Project Number:	**248676**
Project Acronym:	**FORESTA**
Project Title:	**Fostering the Research Dimension of Science and Technology Agreements**
Instrument:	CSA - Support Action
Thematic Priority:	FP7-ICT-2009-4-9.1 International cooperation

D3.2 Report on the status of ICT research cooperation

Due Date:	**31/12/2010**
Submission Date:	**21/03/2011**
Start Date of Project:	**01/01/2010**
Duration of Project:	**24 months**
Partner in Charge of Deliverable	**ROSE Vision**
Version Status	**FINAL**
Dissemination Level	**PU**
File Name:	**FORESTA D3.2_Report on the status of ICT research cooperation**

Date	**Changes**	**Editor**
23/12/2010	First draft version	ROSE
21/01/2011	Partners draft contribution	ALL PARTNERS
30/01/2011	First consolidated draft version	ROSE
15/02/2011	Additional partners contributions	ALL PARTNERS
22/02/2011	Additional revision and contribution requested	ROSE
08/03/2011	Revision and feedback	ALL PARTNERS
11/03/2011	Second consolidated draft version	ROSE
15/03/2011	Peer review	ALL PARTNERS
17/03/2011	Third consolidated version	ROSE
19/03/2011	Revision by coordinator	TESEO
21/03/2011	Final version	ROSE

Table of Contents

1. EXECUTIVE SUMMARY

This report presents the analysis of the ICT research cooperation practices between the EU and Latin America, in the five FORESTA target countries: Argentina, Brazil, Chile, Colombia and Mexico. Additionally, other two countries have been also considered: Uruguay and Costa Rica.

As a result of the analysis, a number of general conclusions have been identified, which will be indicated first. Secondly, there will been displayed the particular conclusions of the seven countries.

General conclusions

1. There has been up to now scarce participation in the EU Framework Programme, what makes difficult to extract definitive conclusions of this cooperation tool. However, **during the last ten years there has been a significant activity in the field of ICT research bilateral cooperation** (Iberoeka and other programmes) that deserves to be taken into account.
2. There is a factual need of long periods to match the European and LatAm researcher's goals, rules of participation, expectations, etc. Most of the projects run in the Framework Programme have been, or even are still, projects promoting the improvement of the research cooperation scenarios, setting the scene. Thus, no quantitative results can be measured yet from the perspective of research results, implementations made by LatAm participants in the research projects. Anyhow, it can be stated that the maturity processes in LatAm from the idea to the research project are clearly longer in LatAm than in Europe. As a consequence, **there is a need of providing continuity to the actions launched in order to capitalize the efforts made at the period of "raising awareness" on the cooperation opportunities**.
3. Most of the participants in the current or past research projects are either academic, governmental organizations or promoters of research activities. Thus, research entities from LatAm are yet minimum numbers to widely assess the impact and effectiveness of the cooperation EU-LatAm. If effectiveness of the current actions can be measured by the interest raised by LatAm organizations (for example, using as an indicator the LatAm participants in the ICT Event 2010) **it can be concluded the current promotion actions have succeeded to effectively contribute to raise interest from LatAm researchers into the cooperation with the EU**.
4. From a realistic point of view, **the main interests of most LatAm countries are more in the innovation than in the basic research field**. It can be stated also, that the expected results in terms of country development are more directly related to innovation and applied research than to basic research. This is curiously the same debate that currently in Europe. It will be very helpful that the current move of Europe towards the Innovation Union and Digital Agenda for Europe, weighting the innovation stage as a crucial milestone, will undoubtedly also help the interest from the LatAm researchers, which are closer to applied research rather than to basic research activities.
5. Although not clearly extracted as a conclusion, it is clear the need of an improvement in the LatAm research cooperation among countries. EU-LatAm research cooperation may act as a catalyser of these other cooperation practices. The European Research Area may act as a valuable example to structure a LatAm political strategy in this field.

Brazil

Brazil has experienced in the past profitable bilateral cooperation in the ICT research field with several European Countries (mainly Spain and Portugal, but also France and Germany) and more recently with the European Union Framework Programme. Anyhow, its position as the eighth economy in the world enable Brazil for a more extensive cooperation in this field, so it is suggested the increasing in this

bilateral or multilateral cooperation actions, and also more flow of information in order to reach to a mutual benefit.

Colombia

The participation of Colombian companies in ICT research projects is very low but can be increased through divulgation strategies and improving the coordination among the different cooperation agents and funding agencies. Regarding the Academy, requirements form the Framework Programme makes difficult the participations of Colombian researchers in the consortia. Finally, it is more than advisable the creation of a set of official indicators to measure the impact of international cooperation in the ICT field.

Chile

The participation in research projects has gained the interest of the Chilean academia and institutional community but is far from the priorities of the companies. Chilean companies are more interested in the short term innovation projects as it has been demonstrated by their participation in innovation programmes like IBEROEKA.

Argentina

Argentina presents an excellent potential for bilateral or multilateral cooperation due to the fact that there have been established strong institutions at a national level for science and technology oversight and support. The main detected weakness are the lack of cooperation between companies and research centers, the lack of R&D personnel with advanced degrees and the lack of a governmental office specially devoted to ICTs.

Mexico

The main particularity of Mexico is the low ratio between R&D expenditure and GDP (about 0,5%), being not only the lowest among the OCDE countries: Brazil and South Africa spend twice and China three times more. Additionally national funding mostly goes to public universities sidelining private entities. It is recommended to focus in applied research and innovation, a clear improvement of the data and indicators regarding the impact of the research activities in the development of the country and the establishment of systematic mechanisms to incorporate the results of this evaluation in policy making and allocation of resources.

Costa Rica

Although Costa Rica is showing a strong growth of its ICT sector, the participation of the country in the different international cooperation activities with Europe is quite small (other countries in the region show superior participation in these activities. What it is still needed is a national policy to guide and to boost this type of activities.

Uruguay

In Uruguay, cooperation with Europe as a whole and with Spain and France in particular, is basically in the academic field. In the private sector, the cooperation is low and there are much more cooperation activities with the United States. An internal Uruguayan weakness is the lack of contact between academia and ICT companies for these purposes, as well as among ICT companies.

2. INTRODUCTION

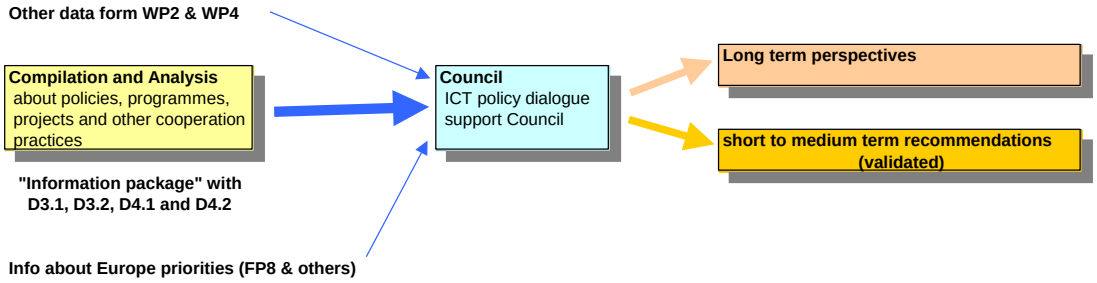
2.1. General objective

The objective of this document is to present and to analyse the best ICT cooperation practices which have been implemented already between the EU and Latin America, in order to serve as a basis for:

- the recommendations to be elaborated by the FORESTA Council (to be done in Task 3.3)
- dissemination through the EU and Latin America R&D communities

In fact, this Deliverable D3.2 constitutes, jointly with the FORESTA Deliverables D3.1, D4.1 and D4.2, an "information package" about policies, programmes and projects related the ICT research cooperation between the EU and Latin America, to be used for both purposes, but especially for the activities of the FORESTA Council.

The following diagram illustrates the process in which the FORESTA Council is fed by the four preliminary documents that integrates the "information package":



Countries considered in this document are the five ones targeted in FORESTA: Argentina, Brazil, Chile, Colombia and Mexico plus two additional ones: Uruguay and Costa Rica.

2.2. Methodology used

Methodology used has been the preparation of individual national analysis by the LatAm partners, and a final integrated analysis done by ROSE. The seven national analysis have been carried out following a common scheme, designed by the Task coordinator ROSE and indicated in point 2.4.

ROSE has made also an extensive advice to the LatAm partners during the elaboration process and has made the integration to prepare the final document.

Work methodology followed internally by the FORESTA LatAm partners for the analysis of national policies has been basically cabinet work, looking in each case for the adequate national information sources, accompanied by consults to several experts.

FORESTA partners in Latin American countries are key entities in their respective R&D ICT environments and, consequently, they are excellent points of reference for ICT policy dialogue analysis, since they are all strategic partners in these dialogues.

The partners responsible for the individual analyses are:

- Argentina: UP
- Brazil: USP
- Chile: UTEM

- Colombia: CINTEL
- Mexico: ITESM
- Uruguay and Costa Rica: ALETI

Coordination action with WP4 leaders has also taken place. A special attention has been paid to avoid overlapping between documents D4.1 (completed before the present D3.2) and this D3.2 and in order to assure that both deliverables were compatible and complementary. The following point clears up the differences between these two documents.

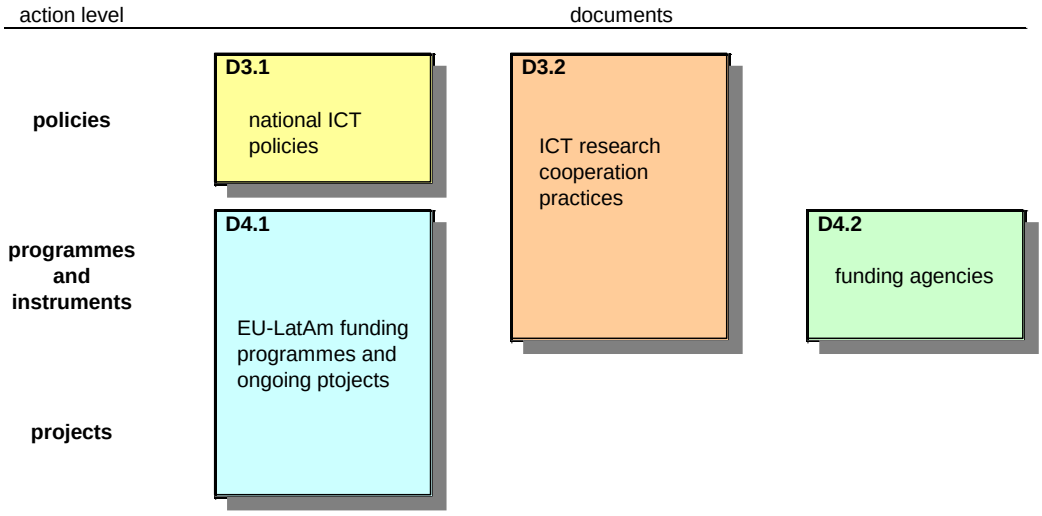
2.3. Differences between D4.1 and D3.2

D4.1 and D3.2 refer to programmes and projects related to EU-LatAM ICT research cooperation. Anyhow there are clear differences between the context, the level, the focus and the content type of both documents.

The following table shows up these differences:

	Document D3.2	Document D4.1
Context	ICT research cooperation practices	EU-LatAm funding programmes and projects
Level	Policies - Programmes	Programmes - Projects
Objective	To provide a first analysis of the results of the ICT research cooperation practices between EU and Latin America, up to now	To describe the different funding programmes for ICT research cooperation between EU and Latin America, with special attention to ongoing support actions
Content type	Analytical	Descriptive
Focus in projects	Completed	Ongoing
Focus in projects	R&D, innovation	Support and Coordination Actions

To provide a better vision of the purpose of the four preliminary documents integrating the so called "information package", the following diagram indicates the positioning of these four documents referred to the different action levels:



2.4. Structure of this document

The structure of the document is the following:

a) An executive summary emphasizing the main conclusions

b) The present introduction, to present the document

c) Individual country analysis, following a common scheme

d) Annexes and References

The Executive Summary (point 1) provides the main conclusions extracted form the analysis of the ICT research cooperation practices between the European Union and Latin America during the last years.

The Introduction (point 2) describes the objective of the document, the methodology followed, the differences between D3.2 and D4.1 and the structure of the document.

The individual analysis of the seven countries considered (points 3 to 9) is structured in a common harmonized way, as follows:

1) projects as a result of the ICT cooperation within the EU Framework Programme:
   - description of the projects
   - analysis on the differences among cooperation practices, with special focus in the differences among industrial-industrial, industrial-academic and academic-academic cooperation
2) projects as a result of Iberoeka and other bilateral programmes between EU countries and Latin America countries, managed at national level by both sides:
   - description of the projects
   - analysis on the differences among cooperation practices, with special focus in the differences among industrial-industrial, industrial-academic and academic-academic cooperation
3) cooperation in standardization activities in the ICT field

4) analysis of the previous research cooperation activates

5) conclusions

The description of the projects has taken into account the information included in other FORESTA documents, especially Deliverable D4.1, in order to avoid the repetition of the information and focusing in the relevant information for the analysis.

Having in mind the profile of the high level experts (Council members and others) for which has been prepared the present document, the length of each national analysis has been established in 8 to 12 pages, sending to Annexes the rest of relevant information to be considered in a second or in depth lecture.

Annexes (point 10), include all the rest of the relevant information about national ICT policies in Brazil (Annex 1), Colombia (Annex 2), Chile (Annex 3), Argentina (Annex 4), Mexico (Annex 5), Uruguay (Annex 6) and Costa Rica (Annex 7), as indicated in the previous paragraph.

Finally, the last point includes the References for a deeper study by the readers of certain specific and punctual aspects.

3. BRAZIL

The European diplomatic missions within Brazil started in 1960 to establish political, economic and trade relations. These diplomatic ties allowed Brazil to have an intense and mature political relation with Europe. This relationship is governed by the EC-Brazil Framework Cooperation Agreement (1992)[1], The EU-Mercosur Framework Cooperation Agreement (1995)[2] and the Agreement for Scientific and Technological Cooperation (2004). This agreement, signed in 2004[3], was only executed in Lisbon 2007[4] as a Country Strategy Paper Brazil – EC 2007-2013, for this CSP an indicative amount of € 61 million has been earmarked for Brazil in this period.

The European Union designed new counselors in 2008 to work in the themes associated with C&T (Science and Technology) and ICT (Information Society) at the EU Delegation in Brasilia. These counselors perform an important role in the implementation of international agreements. *Initially, the EU offered to enter into a Strategic Partnership with Brazil and, later on, into a EU-Brazil Partnership in Science and Technology*.[5]

The EU and Brazil are becoming strategic partners also in the domain of research in C&T. the number of projects and their nature indicate that the cooperation possibilities involve all the knowledge fields.

Brazil is the eighth Economy in the world and products 10.000 doctors per year and has a solid base in research in the C&T field (with 65.000 researchers) in leader's worldwide institutions and high recognized Universities. 1.5% of Brazilian GDP was destined to the research in C&T in 2010 and a complete research system is guided by the MCT (Brazilian Ministry of Science and Technology).

Reinforce the cooperation between the UE and Brazil can provide benefits for both sides. The European Commission and Brazilian Government have intensify their cooperation in research and development in ICT and launched a joint call set of 10.000.000 Euros, the call has closed in January 2011, this call contributes to researches in Future Internet, microelectronics and microsystems, monitoring and control network and e-infrastructure (e-science).

Brazilian researchers have been participating over 10 years in the Framework Programmes, and they have received over 7 million Euros. In the FP7 there are over 35 Brazilian organizations that have already become partners in EU financed projects. This number represents more than ¼ of the Latin America Projects.

The coordinated Brazil-EU call, presented in the event "Digitally Driven"[6], is based on the successes of the European Cooperation between the Latin America and EU. For instance the project ALICE, funded since 2003, has helped in the establishment of the Red Clara, the first Latin-American Network of Research and Education, present in over 12 countries. The Red Clara is co-funded by the Cooperation program @LIS2 that counts with over 12 million Euros until 2012, and its high speed connection to the GEANT2 triggered high-level cooperation among researchers in the EU and Latin America.

The coordinated Brazil-EU call is a result of the workshop "Cooperation EU – Brazil in ICTs" that has occurred in São Paulo, September 2009. Over 200 participants have identified the needs and opportunities for cooperation in the fields of microelectronics and microsystems, monitoring and control network, experimental facilities for the Future Internet, security and e-infrastructure. The formal agreement for the call launching was established during the Third Steering Committee on Scientific and Technological

[1] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:21995A1101%2801%29:EN:NOT
[2] http://ec.europa.eu/world/agreements/prepareCreateTreatiesWorkspace/treatiesGeneralData.do?step=0&redirect=true&treatyId=405
[3] http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/725&format=HTML&aged=0&language=EN&guiLanguage=en
[4] http://eeas.europa.eu/brazil/csp/07_13_en.pdf
[5] http://ec.europa.eu/delegations/brazil/eu_brazil/science_tech/index_en.htm
[6] http://ec.europa.eu/information_society/events/ict/2010/index_en.htm

Cooperation between the EU and Brazil in November 2009.

3.1.ICT cooperation within the EU Framework Programme

3.1.1. Summary table

Brazilian ICT research in the FP7 currently involves eleven projects, which are described below. Further information about each one of the projects can be viewed in Annex 1.

Project Acronym	Project Title	Project Category	Brazil Partners Acad - Ind	International Partners Acad - Ind	Start-Finish dates
CASAGRAS2	Coordination and Support Action for Global RFID-related Activities and Standardization	FP7 – Cooperation-ICT	1 - 0	5 - 0 8	06/2010 - 05/2012
CHOREOS	Large Scale Choreographies for the Future Internet	FP7 – Cooperation ICT	1 - 0	6 - 0 7	10/2010 - 09/2013
ERA	Embedded Reconfigurable Architectures	FP7 – Cooperation ICT	1 - 0	4 - 0 4	01/2010 - 12/2012
FIRST	Implementing cooperation on Future Internet and ICT Components between Europe and Latin America	FP7 – Cooperation ICT	1- 0 1	3 - 0 4	01/2010 - 12/2011
FORESTA	Fostering the Research Dimension of Science and Technology Agreements	FP7 – Cooperation ICT	1 - 0	5 - 0 3	01/2010 - 12/2011
MY FIRE	Multidisciplinary networking of research communities in FIRE	FP7 – Cooperation ICT	1 - 0	4 - 0 4	01/2010 - 12/2011
SYNAPTIC	SYNthesis using Advanced Process Technology Integrated in regular Cells, IPs, architectures, and design platforms	FP7 – Cooperation ICT	1 - 0	3 - 0 4	11/2009 - 10/2012
EULARINET	European Union - Latin American research and innovation networks	FP7 – Cooperation ICT	1 - 0	18 - 0	03/2008 - 02/2012
PRO-IDEAL	Promotion of an ICT dialogue between Europe and America Latina	FP7 – Cooperation	1 - 0	7 - 0 2	01/2009 - 06/2011

		ICT			
PRO-IDEAL PLUS	PROmotion of an Ict Dialogue between Europe and America Latina - extension towards Mexico, Colombia, Cuba, Costa Rica	FP7 – Cooperation ICT	1 - 0	7 - 0 2	06/2010 - 12/2012
TEFIS	TEstbed for Future Internet Services	FP7 – Cooperation ICT	1 - 0	3 - 0 6	06/2010 - 12/2012

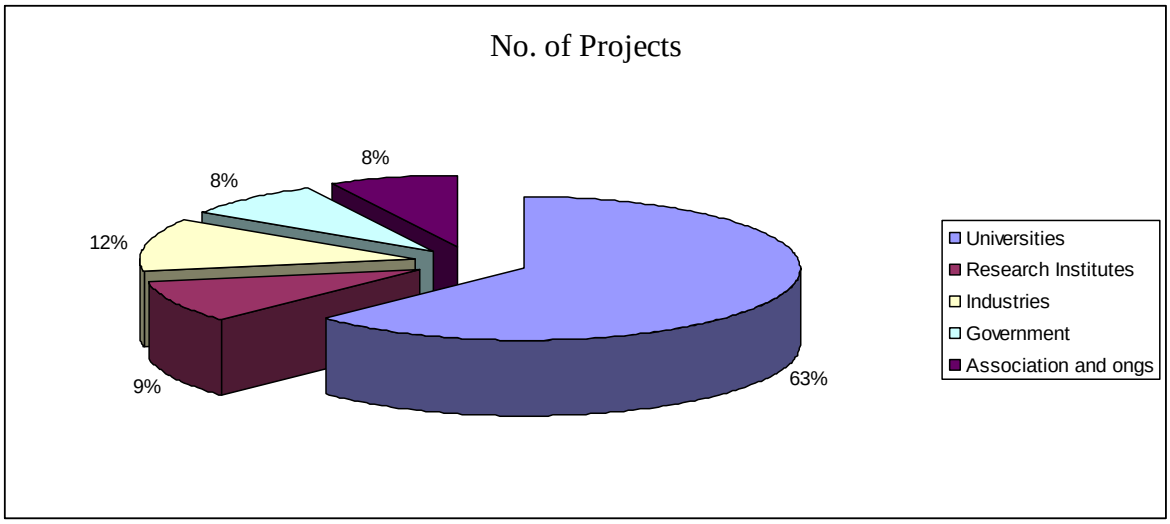
Table 1

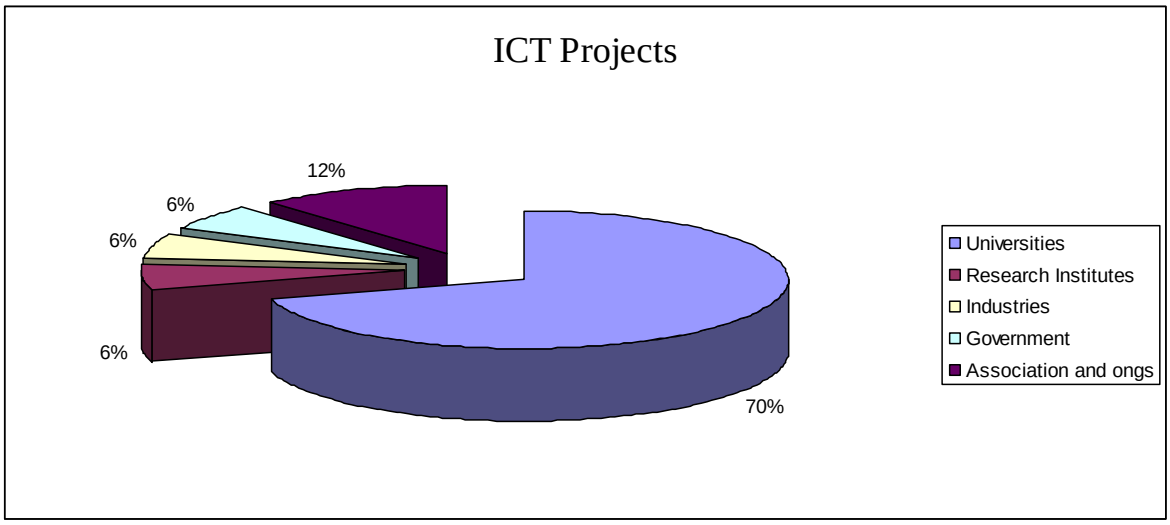
3.1.2. Analysis on the differences among cooperation practices

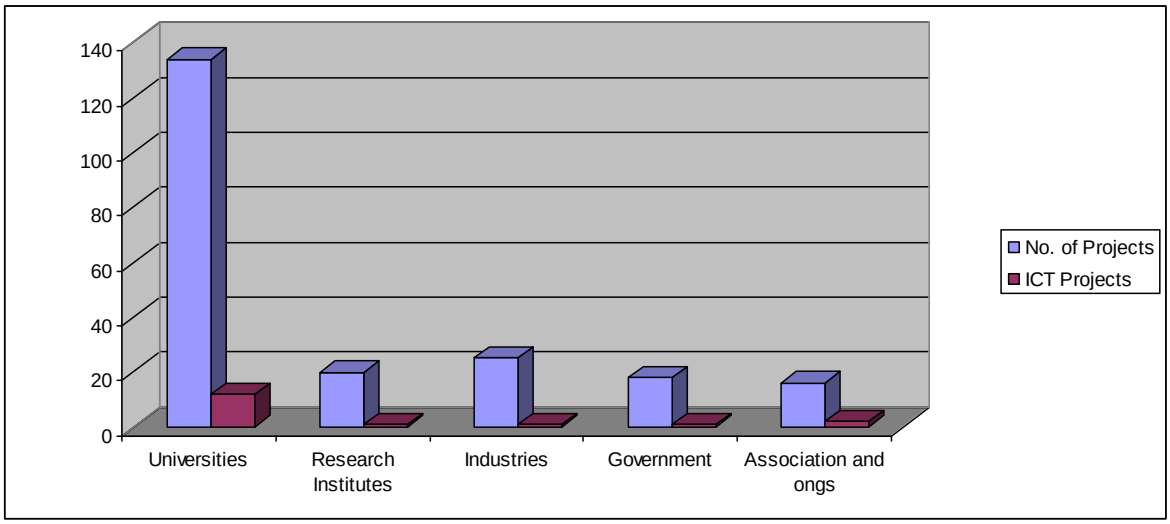
Given the wider experience in Science and Technology, we have analyzed first this general filed and then the specific ICT area.

General Science and Technology cooperation

Organization	No. of Projects
Universities	134
Research Institutes	20
Industries	25
Government	18
Associations and NGOs	16







The Brazilian academic participation, University and research institutes, that work in the projects are

mostly from de city of São Paulo, the international cooperation therefore are not only academic cooperation, the Brazilian academia cooperates with industries in all world as partners in this projects.

3.2. Cooperation managed at national level (Iberoeka and other EU Programmes).

Brazil and Spain are countries with a long tradition of corporate technological cooperation as demonstrated by its action within the IBEROEKA Initiative (118 certified projects with Spanish and Brazilian participation in the period 1991 to 2009), in which both countries have been involved since its launch in 1991. To further strengthen this collaboration, FINEP, Brazil, and CDTI, Spain, signed in 2006 a cooperation agreement by which they undertake to promote, support and finance joint technological projects business entities.

Other significant agreements have been signed with Belgium, France, Germany, Italy, Slovenia, the Netherlands and the United Kingdom.

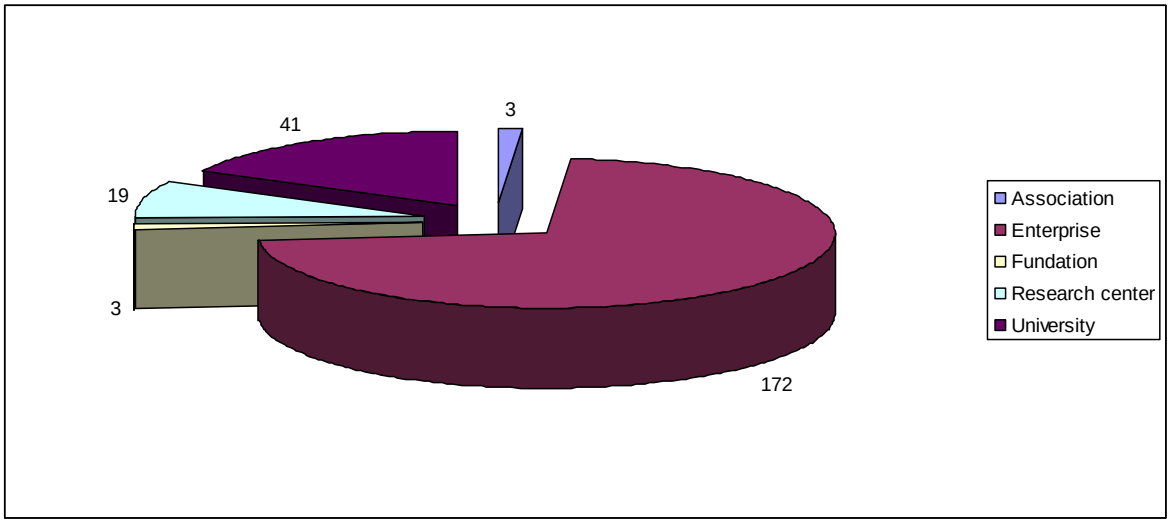
Bilateral cooperation inside LatinAmerica has been established with Colombia, Cuba, Mexico, Panama, El Salvador, Perú and Cuba.

Finally it is necessary to mention the technical cooperation with Japan, the United States and Canada.

3.2.1. Summary table

IBEROEKA Programme	**Programs or Agreements**
IBEROEKA	Projects Cyted – Iberoeka Innovation ICT: 50 Research projects ICT: 32 Organizations Directory: 238 (more information Below)

CYTED – Iberoeka	
Association	3
Enterprise	172
Foundation	3
Research centre	19
University	41



European Programmes	Agreements
Bilateral Agreements	**Belgium**: • FNDS – Fonds National de la Recherche Scientifique. • FWO – National Fund for Scientific Research. **Slovenia:** • MHEST – Ministry of Higher Education, Science and Technology • Agreement on Technical and Scientific Cooperation between Colombia and France to create a fund to promote Colombian-French cooperation in the field of engineering studies (BOMPLAN Agreement). **France**: • INRIA – Institut National de Recherche en Informatique et Automatique. • CENDOTEC - **CENTRO FRANCO-BRASILEIRO DE DOCUMENTAÇÃO TÉCNICA E CIENTÍFICA** **Italy**: • CNR – Consiglio Nazionale delle Ricerche. **Germany:** • PPG7 – Pilot Programme, Amazon and Mata Atlantica • Energy and Urban – industrial Management

European Programmes	Agreements
	Slovenia: • MHEST – Ministry of Higher Education, Science and Technology • Agreement on Technical and Scientific Cooperation between Colombia and France to create a fund to promote Colombian-French cooperation in the field of engineering studies (BOMPLAN Agreement). **Spain:** • MHEST – Ministry of Higher Education, Science and Technology • Agreement on Technical and Scientific Cooperation between Colombia and France to create a fund to promote Colombian-French cooperation in the field of engineering studies (BOMPLAN Agreement). **Netherlands:** • Ministry of Education, Science and Culture **United Kingdom:** • British Council • DFID – Department for International Development

American countries	Programs or Agreements
Bilateral Agreements	**Colombia**: • COLCIENCIAS – Departamento Administrativo de Ciencia, Tecnología e Innovación **Cuba:** • CITMA – Ministerio de Ciencia Tecnologia y Medio Ambiente **United States**: • NSF – National Science Foundation **Mexico**: • CONACYT – Consejo Nacional de Ciencia y Tecnología. **El Salvador** • ME - Ministério de Economia

American countries	Programs or Agreements
	Panama • MRE - Ministerio de Relaciones Exteriores **Peru** • MRE - Ministerio de Relaciones Exteriores

3.2.2. Analysis of the results

Brazil and Spain are countries with a long tradition of corporate technological cooperation as demonstrated by its action within the IBEROEKA Initiative (118 certified projects with Spanish and Brazilian participation in the period 1991 to 2009), in which both been involved since its launch in 1991. To further strengthen this collaboration, FINEP, Brazil, and CDTI, Spain, signed in 2006 a cooperation agreement by which they undertake to promote, support and finance joint technological projects business entities.

Part of this agreement is the call / joint call.

FINEP and CDTI are the major state agencies funding R&D business in Brazil and Spain, respectively. They launch a joint call for submission of R&D projects for international cooperation between enterprises of both countries.

Project proposals must be submitted in parallel in both Brazil and Spain. The Spanish companies have to present their project proposals IBEROEKA through CDTI Site, Application Management Help CDTI. Brazilian companies make their presentation through FINEP form.

The proposals will be evaluated jointly by FINEP and CDTI. The selection process of proposals will take place in two phases, so that those proposals selected in the first phase will be called to submit the complete documentation in their respective countries as well as a collaboration agreement associated with the development of the project.

The scientific cooperation with smaller Europeans countries is modest in comparison with bigger European countries, and it must be very focused, having this priorities very well defined. For instance, Belgium selected some areas of mutual interest like Biotechnology, Nuclear Energy, Space, Microelectronics and Nanotechnology in the call with CNPQ (National Centre of Research).

Still in the medium countries, with Anglo-Saxon, this focus is given naturally in areas like technological development with potential of a rapid economic valorisation. Sweden, for example, signed in 2007 an agreement in the bioenergy field and, most recently, it was concluded a memorandum of understanding that aims to promote especially the cooperation in the high technology and industrial innovation fields. A last agreement completes the chain, with the intention of provide a concrete involvement of Swedish companies in cooperation with Brazil in technological development.

It’s much harder to realize the scientific strategies regarding cooperation with Brazil by the biggest

European countries; the reason of this is the variety of actions. These countries look for establish through the bilateral cooperation with Brazil a fabric of relations either individual either institutional, not necessarily with immediate economic impacts, but in a cultural, economic and geopolitical long-term impact.

Even then, the German cooperation focus is in the development of some specific technologies in fields like environment, water resources and climate. So, there are the interest in support some already gained experience, having in view the Brazilian growth in some fields as biofuel, oil exploitation in deep waters (offshore), aviation industry, etc., in which the negotiations are more profitable and the cooperation more efficient.

In the British cooperation with Brazil, there are the intervention of the British Council and the DFID in the strictly scientific field. The British Council take care most specifically the student mobility between the United Kingdom and Brazil while the DFID, in the development support field, is focused in the definition and assembly of a joint cooperation with south countries. In a way that the British ICT cooperation worry in select actions that increase not only the flow but it's impact.

The goal is to identify the best of Brazilian science and the best researchers and relate them with the British scientists in Cambridge, Oxford, supporting as much as possible the research projects from this cooperation.

3.3.Cooperation in standardization activities in the ICT field

There is in Brazil an action for standardization in the ICT field it was made in compliance with the Target Plan approved by the Board of Institutional Management of the National Commission for Nuclear Energy CNEN, established in 2009. It was agreed, in this action, the development of Director Plan for Information Technologies - PDTI regarding the triennium 2010 - 2012, covering the training of the table of servers, as well as process improvement governance and management of information security.

The description of this Plan is included in Annex 1.

The Plan will serve as a first basis for international cooperation with the European Union in the ICT field.

3.4.Analysis of previous research cooperation activities

Over the last years, Brazil has become an increasingly significant global player and emerged as a key interlocutor for the EU. However, until recently EU-Brazil dialogue has not been sufficiently exploited, and carried out mainly through EU-MERCOSUR dialogue, opens the communication.

Science, technology and innovation will be among the areas of cooperation strengthened. The Commission believes that the recent entry into force of the EU-Brazil Science and Technology Cooperation Agreement, along with the new opportunities for international participation in the EU's Seventh Framework Programme for research (FP7), provide a sound basis for increasing existing cooperation in S&T.

EU and Brazil should facilitate researcher mobility, and also increase the visibility of cooperation in this area. The EC[7] proposal outlines just how the Commission plans strengthening current ties. Firstly,

[7] http://ec.europa.eu/external_relations/brazil/intro/index.htm. Based on the Commission communication COM (2007) 281

dialogue should be strengthened, and joint planning improved, so that priorities can be set that address areas of common interest:

- The Commission also suggests establishing an agreement between Brazil and EURATOM, the European Atomic Energy Community, along the lines of agreements already in place with other countries. The agreement could either focus on the specific field of fusion, promoting Brazil's accession to the International Thermonuclear Experimental Reactor (ITER) project, or on broader areas of nuclear research.
- The proposal also addresses space. Brazil is already a partner in Galileo, the EU's satellite navigation system project (for example in the project CELESTE). Cooperation within this framework should be further intensified through a new cooperation agreement based on information exchanges and contacts, suggests the Commission.
- Other areas selected by the Commission for closer collaboration are information and communication technologies (ICT), the Millennium Development Goals, protecting the environment, energy, trade and economic relations, transport, higher education, culture, and justice, freedom and security.

Traditionally, the main areas with priority of cooperation between Brazil and the EU are:

- Global challenges (including poverty and inequalities)
- Environment
- Energy (including renewable energies)
- Stability and prosperity.
- Environment is the sector that has absorbed the main financial resources, in particular promoting cooperation in specific and target sectors:
    - Biodiversity
    - Tropical forest
    - Bio safety
    - Emissions of greenhouse gases
    - Capacity building and training
    - Protected areas
    - Dissemination activities

Independently of FP7, the most intense cooperation brought about during the last five years has been with a reduced number of countries from the EU, the main countries are: Germany, France, Italy, Spain, United Kingdom and Holland. With some of them the cooperation is done through official channels (Bilateral Technical Cooperation), as the first five countries mentioned, as with Holland there is a decentralized cooperation, in which ABC follows the negotiations. In Annex 1 there is a more extensive analysis of this bilateral cooperation

The main competitors of the EU in terms of cooperation between Brazil and foreign countries in Science, Technology and Development are Japan, USA and Canada. In the 3 cases Agreements on Science and Technology has been signed between Brazil and those countries. The cooperation with Japan is through official channels but with US the direct cooperation between partners (like universities) is very strong. However, some significant differences exist in the model of bilateral cooperation.

- The Japanese cooperation is concentrated in the poorest regions of Brazil: The North and

Northeast and the Japan collaboration does not contemplate donation or loan financial resources[8].

- With Canada the traditional cooperation is decreasing because Canada considered now Brazil an Emergent Economy. The geographical priority is focused in the Northeast States, followed by the peripheries of urban cities and federal-level initiatives. Applied sciences and technology are the main sectors of future collaboration.
- With US, great importance is give to Innovation and Commercialization of Technology, Nanosciences and some sectors of basic science. Education is other of the areas with priority.

In Annex 1 there is also a more detailed analysis of these cooperation practices.

3.5. Conclusions

Brazil is increasingly visible in European countries and became, to the majority of them, the first priority in the Region. For example, although Spain has historically promoted cooperation multilaterally with Latin American countries, including the participation of Portugal, Cyted-Iberoeka programs and, for example, with very impressive results, their bilateral cooperation for S&T is being restructured, aiming to enhance the potential for cooperation with Brazil.

In the same way, the Portuguese cooperation with Brazil in Education and S&T remains strategic and as a priority, especially considering the expansion of investments in Portugal Brazil and vice versa. This small study showed how various European countries perform efforts and allocate resources, to establish scientific and technological relations with the Brazilian community and implement cooperation in ICT based on common projects, adapting to context particular cultural and scientific partner in this great country. Irrespective of the European Union, which provides a formal framework for collaboration and allocates its own resources for multilateral cooperation, is suggested that there are more relationships and locally at least, more flow of information between these countries, so that they can mutually benefit from accumulated experience.

It is known, for example, that several Scandinavian countries maintain special relations with each other that perhaps could be exploited for the implementation of joint operations local S&T cooperation with Brazil. Since some subjects such as climate change particularly interested at all different countries of northern Europe. Other collaborations natural, like Spain or Portugal Germany-France would surely find interesting applications in cooperation with ST&I Brazil. Moreover, European countries that have more tradition of cooperation with Brazil could certainly support the admission of new countries in this cooperation, such as the countries of Eastern Europe.

This draft document was prepared and subjected to debate with people concerned, which are beyond the respondents themselves who provide the raw material for this work, those responsible by the bilateral scientific and technical cooperation with Brazil in other European countries. Once enriched with comments and criticisms of these experts. The door design: Analytical report on the survey of existing bilateral Cooperation Agreements and bilateral / reciprocal Cooperation, including an overview of the Brazilian S & T funding system.

[8] http://ec.europa.eu/europeaid/where/latinamerica/ regional-cooperation.34

4. COLOMBIA

4.1.ICT cooperation within the EU Framework Programme

4.1.1. Summary table

Colombia is a country that is recently showing more interest to participate in international cooperation programs for R+D+i, this has been reflected in the number of agreements signed for ICT and for S&T.

The following table presents a summary of the cooperation actions of Colombia into the EU Framework Program. For more information please view Deliverable D4.1.

Project Acronym	Project Title	Project Category	Colombia No. of Partners	International No. of Partners
EELA-2	E-SCIENCE GRID FACILITY FOR EUROPE AND LATIN AMERICA	FP7 – Capacities - INFRA	1	2
PRO-IDEAL PLUS	PROmotion of an ICT Dialogue between Europe and America Latina – extension towards Mexico, Colombia, Cuba, Costa Rica	FP7 – Cooperation ICT	1	1
FORESTA	Fostering the Research Dimension of Science and Technology Agreements	FP7 – Cooperation ICT	1	2
FIRST	Implementing cooperation on Future Internet and ICT Components between Europe and Latin America	FP7 – Cooperation ICT	1	4
HD-MPC	Hierarchical and distributed model predictive control of large-scale systems	FP7 – ICT	1	6
SALA+	SUPPORT ACTION for a European and Latin American strategic cooperation on networked media RandD	FP7 – Cooperation ICT	1	3
SALA3D	European and Latin American Strategic Cooperation on 3D	FP7 – Cooperation	1	2

Project Acronym	Project Title	Project Category	Colombia No. of Partners	International No. of Partners
	Internet R&D	ICT		

4.1.2. Analysis on the differences among cooperation practices

Although in recent years Colombia has increased its participation in the development of projects within the framework of international cooperation with EU, according with information by official sources as COLCIENCIAS, the National Department of Science and Technology, currently there is not a systematic evaluation process which allows to measure the impact of practices of international cooperation between the academy and industry, and the main differences between them.

However, CINTEL with the aim to show an approximation of this issue, based on the experience of the 7 projects approved under FP7 in the ICT field, presents the following analysis.

Industrial-Industrial cooperation practices

Regarding Industrial – Industrial cooperation, most of the agreements involve mainly European companies, while Colombian enterprise participation is basically limited to the Enterprise Association CINTEL

In Annex 2 there is a relation of the European and LatAm companies involved in FP7 ICT projects with Colombian participation

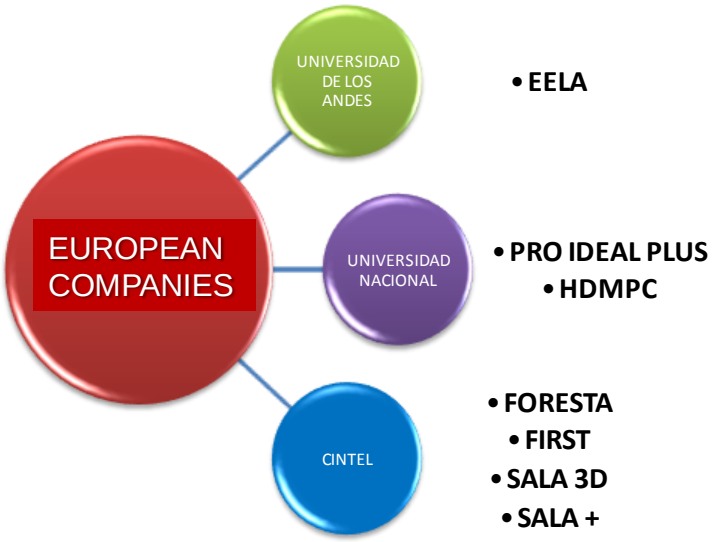
Industrial-Academic cooperation practices

In the projects carried out under the FP7 in Colombia, the academy is represented by universities and in some cases, research centres[9], which interact into EU consortiums where the European industrial participation is an important component.

The following figure shows the Colombian universities that participate in ICT projects under the FP7 which also has the participation of European companies.

Colombian academic entities involved in ICT - FP7 projects with European companies' participation

[9] Due to the nature of CINTEL as Research center, it is included here. However, it's worth noting that although it has a line of action for training and among its members are universities, it can not be regarded as an academic institution itself.



Academic-Academic cooperation practices

The academic-academic cooperation is the most common practice between Framework Programmes in Colombia, where Colombian universities have the opportunity to work together with European and other Latin American universities. In general, this relation is stronger compared to the other cooperation practices (Industry – Industry and Industry – Academic) in the Colombian context.

In Annex 2 is included a table with the different international academic institutions and research centres participating in current ICT projects where Colombian universities are involved.

On the other hand, at national level the Directorate of Technological Development and Innovation of COLCIENCIAS, aware of the need to strengthen university-industry-state relationship to achieve the proper flow of knowledge, has been working on the definition of strategic guidelines to support the integration of this alliance, where:

The university is the key to economic development today, as the main institution generating knowledge, but its activity should be oriented with more emphasis on success stories in the international arena by linking the learning to production processes in enterprises.[10]

The public entities parts of SNCTI are overtaking important actions to improve the flow of information, the joint in terms of budget planning and execution of public resources.

Companies, of which about 96% in Colombia are SMEs, have a low awareness of the importance of innovation to improve their competitiveness, which is considered a market failure that impedes the achievement levels of investment required for innovation. Additionally, there is a lack of incentives and instruments offered by the State.[11]

4.2. Cooperation managed at national level (Iberoeka and other EU

[10] BUENO C., Eduardo, la Tercera Misión de la Universidad, Universidad-Empresa-Estado. Año 1 Edición 1, Enero Julio de 2008.
[11] Low levels of business innovation. Conpes 3582 de 2009

Programmes).

4.2.1. Summary table

European Programmes	Ongoing Projects, Programs or Agreements
Bilateral Agreements	**Belgium**: • Development of relations in the field of scientific and technological research and joint development of activities and actions in biotechnology, Technological innovation, energy saving. • Agreement between the General Commissariat for International Relations of Belgium and French Community and COLCIENCIAS[12]. **France:** • Agreement on Technical and Scientific Cooperation between Colombia and France in the Field of Academic Cooperation Agreement (ECOS-NORD)- • Agreement on Technical and Scientific Cooperation between Colombia and France to create a fund to promote Colombian-French cooperation in the field of engineering studies (BOMPLAN Agreement). **Germany**: • Agreement for Cooperation and Technical Assistance, Enterprise and Innovation between COLCIENCIAS and the Colombian-German Chamber of Commerce & Industry. • Letter of Intent for German-Colombian Academic Cooperation between Deutsche Forschungsgemeinschaft eV (DFG), Germany and COLCIENCIAS. **Spain**: • ICT Agreement between COLCIENCIAS and the Centre for Industrial Technological Development (CDTI), Spain for Staff Exchange.
IBEROEKA	In the field of ICT, Colombia has 38 approved projects, which list and description is available on: http://www.cyted.org/buscadores
@LIS	ALICE: Latin America interconnected with Europe EHAS: Telemedicine for Isolated Areas in Developing Countries

[12] Agreement developed in the field of ICT.

European Programmes	Ongoing Projects, Programs or Agreements
	E-LANE: European-Latin American New Education EMPLENET: Approaching the local administration to the citizen through ICT JIQ/NIB: The Suburb International Journal Link All: Local-communities INsertion NetworK for Latin America Met@Logo: Political and regulation dialogue Red-SOCIAL: Solidarity Network of the Blind and Visual Deficient Persons from Latin America T@lemed: Evidence Based Telemedicine for Remote and Rural Underserved Regions in LA

4.2.2. Analysis of the results

COLCIENCIAS, the Administrative Department of Science, Technology and Innovation, according to its responsibility of coordinate the National System of Science, Technology and Innovation (SNCTI), is consolidating the international projection of Colombia in this field, promoting the inclusion of Colombian ST&I within international networks through international cooperation.

For this reason, in recent years, Colombian researchers have been increasing their participation in different European programs. This aim is supported by a strategy of internationalization, which has had an important component in areas such as health, environment and ICT.

In addition, the European Union (EU) has a strong international cooperation dimension, for its numerous programs, projects and initiatives such as the Framework Programmes and IBEROEKA, among others, that support knowledge and research at a worldwide level, in common areas between countries.

It is important to note that main research topics of the EU are open to third countries and some topics are specifically intended for international cooperation projects. Regarding the EU priorities for International ICT Cooperation, it should be "inspired" by joint inputs from industry, academia and research institutes if there is a guarantee of critical mass of resources.

In October 2007, COLCIENCIAS obtained recognition from the Directorate General for Research European Commission as a Focal Point of the Seventh Framework Programme. The aim of the Focal Point office is to understand the structure and objectives of FP7 as well as to increase management capacity of institutions wanting to participate in international cooperation opportunities.

This has allowed Colombia:

- Perception abroad that the country has a significant level of maturity in research.
- Development of new capabilities for research and innovation, ensuring effective participation of academia and industry.
- Strengthening of networks between European and Colombian technology platforms to facilitate cooperation between the two continents.
- Relevance of ICT as focal point of economic and social development.

- Presence of new and effective tools for joint cooperation.

Despite these results, Colombia needs to continue strengthening their research capacity and other skills that allow greater participation in such international programs.

