

PROJECT PERIODIC REPORT (Project Activity and Management report)



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Date of latest version of Annex I against which the assessment will be made:

Periodic report: 1st ☐ 2nd ☐ 3rd ☐ 4th ☒

Period covered: from 1st November 2010 to 30th October 2011

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Declaration by the scientific representative of the project coordinator¹

I, as scientific representative of the coordinator¹ of this project and in line with the obligations as stated in Article II.2.3 of the Grant Agreement declare that:

- The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;
- The project (tick as appropriate):
 - ☒ has fully achieved its objectives and technical goals for the period;
 - ☐ has achieved most of its objectives and technical goals for the period with relatively minor deviations²;
 - ☐ has failed to achieve critical objectives and/or is not at all on schedule³.
- The public website is up to date, if applicable.
- To my best knowledge, the financial statements which are being submitted as part of this report are in line with the actual work carried out and are consistent with the report on the resources used for the project (section 6) and if applicable with the certificate on financial statement.
- All beneficiaries, in particular non-profit public bodies, secondary and higher education establishments, research organisations and SMEs, have declared to have verified their legal status. Any changes have been reported under section 5 (Project Management) in accordance with Article II.3.f of the Grant Agreement.

Name of scientific representative of the Coordinator¹: ..Federico Álvarez.....

Date://

Signature of scientific representative of the Coordinator¹:

² If either of these boxes is ticked, the report should reflect these and any remedial actions taken.

³ If either of these boxes is ticked, the report should reflect these and any remedial actions taken.

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1 Publishable summary

The Media Internet is evolving to support novel user experiences such as immersive environments including sensorial experiences beyond video and audio (engaging all the human senses) that are adaptable to the user, the networks and the services.

The objective of nextMEDIA (www.fi-nextmedia.eu) is to enhance the coordination of the efforts in Europe towards producing a clear situation of the Future Media Internet, create common pillars (e.g. the Future Media Internet reference architecture for Europe) and support the results of the developments of the European projects by means of the following actions:

- Coordinate and Support of research collaboration in networked media scientific fields, especially in Future Media Internet (with strong orientation to the combination of 3D Internet Media and Content-aware Networks/Network-aware applications).
- Support the cooperation and future research of the European projects in the field of Networked Media by means of driving Task Forces and propose and coordinate new ones (“Future Media Internet Architecture”).
- Identify the position and clear opportunities in the areas where the European research in Future Media Internet is more competitive world-wide and develop studies and roadmaps by means of analysing the situation, technology and patents in the most developed countries in relevant research areas.
- Create the necessary dissemination means to advertise and spread excellence of the European research in Future Media Internet world-wide and attract the prominent scientists and company managers to the events.

The results of the nextMEDIA coordination action will be used to promote and disseminate the common European position, by accessing different channels, such as stakeholder workshops and exchange of best practices. The project will use the results of the information gathering and best practice identification and definition, and will disseminate them to the community at large. For each of the stakeholder groups belonging to this community a set of recommendations on how to mainstream these results into their research activities, policies and strategies will be developed.

2 Project objectives for the period

In the months from 13-24 of the project it was planned to deliver the following results:
(Public deliverables can be accessed through:
http://www.gatv.ssr.upm.es/nextmedia/index.php?option=com_content&view=article&id=11&Itemid=11)

Deliverable/ Milestone	Description	Date
D3.2	nextMEDIA roadmap outline	M13
D4.2	Comparative Analysis on Positioning Approaches of several International actors	M15
M1.2	Setup new goals for the existing groups and task forces ver 2.	M15
M2.3	Networked Media Spring Concertation Meeting – 2011	M16
M6.5	Fifth project meeting	M16
D2.3	Report on current research and business targets V3.0	M16
M6.6	Sixth project general meeting	M20
D1.2	Reports on organisation and results of the TFs and FCNs group meetings. Version 2.0	M24
M2.4	Networked Media Fall Concertation Meeting – 2011	M23
D1.4	White paper on the Future Media Internet Architecture	M24
D3.3	nextMEDIA roadmap	M24
D4.3	Report on Scientific Papers presented in Networked Media Track	M24
D4.4	Report on collaboration events with third countries	M24
D5.4	Final report on Dissemination activities	M24
D6.3	Project Final Report	M24
M1.7	Final version of the white paper on FMI Architecture	M24
M4.4	Final nextMEDIA workshop	M24

