

Future and Emerging Technologies

DG Information
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Information Society

Perspectives for QIPC in FP7

Antonella Karlson

QIPC Cluster Review

Innsbruck, 15 Feb., 2004



Information Society

Acknowledgements

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- ‘Thanks’ to the project representatives and the reviewers for their work



Conference Program

- **10h00 – 10h45: Special session organized by the EC on “Perspectives for QIPC in FP7” and review of the actions undertaken as preparation for FP7 – A. Karlson**
- **10h45 – 11h30: Presentation of the ERA-Net Pilot project QIST – Dr. Christian Monyk and Dr. Tommaso Calarco**
- **11h30 – 12h15: Discussion of the strategic report (roadmap document) – Prof. Peter Zoller**
- **12h15 – 13h30 Lunch**



Conference Program

- **13h30 – 14h30: Short presentation of the three FP6 IPs (negotiations to start shortly)**
- **14h30 – 16h30: Short presentations of a concrete result that could be considered as a ‘success story’ of each FP5 project participating in the review.**
- **16h45 – 17h30: Evaluation of the cluster review. All reviewers must attend. Output required: cluster review report.**
- **17h30 – 18h30 Invited talk by Prof. Rainer Blatt**



Objectives of this presentation

- Give a brief overview of the QIPC activities at EU level
- Give more details on the actions that have been undertaken in regard to FP7, their current status and follow-up
- Have a discussion and receive feedback



Contents

- **Current status of the QIPC cluster: projects**
- **FP7**
- **QIPC strategic report – roadmap document**
- **Scientific American style publication**
- **Overall review of the cluster review**



FP5 Projects

- **FP5 - QIPC proactive initiative, two calls for proposals: 25 projects with total cost of 41 M€ and EU funding of 31 M€**
- **FP5 - FET Open: 10 projects with total cost of 7 M€ and EU funding of 5.6 M€**
- **Cluster review 2005: 13 running projects, most of them till end 2005**



Projects FP6

All the proposals submitted were found to be of excellent scientific quality, which shows that QIPC research in Europe is good!

**That is why 5 M€ additional budget were given: 25 M€ instead of 20 M€
Considering the budget constraints, this is a major achievement**



Projects FP6

- **Three new IPs:**
 - **SCALA**
 - **QAP**
 - **EuroSQIP**
- **Total funding of 25 M€**
- **Negotiations start in February and end 30/05/2005**
- **Projects to start 01/09/2005**
- **Duration - 4 years till 31/08/2009**
- **FP7 starts 01/01/2007**
- **Most likely in FP7 QIPC projects start in mid 2008**
- **Overlap of at least 1 year: the 4th year of the IPs is to insure smooth transition between FP6 and FP7**



Projects FP6

- **One new CA (coordinating action):**
- **ERA-Pilot QIST: Structuring the European Research Area with Quantum Information Science and Technology**
- **Objectives:**
 - **Collect and process data, information, etc.**
 - **Give recommendations on policy, structuring, coordination**
 - » **for the EC, national ministries and funding bodies**



Projects FP6

Some of the deliverables:

- Complete and regularly update the QIPC roadmap document
- Elaborate a map of European research teams and expertise
- Collect information on national initiatives and programs
- Collect information on international initiatives and programs, also research groups and expertise
- Propose collaboration and synergies between national and EC initiatives
- Propose benchmarking
- Organize workshops, conferences
- Coordinate dissemination on various levels



Projects FP6

Are there any other projects?

- **FET Open has a continuous submission scheme since the start of FP6 till 22/09/2005**
- **Gustav Kalbe – coordinator of FET Open**
- **Up to now there are only 4 projects in the area of QIPC, underrepresented**
- **Long term, risky and visionary research in the area of QIPC could find its place within FET Open projects**
- **Strong competition with all other areas of FET**
- **Projects are STREP or CA – type contract**



Projects FP6

Are there any other projects?

- Project SECOQC on quantum cryptography in IST - Security
- Marie Curie grants: need to integrate within the FET QIPC cluster
 - Individual grants ???
 - Thematic networks ???
- European Science Foundation ???

There is a need to coordinate all these efforts



Projects FP6

What is missing?

- A Coordinating Action on scientific level, (something like QUIPROCONE)
- Currently we strongly feel the gap
- What would it do? – Together with the EC coordinate:
 - All projects within FET
 - All projects within the EC
 - Other projects at pan-European or multinational level
 - National projects and initiatives
- It will strengthen the image and identity of QIPC research in Europe!