4.3. Cooperation in standardization activities in the ICT field

According to the information provided by the International Office of the Ministry of ICT, this entity has rarely participated in standardization and normalization activities. It participated at the forum about tariff issues, organized by the ITU's Telecommunication Standardization Sector – ITU-T[13], as well as it has attended with the Colombian Communications Regulation Commission (CRC), to the *Permanent Consultative Committee* of the Inter-American Telecommunication Commission[14] (CITEL), where discussions about topics such IPv6 and TDT, among others, are held. It has specifically participated in:

- ***CITEL's Assembly***

  Its purpose is "to serve as an Inter-American Forum in which the highest telecommunications authorities of the CITEL Member States will share opinions and experiences and make appropriate decisions to direct their activities towards achieving its assigned objectives and mandates"[15]

- ***Permanent Executive Committee of CITEL -COM/CITEL-***

  The Permanent Executive Committee of CITEL is the executive body of the entity. It is composed of representatives of thirteen[16] (13) Member States of CITEL elected at the Assembly.

- ***Permanent Consultative Committee I (PCC.I): Telecommunications***

  It acts as advisory committee on telecommunications of CITEL coordinating standards for telecommunications networks and services in order to achieve the interoperability of such networks and services in the region. "To serve as an advisory committee of CITEL in the area of telecommunications/ICTs, especially in matters related to telecommunication/ICT policy, regulatory aspects, standardization, universal service, economic and social development, environment and climate change, and the development of infrastructure and new technologies."

- ***Permanent Consultative Committee II (PCC.II): Radiocommunications including Broadcasting***

[13] International Union of Telecommunications, **ITU** is the leading United Nations agency for **information and communication technology issues**, and the global focal point for governments and the private sector in developing networks and services. For **145 years**, ITU has coordinated the shared global use of the radio spectrum, promoted international cooperation in assigning satellite orbits, worked to improve telecommunication infrastructure in the developing world, established the worldwide standards that foster seamless interconnection of a vast range of communications systems and addressed the global challenges of our times, such as mitigating climate change and strengthening cyber security

[14] CITEL, an entity of the Organization of American States -OAS-, is the main forum for telecommunications in the hemisphere where governments and the private sector meet to coordinate regional efforts to develop the Global Information Society according to mandates of the General Assembly of the Organization and agreed by the Heads of State and Government at the Summits of the Americas.

[15] http://portal.oas.org/Portal/Topic/CITEL/Estructura/Asamblea/tabid/422/language/en-US/default.aspx

[16] For the period 2010-2014: Argentina, Brazil, Canada, Colombia, Costa Rica, Ecuador, El Salvador, U.S.A, Peru, Uruguay, Venezuela, Mexico and Dominican Republic.

It acts as a technical advisory body of CITEL regarding the coordination and harmonization of standards related to planning and efficient use of radio spectrum and satellite orbits for radiocommunication services, including broadcasting.

For the period 2010 to 2014, Colombia assumed the authority of the Permanent Consultative Committee II: Radiocommunications including Broadcasting (PCC.II). President: Mr. Diego Molano Vega, Minister of ICT. Alternate Chair: Mr. Juan Manuel Roldán Perea, Head of the International Office of the Ministry of ICT.

It is also important to highlight the adoption of the DVB-T/DVB-H European Standard in 2008 for the implementation of digital terrestrial and mobile TV.

4.4.Analysis of previous research cooperation activities

International Cooperation between the European Union and Colombia

European Union cooperation with Colombia has its legal base on the Framework Agreement of Cooperation signed between the European Community (EC) and member countries of the Cartagena Agreement in 1993 (Bolivia, Colombia, Ecuador, Peru and Venezuela).

Complimentary and specifically for Colombia, on December 14th, 2000 was signed the Framework Agreement related to financial and technical aid execution and economic cooperation in virtue of the Asia and Latin America Rules – ALA. This Agreement defines the legal and technical framework needed for cooperation development between parts and allows executing programs and projects.

The beginnings

In an early setting, cooperation between Colombia and EU was made for the general purpose of promoting development for Andean countries, through its integration in the Andean Community of Nations (CAN), whose institutions were intended to be strengthened through a block negotiation with the EU.

The difficulties faced by CAN in this process had as consequence the Colombian Government strengthening with the EU in a bilateral way, as it was in the negotiations for the Free Trade Agreement (TLC) signed in May 2010.

Considering this, cooperation relationships between Colombia and EU had evolved to a more direct contact between parts, which has allowed arranging specific cooperation strategies conceived for particular needs and context of the country.

Main results

Main results from previous cooperation activities that are worth mentioning:

- Widening and strengthening of links between both scientific and technologic communities.
- Rising of Colombian participation in European research projects.
- Strengthening of a Science and Technology policy focused on International Cooperation.

4.5. Conclusions

The European Union counts with diverse tools and areas in which is possible to access cooperation, which becomes in a great opportunity for Colombia. However, there are requirements from the EU that need to be improved by Colombian researchers, in order to obtain successful results when participating in this type of consortiums.

Colombia is currently one of the countries with most participation in cooperation projects development within the Seventh Program Framework in the ICTs area: FORESTA, SALA3D, FIRST and PRO IDEAL PLUS, with respect to other Latin American countries.

Colombia does not count with the proper tools or indicators yet, that allow evaluating the real impact generated by all activities, programs and/or agreements around International Cooperation. Taking this into account, the National Government is considering the possibility of generating a series of indicators for measuring this impact.

Despite this, institutional developments created over the country are important, which has allowed a bigger Colombian participation on initiatives, projects and/or programs supported by the European Union, thanks to the strengthening of Colombia's capacity to manage cooperation projects. Nevertheless, the divulgation strategy at a national scale must be improved for this type of initiatives between different actors that made part of the Science, Technology and Innovation National System.

It is necessary to continue articulating international cooperation programs to the foreign policy lineaments and to the sector development planning priorities of the country.

Coordination between government international cooperation net offices and non government organizations at a national scale is an important factor to avoid effort dispersion and wrong signs to donors.

In order to enhanced and strengthen the alliances between the Academy and the Industry in ICT, mainly at international level, is necessary showing the positive aspects and the benefits for all the participants. Additionally, it worth to mention that for this type of alliances, the intellectual property is a major issue, especially for Universities, for this reason, it is necessary to be clear from the beginning in all the conditions to develop projects under this scheme.

The participation of Colombian ICT companies in this kind of initiatives is very poor according to the information presented. Therefore, it is necessary to design and to provide tools to encourage industry participation in international cooperation projects, as they can have a positive impact on their productivity and competitiveness.

.

5. CHILE

Cooperation in Science and Technology between Chile and the EU Member States born in the sixties as a natural effect of the training of researchers in Europe, mainly in Germany, France, Britain and Spain. [1]

These links evolved naturally in the 70's and 80's according with the EU consolidation and from 1990 some bilateral cooperation agreements were signed.

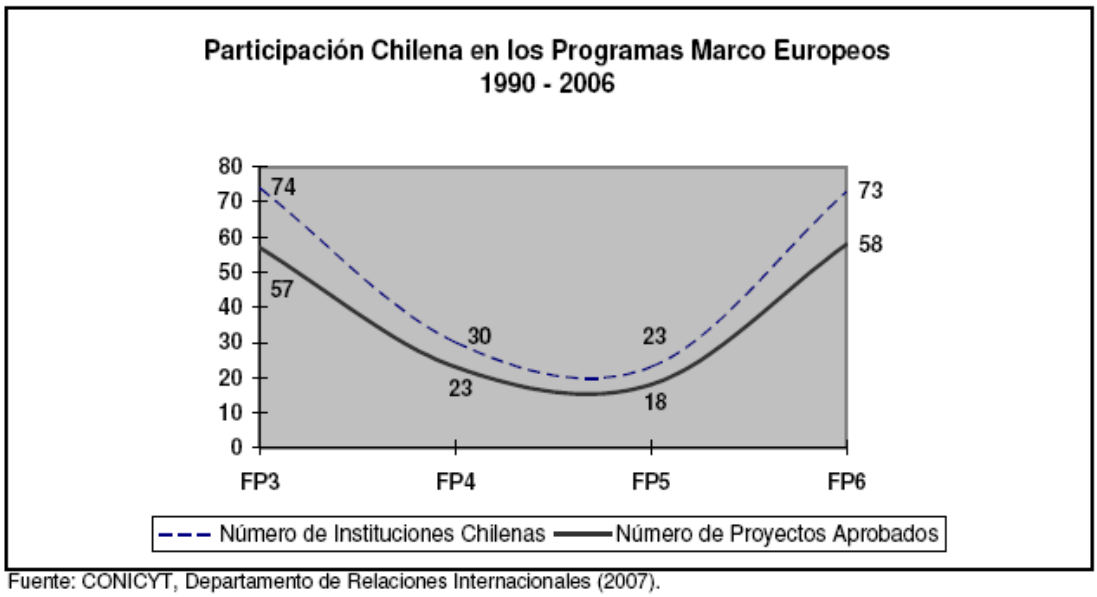
• Bilateral Cooperation with the European Union:
⇒ Cooperation Framework Agreement (1990)
⇒ Second Cooperation Framework Agreement (1996)
⇒ Association Agreement (2002)
⇒ S & T Cooperation Agreement (2002)

Chilean participation in European Framework Programmes started in 1991 in the III Framework Programme (FP3), after signing the first Agreement of Cooperation with the European Union in late 1990. The Chilean government counterpart institution for matters relating to scientific and technological cooperation has always been The National Commission for Scientific and Technological Research, CONICYT.

Chilean scientific community has continuously participated in the Framework Programmes from FP3 to FP7. Between FP3 and FP6 a total of 200 Chilean institutions were involved in research in 156 research projects in partnership with European peers.

The European contribution to the Chilean scientific community stands at 6.9 million Euros for the 58 approved projects under the FP6 (2003-2006). [2]

The chart presented below, shows the evolution of Chilean participation in European Framework Programmes from FP3 to FP6. Two curves are presented with the number of Chilean institutions involved as partners in the proposals (dashed line) and with the number of financed projects with Chilean participation.



Fuente: CONICYT, Departamento de Relaciones Internacionales (2007).

5.1.ICT cooperation within the EU Framework Programme

In this section we will discuss about the current projects in FP7 with Chilean partners participation. First we will identify the current projects and the area in which they are developing. Subsequently we will identify the key actors Chilean involved in academic, industrial and institutional framework to establish a state of the art about the relationship in collaboration in the current FP7 projects where Chilean participation exists.

This report includes all ICT current projects because it is important to establish a relationship between those that support research (Support Action and Infrastructure) and those who execute the research.

5.1.1. Summary table

Currently there are 10 projects developed with participation in the FP7 Chile

Project	**Contract type**
Foresta	Coordination and Support Action
Pro-ideal	Coordination and Support Action
Pro-ideal plus	Coordination and Support Action
Chiep-II	Support Action
Ethical	Coordination Action
Eularinet	Coordination (networking) Action
Evalso	Infrastructure
Gisela	Infrastructure
Imapla	People IRSES
Epikh	People IRSES

According to the statement in the table above projects are classified as follows:

Contract Type	**No. of projects**
Coordination and Support Action	4
Coordination Action	2
Infrastructure	2

People IRSES	2
Total	10

From the identified data can be noted that currently there is an emphasis on project development Coordination and Support Action, which encourage the creation of collaborative networks and encourage the participation of Chilean actors in FP7 research projects. On the other hand, infrastructure projects which have had more continuity in the time, allow having a working platform to promote the development of research projects. In the table we can also be noted that research projects are in the minority compared with the Support Action, but we can keep in mind that the latter are intended to encourage participation in FP7 therefore, the result of them can be seen reflected in the medium term.

5.1.2. Analysis on the differences among cooperation practices

Chilean participation in the 10 current projects is mainly composed of universities and institutions, which exposes a fundamental flaw, the lack of industry participation in R & D activities in FP7.

Type of organization	**No. Of projects**
Universities	3
Industry	0
Institution	3
Total	6

Participation of Chilean Universities in FP7 projects

There are currently three universities participating in four projects of FP7, which represents a low percentage compared to the number of Chilean universities that reaches 60. [3]

University	**Project**
Universidad Tecnológica Metropolitana	FORESTA
Universidad de Chile	ETHICAL
Universidad Técnica Federico Santa María	IMAPLA EPIKH
Total Proyectos	4

Chilean Institutions participating in FP7 projects

In the case of institutions, we see that there are three institutions involved in six projects.

Institutions	**Project**
CONICYT	CHIEP II EULARINET
REUNA	EVALSO GISELA
ADI Chile	PRO IDEAL PRO IDEAL PLUS
Total Project	6

In Annex 3 there is an in-depth analysis of the participation of other Latin America or European companies and institutions in these 10 identified projects.

5.2. Cooperation managed at national level (Iberoeka and other EU Programmes).

5.2.1. Summary table

Iberoeka Programme

During the period 2006-2010 has been approved 28 ICT projects inside IBEROEKA initiative. Most of them (21) have been bilateral Spain-Chile projects. In the rest of them, other LatAm countries (Argentina, Venezuela, Brazil, Panama, Colombia and Uruguay) have participated additionally.

YEAR	**ACRONYM**	**COUNTRIES**
2000	CYBEROEKA	Spain, Chile
2000	SUPCE+	Spain, Chile
2001	CIBERPISCIS	Spain, Brazil, Uruguay, Panamá, Chile
2001	MEDCHIP	Spain, Chile
2001	ERP-AGRÍCOLA	Spain, Argentina, Chile
2001	DIANA 2000	Chile, Spain
2001	DEIMOS	Spain, Chile
2001	PACE	Spain, Venezuela, Chile
2002	E-PYME	Spain, Chile
2002	GKAR7	Spain, México, Colombia, Chile
2002	TRAFICOSEGURO	Spain, Chile

2002	HOTEL WEB	Spain, Chile
2002	TAX FREE	Spain, Chile
2002	PWTF2	Spain, Chile
2003	CGT	Chile, Spain
2003	TERMINAL WEB	Spain, Argentina, Chile
2003	RESOCO	Spain, Chile
2004	SAVADES	Spain, Chile
2004	AUSTRALIS	Spain, Chile
2005	IBER-AVANTHOTEL	Spain, Chile
2005	SICRAJA	Spain, Chile
2005	MOBILE BANKING	Spain, Argentina, Chile
2006	AUTOLIXIVIACIÓN	Spain, Chile
2006	SDMA	Spain, Chile
2007	Q-FORMACIÓN	Spain, Chile
2007	ESTELA	Spain, Chile
2007	DESELE	Spain, Chile
2010	ICOMDEST	Spain, Argentina, Chile

Participants in IBEROEKA projects are mainly companies but in some cases there are Universities.

A table with a more detailed description of the projects is included in Annex 3.

Other bilateral EU-Chile Programmes

CONICYT, as the main official Chilean counterpart for most cooperation programs and international R&D agreements involving Chile, coordinates several cooperation instruments, programs and schemes with many countries and regions.

Additionally, the STIC-AmSud calls are of special interest given its explicit orientation to the applied research in the field of ICTs.

The following table includes projects approved inside these programmes during the period 2009-2010. In this case, participants are mostly Universities and research centres.

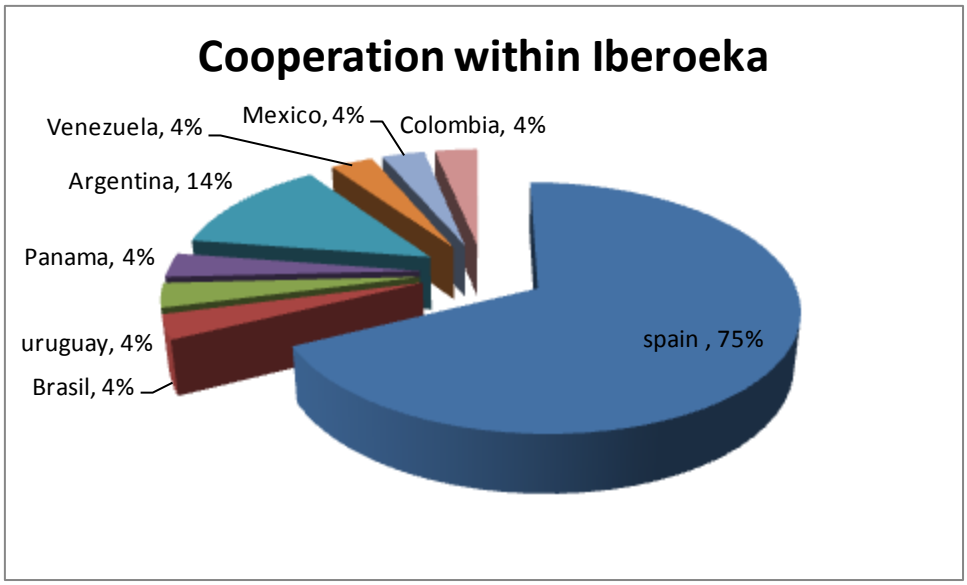
Year	Acronym	Program	Participants
2010	KEOpS	CONICYT-NRA	Chile, France
2010	OVIMINE	STIC-AmSud	Chile, Perú, France
2010	WELCOME	STIC-AmSud	Chile, Argentina, France
2010	LWM	STIC-AmSud	Chile, Brazil, France
2010	I3PE	STIC-AmSud	Chile, Argentina, Brazil, France

2010	DSVANET4ITS	STIC-AmSud	Chile, Brazil, France
2009	NCTVS	STIC-AmSud	Chile, Brazil, France
2009	MoMaRe	STIC-AmSud	Chile, Perú, Argentina, France
2009	ARVS	STIC-AmSud	Chile, Brazil, France
2009	TODAS	STIC-AmSud	Chile, Brazil, France
2009	CAMPUS	STIC-AmSud	Chile, Brazil, Perú, France

In Annex 3 there is an overview about the R&D funding agencies and programmes in Chile, as well as a more detailed description of these projects.

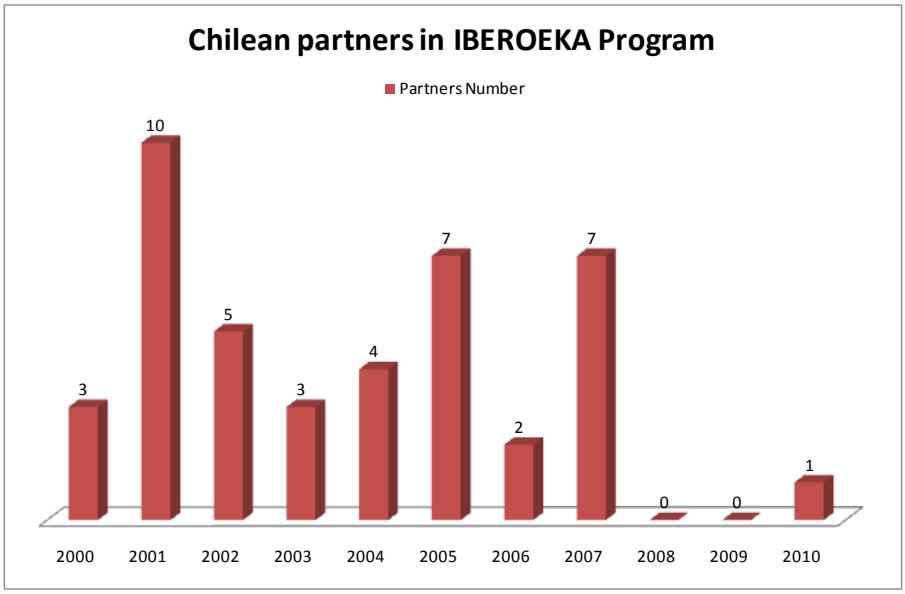
5.2.2. Analysis of the results

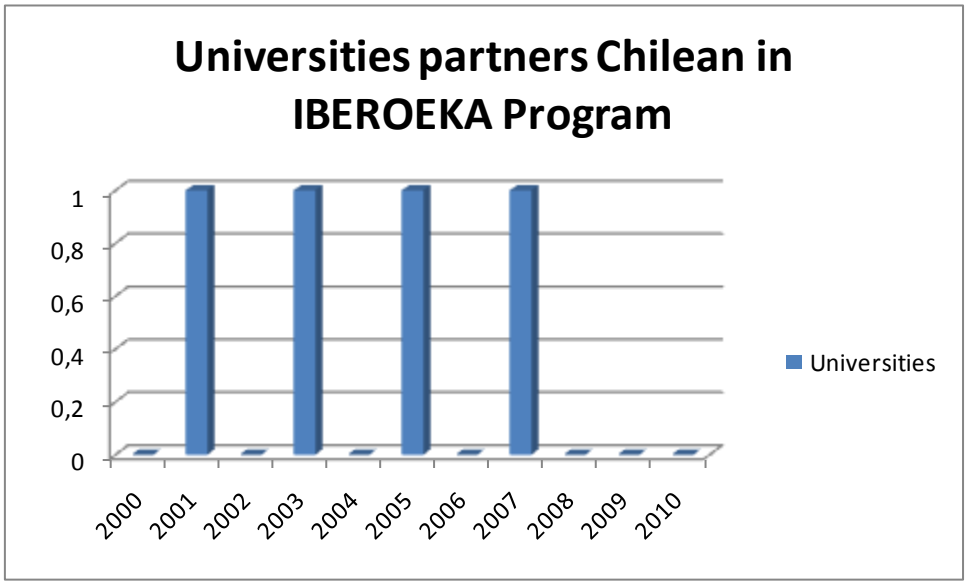
According to our report, since 2000, about 75% of the projects financed under IBEROEKA program with Chilean participation only consider Spain as counterpart while the remaining 25% include other Latin American partners.



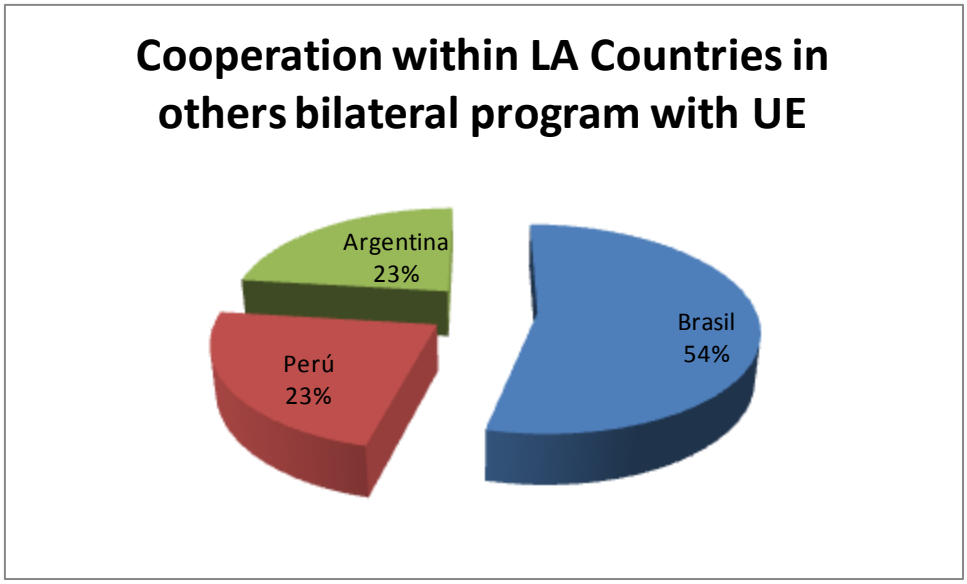
The information obtained and summarized in previous section show a general decrement in the number of Chilean participants in the Iberoeka program. Moreover, the observed records shown that during 2008 and 2009 no projects with Chilean participation were granted in Iberoeka.

Besides this, the involvement of universities is very poor, considering its importance.





Regarding the bilateral cooperation that Chile exhibits with others countries in Latin America including EU partners, our search only reported evidence of systematic bilateral cooperation with France and including only three Latin American partners: Brazil, Argentina and Peru.



5.3.Cooperation in standardization activities in the ICT field

In the area of cooperation between Chile and the EU in other activities and specifically in the field of ICT standardization is necessary to refer to the Agreement on Scientific and Technological Chile-EU signed in 2003 [5], which in Article 5 established forms of cooperation, in which "the parties shall encourage the participation of research institutions and technological development cooperation activities covered by this Agreement in accordance with its internal policies and regulations with a view to providing opportunities for participation in their own research and scientific and technological development". The item No. 9 specifically provides for the exchange of information on practices, laws, regulations and programs related to cooperative activities under this Agreement.

Another important remark of contextually is there in the "Chile Country Strategy Paper 2007-2013" of 11.04.2007 (E/2007/615) [6], commenting on Standards and Technical Regulations in the case of Chile:

"The EU notes with concern the marked tendency for the process of normalization of Chile to include only a reference to U.S. standards, especially when there are no agreed international standards. The immediate effect of such behavior is to divert trade to imports originating outside the EU or to result in additional costs to adapt the products manufactured in the EU. The EU will focus on greater political cooperation and attention to the promotion of international standards, or failing that, the dual recognition of both U.S. standards and the EU. This approach should apply in particular to new technologies, where the local value added of the EU remains considerable."

In Annex 3, there is an analysis of the projects carried out by Chilean companies and institutions in connections with standardization issues.

5.4.Analysis of previous research cooperation activities

This analysis focuses upon cooperation in ICT projects in the context of the framework programs of the period 2002-2010, corresponding to Framework Programme 6 and 7.

According to the report "MAIN RESULTS OF CHILE COOPERATION - EUROPEAN UNION (1990-2007)" of CONICYT [2], the Chilean participation in the Framework Programmes has been quite irregular. This is due largely to the evolution of the European strategy for research and development and its international cooperation policy towards third countries. International cooperation policy of the

European Commission in the Research area radically changed in FP4 and FP3 FP5 respect. This becomes a positive change in the FP6 for the previous two.

Nationally, during the period 1991-2006, there were also major changes in emphasis and policy priorities of international cooperation in science and technology. In Chile from 2000 onwards there has been considerable convergence between the Chile and the European Commission to coincide in the development of a society and knowledge-based economy for which investment in research and development and innovation is fundamental not only to improve national productivity and competitiveness but also to improve the quality of life and social development levels of our countries.

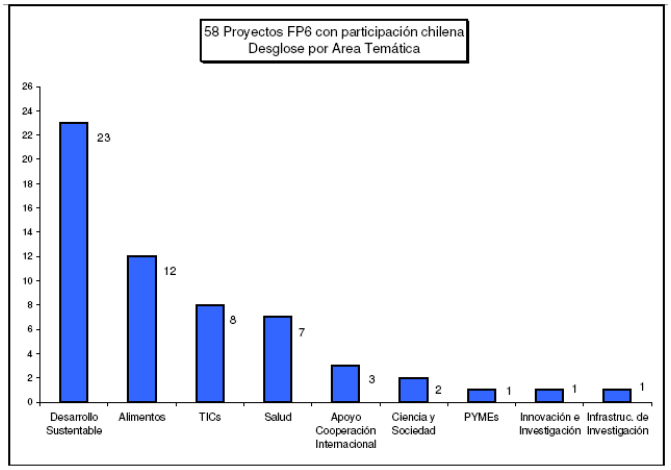
Analysis of Chilean participation in FP6

Chile's participation in the Sixth European Framework Programme (FP6) was clearly marked by the signing of specific scientific and technological cooperation with the EU, which coincides with the beginning of the 6th Framework Programme, where Chile was able to participate in this program on an equal with Member States. This meant to present proposals in all thematic areas defined as third country, in addition to the existing opportunities through INCO.

The results were satisfactory, with a Chilean participation in 58 joint research projects, which represented a contribution of more than 6 million Euros for the Chilean scientific community in the period.

Finally, greatly strengthened political dialogue and mutual understanding, which culminated in the creation of "liaison office Chile-EU" in the Department of Foreign International CONICYT, under the name "European Union Program" and the existence of NCPs officially recognized by the European Commission, which has helped to strengthen Chile's participation in this program and facilitating the international relations of the Chilean scientific and technological community.

The main results of the Chilean participation in the FP6 ICT can be seen in the table presented below:



Fuente: CONICYT, Departamento de Relaciones Internacionales (2007).

In the 6th Framework Programme developed eight projects in the ICT thematic line that is detailed in Annex 3 (point 10.3.5). From this total of eight research projects implemented with participation Chilean ICT in FP6 include three who have had a clear continuity after its completion, according to information available on the official websites of Cordis and projects, as well as reporting Results of EU cooperation CONICYT Chile.

As a result of the analysis of previous cooperation initiatives under FP6 and its impact after its completion stands out:

- **The generation of new research projects based on a continuum of projects** financed by the

EU programs from @Lis and previous Framework Programmes, mainly in the field of infrastructure development and specifically the development of Grids. Stresses the FP6 project "E-Infrastructure Shared Between Europe and Latin America (EELA)" in which participated as a Chilean partner REUNA, whose have like a antecedent the projects ALICE and ALICE2, both with funding from @Lis and continued in subsequent stages with EELA and EELA2 with funding from FP6 and FP7 respectively. Recently this line of development has been awarded the project GISELA (FP7) and started operations in September this year.

- **I**t also stresses the continuity of FP6 project "A Production Astronomy e-VLBI Infrastructure (EXPRESS-VLBI Service)"completed in February 2009 in which participated the University of Concepción as Chilean partner. The research group has now been awarded a new FP7 funding under the project "Novel Explorations Pushing Robust e-VLBI Services (nExpr)" (July 2010). But it is worth noting that the current working group has been formed with European partners and an only partner from outside the EC (Australia) remains outside the Chilean participation. Is unknown the background to establish the reason for the exclusion of Chilean participant in this new FP7 project.
- T**he exploration of forming a commercial service as a result from a FP6 project**. Can establish that there is only one project with a background in the field of applied innovation funded under FP6 "Remote Instrumentation in Next-generation Grids (RINGrid)" in which at the time of development had prospects of settling as a commercial service for to the medical research area, and that its prototype was developed by financial contributions of Innova CORFO to keep the system operating as a service over time. The prototype project called UCRAV "Grid Scientific Instrumentation". Currently is not operating the system and is unknown the reasons which had no commercial success at universities and the productive sector.

Analysis of Chilean participation in FP7

Up to now, four research projects have been completed in the ICT thematic line of the 7th Framework Programme, which are detailed in Annex 3 (point 10.3.5).

Of the three projects for research already completed in the FP7 highlights the participation of REUNA like a Chilean partner at EELA 2 which, as mentioned in the previous section, is a derivative of an FP6 project and currently remains as a partner in GISELA project recently awarded, and therefore conforms in the research line with the career Chilean most prominent in the Framework Programmes.

Regarding the analysis of previous cooperation and its impact on the current status of cooperation, we can finally conclude that:

- **There is no information that would establish a robust result of commercial activities** as a result of ICT research projects funded by the Framework Programmes in the field of Chilean participation.
- Related to the above, **on business results, it is noteworthy that of the eleven projects involving Chilean ICT cooperation, there is no participation of companies**. All belong to Chilean universities or private corporations non-profit. The only reference in the national level is the project "SALA + " but was left out of this analysis because it corresponds to a Support Action, an analysis that focuses on cooperation initiatives in the field of research.

The scope of cooperation and infrastructure, specifically Grids, stands out as the line that has had the experience stronger and sustained participation in EU programs with a history of involvement in five projects in various programs from @ Lis, FP6 to FP7.

5.5. Conclusions

In the analysis of the data presented above is shown the interest of Chilean community academic and institutional to participate in FP7 projects. The universities are actively involved in the development of collaborative research and development activities that promote political debate and the participation of more actors in R & D in FP7 while Chilean institutions involved in the development of infrastructure for collaborative research and in coordinating efforts to promote research and development.

However, our study reveals one of the major flaws in the national context where there is no permanent connection between industry and academic actors. While there are national instruments that promote working together industry and university, through FONDEF and Innova Chile, this has not been extended to the companies' participation in FP7 projects. This has a structural explanation, that is, it reflects a disconnect between academia and business, as evidenced an article published by the specialized financial journal “Diario Financiero” in September 2010 where it is stated the following: "According to the Council of Rectors of Chilean Universities, only 11% of professionals with PhD are working in the productive sector. The latest innovation survey, meanwhile, showed that only 5% of resources allocated to business R & D projects are invested in activities in partnership with universities. Both figures show the tenuous connection between the productive innovation development and basic sciences, key relationship to allow the development of applied research, product creation and generation of own technologies."[7]

In the same article, Alfredo del Valle [9] expressed the lack of a connection point between academic work and productive industrial activities, while Alfonso Cruz [8] states that you must build, develop and design a system or "bridge" that allows the scientific system to talk with applied research, especially because the demand for the latter is scarce.

In another article, Raul Serrano, deputy director of Innovo Usach Technology Management, states that "the link between business-university does not occur naturally. The university and the company have a lack of harmony. ". [10]

The disconnection between university and enterprise is a situation identified by various national actors must be addressed systematically by the various agents involved in policies and actions of R + D + i Chile. In this sense, the importance of the work of the Support Actions FP7 represents an opportunity to encourage the formation of collaborative teams and applying for various calls of FP7.

The lack of participation of enterprises in research projects also reflects the absence of further business activities as a result of ICT research projects funded by the Framework Programmes in the field of Chilean participation.

For this to happen, work motivation and understanding of the various aspects involved in the FP7 participation is essential in the three bodies involved in innovation policy: academia, industry and Government.

6. ARGENTINA

6.1.ICT cooperation within the EU Framework Programme

6.1.1. Summary table

Project acronym	Framework Programme	Total cost (million euro)	EU contribution (million euro)	Project start date	Duration [months]	Project Status
FLOSSWORLD	6th FWP	0,67	0,66	01/05/2005	26	Completed
PLASTIC	6th FWP	4,33	2,5	01/02/2006	30	Completed
SELF	6th FWP	0,98	0,98	01/07/2006	25	Completed
SOLAR-ICT	6th FWP	5,59	0,52	01/01/2007	21	Completed
WINDS LA	6th FWP	0,62	0,59	01/01/2007	24	Completed
COMOESTAS	7th FWP	2,01	1,6	01/01/2008	30	Completed
FLOSSINCLUDE	7th FWP	1,14	0,7	01/02/2008	24	Completed
MANCOOSI	7th FWP	4,5	3,32	01/02/2008	36	Execution
SALA+	7th FWP	0,8	0,72	01/03/2008	24	Completed
ACTION-GRID	7th FWP	1,12	1	01/06/2008	18	Completed
PRO-IDEAL	7th FWP	0,57	0,51	01/11/2008	30	Execution

In Annex 4 (point 10.4.1) there is a more detailed table with these projects.

6.1.2. Analysis on the differences among cooperation practices

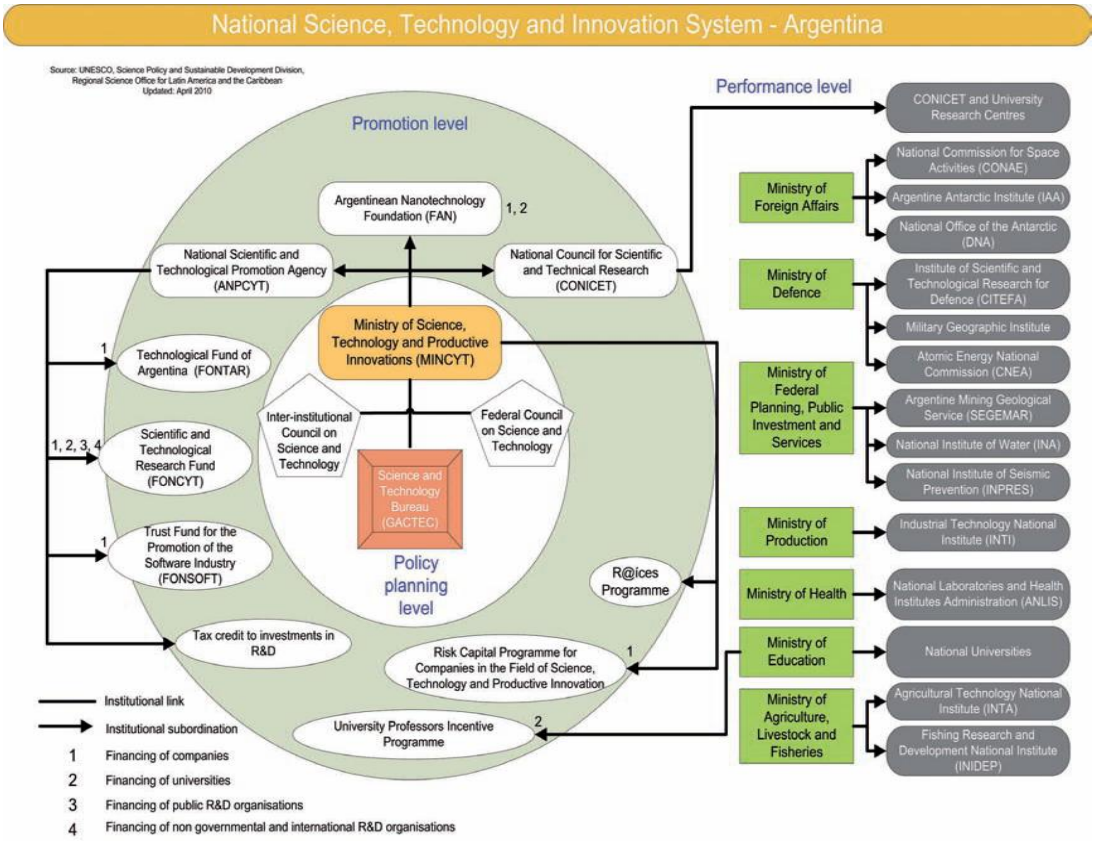
General Framework and Trends in Science, Technology and Innovation Policies

In 2007, Argentina's System of Science, Technology and Innovation (STI) underwent a re-structuring process that resulted in the creation of the Ministry of Science, Technology and Productive Innovation (Ministerio de Ciencia, Tecnología e Innovación Productiva - MINCYT). Its main functions are:

Coordinating the actions of the System's actors, assessing the activities of bodies in charge of STI promotion and execution and formulating STI policies jointly with the Cabinet for Science and Technology (Gabinete Científico y Tecnológico - GACTEC).

GACTEC is an inter-ministerial body in charge of formulating STI policies through the approval of pluri-annual plans submitted by the MINCYT. It is also responsible for defining STI policy priorities and for allocating the public sector budgetary resources for Science and Technology. Its members are representatives from various Ministries, and it is chaired by the Head of the Cabinet of Ministers.

Additionally, the National Council for Scientific and Technical Research (Consejo Nacional de Investigaciones Científicas y Técnicas - CONICET) is a decentralized entity within the jurisdiction of the MINCYT, whose objective is to promote and implement scientific and technological activities in accordance with government policies, priorities and guidelines set forth in the National STI Plans. The system of executing units of CONICET consists of 105 research institutes, 6 regional centres, and 2 service centres. In addition to these, the National Research and Services Labs (Laboratorios Nacionales de Investigación y Servicios - LANAIS) provide services to the scientific and academic community, as well as to the general public.



The National Scientific and Technological Promotion Agency (Agencia Nacional de Promoción Científica y Tecnológica - ANPCYT) was created to fund the STI by channelling economic resources and to manage the economic demands of promoting and developing the field. With regards to its structure it is a decentralized body that reports to the MINCYT administered by a nine-member board of directors. The Technological Fund of Argentina (Fondo Tecnológico Argentino - FONTAR), as well as the Scientific and Technological Research Fund (Fondo para la Investigación Científica y Tecnológica - FONCYT) and the Trust Fund for Promotion of the Software Industry (Fondo Fiduciario de Promoción de la Industria del Software - FONSOFT) are all part of the Agency. Created in 2005, the Argentinean Nanotechnology Foundation (Fundación Argentina de Nanotecnología - FAN) is a non-profit entity which has to set the

basis for promoting the development of national human and technical infrastructure in the field of nano and micro-technology.

Lastly, the Inter-institutional Council on Science and Technology (Consejo Interinstitucional de Ciencia y Tecnología - CICyT), created by Law Nº 25,467 (2000), has the function of coordinating the systems bodies, seeking exchange and cooperation towards more effective institutional programmes and projects. Moreover, the CICyT is oriented towards defining common policies, as well as a closer linkage to the community and the production sector.

Main Initiatives for Promoting Interaction between Science and Industry

Three initiatives for the promotion of a greater interaction between the private sector and other actors of the Science and Technology System at the international level are to be pointed out:

- The Secretariat for Scientific and Technological Articulation (Secretaría de Articulación Científico Tecnológica) (MINCYT): Aimed at fostering the linkage between academic agencies, universities and R&D institutions towards greater coordination in research activities;
- The National Inter-university Council (Consejo Interuniversitario Nacional): An organization that encompasses all the national public universities. Since 2001, it has held a cooperation agreement with the Industrial Union of Argentina (Unión Argentina Industrial) to work jointly in the creation of cooperation opportunities between the productive sectors, the public and private universities, and the rest of the scientific, technological and education system;
- The Network for Technology Linkage (Red de Vinculación Tecnológica - RedVT) between public universities in Argentina: Its overall objective is to coordinate the efforts of technology-related areas for promoting knowledge contribution and cooperation between Argentinian universities and the social, productive and governmental sectors. Furthermore, there are initiatives in the form of programmes and projects that also contribute to articulating the Science and Technology System with private actors:
- INNOVAR Programme (2005): A platform for launching products and/or processes which have outstanding design, technology or originality. It is aimed at consolidating an environment favorable to innovation in society;
- Fund for Scientific and Technological Research (Fondo para la Investigación Científica y Tecnológica - FONCyT): Funds Projects for the Adjustment and/or Improvement of Infrastructure (Proyectos de Adecuación y/o mejora de infraestructura - PRAMIN), Projects for Infrastructure and Technological Equipment (Proyectos de Infraestructura y Equipamiento Tecnológico - PRIETEC), Scientific Meetings (Reuniones Científicas - RC), Projects for equipment modernization (Proyectos de modernización de equipamiento - RC), Research and Development projects (Proyectos de investigación y desarrollo - PID), Oriented Scientific and Technological Research Projects (Proyectos de investigación científica y tecnológica orientados - PICTO), and Projects on Scientific and Technological Research (Proyectos de investigación científica y tecnológica - PICT);
- Venture Capital Programme for Enterprises in the Field of Science, Technology and Productive Innovation: Promotes the investment of venture capital and favors the initial phases of emerging enterprises.
- Projects in Strategic Areas (Proyectos en Áreas Estratégicas - PAE), and Productive Clusters Integrated Projects (Proyectos Integrados de Aglomerados Productivos - PITEC): Intended for strengthening research and technology innovational capacity, with focus on the strategic sector through the promotion of public-private associations;
- Sectorial Fund (Fondo Argentino Sectorial - FONARSEC): The Secretariat for Planning and

Policies of the Ministry of Science, Technology and Productive Innovation, in addition to the Agencies, is currently assessing alternative funding schemes that are complementary to those already available, such as the mechanisms of sectorial funds. The FONARSEC is a new funding instrument of the Agency that is complimentary to the lines of action developed by the FONCYT and the FONTAR;

- Technological Fund of Argentina (Fondo Tecnológico Argentino - FONTAR): It funds innovation projects through different instruments implemented by public calls or permanent windows of opportunity. Projects funded by the FONTAR include: technological development and modernization, patenting expenses, technological services for institutions and for SMEs, training, technical assistance, technological advisory programmes, entrepreneurial incubators and technology parks and poles.
- National Institute for Industrial Technology (Instituto Nacional de Tecnología Industrial - INTI): This institute has the objective of promoting competitiveness in the industrial sector through the transfer of research and technology;
- National Institute for Agricultural Technology (Instituto Nacional de Tecnología Agrícola - INTA): Its main objective is to contribute to the competitiveness of the agriculture, forestry and agro-industry sector throughout the nation, by providing support to STI and technology transfer, within a framework of ecological and social sustainability;
- Integrated Fund for Regional Development (Fondo Integral para el Desarrollo Regional - FONDER): A programme framed by the current public STI policies and focused on the strengthening of local productive development processes from an integrated approach.

6.2. Cooperation within Iberoeka and other European Programmes managed at national level.

6.2.1. Summary table

Iberoeka projects

There have been 49projects with most of the countries in LA. The most frequent partners of Argentina have been Brazil and Spain. There is no information at the CYTEDWebsite about the results of these projects.

In the Annex 4 (point 10.4.2) there is a list of these projects.

Bilateral agreements

According to the information provided by the Science, Technology and Productive Innovation Ministry (MINCyT), the Argentine Republica bilateral R&D agreements with 12 countries(4 belonging to LA, 6 belonging to the EU and 2 to Asia and East Europe).Figure 1 shows the distribution of the number of projects with each country:

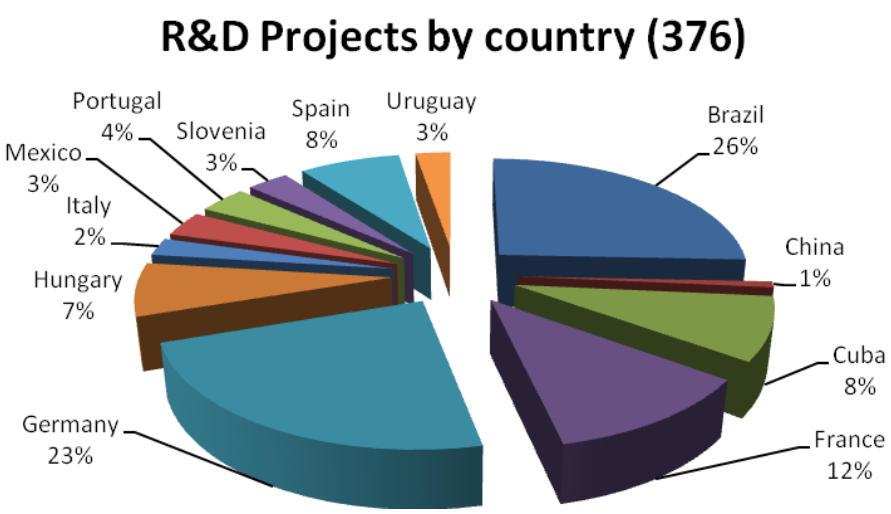


Figure 1

Figure2 shows the evolution of the number of projects in the past 6 years. The diminution of the number of projects in the two last years is due to extension of the projects (two years) and because they haven't finished yet

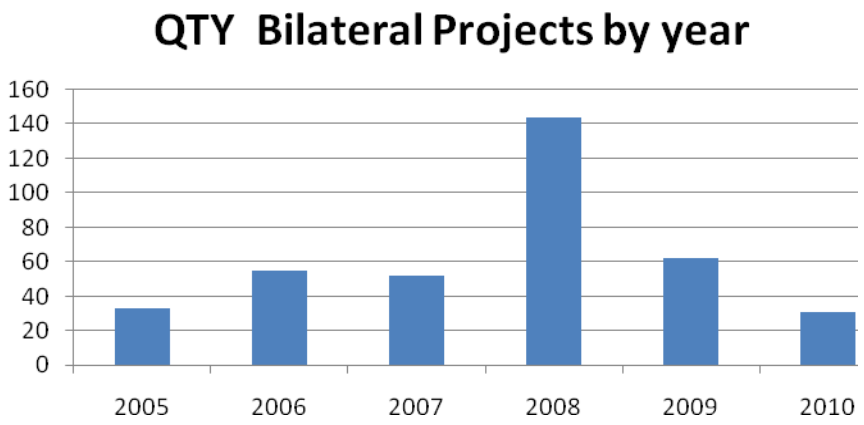


Figure 2

Figure 3 shows the distribution of the 376 projects by R&D area

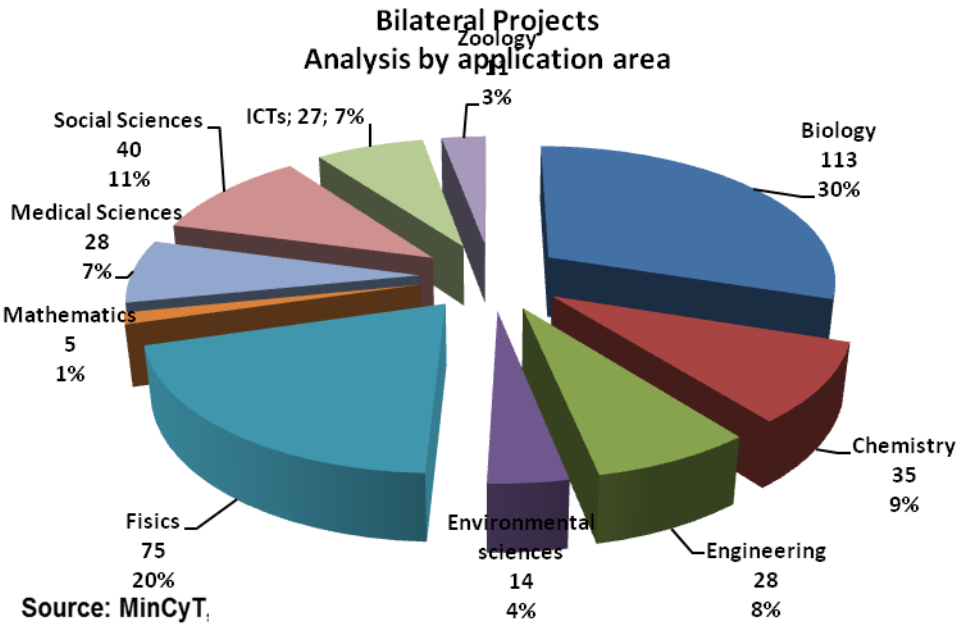


Figure 3

Only 27 of the 376 Projects (7%) belong to the ICT area.