A chronogram of the tasks carried out during this period is the following:

Workpackages		M 13	M 14	M 15	M 16	M 17	M 18	M 19	M 20	M 21	M 22	M 23	M 24
		1Q	2Q	1Q	2Q	1Q	2Q	1Q	2Q	1Q	2Q	1Q	2Q
1	Coordination and Support of the FMI-related initiatives												
	T1.1 Coordination & Support of the Future Media 3D Internet and Future Content networks Task Forces				M1.2								D1.2
	T1.2 Organization of the Future Media Internet Architecture Think Tank				M1.6							M1.8	D1.4
2	Coordination of projects towards the FIA activities												
	T 2.1 Coordinate projects on FIA activities	M2.2				M2.3							
	T2.2 Cross-projects FIA Coordination		D2.2			D2.3					D2.4	M2.4	
3	Future Media Internet international roadmap												
	T3.1 Situation in Europe												
	T3.2 Situation of Europe regarding Japan and USA												
	T3.3 Elaboration of a Roadmap		D3.2								M3.2		
	T3.4 Additional measures for exploitation of the roadmap											M3.3	D3.3
4	Coordination Actions for European Research Promotion at International Level												
	T4.1 Workshop on Content Networks and 3D Media Internet												
	T4.2 Industry Panels in cooperation with relevant Conferences in the field of Networked Media				D4.2								
	T4.3 Organization of Networked Media Track in Scientific Event												D4.3
	T4.4 Collaboration with Third Countries												D4.4
	T4.5 Final Workshop												M4.4
5	Dissemination and standardisation coordination												
	T5.1 ETSI ISG												
	T5.2 Standardisation monitoring and regulatory implications of Future Media Internet												
	T5.3 Web page and dissemination material												
	T5.4 Exhibition and training												
	T5.5 Talent support												D5.4
6	Management												
	T6.1 Project Coordination					M6.5				M6.6			M6.7
	T6.2 Project Assessment												D6.3

3 Response to the reviewers recommendations in the 3rd Review

nextMEDIA has considered the 3rd Review recommendation and a set of actions took place as reactions to the recommendations. In more details:

3.1 General recommendations:

Note: in italics the text from the report

First categories under observation need to be straightened, in particular for D3.2, but also for evaluation of questionnaires etc.

Currently, the investigations and roadmap mix orthogonal categories together and thereby obtain invalid results. Examples are

- *"Fancy Applications" like Facebook stands next to*
- *"Business Models/Solutions" like CDNs/Akamai and*
- *"Base technologies" like scalable coding*

These are incompatible and it does not make sense to alternatively question on them.

The roadmap has been re-arranged and distributed into different categories where “base technologies” “business models” and “fancy applications” will be compared only between them and taking into account the different perspectives and dimensions. For example scalable coding is a technology which can be used for applications such as media delivery over Internet and the business model is the Akamai approach for using scalable video coding. In this way you can compare 3 dimensions: technology, business (including the socioeconomic dimension) and services.

Then the roadmap has been reformulated into the following categories.

- 1) Exec Summary
- 2) Intro (including a very brief description of methodology)
- 3) Base Technologies and Architectures
- 4) Application Areas and Services
- 5) Business Models
- 6) Policy Implications
- 7) Conclusions

Second empirical analysis is not performed on firm grounds contains methodological errors (in statistical set selection). Current D4.2 presents a "somewhat random", but largely biased selection of interviewees that neither represent the countries/population of Europe, nor the "main international actors in the area ...". As is, this deliverable does not carry any weight.

We encourage not to use the outcome of D4.2 in further work.