FP7

- **FP7 is in the process to be designed**
- **The official proposal by the EC to the Parliament is to double the budget with respect to FP6**
- **Attempt to assure continued funding for research in QIPC**



FP7

General official documents on FP7 are on the EC site:

The future EU research policy

http://europa.eu.int/comm/research/future/index_en.html

Research themes in FP7

http://europa.eu.int/comm/research/future/themes/index_en.html

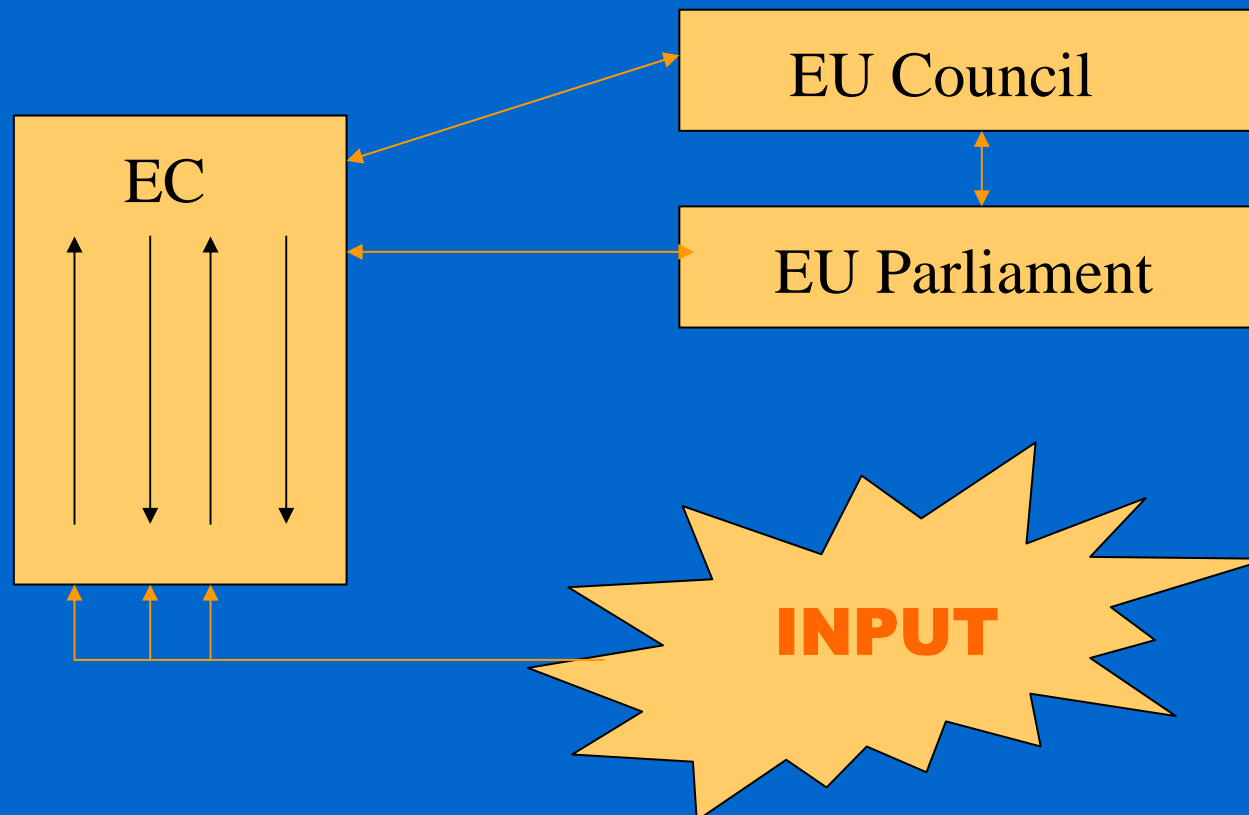
The EC site on Cordis

<http://www.cordis.lu/era/fp7.htm>



Rational and context

- Framework Program 7
- Process



Timetable

- **Commission communications**
 - 14.01.2004: Europe and basic research
 - 10.02.2004: first orientation
 - 16.06.2004: Guidelines (12 pages)
- **Input from units: Dec. 2004**
-iterations.....
- **Official proposal from EC: March 2005**
- **Official Communication by the EC on April 6, 2005**
-iterations.....
- **Proposal on the Specific program: Sept. 2005**
-iterations.....
- **Adoption: June 2006**
- **Work Program: Sept. 2006**
- **Call for proposals: Dec. 2006**
- **Start: Jan. 2007**



INPUT

= feedback from external (to the EC) people or organizations

- **Lessons learned: assessment of FP5 and FP6**
- **ISTAG: IST Advisory Group**
- **IST Committee (member states)**
- **Input from the research community and specifically participants in FP5 and FP6 projects**
- **Workshops with external experts**



Objectives of the input

- **Present the achievements of QIPC research in an appropriate way to decision makers**
- **Build and express a European identity of QIPC research**



Three actions decided in Rome:

1. Strategic report
2. Expand with technical assessment and outlook

Prof. Peter Zoller - Thank you very much for all your time and efforts to produce this document!