6.2.2. Analysis of the results

Iberoeka projects

Figure 4 shows the relative participation of other countries in Argentine projects

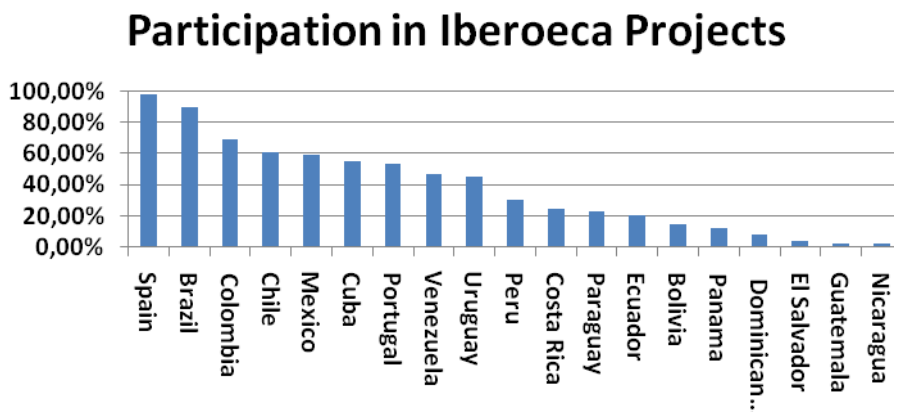


Figure 4

Spain and Brazil have participated in more than 80% of the projects. Colombia, Chile, Mexico, Cuba, Portugal, Venezuela and Uruguay have participated in a range of 40% to 70% and the remaining countries have participated in less 30% of the projects.

Figure 5 shows the detailed participation of all countries

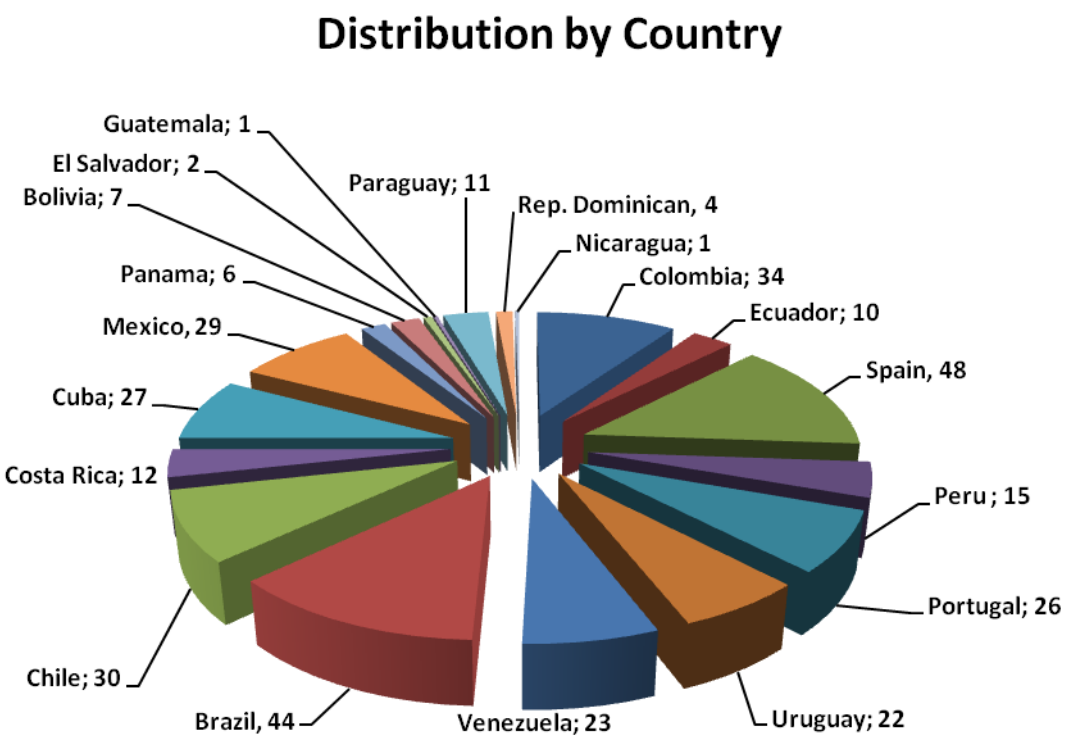


Figure 5

The institutions have been divided in three categories:

a) Foundations: Non-profit research organizations
b) Institutes: Governmental organizations oriented to a precise area of knowledge
c) Hospitals: Sanitary organizations public or private
d) Universities: Public or private education organizations
e) Enterprises: All kind of commercial organizations

Most of the projects have a University as a leader (67%) and only a 2% have an Enterprise as a leader. Figure 6 shows the overall distribution

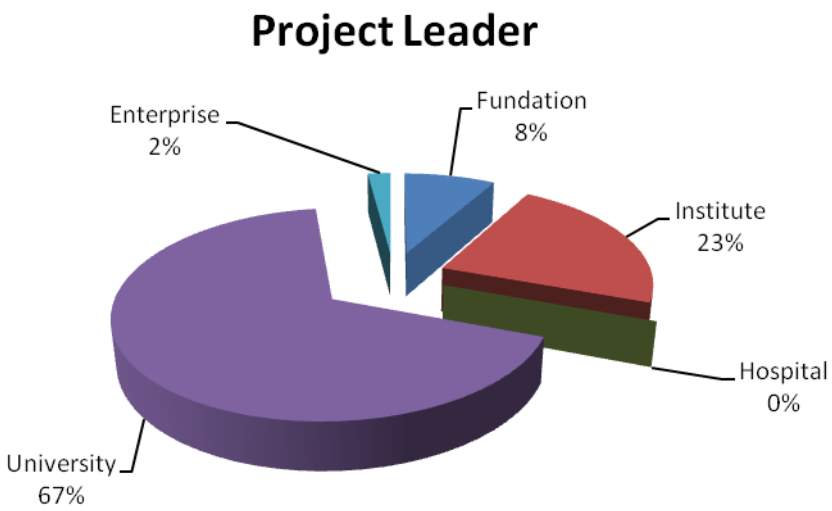


Figure 6

Analyzing the members of the projects, we found that the Universities and Research Institutes are part of the projects in the 73% of them. We found also that the Enterprise participation is higher as participant in projects rather than as project leaders.

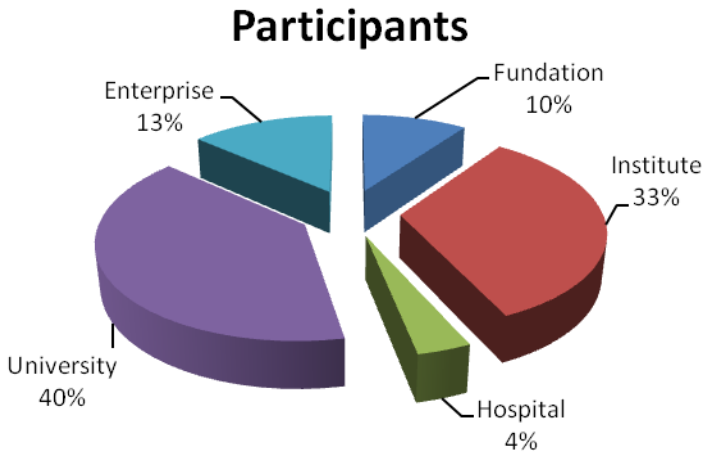


Figure 7

Another interesting point is the analysis of the interaction between the different types of institutions. For readability of the result in this type of analysis we have built only one category with the name research centre the data of Foundations, Institutes and Hospitals. The results can be viewed in Figure 8.

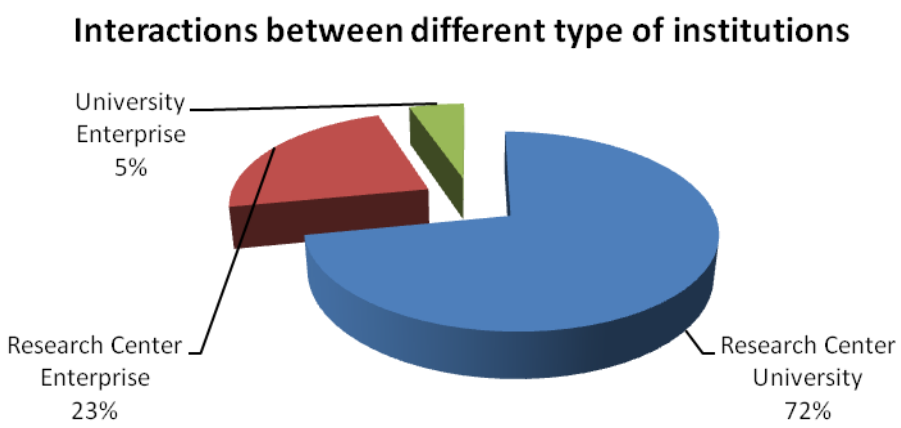


Figure 8

The most important interaction occurs between Research Centres and Universities (72% of the projects). This fact means that in 72% of the projects there are at least one Research Centre and at least one University. The most weak interaction appears between the University and Enterprises that only occurs in the 5% of the projects.

As it is stated at the site of CYTED, IBEROEKA's main objective is, through close **collaboration between companies and research centres**, to increase the productivity and competitiveness of the national industries and economies that form the basis of lasting prosperity within the Ibero-American community. In spite of that, **in Argentina the enterprises have a very low integration in these projects**. The interactions between Companies and Universities are very low (5%)

Bilateral agreements

Figure 9 shows the distribution by country only in the ICT area. Only 18% are within LA countries and that the remaining 82% are with the EU

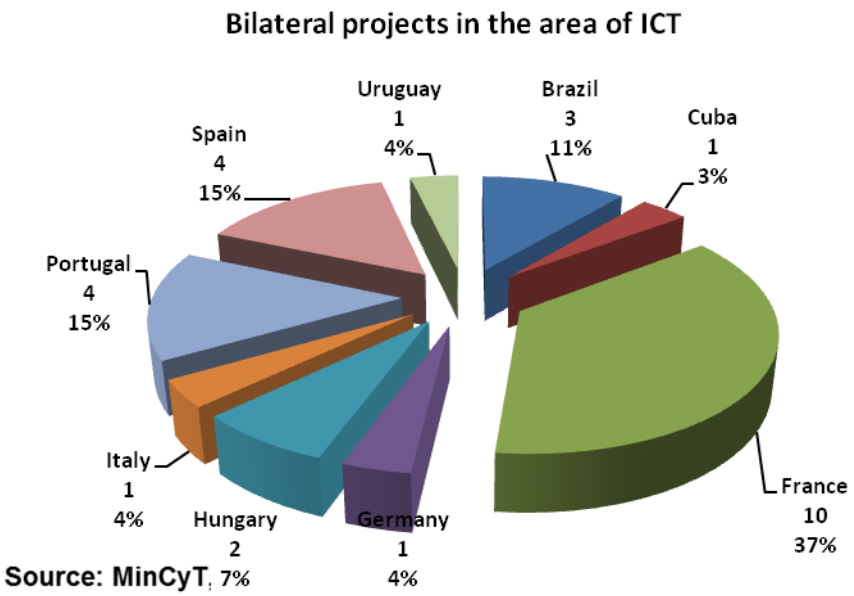


Figure 9

Figure 10 shows that the ICT projects have a similar behavior compared with the projects of the overall areas.

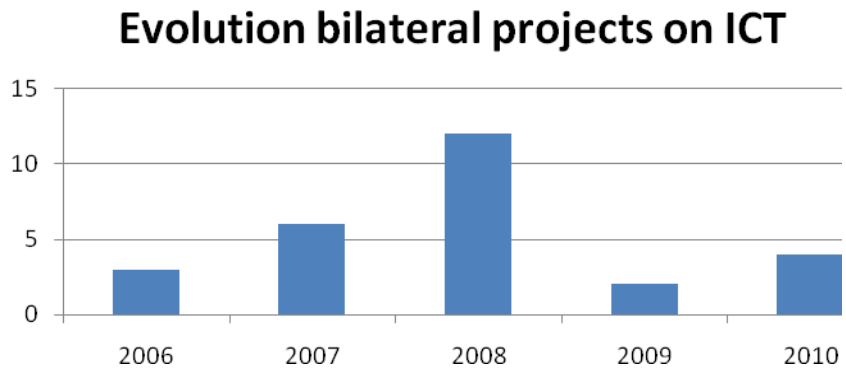


Figure 10

From the previous information, we may conclude that **bilateral agreements are only 7% of the total R&D projects, so it is possible to promote de realization of agreements with countries in LA and EU**.

6.3. Cooperation in standardization activities in the ICT field

There are no standardization activities between Argentina and UE in the ICT field. The most recent decision regarding standardization in the ICT field was to adopt the Brazilian-Japanese TV standard (ISDB-T).

6.4.Analysis of previous research cooperation activities

Argentina has subscribed STI agreements with over 150 countries and stands out for the number of ongoing projects and cooperation programmes with Brazil, Chile, Mexico, the U.S., and Canada in America; France, Belgium, England, Germany, Holland and Italy in Europe; China, Israel and Japan in Asia, and South Africa in Africa. Also, the following programmes and projects should be mentioned as they are Argentina's most ambitious initiatives and are evidence of a significant international trend in the Argentinean System:

- CYTED Ibero-American Programme: One of the main areas of international participation of Argentina;
- Ibero-American Network for Local Knowledge and Practice on the Plant Environment (RISAPRET) within the framework of the CYTED Ibero American Programme;
- BIOTECSUR is a biotechnology platform for the MERCOSUR (the Common Market of the South) originating in the BIOTECH - MERCOSUR – EU project for the development of specific R&D actions focused on regional priorities;
- Argentinean-Brazilian Biotechnology Centre (Centro Argentino Brasilero de Biotecnología - CABBIO): A coordinating entity that includes a network or biotechnology research groups. Its objective is to promote interaction between science centres and the productive sector by means of two types of activities: The implementation of bi-national projects for research and the development and training of high-level human resources with courses at the Argentinean/Brazilian School of Biotechnology (Escuela Argentina Brasileña de Biotecnología - EABBIO);
- Pierre Auger Project: A basic science initiative that aims at the study of the causes of the existence of known high-energy radiation such as the cosmic rays. These rays originate in outer space and upon reaching the surface of the Earth are sensed by the detectors at an observatory located in the Argentinean province of Mendoza;
- Gemini Observatory: Made up of two optical/infrared telescopes, one located at the Mauna Kea volcano in Hawaii and the other on Pachón Hill in Chile. Both operate with the cooperation of Argentina, Australia, Brazil, Canada, Chile, the U.K and the U.S.
- Morning Constellation: An international initiative for observing the Earth, consisting of the US satellites Landsat 7, Eo-1 and Terra and the SAC-C Argentinean satellite. The Constellation increases synergy among different instruments, provides new capacities for observing the Earth, explores the usefulness of autonomous navigation techniques and allows instruments aboard the different satellites to obtain images of different resolutions in different bands;
- Italian-Argentinean Satellites System for Emergency Management: This is a joint initiative of Argentinean and Italian space agencies to prevent, mitigate and assess catastrophes, to preserve the environment and to improve agriculture. This is the first satellite system in the world designed specifically for this purpose;
- Multinational System of Specialized Information on Biotechnology and Food Technology for Latin America and the Caribbean (SIMBIOSIS) for Latin America and the Caribbean: A virtual network for connecting scientists, experts and research centres interested in biotechnology, food technology and biodiversity. It is sponsored by the member States and the OAS. The SIMBIOSIS network provides information on existing research programmes, national institutions, development efforts and human capacity for STI;
- Great Hadrons Collider (also referred to as European Particles Accelerator): This is a highly sophisticated 27-kilometer underground ring located in Geneva, Switzerland. It was built by the

European Particle Physics Lab (CERN) with the objective of reproducing the physical conditions that gave origin to the Universe and to find the so-called Higgs boson.

One of the first participations of Argentinian scientists in CERN activities took place in 1975-1978 with scientists from the Universidad Nacional de Mar del Plata (UNMP) participating in the design and modification of power supplies for focusing magnets in the group PS/PO. Subsequently, individual high-energy physicists participated in EMC and L3.

In 1992 an ICA was signed with the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), which was replaced in 2007 by a higher-level ICA with the Government of Argentina.

The third CERN-LA School of Physics, for postgraduate students working towards a PhD, was organized in Malargüe (Argentina) in 2005. The HELEN Network has been very helpful for the development of the CERN-Argentinian relations, being instrumental for the groups of the Universidad de Buenos Aires (UBA) and the Universidad Nacional de la Plata (UNLP) to become members of the ATLAS Collaboration. The President of Argentina visited CERN in 2009.

(http://international-relations.web.cern.ch/International-Relations/nms/argentina.html)

Specific cooperation in ICT area

While in FP6 only 5 Argentinean organizations had participated in four ICT projects, and four organizations had participated in two e-Infrastructures projects, so far in FP7 there are 10participations in eight ICT projects, as well as four participations in two e-Infrastructure projects. The projects concern software and services, mobile and wireless systems, networked services, ICT for health, open source software, research infrastructures, including e-Infrastructure to remotely access to the AUGER observatory located in Argentina, GRID technologies and the support of international cooperation. The ICT NCP visited many institutions located in Ciudad de Buenos Aires and in different provinces to present the ICTFP7 opportunities. This dissemination is reinforced constantly with the MINCyT attendance of specific IT events, workshops and meetings.

The priority themes on ICT areas for Argentina are: Components, systems, engineering; Micro y nano-electronic, Radio frequency identification RFID, Systems on-chip, Embedded systems: low cost sensors, ICT for Independent Living and Inclusion, Applications of ICT for improving the logistics of agricultural bulk exports, Applications of ICT for greater social inclusion (including applications to education).These subjects are based on the results of the Forum "2020: Perspectives and Strategies in Science, Technology and innovation", organized by the MINCyT in 2008. This multi-sectorial and multi-stakeholder effort gathered more than 150 key actors to identify the technologies, application areas and business that should be primarily fostered in the ICT area in Argentina in the next years.

In order to strengthen the EU-Argentina ICT cooperation, five European Technology Platforms (ETPs) were suggested due to their topics and current projects, which bring into line with Argentinean priorities and the work carried out in some Latin American ETPs (1 means high priority, and 5 means lower priority):

1. Networked European Software and Services Initiative (NESSI).
2. Embedded Computing Systems (ARTEMIS).
3. Networked and Electronic Media (NEM)
4. European Technology Platform on Smart Systems Integration (Epos)
5. Mobile and Wireless Communications – eMobility.

This collaboration will give some opportunities to overcome one of the main challenges for ICT

international cooperation, meaning to promote and enhance effective cooperation among private enterprises in R&D ICT stakeholders.

6.5. Conclusions

Argentina has established strong institutions at the national level for science and technology oversight and support. Yet, unrealized potential remains for adopting a coherent approach to research and development, particularly for reinforcing public-private partnerships. It is a fact that Argentina underinvests in R&D. Notably, private sector involvement in R&D is very low by international standards. In part, this can be attributed to the prevalence of small and medium-size enterprises with few innovative sales. Moreover, Argentina's national innovation system is marked by weak linkages between private companies, universities and Government research institutions. Public-private collaboration is only common in regard to the financing of research. Another weakness of the innovation system is the lack of R&D personnel with advanced degrees. Strengthening graduate education, boosting private sector R&D and fostering linkages would be important first steps in building a globally competitive Argentine national innovation system.

Related to Iberoeka projects, and as it is stated at the site of CYTED, IBEROEKA's main objective is, through close **collaboration between companies and research centres**, to increase the productivity and competitiveness of the national industries and economies that form the basis of lasting prosperity within the Ibero-American community.

In spite of that, **in Argentina the enterprises have a very low integration in these projects**. The interactions between Companies and Universities are very low (5%)

Regarding to bilateral projects, we may conclude that **bilateral agreements are only 7% of the total R&D projects, so it is possible to promote the signature of agreements with countries in LA and EU**.

Finally, it is important to remark that there is no governmental office especially devoted to ICTs. Even though there are some sectors within several ministries, the lack of a Ministry, or at least a Secretary, in charge of the whole ICT national policy, is a problem not only to coordinate several and different activities, but to collect and organize all the information regarding this sector.

7. MEXICO

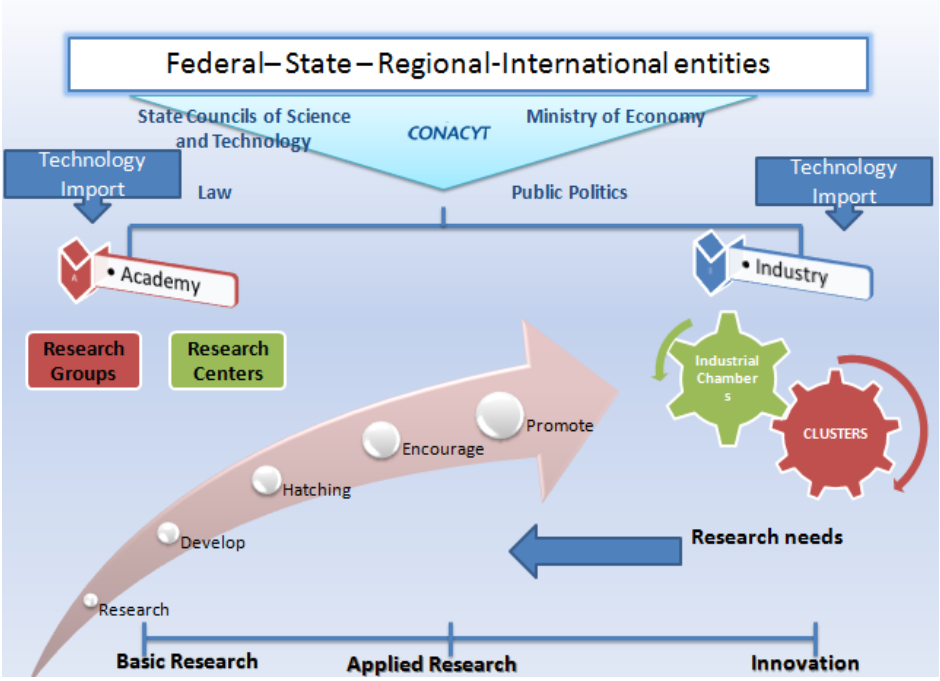
7.1.ICT cooperation within the EU Framework Programme

7.1.1. Summary table

Funding program	Project Acronym	Project Title	Mexican participant
3 INCO	EULARINET	European Union - Latin American Research and Innovation NETworks	CONACYT
2 ICT	OASIS	Open Architecture for Accessible Services Integration and Standardisation	ITESM
3 INCO	UEMEXCYT 2	Bureau for EU-Mexican Science and Technology Cooperation – Step II	CONACYT
1-3 INFRA	EELA-2	E-SCIENCE GRID FACILITY FOR EUROPE AND LATIN AMERICA	UNAM
3 ICT	IDEALIST2011	Trans-national cooperation among ICT National Contact Points	ITESM
3 INCO	INCONTACT-ONE WORLD	Trans-national co-operation among NCPs for International Cooperation	CONACYT
2 SiS	KIDSINNSCIENCE	Innovation in Science Education - Turning Kids on to Science	CINVESTAV
3 INCO	ACCESS2MEXCYT	Promoting High-Quality Research Opportunities for European Researchers in Mexico	CONACYT
3INCO	ENLACE	Enhancing Scientific Cooperation between the European Union and Central America	EL COLEGIO DE LA FRONTERA SUR
3 ICT	PRO-IDEAL PLUS	Promotion of an ICT Dialogue between Europe and America Latina – extension towards Mexico, Colombia, Cuba, Costa Rica	ITESM
3 ICT	FORESTA	Fostering the Research Dimension of Science and Technology Agreements	ITESM
3 ICT	FIRST	Implementing cooperation on Future Internet and ICT Components between Europe and Latin America	ITESM

7.1.2. Analysis on the differences among cooperation practices

Cooperation Practices in Mexico



CONACYT is the entity responsible for the development of policies for science and technology in Mexico, the Ministry of Economy (Secretaría de Economía) promotes equity in employment generation and the country's economic growth by promoting policies in order to detonate the competitiveness and investment in the productive sector, and the State Councils of Science and Technology are the responsible for detecting the requirements of research and innovation and define the policy to follow for each state and create the necessary human resources. These three entities, each one in their own work area, promote scientific cooperation at a national level with both national and international organizations.

Cooperation practices in Mexico are given through by companies, technology institutes, universities and research centres (as shown in Figure 7, D3.1).

The academy promotes the cooperation practices, by research groups and research centres, and converges to generate scientific cooperation directly with industry or other academic institutions in order to develop the idea and finally launch a new product or service to the market.

The research process of the academy usually is (research-development - hatching - encourage and promote), it is important to mention that this model changes according to each institution. The author of this model is the Tecnológico de Monterrey.

The Industry also research and converges with the academy by providing their research needs. Also industrial chambers and clusters have contact with each other and share ideas to express the market needs to the government in order to be taken into account for national economic development plans.

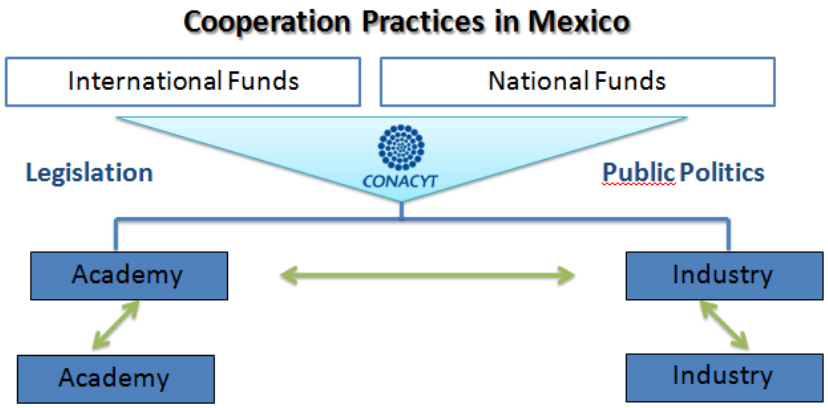
It is important to mention that "R&D and technological innovation are still regarded as contributory or even marginal contributors to competitiveness and productivity of the economy nation-wide and regionally but nowhere is clearly stated the role of innovation and behind it of R&D, as a cornerstone of national and regional progress both on strictly economic grounds but also in social and environmental

matters.

A clear example of that is the fact that some critical elements in the design of the National System of Science and Technology established already in the Law on Science and Technology of 2002 are still not fully operational."[17]

The following text explains how is the cooperation relation between the academy and the industry and its combinations.

.



Academy-Academy Cooperation practices

The Academy is the brain power, labour and representation that can assist and develop research and innovation in Mexico. Until recent years, official programs did not support at all the cooperation instruments in the framework of the academy. In this situation, cooperation activities between Universities and its academic members were developed in a one-to-one basis supported by the collaboration relationships between institutions.

Despite that there is no policy defined in the *Science and Technology New Law*, Mexico has developed technology platforms that encourage cooperation among universities (Academy). An example is the University Corporation for Development of Internet AC (CUDI), whose objective is to provide the scientific community and University of Mexico in a telecommunications network that allows you to create a new generation of researchers by providing them with better tools to develop scientific and educational applications of high technology worldwide. Following the worldwide development of data networks for greater capacity and speed, for use in high-tech applications, take the initiative to develop a high-speed network and join the international network called Internet 2.

In recent years, the CONACYT has implemented and support Research Networks in specific domains through the creation of National Contact Points for each one. The goal is to encourage the collaborative work between researchers and technical people with common objectives in order to produce solutions to strategic and common problems and in that way encourage the country R&D. Researchers from Universities or Research Institutes can be a part of these networks. Worth to mention is the case of the following networks in Mexico:

TICs, ICT net, Mathematical and Computational Models, Robotics and mechatronic

[17] "Research and development are the cornerstones of national and regional progress in Mexico", Interview with Leopoldo Rodriguez Sánchez, chairman for the Board of Honor of the Mexican Association of Directors of Applied Research and Technological Development. – ITB Infoservice, 13 July 2010 (pag.37)

All together have near 350 ICT researchers coming from different Mexico Universities. Every network settles down its research, development areas and the specific projects. Due to its recent creation, (ICT National Contact Point starts operations at 2008), it is difficult to evaluate its impact.

Industry- academy cooperation practices

The link between institutions of higher education and companies is essential for the development of Mexico, because it allows boost economic growth and achieves better living conditions for the population. In this sense, it concerns that in the more of the 98,000 existing projects linked between academy and companies during 2009,only 3 per cent were research projects, and about 9 percent technical consultation.[18]

The industry provides their research needs to the academy, in order to solve specific problems; this helps having a greater synergy between both and develops projects launched to success.

"There is a very significant effort and allocation of resources for promoting networking between business firms, higher education institutes and public research centres in the programs more recently launched by CONACYT. Example of this are the AERI-Alliances (Strategic Alliances Networks for Innovation for Competitiveness) for creating and consolidating networks between the different categories of players and the direct incentives for innovative projects. The low level of networking existing before launching these new programs in 2008 was emphasized as a major weakness on the Mexican R&D and innovation system."[19]

There are several national and international funds that support cooperation research in Mexico. In its various versions, those funds promote industry- academy working together in orders to generate a virtuous circle of information and thus needs to combine efforts to generate innovation. The industry supports the academy for the solution of the different needs or develops new technologies. The academy is supported by industry to identify new market opportunities or deficiencies, and from them, make innovation projects. Main national funds are (International cooperation not included):

- AVANCE
- Fondo Nuevo para Ciencia y Tecnología. *New Fund for Science and Technology.*
- Programas de Estímulo para la Innovación. *Incentive Programs for Innovation*. There are three types; INNOVAPYME, PROINNOVA, INNOVATEC.
- IDEA. *Incorporation of scientists and technologists in the Mexican social and productive sector.*
- Estancias Sabáticas al Interior de las Empresas. *Sabbatical time in Mexican companies.*
- Redes de Innovación. *Innovation Networks*
- *Regional Development Fund Institutional Development for Scientific, Technological and Innovation (Fordecyt*).

Another ways of Industry- academy cooperation are the so called Science and Technology Parks. Currently in Mexico there are 23 parks formed from partnerships and private sector funding, the federal

[18] Digital magazine: Universia, Dr. Rodolfo Tuirán intervention, Secretary of Higher Education of the Ministry of Public Education (SEP) for the installation of the Board of Second National Congress of Academia-Business-08,14-09)

[19] "Research and development are the cornerstones of national and regional progress in Mexico", Interview with Leopoldo Rodriguez Sánchez, chairman for the Board of Honor of the Mexican Association of Directors of Applied Research and Technological Development. – ITB Infoservice, 13 July 2010 (pag.37)

and state public sector, and academia.

Those parks are spread across 16 states, some of which are located strategically close to high-tech companies. Among the states with the greatest number of parks are: Jalisco (4), Nuevo León (3), Chihuahua (2) and Sonora (2). The northern and the central region are where most parks are located.

One aspect that stands out is that 10 of the 23 technological parks in the country are driven or have a strong relationship with the Instituto Tecnologico y de Estudios Superiores de Monterrey (ITESM). You can view the complete list of parks on following link http://bit.ly/eZWI9C.

Industry- industry cooperation practices

Industry-industry cooperation is presented with three major economic development strategies to strengthen Mexican companies' cooperation practices; 1) through commerce chambers and associations, 2) using funding from Governmental programs and 3) strengthening productive chains (industrial clusters) and 4) Science and Technology Parks.

Commerce Chambers and associations

CANACO *(*National Chamber of Commerce, Services and Tourism of Mexico City) is the business organization's oldest and largest of Mexico. Facilitates cooperation among partners through its programs Business Training and Business Incubator. CANACO's *Mexico Business Entrepreneur Centre* (Centro México Emprende) plays a information Portal role for fast growing Technological innovation companies and Software development companies called gazelles companies, offering information and support for get funds and access to science and technology parks.

Specifically in the ICT field, CANIETI (The Mexican Electronics Telecommunications and Information Technologies Industries Chamber) is an entity representing the Electronics, Telecommunications and Information Technology Sector in Mexico, which promotes the development of said sector. CANIETI offer its members advice for selection, presentation and project tracking programs funding, being Prosoft 2.0, MexicoIT and Mexico FIRST the most important initiatives in this area. (Mexico FIRST is related also to Clusters of Information Technology in Mexico)

AMIPCI (Mexican Internet Association) includes companies that represent an influence on the development of the Internet Industry in Mexico. AMIPCI offers courses and seminars on the Internet, Marketing, electronic billing, and hold sectorial meetings in which they invite the major players in the industry to discuss common issues.

TechBA. It is a program of the Ministry of Economy and FUMEC (the United States-Mexico Foundation for Science AC) supports and advises Mexican entrepreneurs Small and Medium Enterprises Technology SMEs to have a rapid growth in Mexico and other countries.

Funding Programs

Almost all Funding programs can be obtained through academy and government partnership, however, worth noting;

IBEROEKA Instrument for the industrial sector to foster international cooperation between companies in the field of research and technological development.

Estímulos Fiscales. *Tax incentives*. Federal government program that support taxpayers of income tax, which have invested in research and technology development aimed at developing new products, materials or processes.

Fondo Nuevo para Ciencia y Tecnología. *New Fund for Science and Technology* Federal Government support program for taxpayers Rate Business Tax (IETU, a *special* tax in Mexico)

Fondo PYME. *SME Funds*. Support SMEs with the aim of promoting national economic development through the granting of temporary support to programs and projects.

FONCICYT. Is an International Cooperation Fund for the promotion of scientific and technological research between Mexico and the European Union supports projects in the following ways: Joint research projects and Building and strengthening research networks.

Clusters

SPyME, (the undersecretary for Small and Medium Enterprises) through the *SME Funds* supports productive projects with a view of clustering, and the development of sectorial studies focused on the development of clusters. Likewise, CANIETI created National Clustering vice-president, which aims to coordinate the overall development of IT clusters in Mexico, through the organization of a national cluster coordination. There are not yet international competitiveness due that clusters are relatively young in Mexico and have positioned at a level of competitiveness regional and national because the conditions of demand (market size local and sophistication) according to *Clusters competitiveness study of information technology* in Mexico. Existing Clusters of Information Technology in Mexico can be consulted in http://bit.ly/hON2uf and nanotechnology cluster http://www.clusternano.org/

7.2. Cooperation managed at national level (Iberoeka and other EU Programmes).

7.2.1. Summary table

program	Description	Ongoing Agreements, Projects or Programs
Bilateral international cooperation	CONACYT through the *Directorate of Technological Development and Innovation,* has signed cooperation agreements for projects to applied research, technological development and innovation in linking national and international cooperation that encourage collaboration between Mexico and other countries being developed jointly by participating organizations of both countries	***France***: [(1)] ***OSEO (Agence française de l'innovation)*** intends to join efforts to support SMEs in both countries (Mexico-France) to improve their competitive advantages through technological cooperation with international research projects, technological development and innovation co-developed in sectors of Information Technology and Telecommunications Environment and Biotechnology. ***Spain and France***[(1)] ***Centro para el Desarrollo Tecnológico Industrial (CDTI)*** ***Agence Nationale de la Recherche (ANR)*** Aims to provide financial support to international networks for the implementation of projects related to applied research, technological development or innovation, has two modes. Type A: France, French National Research Agency (ANR) Basic research projects and / or applied. Category B: Spain, Industrial Technological Development Centre (CDTI) Applied research projects or industrial submitted to CONACYT for a Mexican company in connection with an HEI or CI or more a Mexican university Spanish partner, the CDTI supports most companies.

IBEROEKA	Part of the Iberoamerican Program of Science and Technology for Development CYTED. It's an instrument for the industrial sector to foster international cooperation between companies in the field of research and technological development. In Mexico, mechanisms and funding schemes are used internally by CONACYT	**MANTRA** **GIA** **SECURE-ID** **SIT** **STRATEGO** [2]
FONCICYT	Fund of International Cooperation in Science and Technology between Mexico and the European Union as part of the International Cooperation for the Promotion of Scientific and Technological Research. This program is supported by the Financing Agreement between the European Community and the National Council of Science and Technology of Mexico	**Consorcio europa-méxico para el desarrollo de aplicaciones en información cuántica y tecnologías de comunicación.** [3] **Modelos gráficos probabilistas dinámicos y sus aplicaciones.** [3] **Análisis de imágenes para el control de robots autónomos.** [3]
Bilateral agreements	Several countries have signed agreements with Mexico seeking opportunities for international cooperation for the generation, implementation and dissemination of scientific research projects. In spite not been ICT exclusive includes some flavour of technological modernization and training of specialized human resources Innovation and technological development of the industry.	**Agreements signed with;** [4] **Germany** **Bulgaria** **Belgium** **Spain** [5] **France** [5] **Great Britain** **Hungary** **Italy** **Poland** **Czech Republic** **Russia**

Notes:

1) Only ICT considered
2) For a complete description see annexe
3) Program ends 2010

4) See complete description at annexe.

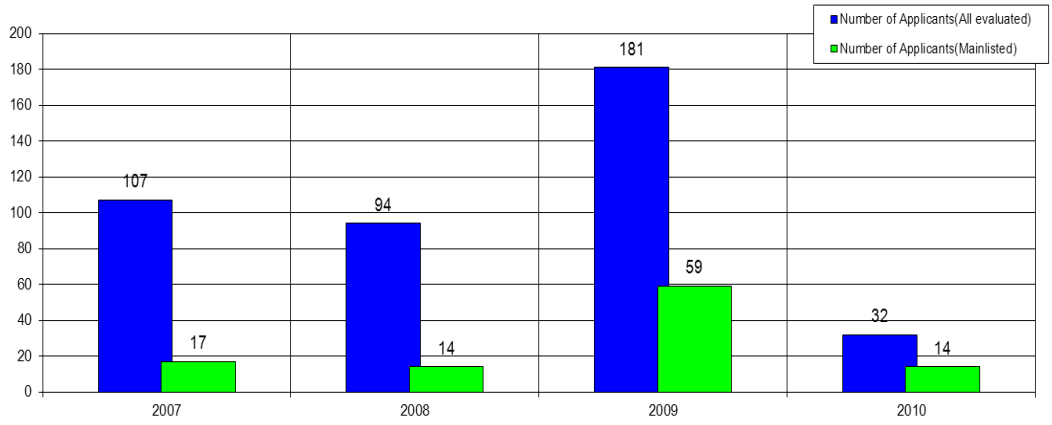
5) Programs with this country apart from those mentioned above

7.2.2. Analysis of the results

"The EU has intended to identify and adopt modalities of cooperation which better correspond to the level of development reached by Mexico and the international role it own plays. The EU also intends to take into account Mexico's potential for further growth and the positive role it may actually play on the global scene".

In the Mexico's side, international technological cooperation have been strengthen through the development of next principal programmes; Séptimo Programa Marco FP7, FONCICYT, Uemexcyt2 and Bilateral Agreements, in connection with foreign entities. Mexico Government efforts aims to promote research cooperation especially between both regions to have more Mexican entities participating on several of the programs opportunities of collaboration and to find more joint funding mechanism to strengthen this. Proposals received between the CONACYT electronic system and the Electronic Proposal Submission Service (EPSS) of the European Commission, having almost 50-50 participation from Mexico, and Europe-rest of Latin America. This means that the consortia gathered for the proposals are equilibrated.

In spite of the interest showed in those programmes, bilateral cooperation between Mexico and the EU participation in European research activities and vice-versa is still low and there is a huge potential for further development. Furthermore annual participation evolution from Mexican entities participating on European international collaboration projects has been declining as showed in the next figure



However is important to note that approved projects (green bars) has been almost constant. Mexican authorities have found bilateral dialogue on Science and Technology with the European Commission had been more fruitful under personal relationship; year 2009 was an example with bigger growth as a result of this relationship. Nevertheless funding has been insufficient to achieve globally competitive standards in activities of ICT, according to information obtained in CONACYT's programs, the total amount approved for projects in science, technology and innovation has been less than the amount requested, which makes evident the existence of unmet demand. An interesting opportunity for create more solid bases for present and future collaboration arise from this. Furthermore, the whole spectrum of possible arrangements should be explored and utilized in complementary ways; the aim should be to intensify the EU-Mex cooperation in areas of common strategic importance.

In general, international research cooperation have the potential to play an important role also in the frame of the implementation of the strategic Mexico's PND (National Plan Development) in the ICT

field, and even further moves towards stronger strategic partnerships with key third Latin America countries.

7.3.Cooperation in standardization activities in the ICT field

The Mexican National Development Plan 2007-2012 declared boosting the national economic productivity as a main task of research and technology development. The construction of research networks and the internationalization of Mexican sciences are priorities of this plan. The development of the ICT-sector is recognized as a key-factor to reach these objectives. The National Research Policy is derived from the National Development Plan and is instrumented through the "Special Plan for Science, Research, Technology and Innovation" (PECITI), which indicates in chapter 5 the cross-cutting strategy in scientific, technology and innovation activities. CONACYT through their agencies is in charge for implementing these activities in order to support and establish standards on scientific research, technology and innovation.

Besides that, the European Community and Mexican government signed the Agreement on Cooperation in Science and Technology between Mexico and the European Community. The objectives of this Agreement are to stimulate, develop and facilitate cooperative activities between the European Community and Mexico in areas of common interests in which research and development activities in science and technology are carried out. One of the first actions implemented to support the improvement and facilitation of the S&T cooperation between Europe and Mexico, and therefore the achievement of the engagement foreseen in the Agreement, was the launch in 2006 of the Bureau for European and Mexican Science and Technology Cooperation UEMEXCyT, located in CONACyT and co-financed by the European Commission's Directorate-General for Research and Technological Development (DG RTD) and CONACyT, for a two-year period. The UEMEXCYT II project proposes to support the bilateral political dialogue initiated by the S&T Agreement's Joint Steering Committee, providing follow-up and continuity to the efforts carried out by the UEMEXCyT-Office as well as improving the channels of communication and partnership between Mexico and the EU Member States. In this context, it was considered important to open the project to a larger consortium composed not only of CONACyT, its coordinator, but also institutions from six EU Member States, notably Spain, France, Italy, Germany, Belgium and Austria, with which Mexico enjoys important bilateral cooperation programmes in science and technology. Together, these regulatory instruments lay the foundations for the Cooperation in standardization activities the area of science and technology between the scientific and technological communities in Mexico and in European Union member countries.[20]

Since the Science and Technology Agreement with the EU entered into force in 2005, NCPs were nominated by the Mexican government and started supporting newcomers with information and trainings for the FP6 in different thematic areas on an honorary base.

The objective of the NCP-projects is the creation of a new networking infrastructure for R&D on national and international level. The first task to reach this objective was a national mapping of research- and innovation-capacities. The results of this mapping are used to promote the creation of new research and technology projects with the international research communities. Such actions are meant to influence the rhythm of projects established to strengthen cooperation on ICT areas.

7.4.Analysis of previous research cooperation activities

Formal relations between the European Economic Community and Mexico began with a Cooperation Agreement signed on 15.7.1975, subsequently replaced by a Framework Agreement on Cooperation

[20] Source: http://www.conacyt.gob.mx/uemexcyt2/cooperacion/ue-mex/Relaciones_UE-MEX.html

which came into force on 1 November 1991 (OJ No L 340 of 11.12.1991). This Agreement covers a variety of domains, including cooperation in energy and research as well as economic and commercial activities.

At 1990, individual cooperation began with two thesis research at the doctoral level, then the conclusion of the Science and Technology (S&T) Cooperation Agreement with the European Community and its Country Strategy Paper (CSP) 2002-2006, allowed the start the CONACYT co-financed cooperation programme in the area of Science and Technology. This important step enabled the strengthening of cooperation in research collaboration and funding by means of the PhDs (supervisor in México and in Europe), main results were; the first Mexican participation in a project under the FP5 and the development of 6 projects with the Eurocentre of ITESM GDA with different European organizations.

These almost 20 years of collaborative projects have served to gain a more focused research vision and to promote and strengthen collaboration among institutions of higher education, research institutes, companies and national laboratories across the country, in order to achieve articulated and structured solutions contribute to national development and population welfare of STIs . Certainly founded has been participation in projects has been enriching and a decisive factor, main results are translated into 12 finished and 4 in progress PhD thesis, 10 projects with national fund, 12 projects with national organisms, building a 50 partners network. But not only orientation towards theoretical research, but also development toward research applications in intelligent systems field, by creating 1 start-up company, Soft Decisions, that developed text-Mining techniques and applications, social networks information retrieval, data-mining, business intelligence using same algorithms in different applications. Not commercial results available.

Even that in Mexico we have public policies and financial support is on hand, important results are not yet available.[21]

The table in Annex 5 (point 10.5.3) summarizes of 25 more recent international research cooperation projects (period 2005-2010).

7.5. Conclusions

There is a lack of reliable sources talking about ICT in Mexico. Only dispersed information is available through stakeholders and government databases. Efforts like FORESTA project provides reliable information to decision and policy makers so a sustainable research line establishing information about ICT national status is highly recommended as a second project stage. Several inferences arise from above thoughts about Mexican ICT cooperation practices. Some of those are being widely discussed at different national academic and industry forums, and are summarized as follows:

Industry-Academy collaboration culture (and their different combinations Academy-Academy, Industry-Industry previously described in 1.2.c) is not enough at national level. Besides the ICT infrastructure for ICT is quite expensive and the availability of funds is not on equal terms for everyone, "the big challenge for the Federal Government will be to escalate as well the amount of available resources in order to respond to a rapidly growing demand."[22]

Even though Mexico Science and Technology law regulates mechanism to promote, develop and strengthen scientific research, technological development and innovation, **there´s missing a policy-**

[21] Source: Winds Report ICT research in Mexico. http://bit.ly/fj0Ako

[22] "Research and development are the cornerstones of national and regional progress in Mexico", Interview with Leopoldo Rodriguez Sánchez, chairman for the Board of Honor of the Mexican Association of Directors of Applied Research and Technological Development. – ITB Infoservice, 13 July 2010 (pag.37)

making process for research based on the needs of the Mexican society.

Mexico still has a very low level in science, technology and innovation investment and therefore continuously losing competitiveness on international level. The registration of patents per capita in Mexico is the lowest in the OECD. "The proportion of R & D expenditure to GDP in Mexico (about 0.5%) not only is the lowest among OECD countries, it is even considerably lower than other emerging economies. China spends three times more than Mexico (1.5% of GDP). Brazil and South Africa spend twice (with 1% of GDP). In all these countries, there are already announced decisions to increase the investment on R&D." [23]

Worth to mention that Mexico's major investments are in applied research and innovation, being the last one where there is the largest amount of investment of the industry. The reason for this is that innovation gets a quick return of investments and creates jobs in a short term. On the other hand Universities' efforts are more focused on basic and applied research.

Cooperation between industry and academy is ruled more by commercial- than by research interests. Companies wishing to participate in ICT research receive incentives through national and international funds and therefore increase the industrial participation in the field.

National funding mostly goes to public universities (academy), sidelining private entities.[24]

A reliable database with information about Mexican international and national cooperation projects doesn´t exist. Currently CONACYT is developing such a database.[25]

The growth of the Mexican economy is necessary to compete with other emerging economies. The signature of international cooperation agreements of the Mexican government with the EU to foster research collaboration in the field of science and technology is a notable progress and a necessary strategy to generate more cooperation with the main ICT-stakeholders in the EU.

The development of a government research-policy which regulates and integrates those collaboration efforts still is a big challenge. Industrial chambers, federal Science- and Technology-Councils, governmental institutions and universities face a great challenge to address it, taking into account the national economic and institutional development as well as external factors such as globalization and technological progress, which will translate into better opportunities and improve national competitiveness.

It is also necessary to create a reliable ICT information framework, enabling a better coordination among ministries and agencies responsible for the development and implementation of ICT-policies.