The deliverable has been updated to reflect the randomness of the interviews and why this has been selected. The work has been explained better to express that this is not reflecting the position of international actions due to the comments the reviewers proposed. The deliverable will not input 3.3

We believe, the work of Nextmedia would benefit of a closer contact with the people working in the projects. In particular, we believe that it is not enough to identify areas for collaboration in research and in standardization, but Nextmedia should act as a facilitator for the projects to collaborate. We include more concrete suggestions in the per WP feedback below.

nextMEDIA will foster this collaboration with concrete and focused examples. The collaboration, which nextMEDIA fostered will be reflected in 2.4

Finally, we suggest, for final report on M24, to enrich the reports with links to the URLs in the website where the documents and references can be accessed. That will add value to the website and at the same time will make the reports more useful.

We will do that.

3.2 Recommendations per WP

WP1 : Progressing adequately according to the DoW.

No corrective action required

WP2: Overall, the work is fine. However, for the final report we would expect to see concrete information about collaborations as a result of the NextMedia coordination action.

We will include in the 2.4 the data and information supporting this statement

WP3: Progressing adequately

WP4: For the next review, we would recommend to provide concrete numbers on the number of submissions of papers to WS and special issues, as well as the number of submissions from the projects coordinated by NextMedia.

This will be included in the final deliverables of the WP4 for the project.

WP5: We encourage to explore (newly visible) options at ETSI and - if possible - create an ISG for future activities in the area of FMI.

We will follow 2 approaches:

1. Create a ISG under ETSI. The approach we discussed with the project officer is to use the FIA steering board as we think that a ISG may have more participants if the companies in the FIA are consulted from the very first moment.

Taking into account the spare time we have in the project, this sounds like a most reasonable option, and then the FIA steering board can continue before going directly to the companies.

If we manage to get FIA people interested in formatting the group it would have even greater long-term impact.

2. Support the project in participating in other initiatives such as the CDNi group and others we identified.

Regarding website, as in previous review, more relevant metrics would be useful (unique users & visits, instead of page views, for example. Furthermore, we think that the audience reached by the dissemination tasks should be widened, to reach not only the research community, but as many companies and institutions as possible that could be interested in the EU R+D projects or their outcome.

We have inserted a better tool to quantify the visits as the reviewers are proposing and we are changing the documentation handling in the website to be more “searchable” by the search engines.

4 Work progress and achievements during the period

In more details the technical achievements per WP are analysed in the next subsections:

4.1 WP1 “Coordination and Support of the FMI-related initiatives”

The aim of the 1st WP of nextMEDIA is to coordinate and support the Future Media Internet related activities. Towards this aim two are the main objectives of the project:

- to support the current initiatives organised by the EC, such as the “Future Media Internet Task Force” and the “Future Content Networks” group and be the bridge between them and the other Future Internet Assembly groups (such as RWI, MANA, Identity & trust, FIRE), and
- to set up and coordinate, together with the EC, a new think tank, namely the “Future Media Internet Architecture” Think Tank with the aim to reinforce the leadership of the EU in this field.

In order to realise the aforementioned objectives, nextMEDIA activities during this period can be classified in four main categories:

- Future Internet Assembly (FIA) related activities (T1.1)
- Future Content Networks (FCN) related activities (T1.1)
- Future Media Internet – Task Force (FMI-TF) related activities (T1.1)
- Future Media Internet Architecture – Think Tank (FMIA-TT) related activities (T1.2)
- Future Internet Architectures (FIArch) related activities (T1.2)
- FIA book

The work that carried out by nextMEDIA during the 2nd year of the project (1/11/2010-31/10/2011) of the project is described in the subsequent subsections.