It is a major success!



Strategic report - roadmap:

- ERA-Pilot QIST is starting work
- We hope that Prof. Peter Zoller will continue to coordinate the team and supervise the scientific quality of the document
- Hope that the leading scientists in Europe will contribute or endorse the document
 - Document on FET web site
 - AK: email to an extended list of people

Please give feedback and comments!

**Official publication of the EC: input in May
and ready by beginning of Sept.**



Action 3. Publication

“QIPC in Europe”:

- Short articles Scientific American style
- Commitment for 28 articles by 54 leading European scientists
- At the moment have 17 articles
- Please send the remaining 11 ASAP!
- Hope to be ready for QUPON conference
- Will be on the FET web site asap
- **Many thanks to all the contributors!**



Action 3. Publication – why?

The difference between other review articles and this publication, as I see it:

- a balanced coverage of all areas of QIPC research
- a balanced geographical coverage: most research groups in Europe are represented
- if all contributions are received, the publication will convey a rather complete image and the fact that the European QIPC community is unified. This is important for the outside world to take you seriously.
- the publication appears as 'an official publication of the European Commission', therefore there is some kind of EC endorsement (which can only help QIPC research, especially on national level)
- It will be sent to all Directors and Heads of Units to DG Research and DG INFSO. That will certainly draw their attention to QIPC at a crucial stage of preparation for FP7



Action 3. Publication – why?

- The publication can be sent to relevant members of the European Parliament and to national ministries or funding bodies - Please provide us the contact information and we will take care of the distribution.
- In the template it is requested to provide info about relevant EC and national projects. This will give evidence that the money already spent on QIPC research has lead to significant results.
- together with the 'strategic report - roadmap document' it makes an appropriate 'package' to plead for QIPC funding in FP7
- other review articles are scattered and it is rare that they become known outside of the research community



Distribution list - Publication

“QIPC in Europe”:

- The FET web site
- All contributors and the consortium members of EC funded projects in the area of QIPC - to be used for dissemination and publicity.
- All Directors and Heads of Unit in DG Information Society and DG Research of the European Commission.
- At events co-organized by the EC.
- The QUPON conference 20-26 May, 2005.



Distribution list - Publication

Please help!

- Relevant members of the European Parliament.
- Relevant ministries in member states, regional governments, etc.
- Please give us any other suggestions.



QIPC FET web site

- All this info will appear asap on a refurbished site
- Regular updates



Report of the QIPC cluster and of the cluster review

Rapporteur: Dr. Tommaso Calarco

Outline

- **An overview and assessment of the cluster review – the event**
- **An overview of the objectives of the QIPC initiative as a whole**
- **Main conclusions on the progress and achievements of each project**
- **How the achievements of each project fit into the overall objectives of the initiative**



Report of the QIPC cluster and of the cluster review - 2

- **How far did the QIPC initiative succeed in mobilizing research communities in Europe to address the challenges**
- **What are the main results of the QIPC initiative and to what extent did it achieve its initial mission and objectives**
- **How the results of the QIPC initiative compare to the international state-of-the-art**
- **Potential impact of the results**



Report of the QIPC cluster and of the cluster review - 3

Request to the reviewers team of each project to write a text of 30 lines:

- **main conclusions on the progress and achievements of the project with respect to last year's review**
- **main conclusions on the progress and achievements of the project from the beginning of the project**
- **Do the main objectives of the project at this point in time differ from the objectives in its initial Description of Work and how**
- **How the current objectives of the project fit in the objectives of the FET QIPC initiative**



Report of the QIPC cluster and of the cluster review - 4

Request each project coordinator to write:

- a text of 20 lines describing the particular 'success story' presented in your slides.
- a text of 20 lines describing the current main objectives of your project and how they fit in the objectives of the QIPC initiative.





All your ideas are very welcome!

Question time!

Thank you for your attention!