Furthermore systematic **mechanisms to incorporate the results of evaluation in policy making and resource allocation should be developed**. As noted above the continuation of the FORESTA project should address this issue.

All these measures should lead to the improvement of the economic growth and the competitiveness of the country "to promote social equity and improve quality of life for individuals and organizations".[26]

[23] Perspectivas OCDE: México Políticas Clave para un Desarrollo Sostenible. OECD Mexico Publications Center.
[24] Interview with Neil Hernández Gress, ICT-NCP México.
[25] Interview with Angel Guillermo Cárdenas Cravioto,ICT senior Project officer UEMEXCYT.
[26] La innovación: piedra de toque del desarrollo mexicano. OECD Mexico Press Center.

8. COSTA RICA

8.1. ICT cooperation within the EU Framework Programme

8.1.1. Summary table

Costa Rica has participated or is currently participating in three 7FP projects in the ICT field, all them Support Actions.

project	period	budget	Countries involved	status
Solar-ICT	2007-2008	0,59 M€	Belgium, Uruguay, Costa Rica, Ecuador, Guatemala, Perú	finished
SALA +	2008-2010	0,81 M€	Spain, France, Germany, United Kingdom, Costa Rica, Argentina, Honduras, Guatemala, Uruguay, Colombia, Chile	finished
Pro-Ideal Plus	2010-2011	0,58 M€	Spain, United Kingdom, Costa Rica, Mexico, Cuba, Colombia, Brazil, Argentina, Chile	running

In Annex 6 it is included a detailed description of these projects.

8.1.2. Analysis on the differences among cooperation practices

Costa Rica has participated in three ICT projects within the European Framework Programme. Two of the projects have already finished (Solar-ICT and Sala +) and one of them is under execution (Pro-ideal Plus). The three projects are support actions. Although the number of ICT projects is small, Costa Rica is actively promoting cooperation with EU. The only project that is still under execution is constantly promoting cooperation through different dissemination tools such as newsletters, project angel course, events in the country, between others.

8.2. Cooperation managed at national level (Iberoeka and other EU Programmes).

8.2.1. Summary table

IBEROEKA - INNOVATION PROJECTS IN WHICH COSTA RICA IS INVOLVED					
Acronym	Code	Budget	Countries involved	Topic Related	Full Name
JSNAP PARA AS/400	IBK 99-011	USD 709.220,00	Spain Costa Rica	Software Development	Generación de aplicaciones java para entorno as/400
MUNICIPIO VIRTUAL Centroamérica	IBK 01-167	USD 546.461,00	Spain Costa Rica El Salvador	e-Government	Desarrollo del sistema municipio virtual para los países centroamericanos

IBEROEKA - RESEARCH PROJECTS IN WHICH COSTA RICA IS INVOLVED					
Acronym	Code	Duration	Countries involved	Topic Related	Full Name
D2ARS	507AC0328	2007 - 2009	Spain Costa Rica Brazil Colombia Cuba Mexico	Embedded Software	Diseño y desarrollo de aplicaciones basadas en redes de sensors
COMPETISOFT	506AC0287	2006 -2008	Argentina Brazil Chile Colombia Costa Rica Cuba Ecuador El Salvador Guatemala México Peru Portugal Uruguay Venezuela	I+D Networking Groups	Mejora de procesos para fomentar la competitividad de la pequeña y mediana industria del software de Iberoamérica
PIBAMAR	VII.22	2003 -2007	Argentina Brazil Chile Colombia Costa Rica Cuba Spain México Perú Portugal Venezuela	Automation of complex mechanisms	Automatización de los procesos de mecanizado de alto rendimiento
IDEAS	VII.11	1997 - 1999	Argentina Brazil Colombia Costa Rica Cuba Spain Uruguay Venezuela	Software Engineering	Ingeniería de ambientes de software

In addition to this, there are several networks created with the support of the IBEROEKA programme in which research applied to different specific areas is developed by organizations in different countries of Latin America and Europe (Spain and Portugal in this case).

An example of this is the AUTRANSCAÑA project. It was focused on the design of automatic processes for the production of sugar. The project started in 2006 and finished in 2009. The head of the project was the Centro de Automatización, Robótica, Tecnologías de la Información y Producción (CARTIF) from Valladolid, Spain. The General Director was José Perán.

The FORESTA partnership held a meeting with the Costa Rican participant in the AUTRANSCAÑA network, Ismael Mazón. In the meeting it was discussed that the IBEROEKA programme is one of the

main sources for Latin American partners to get in touch with European organizations in order to create synergies that benefit both regions.

8.2.2. Analysis of the results

In relation to ICT cooperation with other European Programmes managed at national level, IBEROEKA programme is the only one that Costa Rica participates. In the summary table are listed specific research and innovation projects. In relation to IBEROEKA innovation projects, the last project finished in 2001. Research projects are more recent; most projects were developed over the last five years. FREEBIT (Red iberoamericana de software libre en biomedicine) is a project that is still ongoing the duration from this project is from 2010-2013. This project is a support action and is not on the summary list.

8.3. Cooperation in standardization activities in the ICT field

There are no much cooperation in standardization activities in the ICT field between Costa Rica and Europe. Nevertheless there is an important initiative promoted by the MICIT (Ministry of Science and Technology). This initiative consists in a certification in management of innovation and market (DGIM). This certification is sponsored by the MICIT and is possible by an agreement with the program for the promotion and training of the SME (Small Enterprise Promotion and Training, SEPT), University of Leipzig and a consulting firm Conoscopic GmbH, Germany.

8.4. Analysis of previous research cooperation activities

This topic has been included in points 8.2 and 8.3.

8.5. Conclusions

Although Costa Rica is showing a strong growth of its ICT sector, the participation of the country in the different international cooperation activities with Europe is quite small. Other countries of the region show superior participation in these activities.

On the other hand, several actions are taken by Costa Rica in order to start promoting these activities. IBEROKEAS projects and Seventh Framework Programme initiatives are the main tools for Costa Rica to enhance international cooperation.

What is still needed is a national policy to guide and boost this type of activities. The European Union is a key partner for Latin American countries in order to achieve high rates of development with a technological improvement.

In order to fulfil this need of the Costa Rican ICT sector, three projects has been launched inside the European Framework Programme (SOLAR-ICT, SALA+, PRO-IDEAL PLUS). Despite these activities, the evolution of concrete research activities focused on ICT is still quite slow. It is still needed to add some public policies that promote this sort of cooperation actions in Costa Rica in order to boost the cooperative potential that the country shows.

9. URUGUAY

9.1.ICT cooperation within the EU Framework Programme

9.1.1. Summary table

In Uruguay there have been five ICT cooperation projects within the EU Framework Programme. Three of the projects are underway (SALA3D, ANGELS and Proideal Plus) and two are already completed (SALA + and Pro-ideal). In relation of the type of project, four of them are support actions (SALA3D, Proideal Plus, SALA + and Pro-ideal) and one is a collaborative project in research (ANGELS).

Below is a brief description of each Project:

Project Start Date	Acronym	Project Name	Research Area
March 2010	SALA3D	European and Latin American Strategic Cooperation on 3D Internet R&D	ICT-2009.1.5 Networked media and 3D Internet
March 2008	SALA+	Support Action for a European and Latin American strategic cooperation on networked media R&D	ICT-2007.1.5 Networked media
November 2008	PRO-IDEAL	Promotion of an ICT dialogue between Europe and America Latina	ICT-2007.9.2 International cooperation (ICT-2007.9.2)
February 2009	ANGELS	Anguilliform robot with electric sense	ICT-2007.8.5 Embodied intelligence
	Proideal Plus	Promotion of an ICT dialogue between Europe and America Latina	

Due to its interest, more detailed information about ANGELS (Anguilliform robot with electric sense) is included in Annex 7 (point 10.7.1).

9.1.2. Analysis on the differences among cooperation practices

In relation to the cooperation between industries and academic institutions from Uruguay with Academic Institutions in the UE there is a significant cooperation (especially in the relation academia-academia).

Below are analyzed the areas, companies, research centres of universities from Uruguay that cooperate with academic institutions in the UE:

Area	Specific area	Uruguay institution that cooperates with Academia in UE
Electronic	Microelectronics	GME
Electronic	Microelectronics	µDIE
Electronic	Digital electronics, data acquisition	Electrónica Aplicada
Signals - Images	Audio	Grupo de procesamiento de audio
Signals - Images	R&D related to biological applications	Grupo de Tratamiento de Imágenes
Software Engineering	Software Engineering	Grupo de Investigación en Ingeniería del Software
Telecommunications	Mathematics applied to telecommunications	ARTES
Models	Modeling and optimization of networks, urban public transport, and stochastic combinatorial optimization, logistics and disaster management	Departamento de Investigación Operativa
Models	Models, traffic	Grupo de sistemas y control
Historic areas	Parallel and distributed computing, high performance / graphic computing	Centro de cálculo
Historic areas	Integration of computer systems based on middleware technologies / platforms for digital integration	Laboratorio de Integración de Sistemas
Historic areas	Natural Language Processing	PLN
Other	Quantum Computing	Computación cuántica
Other	Learning techniques and automated reasoning to support clinical diagnosis and treatment of diseases	G. de I. en Sistemas inteligentes Aplicados a Sistemas de Apoyo al Diagnóstico Clínico

There is little cooperation between industrial entities in Uruguay and industrial entities in UE.

9.2. Cooperation managed at national level (Iberoeka and other EU Programmes).

9.2.1. Summary table

Iberoeka Innovation Projects

The IBEROEKA Programme, launched in 1991, is a tool designed to promote cooperation in technological research and development between industrial sector companies. IBEROEKA is run by the Ibero-American Network of IBEROEKA Management Organisations. These are appointed in each

country taking part in the Programme.

IBEROEKA's Innovation Projects are generated from the bottom up. In other words, the participating companies generate the ideas and decide on the project and the conditions under which it will be carried out. For each project the companies choose their partners and decide on the collaboration agreement to use, the risks and costs that each party will take on and how the results of the project will be allocated in the operational phase.

IBEROEKA's main objective is, though close collaboration between companies and research centres, to increase the productivity and competitiveness of the national industries and economies that form the basis of lasting prosperity within the Ibero-American community.

This objective has to be achieved by encouraging and enabling close industrial, technological and scientific cooperation between the participants aimed at the development of products, process and services with potential markets. This cooperation will be based, as far as is possible, on new technologies that allow the companies to acquire a solid technological base.

Below is a table with the 23 ICT projects carried out under IBEROEKA Programme with presence of Uruguayan companies and institutions. A more detailed description is available in Annex 7 (point 10.7.2).

Project Acronym	IBK code	Countries involved	Budget (USD)
ILIVECENTER	08-580	Argentina, Uruguay	425 000
TECNOJUEGOS MOVILES	08-552	Uruguay, Argentina	159 000
DESI-TVIP	07-525	Spain, Uruguay	2 222 333
EM	07-515	Spain, Uruguay	1 709 168
MAITE	06-489	Argentina, Uruguay	300 204
KAL	05-439	Uruguay, el Salvador	31 600
CENSEL	05-427	Spain, Portugal, Uruguay	4 425 000
OPENSIC	04-347	Spain, Uruguay	2 691 140
INTERFLOTAS	03-322	Spain, Uruguay	1 000 000
HOMOL	03-303	Spain, Uruguay	3 350 000
INFOESCAPARATE	03-291	Spain, Uruguay	1 324 777
SIGAMTEMAD	01-157	Spain, Uruguay	1 000 000
ITSACIV	01-156	Spain, Uruguay	1 075 000
CIBERPISCIS	01-143	Spain, Panamá, Brazil, Uruguay, Chile	4 313 000
SECAMDE	00-086	Spain, Uruguay	480 000
REGUAL	99-056	Spain, Uruguay	1 971 580

NEUROCOR	IB-144	Spain, Uruguay	854 000
PARVIS	IB-082	Spain, Uruguay	580 000
ATLANTIS	IB-062	Spain, Uruguay	509 117
IMPACTO	IB-038	Spain, Uruguay	3 020 000
MOVIDA	IB-020	Spain, Uruguay	788 000
BIBLOS	IB-019	Spain, Uruguay	292 000
PRINT	IB-021	Spain, Uruguay	1 127 000

CYTED Research actions

The aims and activities in which is interested the Information and Communication Technology area of the CYTED framework Programme, are focussed on trying to reduce the digital divide as much as possible.

Starting from the basic idea of working together, the strategic objectives in place are focussed on improving the level of education and training, on the identification of possible market niches associated with sectors of strategic economic importance to the Region, on launching research and development projects in these areas which are supported by the national infrastructures in the signatory countries and on ensuring, as far as possible, the transfer of technology to the SMEs in the industrial sectors that make up the majority of the industrial fabric of our countries.

There have been 32 CYTED (Latinamerican Science & Technology Development Programme) actions in the ICT area in Uruguay, 5 projects are currently underway.

In Annex 7 (point 10.7.3) there is a brief description of each Project.

STIC-Amsud projects

STIC-Amsud is a program of scientific-technologic cooperation with partners from France, Argentina, Brazil, Chile, Paraguay, Peru and Uruguay. The objective is to promote and strengthen collaboration and networking in research and development in the field of science and information technology and communication (CTICS), through the submission of joint projects.

In Annex 7 (point 10.7.3) there is a brief description of the 11 projects identified in the ICT area with presence of Uruguay companies.

9.2.2. Analysis of the results

In relation to Iberoeka Innovation projects, the latter recorded project in which Uruguay has participated begun in 2008. During 2009 and 2010 there has not been approved any project Iberoeka project in which Uruguay has participated. Nevertheless, it is not possible to set a trend in two years. It is important to remark that in Iberoeka projects (this is a difference with Amsud and CYTED Research projects) there is a significant participation of the Uruguayan ICT private sector, the academic sector also participates, but in not the principle beneficiary of this kind of projects.

In relation to CYTED Research Actions, there have been 32 CYTED actions in ICT in Uruguay, 5 projects are currently underway in Uruguay. Most of the participants in the project are from the Universidad de la República (public university), although private universities and research centers have also participated.

In relation to AMSUD cooperation programme, there have been a lot of projects approved in recent years. In fact, AMSUD organized regular meetings in which European and American scientists participate. In the last meeting in Buenos Aires, in November 2010, there were Uruguayan representatives. Most of the participants in the project are from the Universidad de la República (public university), although private universities and research centers have also participated.

9.3. Cooperation in standardization activities in the ICT field

In the ICT field there are no standardization activities between Uruguay and UE. In Uruguay was selected the DVB-T/DVB-H European Standard for the implementation of digital terrestrial and mobile TV, this was a case of standardization in the ICT field between Uruguay and the UE. However, the current president (José Mujica) has decided to change the European Standard for Digital TV, held since 2006 by the Vázquez administration, for the Brazilian-Japanese standard (ISDB-T) in order to align with Argentina and Brazil decision.

9.4. Analysis of previous research cooperation activities

This topic is included in points 9.2 and 9.3.

9.5. Conclusions

In Uruguay, cooperation with Europe as a whole and Spain and France is stronger in the academic field, although this strength is necessary to continue developing this cooperative relation. However, the Uruguayan private sector cooperation in ICT with Europe is low (most of this cooperation is within the framework of Iberoeka innovation programs and for the past two years there have not been approved projects in which Uruguay participated). In relation to the private sector cooperation in ICT, there is much more cooperation with the United States than with the EU.

In relation to cooperation within the UE Framework Programme, there have been five projects and cooperation begun in 2008.

Within the AMSUD framework there have been a significant number of projects approved between 2008 and 2009.

In relation to CYTED research projects, nowadays Uruguay is participating in 5 projects.

An internal weakness that has Uruguay is the low relationship between academia and ICT companies and ICT companies with other companies.

10. ANNEXES

10.1. Annex 1. Issues related with ICT research cooperation in Brazil

10.1.1. Description of the projects within the EU Framework Programme

Coordination and Support Action for Global RFID-related Activities and Standardization – 2 (CASAGRAS2)

The need for authoritative, on-going international cooperation in respect of the European agenda for taking the concept of the Internet of Things (IoT) to reality is pivotal in putting it into the global context it demands. CASAGRAS2 provides the necessary conduit for taking the next steps in international collaboration.

CASAGRAS2 identifies a much broader base for international cooperation, with partners from Brazil, mainland China, Hong Kong, India, Japan, Korea, Malaysia and USA. The European partners are from Belgium, France, Germany, Russia and the UK. CASAGRAS2 also identifies a group of experts to participate in the project that will target stakeholders based in Argentina, Belgium, Brazil, China, Denmark, Germany, India, Italy, Korea, Netherlands, USA and Russia.

The coordination and support action plan for CASAGRAS2 draws upon the outcomes of CASAGRAS1 and the recommendations that specifically align with the targets identified in Objective ICT-2009-1.3: ICT Internet of Things and Enterprise environment. Moreover, it seeks to contribute to the European research cluster for IoT development represented by CERP-IoT, offering an important holistic input characterized by the generic nature of the work packages in respect of architecture, identification and data capture protocols, applications and services framework, R&D roadmap, education and training and the important multi-dimensional features of governance; all with respect to international deliberation. Each component of these work package activities will be developed in cooperation with international partners through the international platform work package. Outcomes will be delivered through a dissemination infrastructure, exploiting a range of delivery platforms and serving a wide range of project, stakeholder and end-user delivery needs, with substantial foundations for innovation and enterprise in respect of applications, services and products, and socio-economic benefit.

Large Scale Choreographies for the Future Internet (CHOREOS)

The CHOReOS project positions itself in the context of the Ultra-Large-Scale (ULS) Future Internet of software services. To address the challenges inherent of ULS as well as other key requirements of the Future Internet, such as fusion of the user/developer/system roles, adaptability and QoS-awareness, to name a few, CHOReOS revisits the concept of choreography-based service composition in service-oriented systems.

CHOReOS introduces a dynamic development process, and associated methods, tools and middleware sustaining the ever-adaptable composition of services by domain experts being the users of business choreographies in the Future Internet. CHOReOS concepts then encompass formally grounded abstractions and models, dynamic choreography-centric development process, governance and service-oriented middleware, thus providing an Integrated Development & Runtime Environment (IDRE) aimed at overcoming the ULS impact on software system development.

Formally grounded abstractions and models enable reasoning about the properties, both functional and non-functional, of ULS choreographies. Dynamic choreography-centric development process allows the fusion of the user/developer/system roles, while managing the ULS service base, and supports the

synthesis of scalable and adaptable choreographies. Governance includes service integration policies and rules, as well as tools for dynamic verification & validation of choreographies.

Finally, service-oriented middleware enables adaptable choreographies over ESB-based middleware, Grids, Clouds, and technologies for the Internet of Things, thus overcoming scalability and heterogeneity issues of the Future Internet. Last but not least, CHOReOS assesses the industrial exploitation of this choreography-centric vision by experimenting on three demanding use cases in different domains (passenger-friendly airport, mobile-enabled coordination of people, vehicular network) and by carrying out a study of social-technical factors.

ERA Embedded Reconfigurable Architectures

ERA aims at investigating and developing new methodologies in both tools and hardware designs to break through current power and memory walls and help design the next-generation embedded systems platforms. The proposed strategy is to utilize adaptive hardware to provide the highest possible performance with limited power budgets. The envisioned ERA platform is adaptive and employs a structured design to integrate the necessary computing, networking, and memory elements.

In the Objective ICT-2009.3.4 "Embedded Systems Design", a strong focus is placed on the development of novel (generic) design methodologies that can be applied to several application areas. The ERA describes a platform that can adapt itself through coarse-grain reconfigurable hardware to tailor the hardware itself for changing environments and needs of the applications running on the platform, for different application markets and platform usage. It has the following main objectives:

- to define and develop a dynamically reconfigurable integrated platform composed by the following components: a parameterized VLIW processor, a reconfigurable NoC, and a memory subsystem - taking into account power consumption as design parameter.
- to provide the support for flexible and fast reconfiguration of the platform by using direct hardware support as well as partial FPGA reconfiguration.
- to provide the needed hardware monitoring and low-level OS support to efficiently control the hardware reconfiguration.
- to benchmark and analyze a set of existing applications in the area of mobile processing to extract a set of off-line and on-line measurable parameters.
- ERA will focus on the development of an adaptive embedded systems platform to handle the challenges of current embedded processor designs
- Research Projects Embedded Systems Design
- to build a supervisor which will be able to monitor the parameters and react to online application changes to appropriately reconfigure the hardware.

The envisioned adaptive ERA platform employs a structured design approach that allows integration of varying computing elements, networking elements, and memory elements. For computing elements, it will utilize a mixture of commercially available off-the-shelf processor cores, industry-owned IP cores, and application specific/ dedicated cores, and it will dynamically adapt their composition, organization, and even instruction-set architectures to provide the best possible performance/power trade-offs. Similarly, the choice of the most-suited network elements and topology and the adaptation of the hierarchy and organization of the memory elements can be determined at design-time or at run-time. Furthermore, the envisioned adaptive platform must be supported by and/or made visible to the application(s), run-time system, operating system, and compiler exploiting the synchronicities between software and hardware.

Finally, an additional goal of the adaptive platform is to serve as a quick prototyping platform in embedded systems design. ERA has four key areas to pursue innovations in order to achieve the objectives:

- definition and characterization of application benchmarks for embedded systems employing reconfigurable architectures.
- definition of a reconfigurable and parameterized processor architecture.
- definition of a reconfigurable memory subsystem.
- definition of the software/compiler tools and OS support for the ERA platform.

The applications exhibit behaviour that can be exploited for more efficient processing (at given power budgets) by adapting the hardware (processor and memory) to them.

This paradigm shift requires new approaches in compiler algorithms and tools and advanced (embedded) OS-level support. All partners have expertise in one or several of the mentioned areas.

Implementing cooperation on Future Internet and ICT Components between Europe and Latin America: FIRST

Support Action that intends to foster International Cooperation in the areas of Future Internet and ICT Components and systems1 between Europe and Latin America.

The project's aim is to extend the constituency of European Technology Platforms (ETPs) to Latin American strategic stakeholders from the different sectors included in the Future Internet field.

The extension of the ETPs constituencies to be performed by FIRST will include, at least, the following activities:

- Identification of key stakeholders, that proves to be best suited to launch and run Technology Platforms in Latin America (Argentina, Brazil, Chile, Colombia and Mexico; preliminary studies in Costa Rica, Ecuador, Panama and Uruguay) including representatives from industrial (large companies and SMEs) and academic sectors.
- Analysis of potential areas of cooperation between Europe and Latin America at national (Argentina, Brazil, Chile, Colombia and Mexico, as well as preliminary studies in Costa Rica, Ecuador, Panama and Uruguay) and Regional levels. This analysis will use ETPs thematic areas as an organizational model, but will not limit cooperation to these areas.
- Promotion and support to the creation of Technology Platforms in Latin America at a national level in Argentina, Brazil, Chile, Colombia and Mexico, including the production of both organizational documents (governance, structure, etc.) and technical documents (Vision, Strategic Research Agenda).
- Creation of a Regional Strategy for EU-LatAm cooperation in the field of Future Internet by compiling the different national strategies developed at a national level in Argentina, Brazil, Chile, Colombia and Mexico, Liaising Latin American Technology Platforms with European counterparts, as well as providing periodic information to other relevant organizations such as European Commission, National Member States initiatives on Future Internet, FIRE, FIA, FIF, etc.
- Increasing awareness on the potentialities for cooperation in the field of Future Internet between Europe and Latin America.

Fostering the research dimension of Science and Technology agreements: FORESTA

FORESTA is a project financed by the European Union dedicated to promote the research cooperation between Latin America and the European Union in terms of Information Technology and Communication (ICT), providing; advice, training, communication networks, knowledge share to support the process of decision making.

FORESTA is integrated by a consortium of 9 partners, 3 of them are located in the European Union, and the other partners are from Brazil, Argentina, Mexico, Colombia, and Chile.

FORESTA intends to boost the research dimension of ICT Cooperation and Policy Dialogue between EU and the Latin American region. To achieve such objective a various set of instruments and activities have been created; organization of conferences, creation of discussion spaces, networking as well as the information dissemination.

The project is structured in two main blocks of activities:

a) One looking at immediate opportunities for cooperation between researchers of the two communities (Europe and Latin America) via the organization and follow up of conferences in the five target countries.

b) The other one looking at long-term perspectives. This latter evolves around two sets of activities:

   - analysis of current ICT policies in the region and identification of key research issues to address in the future;
   - recommendations on how to make a better use of support instruments to ICT research cooperation (European or national funding programmes and other initiatives).

Multidisciplinary networking of research communities in FIRE: MYFIRE

The objective of the MyFIRE project is the multidisciplinary networking of research communities addressing both technological, socio-economical and environmental aspects of the Future Internet.

The coordination of research experience and user-driven open innovation activities establishing common concepts, roadmaps, methodologies and tools, based on standardized approaches.

MyFIRE project develops the efficient mechanisms of test beds process to make it more effective and used. MyFIRE identifies the user communities and their needs for improving research value of the huge investments in FIRE testbeds.

MyFIRE develops a unique and new approach addressing the optimization, the design, the set up and the use of the experimental test facilities by increasing awareness on economic data and technical related best practices

The MyFIRE project will apply a methodology known and successfully used by its partners in previous support projects. The approach is to create a supportive environment, which enables key stakeholders to focus on the central question, develop consensus and collectively develop and agree on best practices for testing facilities across the scientific community.

MyFIRE project will create an environment providing the awareness for the efficient development of experimental facilities in Europe in collaboration with international partners, especially in the BRIC countries. This will reflect the balance between the requirements for strong collaboration and the stakeholders' expectations thus achieving the good experimental activities to develop the sustainable testing methodologies able to contribute to European standards development. The framework will be developing through the creation of open dialogue between the ICT networking research communities and experts from key areas of sociology, policy making, economic models and standardization.

SYNthesis using Advanced Process Technology Integrated in regular Cells, IPs, architectures, and design platforms: SYNAPTIC

The project described in this proposal targets the optimization of manufacturability and the reduction of systematic variations in nanometer technologies through exploitation of regularity at the architectural, structural, and geometrical levels. We propose the creation of a methodology and associated suite of design tools, which extract regularity at the architectural and structural level and automate the creation of regular compound cells which implement the functionality of the extracted templates.

The cell creation will employ Restricted Design Rules (RDR s) and other regularity techniques at the geometrical level to maximize manufacturability and reduce systematic variations. Since the majority of designs in the nanometer regime employ some form of SRAM the project will include a study of the effects of RDR s on SRAM in terms of performance and manufacturability and the subsequent definition of a set of RDR s which allow manufacturability optimization for logic functions while remaining compatible with SRAM technologies. To this end we have assembled a consortium of European academic, research and industrial experts with world-class experience in regularity approaches at the various levels. In order to ensure the successful commercialization and deployment of the resulting tool suite the consortium includes a European EDA vendor with significant expertise in the field of design optimization through automated cell creation. This project will enable European industry to play a leading role in the definition of next generation design methodologies and challenge the US domination in the area of design automation.

European Union - Latin American research and innovation networks: EULARINET

EULARINET (Co-ordinating Latin America Research and Innovation NETworks) goal is to strengthen bi-regional dialogue on S&T between EU Member States (MS) and Latin American Partner Countries (LAPC) at policy, programme and institutional (research entities) level, thus contributing to a threefold objective:

- to promote the joint identification, setting up, implementation and monitoring of mutual interest priorities in following versions of future work programmes across the Specific Programmes of FP7.
- joint definition of S&T co-operation policies support and stimulate the participation of LAPC in FP7 EULARINET will establish a co-ordination platform bringing together the key EU and LA policy makers and programme managers, as well as representatives of research entities, universities and the private sector, eminent researchers and representatives of the civil society,
- to set up dialogue fora at different levels, leading to the identification of S&T and defining specific activities to promote, support and stimulate participation of LA researchers in FP7.

As political background, EULARINET will consider and develop the ongoing EU LA dialogue on S&T, since the Río Summit in June 1999, the ALCUE's Brasilia Action Plan for S&T Co-operation, the Guadalajara Declaration to set up the EU LA Knowledge Area and finally the Vienna Summit in 2006 and the conclusions of the preparatory Senior Officials meeting in Salzburg, as a basis to go further in the practical implementation and updating of the existent policy guidelines.

Promotion of an ICT dialogue between Europe and America Latina: PRO-IDEAL

PRO-IDEAL aims to promote the ICT programme in Argentina, Brazil (Sao Paulo southwards), Chile and Uruguay. These countries were selected because they represent

a) powerful emerging economies on the subcontinent,

b) have a similar social and industrial level of development, and thus

c) are valuable potential partners for Europe.

PRO-IDEAL plans a series of activities that are geared at improving the overall performance of the countries' research community in the ICT programme. The main activities consist in:

- Coaching courses to "coach the coaches": This allows active knowledge transfer that creates a multiplying effect in the target region. The trained coaches will, in turn, act as "Project Angels" for their region.
- Organizing awareness rising and coaching events for potential partners in ICT projects, three in each target country, linked to open calls.
- Reinforce the ICT policy dialogue with key stakeholders.

These efforts will be supported by the PRO-IDEAL ICT promotion platform, an on-line tool based on the Web 2.0 paradigm of knowledge sharing comprising:

- an ICT Wiki providing easy access to information,
- Blogs displaying coaching modules for self-learning,
- News feeds on events, calls, etc.

The platform will be a free, permanent source of information and communication tool that will be sustained beyond project duration by its user community. The above activities are carried out by an experienced partnership that has a proven track record in successful international projects: INMARK from Spain will co-ordinate the consortium; the European Multimedia Forum disposes of the network in the ICT sector and takes care of the dissemination strategy as well as the Web 2.0 tool; the partners in the target countries will act as "hub" implementing the promotion activities at local level, using their established networks covering academic and industrial research communities, and public institutions.

1.1.10 PROmotion of an Ict Dialogue between Europe and America Latina - extension towards Mexico, Colombia, Cuba, and Costa Rica: PRO-IDEAL PLUS

PRO-IDEAL PLUS "PROmotion of an ICT Dialogue between Europe and America Latina" extension towards Mexico, Colombia, Cuba and Costa Rica aims to strengthen the research dimension of Information Society policy dialogues in the target region, establishing a sustainable ICT research community and developing synergies. PRO-IDEAL PLUS will equally enhance the international cooperation of stakeholders within the target countries amongst themselves thus leveraging best practices e.g. from those countries that already enjoy an S&T agreement. It will do so by:

- Organizing ICT Fora in order to facilitate the introduction of ICT research dimension into the regular policy dialogues in parallel to EU-LAC S&T events. These ICT Fora are continued via the Virtual ICT Dialogue space on the PRO-IDEAL PLUS platform. Complementary Round Tables will allow for informal discussions with stakeholders.
- Organizing ICT Days with interactive workshops and coaching courses to stimulate, encourage and facilitate proactive participation of researchers in the ICT programme, based on the experience in the PRO-IDEAL project (http://www.pro-ideal.eu, involving AR, CL, BR, UY).
- Fostering pro-active cooperation between PRO-IDEAL PLUS and other research initiatives e.g. e-science networks (e.g. Red CLARA, GEANT2), ICT networks (e.g. ALETI) other INCO-NET projects, but also bilateral initiatives such as UEMEXCYT II.

- Drafting an ICT research Roadmap providing a shared insight and long-term visions for ICT cooperation

The above activities are carried out by an experienced partnership that has a proven track record in successful international projects: INMARK from Spain will co-ordinate the consortium; the European Multimedia Forum disposes of the network in the ICT sector and takes care of the dissemination strategy as well as the Web 2.0 tool; the partners in the target countries will act as hub implementing the project activities at local level.

TEstbed for Future Internet Services (TEFIS)

The flourishing of user drove demand, the heterogeneity of networks, the multiplicity of new devices, all mean that the Internet as we know it is reaching a saturation point. One of the main challenges of Future Internet research is to address the surge in complexity that service and network developers are facing. Building on top of the on-going actions to support large-scale experimentation for Future Internet protocols, TEFIS brings evaluation processes one step further. TEFIS provides an open platform to support experimentations at large-scale of resource demanding Internet services in conjunction with upcoming Future Internet networking technologies and user-oriented living labs. It will act as a single access point to a variety of existing and next generation of experimental facilities.

TEFIS outcome will be: Open platform to integrate and use heterogeneous test beds based on a connector models, and exposed as a classical service. Integration of 8 complementary experimental facilities, including network and software testing facilities, and user oriented living labs.

Platform to share expertise and best practices. Core services for flexible management of experimental data and underlying test beds resources during the experiment workflow Single access point to test beds instrumented with a large number of tools to support the users throughout the whole experiment lifecycle (compilation, integration, deployment, dimensioning, user evaluation, monitoring, etc) and allow them to work together by sharing expertise. A specific action is foreseen via an Open Call to engage new experimentations and to gradually expand TEFIS.

Combining the efforts of the software and service industry, the FIRE community and the user-centric Living Labs, TEFIS will foster research and business communities in collaboratively elaborating knowledge about the provisioning of Future Internet services.

10.1.2. Cooperation within the EU Framework Programme in the Science and Technology field

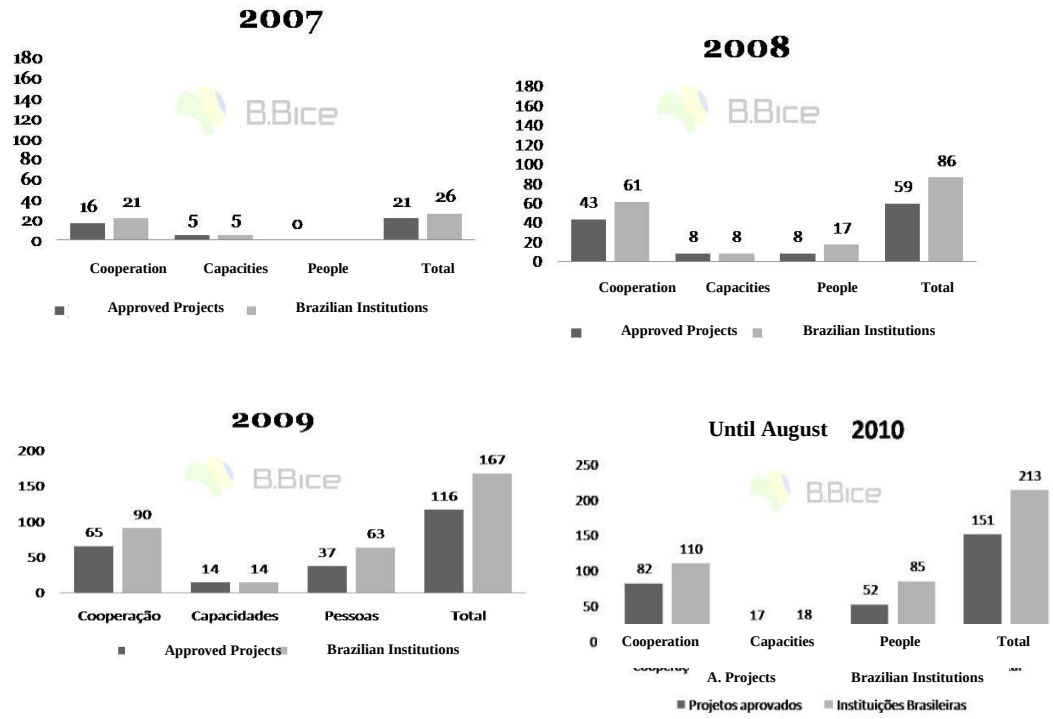
The Brazilian research and development cooperation with Europe in Science and Technology grows in a significant way, the number of approved projects before October 2010 was already 151 projects, with the participation of 203 Brazilian institutions. Brazilian performance in approved projects submitted to the FP7 is also increasing, indicating that our researchers and our research institutions and technology-based companies have been improving procedures for submitting proposals to the Framework Programme.

The Brazilian research priority with the EU is in the areas where Brazil has excellence, that been biofuel, ICT, Nanotechnology and Health. Brazil and UE plan to develop strategic initiatives to strengthen cooperation in Science and Technology for the next five years. The European side emphasizes that it is the expansion of the milestones of the Strategic Partnership (Joint Action Plan), the conclusion of the nuclear fusion (EURATOM), which the European Council has been approved and, possibly, the entry of Brazil in the International Thermonuclear Experimental Reactor (ITER). The Brazilian side also noted the expansion of Strategic Partnership and a greater relationship with key State Members individually.

The Brazilian Bureau for Enhancing the International Cooperation with the European Union (Project B. Bice[27]) established in 2005 with the aim to promote and improve cooperation in Science, Technology and Innovation (ST&I) between Brazil and the European Union countries is responsible for improving the Brazilian participation in the 6th and the 7th Framework Programme for Research and Development, through the dissemination of information related to the cooperation opportunities offered by the programs.

The administration of the BB.Bice project is made by the Support Center to the Technologic Development of the University of Brasília (CDT/UnB)[28], and coordinated/ developed by the Center of Government Advanced Studies and Public Administration (CEAG/UnB)[29], with the partnership of the Brazilian Information Institute of Science and Technology (IBICT)[30], a research institute connected to the Brazilian Ministry of Science and Technology (MCT)[31].

The data about the Brazilian participation and Latin-American countries in the 7th Framework Programme (FP7) has been given by the European Commission to the B.Bice. The period approached here is December 2006 to August 2010. In the first year of the FP7, Brazil had 21 approved projects; this number has doubled in 2008, reaching 59 approved projects. And in the following years the Brazilian participation has grown substantially.



In the FP7 first year, Brazil counted with projects in the thematic areas: Transport, Environment, Energy, Nanoscience, ICT, Health and Biotechnology, with greater participation in the areas of Health and ICT

[27] http://www.bbice.unb.br
[28] http://novoportal.cdt.unb.br/
[29] http://www.ceag.unb.br/modulos/sobre_ceag/quem_somos.php
[30] http://www.ibict.br/
[31] www.**mct**.gov.br/

(Figure 5). In 2008, projects were approved in the areas of Space and in Socio-Economic Science and Humanities (Figure 6). Finally, in 2009, the themes with more approved projects were ICT, Biotechnology, Transport and Health (Figure 7). In 2010 the space has increased significantly (from 1,6% to 6,1%) and biotechnology continued to prevail, accounting more than a quarter of approvals in the cooperation theme (Figure 8).

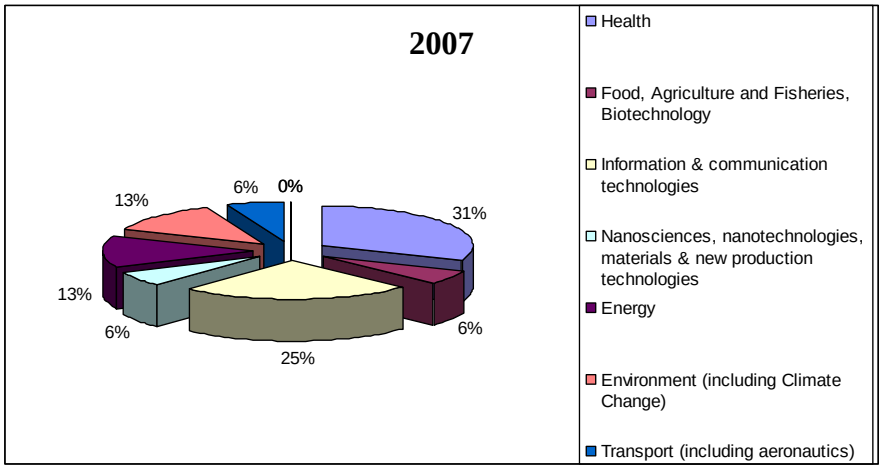


Figure 5

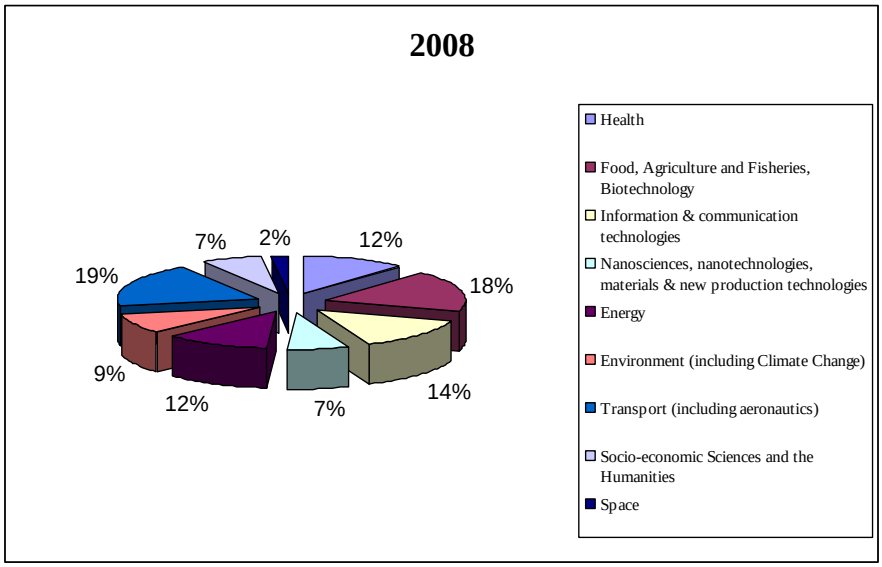


Figure 6

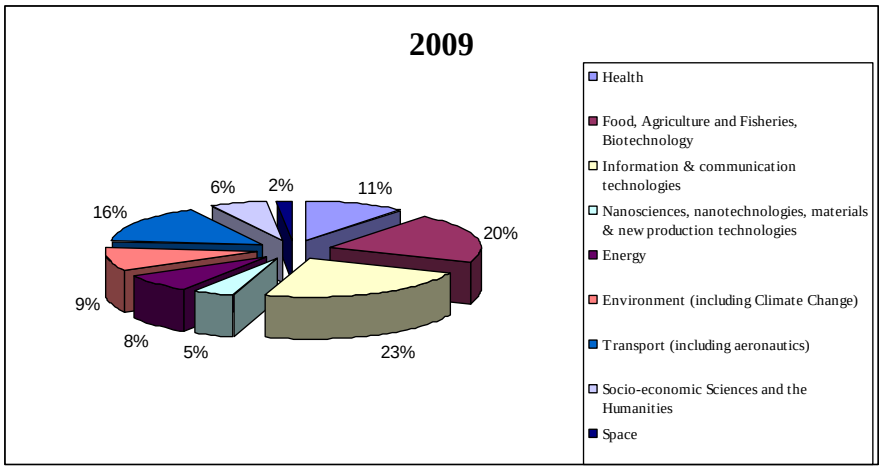


Figure 7

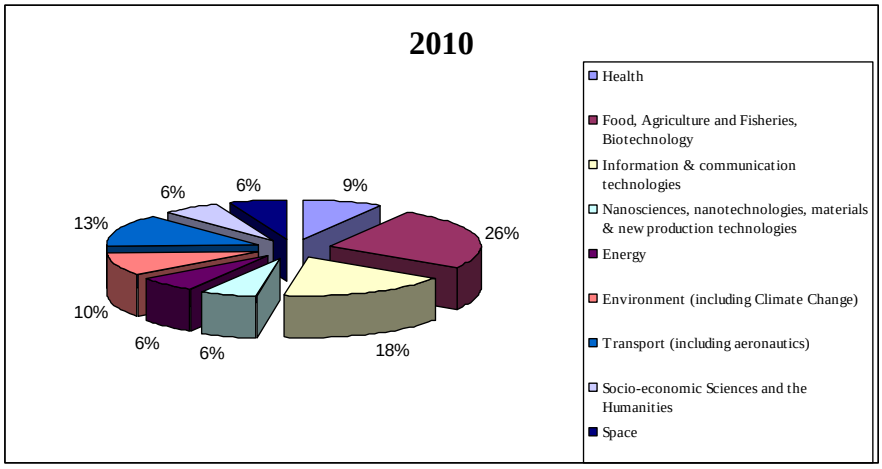


Figure 8

During all this years of experience, many institutions pleaded projects, as we can see in the Figure 9. Today, the institutions that participate most in the FP7 are Universities, publics or private. The most interesting case is USP that is the most pro-active regarding submitting proposals. Even though a large number of rejection, its success base is 32% greater than the actual average rate of Brazil (22,2%).

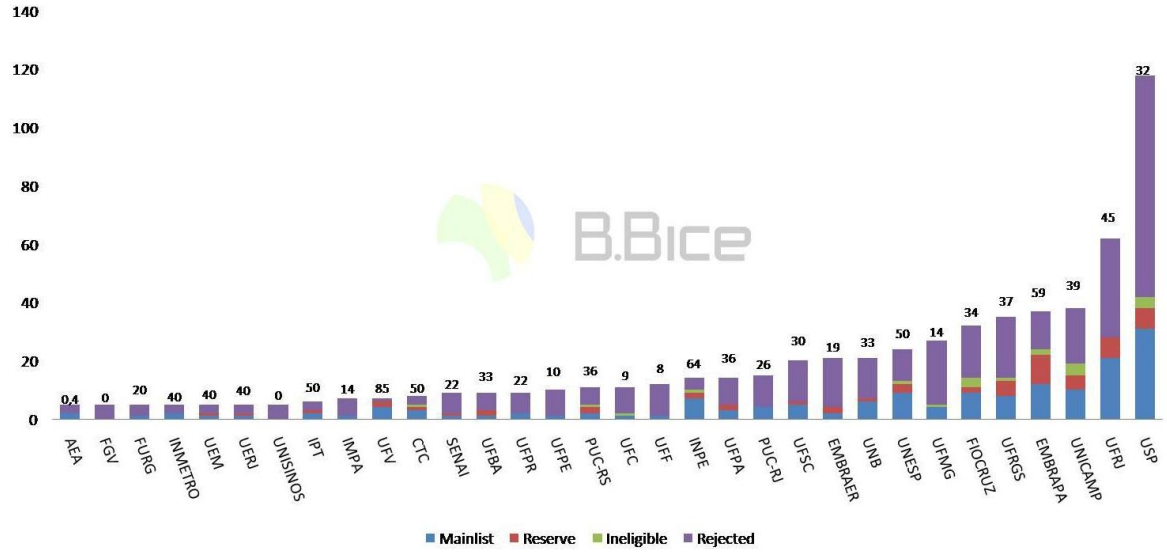


Figure 9

Success rates in Brazil are growing through the FP7. In late 2007, this rate was 10.2%, in 2008 it has gone to 16,1% and in 2009 to 21,2% and was currently (Until August 2010) 22,2%. This percentage is above the European average, which is approximately 19%. This rate varies according to the subprogram. In January 2010, subprogrammes with higher rates of success were people (59,4%). Capacities, in the subtheme of science in society (57,1%) and cooperation in the thematic area of transport (40,9%).

10.1.3.Description of the PDTI (Master Plan for Information Technologies)

The PDTI (Master Plan for Information Technologies) has been elaborated by the CNEN (National Commission for Nuclear Energy) aiming to align the actions of the Information Technology and Communication ICT strategic objectives adapting institutional processes in IT governance and related areas in IT Administrative Units of CNEN.

Considering the guidelines of the Federal Government on the suitability of the areas of ICT Federal Public Administration to best practice IT governance and, considering the COBIT references, this Plan aims to implement a scenario that allows the CNEN reach a certain level of maturity of IT governance by 2012, allowing Optimization of planning and organization of services and ICT processes. CobiT, English, Control Objectives for Information and related Technology, is a guide to good presented as a practical framework, directed toward the management of information technology (IT).

Created and maintained by ISACA (Information Systems Audit and Control Association) has a series of resources that can serve as a reference model for IT management, including an executive summary, a framework, control objectives, audit charts, tools for implementation and mainly a guide to management techniques. Specialists' management and independent institutes recommend the use of CobiT as a means to optimize IT investments, improving the Return On Investment (ROI) realized by providing metrics to evaluate results (KPIs, CSFs and KGIs).

The main recommendations of the Federal Government, as well as IT governance, revolving around the optimization of services and use of IT resources, accessibility of sites and interoperability of systems that support the Government Institutions. As such, it

COBIT, the Federal Government spends as Normative guidelines, templates and primers reference, as eMag, Eping, and best practices in managing IT network tool, referenced in ITIL. ITIL, English, Information Technology Infrastructure Library, is a set of good practices be applied in the infrastructure, operation and maintenance of technology services and information technology (IT). Was developed in the late 1980s by the CCTA (Central Computer and Telecommunications Agency) and is currently in custody of the OGC (Office for Government Commerce) of England.

The ITIL library seeks to promote the management, customer focus and quality of supply of services for information technology (IT). It addresses process frameworks for managing an IT organization by presenting a comprehensive set of management processes, organized in subjects with which an organization can make their management tactics and operational in order to achieve strategic alignment with business. Remember that as a framework, he recommends what to do but not how. Considering all these references, it is necessary to implement various actions that contemplate the improvement of the following disciplines: Applications, Data Security, Infrastructure and Processes.

The main critical factors identified in the strategic diagnosis were lack of ICT standardization in the procedures regarding information security management systems, integration of information flow, procurement of IT resources and communication. The restructuring actions in ICT along with the standardization of IT-based activities ITL in more shares of adequate infrastructure and conformance to standards ISO security benefit standardization, information security and communication.

Shares of technology standardization, permeating the integration of information flow, the development of management systems and the structuring of data architecture, will benefit ICT activities, in compliance with business processes of the Units. As for the maturity of IT governance are planned actions for the alignment of IT to business, leading to efficient use of IT resources, leading to the CNEN maturity level 3 (three) COBIT (IT processes defined and documented).

- The scenario proposes to review the Organizational Structure of ICT to the transfer, in fact, for CGTI to, the activities of corporate ICT considered, following the line of centralization corporate actions, administrative and human resources to Headquarters, under the responsibility DGI (Directorate of Institutional Management).
- Proposes to define a structure of Scientific Computing, responsible for providing capacity of high-performance processing units for the CNEN covering necessary infrastructure, as well as creating a body of knowledge with servers scientific computing and information technology.
- Creating an enterprise data model with appropriate data layers that meet the creating an environment of Business Intelligence BI, Knowledge Base, considering the best practices in knowledge management.
- Proposes to structure and standardize governance processes and ICT services, with Definition of Levels of Service Agreements (SLA), including the creation of a Framework CNEN for any development application, considering all the precepts of CobiT, ITIL guidelines and reference models of the Federal Government for the provision of services IT.
- It also proposes guidelines on the physical and logical security environments, applications, hardware - HW, Software - SW, etc.
- Proposes the separation of applications and databases that support the activities of inspection (DRS) on specific servers for DRS, applications and databases that support DGI, in order to prepare for the future IT architecture or environment separately from the Brazilian

Regulatory Agency.

- Proposes the establishment of standards for the park (servers, workstations, database data, printers, etc.) to optimize the maintenance and purchasing power, which may be made in batches that meet all CNEN, but not necessarily centered on Headquarters. The scenario includes guiding the use of hiring third parties to address the lack of staff IT. All proposals aim to future productivity gains as well as providing a jump to higher level and better structured provision of ICT services.

To align IT to the strategic activities of the CNEN, together with the CGTI areas related ICT Administrative Units, and with the support of the IT Steering Committee should formalize an IT strategy, making clear the rationale for the Information Technology for throughout the organization and its vision.

It is also possible to evaluate the strategic importance of information technology business assessing the amount of information underlying the processes that form the chain value and the final product or service. The impact that developments in information technology can cause the business today and how it might impact the future is also a form of measure how much strategic information technology is important for the organization.

Given that CNEN in its 8 (eight) has diversified business units, as surveillance, research and development, education, and manufacturing activities, the participation of strategic IT for each of these units will have a different relationship, which may indicate that the participation of ICT may have different roles depending on the unit it serves.

However, regardless of the strategic relationship of IT with the business and its mission, the ICT needs be a proactive provider of solutions leveraging the mission of CNEN and not just solving specific technological problems.

Estimated Disbursements for Next 3 (three) years:

Year	Disbursement	Cumulative
2010	R$ 6.500.000,00	R$6.500.000,00
2011	R$ 8.600.600,00	R$15.100.600,00
2012	R$6.119.000,00	R$21.219.600,00

10.1.4. Analysis of R&D cooperation among Brazil, the EU and other countries

Over the last years, Brazil has become an increasingly significant global player and emerged as a key interlocutor for the EU. However, until recently EU-Brazil dialogue has not been sufficiently exploited, and carried out mainly through EU-MERCOSUR dialogue, opens the communication.

Science, technology and innovation will be among the areas of cooperation strengthened. The Commission believes that the recent entry into force of the EU-Brazil Science and Technology Cooperation Agreement, along with the new opportunities for international participation in the EU's Seventh Framework Programme for research (FP7), provide a sound basis for increasing existing cooperation in S&T. EU and Brazil should facilitate researcher mobility, and also increase the visibility of cooperation in this area. The EC[32] proposal outlines just how the Commission plans strengthening current

[32] http://ec.europa.eu/external_relations/brazil/intro/index.htm. Based on the Commission

ties. Firstly, dialogue should be strengthened, and joint planning improved, so that priorities can be set that address areas of common interest:

- The Commission also suggests establishing an agreement between Brazil and EURATOM, the European Atomic Energy Community, along the lines of agreements already in place with other countries. The agreement could either focus on the specific field of fusion, promoting Brazil's accession to the International Thermonuclear Experimental Reactor (ITER) project, or on broader areas of nuclear research.
- The proposal also addresses space. Brazil is already a partner in Galileo, the EU's satellite navigation system project (for example in the project CELESTE). Cooperation within this framework should be further intensified through a new cooperation agreement based on information exchanges and contacts, suggests the Commission.
- Other areas selected by the Commission for closer collaboration are information and communication technologies (ICT), the Millennium Development Goals, protecting the environment, energy, trade and economic relations, transport, higher education, culture, and justice, freedom and security.

Traditionally, the main areas with priority of cooperation between Brazil and the EU are:

- Global challenges (including poverty and inequalities)
- Environment
- Energy (including renewable energies)
- Stability and prosperity.
- Environment is the sector that has absorbed the main financial resources, in particular promoting cooperation in specific and target sectors:
    - Biodiversity
    - Tropical forest
    - Bio safety
    - Emissions of greenhouse gases
    - Capacity building and training
    - Protected areas
    - Dissemination activities

Two specific EU-funded projects support the cooperation between Latin America and the EU:

• The EULANEST project intends to promote and co-ordinate research co-operation among EU Member States (MS) and Latin American countries (LAC), thus contributing to strengthen the impact of their national programmes on international cooperation in science and technology (S&T) with Latin America. EULANEST is intended to network European policy-makers and programme managers involved in promoting research cooperation with Latin America in all fields of science. This ERA-NET will prepare its partners towards the preparation, design, implementation and development of joint transnational research activities. EULANEST will first map and benchmark the cooperation activities in S&T among

communication COM (2007) 281

MS and LAC, identifying best practices and preparing the ground for a Joint Action Programme with the final goal of the launching of a joint call between the partners. Through these activities EULANEST will contribute to the building of the European Research Area (ERA) and, particularly, to strengthening the international dimension of the ERA by co-coordinating bilateral programmes of research co-operation with Latin America, both within and between European countries In addition EULANEST intends to help to develop a more coherent approach of the EU towards scientific cooperation with emerging Latin American countries, like Chile, Argentina, Brazil, in the present Framework and INCO programme where no specific treatment adequate to the characteristics of these countries is available.

• EULARINET (Co-coordinating Latin America Research and Innovation NETwork) goal is to strengthen bi-regional dialogue on S&T between EU Member States (MS), Associated States (AS) and Latin American Partner Countries (LAPC) at policy, programme and institutional (research entities) level, thus contributing to a threefold objective:

- Promote the joint identification, setting up, implementation and monitoring of mutual interest priorities of future work programmes across the Specific Programmes of FP7.
- Joint definition of S&T co-operation policies
- Support and stimulate the participation of LAPC in FP7
- S&T cooperation between Brazil and Europe at Member State level.

The most intense cooperation brought about during the last five years has been with a reduced number of countries from the EU, the main countries are: Germany, France, Italy, Spain, United Kingdom and Holland. With some of them the cooperation is done through official channels (Bilateral Technical Cooperation), as the first five countries mentioned, as with Holland there is a decentralized cooperation, in which ABC follows the negotiations.

Germany

Brazil is Germany's most important cooperation partner in Latin America in the area of education and research. The two countries jointly support large-scale environmental and sustainability research projects as well as numerous projects in the areas of biotechnology and health research, to name but a few Scientific and Technological (S&T) Cooperation with Brazil is based on the framework agreement on scientific research and technological development between Germany and Brazil, which was updated in 1996 and places particular emphasis on the integration of industry partners in both countries. In addition to governmental funding institutions (CNPq, CAPES, FINEP, etc.), the Brazilian research funding scene also features institutions at state level, such as FAPESP in São Paulo and FPERGS in Rio Grande do Sul. The key areas of cooperation in individual specialist fields were determined in collaboration with the Brazilian partner ministries MCT (science and technology), MEC (education), MMA (the environment), and the overarching MRE (foreign ministry). Environmental research, sustainability research, and marine research are at the forefront of the collaboration. Application-oriented research focuses on the following areas, among others: information technology, genome research, nanotechnology, biotechnology, health, and space flight. The BMBF supports a wide range of measures for technology transfer.

The German Federal Ministry for Education and Research with its International Bureau started in 2007 a dialogue project in cooperation with the German Development Institute with the title “Dialogue 4S: Sustainable Solutions - Science for Sustainability” aiming at the BRICS countries (Brazil, Russia, India, China, South Africa). This aims to break open the thematic restriction and widen the focus of Germany's technology and research competence in sustainability.

France

In first place is France in subjects of innovation and basic science. The most favoured sectors are nanotechnology, bio combustibles and ICT. The most intense cooperation is done between the CNPq and

the CNRS. With France, cooperation is very strong in Agriculture and Environment, which is mainly carried out by IRD and CIRAD.

Also there is a modality of projects type 2 + 2 with two companies, one from Brazil and the other from France, and two research centres, one in each country. As far as innovating initiatives there is the programme of initiatives through which 5 managers visited research centres, institutes... in France (in 2007) and in 2008 it will be the other around. Brazil is number 14 in the French copublication ranking with 600 co-publications a year. France is number 2 in the Brazilian copublication ranking. More than900 French scientists are visiting theirs colleagues in Brazil each year (average of 18 days: i.e. 80 French researchers are present each day in Brazilian laboratories).

Spain

IV Meeting of the S&T Commission (2008) for the Cooperation between Spain and Brazil In this meeting it was established a bilateral program of cooperation between the two countries for the next 4 years, which is articulated in 3 main points:

- Priority and sectorial concentration in the strengthening of the institutional capacities, democratic government etc.
- Geographical concentration in the Brazil Northeast, for being the region, which has the lowest levels of social and economic development.
- Development of the triangular cooperation, with projects in third countries less developed.

CYTED – IBEROEKA

The CYTED program has as main objective to contribute to the harmonious development of the Iberoamerican region through the establishment of cooperation mechanisms between groups of research (Universities, RO and innovative enterprises) with the objective to translate the RTD results to the productive sector and the civil society in general. Number of activities carries out by CYTED (1990 – 2007) and IBEROEKA program (1991 – 2006) between Portugal and Spain with all the Latin American countries:

There is considerable interest and scope in EU-Brazil co-operation in higher education, to

broaden academic knowledge and bring future intellectual elites closer together. Brazil has been an active participant in the EU's higher education programme Alβan, Erasmus Mundus and in EU Member States' bilateral exchange programmes. Brazil also registered a strong participation in the EU's ALFA programme for EU-LA interuniversity co-operation. Significantly, consideration is being given to the launch of a policy dialogue on education to exchange best practices.

Other cooperation actions with EU countries

The EU proposes to stimulate further the exchanges and dialogue between our cultures, by intensifying university exchanges in the near future, with funds from the EU's Country Strategy Paper 2007-2013: €30,5 million are foreseen for additional Erasmus Mundus scholarships for Brazilian students.

The Programme Alβan[33]

(European Union Programme of High Level Scholarships for Latin America) aims at the reinforcement of the European Union-Latin America co-operation in the area of Higher Education and covers studies for postgraduates as well as higher training for Latin America professionals/future decision-makers, in institutions or centres in the European Union.

[33] http://www.programAlßan.org.

Further to opening-up of the European Higher Education Area to Latin Americans Alβan scholarships will contribute to better employability skills and career opportunities for Latin American postgraduates and professionals in their own countries[34].

The general objective of the programme ALFA (Regional Cooperation with Latin America - ALFA III) is to contribute to the development of the higher education in Latin America (LA) through cooperation between the EU and the countries of Latin America, as a means of contributing to the economic and social development of the region in general and the more balanced and equitable development of Latin-American society in particular.

The Programme is implemented through:

- Joint Projects (Lot 1) designed to encourage exchanges of experiences between Higher Education Institutions (HEI) in Latin America and the EU.
- Structural Projects (Lot 2) to promote the reform of higher education systems at regional level in Latin America.
- In addition, Accompanying Measures (Lot 3) will be financed to increase visibility and promote results of Lots I and II projects.

Cooperation with other countries

The main competitors of the EU in terms of cooperation between Brazil and foreign countries in Science, Technology and Development are Japan, USA and Canada. In the 3 cases Agreements on Science and Technology has been signed between Brazil and those countries. The cooperation with Japan is through official channels but with US the direct cooperation between partners (like universities) is very strong. However, some significant differences exist in the model of bilateral cooperation.

- The Japanese cooperation is concentrated in the poorest regions of Brazil: The North and Northeast and the Japan collaboration does not contemplate donation or loan financial resources[35].
- With Canada the traditional cooperation is decreasing because Canada considered now Brazil an Emergent Economy. The geographical priority is focused in the Northeast States, followed by the peripheries of urban cities and federal-level initiatives. Applied sciences and technology are the main sectors of future collaboration.
- With US, great importance is give to Innovation and Commercialization of Technology, Nanosciences and some sectors of basic science. Education is other of the areas with priority.

Japan

More than 96 billion Yens (about 750 million EUR) have been received by Brazil through the technical and financial cooperation that places Brazil in a position among all the countries beneficiated by the Japanese Aid, and the first position in the world out-of the Asian continent.

The Brazilian institutions can access to the program by means of the presentation of proposals that will be evaluated and approved for the ABC and the JICA.

[34] http://europa.eu.int/comm/europeaid/projects/Alßan.33

[35] http://ec.europa.eu/europeaid/where/latinamerica/ regional-cooperation.34

It is important to detach that the bilateral technical cooperation with Japan does not contemplate the donation or loan of financial resources, also it does not contemplate, university infrastructure, academic researches, and scholarships. The main items contemplated by the cooperation include high level consultancy (sending Japanese consultants), the qualification and training of Brazilian technicians in Japan and, in some cases, the equipment donation. The national counterpart, is translated in staff, local installations and expenses fits to the Brazilian institution, amount that must be, at least, equal to the value of the requested cooperation.

The objectives of Japanese cooperation with Brazil are:

- To provide knowledge and technological transfer in areas of interest of Brazilian institutions
- To fortify the administrative capacities of the country
- To concentrate efforts towards the reduction of internal and inter regional disparities.
- To contribute for the sustainable development involving local communities and public agents
- Focus on Regions Priorities: The regions North and Northeast are considered with priority in reason of its lesser relative, economic and social development.

United States.

Brazil-U.S. relationship. In 1994 the Brazil - USA Science and Technology Agreement was extended and amended, thus reaffirming both nations' intent to cooperate on S&T[36]. Energy, earth and space science, biotechnology, engineering, and agriculture are just some of the areas of joint interest that will carry Brazil and the U.S. into the future. On July 21, 2006, the first meeting of the U.S.-Brazil Ministerial Level Joint Commission on Scientific and Technological Cooperation was held in Washington, DC. Potential fields include information technology and communications, biotechnology, agriculture, energy, public health and Earth observation.

Sectors of mutual interest[37]:

- Renewable Fuels: Objective: Increase access to modern energy services benefits everyone by facilitating cheap electricity and catalyzing economic growth, especially in rural settlements.
- Agriculture: Institutions such as Brazil's Agricultural Research Corporation, Embrapa, and The Agricultural Research Service of the U.S. Department of Agriculture are working together to implement programs of mutual benefit.
- Earth Observation and Forestry: Through the Executive Committee of the Group on Earth Observations, the U.S. and Brazil are working to develop capacity worldwide for producing and using earth observations and for establishing a Global Earth Observing System of Systems (GEOSS).
- Global Positioning Systems: The two countries have also collaborated on Global Positioning Systems, which has had a significant impact in accuracy. GPS increases public safety by preventing transportation accidents and by reducing the response times of ambulances, fire fighters, and other emergency services.
- Information, Communications and Technology: Brazil and the United States are moving quickly toward enhancing broad internet access by leveraging broadband and wireless communication

[36] http://www.ed.gov/news/pressreleases/2008/07/07252008.html

[37] http://www.ed.gov/programs/fipsebrazil/index.

technologies.

- Health: Brazil-U.S. research efforts have placed both nations at the forefront of biomedical research. Brazilian and U.S. medical researchers now collaborate regularly, cooperatively conducting important research about tropical disease, HIV/AIDS, cancer, and cardiology.

Canada

Canada and Brazil Science and Technology Cooperation Agreement: In 2005, Foreign Affairs and International Trade Canada (DFAIT) was provided with a mandate to negotiate a Science and Technology Cooperation Agreement with the government of Brazil. This agreement will be the final component of the International Science and Technology Partnerships Program (ISTPP) to be delivered, following the successful signings of agreements between Canada and Israel, India and China.

The Canada-Brazil bilateral relationship has not yet fully achieved its potential. Until recently, the focus has been placed on conflicts that overshadowed an otherwise positive relationship. In 2003, the two ministers of Foreign Affairs endorsed a joint plan of action to reinvigorate Brazil-Canada bilateral relations. The plan highlighted extensive areas of collaboration including hemispheric and global issues, federalism and parliamentary relations, commercial initiatives, science and technology, education/cultural exchanges, security/military cooperation, and technical and development cooperation.

Program Implementation with Brazil (Bilateral Program): Emphasis is placed on the systematic involvement of the Brazilian Cooperation Agency (ABC) in policy dialogue, program planning, management, implementation and monitoring. Starting in 1996, the program worked on the basis of a technology transfer approach, with technology referring to Canadian approaches or models which incorporated unique know-how or expertise, and technology transfer referring to the sharing of these Canadian approaches with strong partners in Brazil that were able to successfully adapt them to meet pressing development challenges. Three lines of concentration have been identified jointly with the Brazilian Cooperation Agency sectorial, institutional and regional. Finally, the strategy includes new dimensions based on policy dialogue and trilateral cooperation.

Sectorial concentration: The Brazil program concentrates its efforts primarily in social sectors (governance, health and the world of work) while maintaining gender and ethnic equality and environmental management as crosscutting themes. Governance is the primary sector for programming and cuts across the other two sectors, health and the world of work, contributing to synergies at the program level.

In support of the activities described above, Canada's program in Brazil devotes resources to building knowledge, gathering intelligence and sharing information, and emphasizes the collection and dissemination of lessons learned.

10.2. Annex 2. Issues related with ICT research cooperation in Colombia

European and Latin American companies involved in ICT- 7FP projects, with Colombian participation

Project Acronym	European or LatAm company	Country
EELA-2	HLP Développement (HLP)	France
PRO-IDEAL PLUS	Inmark Estudios y Estrategias	Spain
	EMF - TheForum of e-Excellence	UK
	SOFTEL	Cuba
FORESTA	Technical Support for EuroppeanOrganisationsSprl (TESEO)	Belgium
	Rose Vision (ROSE)	Spain
	Europe for Business Ltd (EFB)	United Kingdom
FIRST	Rose Vision (ROSE)	Spain
	European Institute for Research and Strategic Studies in Telecommunications Gmbh (EURESCOM)	Germany
	Technical Support for EuroppeanOrganisationsSprl (TESEO)	Belgium
	THALES Services SAS	France
	FUTURA Networks Do Brasil Consultoria Lda. (FBR)	Brazil
HD-MPC	Electricite de France SA (EDF)	France
	Rheinisch-WestfalischeTechn. Hochschule Aachen (RWTH)	Germany

Project Acronym	European or LatAm company	Country
	INOCSA Ingeniera, S.L. (INOCSA)	Romania
SALA+	Asociación de Empresas de Electrónica, Tecnologías de la Información y Telecomunicaciones de España (AETIC)	Spain
	CETIM – Center for Technology and Innovation Management GmbH	Germany
	Sigma Consultants	France
	Rokasud S.A. (DigitalMassMedia)	Argentina
	Federación de Asociaciones de Latinoamérica el Caribe y España de entidades de Tecnología de la Información (ALETI)	Costa Rica
	AretelBioBio (ABB)	Chile
	HyCAmericas (HyCA)	Chile
SALA3D	Technical Support for EuroppeanOrganisationsSprl TESEO	Belgium
	AETIC - Asociación de Empresas de Tecnologías de la Información y Comunicaciones de España	Spain

European and American academic entities involved in ICT - 7FP projects, with Colombian participation

Entity	Country	Project
Universidade de Sao Paulo (USP)	Brazil	FORESTA FIRST
Instituto Tecnológico y de Estudios Superiores de Monterrey(ITESM)	Mexico	FORESTA FIRST PRO IDEAL PLUS
Centro de Investigaciones Energéticas Medioambientales y Tecnológicas (CIEMAT)	Spain	EELA
Centro de Gestión de la Información y Desarrollo de la Energía (CUBAENERGIA)	Cuba	EELA
University College Cork - Costal and Marine Resources Centre (UCC-CMRC)	Ireland	EELA
Centre National de la RechercheScientifique (CNRS)	France	EELA
IstitutoNazionale di Fisica Nucleare (INFN),	Italy	EELA
Laboratorio de Investigación en Nuevas Tecnologías Informáticas (LINTI - UNLP)	Argentina	EELA
Red Universitaria Nacional (REUNA)	Chile	EELA
Servicio Nacional de Meteorología y Hidrología (SENAMHI)	Peru	EELA
Universidad de Los Andes (ULA)	Venezuela	EELA
Universidad Nacional Autónoma de México (UNAM)	Mexico	EELA

Entity	Country	Project
Universidade do Porto (UPORTO)	Portugal	EELA
Universidade Federal do Rio de Janeiro (UFRJ)	Brazil	EELA
Universidad Técnica Particular de Loja (UTPL)	Ecuador	EELA
Universidad Tecnológica de Panamá (UTP)	Panamá	EELA
Universidad de la República (UdelaR)	Uruguay	EELA
Laboratorio Technológico,	Uruguay	PRO IDEAL PLUS
Cidade do Conhecimento, Universidade de São Paulo	Brazil	PRO IDEAL PLUS
Universidad de Palermo UP	Argentina	FORESTA
Universidad Tecnologica Metropolitana UTEM	Chile	FORESTA
Delft University of Technology (TUD)	Netherlands	HDMPC
KatholiekeUniversiteitLeuven (KUL)	Belgium	HDMPC
Politecnico di Milano (POLIMI)	Italy	HDMPC
Universidad de Sevilla (USE)	Spain	HDMPC
EcoleSuperieured'Electricite (SUPELEC)	France	HDMPC
University of Wisconsin-Madison (UWM)	United States	HDMPC
Queen Mary and Westfield College, University of London (QMUL)	United Kingdom	SALA +
Universidad Técnica Federico Santa Maria	Chile	SALA +

10.3. Annex 3. Issues related with ICT research cooperation in Chile

10.3.1. In-depth analysis of cooperation practices in the 10 FP7 projects with Chilean participation

Chilean participation in the 10 current projects is mainly composed of universities and institutions, which exposes a fundamental flaw, the lack of industry participation in R & D activities in FP7.

Type of organization	**No. Of projects**
Universities	3
Industry	0
Institution	3
Total	6

Participation of Chilean Universities in FP7 projects

There are currently three universities participating in four projects of FP7, which represents a low percentage compared to the number of Chilean universities that reaches 60. [3]

University	**Project**
Universidad Tecnológica Metropolitana	FORESTA
Universidad de Chile	ETHICAL
Universidad Técnica Federico Santa María	IMAPLA EPIKH
Total Proyectos	4

Chilean Institutions participating in FP7 projects

In the case of institutions, we see that there are three institutions involved in six projects.

Institutions	**Project**
CONICYT	CHIEP II EULARINET

REUNA	EVALSO GISELA
ADI Chile	PRO IDEAL PRO IDEAL PLUS
Total Project	6

Participation of Latin American universities in FP7 projects with involving Chilean partners.

In the field of academic collaboration we have identified the participation of 14 Latin American universities in FP7 current projects in Chile. The Identified universities are Chile, Argentina, Mexico, Colombia, Brazil, Venezuela and Uruguay.

Country	**University**	**Project**
Chile	Universidad Tecnológica Metropolitana	FORESTA
	Universidad de Chile	ETHICAL
	Universidad Técnica Federico Santa Maria	IMAPLA EPIKH
Argentina	Universidad de Palermo	FORESTA
Mexico	Instituto Tecnológico y de Estudios Superiores de Monterrey	PRO-IDEAL PLUS FORESTA
	Universidad Nacional Autónoma de México (UNAM)	GISELA EPIKH
Colombia	Universidad Nacional de Colombia	PRO-IDEAL PLUS
	Universidad de Los Andes Fundación	GISELA
Brazil	Centro Federal de Educação Tecnológica Celso Suckow da Fonseca (CEFET-RJ)	EPIKH
	Universidade Federal do Rio de Janeiro (UFRJ)	GISELA EPIKH

	Universidad de Sao Paulo	PRO-IDEAL PLUS PRO-IDEAL FORESTA
	Universidad Federal de Campina Grande	GISELA
Venezuela	Universidad de Los Andes	GISELA
Uruguay	Universidad de La Republica	GISELA

Participation of European universities in FP7 projects with Chilean partners.

Academic cooperation in current projects is enhanced by the participation of European partner universities allowing Chilean researchers to work in multidisciplinary teams, update knowledge and to have access to better infrastructure. Currently there are 14 European partner universities participating in the 10 ongoing projects involving Chilean partners.

Country	**University**	**Project**
Germany	Ruhr-Universitaet Bochum	EVALSO
England	Imperial College London	ETHICAL
	Queen Mary and Westfield College, University Of London	EVALSO
Italy	Politecnico Di Milano	IMAPLA
	Istituto Nazionale Di Astrofisica	EVALSO
NEDERLAND	Universiteit Leiden	EVALSO
Ukraine	Palladin Institute of Biochemistry of the National Academy of Sciences of Ukraine	ETHICAL
SPAIN	Centro de Investigaciones Energéticas Medioambientales y Tecnológicas (CIEMAT)	EPIKH
	Universidad de Sevilla	IMAPLA
	Universidad Politecnica de	EULARINET

	Madrid	
France	Universite Henri Poincare Nancy	IMAPLA
Finland	Suomen Akatemia	EULARINET
HUNGARY	Magyar Tudományos Akadémia Számítástechnikai és Automatizálási Kutató Intézet (MTA SZTAKI)	EPIKH
Portugal	Universidad Do Porto	GISELA

In this study we have identified the involvement of other partner universities from outside the EU or Latin America, which undoubtedly increases the impact of the projects. Identified universities work in two projects FP7 belong to Malaysia, Jordan, China, Israel, Tunisia and South Africa.

Country	**University**	**Project**
Malaysia	Universiti Malaysia Sarawak	ETHICAL
JORDAN	Jordanian Universities Network (JUNET)	EPIKH
CHINA	Peking University (PKU)	EPIKH
	School of Computer Science and Engineering of Beihang University (BUAA)	EPIKH
ISRAEL	School of Computer Science of Tel Aviv University (SCS-TAU)	EPIKH
TUNISIA	Unité de Recherche en Technologies de l'Information et de la Communication de l'Université de Tunis (UTIC)	EPIKH
SOUTH AFRICA	University of Cape Town (UCT)	EPIKH

According to the tables shown above, in the field of academic collaboration are currently 35 universities working in the ten projects are being implemented with the participation of Chilean partners in the 7PM

In the academic collaboration, we can to identify active participation of 14 Latin American partner

universities in the 10 current projects. In this context, we can say that participation of Chile is the second highest with three participating universities, after Brazil with four. Next comes Mexico and Colombia with two universities and Argentina, Venezuela and Uruguay with a respectively.

Academic collaboration is enhanced by the participation of 14 European universities, so that dialogue and cooperation in R & D that develops between European and Latin American partners is potentially beneficial to both.

Company collaboration in current projects FP7 that involve Chilean partners.

In the context of companies' participation in FP7 ongoing projects with Chilean partners, we note that there is no participation of Chilean companies in any of the projects underway, while in the Latin American context there is only one company involved.

Country	**Industry**	**Project**
Cuba	Empresa Productora De Software para la Técnica Electronica - Softel	PRO-IDEAL PLUS

Moreover, we have identified five European companies involved in the current projects FP7 with Chilean partners.

Country	**Company**	**Project**
England	European Multimedia Forum Ltd	PRO-IDEAL PRO-IDEAL PLUS
SPAIN	Inmark Estudios Y Estrategias S.A.,	PRO-IDEAL PRO-IDEAL PLUS
Cyprus	GeoImaging Ltd	ETHICAL
Greece	Arachni Ltd	ETHICAL
France	HLP Developpement SA	GISELA

Regarding the participation of companies in the current projects FP7 with involving Chilean partners is zero. This situation is similar to what is happening throughout Latin America, because in the 10 current projects only there is a company in the Pro Ideal Plus project, which is a Support Action project and not a research project.

Collaboration with different organizations in current projects FP7 with Chilean partners.

In terms of the participation of government agencies and NGOs we have identified 20 Latin American institutions and 21 European institutions.

In Chile there are three institutions involved in the projects development: CONICYT, REUNA and ADI Chile which work in six current projects.

The National Commission for Scientific and Technological Research, CONICYT, is a state institution of Chile and depends of the Ministry of Education and currently directs two major strategic objectives or pillars: the promotion of human capital formation and strengthening of scientific and technological base of the country. In turn, both pillars are powered established across an area of scientific information and international links. [4]

The National University Network Corporation (REUNA) is a private corporation not-for-profit organization that was created as a collaborative initiative, driven by research institutions and higher education, has the only academic network technology infrastructure dedicated to research , education and innovation in Chile.

The Computer Law Association of Chile (ADI-CHILE) is a private corporation not-for-profit organization created with the aim of promoting the development of legal science in their interaction with Information and Communications Technology, Internet, trade electronic, digital signature, computer crime and personal data.

Projects involving Chilean institutions

Institution	**Project**
CONICYT [38]	EURALINET CHIEP II
REUNA[39]	EVALSO GISELA
ADI Chile[40]	PRO IDEAL PRO IDEAL PLUS

Latin American institutions

In the ten current projects FP7 with Chilean partners there are 20 Latin American Institutions

Country	**Institution**	**Project**
Chile	Conicyt	EURALINET CHIEP II
	Reuna	EVALSO GISELA
	Adi Chile	PRO IDEAL

[38] Comisión Nacional de Investigación Científica y Tecnológica
[39] Corporación Red Universitaria Nacional
[40] Asociación de Derechos e Informática de Chile

		PRO IDEAL PLUS
Colombia	Cintel	FORESTA
	Instituto Colombiano Para El Desarrollo De La Ciencia Y La Tecnologia	EULARINET
Costa Rica	ALETI	FORESTA
	Asociacion Camara De Tecnologias De Informacion Y Comunicación	PRO-IDEAL PLUS
Argentina	Ministerio de Ciencia, Tecnología e Innovación Productiva	PRO-IDEAL PRO-IDEAL PLUS EULARINET
	Fundacion Para La Innovacion Y Transferencia De Tecnologia	GISELA
Uruguay	Laboratorio Tecnologico Del Uruguay - LATU	PRO-IDEAL
	Cooperacion Latinoamericana De Redes Avanzadas	EVALSO GISELA
	Ministerio De Educacion Y Cultura	EULARINET
Brazil	Ministerio Da Ciencia E Tecnologia	EULARINET
Mexico	Consejo Nacional De Ciencia Y Tecnologia – CONACYT	EULARINET
	Corporacion Universitaria Para El Desarrollo De Internet, A.C	GISELA
Nicaragua	Consejo Nicaraguense De Ciencia Y Tecnologia (NIC)	EULARINET
Peru	Red Academica Peruana	GISELA
PANAMA	Centro Internacional De Desarrollo Tecnologico Y Software LIBRE	GISELA

Ecuador	Consorcio Ecuatoriano Para El Desarrollo De Internet Avanzado	GISELA
CUBA	Centro De Gestion De La Informacion Y Desarrollo De La Energia	GISELA

Institutions can be classified into three types: government representatives, associations or private corporations or nonprofit ventures and business associations.

State Institutions:

- Ministerio de Ciencia, Tecnología e Innovación Productiva (Argentina)
- Ministerio De Educación Y Cultura (Uruguay)
- Ministerio Da Ciencia E Tecnologia (Brasil)
- Consejo Nacional De Ciencia Y Tecnología – CONACYT (México)
- Consejo Nicaragüense De Ciencia Y Tecnología (Nicaragua)
- Instituto Colombiano Para El Desarrollo De La Ciencia Y La Tecnologia (Colombia)

Associations or corporations

- Centro de Investigación de las Telecomunicaciones Cintel (Colombia)
- Fundación Para La Innovación Y Transferencia De Tecnología (Argentina)
- Laboratorio Tecnológico Del Uruguay – LATU (Uruguay)
- Corporación Latinoamericana De Redes Avanzadas (Uruguay)
- Corporación Universitaria Para El Desarrollo De Internet, A.C (México)
- Red Académica Peruana (Perú)
- Centro Internacional De Desarrollo Tecnológico y Software LIBRE (Panamá)
- Consorcio Ecuatoriano Para El Desarrollo De Internet Avanzado (Ecuador)
- Centro De Gestión De La Información Y Desarrollo De La Energía (Cuba)

Business Associations

- Federación Latinoamérica, El Caribe y España de Entidades de Tecnologías de la Información ALETI[41]

[41] ALETI es la Federación que nuclea a la Industria TICs de 17 países. Su misión es integrar a todas las Entidades (federaciones, cámaras y asociaciones) TIC de Latinoamérica, El Caribe y España para fomentar el uso, desarrollo, intercambio y comercialización de tecnologías, así como también promover e impulsar la generación de políticas positivas para el desarrollo de

- Asociación Cámara De Tecnologías De Información Y Comunicación (Costa Rica)

European institutions

We have identified 21 European institutions involved in ongoing projects FP7 with Chilean partners

Country	Institution	Project
Belgium	Technical Support for European Organizations Sprl. TESEO	FORESTA
	European Health Telematics Association	ETHICAL
Spain	Rose Vision	FORESTA
	Agencia Estatal Consejo Superior De Investigaciones Cientificas (	EULARINET
UK	Europe for Business Ltd	FORESTA
ITALY	Consorzio COMETA (COMETA)	EPIKH
	Istituto Nazionale di Fisica Nucleare (INFN)	GISELA EPIKH
	Consortium Garr	EVALSO
Deutschland	Fraunhofer-Institute for Production Systems and Design Technology	ETHICAL
	European Organisation For Astronomical Research In The Southern Hemisphere	EVALSO
	Deutsches Zentrum Fur Luft Und Raumfahrt E.V.	EULARINET
	Bundesministerium Fuer	EULARINET

la Sociedad de la Información y Conocimiento en la región que permitan acelerar el mejoramiento en la calidad de vida de los pueblos.

	Bildung Und Forschung	
Austria	Zentrum Fuer Soziale Innovation	EULARINET
France	Centre De Cooperation International En Recherche Agronomique Pour Le Developpement	EULARINET
	Centre National de la Recherche Scientifique (CNRS)	GISELA EPIKH
	Institut De Recherche Pour Le Developpement	EULARINET
Norway	The Research Council Of Norway	EULARINET
Portugal	Agencia De Inovacao - Inovacao Empresarial E Transferencia De Tecnologia (PORT)	EULARINET
	Fundacao Para A Ciencia E A Tecnologia (PORT)	EULARINET
Czech Republic	CESNET Zajmove Sdruzeni Pravnickych Osob (CESNET)	EPIKH
GREECE	Greek Research and Technology Network (GRNET)	EPIKH

Institutions outside the EU and Latin America

We have identified 6 institutions outside the EU and Latin America. These institutions are participating in the EPIKH project.

Country	**Institution**
CHINA	Institute of High Energy Physics of the Chinese Academy of Sciences (IHEP)
INDIA	Indian Statistical Institute (ISI)
EGYPT	ElectronicS Research Institute (ERI)

SOUTH AFRICA	Council for Scientific and Industrial Research (CSIR)
ALGERIA	Centre de Recherche sur l'Information Scientifique et Technique (CERIST)
MOROCCO	Centre National pour la Recherche Scientifique et Technique (CNRST)

10.3.2.ICT related IBEROEKA projects with Chilean participation in the period 2006-2010

ICT RELATED IBEROEKA PROJECTS INCLUDING CHILEAN PARTICIPATION 2006-2010					
YEAR	**ACRONYM**	**COUNTRIES**	**COMPANIES/ INSTITUTIONS**	**ID AND TITLE**	**OBJECTIVE**
2000	CYBEROEKA	Spain Chile	- Cyberguardián S.A. (CMP, leader) - Sistema S.A. , Amerikanclaris (CMP)	IBK 00-094 Cyberguardian Iberoeka	Development of security services with proprietary technology to help small and medium enterprises in the use of Internet without risk for the safety of their process or data.
2000	SUPCE+	Spain Chile	- Seratel Technology S.A.L. (CMP, leader) - Sender S.A.(CMP)	IBK 00-120 Universal Monitoring System for Modulated Frequency and Medium Wave Broadcasting Centers	Implement a system to access remotely, through GSM communications, telephone, radio link or any other audio system, to all the parameters needed to control and know the quality of service in a broadcasting transmitter station, in order to monitor the status of the transmitters and local environment conditions.
2001	CIBERPISCIS	Spain Brasil	- Grupo de Empresas Gumer (CMP, leader) - Grupo Bolsagest2000 Almerimatik S.A. (CMP) - Instituto de automática industrial del CSIC (R&D CENT) - Universidad de Almería (UNIV) - Moluscos Fazenda Marinha (EMP)	IBK 01-143 Development of an Intercontinental Platform for Research, Production, Logistics Distribution and Marketing of Standardized Fishery Products	Development of an intelligent integrated marketing system for the fishing industry to allow a continuous provisioning of standardized and controlled products along with an assisted planning of supply in terms of consumer's demand.

		Uruguay Panamá Chile	- Quórum F.S. (R&D CENT) - Universidad de la República (UNIV) - Columbus University (UNIV) - Contratistas internacionales S.A. (EMP) - Ministerio de Agricultura (R&D CENT) - Universidad Católica Sta. María Antigua (UNIV) - Universidad Católica del Norte (UNIV) - Salmones Alqui Ltda. (EMP) - Sociedad Agricola Nacional del Cogotí Ltda. (CMP)		
2001	MEDCHIP	Spain Chile	- Medplant Genetics S.L.(CMP, leader) - Centro Nacional de Investigación Oncológica Carlos III (R&D CENT) - Universidad Autónoma de Madrid (UNIV) - Universidad del País Vasco (UNIV) - Bios chile Ingeniería Genética (CMP)	IBK 01-164 Development of Systems for early diagnosis and identification of therapeutic targets, using DNA-Chip Technology.	Development of DNA-Chip technologies for its use in the diagnosis and research of cancer treatment and neurodegenerative diseases.
2001	ERP-AGRÍCOLA	Spain Argentina Chile	- Verdtech Nuevo Campo S.A. (CMP, leader) - Celesur S.A.(CMP) - Godoy y Pujol Asociados (CMP) - AP Technologies (CMP)	IBK 01-163 ERP System applied to the Management of Agricutural Farms	To create an integrated ERP system to help the management of agricultural enterprises.
2001	DIANA 2000	Chile	- Mutual de Seguridad Asesorías S.A. (CMP, leader)	IBK 01-161 Development of Modular Clinical Information	To develop and commercialize clinical information systems that meet the increasing need for optimizing the operation of

		Spain	- Strategy Consultors (CMP) - Universidad Politécnica de Madrid (UNIV)	Systems, for Public and Private Health Systems in the Ibero-America Region.	offices, clinics and hospitals.
2001	DEIMOS	Spain Chile	- CETISA S.A. (CMP, leader) - Universidad Carlos III de Madrid (UNIV) - Epsilon S.A. (CMP) - Ingeniería e Inversiones Anadel Ltda. (CMP) -Schlumbergersema Chile (CMP)	IBK 01-188 Emarketplace for SMEs and Services	To build an electronic trading and networking platform for SMEs, enabling them to offer services to each other, and create synergy between the various companies involved in order to create new attractive products and services.
2001	PACE	Spain Venezuela Chile	- Infoservicios S.A. (CMP, leader) - Universidad Carlos III de Madrid (UNIV) - M&P.P. Consultores C.A. (CMP) -Schlumbergersema Chile (CMP)	IBK 01-187 Self-assisted Platform for Electronic Commerce	To develop a 100% Ibero-American Business Intelligence platform based on a B2C (business to customer) orientation to create self-assisted TCP/IP intelligent systems for electronic commerce able to assist customers personally and interactively upon their needs (CDT Customer Decisions Tool).
2002	E-PYME	Spain Chile	- Fundación Robotiker Tecnalia (R&D CENTER, leader) - Punto Comercial (CMP) - INTEC corporación de investigación tecnológica de Chile (CMP)	IBK 02-211 Computational Tools for Commercial Diagnosis and E-business Solution Implementation.	To develop a computational tool to carry out financial and commercial diagnosis, design and implementation of solutions useful for the e-business activity in the Latin-American SMEs space.
2002	GKAR7	Spain México Colombia Chile	- Goitek Systems S.L. (CMP, leader) - Calypso (CMP) - RO Consultores (CMP) - Automation & Company (CMP) - Goitek Chile (CMP)	IBK 02-209 Real-Time Web Platform for Production Data Logging and Processing	To implement technologic collaboration between industrial associates developing hardware and software for industrial applications in the field of data acquisition and processing over web based platforms including wireless networking architectures.
2002	TRAFICOSEGURO	Spain	- Selba S.L. (CMP, leader)	IBK 02-235 Research and	Development of a computational system for the management,

		Chile	- Arstecne Ingeniería de Sistemas (CMP) - GTD Chile S.A. (CMP)	Development of a global communications and management system for urban security and transport control applications.	monitoring and communications issues in urban security and transport applications
2002	HOTEL WEB	Spain Chile	- Travelsoft Information Technology S.A.(CMP, leader) - Soluziona Chile (CMP) - Tecnosolution (CMP)	IBK 02-244 E-business Platform for accommodation and related services.	To create an e-business network between hotels and comercially related establishments in order to offer passengers through the TV set at their room to buy services and offers via on-line payment.
2002	TAX FREE	Spain Chile	- Travelsoft Information Technology S.A.(CMP, leader) - Soluziona Chile (CMP) - Tecnosolution (CMP)	IBK 02-243 Tax Refund Requirements management tool	To allow tourists to set their tax refund requirements through Internet using an on-line application.
2002	PWTF2	Spain Chile	- Nuevos medios de ocio y turismo S.A. (CMP, leader) - Soluziona Chile (CMP) - Tecnosolution (CMP)	IBK 02-242 Touristic Web Platform, Phase II	To create an e-business and distribution network for the tourism-based industry, to reinforce synergies and individual potentialities thus increasing the market participation and reducing operational costs.
2003	CGT	Chile Spain	- Servicios Profesionales Support Ltda.(CMP, leader) - Teleserver S.A.(CMP)	IBK 03-295 Global Transcription Center	To create a Global Transcription Center, whose main service is typesetting documents received from remote sources and acquiring its information by means of speech processing, which require the participation of specialists with proficiency in specific matters for its transcription. The distributed platform aims to reduce transcription times.
2003	TERMINAL WEB	Spain Argentina Chile	- TB Solutions Technologies Software S.L. (CMP, leader) -G&L Group Argentina S.A. (CMP) -G&L Group Chile S.A. (CMP)	IBK 03-321 Web Terminal for Financial Entities	To replace the local applications and tools currently in use for finantial terminals with web terminals. The aim is to reduce dependence from some expensive propietary tools and protocols and to avoid fixed costs due to software distributions currently embedded in these terminals.
2003	RESOCO	Spain	-PRL Soft S.L. (CMP,	IBK 03-328 ICTs	To foster social corporative

		Chile	leader) - GAIA Asociación de las industrias de tecnologías electrónicas y de la información del País Vasco (ASOC EMP) - Teknobide (CMP) - CT Valparaiso S.A. (Spin off Pontificia Universidad Católica de Valparaiso) (CMP)	to foster the Social Corporative Responsibility	responsibility by applying an standardized model based in a telematic management tool that facilitate its implementation and appropriation.
2004	SAVADES	Spain Chile	- Soluziona Consultoría y Tecnología S.L. (CMP, leader) - Soluziona Chile (CMP) - STI S.A.(CMP) - Servicios Profesionales Support Ltda.(CMP)	IBK 04-365 High added value wireless solutions for moving personnel tracking and communication	R&D plus innovation solutions based on PDA mobility and GPS localization capabilities to increase productivity and competitiveness in companies.
2004	AUSTRALIS	Spain Chile	- Owasys Advanced Wireless Devices S.L. (CMP, leader) - Robotiker (R&D CENT) - Paradigma Ltda. (CMP)	IBK 04-372 Development of a client/server scheme for wireless connectivity between the control center and remote monitoring units	To create a family of devices to provide wireless conectivity between a control center and a number of remote monitoring units, for the fast deployment of telemetry and surveillance systems and its integration to pre-existent networks.
2005	IBER-AVANTHOTEL	Spain Chile	-GIT consultors (CMP, leader) - Fundación IBIT (CMP) - Cámara de comercio de Viña del Mar (IND. ASSOC.) - Ecoredlatina S.A. (CMP) - Universidad de Playa Ancha (UNIV)	IBK 05-411 Central of Reservations for independent accommodation suppliers.	To adapt a Central of Reservations (CRS) and an Hotel Management System (HMS) by developing a set of protocols for interoperability, functional enhancements and optimizations. To implement HMS and CRS in touristic areas and to leverage new marketing channels for online booking for accommodation.
2005	SICRAJA	Spain Chile	- Verdtech Nuevo Campo S.A. (CMP, leader) - Godoy y Pujol Asociados (CMP) - Verdtech Nuevo Campo Chile S.A. (CMP) -Pontificia	IBK 05-410 Smart System for remote control of irrigation applied in gardening and in agriculture.	Create a hardware and software solution that allows the use of new communication technologies (GPRS) to provide in short-term the market of Parks and Gardens and in medium term, the agricultural industry, an innovative solution for the intelligent management of irrigation through Internet.

			Universidad Católica de Valparaiso (UNIV)		
2005	MOBILE BANKING	Spain Argentina Chile	- TB Solution Advanced Technologies S.L. (CMP, leader) -G&L Group Argentina S.A. (CMP) -G&L Group Chile S.A. (CMP)	IBK 05-445 Open Platform of secure services for mobile users in financial environment.	Development of open platform for mobile banking services focused on usability, interoperability, and scalability, to facilitate the deployment and access to services, through service models that meet banks and customer requirements with appropriate conditions of security and reliability.
2006	AUTOLIXIVIACIÓN	Chile Spain	- GTD Chile Ingeniería de Sistemas, S.A. (CMP, leader) - Arstecne Ingeniería de Sistemas, S.A. (CMP)	IBK 06-481 Automatic and autonomous system to control irrigation and leaching in mining.	Development of an electronic, automatic and autonomous system for irrigation and leaching processes in the mining sector.
2006	SDMA	Spain Chile	- Sociedad Digital de Autores y Editores (CMP, leader) - Microgénesis S.A. (CMP) -Sociedad Chilena del Derecho de Autor (CMP)	IBK 06-492 Distributed Audiovisual Monitoring System	Design and development of a distributed system for monitoring the use of musical works on radio channels, TV (analogue, Freeview and Satellite) and online.
2007	Q-FORMACIÓN	Spain Chile	- Alecoop S. Coop. (CMP, leader) - Mik S. Coop. (CMP) - Vicomtech (CMP) - Educación Universitaria no Presencial, UVirtual, S.A. (CMP) - U. Arturo Prat (UNIV)	IBK 06-501 Computer Assisted Teaching-Learning Process	Design and development of a computer application to assist in a structured and guided scheme the design, implementation and management of a teaching-learning process based on competences and application of new learning methods based on Artificial Intelligence technique.
2007	ESTELA	Spain Chile	- Telefónica Internacional, S.A. (CMP, leader) - Educaterra Telefónica (CMP) - Compañía de Telecomunicaciones de Chile S.A. (CMP) - Relacom (CMP)	IBK 07-518 Development of a Telecommunications Services Certification System on-line.	Develop a training and certification on-line system to validate specific behavioral skills, competences and techniques required by installers of telecommunications infrastructure and services.
2007	DESELE	Spain	- Indra Sistemas, S.A. (CMP, leader) - Fresh Interactive	IBK 07-536 Interactive services platform to help the	To implement a platform for testing interactive services over

		Chile	Technologies (CMP) - Sidsa Semiconductores Investigación y Diseño (CMP) - Aretel Bio Bio A.G. (ORG) - MSP (CMP) - Soluziona Chile (CMP)	development of emerging areas.	the digital terrestrial television signals in Chile.
2010	ICOMDEST	Spain Argentina Chile	- Araldi S.L. (CMP, leader) - Virtual Knowledge S.A.U. (CMP) - Ejido Asesores Cumdeo S.R.L. (CMP) - Inter Cultura S.R.L.(CMP) - Iale Tecnología Chile Ltda. (CMP)	IBK 10-645 Competitive Intelligence in touristic destinations	To develop in the framework of Spanish, Argentinean and Chilean touristic-cultural industry, a technological platform for the integral management of the tourism observatories through competitive intelligence approaches that combine information coming from specialized knowledge networks.

10.3.3.R&D Funding agencies and programmes in Chile and ICT related projects

CONICYT, as the main official Chilean counterpart for most cooperation programs and international R&D agreements involving Chile, coordinates several cooperation instruments, programs and schemes with many countries and regions.

In general, CONICYT define three macro levels of programs where different sub-programs or instruments are placed, namely:

1- Programs related to de Scientific and Technological Basis.

2- Programs related to Human Capital.

3- Programs related to Complimentary Support.

This latter family of programs for Complimentary Support is in its turn divided into:

3.1- Bilateral International Cooperation Program

3.2- Multilateral International Cooperation Program

3.3- European Union in Science and Technology

In 3.2, a number of multilateral organisms are listed (APEC,OEA, MERCOSUR, etc.) but among them, two are explicitly highlighted: CYED and European Union.

CYTED (Latinamerican Science and Technology Development Programme), created in 1984, including

19 Latin American countries plus Spain and Portugal. According to the information given in the website (www.cyted.org) by 2010 the CYTED Programme created 191 Thematic Networks, 193 Coordination Activities, 3 Consortium Research Projects and 614 IBEROEKA Innovation Projects, involving the participation of over 10,000 Latin American scientists and technicians every year. The research activities information provided by CYTED is organized in seven thematic areas one of them being Information and Communication Technologies which is remarkable since in many classifications ICTs are merely considered a transversal component.

For what concerns EU, since 1995 Chile played the role of coordinator in a LatAm promoting group paving the way for the inclusion of many countries from the LatAm region into the Framework of Communitarian Agreements. These actions led to the creation (during de EU-LatAm Summit that took place in Rio de Janeiro in 1999) of a higher level commission, including representatives from LatAm countries as well as Europeans.

Following the ever increasing interaction between the LatAm region and the EU, Chile through the International Relations Department of CONICYT created in 2004 the International Cooperation Programme "European Union in Science and Technology" as a new platform to reinforce the mutual cooperation acting as the National Contact Point (NCP) in front of the EU, whose responsibility is related to three main action lines:

- Definition of a cooperation strategy.

- Reinforcement and expansion of cooperation ties.

- Strengthen the promotion of the EU Framework Programs and its related opportunities.

Within the Bilateral International Cooperation Program is it possible to find a diversity of cooperation instruments to finance joint R&D initiatives. These instruments operate through CONICYT as the Chilean counterpart for calls and management, and among others, it is offered for Chilean entities or researchers the possibility of jointly apply for funding with institutions like the following:

- NRA: National Research Agency (France).

- CNRS : National Center for Scientific Research (France).

- INRIA: National Institute for Research in Computer Science and Control (France).

- INSERM: French National Institute of Health and Medical Research (Institut National de la Santé et de la Recherche Médicale, France).

-IRD: Institute of Research for the Development (Institut de Recherche pour le Developpement, France).

-ECOS: Assessment and Orientation Committee for Scientific Cooperation with Chile, France Government.

- DFG: German Research Foundation (Deutsche Forschungsgemeinschaft, Germany).

- DAAD: German Academic Exchange Service (Deutscher Akademischer Austauschdienst, Germany)

- BMBF: Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung, Germany).

- CSIC: Spanish National Research Council (Consejo Superior de Investigaciones Científicas, Spain).

Although many of the funding instruments related to the abovementioned institutions are oriented to support researchers mobility, students exchange, internships and so on, since our focus is set on the ICTs oriented instruments, the STIC-AmSud calls are of special interest given its explicit orientation to the applied research in the field of ICTs.

Year	Acronym	Program	Participants	Title or ID	Abstract or Objective
2010	KEOpS	CONICYT-NRA	Chile: Universidad de Valparaiso France: INRIA, Université de Nice Sofía-Antípolis	Algorithms for modeling the visual system: From natural vision to numerical applications	http://keops.gforge.inria.fr/
2010	OVIMINE	STIC-AmSud	Chile: Universidad Técnica Federico Santa María Perú: P. Univ. Católica Universidad Nacional de Ingeniería France: École des Ponts Paristech	Optimization and Viability in Mining	http://www.am2v.cl/home/index.php?option=com_jresearch&view=project&task=show&id=31
2010	WELCOME	STIC-AmSud	Chile: Univ. Diego Portales Argentina: Univ. Nacional de Cordova France: INRIA Sophia Antípolis	Wireless Experimental Realistic Measurements	
2010	LWM	STIC-AmSud	Chile: Univ. de Chile Brasil: Univ. F. de Rio Grande do Sul France: IMAG Grenoble	Learning While Moving	
2010	I3PE	STIC-AmSud	Chile: Univ. de Santiago Argentina: Univ. De Mar del Plata Univ. Nacional	Inverse problems in physical property estimation	

			del Litoral Brasil: Univ. F. de Rio de Janeiro Francia: École des Mines d'Albi		
2010	DSVANET 4ITS	STIC-AmSud	Chile: Univ. Tec. Fco. Santa María Brasil: Univ. F. Paraná Francia: Univ. Paris XI	Dependable and secure VANETs for intelligent transportation systems	
2009	NCTVS	STIC-AmSud	Chile: P.Univ. Católica Brasil:Univ. F. Rio Grande do Sul France: LAAS-CNRS	Nonlinear Control Tools for Visual Servoing	
2009	MoMaRe	STIC-AmSud	Chile: CMM Univ. De Chile Perú: Univ. Nac. De Ingeniería Argentina: UNICEN France: INRIA	Modelamiento Matemático por Manejo de Recursos Naturales	
2009	ARVS	STIC-AmSud	Chile: Univ. de Chile Brasil: Univ. de Pernambuco France: IRISA-INRIA	Hybrid model based markerless 3D tracking for augmented reality and visual servoing	
2009	TODAS	STIC-AmSud	Chile: Univ. Tec. Fco. Santa María Brasil: Univ. de Pernambuco France: Université d'Angers; INRIA	Trace Observation Driven Adaptive Solvers	

2009	CAMPUS	STIC-AmSud	Chile: Univ. Tec. Fco. Santa María Brasil: PUC Rio Perú: Univ. Cat. San Pablo France: UPMC-LIP6	Context Aware Multi-agents for Pervasive and Ubiquitous Systems	

10.3.4. Analysis of project activities related to standardization in the field of ICT

The expected results in political science as are the accelerations in the development of new simulations, applications, and as such new discoveries. The impact on the EU economy and the country can be expected, by analogy with different standards that have changed the way the mobile telecommunications infrastructure built, bringing EU at the forefront of technology, the field should be encouraged management of IT infrastructure and application development, helping to strengthen Europe's leadership in the sector.

Some of the Projects and Programs related to Standardization in the field of ICT are detailed in Table XX. Stresses the GridCOMP FP6 project, which seeks laterally standardizing the definition GCM (Global Mobile Communication) based on Technical Standards for Both Different algorithms inter operability as delivery mechanisms.

In the Sixth framework program of European Union, exists two other major projects around the concept of normalization, the first of these is the LEKTOR which aims to increase awareness of potential legal barriers in the context of electronic commerce and provide solutions through creating a platform for the exchange of independent legal knowledge among the target groups, ie SMEs (Small and Medium Enterprise) and the second is the project RINGrid, defined as its main objectives: the systematic identification of instruments and corresponding user communities, also, to define their needs, including careful analysis of the synergy of remote instrumentation to the next generation high-speed, on the other hand defines the communication networks and infrastructure as the basis for the definition of recommendations for the design of the new generation Remote Instrumentation Services.

Moreover, the @ LIS, promoting the use of ICT for development and social inclusion. Its three projects will strengthen cooperation among countries in Latin America to Europe, is based on supporting the dialogue on political, social, regulatory and technological aspects of information society, and promote scientific research through the expansion and interconnection of advanced networks between universities and research centers.

To promote the efforts for harmonization and regulatory integration in Latin America, @ LIS facilitates the implementation of best regulatory practices through the exchange of information and experiences among telecommunications regulators in the region and Europe. Thus, it will support countries in the region in the definition and adoption of strategies for building the Information Society, as well as raise awareness of the potential of these technologies. In this vein, the project promotes the implementation and evaluation of the Regional Action Plan that countries running since 2005.

From this initiative came REGULATEL, as the Latin American Forum of Telecommunications Regulators, whose objectives are to facilitate the exchange of information on the legal and regulatory management, market services and telecommunications among Forum member countries, promoting

harmonization of regulation of telecommunications to contribute to the integration of the region and identify regional interests and defend common positions in international forum.

Thus it has been a contribution to the European Institute of Telecommunications Standards (ETSI) to establish a dialogue between the EU and the ICT communities of Latin America, developing synergies with Latin American institutions responsible for standards in terms of ICT.

In this path decision of the European Commission on October 16, 2008 @ LIS 2 is approved as a program of the European Commission in order to continue the promotion of information society and fight against the digital divide across America. Its objectives are to develop further, while improving and expanding dialogue and applications in the Information Society in Latin America, boosting interconnections between research networks and communities in both regions to reduce the digital divide and integrating Latin America in a Global Information Society.

The program's activities (in which all Latin American countries involved in the whole region) have been organized around three lines of action with more projects to be implemented between 2009 and 2012. Each of the projects will contribute to bringing the communities of players and users in the two regions and facilitate the integration of Latin-American countries in a global information society.

All activities under the framework of the @ LIS 2 have been awarded and are currently running.

Finally, the liberal economic policies, are mixed with the policies of freedom of standardization, resulting in a restriction of the economic development of the region into the European community, Chile in terms of norms and standards often as stated in the analysis in the "Chile Country Strategy Paper 2007-2013" is generally determined to adjustments focused on economic affairs with the U.S., with the EU, which has the highest social and developmental approach to R & D. Therefore this analysis shows that the union of commercial and social ties with the region determines the standardization and standardization of systems, so far the major standardization initiatives have been made in the technical aspect and not the exchange social economic development of ICTs. An example of this is the adoption of Chile of the ISDB-T standard for digital terrestrial television.

Initiatives that consider Standards Development		
Project	**Overview**	**Objectives**
GridCOMP (FP6)	• Being able to interoperate with existing standards such as Web services, WSRF, Unicore, EGEE gLite; • Become a "de facto" for large industry and SMEs specifying and implementing all the features normally expected from a framework of current programming networks; • Address both for scientific computing and enterprise computing; • Reach a wide global audience, thanks to the participation of non-European partners in South America, Australia and China. Result: GCM standardizing the definition of four	-Take the network component model (GCM,CoreGRID Network of Excellence) as a first specification. -ObjectWeb ProActive implementation using open source as a starting point. ObjectWeb ProActive Grid middleware ensures interoperability with other standards: EGEE gLite, UNICORE, NorduGrid, Globus, Web Services. -Coordination with the NESSI initiative is also a

	standards. 1.- The implementation interoperability GCM 2.- GCM Interoperability Application Description. 3 .- GCM Fractal ADL	strong priority, with the involvement of ObjectWeb, Atos Origin, and IBM.
Programa @LIS	Promote the use of ICT for development and social inclusion. Its three projects will strengthen cooperation among countries in Latin America and Europe, support dialogue on political, social, regulatory and technological aspects of information society, and promote scientific research through the expansion and interconnection of advanced networks between universities and research centers. The "inclusive political dialogue and exchange of experiences, co-financed by the EU (€ 9 million) and ECLAC (€ 3 million), is the largest cooperation program undertaken by the regional commission of the United Nations. The project "Regulatory Dialogues" implemented by REGULATEL, with € 1 million, financed by the EU and € 252,800 from regulators in the countries of the region. To promote the efforts for harmonization and regulatory integration in Latin America, will facilitate the implementation of best regulatory practices through the exchange of information and experiences among telecommunications regulators in the region and Europe.	
ETSI	The European Institute of Telecommunications Standards (ETSI) has established a dialogue between the EU and Latin American communities ICT	

Programa @ LIS 2	Adopted by decision of the European Commission on October 16, 2008, the @ LIS 2 program has a budget of € 31.25 million of which € 22 million (70.4%) are funded by the European Commission. Action 1 - policy and regulatory dialogue Promoting, and at the same time enhancing and expanding dialogue and applications on the Information Society in LA. Action 2 - Research Networks Encourage and support research and Europe intra AL. The program will maintain the continuity of CLARA, while supporting the relationship between researchers and promotes joint projects. Action 3 - Network controllers Support for standardization and harmonization of regulatory processes in the telecommunications sector in Latin America.	The specific objectives of the second phase of the @ LIS 2 - Continue to promote and improve at the same time and broaden the dialogue and applications in the Information Society in Latin America - Encourage and support research and Europe intra AL - Support to standardization and harmonization of regulatory processes in the telecommunications sector in Latin America.
ALICE2 (@LIS2)	Project co-financed by the European Commission through the @ LIS 2. EC funding: € 12,000,000 Latin American counterpart: € 6,000,000	- Encourage and support collaborative research within Latin America and the region with Europe through the strengthening of CLARA (Latin American Cooperation of Advanced Networks) and its network infrastructure, CLARA, and promoting the creation and maintenance of communities research work on topics related to development.
EELA-2 (FP6)	Construction of a large capacity, production quality, scalable network fund, providing around the clock, worldwide access to distributed computing resources, storage and network that needs the broad range of applications from European - Latin Scientific American collaborations, with particular attention to: Offers a complete set of versatile services to meet the application requirements.	- Consolidate and expand the current EELA e-Infrastructure built on the GÉANT2/European and RedCLARA / LA National Research and Education Networks (NREN), to become a center of e-Infrastructure, providing a full set of enhanced services to all multiple types of applications Scientific Areas

		of European and Latin American scientific communities.
LEKTOR (FP6)	Legal Knowledge Transfer Accelerator for SME clusters and digital business Ecosystems Start date: June 1, 2006 End Date: May 31, 2008 Project Web Site: --- Project Type: Specific Support Action Priority areas: Information and Communication Technologies, Research Applications	Aims to raise awareness of the potential legal barriers in the context of electronic commerce and provide solutions by creating a platform for the exchange of independent legal knowledge among the target groups, ie SMEs. LEKTOR is aimed at SMEs, SME clusters and digital business ecosystems for SMEs and all multipliers in question. LEKTOR not investigate on their behalf in legal matters, but to identify, collect and evaluate existing (from other European projects, national and regional initiatives), making the results available in the platform LEKTOR. Also identify the legal issues of electronic commerce from the user side.
RINGRID (FP6)	Remote Instrumentation in Next-generation Grids Start date: October 1, 2006 End Date: March 30, 2008 Project website: http://www.ringrid.eu/ Project Type: Specific Support Action Priority areas: Information Technology and Communication; Platforms ICT Technology	The main objectives are: - the systematic identification of instruments and corresponding user communities - defining their needs and careful analysis of the synergy of remote instrumentation to the next generation high-speed communication networks and network infrastructure as the basis for the definition of recommendations for designing next-generation Remote Instrumentation Services.

10.3.5.Details of FP6 and FP7 completed project with Chilean participation in the

ICT field.

ICT FP6 projects

1.- European Research Network on Foundations, Software Infrastructures and Applications for Large Scale Distributed, Grid and Peer-to-Peer Technologies (COREGRID)	Start date: September 1, 2004 End Date: August 31, 2008 Project website: http://www.coregrid.net/ Type of project: Network of Excellence Priority areas: Information and Communication Technologies; Platforms ICT Technology
2.- E-Infrastructure shared between Europe and Latin America (EELA)	Start date: January 1, 2006 End Date: December 31, 2007 Project website: http://www.eu-eela.org/ Project Type: Specific Support Action Priority areas: Information Technology and Communication; Platforms ICT Technology
3.- A Production Astronimy e-VLBI Infrastructure (Express e-VLBI Service) (EXPReS)	Start date: March 1, 2006 End Date: February 28, 2009 Project website: http://www.expres-eu.org/ Type of project: Integrated Infrastructure Initiatives Priority areas: Information Technology and Communication
4.- GRID Programming with Components: an advanced component platform for an effective invisible grid (GRIDCOMP)	Start date: January 1, 2006 End Date: November 30, 2008 Project website: http://gridcomp.ercim.org/ Project Type: Specific Targeted Research Project Priority areas: Information and Communication Technology, ICT Technology Platforms
5.- Legal Knowledge Transfer accelerator for SME clusters and digital business ecosystems (LEKTOR)	Start date: June 1, 2006 End Date: May 31, 2008 Project Web Site: --- Project Type: Specific Support Action Priority areas: Information and Communication Technologies, Research Applications
6.- Morphogenesis and gene regulatory networks in plants and animals: a complex systems modelling approach (MORPHEX)	Start date: January 1, 2007 End Date: December 31, 2009 Project website: http://www.iscv.cl/eng/Proyectos/MORPHEX.html Project Type: Specific Targeted Research Project Priority areas: Food, Agriculture and Fisheries, and Biotechnology, Sustainable Production and management of biological resources from land,

	forest and aquatic environments
7.- Open Network for Connecting Excellence in Complex (ONCE-CS)	Start date: July 1, 2005 End Date: December 30, 2007 Project website: http://once-cs.net Project type: Coordination Action Priority areas: Information Technology and Communication
8.- Remote Instrumentation in Next-generation Grids (RINGRID)	Start date: October 1, 2006 End Date: March 30, 2008 Project website: http://www.ringrid.eu/ Project Type: Specific Support Action Priority areas: Information Technologies and Communication, ICT Technology Platforms.

ICT FP7 projects completed

1.- Continuous monitoring of medication overuse headache in Europe and Latin America: development and standardization of an alert and decision support system (COMOESTAS)	End Date: June 30, 2010 Project website: www.comoestas-project.eu Project Type: Collaborative project (generic) Priority areas: Advanced ICT for Risk Assessment and Patient Safety (ICT-2007.5.2)
2.- International cooperative action on grid computing and biomedical informatics between the European Union, Latin America, the Western Balkans and North Africa (ACTION-GRID)	Start date: June 1, 2008 End Date: November 30, 2009 Project website: www.action-grid.eu http://cordis.europa.eu/fetch?CALLER=PROJ_ICT&ACTION=D&DOC=2&CAT=PROJ&QUERY=012c2d6445e2:7c49:6c9dea00&RCN=86720 Project type: Coordination and support actions Priority areas: ICT-2007.5.3 Virtual Physiological Human
3.- *E-science grid facility for Europe and Latin America (EELA 2)*	End Date: March 31, 2010 Project website: www.eu-eela.eu Project type: Coordination and support actions FP7-INFRASTRUCTURES Priority areas: -

10.4. Annex 4. Issues related with ICT research cooperation in Argentina

10.4.1.EU Framework Programme projects

Project acronym	Project Title	Funded under	Total cost (million euro)	EU contribution (million euro)	Project start date	Duration [months]	Project Status
FLOSSWORLD	Free libre and open source software - Worldwide impact study	6th FWP	0,67	0,66	01/05/2005	26	Completed
PLASTIC	Providing dependable and adaptive service technology for pervasive information and communication	6th FWP	4,33	2,5	01/02/2006	30	Completed
SELF	science, education and learning in freedom	6th FWP	0,98	0,98	01/07/2006	25	Completed
SOLAR-ICT	Development of a knowledge platform to support Euro-Latin American research Partnerships in ICT	6th FWP	5,59	0,52	01/01/2007	21	Completed
WINDS LA	Widening IST Networking Development support - Latin America	6th FWP	0,62	0,59	01/01/2007	24	Completed
COMOESTAS	Continuous monitoring of medication overuse headache in Europe and Latin	7th FWP	2,01	1,6	01/01/2008	30	Completed

	America: development and standardization of an alert and decision support system						
FLOSSINCLUDE	Free/Libre and open source software: International cooperation development roadmap	7th FWP	1,14	0,7	01/02/2008	24	Completed
MANCOOSI	Managing the complexity of the open source infrastructure	7th FWP	4,5	3,32	01/02/2008	36	Execution
SALA+	SUPPORT ACTION for a European and Latin American strategic cooperation on networked media RandD	7th FWP	0,8	0,72	01/03/2008	24	Completed
ACTION-GRID	International cooperative action on grid computing and biomedical informatics between the European Union, Latin America, the Western Balkans and North Africa	7th FWP	1,12	1	01/06/2008	18	Completed
PRO-IDEAL	Promotion of an ICT dialogue between Europe and America Latina	7th FWP	0,57	0,51	01/11/2008	30	Execution

10.4.2. Iberoeka projects in Argentina

Proyecto	Begin	End	PAISES																				
			Argentina	Colombia	Ecuador	España	Peru	Portugal	Uruguay	Venezuela	Brasil	Chile	Costa Rica	Cuba	Mejico	Panama	Bolivia	El Salvador	Guatemala	Paraguay	Rep. Dominicans	Nicaragua
510RT0389 - Mejora de la atención sanitaria en entornos rurales mediante aplicaciones de telemedicina sobre tecnologías inalámbricas	2010	2013	1	1	1	1	1	1	1	1												
510RT0391 - Red iberoamericana de software libre en biomedicina	2010	2013	1	1	1	1					1	1	1									
510AC0400 - Plataforma web sobre computación artificial y natural para salud	2010	2013	1	1		1					1	1		1		1						
510AC0408 - Redes de sensores y microsistemas para el control del impacto de la producción agricola y la mineria en los acuiferos	2010	2013	1	1		1		1	1		1		1	1	1							
509AC0372 - Docencia e investigación en robótica médica utilizando recursos software de código abierto	2009	2012	1	1		1								1	1	1						
508RT0355 - Tecnologías de redes inalámbricas para comunicación y formación	2008	2011	1			1					1			1	1							

Proyecto	Begin	End	PAISES																				
			Argentina	Colombia	Ecuador	España	Peru	Portugal	Uruguay	Venezuela	Brasil	Chile	Costa Rica	Cuba	Mejico	Panama	Bolivia	El Salvador	Guatemala	Paraguay	Rep. Dominicans	Nicaragua
508RT0358 - Red iberoamericana de descubrimiento de conocimiento	2008	2011	1	1		1		1		1	1	1		1	1							
508RT0361 - Qualidade em sites na área da saúde	2008	2011	1	1		1		1	1		1	1										
506RT0303 - Red de automatización y control de la industria de transformación de la caña de azúcar	2006	2009	1	1		1	1			1	1	1	1	1	1		1					
506AC0287 - Mejora de procesos para fomentar la competitividad de la pequeña y mediana industria del software de iberoamérica	2006	2008	1	1	1	1					1	1	1	1								
506AC0292 - Desarrollo de miscrosistemas y sensores para monitorización medioambiental	2006	2009	1			1	1		1		1			1	1					1		
506AC0293 - Tecnologia grid como motor del desarrollo regional	2006	2008	1	1	1	1	1				1	1		1	1					1		
505RT0277 - Red iberoamericana para la conservación e informatización de colecciones biológicas - sistemas de información	2005	2008	1			1			1	1	1		1									
505AC0275 - Telemedicina rural para la salud materno - infantil	2005	2007	1	1	1	1	1				1			1	1	1					1	

Proyecto	Begin	End	PAISES																			
			Argentina	Colombia	Ecuador	España	Peru	Portugal	Uruguay	Venezuela	Brasil	Chile	Costa Rica	Cuba	Mejico	Panama	Bolivia	El Salvador	Guatemala	Paraguay	Rep. Dominicans	Nicaragua
VII.L - Red iberoamericana de bioinformática (ribio)	2003	2007																				
VII.22 - Automatización de los procesos de mecanizado de alto rendimiento (pibamar)	2003	2007	1	1		1			1		1	1		1	1					1		
VII.K - Red iberoamericana de tecnologías de apoyo a la discapacidad (riberdiscap)	2002	2007	1	1		1	1	1			1	1	1							1		
IX.4 - Concepción y desarrollo del material y de las herramientas para la puesta en marcha de un programa de cursos de formación en microtecnologías basado en internet dedicado a profesionales del sector electrónico	2002	2006	1	1		1	1		1		1				1							
IX.F - Red iberoamericana de mostradores planos de informaçao	2001	2005	1	1		1		1		1	1	1		1	1		1					
IX.G - Red iberoamericana de certificación y calificación de componentes y sistemas microelectrónicos (pucara)	2001	2005	1	1		1		1	1		1				1					1		

Proyecto	Begin	End	PAISES																			
			Argentina	Colombia	Ecuador	España	Peru	Portugal	Uruguay	Venezuela	Brasil	Chile	Costa Rica	Cuba	Mejico	Panama	Bolivia	El Salvador	Guatemala	Paraguay	Rep. Dominicans	Nicaragua
IX.I - Red iberoamericana de tecnologías para el desarrollo de sensores y microsistemas (teseo)	2001	2005	1			1	1	1	1		1	1		1	1							
VII.I - Red iberoamericana de robótica (ribero)	2001	2005	1	1	1	1	1	1		1	1	1		1	1	1						
VII.J - Red iberoamericana de tecnologías de software para la década del 2000 (ritos2)	2001	2006	1	1		1	1	1		1	1	1			1		1	1		1		
IX.H - Red iberoamericana de servicios de fabricación de microsistemas, para soporte a la industria y formación continuada de expertos en microtecnologías (iberchip)	2001	2005	1	1		1	1		1		1											
VII.17 - Métodos avanzados de generación de imágenes acústicas (magias)	2000	2004	1			1		1	1		1			1	1							
VII.F - Red iberoamericana de tecnologías ultrasónicas	1998	2001	1			1		1	1		1	1		1	1							
VII.G - Red iberoamericana de automatización de los procesos de mecanizado (ribamec)	1998	2001	1	1	1	1		1		1	1		1	1	1							
VII.15 - Aplicaciones e implantaciones de redes neuronales en reconocimiento de patrones	1998	2000	1			1		1			1	1		1			1					

Proyecto	Begin	End	PAISES																			
			Argentina	Colombia	Ecuador	España	Peru	Portugal	Uruguay	Venezuela	Brasil	Chile	Costa Rica	Cuba	Mejico	Panama	Bolivia	El Salvador	Guatemala	Paraguay	Rep. Dominicans	Nicaragua
VII.11 - Ingeniería de ambientes de software	1997	1999	1	1		1			1	1	1		1	1								
VII.12 - Diseño y control de robots para aplicaciones especiales	1997	1999	1	1		1		1		1	1	1		1	1	1						
VII.13 - Ambiente para la manipulación y recuperación de información en www	1997	1999	1	1		1		1	1	1	1	1			1							
IX.D - Red iberoamericana de diseño digital de alto nivel	1996	2001	1	1		1	1		1	1	1				1							
IX.2 - Microsensores de estado sólido para medio ambiente	1996	1998	1			1		1	1		1	1		1								
VII.10 - Integración de sistemas y actividades en edificios inteligentes	1996	1998	1	1		1		1			1			1	1							
VII.5 - Técnicas de inteligencia artificial para supervisión, diagnósis y control de procesos	1996	1998	1			1		1		1		1										
VII.8 - Sistemas de multimedia e hipermedia: aplicaciones educativas	1996	1998	1	1		1		1			1	1								1		
VII.9 - Potenciación de procesos de movilidad y orientación en personas con deficiencias mediante sensores de proximidad	1996	1998	1	1		1		1			1	1								1		

Proyecto	Begin	End	PAISES																			
			Argentina	Colombia	Ecuador	España	Peru	Portugal	Uruguay	Venezuela	Brasil	Chile	Costa Rica	Cuba	Mejico	Panama	Bolivia	El Salvador	Guatemala	Paraguay	Rep. Dominicans	Nicaragua
IX.B - Red iberoamericana sobre mostradores de cristal líquido	1995	1998	1	1		1	1	1	1	1	1	1		1	1		1					
IX.C - Red iberoamericana sobre aplicaciones de la microelectrónica a la medicina	1995	2002	1	1	1	1	1		1	1	1	1		1	1			1			1	
VII.D - Red iberoamericana de sistemas de informática industrial	1994	2002	1			1			1	1	1	1	1	1	1							
IX.A - Red iberoamericana sobre calidad en microelectrónica y sus aplicaciones	1992	1998	1			1			1	1	1											
VII.B - Red iberoamericana de sistemas flexibles de producción integrada	1992	1995	1	1		1					1	1	1									
VII.C - Red iberoamericana de tecnología del software	1992	1997	1	1	1	1		1	1	1	1	1	1		1		1			1		
VII.4 - Nuevas tecnologías de la información para la autonomía personal de los discapacitados	1992	1995	1			1					1	1		1						1	1	
IX.1 - Proyecto integrado de capacitación en diseño de circuitos integrados	1990	2002	1	1		1				1	1											
VII.A - Red iberoamericana de informática educativa	1990	2002	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1

Proyecto	Begin	End	PAISES																			
			Argentina	Colombia	Ecuador	España	Peru	Portugal	Uruguay	Venezuela	Brasil	Chile	Costa Rica	Cuba	Mejico	Panama	Bolivia	El Salvador	Guatemala	Paraguay	Rep. Dominicans	Nicaragua
VII.3 - Técnicas de inteligencia artificial en control industrial	1988	1990	1			1		1		1												
VII.2 - Robótica avanzada y fabricación flexible	1987	1990	1	1		1		1		1	1	1			1							
VII.1 - Desarrollo de tecnología avanzada para el control distribuido de procesos	1985	1991	1			1				1	1	1			1							
			48	34	10	48	15	26	22	23	44	30	12	27	29	6	7	2	1	11	4	1

10.4.3.Annex 2. Bilateral Agreements in Argentina

Country	Site
Austria	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/austria
Australia	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/australia
Belgium	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/belgica
Chile	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/chile
Colombia	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/colombia
Korea	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/corea
Ecuador	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/ecuador
Egypt	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/egipto
Arab Emirates	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/emiratos
U.S	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/eeuu
Finland	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/finlandia
Netherlands	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/holanda
New Zealand	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/zelanda
Peru	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/peru
Czech Rep	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/rep_checa
Russia	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/rusia
South Africa	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/sudafrica
Switzerland	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/suiza
Vietnam	http://www.mincyt.gov.ar/index.php?contenido=coopinter_archivos/bilateral/vietnam

These agreements are no specifically focused inICT activities and most of them are in the period of requesting proposal for projects

10.4.4. Annex 3. Bilateral projects in Argentina

Year	Country	Area	Argentine organization	Foreign Organization	Program	State	Title
2005	Germany	Biology	Institute	Institute	DAAD	Terminado	Caracterización funcional y molecular de la tolerancia inducida a la acidez (ATR) en s melioti
2005	Germany	Biology	Institute	Institute	BMBF	Aprobado	Desarrollo de anticuerpos VHH de camélidos sudamericanos para aplicación de biotecnología
2005	Germany	Biology	Institute	Institute	BMBF	Terminado	Estudio sobre la biodiversidad del picofitoplancton del Mar Argentino, importante fuente de microorganismos con ptencialidades para futuras aplicaciones biotecnológicas
2005	Germany	Biology	Institute	Institute	BMBF	Aprobado	Generación de un catálago de marcadores génicos de miopatía cardíaca dilatada por análisis en microchips De DNA de la expresión diferencial de genes en el ratón mutado en el gen del receptor tirosina quinasa erb4 en el músculo ventricular.
2005	Germany	Biology	Institute	Institute	BMBF	Aprobado	Las comunidades planctónicas microbianas y su relaicón con los indicadores biogeoquímicos del Mar Argentino y Océano Antártico

2005	Germany	Biology	University	Institute	BMBF	Aprobado	Influencia de las salpas sobre el éxito del reclutamiento de *Euphausia superba* y capacidad de los estados larvales de esta especie para tolerar largos períodos de inanición
2005	Germany	Biology	University	Institute	BMBF	Aprobado	Lipid and fatty acid profiles as tracer to determine the food web structure in an semi - enclosed Antarctic system, the example of Potter Cove.
2005	Germany	Biology	Institute	University	DAAD	Terminado	Efecto del flujo génico histórico y contemporáneo en el mantenimiento de la diversidad genética en poblaciones fragmentadas de Araucaria araucana
2005	Germany	Biology	Institute	University	BMBF	Aprobado	Análisis de la actividad enzimática de la LS de Brucella abortus (BLS). Estudio de las significancias biológicas del rearreglo cuaternario de BLS recientemente identificado
2005	Germany	Biology	University	University	BMBF	Aprobado	Daño fotoinducido por radiación UV-A presente en la radiación solar. Importancia de pigmentos naturales derivados de la Pteridina.
2005	Germany	Engineering	University	University	BMBF	Aprobado	Identification of new components of the antioxidant response in higher plants

2005	Germany	Environmental sciences	University	University	BMBF	Aprobado	Posibilidades y límites de la biorremediación en suelos semiáridos (patagónicos) con alta salinidad, contaminados con hidrocarburos provenientes del petróleo.
2005	Germany	Fisics	Institute	Institute	BMBF	Aprobado	Observatorio gravimético antártico durante el año Polar Internacional 2007/2008
2005	Germany	Fisics	Institute	University	DAAD	Terminado	Biorremediación de Suelos contaminados con metales pesados por la bioestabilización de actinomycetes
2005	Germany	General	University	University	DAAD	Terminado	Métodos Adaptativos eficientes para Cálculo Científico
2005	Germany	Medical Sciences	Institute	Institute	BMBF	Aprobado	Estudio de la respuesta transcripcional a hypoxia en Drosophila melanogaster. Uso de técnicas avanzadas de microscopía confocal
2005	Germany	Medical Sciences	Institute	University	BMBF	Aprobado	Participación del Sistema de Receptor tipo Toll en la respuesta adrenal al estrés
2005	Germany	Medical Sciences	University	University	BMBF	Aprobado	Papel de las células dendríticas en la inducción y desarrollo de un cuadro de orquitis autoinmune experimental
2005	Germany	Medical Sciences	University	University	BMBF	Aprobado	Movimiento quimiotáctico de espermatozoides humanos mediado por el complejo formado por la progesterona y su proteína transportadora

							CBG
2005	Germany	Social Sciences	University	University	BMBF	Aprobado	Futuros costeros en la Provincia de Buenos Aires
2005	Germany	Zoology	Institute	University	BMBF	Aprobado	Efectos de la radiación ultravioleta en la productividad primaria y en especies de fitoplancton de los hemisferios Sur y Norte
2005	Hungary	Biology	Institute	Institute			Dinosaurios y otros vertebrados involucrados en la última conexión cretácica entre Laurasia y Gondwana: Una evaluación del cambio faunístico
2005	Hungary	Biology	Institute	Institute			Dinosaurios y otros vertebrados involucrados en la última conexión cretácica entre Laurasia y Gondwana: Una evaluación del cambio faunístico
2005	Hungary	Biology	University	Institute			Identificación y mejoramiento de rizobios competitivos y eficientes para la fijación de nitrógeno
2005	Hungary	Biology	University	Institute			Caracterización de productos naturales antifúngicos y sus análogos, con uso potencial en agricultura, por espectrometría de masa tándem

2005	Hungary	Chemistry	University	Institute			Caracterización y evaluación de In y Pd, In-Zeolitas como catalizadores para la eliminación de contaminantes
2005	Hungary	Chemistry	University	Institute			Identificación y mejoramiento de rizobios competitivos y eficientes para la fijación de nitrógeno
2005	Hungary	Chemistry	University	Institute			Caracterización de productos naturales antifúngicos y sus análogos, con uso potencial en agricultura, por espectrometría de masa tándem
2005	Hungary	Chemistry	University	University			Caracterización y evaluación de In y Pd, In-Zeolitas como catalizadores para la eliminación de contaminantes
2005	Hungary	Fisics	Institute	Institute			Application of complex energy quasi- particles for the description of drip line nuclei
2005	Hungary	Fisics	Institute	Institute			Application of complex energy quasi- particles for the description of drip line nuclei
2005	Hungary	Fisics	Institute	Institute			Interacción láser-materia: Interacción de pulsos láser cortos con átomos y superficies
2005	Hungary	Fisics	University	Institute			Interacción láser-materia: Interacción de pulsos láser cortos con átomos y superficies

2006	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Biodiversidade e aplicações biotecnológicas de leveduras isoladas de ecossistemas naturais da Argentina e do Brazil
2006	Brazil	Chemistry	University	University	MINCYT-CAPES	Aprobado	Síntese e Avaliação de Produtos Naturais e Análogos de Interesse Biológico Empregando Compostos Organocalcogênios
2006	Brazil	Engineering	Institute	Institute	MINCYT-CAPES	Aprobado	Preparação e caracterização de fios e fitas supercondutoras de MgB2 preparados pelo método de pó-em-tubo (PIT)
2006	Brazil	Fisics	Institute	University	MINCYT-CAPES	Aprobado	Materiais nanoestruturados para células a combustível de óxido sólido
2006	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	A constituição e reforma dos sistemas educativos no Brazil e na Argentina: histórias conectadas (1820-1980).
2006	Germany	Biology	Institute	Institute	BMBF	Aprobado	Estudio sobre la biodiversidad del picofitoplancton del Mar Argentino, importante fuente de microorganismos con ptencialidades para futuras aplicaciones biotecnológicas

2006	Germany	Biology	Institute	Institute	BMBF	Aprobado	Generación de un catálago de marcadores génicos de miopatía cardíaca dilatada por análisis en microchips De DNA de la expresión diferencial de genes en el ratón mutado en el gen del receptor tirosina quinasa erb4 en el músculo ventricular.
2006	Germany	Biology	Institute	Institute	BMBF	Aprobado	Estudio de la respuesta transcripcional a hypoxia en Drosophila melanogaster. Uso de técnicas avanzadas de microscopía confocal
2006	Germany	Biology	University	Institute	DAAD	Terminado	Estudios experimentales y teóricos de procesos de adsorción de moléculas de interés biológico sobre superficies monocristalinas lata y oro
2006	Germany	Biology	University	Institute	BMBF	Aprobado	Influencia de las salpas sobre el éxito del reclutamiento de *Euphausia superba* y capacidad de los estados larvales de esta especie para tolerar largos períodos de inanición
2006	Germany	Biology	University	Institute	BMBF	Aprobado	Lipid and fatty acid profiles as tracer to determine the food web structure in an semi - enclosed Antarctic system, the example of Potter Cove.

2006	Germany	Biology	University	Institute	BMBF	Aprobado	Posibilidades y límites de la biorremediación en suelos semiáridos (patagónicos) con alta salinidad, contaminados con hidrocarburos provenientes del petróleo.
2006	Germany	Biology	Institute	Universidad	DAAD	Terminado	Evaluación de riesgo por pesticidas y desarrollo de estrategias de mitigación en cuencas con agricultura intensiva de la Pampa Argentina
2006	Germany	Biology	Institute	University	DAAD	Terminado	Caracterización de plantas transgénicas de Arabidopsis thaliana con expresión modificada de enzima málica NADPdependiente
2006	Germany	Biology	Institute	University	DAAD	Terminado	Caracterización de biomateriales a través de técnicas electroquímicas modernas
2006	Germany	Biology	Institute	University	BMBF	Aprobado	Efectos de la radiación ultravioleta en la productividad primaria y en especies de fitoplancton de los hemisferios Sur y Norte
2006	Germany	Biology	Institute	University	BMBF	Aprobado	Análisis de la actividad enzimática de la LS de Brucella abortus (BLS). Estudio de las significancias biológicas del rearreglo cuaternario de BLS recientemente identificado
2006	Germany	Biology	Institute	University	BMBF	Aprobado	Participación del Sistema de Receptor tipo Toll en la respuesta adrenal al estrés

2006	Germany	Biology	University	University	DAAD	Terminado	Ultraestructura de la espermatogenesis y sistema genital en scorpiones, solifugae y ácaros acuáticos de agua dulce (chelicerata ráchnida)
2006	Germany	Biology	University	University	BMBF	Aprobado	Daño fotoinducido por radiación UV-A presente en la radiación solar. Importancia de pigmentos naturales derivados de la Pteridina.
2006	Germany	Chemistry	University	University	DAAD	Terminado	Síntesis de compuestos bioactivos a través de intermediarios organometálicos
2006	Germany	Engineering	University	University	DAAD	Terminado	Investigación del control dinámico de cargas alares mediante miniplaps
2006	Germany	Medical Sciences	Institute	University	DAAD	Terminado	Rol de la angiotensina (1-7)y su receptor endógeno Mas en la diferenciación y maduración de células dendríticas
2006	Germany	Medical Sciences	Institute	University	DAAD	Terminado	Efecto de fitiestrógenos en modelos experimentales de cáncer de mama y de endometrio.
2006	Germany	Medical Sciences	University	University	BMBF	Aprobado	Papel de las células dendríticas en la inducción y desarrollo de un cuadro de orquitis autoinmune experimental

2006	Germany	Medical Sciences	University	University	BMBF	Aprobado	Movimiento quimiotáctico de espermatozoides humanos mediado por el complejo formado por la progesterona y su proteína transportadora CBG
2006	Germany	Social Sciences	Institute	Institute	DAAD	Terminado	Las rutas de un intercambio transcultural:La transmisión de saberes y prácticas políticas entre Argentina y Germany
2006	Germany	Social Sciences	University	University	BMBF	Aprobado	Futuros costeros en la Provincia de Buenos Aires
2006	Germany	Zoology	Institute	Institute	BMBF	Aprobado	Las comunidades planctónicas microbianas y su relaicón con los indicadores biogeoquímicos del Mar Argentino y Océano Antártico
2006	Germany	Zoology	University	University	BMBF	Aprobado	Identification of new components of the antioxidant response in higher plants
2006	Hungary	Biology	Institute	Institute			Identification of the intrinsic structural disorder of the partners of 14-3-3 proteins.
2006	Hungary	Biology	University	Institute			Correlation of Upper Jurassic faunal successions in the Neuquén Basin (Argentina) and Transdanubian Range (Hungary) and the calibration of the

							Jurassic Time Scale.
2006	Hungary	Biology	University	University			Study of the floral biology and crop regulation methods for improving the competitiveness of apple and pear production.
2006	Hungary	Biology	University	University			The effects of drought stress on growth related production of reactive oxygen species with special attention to root development and nitric oxide signalization in wheat and maize plants.
2006	Hungary	Chemistry	Institute	Institute			Characterization of mitochondrial nitric oxide production in cardiac cells under normal and hypoxic conditions.
2006	Hungary	Fisics	University	University			Preparation, characterization and catalytic application of transition metal nanoparticles and metal complexes immobilized in graphite oxide.
2006	Hungary	Fisics	University	University			Experimental and theoretical design of transition metal carbide-based catalytic materials.

2006	Hungary	Medical Sciences	University	University			Synthesis, biological activity and molecular modeling of small-size peptides and peptidomimetics as drug candidates. Therapeutic peptides as anti-amyloid drug candidates for Alzheimer's as well as related diseases and cell-penetrating peptides with antimi
2006	Hungary	TICS	Institute	Institute			The possible uses of the Chernoff faces for data visualisation in school cartography.
2006	Hungary	TICS	University	Institute			Knowledge information and representation in multilingual applications
2006	Spain	Fisics	Institute	Institute			Construcción de Detectores, Simuladores y Análisis de Datos par el Proyecto Auger en el Rango 10 - 3x 10 eV
2006	Spain	Fisics	Institute	Institute			Invariancia conforme en sistemas fisicos y sistemas de Clasificación Ultramétricos
2006	Spain	Fisics	Institute	Institute			Estudio de la Dinamica de QCD en Colisiones electron- protón a valores pequeños de la fracción de impulso del protón
2006	Spain	Fisics	Institute	Institute			Detección de Neutrinos Cósmicos de Alta Energía Mediante la Medición de Lluvias Atmosféricas Inclinadas con el Observatorio

							Pierre Auger
2006	Spain	Fisics	Institute	Institute			Desarrollo e Implementación del Sistema de Selección de Datos del Experimento Atlas al LHC
2006	Spain	Fisics	Institute	Institute			Estudio de las propiedades del frente tamporal de las cascadas de partículas secundarias producidas por rayos cósmicos utraenergeticos dectados en el Observatorio Pierre Auger para la determinaciòn de la naturaleza de la partícula y la conexión con su ori
2006	Spain	Fisics	Institute	Institute			Teoría de Campos Cuanticos y Teoría de Supercuerdas
2006	Spain	Fisics	Institute	Institute			Modelo Estandar y sus Extensiones
2006	Spain	Fisics	Institute	Institute			La Estructura del Fotón
2006	Uruguay	Biology	University	University			Morfología y sistemática molecular en la caracterización de poblaciones del bagre blanco Pimelodus albicans de las cuencas PARANÁ-URUGUAY y Río de la Plata.

2006	Uruguay	Biology	University	University			Caracterización fisicoquímica de TEM-144 y estudio bioinformático de expresión del plásmido pT12 codificante de Salmonella Derby
2006	Uruguay	Chemistry	Institute	University			Preparación quimioenzimática de azúcares modificados y sus correspondientes nucleósidos
2006	Uruguay	TICS	University	University			Metodología para diseño de Data Warehouses basados en descubrimiento de requerimiento y guiados por parámetros de calidad de las fuentes
2006	Uruguay	Zoology	University	University			Análisis comparativo de las degeneraciones cerebelosas ocasionadas por consumo de solanáceas en bovinos del cono sur Sudamericano a través de la lectinohistoquím. y la inmunohistoquímica
2006	Uruguay	Zoology	University	University			Estudio del ciclo sueño vigilia en hámsteres dorados tratados con efavirenz y/o melatonina
2007	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Identificação E Validação De Bioindicadores Na Avaliação De Exposição Individual À Radiação Ionizante
2007	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Filogeografia, especiação e arquitetura genética de caracteres complexos em espécies

							do cluster Drosophila buzzatii
2007	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Bactérias lácticas e seus metabólitos bioativos: aplicação em alimentos
2007	Brazil	Chemistry	Institute	Institute	MINCYT-CAPES	Aprobado	Desenvolvimento de filmes de CaCu3Ti4O12 para aplicações em dielétricos, varistores e sensores"
2007	Brazil	Chemistry	University	University	MINCYT-CAPES	Aprobado	Preparação E Aplicação Tecnológica E Ambiental De Materiais Porosos De Baixo Custo
2007	Brazil	Chemistry	University	University	MINCYT-CAPES	Aprobado	Investigação De Produtos Naturais Como Fonte De Matérias-Primas Para A Obtenção De Substâncias Com Atividades Antitumoral, Antiinflamatória, Antiviral E Antiparasitária
2007	Brazil	Engineering	Institute	University	MINCYT-CAPES	Aprobado	Sinterização ultra-rápida de materiais cerâmicos porosos conformados por consolidação direta com amido.
2007	Brazil	Engineering	University	University	MINCYT-CAPES	Aprobado	Fontes renováveis e tecnologia de extrusão na produção de embalagens biodegradáveis
2007	Brazil	Fisics	Institute	University	MINCYT-CAPES	Aprobado	Estudo de Reações Nucleares entre Ions Pesados a Energias Próximas à da Barreira Coulombiana
2007	Brazil	Fisics	Institute	University	MINCYT-CAPES	Aprobado	Dinâmica de Redes Econômicas, Sociais, e

							de Epidemias
2007	Brazil	Fisics	University	University	MINCYT-CAPES	Aprobado	Radiação solar global, par e uv: aplicações energéticas, efeitos biológicos e interações com a atmosfera
2007	Brazil	Fisics	University	University	MINCYT-CAPES	Aprobado	Desarrollo e Aplicação de Técnicas de Espectroscopia Tridimensional ao Estudo de Dinâmica de Galáxias
2007	Brazil	Fisics	University	University	MINCYT-CAPES	Aprobado	Cristalografia estrutural e modelado de materiais de interesse tecnológico
2007	Brazil	Medical Sciences	University	Institute	MINCYT-CAPES	Aprobado	Biologia, ecologia e comportamento de vetores da doença de Chagas.
2007	Brazil	Medical Sciences	University	University	MINCYT-CAPES	Aprobado	Códigos neuronais de representação sensorial em áreas corticais e subcorticais do cérebro do rato
2007	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Governo da economía na Argentina e no Brazil em perspectiva comparada. Instituicões políticas, política econômica e integração regional
2007	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Reconfiguração estatal, movimentos sociais e formas de construção da ciadania em perspectiva comparada.
2007	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	A produção de tecnologias sociais em países periféricos: análise de experiências de adequação sócio-técnica na Argentina e

							no Brazil
2007	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Brazil e Argentina em perspectiva comparada. Espaços, sujeitos sociais, políticas públicas e representações rurais contemporâneas.
2007	Brazil	TICS	University	University	MINCYT-CAPES	Aprobado	Adapt-SUR (ADAPTabilidade de sistemas baseados em modelos de perfis de uSUários, análise de comportamento e Reconhecimento de planos)
2007	Cuba	Biology	Institute	Institute			Fortalecimiento de la detección de bacterias patógenas en alimentos frescos, e implementación de técnicas genotípicas destinadas a la caracterización de los aislamientos.
2007	Cuba	Biology	University	Institute			Uso de productos naturales obtenidos de plantas en el control de insectos que afectan el patrimonio cultural de archivos depositados en diversas instituciones
2007	Cuba	Biology	University	Institute			Investigación y capacitación para el diagnostico y el biocontrol de la marchites en tabaco causada por Fusarium spp. y Ralstonia solanacearum en Argentina y Cuba.

2007	Cuba	Biology	University	Institute			Indicadores de sostenibilidad del sistema suelo-planta-animal
2007	Cuba	Biology	University	Institute			Caracterización física de la polimerización de la hemoglobina S (HbS) en condiciones de desoxigenación espontánea .
2007	Cuba	Biology	University	Institute			Estudio de la interacción membrana eritrocitaria-Hemoglobina durante el proceso de polimerización de la Hemoglobina S (HbS) en condiciones de desoxigenación espontánea.
2007	Cuba	Chemistry	University	Institute			Obtención de materiales de avanzada de alto valor agregado a partir de carbones activados para la industria médico farmaceútica.
2007	Cuba	Environmental sciences	University	Institute			Aplicación de las técnicas nucleares (hidrología isotópica) para la evaluación de la sostenibilidad de los recursos hídricos de la Cuenca costera Artemisa-Quivicán.
2007	France	Fisics	University	Institute			Estimación de modelos dinámicas reducidos de escurrimientos turbulentos a partir de secuencia de imágenes
2007	France	Medical Sciences	University	University			Modelización Matemática y Control de la Infección por el Virus de la Inmunodeficiencia Humana (VIH-1)

2007	France	TICS	Institute	Institute			Métodos Monte Carlo para Control e Inversión de Cadena Cinemáticas Articuladas, Aplicaciones a Animación Virtual y Captura de Movimiento sin Marcadores
2007	France	TICS	University	Institute			Modelización lingüística de secuencia genómicas por aprendizaje de gramáticas – Técnicas de procesamiento de Lenguaje Natural aplicadas a la modelización de Secuencias Genómicas
2007	France	TICS	University	Institute			Wikis Semánticas P2P para la Gestión de Conocimiento Distribuido a gran escala y la Integración de Grandes comunidades
2007	France	TICS	University	Institute			Servicios de Inferencia para Sistemas de Diálogo
2007	Hungary	Biology	Institute	Institute			Sugarcane Resistant to the Sugar Cane mosaic Virus Complex mediated by Gene Silencing.
2007	Hungary	Chemistry	University	Institute			Development and characterization of partially and / or completely biodegradable polymer films using nanocelluloses.
2007	Hungary	Chemistry	University	University			Fracture and failure behaviour of self-reinforced (all-polymer) polymer composites.

2007	Hungary	Engineering	Institute	Institute			Formulation and testing of water-borne environment- friendly and anticorrosive paint coatings.
2007	Hungary	Fisics	University	University			Development of quantitative model of X-ray fluorescence microanalysis for determination of toxic elements in biological samples using combined algorithm of fundamental parameter method with Monte Carlo simulation of X-ray scattering.
2007	Italy	Biology	Institute	Institute			Biología Estructural de la enfermedad de Parkinson: Bases estructurales y especificidad de interacción entre iones metálicos y alfa-Synucleína
2007	Italy	Biology	Institute	University			Producción identificación y estudio d las propiedades biológicas de péptido generados por acción de microorganismos
2007	Italy	Environmental sciences	University	Institute			Implementación de la estación Ionosférica de Tucumán: radiosondaj ionosférico vertical elaboración en tiempo real de ionogramas y generación de mapas ionosféricos.

2007	Italy	Environmental sciences	University	University			Implicancia agrícola y ambiental del uso de bacterias promotoras del crecimiento vegetal para aliviar el efecto de la salinidad por cloruros y sulfatos en leguminosas.
2007	Italy	Environmental sciences	University	University			Geoquímica de sedimentos eólicos Argentinos y del polvo atmosférico depositado en la Antártida: dinámica del transporte e implicaciones climáticas.
2007	Italy	Fisics	Institute	University			Producción sustentable de hidrógeno empleando metales nobles soportado sobre nanocompuestos basados en ceria
2007	Italy	Fisics	Institute	University			Estudio estructural de cobaltitas sintetizadas en volumen y en nanofilms
2007	Italy	Medical Sciences	University	Institute			Efecto angiogénico y miocardiogénico de la inyección intramiocárdica de la proteína "High Mobility Group Box 1" en un modelo ovino de infarto agudo de miocardio
2007	Italy	TICS	University	University			Desarrollo de Sistemas electromecánicos para almacenamiento de energía

2007	Uruguay	Biology	Institute	University			Valorización de la lactosa presente en el suero de quesería por transformaciones enzimáticas para obtener productos de aplicación en la industria alimenticia y farmacéutica
2007	Uruguay	Chemistry	Institute	University			Síntesis de Azúcares y nucleósidos modificados
2007	Uruguay	Medical Sciences	University	University			Expresión de receptores endometriales a estrógenos, progesterona, oxitocina e IFN-tau y expresión de la ciclooxigenasa 2 y su asociación con las concentraciones hormonales durante los procesos de luteólisis y Reconocimiento Materno de la Preñez en llamas (Lama glama)
2007	Uruguay	Medical Sciences	Institute	Institute			Nuevos transductores ultrasónicos para imaginería en diagnóstico clínico en medicina y para control no destructivo de materiales.
2008	Brazil	Biology	Institute	University	MINCYT-CAPES	Aprobado	Hymenochaetales poroides (Basidiomycota) en ecosistemas áridos y semi-áridos de Argentina y Brazil: diversidad y ecología

2008	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Glicómica de Plasmodium falciparum: estudio estructural de las cadenas glicosídicas de las glicoproteínas presentes en los estadíos intraeritrocíticos
2008	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Crioconservación de embriones de especies de plantas nativas de Brazil y Argentina: Estudios físicos químicos fisiológicos y subcelulares
2008	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Fontes renováveis e tecnologia de extrusão na produção de embalagens biodegradáveis
2008	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Códigos neuronais de representação sensorial em áreas corticais e subcorticais do cérebro do rato
2008	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Filogeografia, especiação e arquitetura genética de caracteres complexos em espécies do cluster Drosophila buzzatii
2008	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Bactérias lácticas e seus metabólitos bioativos: aplicação em alimentos
2008	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Modificación enzimática de proteínas de leche bovina y ovina: propiedades estructurales funcionales y biológicas

2008	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Utilización de sustratos artificiales para la provisión de biofilm a juveniles de la langosta de agua dulce Cherax quadricarinatus.
2008	Brazil	Chemistry	Institute	University	MINCYT-CAPES	Aprobado	Desenvolvimento de filmes de CaCu3Ti4O12 para aplicações em dielétricos, varistores e sensores"
2008	Brazil	Chemistry	University	University	MINCYT-CAPES	Aprobado	Calidad del Biodiesel. Estudios y desarrollos de métodos analíticos de referencia y modelos de calibración de parámetros de calidad.
2008	Brazil	Chemistry	University	University	MINCYT-CAPES	Aprobado	Preparação E Aplicação Tecnológica E Ambiental De Materiais Porosos De Baixo Custo
2008	Brazil	Chemistry	University	University	MINCYT-CAPES	Aprobado	Investigação De Produtos Naturais Como Fonte De Matérias-Primas Para A Obtenção De Substâncias Com Atividades Antitumoral, Antiinflamatória, Antiviral E Antiparasitária
2008	Brazil	Engineering	Institute	University	MINCYT-CAPES	Aprobado	Sinterização ultra-rápida de materiais cerâmicos porosos
2008	Brazil	Fisics	University	Institute	MINCYT-CAPES	Aprobado	Revestimientos libres de cromo para protección contra la corrosión de electrocincados

2008	Brazil	Fisics	Institute	University	MINCYT-CAPES	Aprobado	Nanopartículas magnéticas sintetizadas por métodos químicos: caracterización y aplicaciones biomédicas (hipertermia)
2008	Brazil	Fisics	Institute	University	MINCYT-CAPES	Aprobado	Estudo de Reações Nucleares entre Ions Pesados a Energias Próximas à da Barreira Coulombiana
2008	Brazil	Fisics	University	University	MINCYT-CAPES	Aprobado	Comparacion entre el magmatismo tardio a post orogenetico neoproterozoico-eopaleozoico de las fajas Brazilianas (Brazilia y paraguai) y el magmatismo eopaleozoico del noroeste argentino: historia geologica del gondwana occidental
2008	Brazil	Fisics	University	University	MINCYT-CAPES	Aprobado	Radiação solar global, par e uv: aplicações energéticas, efeitos biológicos e interações com a atmosfera
2008	Brazil	Fisics	University	University	MINCYT-CAPES	Aprobado	Identificação E Validação De Bioindicadores Na Avaliação De Exposição Individual À Radiação Ionizante
2008	Brazil	Fisics	University	University	MINCYT-CAPES	Aprobado	Desarrollo e Aplicação de Técnicas de Espectroscopia Tridimensional ao Estudo de Dinâmica de Galáxias

2008	Brazil	Fisics	University	University	MINCYT-CAPES	Aprobado	Cristalografia estrutural e modelado de materiais de interesse tecnológico
2008	Brazil	Medical Sciences	University	University	MINCYT-CAPES	Aprobado	Biologia, ecologia e comportamento de vetores da doença de Chagas.
2008	Brazil	Null	Null	Null	MINCYT-CAPES	Aprobado	conformados por consolidação direta com amido.
2008	Brazil	Social Sciences	University	Institute	MINCYT-CAPES	Aprobado	Argentina y Brazil: posibilidades y obstáculos en el proceso de integración territorial
2008	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Las Políticas Exteriores de Argentina y Brazil en el marco de la Cooperación Sur-Sur (período 2003-2008) Un estudio comparativo
2008	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Nueva regulación educativa en Argentina y en Brazil: perspectiva comparada
2008	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Calidad de vida y bienestar en niños niñas y jovenes que viven en el gran buenos aires y en la plata (argentina) y rio grande do sul (Brazil)
2008	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Ruptura y Continuidad: Investigaciones sobre la relación entre Naturaleza e Historia a partir de su formulación por el Gran Racionalismo del siglo

							XVII
2008	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Mediatización sociedad y sentido: aproximaciones comparativas de modelos Brazileños y argentinos.
2008	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Governo da economía na Argentina e no Brazil em perspectiva comparada. Instituicões políticas, política econômica e integração regional
2008	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Reconfiguração estatal, movimentos sociais e formas de construção da ciadania em perspectiva comparada.
2008	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	A produção de tecnologias sociais em países periféricos: análise de experiências de adequação sócio-técnica na Argentina e no Brazil
2008	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Brazil e Argentina em perspectiva comparada. Espaços, sujeitos sociais, políticas públicas e representações rurais contemporâneas.

2008	Brazil	TICS	University	University	MINCYT-CAPES	Aprobado	Adapt-SUR (ADAPTabilidade de sistemas baseados em modelos de perfis de uSUários, análise de comportamento e Reconhecimento de planos)
2008	Cuba	Biology	Institute	Institute			Preservación de materias primas de origen animal y vegetal mediante la aplicación de cultivos bioprotectores
2008	Cuba	Biology	Institute	Institute			Fortalecimiento de la detección de bacterias patógenas en alimentos frescos, e implementación de técnicas genotípicas destinadas a la caracterización de los aislamientos.
2008	Cuba	Biology	University	Institute			Investigación y capacitación para el diagnostico y el biocontrol de la marchites en tabaco causada por Fusarium spp. y Ralstonia solanacearum en Argentina y Cuba.
2008	Cuba	Biology	University	Institute			Uso de productos naturales obtenidos de plantas en el control de insectos que afectan el patrimonio cultural de archivos depositados en diversas instituciones

2008	Cuba	Chemistry	Institute	Institute			Optimización y/o desarrollo de procedimientos para el análisis de trazas en aguas, sedimentos y residuales líquidos.
2008	Cuba	Chemistry	University	Institute			Obtención de nuevos materiales a partir de materias primas alternativas para la separación, purificación y almacenamiento de gases.
2008	Cuba	Engineering	Institute	Institute			Desarrollo y caracterización de recubrimientos de cerámicas bioactivas en sustratos base titanio.
2008	Cuba	Engineering	Institute	Institute			Aplicación de las técnicas nucleares (hidrología isotópica) para la evaluación de la sostenibilidad de los recursos hídricos de la Cuenca costera Artemisa-Quivicán.
2008	Cuba	Fisics	Institute	Institute			Principales asociaciones mineralógicas de los elementos contaminantes presentes en residuales sólidos de la Industria Minero Metalúrgica.
2008	Cuba	Medical Sciences	University	Institute			Investigación de tratamientos inmunoterapéuticos en combinación a base del gangliosido NgGM3 y el receptor del factor de crecimiento epidérmico en carcinomas murinos

2008	Cuba	Social Sciences	University	Institute			Observatorios Sociales Rurales para Argentina y Cuba Metodologías de relevamiento "Panel Detallista" sobre territorio rurales a partir de la construcción de variables e indicadores que vinculan necesidades y satisfactores para el desarrollo sustentable
2008	France	Engineering	University	Institute			Formación compartida de alumnos ingenieros en física, electrónica y materiales provenientes de la UNS de Bahía Blanca y del INP de Grenoble.
2008	France	Engineering	University	Institute			Programa franco-sudamericano en ingeniería de la innovación aplicada A productos, procesos y estrategia empresarial
2008	France	Engineering	University	Institute			Formación complementaria franco-argentina de ingenieros. Red: uncuyo-insa

2008	France	Engineering	University	Institute			CÓRDOBA-INSA
2008	France	Engineering	University	University			FORMACIÓN COMPLEMENTARIA DE INGENIEROS FRANCO-ARGENTINA. RED: GRUPO ENI (ENIB, ENIM, ENISE, ENIT, ENIVL) - UNCUYO (MENDOZA) - UIA (CÓRDOBA).
2008	France	Engineering	University	University			Cooperación en Ingeniería Electrónica, Comunicación, Información y Aplicaciones
2008	France	Engineering	University	University			Ingeniería Industrial

2008	France	Environmental sciences	University	University			Cooperación Argentino-Francesa para la Formación de Ingenieros en Medio ambiente y Agua
2008	France	Environmental sciences	University	University			Red franco argentina de materiales, mecanica y procesos - gestion de recursos hídricos y medio ambiente, mat-rh
2008	France	Fisics	Institute	Institute			Estructura Estocástica de Sistemas de Partículas Interactivas de Gran Tamaño EESPIGT (SSLIS en inglés)
2008	France	Mathematics	Institute	Institute			Algebra no conmutativa y teoría de representaciones - NOCOMALRET
2008	France	Mathematics	Institute	Institute			Nonlinear Analysis and Partial Differential Equations (NAPDE)

2008	France	Social Sciences	University	Institute			Desarrollo de Cooperaciones Duraderas: Transferencia de Tecnología e Innovación, relacionadas con la industria automotriz -DEPADU
2008	France	Social Sciences	University	University			Formar Jóvenes Biculturales E Investigadores Abiertos En El Sector Agrario Y Agroalimentario
2008	France	Social Sciences	University	University			Red FIUBA – GEC para la formación de Ingenieros Internacionales Argentina – France (FININAF)
2008	France	TICS	Institute	Institute			CoReA: Comprehension and Remodularization of Applications based on Aspects, Classboxes and Traits
2008	France	TICS	Institute	Institute			Robust single-trial evoked potential detection for brain-computer interfaces using computational intelligence techniques
2008	France	TICS	Institute	Institute			BAVI: Bio-inspired Audio/Visual information Integration

2008	France	TICS	Institute	Institute			Dynamics of Layered Complex Networks
2008	France	TICS	Institute	Institute			Types for Robust Program Development
2008	France	TICS	University	University			SISTEMAS DE TRANSPORTE: INTELIGENCIA ARTIFICIAL, ENERGÍA, MEDIO AMBIENTE
2008	Germany	Biology	Institute	Institute	DAAD	Aprobado	Mejoramiento del control biológico de carpocapsa mediante el desarrollo de medidas de monitoreo de resistencia y evaluación a gran escala de nuevos aislamientos del granulovirus Cydia pomonella (CpGV)
2008	Germany	Biology	Institute	Institute	DAAD	Aprobado	Estudio de los mecanismos celulares y moleculares involucrados en el desarrollo de la involución mamaria post-lactancia: Rol del sistema angiotensinergico.
2008	Germany	Biology	University	Institute	BMBF	Aprobado	Modelamiento adaptivo de relaciones estructura-actividad e identificación de marcadores biológicos y químicos a partir de datos high-throughput mediante métodos de inteligencia computacional

2008	Germany	Biology	Institute	Null	DAAD	Terminado	Análisis de la estructura y función de la familia de las proteínas de choque térmico pequeñas del parásito toxoplasma gondii
2008	Germany	Biology	University	Null	DAAD	Terminado	Efectos combinados de microorganismos simbiontes de tejidos foliares y radicales sobre interacciones multitroficas
2008	Germany	Biology	University	Null	DAAD	Terminado	Modelado de sistemas biológicos complejos: Estudio de epidemiología dinámica y del crecimiento de tumores y cáncer
2008	Germany	Biology	University	Null	BMBF	Terminado	Cooperación Internacional en la utilización de compost y lobricompuesto provenientes de residuos sólidos urbanos en agricultura urbana y periurbana de la Provincia de Entre Ríos, Argentina.
2008	Germany	Biology	University	Null	BMBF	Terminado	Identificación de compuestos naturales que afectan la señalización de Interferones
2008	Germany	Biology	University	University	DAAD	Aprobado	El rol de las proteinas tiol mitocondriales durante la asfixia perinatal.

2008	Germany	Biology	University	University	BMBF	Aprobado	Biomonitoreo activo de emisiones de fluoruros empleando Tillandsia capillaris (Ruiz & Pav.) forma capillaris y Lolium multiflorum (LAM) cv. Lema. Estudio comparativo entre Germany y Argentina
2008	Germany	Biology	University	University	BMBF	Aprobado	Colloidal imprinted-particles and systems for Bio-separations
2008	Germany	Biology	University	University	BMBF	Aprobado	Caracterización fisiofarmacológica de los sistemas transportadores celulares: impacto de la modulación de la actividad intestinal de la glicoproteína-P
2008	Germany	Chemistry	University	Institute	BMBF	Aprobado	Metabolismo de L-Prolina en tejidos de Arabidopsis que desarrollan la Respuesta de Hipersensibilidad (HR)
2008	Germany	Chemistry	Institute	University	DAAD	Aprobado	Control de la dinámica de películas ultra delgadas de polímeros con moléculas fotoactivas
2008	Germany	Engineering	University	Null	DAAD	Terminado	Análisis de procesos básicos en sistemas de conversión de energía solar.
2008	Germany	Engineering	University	University	BMBF	Aprobado	Economía de hidrógeno: Estudios teóricos y experimentales de la actividad electrocatalítica de materiales para celdas de combustible y otras aplicaciones.

2008	Germany	Engineering	University	University	BMBF	Aprobado	Hacia una Red Global de Sensores Interconectados. Un ensayo experimental Argentino- Alemán
2008	Germany	Environmental sciences	University	University	BMBF	Aprobado	Arsenico en aguas subterraneas: presencia, evolución y remediación
2008	Germany	Fisics	Institute	Institute	BMBF	Aprobado	Aleaciones de Fe y compuestos nano estructurados.
2008	Germany	Fisics	Institute	Null	DAAD	Terminado	Simulaciones y modelos hidrodinámicos de gotas poliméricas fuera del equilibrio sobre sustratos blandos con aplicaciones a mano y microfluídica
2008	Germany	Fisics	Institute	Null	DAAD	Terminado	Fotooxidación atmosférica de hidrocarburos oxigenados
2008	Germany	Fisics	Institute	Null	BMBF	Terminado	Observatorio gravimético antártico durante el año Polar Internacional 2007/2008
2008	Germany	Fisics	University	Null	BMBF	Terminado	Desarrollo de materiales electroquímicos funcionales usando escritura directa por interferencia láser
2008	Germany	Fisics	Institute	University	DAAD	Aprobado	Caracterización microestructural de aleaciones de base magnesio
2008	Germany	Fisics	University	University	DAAD	Aprobado	DA0804 Teoría de campos para modelos microscópicos de antiferromagnetos quánticos frustrados

							dopados y no dopados
2008	Germany	Fisics	University	University	DAAD	Aprobado	Orden magnético inducido por defectos en láminas delgadas de ZnO y TiO2
2008	Germany	Fisics	University	University	DAAD	Aprobado	Aplicación de técnicas de análisis de sensibilidad topológica y el método de los elementos de contorno a problemas de dispersión acústica.
2008	Germany	Mathematics	University	Null	DAAD	Terminado	Análisis Teórico y numérico de ecuaciones no lineales de la Matemática Financiera
2008	Germany	Medical Sciences	University	Institute	BMBF	Aprobado	Envio celular especificamente dirigido de enzimas que activan pro-drogas nucleosídicas anticarcinogénicas
2008	Germany	Medical Sciences	Institute	Null	DAAD	Terminado	Study of signalling pathways in decidualization and embryo.maternal interaction
2008	Germany	Medical Sciences	University	Null	BMBF	Terminado	Chlidren´s Environmental Health combined VOC and mould exposure as risk factor for respiratory diseases and allergies
2008	Germany	Medical Sciences	University	Null	BMBF	Terminado	Biomarcadores y bases genético moleculares en la poliquistosis renal antosómica dominante

2008	Germany	Medical Sciences	Institute	University	BMBF	Aprobado	Extracción y modelación de los parámetros prosódicos para el análisis, síntesis y reconocimiento del habla
2008	Germany	Medical Sciences	Institute	University	BMBF	Aprobado	Investigación sobre la capacidad diferencial de la cepa de referencia vacunal Bordetella pertussis Tohama I y el aislado clínico Bp955 en la formación de biofilm. Implicancias para el diseño de nuevas vacunas contra tos convulsa
2008	Germany	Medical Sciences	University	University	BMBF	Aprobado	Selección de variantes puntiformes de Staphylococcus aureus durante la infección experimental en un modelo de osteomielitis en la rata: efecto de anticuerpos anticápsula presentes tras inmunización activa una con vacunas polisacarídicas conjugadas de serotipos capsulares 5 y 8. Caracterización de las variantes puntiformes estables obtenidas.
2008	Germany	Social Sciences	University	University	DAAD	Aprobado	Movimientos sociales, esfera pública y nuevas configuraciones del derecho en América Latina
2008	Germany	TICS	University	Null	DAAD	Terminado	Modelado de Inferencia y Preferencias en Sistemas Multiagentes a través de Argumentación mediante extensiones de la Programación en

							Lógica Rebatible
2008	Germany	Zoology	Institute	Institute	DAAD	Aprobado	Desarrollo de un Sistema de Transformación de Cloroplastos para Caña de Azúcar
2008	Germany	Zoology	University	Institute	DAAD	Aprobado	Presencia y Tipificación de Toxoplasma Gondii en los Animales en Argentina
2008	Germany	Zoology	University	Null	BMBF	Terminado	Análisis del impacto y control de la eficiencia del riego por goteo.
2008	Germany	Zoology	Institute	University	DAAD	Aprobado	Estudio de los canales iónicos, KCa y Kv, en el testículo del hámster y pacientes fértiles e infértiles
2008	Germany	Zoology	University	University	BMBF	Aprobado	Expression of apoptotic genes in bovine oocytes and embryos
2008	Portugal	Biology	University	Institute			Aplicaciones biotecnolOgicas de levaduras tolerantes a metales pesados aisladas de ambientes acuáticos ácidos de Argentina y Portugal
2008	Portugal	Biology	University	University			Patrones de ictiobiodiversidad en el 0céano Atlántico: caso de estudio los peces planos

2008	Portugal	Chemistry	University	University			CaracterizaciOn quImica y funcional de proteInas de capa-S de Lactobacillus kefir
2008	Portugal	Chemistry	University	University			InteracciOn de aminoácidos y bases nitrogenadas con membranas lipIdicas por espectroscopia infrarroja y potenciales superficiales
2008	Portugal	Engineering	University	University			EvaluaciOn integrada de las propiedades a nivel macro y nanometrico relevantes a las piezas moldeadas por inyecciOn de materiales nanoestructurados basados en polipropileno
2008	Portugal	Environmental sciences	Institute	Institute			El género Lotus y su uso en la biorremediaciOn de suelos contaminados con metales pesados. La bioquImica y sus simbiontes.
2008	Portugal	Environmental sciences	University	Institute			Estudio de la estructura profunda y localizaciOn de la cámara magmática de los sistemas volcánicos activos Copahue (Argentina) y DecepciOn (Antártida) mediante técnicas geofIsicas de magnetotelúrica
2008	Portugal	Fisics	University	University			Bases moleculares para el desarrollo de dispositivos bioelectrOnicos basados en proteInas de membrana

2008	Portugal	Fisics	University	University			PreparaciOn de catalizadores nanodispersos para la hidrogenaciOn selectiva de compuestos carbonIlicos insaturados empleando técnicas de control superficial.
2008	Portugal	Fisics	University	University			Análisis de Elementos Trazas en BiofIsica. Aplicaciones de EspectrometrIa de Rayos X.
2008	Portugal	TICS	Institute	Institute			LocalizaciOn y ReconstrucciOn Simultánea de Entornos usando Múltiples Robots MOviles Gobernados por Interfaces Músculo-Computadora para la RehabilitaciOn de Personas con Discapacidad Motora
2008	Portugal	TICS	Institute	University			Modelado Numérico y 0ptimizaciOn por Algoritmos Genéticos de Procesos de BiofabricaciOn Estereolitográfica de "Scaffolds" para IngenierIa de Tejidos.
2008	Portugal	TICS	University	University			AspectWeb: Desarrollo de Aplicaciones Web con Aspectos
2008	Portugal	TICS	University	University			Dinámica de Conocimiento en Agentes Cognitivos
2008	Slovenia	Biology	University	University			Funcionalización de Sustratos Orgánicos Seleccionados y Desarrollo de Estrategias para Síntesis

							Orgánica Sustentable
2008	Slovenia	Engineering	Institute	Institute			DEGRADACION DE BARRERAS INGENIERILES DE REPOSITORIOS DE RESIDUOS RADIOACTIVOS DE BAJA Y MEDIA ACTIVIDAD
2008	Slovenia	Engineering	Institute	University			Fungal life and evolution in subglacial environments of Northern (Svalbard, Norway) and Southern Hemisphere (Northwestern Patagonia, Argentina) glaciers
2008	Slovenia	Engineering	University	University			Medición de la Tenacidad a Fractura de Materiales Heterogeneos Utilizando el Método de Normalización
2008	Slovenia	Engineering	University	University			Applicability of natural components for the replacement of synthetic additives in the food industry.
2008	Slovenia	Environmental sciences	Institute	Institute			Aplicación de Tecnicás de Cálculo Quimiometrico a Problemas Medioambientales. Caso de Estudio: Gestión de lča calidad de cuerpos de agua superficiales.

2008	Slovenia	Fisics	Institute	Institute			Materiales funcionales cerámicos nanoestructurados
2008	Slovenia	Fisics	University	Institute			Formación de patrones a escala nanometrica y facetado inducido por irradiacion de iones
2008	Slovenia	Fisics	University	Institute			Aspectos de la Física más allá del Modelo Estándar y la correspondencia holográfica entre teoría cuántica de campos y gravedad
2008	Slovenia	Fisics	Institute	University			Desarrollo y aplication de los metodos de lente termica y espectroscopia fotoacustica para analisis de muestras ambientales y agricolas
2008	Slovenia	Fisics	Institute	University			Studies of the origin and nature of the highest energy cosmic rays with the Pierre Auger Observatory
2008	Slovenia	Medical Sciences	University	University			Electroquimica de tumores: Modelos numericos y experimentales
2008	Spain	Fisics	Institute	Institute			Construcción de Detectores, Simuladores y Análisis de Datos par el Proyecto Auger en el Rango 10 - 3x 10 eV

2008	Spain	Fisics	Institute	Institute			Invariancia conforme en sistemas fisicos y sistemas de Clasificación Ultramétricos
2008	Spain	Fisics	Institute	Institute			Estudio de la Dinamica de QCD en Colisiones electron- protón a valores pequeños de la fracción de impulso del protón
2008	Spain	Fisics	Institute	Institute			Detección de Neutrinos Cósmicos de Alta Energía Mediante la Medición de Lluvias Atmosféricas Inclinadas con el Observatorio Pierre Auger
2008	Spain	Fisics	Institute	Institute			Desarrollo e Implementación del Sistema de Selección de Datos del Experimento Atlas al LHC
2008	Spain	Fisics	Institute	Institute			Estudio de las propiedades del frente tamporal de las cascadas de partículas secundarias producidas por rayos cósmicos utraenergeticos dectados en el Observatorio Pierre Auger para la determinaciòn de la naturaleza de la partícula y la conexión con su ori
2008	Spain	Fisics	Institute	Institute			Teoría de Campos Cuanticos y Teoría de Supercuerdas
2008	Spain	Fisics	Institute	Institute			Modelo Estandar y sus Extensiones

2008	Spain	Fisics	Institute	Institute			La Estructura del Fotón
2009	Brazil	Biology	Institute	Institute	MINCYT-CAPES	Aprobado	Construcción de cronologías de anillos de crecimiento de árboles para estudios de cambios climáticos desde el Nordeste de Brazil al Noroeste de Argentina: investigación sobre paleoclima, dinámica de poblaciones y capacitación a nivel de Pos-Graduación
2009	Brazil	Biology	Institute	Institute	MINCYT-CAPES	Aprobado	Relación Parasitoide-Hospedador en los Pipunculidae (Díptera) Neotropicales asociados a sistemas agrícolas
2009	Brazil	Biology	Institute	University	MINCYT-CAPES	Aprobado	Hymenochaetales poroides (Basidiomycota) en ecosistemas áridos y semi-áridos de Argentina y Brazil: diversidad y ecología
2009	Brazil	Biology	Institute	University	MINCYT-CAPES	Aprobado	Ecotoxicología y alteraciones morfo-funcionales en gasterópodos marinos expuestos a contaminación por TBT en zonas costeras de Patagonia y Brazil

2009	Brazil	Biology	Institute	University	MINCYT-CAPES	Aprobado	Interacción entre factores bromodominio e Histonas acetiladas: estudio de su función en la transcripción y reparación del ADN en Trypanosoma cruzi.
2009	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Glicómica de Plasmodium falciparum: estudio estructural de las cadenas glicosídicas de las glicoproteínas presentes en los estadíos intraeritrocíticos
2009	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Crioconservación de embriones de especies de plantas nativas de Brazil y Argentina: Estudios físicos químicos fisiológicos y subcelulares
2009	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Modificación enzimática de proteínas de leche bovina y ovina: propiedades estructurales funcionales y biológicas
2009	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Utilización de sustratos artificiales para la provisión de biofilm a juveniles de la langosta de agua dulce Cherax quadricarinatus.
2009	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Evaluación de impacto ambiental de diferentes poluentes utilizando crustáceos autóctonos como indicadores

							biológicos.
2009	Brazil	Biology	University	University	MINCYT-CAPES	Aprobado	Obtención y caracterización de nuevos biocatalizadores para la síntesis de ciclodextrinas empleando Ciclodextrina Glucosiltransferasas provenientes de Bacillus firmus y Bacillus circulans.
2009	Brazil	Biology	University	Institute	MINCYT-CAPES	Aprobado	Evaluación del potencial tecnológico y probiótico de bifidobacterias aisladas de leche materna para el desarrollo de alimentos funcionales.
2009	Brazil	Chemistry	Institute	University	MINCYT-CAPES	Aprobado	Desarrollo de metodologías analíticas basadas en la combinación de técnicas espectroscópicas y herramientas quimiométricas
2009	Brazil	Chemistry	University	University	MINCYT-CAPES	Aprobado	Desarrollo de métodos bio- separativos de bajo impacto que emplean polímeros de cadena flexible: precipitación selectiva con polieelectrolitos y extracción líquido-líquido con sistemas bifásicos acuosos.

2009	Brazil	Chemistry	University	University	MINCYT-CAPES	Aprobado	Calidad del Biodiesel. Estudios y desarrollos de métodos analíticos de referencia y modelos de calibración de parámetros de calidad.
2009	Brazil	Chemistry	University	University	MINCYT-CAPES	Aprobado	Modelos biomimeticos de enzimas redox de manganeso y selenio. Estudios estructurales, cineticos y mecanisticos.
2009	Brazil	Engineering	University	Institute	MINCYT-CAPES	Aprobado	Estructuras Aeronáuticas y Espaciales en Materiales Compuestos y Metálicos
2009	Brazil	Engineering	University	University	MINCYT-CAPES	Aprobado	Generación distribuida basada en energías renovables - Conexión en sistemas de suministro de energía eléctrica a través de dispositivos electrónicos de potencia incorporando almacenamiento de energía.
2009	Brazil	Environmental sciences	University	University	MINCYT-CAPES	Aprobado	Biomineralizaciones de Si, Fe y Ca como indicadoras de cambios paleoambientales en regiones costeras. Áreas de estudio: Litoral sudeste Brazileño y Litoral Bonaerense de Argentina

2009	Brazil	Fisics	Institute	Institute	MINCYT-CAPES	Aprobado	Comprendiendo las conexiones e interacciones entre aguas superficiales y subterraneas: el rio paraná medio, el sistema lagunar patos - mirim y la costa patagonica. Evaluacion isotopica.
2009	Brazil	Fisics	University	Institute	MINCYT-CAPES	Aprobado	Revestimientos libres de cromo para protección contra la corrosión de electrocincados
2009	Brazil	Fisics	Institute	University	MINCYT-CAPES	Aprobado	Interacción de Iones con la Materia
2009	Brazil	Fisics	Institute	University	MINCYT-CAPES	Aprobado	Nanopartículas magnéticas sintetizadas por métodos químicos: caracterización y aplicaciones biomédicas (hipertermia)
2009	Brazil	Fisics	University	University	MINCYT-CAPES	Aprobado	Preparación y estudio de nanohilos magnéticos nanoestructurados.
2009	Brazil	Social Sciences	University	Institute	MINCYT-CAPES	Aprobado	Argentina y Brazil: posibilidades y obstáculos en el proceso de integración territorial

2009	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	La formación de coaliciones de gobierno y de políticas públicas en sistemas federales: Argentina y Brazil en perspectiva comparada.
2009	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	El sujeto que aprende en la época actual: Procesos de subjetivación en el aprendizaje escolar y en el uso de las nuevas tecnologías.
2009	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Procesos de administración institucional de conflictos en perspectiva comparada. Brazil-Argentina
2009	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Las Políticas Exteriores de Argentina y Brazil en el marco de la Cooperación Sur-Sur (período 2003-2008) Un estudio comparativo
2009	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Nueva regulación educativa en Argentina y en Brazil: perspectiva comparada
2009	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Calidad de vida y bienestar en niños niñas y jovenes que viven en el gran buenos aires y en la plata (argentina) y rio grande do sul (Brazil)
2009	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Ruptura y Continuidad: Investigaciones sobre la relación entre Naturaleza e Historia a partir de su formulación por el Gran Racionalismo del siglo

							XVII
2009	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Mediatización sociedad y sentido: aproximaciones comparativas de modelos Brazileños y argentinos.
2009	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	Comparacion entre el magmatismo tardio a post orogenetico neoproterozoico-eopaleozoico de las fajas Brazilianas (Brazilia y paraguai) y el magmatismo eopaleozoico del noroeste argentino: historia geologica del gondwana occidental
2009	Brazil	Social Sciences	University	University	MINCYT-CAPES	Aprobado	"Las dimensiones de la democracia en Argentina y en Brazil, en perspectiva comparada. Democracia, participación y neoliberalismo".
2009	Brazil	TICS	University	University	MINCYT-CAPES	Aprobado	Control autónomo y coordinado de robots móviles
2009	Cuba	Biology	Institute	Institute			Desarrollo, producción y evaluación de Biofertilizantes para sistemas productivos agrícolas sostenibles en Cuba y Argentina.

2009	Cuba	Biology	Institute	Institute			Desarrollo de mezclas simbioticas promotoras de salud animal.
2009	Cuba	Biology	Institute	Institute			Control del microbiodeterioro presente en archivos, bibliotecas y museos mediante el empleo de biocidas vegetales
2009	Cuba	Biology	University	Institute			Análisis morfológico y molecular de diferentes aislamientos de la roya marrón de la caña de azúcar, Puccinia melanocephala Sydow y P. Sydow (= Puccinia erianthi Padwick y Khan) presentes en Cuba y Argentina.
2009	Cuba	Biology	University	Institute			Preservación de materias primas de origen animal y vegetal mediante la aplicación de cultivos bioprotectores
2009	Cuba	Chemistry	Institute	Institute			Principales asociaciones mineralógicas de los elementos contaminantes presentes en residuales sólidos de la Industria Minero Metalúrgica.
2009	Cuba	Engineering	Institute	Institute			Obtención de nuevos materiales a partir de materias primas alternativas para la separación, purificación y almacenamiento de gases.

2009	Cuba	Engineering	Institute	Institute			Desarrollo y caracterización de recubrimientos de cerámicas bioactivas en sustratos base titanio.
2009	Cuba	Fisics	Institute	Institute			Optimización y/o desarrollo de procedimientos para el análisis de trazas en aguas, sedimentos y residuales líquidos.
2009	Cuba	Mathematics	University	University			Utilización de funciones wavelets en la solución numérica de ecuaciones diferenciales. Desarrollo de métodos basados en el análisis armónico y la teoría de wavelets, en el área del análisis numérico. Aplicaciones en problemas de mecánica de sólidos y de fluidos.
2009	Cuba	Medical Sciences	University	Institute			Investigación de tratamientos inmunoterapéuticos en combinación a base del gangliosido NgGM3 y el receptor del factor de crecimiento epidérmico en carcinomas murinos
2009	Cuba	Social Sciences	University	Institute			Observatorios Sociales Rurales para Argentina y Cuba Metodologías de relevamiento "Panel Detallista" sobre territorio rurales a partir de la construcción de variables e indicadores que vinculan necesidades y satisfactores para el desarrollo sustentable

2009	Cuba	TICS	Institute	Institute			Tics y Sociedades de la Información en América Latina y el Caribe: Políticas Públicas para la creación de capacidades y conocimientos en Argentina y Cuba
2009	Mexico	Biology	Institute	University			Competitividad y potencial antibacteriano de cultivos bioprotectores en alimentos de origen cárneo y vegetal listos para consumir.
2009	Mexico	Biology	Institute	University			Respuesta de las comunidades fitoplanctónicas del trópico y latitudes medias a la radiación ultravioleta y la temperatura: Aproximación a un escenario de cambio climático.
2009	Mexico	Biology	University	University			Señalización por oxido nítrico (NO) y 3'5'-guanosinmonofosfato cíclico (diGMPc) en el proceso de formación de biopelículas y metabolismo del hierro en la interacción Azospirillum-planta.
2009	Mexico	Biology	University	University			Respuestas de defensa vegetal en la simbiosis Bradyrhizobium japonicum-soja.

2009	Mexico	Biology	University	Institute			Avances y perspectivas de investigación científica en la nutrición de la langosta de agua dulce (Cherax quadricarinatus), en Argentina y México.
2009	Mexico	Chemistry	Institute	University			Desarrollo de materiales antireflectivos y optimización de sus propiedades para uso en celdas solares de película delgada.
2009	Mexico	Chemistry	Institute	University			Balance de Energía e Influencia de la Estructura Cristalina en los Procesos de Ablación Láser de Silicio Amorfo y Cristalino.
2009	Mexico	Chemistry	University	University			Síntesis, caracterización y valoración de nuevos monómeros a base de amino alcoholes y dioles para la formulación de resinas compuestas para uso dental.
2009	Mexico	Chemistry	University	University			Síntesis de tioacil- y selenoacilbenzotriazoles. Estudio del comportamiento térmico por Flash Vacuum Pyrolysis (FVP) y aplicación a la síntesis de benzotiazoles y benzoselenazoles.
2009	Mexico	Fisics	Institute	University			Evolución de galaxias y efectos del medio ambiente: teoría y observaciones.

2009	Mexico	Fisics	University	University			Estudio de la microestructura de aleaciones metálicas de uso industrial sometidas a atmósferas corrosivas.
2009	Mexico	Social Sciences	University	University			Trabajadores migrantes en regiones agrícolas de exportación en Argentina y México.
2009	Mexico	Social Sciences	University	University			Tierra Vertida. Hormigón Verde. Estudio de los materiales componentes, su dosificación, interacción y puesta en obra en dos contextos. Analisis comparativo de los resultados.
2010	China	Biology	Institute	Institute		Aprobado	NOTE Safety improvement and shelf life extension of fresh and cooked meat products applying non-thermal technologies and packaging systems
2010	China	Biology	Institute	Institute		Aprobado	Subproducts-ArChi Alternative technologies for bone and blood protein utilization in food and feed industries.

2010	China	Zoology	Institute	Institute		Aprobado	Quality-ArChiBe Argentine-Chinese beef track project for meat quality and safety
2010	France	Biology	Institute	Institute			Patogénesis molecular de leptospirosis. Rol de las proteínas BatA y BatB.
2010	France	Biology	Institute	Institute			Rol del aprendizaje en el reclutamiento de neuronas generadas en el hipocampo adulto.
2010	France	Biology	University	Institute			Participación de c-Fos en la proliferación y mantenimiento de células madre y progenitoras neurales murinas de embriones y adultos.
2010	France	Biology	University	University			Estudio del rol de la proteína vegetal Remorina en la interacción planta/virus
2010	France	Chemistry	University	University			Por un entendimiento mecanístico de procesos relevantes en síntesis orgánica como formación y/o fragmentación de enlaces C- C, C-S y C-Se así como remoción de grupos funcionales. Hay radicales involucrados en estas reacciones?

2010	France	Environmental sciences	Institute	Institute			Peligro potencial de contaminación por petróleo sobre un ecosistema marino virgen (Caleta Valdés, Península Valdés, Patagonia Argentina. – sitio clasificado «Patrimonio natural de la humanidad » por la UNESCO). Evolución e impacto de la polución por hidrocarburos
2010	France	Environmental sciences	University	University			Balance entre clima y tectónica en el desarrollo de redes de drenaje; casos de las sierras del Aconquija y de Mojotoro, noroeste de la Argentina.
2010	France	Fisics	University	Institute			Dinámica y relajación de espín en semiconductores y nano-estructuras semiconductoras: efectos de la interacción espín-órbita y la interacción electrón-electrón
2010	France	Fisics	Institute	University			Elaboración de aleaciones con memoria de forma mediante técnicas de solidificación rápida
2010	France	Fisics	Institute	University			Estudio experimental del efecto túnel en junturas a base de materiales magnéticos y superconductores. Nuevas estrategias para la fabricación de junturas micro y nano estructuradas.

2010	France	Fisics	University	University			Ionización múltiple de átomos por impacto de electrones
2010	France	Mathematics	University	University			Estudio de condiciones de regularidad geométrica en álgebra no conmutativa
2010	France	Medical Sciences	Institute	Institute			Estudio de la interacción entre proteínas y glicanos en fenómenos metastásicos en cáncer de próstata
2010	France	Medical Sciences	Institute	Institute			Interacciones entre glucocorticoides y células T reguladoras. Su potencialidad como estrategia de modulación inmunoendócrina en la infección por Trypanosoma cruzi
2010	France	Social Sciences	University	Institute			Vulnerabilidad micro y macroeconómica y el financiamiento de las economías de América del Sur
2010	France	Social Sciences	University	Institute			La aplicabilidad del principio de no regresión en materia medioambiental. Posibilidades y perspectivas.
2010	France	Social Sciences	University	University			Regulación de medios audiovisuales. Estudio comparativo entre la Unión Europea y el Mercosur: los casos de France y Argentina.

2010	Spain	Biology	Institute	Institute			La dinámica floemática de la genómica funcional del desarrollo vegetal controlada por pequeños RNAs, estudiada mediante infecciones virales.
2010	Spain	Biology	Institute	Institute			Expresión génica diferencial asociada a la infección del fruto de los cítricos por Xanthomonas axonopodis pv. citri: análisis transcriptómico en poblaciones celulares microdiseccionadas de la corteza y de la zona de abscisión del cáliz
2010	Spain	Biology	University	Institute			Caracterización de variedades y clones de vid mediante herramientas genómicas
2010	Spain	Biology	University	Institute			Genómica Funcional en Cítricos: Análisis de la respuesta frente a patógenos de gran incidencia en la citricultura de Argentina y Spain
2010	Spain	Biology	Institute	University			Genómica de la acumulación de cadmio en soja y girasol: una aproximación a la metalómica vegetal
2010	Spain	Biology	Institute	University			Estudios de Genómica Funcional en relación a la maduración de los frutos de Fragaria x ananassa.
2010	Spain	Biology	University	University			Genómica y proteómica vegetal aplicadas al desarrollo de nuevos fármacos

2010	Spain	TICS	University	Institute			Dinámica de homogeneización de genomas eucariotas
2010	Spain	TICS	Institute	University			Redes complejas y sus aplicaciones en bio-informática
2010	Spain	TICS	University	University			Desarrollo de Herramientas de Procesado de Señales para el Análisis de Datos Bioinformáticos
2010	Spain	TICS	University	University			Uso de la información mutual, derivada de la teoría de la información, para predecir interacción y coevolucion entre posiciones de una proteína y entre dos proteínas. Análisis de redes de interacción. Data mining. Integración de conocimientos.
2010	Brazil	Biology	Institute	University			Enzimas proteolíticas extracelulares de haloarqueas y bacterias halofílicas: Caracterización físico-química y aplicaciones biotecnológicas

10.4.5.A success case: ESLAI

The Latin American School of Informatics (Escuela Superior Latinoamericana de Informática, ESLAI, 1986-1990) was an undergraduate school of computer science in Argentina located at approximately 40 km. away from Buenos Aires. Lectures were held in a former country house at the Parque Pereyra Iraola.

The School had Manuel Sadosky among its main founders. In spite of its short life, it had a considerable impact on informatics teaching and research in Argentina and South America. ESLAI courses were attended by students from several Spanish speaking countries in South America (Argentina, Uruguay, Paraguay, Bolivia, Peru, Ecuador, Colombia and Venezuela). All students had a full scholarship and the admission process was passed by about 15% of applicants.

The School established cooperation programs with a number of foreign universities in the Americas as well as in Europe. That cooperation sponsored important visitors to the School, and also enabled its students to attend graduate school at foreign universities.

The School had a clearly orientation towards theoretical aspects of computer science, with a remarkable European influence.

This project followed the guidelines of the Institute Balseiro that is a centre with undergraduate and graduate students in physics and engineering as well as research.

The scholarships scheme allowed the beginning of a fruitful relationship with the production environment, performing works with major companies and institutions in Argentina, Brazil, Ecuador, Venezuela, Uruguay and Italy. (Among them: SIDERCA, Aluar, IBM Argentina, Venezuela Oil, Pontificia Universidad, Rio de Janeiro Catholic University of Pisa, etc.).

During its short existence (four years), a number of research groups had been created and this activity produced 28 publications and 54 conference presentations.

10.5. Annex 5. Issues regarding ICT research practices in Mexico.

10.5.1. Bilateral agreements between Mexico and single EU countries

Country	Institutions	Description
Germany	DFG Deutsche Forshungsgeminschaft and CONACYT	To promote the cientific cooperation in the follow modalities: Exchange of investors and young scientist for visitor research, Organize with high cientific level, bilateral seminars and simposia.
Germany	DLR (from BMBF) and CONACYT	To promote scientific and technological cooperation between the government of the United States of America and the Government of the Federal Republic of Germany in the following forms of Regional cooperation: -Sending teachers, researchers, technical trainers, exchange of scientific information, materials and equipment necessary for conducting courses, seminars, workshops and joint research projects.
Germany	DAAD and CONACYT	Program of cooperation for the solution of problems of both parts and provided for this purpose, a mutual assistance under the Interinstitutional Agreement of Scientific Cooperation between the National Council Science and Technology of Mexico and the National Fund for Scientific Research of Belgium
Bulgaria	ACB (Academy of Sciences of Bulgaria) and CONACYT	To promote contact between institutions in each countries that are focused to the work of basic and experimental research in the field of science, in the following ways:-exchange of scientists and specialists, joint execution of fundamental and applied research.
Belgium	FNRS and CONACYT	Program of cooperation for the solution of problems of interest to both parties and provided with this fine, for mutual assistance in the following ways: -exchange of scientists and specialists, joint execution of fundamental and applied research.
Spain	CSIC (Higher Council for Scientific Research of Spain) and CONACYT	Program to develop and strengthen collaboration in the field of scientific and technological research, in the following ways: Sending teachers, researchers, technical trainers, exchange of material and equipment, necessary for conducting courses, seminars, workshops and joint research projects.
Spain	GENCAT (Comissionat per a Universitats I Recerca the Department of the Presidency of the Ctalunya Generalist) and CONACYT	Program to promote and develop collaborative activities in areas of common interest and academic exchanges also joint research programs in the following ways:-exchange research and information programs and transfer of university-industry technology, documentation and publications, organization of conferences, seminars, courses and activities to promote innovation, realization of joint research.

France	**CNRS (National Center for Scientific Research in France) and CONACYT**	**To promote and develop collaborative activities in areas of common interest , academic exchanges and joint research programs, in the following ways:-exchange of scientists, researchers and teachers to conduct joint research programs, organizing seminars, workshops and training courses.**
France	**ECOS-Nord (program) and CONACYT in coordination with SEP and ANUIES,**	**To improve the academic staff of higher education through teacher training and development, in relation to education and training for scientific research and technology. On through the following ways:- training doctoral students full-time either in France or by alternating rooms under joint academic supervision system, through the exchange of professors and researchers from France and Mexico,**
France	**INP (Ministry of Foreign Affairs of France) and CONACYT**	**Program for the joint development of technologies through the Mexican engineering doctoral training by a mentoring system mixed at a Mexican institution of higher education, with participation of French institutions and industry.**
Great Britain	**CB (the British Council) and CONACYT**	**Academic Cooperation, Science and Technology for the establishment of a Programme of Cooperation in Science, Technology and Human Resources Training**
Hungary	**Ministry of Education of the Republic of Hungary and Government of Mexico**	**To promote and advance scientific progress in areas of common interest in the following ways: implementation of joint research projects, exchange of scientists, researchers, engineers and technical experts, organization of scientific and technological joint workshops, seminars, symposia and other meetings, exchange of results research, publications and scientific and technological information, make together technical studies applicable to industry and agriculture.**
Hungary	**ACH (Academy Science of Hungary,) and CONACYT**	**Program of technical cooperation, to promote and advance scientific progress in areas of common interest, in the following ways:-developing scientific programs (joint research projects) to exchange scientists and researchers, training of graduate students, exchange scientific information and documentation, participate together in conferences, seminars and symposia of scientific nature.**
Italy	**CNR (Consiglio Nazionale delle Ricerche,) and CONACYT**	**Program of scientific and technological cooperation to expand and strengthen cooperation in areas of common interest, in the following ways: - the exchange of scientists and experts, conducting joint research programs, as well as bilateral talks and seminars on specific topics of common interest, and exchange of scientific information.**
Italy	**Ministry of Foreign Affairs and the Republic of Italy and CONACYT**	**Executive Program for Cooperation in economic, social and cultural strengthening of both countries in areas of common interest, with the following ways: make together research and technological development project, education and training of scientific and technological exchange, inter subscription agreements, organizing conferences, symposia, seminars Workshops that take place in Mexico and Italy, and exchange of information, publications and reports of scientific and technological research.**

Poland	**ACP (Polish Academy of Sciences) and CONACYT**	**Program of scientific and technological cooperation to expand and strengthen cooperation in areas of common interest, in the following ways: - undertake joint research, exchange of information materials, publications and scientific journals as well as research, organization of seminars, symposia and scientific conferences.**
Czech Republic	**ACRCH (Academy of Sciences of the Czech Republic) and CONACYT**	**Program of scientific and technological cooperation to develop relations in the field of scientific research, in the following ways: - Interchange of scientists to stay long and short duration for joint research programs and participation in conferences of international character, and symposia.**
Russia	**ARC (Russian Academy of Sciences) and CONACYT**	**Program of scientific and technological cooperation to promote diffusion between institutions and researchers in the areas of basic research, in the following ways: - assistance to joint research projects, exchange of researchers trained and young scientists for research visits and joint participation in conferences, seminars and symposia of high scientific level.**

10.5.2.Iberoeka projects in Mexico

Funding program	Project Acronym	Project Title	Support
IBEROEKA	MANTRA	System for Aircraft Maintenance Training Using Augmented Reality	CDTI and CONACYT
IBEROEKA	GIA	Integral Warehouse Management: RFID Solution	CDTI
IBEROEKA	SECURE-ID	Creating a safe environment for services and e-Government applications that allow users access through the electronic ID card	CDTI and CONACYT
IBEROEKA	SIT	Intelligent Transportation System	CDTI
IBEROEKA		Development of technology platforms for sensor networks and wireless actuators	CDTI
IBEROEKA		Virtual Space for researching in Library and Information Studies	CDTI
IBEROEKA	STRATEGO	New strategy for the overall management of business services using IT systems with leading edge technologies	CDTI
IBEROEKA		Collaborative TV	CDTI
IBEROEKA		Territorial Collaborative System, for Planning, Prevention and Crime Control	CDTI
IBEROEKA		International Cooperation Project on Technology Platforms, Devices and Tele-Health Services for Preventive Care Programs and Gerontological Assistance	CDTI
IBEROEKA		Comprehensive subways monitorization	CDTI
IBEROEKA		Prototype of a mobile support system to monitoring and health care of patient	CDTI

10.5.3.Previous international projects considered in the analysis (point 7.4)

Year	Description	Mexican partner	European partner
1990-1994	**DRIVE-DETER: Prometheus** **system able to count the number of errors that a vehicle-driver is doing**	PhD Thesis	Institut national polytechnique de Toulouse, (France)
1995-1999	**SAVE** **diagnosis system able to warn the vehicle-driver before an accident**	PhD Thesis	Institut national polytechnique de Toulouse, (France)
2001-2003	**Awake** **diagnosis system and non intrusive new sensors able to predict fatigue, innatention of a car-driver**	PhDTesis ITESM CEM	Institut national polytechnique de Toulouse, (France)
2002-2004	E-HUBS (e-Engineering enabled by Holonomic and Universal Broker services) FP5 project	ITESM Mty	Technische Universiteit Delft, (Netherlands)
2004	Value chains in the electronics industry	Eurocentro ITESM	- IAT (Spain)
2005	Knowledge Transfer to form a consortium for technological innovation in food production.	Eurocentro ITESM	- IAT (Spain)
2005	Training of European and Latin American SMEs CMMI and Software Metrics	Eurocentro ITESM	- IAT (Spain)
2005	SMEs Knowledge transfer about consulting and training based on the CMMI quality model for software development in IT	ESI Center	
2006	Knowledge transfer in Science Parks based on the European model of regional innovation	Eurocentro ITESM	- IAT (Spain)
2006	Transfer of European methodology for the sustainable management of agro-supply chains in the Southeast of Mexico and Central America	Eurocentro ITESM	- ONUDI (France), FINPRO (Finland), CESEFOR (Spain), IMC (Italy)
2003-2006	@Lis-Technet	ITESM CEM	Universidad Politécnica de Cataluña, (Spain)
2003-2007	E-LANE (Europe Latinamerica New Education) @ LIS project, alliance for the Europe-Latin American Information Society	ITESM Mty	Universidad Carlos III de Madrid, (Spain)

2004-2007	**RexNet-Yippee - Remote Experimentation Network (Subprogram Alfa-II)**	**ITESM CEM**	**Universidad de Porto, (Portugal)**
2004-2007	**GRADUA-2 (Subprograma ALFA)**	**ITESM Mty**	**ITESM Mty**
2005-2007	**ALFA: LogInv (Reverse logistics and friendly environmental management) (Subprogram ALFA)**	**ITESM Mty**	**Universidad de Oviedo en Asturias, (Spain)**
2006-2007	**REGINA (Specific Support Action)** **FP6 Project**	**ITESM Mty**	**FH Jaenneum, (Austria)**
2005-2008	**EU-ALFA (Latin America - Academic Training)**	**ITESM Mty**	**FH Joanneum, (Austria)**
2004-2008	**SENSATION** **FP6 Project**	**ITESM CEM**	**Centre for Research and Technology Hellas, Hellenic Institute of Transport CERTH-HIT, (Greece)**
2004-2008	**ECOLEAD (European Collaborative networked Organisations LEADership initiative) FP6 Project**	**ITESM Mty**	**Technical Research Centre (Finland)**
2004-2008	**ASK-IT (Ambient intelligence system of agents for knowledge-** **based and integrated services for mobility impaired users) FP6 Project**	**ITESM CEM**	**CERTH-HIT, (Greece)**
2007-2008	**WINDS-LA (Widening IST Networking Development Support) FP6 Project**	**ITESM CEM**	**Menon Network, (Belgium)**
2008-2001	**OASIS** **FP6 Project**	**ITESM CEM**	**PHILIPS – FIMI, (Italy)**
2010-2012	**FORESTA** **FP7 Project**	**ITESM CEM**	**TESEO, (Belgium)**
2010-2012	**PROIDEALPLUS** **FP7 Project**	**ITESM CEM**	**INMARK, (Belgium)**
2010-2011	**FIRST** **FP7 Project**	**ITESM CEM**	**INMARK, (Belgium)**

10.6. Annex 6. Issues regarding ICT research practices in Costa Rica

10.6.1.Details of the FP projects in Costa Rica

Solar-ICT project

Project details	
Project Reference: 045160	**Contract Type:** Specific Support Action
Start Date: 2007-01-01	**End Date:** 2008-09-30
Duration: 21 months	**Project Status:** Completed
Project Cost: 5.59 million euro	**Project Funding:** 518021.00 euro

Participant Organization: CAMARA DE INDUSTRIAS DEL URUGUAY	**Country:** URUGUAY
Participant Organization: ASOCIACION CAMARA DE TECNOLOGIAS DE INFORMACION Y COMUNICACION	**Country:** COSTA RICA
Participant Organization: INSTITUTO DE ESTUDIOS AVANZADOS	**Country:** ECUADOR
Participant Organization: CENTRO DE PROMOCION DE LA PEQUENA Y MICRO EMPRESA	**Country:** PERU
Participant Organization: CENTRO DE FORMACION DE LIDERES SA	**Country:** GUATEMALA
Participant Organization: CONSEJO NACIONAL DE CIENCIA Y TECNOLOGIA	**Country:** PARAGUAY
Participant Organization: TECHNICAL SUPPORT FOR EUROPEAN ORGANISATIONS SPRL (Coordinator)	**Country:** BELGIUM

Description of Solar-ICT project

SOLAR-ICT is an initiative that aims to highlight the opportunities and potentialities for European and Latin American and Caribbean (LAC) research collaboration in ICT by identifying common development goals and creating deeper strategic cooperation. Usually, efforts for strategic cooperation with the Latin American and Caribbean (LAC) region are focused on the countries with larger economies like Brazil, Argentina, Chile or Mexico.

However, lesser-developed countries, with obvious smaller economies, still denote important and interesting openings for joint Euro-Latin American development policies in ICT. The focus on these six targeted countries will provide different views of economic environments in different stages of ICT development that will help uncover the diverse opportunities that can enhance research and development cooperation between EU and the LAC region.

SOLAR-ICT focuses on Costa Rica, Ecuador, Guatemala, Paraguay, Peru, and Uruguay, strengthening the fact that countries with smaller economies can also denote important and interesting openings for joint Euro-Latin American developments in ICT.

The aim of this project is to organize and contribute to a global strategy for future initiatives between

Europe and Latin American and Caribbean region. Specific Project Objectives:

- *to draw a thorough study in each of the 6 target countries*, comprising of mapping and benchmarking to identify the primary organizations, ICT research competencies and best practices in each targeted country, focusing on all potential common areas of ICT interest.
- *to identify future collaboration guidelines within the ICT programme*. The organization of 6 Workshops in Latin America will raise awareness on the European Union's 7th Research Framework Programme (FP7) and discussion tables will emphasise prospective benefits of collaboration in ICT research between EU and the LAC region in order to delineate common development needs and opportunities.
- *to develop an EU-LAC electronic platform dedicated to research cooperation in ICT*, which will present the project's outcomes and encourage information exchange on ongoing and future R&D programmes to be shared by the different stakeholders.

For the SOLAR-ICT project the country profile of Costa Rica is the following:

"Costa Rica, although a small country, is very powerful in ICT. Besides that Costa Rica possesses one of the highest standards of education in Latin America, the significant arrival of foreign direct investment in IT and knowledge intensive activities has completely converted its economy into a tech-led market. They are the most densely networked country of Latin America and Costa Rica has the highest software exports per capita in the region. Costa Rica represents a dynamic eco-system of domestic and foreign interests, where the R&D potential is continuing to grow. It presents a very capable environment with which to develop joint ventures and collaborative projects."

Sala+ project

Project details
Project Acronym: SALA+ **Project Reference:** 216861 **Start Date:** 2008-03-01 **Duration:** 24 months **Project Cost:** 805200.00 euro **Contract Type:** Coordination and support actions **End Date:** 2010-02-28 **Project Status:** Completed **Project Funding:** 719220.00 euro

Coordinator
Contact Person: SESEÑA NAVARRO Julian Tel: +34-630047191 Fax: +34-913574440 Email: Contact
Organisation: ASOCIACION DE EMPRESAS DE ELECTRONICA, TECNOLOGIAS DE LA INFORMACION Y TELECOMUNICACIONES DE ESPAÑA RESEARCH & DEVELOPMENT STRATEGY CL. PRINCIPE VERGARA 0 PO Box 28006 MADRID SPAIN

Participants	
FEDERACION DE ASOCIACIONES DE LATINOAMERICA EL CARIBE Y ESPANA DE ENTIDADES DE TECNOLOGIAS DE LA INFORMACION	COSTA RICA
ROKASUD S.A.	ARGENTINA
QUEEN MARY AND WESTFIELD COLLEGE, UNIVERSITY OF LONDON	UNITED KINGDOM
COMISION TECNICA REGIONAL DE TELECOMUNICACIONES	HONDURAS
SUPERINTENDENCIA DE TELECOMUNICACIONES	GUATEMALA
CETIM - CENTER FOR TECHNOLOGY AND INNOVATION MANAGEMENT GMBH	GERMANY
SIGMA ORIONIS	FRANCE
ASOCIACION DE REGULADORES REGULATEL AD	COSTA RICA
MINISTERIO DE INDUSTRIA, ENERGIA Y MINERIA	URUGUAY
CENTRO DE INVESTIGACION DE LAS TELECOMUNICACIONES	COLOMBIA
ASOCIACION REGIONAL DE TELEVISION DEL BIO BIO ASOCIACION GREMIAL	CHILE
UNIVERSIDAD TECNICA FEDERICO SANTA MARIA	CHILE
HYC AMERICAS SA	CHILE

Description of Sala + project.

SALA+ is a support action project, aiming at connecting Latin America and Europe through R&D cooperation in the networked electronic media (NEM) area, is a 24 month project launched in March 2008.

The project also aims at analyzing and building upon existing R&D programmes and key organizations involved in the NEM field in order to propose new thematic priorities for strategic cooperation in the NEM field and support the development of a Strategic Research Agenda for R&D cooperation between Europe and Latin America in the NEM field, taking into account the European Commission's FP7 Work Programme, and other initiatives such as the NEM Strategic Research Agenda, etc.

SALA+ organized a number of workshops and seminars in Latin America to create awareness and promote the Euro-LatAm cooperation in the NEM field and provide the NEM communities from both regions with opportunities to strengthen their relations and work together on potential cooperation projects, namely in the framework of FP7.

As described, the Project held several events in Costa Rica- These workshops had the objective of get in touch with the main stakeholders of the Costa Rican Network Electronic Media sector. In addition to this, the SALA+ project developed a Strategic Research Agenda for NEM in which the Costa Rican priorities were identified. The following is a summarized list of priorities for the country:

- Home and extended home networks
- Security privacy and trust
- Rights management
- Identity management and AAA

Pro-Ideal Plus project

Project details
Project Acronym: ***PRO-IDEAL PLUS*** **Project Reference:** 246644 **Start Date:** 2010-01-01 **Duration:** 24 months **Project Cost:** 649542.00 euro **Contract Type:** Coordination and support actions **End Date:** 2011-12-31 **Project Status:** Execution **Project Funding:** 584000.00 euro

Coordinator
Contact Person: URSA Yolanda Tel: +34-914480203 Fax: +34-915940578 Email: Contact
Organisation: INMARK ESTUDIOS Y ESTRATEGIAS S.A. AVENIDA LLANO CASTELLANO 43 28034 MADRID SPAIN

Participants	
ASOCIACION CAMARA DE TECNOLOGIAS DE INFORMACION Y COMUNICACIÓN	COSTA RICA
EUROPEAN MULTIMEDIA FORUM LTD	UNITED KINGDOM
INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY	MEXICO
EMPRESA PRODUCTORA DE SOFTWARE PARA LA TECNICA ELECTRONICA – SOFTEL	CUBA
UNIVERSIDAD NACIONAL DE COLOMBIA	COLOMBIA
UNIVERSIDADE DE SAO PAULO	BRAZIL
MINISTERIO DE CIENCIA, TECNOLOGÍA E INNOVACIÓN PRODUCTIVA	ARGENTINA
ORGANIZACION NO GUBERNAMENTAL, ASOCIACION DE DERECHOS E INFORMATICA DECHILE	CHILE

Description of Pro-Ideal Plus project

PRO-IDEAL PLUS is an international cooperation Project supported by the Seventh Framework Programme of the European Union with the main objective of enhancing the active participation of Latin American universities, research centres and companies in different R&D activities related to digital technologies.

The open cooperation with third countries of the Seventh Framework Programme represents an excellent opportunity also for Latin American countries that can participate in equal conditions with the European entities. Nevertheless, up to now the participation of LA entities in ICT projects has been quite weaker than expected.

The opportunities and strengths of Pro-Ideal Plus are:

a) PRO-IDEAL PLUS offers a wide variety of information regarding Digital Technologies projects and facilitates the dialogue between Latin American and European Stakeholders.

b) the Project developed a 2.0 platform in R&D regarding digital technologies. www.pro-ideal.eu. This platform Works as a useful source of information and different tools such as:

• Wiki service specialized in digital technologies that also offer key information on how to start cooperation actions with the European Union.

• Online Access on coaching contents

• Discussion Forums

• Partner Search service. In cooperation with Ideal-ist.

• Evaluation of Project ideas

• Event and Call news constantly updated.

PRO-IDEAL PLUS offers the opportunity of turning into a "Project angel". This figure is the name given to a person with expertise in ICT project for Europe and Latin America. These "angels" are trained by the PRO IDEAL PLUS project in order to help their organization with the different step needed to be followed in order to apply for a Seventh Framework Programme.

10.7. Annex 7. Issues related with ICT research cooperation practices in Uruguay.

10.7.1. Description of the FP7 ANGELS project

The aim of the ANGELS project is to design and build a prototype of a reconfigurable Anguilliform swimming robot able to split into smaller agents (and vice-versa), each equipped with a bio-inspired "electric sense" used both for recognition of objects and communication between agents. This mode of active perception, present in some fish, is based on the polarization of certain regions of their body, so generating an electric field flowing through an electroreceptive skin. The research area of this project is embodied intelligence.

The robot will exploit both "mechanical re-configurability", by changing body topology, and a new concept of "electric re-configurability" that will allow the robots to self-adapt their perception to their environment by changing the location of emitters and receptors on the robot boundaries. The electric field generated around the robots can be considered as an "electric-body" shaped through electric reconfigurations. ANGELS will explore the range of abilities conferred by different mechanical and electric morphologies, from the shaping of the common electric body shared by the agents navigating in formation, to design of behavioural cooperative rules inspired by fish for improving multi-agent perception through emergent collective behaviours.

Thus the intelligence encoded in the animals' morphology will be applied to the design of a new generation of Autonomous Underwater Vehicles able to adapt to their environment and suited to a wide spectrum of uses, in particular in situations where vision cannot be used. To achieve these goals, the ANGELS will form a multidisciplinary team combining the complementary expertise of biologists, roboticians, image-processing specialists and nuclear physicists specialized in the design of particle detectors.

The project duration is 36 months and has started in February of 2009 and will finish in January 2012. The total cost of the project is 4, 03 million euro. The participants from Uruguay are the Ministerio de Educación y Cultura (Ministry of Education and Culture and the Universidad de la República (University of the Republic), the main public university in Uruguay. The coordinator of the project is the Association pour le recherche et le developpement des methods et processus industriels (ARMINES), located in France. The other participants of the projects are the Ecole Nationale Superieure des Techniques industrielles et des mines de Nantes (France), Ecole Polytechnique Federale de Lausanne (Switzerland), Centre Nacional de la Recherche Scientifique (CNRS) (France), Scuola Superiore di Studi Universitari e di Perfezionamento Sant' Anna (Italy), Rheinische Friedrich-Wilhems Universitaet Bonn (Germany) and Universitaet Stuttgart (Germany).

10.7.2. IBEROEKA projects with Uruguayan participation

Project Acronym / IBK Code	Project full Title	Coordinator Entitity	Coordinator Country	Consortium	Global Investment (Millions USD)

ILIVECENTER IBK 08-580	Plataforma De Automatización Hogareña Integral Con Foco En El Ahorro Energético Y La Capacidad De Integración A Teléfonos Celulares	METADATA SOFTWARE SOLUTIONS S.A.	ARGENTINA	1- METADATA SOFTWARE SOLUTIONS (Argentina) S.A. 2- TADIMOY S.A. (Uruguay)	425 000 USD
TECNOJUEGOSMOVILES IBK 08-552	Desarrollo Y Adaptación A Nuevos Mercados De Un Portal De Juegos De Cartas Para Tecnología Web Y Móvil	ENTRETENIMIENTO HISPANO	URUGUAY	1- ENTRETENIMIENTO HISPANO 2- BRIDGE SOLUCIONES TECNOLÓGICAS SRL (Argentina)	159 000 USD
DESI-TVIP IBK 07-525	Desarrollo De Servicios Interactivos Para Tv. Sobre Ip	INDRA SISTEMAS S.A.	ESPAÑA	1- INDRA SISTEMAS S.A. (España) 2- FRESH INTERACTIVE TECNOLOGIES S.A. (España) 3- IDEASOFT URUGUAY SRL (Uruguay) 4- LAMBDASTREAM (España) 5- MOBILIVEE (LACOBEL SA) (Uruguay) 6- SIDSA, SEMICONDUCTORES INVESTIGACIÓN Y DISEÑO S.L. (España) 7- UNIVERSIDAD POLITÉCNICA DE MADRID (España)	2 222 333 USD
EM IBK 07-515	Plataforma Easymóvil: Telefonía Y Geo-localización Gps-indoor Para Mayores, Niños Y Discapacitados	OPERA WIRELESS S.L.	ESPAÑA	1- OPERA WIRELESS S.L. (España) 2- BLUSENS TECHNOLOGY (España) 3- EASYLABS (Uruguay) 4- FUNDACIÓN PARA INVESTIGACIÓN Y DESARROLLO (FIDES), UNIVERSIDAD FRANCISCO DE VITORIA (España)	1 709 168 USD

MAITE IBK 06-489	Desarrollo De Un Módulo De Adaptación Para La Actualización De Un Viejo Parque De Teléfonos Públicos A Una Terminal Inteligente De Comunicaciones De Acceso Público, Con Gestión Y Operación Remota	GEOCOM S.A.	ARGENTINA	1- GEOCOM S.A. (Argentina) 2- MICROSISTEMAS S.A. (Uruguay)	300 204 USD
KAL IBK 05-439	Desarrollo en el mercado centroamericano de un sistema de gestión integral para el sector de la ingeniería, arquitectura y construcción	KALYA SOLUCIONES INFORMÁTICAS (NILENSUR S.A.)	URUGUAY	CALDERÓN RUIZ INGENIEROS S.A. DE C.V. (SOLUCIONES) (EL SALVADOR) KALYA SOLUCIONES INFORMÁTICAS (NILENSUR S.A.) (URUGUAY)	31 600 USD
CENSEL IBK 05-427	Sistema para la elaboración y tratamiento del censo electoral	INDRA SISTEMAS S.A.	ESPAÑA	ICA INGENIEROS CONSULTORES ASOCIADOS (Uruguay) INDRA SISTEMAS PORTUGAL S.A. IST – INSTITUTO SUPERIOR TÉCNICO, UNIVERSIDADE TÉCNICA DE LISBOA	4 425 000 USD
OPENSIC IBK 04-347	Sistema de gestión clínica	SOLUZIONA INTERNACIONAL SERVICIOS PROFESIONALES	ESPAÑA	CONATEL (Uruguay), Soluziona S.A. (España)	2 691 140 USD
INTERFLOTAS IBK 03-322	Gestión Integral Del Transporte Vía Internet	CENOCLAP, S.A.	ESPAÑA	INGENIEROS CONSULTORES ASOCIADOS (ICA) (Uruguay)	1 000 000 USD
HOMOL IBK 03-303	Homologación de máquinas de votación electrónica	INDRA SISTEMAS S.A.	ESPAÑA	ICA INGENIEROS CONSULTORES ASOCIADOS (Uruguay)	3 350 000 USD

INFOESCAPARATE IBK 03-291	Infoescaparate. Canal De Comunicación Entre Fabricantes Y Distribuidores Con Los Profesionales Transformadores	TLR SOFT S.L.	ESPAÑA	IDEASOFT URUGUAY SRL (Uruguay)	1 324 777 USD
SIGAMTEMAD IBK 01-157	Software Para La Creación De Sistemas De Información Geomáticos Aplicados A La Movilidad, Para Telefonía Móvil De Alta Definición	TELEFÓNICA Y SISTEMAS	ESPAÑA	INGENIEROS CONSULTORES ASOCIADOS (ICA) (Uruguay)	1 000 000 USD
ITSACIV IBK 01-156	Proyecto Desarrollo De Una Infraestructura Telemática De Servicios Avanzados Para Ciudad Virtual	TELEFÓNICA Y SISTEMAS	ESPAÑA	ICA INGENIEROS CONSULTORES ASOCIADOS (Uruguay)	1 075 000 USD
CIBERPISCIS IBK 01-143	Desarrollo De Una Plataforma Intercontinental Para Investigación, Producción, Logística De Distribución Y Comercialización De Productos Pesqueros Normalizados	GRUPO DE EMPRESAS GUMER	ESPAÑA	COLUMBUS UNIVERSITY (Panamá), CONTRATISTAS INTERNACIONALES, S.A.(Panamá), GRUPO BOLSAGEST2000-ALMERIMATIK S.A. (España), INSTITUTO DE AUTOMÁTICA INDUSTRIAL (IAI) (CSIC) (España), MINISTERIO DE AGRICULTURA (Panamá), MOLUSCOS FAZENDA MARINHA (Brasil), QUÓRUM F.S. (Uruguay), SALMONES ALQUI, LTDA. (Chile), SOCIEDAD AGRÍCOLA NAC. DEL COGOTI, LTDA. (Chile), UNIVERSIDAD CATÓLICA DEL NORTE (Chile), UNIVERSIDAD	4 313 000 USD

				CATÓLICA STA. MARÍA ANTIGUA (Panamá), UNIVERSIDAD DE ALMERÍA (España), UNIVERSIDAD DE LA REPÚBLICA (Uruguay)	
SECAMDE IBK 00-086	Sistema Experto Cualitativo Para El Análisis Y Mejora Del Desarrollo De La Empresa	CONSULT. DIF. INFORM. MEDIO AMBIENTE,S.L	ESPAÑA	INGENIEROS CONSULTORES ASOCIADOS (ICA) (Uruguay)	480 000 USD
REGUAL IBK 99-056	Definición Proyecto Iberoeka De Regulador Eléctrico De Precisión Para Corriente Alterna De Alta Eficiencia	SALICRU, S.A.	ESPAÑA	REEL, S.R.L. (Uruguay)	1 971 580 USD
NEUROCOR IB-144	Planta Industrial Para La Fabricación De Marcapasos Cardíacos	NEUROCOR, S.L.	ESPAÑA	CENTRO DE CONSTRUCCIÓN DE CARDIOESTIMULADORES DEL URUGUAY S.A. (CCC) (Uruguay)	854 000 USD
PARVIS IB-082	Producción Y Análisis De Registros Visuales	TELEFÓNICA, INVESTIGACIÓN Y DESARROLLO	ESPAÑA	UNIVERSIDAD DE LA REPÚBLICA (Uruguay)	580 000 USD

ATLANTIS IB-062	Software De Gestión Mecanizada De Bibliotecas Y Centros De Documentación	S.I.C., SERVICIOS INFORMATICOS CENTRALES, S.A.L.	ESPAÑA	ARTECH, S.A., (Uruguay), COMPUTER CONECTION-SOFT, S.A. (Uruguay), DELARROBLA & ASOCIADOS (Uruguay)	509 117 USD
IMPACTO IB-038	Análisis De Riesgos E Impactos Ambientales	ERITEL, S.A.	ESPAÑA	ENCE, S.A. (España), INGENIEROS DE SISTEMAS ASOCIADOS (ISA, LTDA.) (Uruguay)	3 020 000 USD
MOVIDA IB-020	Modelado De Fuentes De Vídeo En Redes Digitales Asíncronas	TELEFÓNICA, INVESTIGACIÓN Y DESARROLLO	ESPAÑA	INTERFASE, S.A. (Uruguay), UNIVERSIDAD DE LA REPÚBLICA (Uruguay)	788 000 USD
BIBLOS IB-019	Biblioteca De Objetos De Vídeo Para Simulaciones	TELEFÓNICA, INVESTIGACIÓN Y DESARROLLO	ESPAÑA	UNIVERSIDAD DE LA REPÚBLICA (Uruguay)	292 000 USD
PRINT IB-021	Presentación Integrada De Vídeos En Terminales	TELEFÓNICA, INVESTIGACIÓN Y DESARROLLO	ESPAÑA	INTERFASE, S.A. (Uruguay), UNIVERSIDAD DE LA REPÚBLICA (Uruguay)	1 127 000 USD

10.7.3. Other ICT research projects with Uruguayan participation

CYTED Research Actions

Project Acronym	Project Full Title	Uruguay Participants	Period
MASERATTI	Mejora de la atención sanitaria en entornos rurales mediante aplicaciones de telemedicina sobre tecnologías inalámbricas	UNIVERSIDAD DE LA REPÚBLICA DE URUGUAY (UDELAR).	2010-2013

REDSENSA	Redes de sensores y microsistemas para el control del impacto de la producción agricola y la mineria en los acuiferos	UNIVERSIDAD DE LA REPUBLICA DE URUGUAY (IFFC-UDELAR)	2010-2013
SALUS	Qualidade em sites na área da saúde	UNIVERSIDAD DE LA REPÚBLICA, INSTITITO DE COMPUTACIÓN (INCO), EVIMED LIMITADA (EVIMED)	2008-2011
SOLITE	Software libre en teleformación	UNIVERSIDAD DE LA REPÚBLICA	2008-2011
REVVIS	Reunião de especialistas em verificação e validação de software	GRUPO DE MÉTODOS FORMALES, INSTITUTO DE COMPUTACIÓN, FACULTAD DE INGENIERÍA, UNIVERSIDAD DE LA REPÚBLICA	2007-2010
SUCODIC	Desarrollo de sistemas ultrasónicos y computacionales para diagnóstico cardiovascular	LAU/URU	2007-2009
COMPETISOFT	Mejora de procesos para fomentar la competitividad de la pequeña y mediana industria del software de iberoamérica	INCO, FI, UDELAR	2006-2008
SENSAME	Desarrollo de miscrosistemas y sensores para monitorización medioambiental	INSTITUTO DE FÍSICA (FC-UDELAR)	2006-2009
CYTEDGRID	Tecnologia grid como motor del desarrollo regional	UDELAR	2006-2008
	Red iberoamericana para la conservación e informatización de colecciones biológicas - sistemas de información	Alvaro Jaime Mones Sibillotte	2005-2008
RIBIO	Red iberoamericana de bioinformática (ribio)	UDELAR	2003-2007
	Concepción y desarrollo del material y de las herramientas para la puesta en marcha de un programa de cursos de formación en microtecnologías basado en internet dedicado a profesionales del sector electrónico	UDELAR	2002-2006
	Determinación de patrones ultrasónicos eficaces para terapia segura mediante control de radiación pulsada distribuida	UDELAR	2002-2006

PUCARA	Red iberoamericana de certificación y calificación de componentes y sistemas microelectrónicos	INSTITUTO DE INGENIERÍA ELECTRICA (IIE), TÉCNICAS DE EXPLOTACIÓN	2001-2005
TESEO	Red iberoamericana de tecnologías para el desarrollo de sensores y microsistemas	INSTITUTO DE FÍSICA - FACULTAD DE CIENICAS, DEPARTAMENTO FÍSICA DE LOS MATERIALES	2001-2005
RITOS 2	Red iberoamericana de tecnologías de software para la década del 2000	UDELAR	2001-2006
IBERCHIP	Red iberoamericana de servicios de fabricación de microsistemas, para soporte a la industria y formación continuada de expertos en microtecnologías	CENTRO DE CONSTRUCCIÓN DE CARDIOESTIMULADORES DEL URUGUAY	2001-2005
COMDIST	Componentes distribuidos para la implementación de servicios de telepresencia	UDELAR	2000-2002
MAGIAS	Métodos avanzados de generación de imágenes acústicas	UDELAR	2000-2004
	Red iberoamericana de tecnologías ultrasónicas	UDELAR	1998-2001
	Ingeniería de ambientes de software	UDELAR	1997-1999
	Ambiente para la manipulación y recuperación de información en www	UDELAR	1997-1999
	Red iberoamericana de diseño digital de alto nivel	UNIVERSIDAD ORT	1996-2001
	Red iberoamericana de coordinación de telemática	UMROU	1996-2001
	Microsensores de estado sólido para medio ambiente	UDELAR	1996-1998
	Red iberoamericana sobre mostradores de cristal líquido	Facultad de Ingeniería - UDELAR	1995-1999
	Red iberoamericana sobre aplicaciones de la microelectrónica a la medicina	ELECTRÓNICA MÉDICA SRL., CENTRO DE CONSTRUCCIONES DE CARDIOESTIMULADORES DEL URUGUAY, S.A. (CCC), UNIVERSIDAD DE MONTEVIDEO	1995-2002
	Red iberoamericana de sistemas de informática industrial	UDELAR	1994-2002

	Red iberoamericana sobre calidad en microelectrónica y sus aplicaciones	UDELAR	1992-1998
	Red iberoamericana de tecnología del software	UDELAR	1992-1997
	Nuevas tecnologías de la información para la autonomía personal de los discapacitados	MINISTERIO DE EDUCACIÓN Y CULTURA	1992-1995
	Red iberoamericana de informática educativa	CENTRO NACIONAL DE INFORMÁTICA EDUCATIVA	1990-2002

STIC-Amsud research projects

Project Approval Date	**Acronym**	**Name of the Project**	**Uruguay Participants**
may-09	NanoRadio	Design for reliability and portability of RF Interfaces based on Nanoscale CMOS technology	Fernando Silveira (Universidad de la República, Uruguay)
may-09	ALAP	Ambient assisted Living for Ageing People	Regina Motz (Universidad de la República, Uruguay)
may-08		Performance evaluation and design of optical and wireless networks	Hector Cancela (Universidad de la República - Uruguay)
may-08	FMCrypto	Formal Methods for Cryptographically Secure Distributed Computations	Alfredo Viola (Universidad de la República - Uruguay)
may-08	SCAN	Self-Conscious Ambient Networks	Eduardo Grampin (Universidad de la República- Uruguay)
may-08		Types for Robust Program Development	Nora Szasz (Universidad ORT - Uruguay)
mar-07		Evolution and quality management in dynamic data integration systems	Raul Ruggia (Instituto de Computación, Universidad de la República, Uruguay) - International Coordinator
mar-07	The MICROBIO Project	Merging, InduCing and Reasoning with Ontologies in BIOinformatics	Hugo Naya (Institut Pasteur de Montevideo, Uruguay)
mar-07	PLOMO	Mutual software platform for the elaboration of soft tissues physical models	Gregory Randall (Departamento de Control y Electrónica Industrial del Instituto de Ingeniería Eléctrica, Universidad de la República, Uruguay)

Before mar-07	RESECO	Reliability and Security of Distributed Software components	Uruguay (Gustavo Betarte, University of the Republic)
Before mar-07		Energetc Optimization	Uruguay (Alfredo Piria, University of the Republic)

11. REFERENCES

BRAZIL

http://www.cyted.org/?lang=pt

http://www.forestaproject.eu/index/index.php?lang=en

http://www.eularinet.eu/

http://www.choreos.eu/

http://www.choreos.eu/bin/About/Consortium

http://www.choreos.eu/bin/download/Download/Collateral/CHOReOSFactsheet2010.pdf

http://www.cidade.usp.br/blog/secao/proideal/

http://www.pro-ideal.eu

http://www.synaptic-project.eu/

http://www.cyted.org/?lang=pt http://www.agencia.fapesp.br/materia/10923/especiais/pesquisa-brasileira-na-europa.htm

http://www.comunidadefb.com.br/web/pdf/livroazul2008.pdf

http://ec.europa.eu/delegations/brazil/eu_brazil/index_en.htm

http://www.ufms.br/relacoes_internacionais/wp-content/uploads/2009/08/edital-cnpq-n-015-2009-convenios-bilatrais-de-cooperacao-internacional.pdf

http://www.ufms.br/relacoes_internacionais/wp-content/uploads/2009/08/edital-cnpq-n-015-2009-convenios-bilatrais-de-cooperacao-internacional.pdf

http://www.eularinet.eu/site/documents/language:eng

http://www.ncp-incontact.eu/nkswiki/index.php?title=EULARINET,_Bi-regional_Policy_Dialogue_Meeting

http://www.comunidadefb.com.br/web/index_euro.php

http://www.ubique.org/pro-ideal/

http://ec.europa.eu/trade/creating-opportunities/bilateral-relations/countries/brazil/

http://en.wikipedia.org/wiki/Brazil_%E2%80%93_European_Union_relations

http://ec.europa.eu/europeaid/documents/case-studies/brazil_xingu-river_en.pdf

http://ec.europa.eu/delegations/brazil/press_corner/all_news/news/2010/20101208_01_en.htm

http://ec.europa.eu/europeaid/where/latin-america/regional-cooperation/ralcea/index_en.htm

http://ec.europa.eu/delegations/brazil/press_corner/all_news/news/2011/20110113_02_en.htm

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:21995A1101(01):EN:NOT

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:21995A1101(01):EN:NOT

http://ec.europa.eu/delegations/brazil/eu_brazil/science_tech/index_en.htm

http://www.ncp-incontact.eu/nkswiki/index.php?title=EULARINET,_Bi-regional_Policy_Dialogue_Meeting

http://www.ufms.br/relacoes_internacionais/wp-content/uploads/2009/08/edital-cnpq-n-015-2009-convenios-bilatrais-de-cooperacao-internacional.pdf

http://cordis.europa.eu/fp7/cooperation/nanotechnology_en.html

http://cordis.europa.eu/fp7/health/home_en.html

http://ec.europa.eu/delegations/brazil/eu_brazil/trade_relation/index_en.htm

http://eeas.europa.eu/brazil/docs/2008_joint_action_plan_en.pdf

http://ec.europa.eu/delegations/brazil/eu_brazil/political_relations/index_en.htm

http://eeas.europa.eu/brazil/summit/index_en.htm

http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/725&format=HTML&aged=0&language=EN&guiLanguage=en

http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/725&format=HTML&aged=0&language=EN&guiLanguage=en

http://europa.eu/geninfo/query/resultaction.jsp?userinput=%22Agreement%20for%20Scientific%20and%20Technological%20Cooperation%22

http://www.consilium.europa.eu/App/Search/searchMeta.aspx?id=1&lang=en&searchterm=brazil

http://ec.europa.eu/world/agreements/prepareCreateTreatiesWorkspace/treatiesGeneralData.do?step=0&redirect=true&treatyId=405

http://eur-lex.europa.eu/

http://www2.mre.gov.br/dai/bilaterais.htm

http://www.cnen.gov.br/acnen/relatorios/PDTI_publicacao_resumo_20091223.pdf

COLOMBIA

- 7th Framework Programme for Research & Development:
  http://cordis.europa.eu/fp7/home_en.html
- @lis

  http://www.alis-online.org/

  http://ec.europa.eu/europeaid/where/latin-america/regional-cooperation/alis/index_en.htm
- CITEL

  http://portal.oas.org/Topic/CITEL/tabid/378/Default.aspx?language=en-US
- COLCIENCIAS

  www.colciencias.gov.co
- Documento CONPES 3582: POLÍTICA NACIONAL DE CIENCIA, TECNOLOGÍA E INNOVACIÓN. Consejo Nacional de Política Económica y Social, República de Colombia, Departamento Nacional de Planeación. 2009.

  http://www.dnp.gov.co/PortalWeb/Portals/0/archivos/documentos/Subdireccion/Conpes/3582.pdf
- Erasmus mundus

http://eacea.ec.europa.eu/erasmus_mundus/programme/about_erasmus_mundus_en.php

- IBEROEKA

  http://www.cyted.org/cyted_innovacion/org_gestores.php?lang=es

- ITU-T

  http://www.itu.int/ITU-T/info/structure.html

- MINISTERIO DE RELACIONES EXTERIORES DE COLOMBIA

  http://www.cooperacioninternacional.gov.co/paises-y-organismos/category/por-tipo-de-cooperaci%C3%B3n/asistencia-oficial-al-desarrollo/uni%C3%B3n-europea

- MINISTERIO DE TECNOLOGÍAS DE LA INFORMACIÓN Y LAS COMUNICACIONES

  http://www.mintic.gov.co

CHILE

Nº	Document Name	Source	URL
1	La Participación de Chile en los Programas Marco Europeos	Cristina Lazo, Programa Unión Europea, CONICYT, 2007.	http://www.conicyt.cl/573/articles-7715_recurso_1.ppt
2	Principales Resultados de la Cooperación Chile- Unión Europea 1990-2007	Departamento de Relaciones Internacionales, Programa Unión Europea, CONICYT, 2007.	http://www.conicyt.cl/573/articles-7654_informe_proyectosfp6.pdf
3	Estadísticas Ministerio de Educación	División de Educación Superior, Ministerio de Educación	http://www.divesup.cl/
4	Presentation of CONICYT	CONICYT	http://www.conicyt.cl/573/propertyvalue-81704.html
5	ACUERDO de cooperación científica y tecnológica entre la Comunidad Europea y la República de Chile	European Commission	*ec.europa.eu/research/iscp/pdf/eu_chile_agreement2003_es.pdf*
6	Chile Country Strategy Paper 2007-2013	European Commission	www.eeas.europa.eu/chile/csp/07_13_en.pdf
7	Chile vive una "crisis de inmadurez" por falta de desarrollo tecnológico	Diario Financiero, Septiembre 2010	http://df.cl/portal2/content/df/ediciones/20100906/cont_150378.html
8	Chile vive una "crisis de inmadurez" por falta de desarrollo tecnológico	Alfonso Cruz, académico de la Facultad de Economía y Negocios de la Universidad Alberto Hurtado	http://df.cl/portal2/content/df/ediciones/20100906/cont_150378.html
9	Chile vive una "crisis de inmadurez" por falta de desarrollo tecnológico	Alfredo del Valle , Director de Innovación de la Universidad Católica de Chile	http://df.cl/portal2/content/df/ediciones/20100906/cont_150378.html
10	La universidad y la empresa tienen falta de sintonía	Raúl Serrano, subdirector de Gestión Tecnológica de Innovo Usach.	http://arriesgo.wordpress.com/2010/08/13/%E2%80%9Cla-universidad-y-la-empresa-tienen-falta-de-sintonia%E2%80%9D/

ARGENTINA

MEXICO

ACCES2MEXCYT. http://www.access2mexcyt.eu/

Agence Nationale de la Recherche (ANR). http://www.agence-nationale-recherche.fr/

Agence française de l'innovation . OSEO. http://www.oseo.fr/

AMIPCI. http://amipci.org.mx/

AVANCE. http://bit.ly/fawKx3

CANACO. http://www.ccmexico.com.mx/

CANIETI. http://www.canieti.org/

Centro México Emprende. http://www.mexicoemprende.org.mx/df/canaco/

Centro para el Desarrollo Tecnológico e Industrial CDTI. http://www.cdti.es/

Clúster de nanotecnología http://www.clusternano.org

Clústers de Tecnologías de Información en México. http://bit.ly/hON2uf

Cordis. http://bit.ly/gMOBhe

CUDI. http://www.cudi.edu.mx/

EELA-2. http://bit.ly/et5SgY

Estancias Sabáticas al Interior de las Empresas. http://bit.ly/ihyVBT

Estímulos Fiscales. http://bit.ly/ebsAFS

Estudio de competitividad de clústers de tecnologías de información. http://bit.ly/h2kHig

EULANEST. http://bit.ly/hAKZvt

First. http://www.latin-american-technology-platforms.eu/

FONCICYT. http://bit.ly/hmMWnQ

Fondo Nuevo para Ciencia y Tecnología. http://bit.ly/hc1hvA

Fondo Nuevo para Ciencia y Tecnología. http://bit.ly/hc1hvA

FondoPYME. http://www.fondopyme.gob.mx/2010/index_b.asp

Fordecyt. http://bit.ly/fNDqft

FORESTA . http://www.forestaproject.eu

IDEA. http://bit.ly/guVMaN

Kids in Science. CINVESTAV. http://bit.ly/eOysMN

La innovación: piedra de toque del desarrollo mexicano. http://bit.ly/e712hS

Mathematical and Computational Models, http://www.rmmc.com.mx

Mexico Country Strategy Paper 2007-2013 http://eeas.europa.eu/mexico/csp/07_13_en.pdf

México FIRST. http://www.mexico-first.org/

MexicoIT. http://www.mexico-it.net/

Nueva Ley de Ciencia y Tecnología. http://www.diputados.gob.mx/LeyesBiblio/pdf/242.pdf

OASIS. http://bit.ly/f3vY4G

PECITI. Programa especial de ciencia, tecnología e innovación 2008-2012 http://bit.ly/gzZbFp

Perspectivas OCDE: México Políticas Clave para un Desarrollo Sostenible. http://bit.ly/d6Ib8M

Plan Nacional de Desarrollo. http://pnd.presidencia.gob.mx/

Programa ENLACE, Colegio de la Frontera Sur. http://bit.ly/fxWRkm

Programas de Estímulo para la Innovación. http://bit.ly/dpOuXy

ProIdeal Plus. http://www.pro-ideal.eu/

Prosoft 2.0. http://bit.ly/eeBWx2

Proyecto EULARINET. http://bit.ly/idZMTc

Red TICs, http://www.redtic-conacyt.mx

Redes de Innovación. http://bit.ly/cIQP6T

Subsecretaría para PYMES. http://bit.ly/dbNoLv

TechBA. http://techba.org/

UEMEXCYT2 Newsletter. www.conacyt.gob.mx/uemexcyt2

Winds Report ICT research in Mexico. http://bit.ly/fj0Ako

COSTA RICA

www.salamas.eu

http://www.pro-ideal.eu/

http://cordis.europa.eu/home_es.html

http://www.cyted.org/

URUGUAY

http://latu21.latu.org.uy/ingenio/docs/pro-ideal-docs/Fernando_Brum.pdf - Research Lines – Fernando Brum – August 2010

http://www.cyted.org/

www.sticamsud.org/