4.1.1 FIA workshops T1.1 Coordination & Support of the Future Media 3D Internet and Future Content networks Task Forces

4.1.1.1 FIA Ghent December 2010

The 6th FIA workshop was held in Ghent, Belgium on 16-17 December, 2010. Two of the nextMEDIA beneficiaries (Petros Daras and Theodore Zahariadis) participated in the teleconferences organised by the EC towards organising some of the BO sessions, which took place in Ghent. More specifically:

- Petros Daras (CERTH) and Theodore Zahariadis (Synelixis) were co-organisers of the BO session: “*Search as an architectural component*; ”
- Theodore Zahariadis (Synelixis) was the organizer of the BO session “FI Architecture Group” and one of the session key speaker. Federico Alvarez (UPM), Petros Daras (CERTH) and Ebroul Izquierdo (QMUL) helped with the organisation of this BO session.

The organisation of the abovementioned BO Sessions implies selection and invitation of speakers, agenda preparation and set content of the sessions. Below the complete description of the “Search” session is given along with the outcome of the session.

Session VIII: Search as an architectural component

Chair: Loretta Anania (EC– DG INFSO),

Th. Zahariadis (Synelixis), J. Domingue (Open University), P. Daras (ITI), A. Galis (UCL)

Objectives

As the FIA activities evolve, it turns out that there are going to be different stratum that support the Future Internet. All these stratum have different types of resources and also virtual representations. At the network stratum, we may consider as resources the nodes themselves (e.g. routers, servers, printers, terminals, etc.) and their physical characteristics (e.g. processing power, network interfaces, routing capabilities, memory, caching capabilities, traffic, etc.). At the Service stratum, we may consider the services, the service components and their APIs and interfaces as resources. At the Content Stratum, the different types of content (e.g. text, pictures, voice, video of different types and formats, slices and sub) can be considered as resources. Finally, any piece of information or any application (including social networks and link open data links) may also be considered as a resource.

The initial objective of this session was to highlight the search and discovery issues of different resources at the different stratum. This is a very broad topic. Quite different mechanisms (even philosophy and language) are currently used to discover/mine, describe, index and retrieve resources at each stratum. Due to time restrictions, the session was focused only in the area of content searching and retrieval, which may be the most challenging ones as the content is and will grow much faster than any other resource and the search engines need in most cases to extract and combine information rather than just discover it.

Presentations

• Introduction and context	Loretta Anania	EC – DG INFSO
• Search as an architectural component: searching for a new paradigm	Francesco Nucci	Engineering
• Next Generation Search	Ricardo Baeza-Yates	Yahoo!
• Visual Search as an architectural component	Alexis Joly	INRIA
• Discussion	Moderator: L. Anania (EC) Panel: R. Baeza-Yates (Yahoo!) F. Nucci (Engineering) A. Joly (INRIA) J. Domingue (Open University)	
• Conclusions- Discussion	Loretta Anania	EC– DG INFSO

The presentations are available on the FIA Ghent website (<http://fi-ghent.fi-week.eu/slides/>)

Summary of Presentations

Search as an architectural component: searching for a new paradigm

(Francesco S. Nucci – Engineering R&D Lab, Director European Projects)

“Search” is not limited to everyday’s experience of searching the web but it is a *must* feature of business intelligence applications for the enterprise. The size of digital archives has grown enormously in many application domains (e.g. enterprise, news agencies, TV broadcasters, advertising agencies,...) the characterization of their interactions (i.e. messages, events, etc.) and their distribution. Moreover, content is increasingly going to be Multimedia based: combinations of text, audio, still images, animation, video and interactivity into a single form. As a result and based on various analysis 50% of the applications will include a search facility as a primary interface for end users.

This need for search engines poses a number of challenges, namely:

- Lack of a unified framework for multimodal content search and retrieval
- Lack of Dynamic and Scalable Indexing techniques for searching over the network
- Lack of user-centric and context-aware S&R framework
- Lack of efficient tools for searching Intelligent Content

Dr. Nucci concluded that in the current Internet we are using some core services – such as search engines. Others, e.g., to provide geo-information, people search or social networking, have seen tremendous growth in recent years. Mostly we are using these services in isolation from each other, e.g., via independent websites and user interfaces. Some services – like search – are starting to become integrated but here a significant increase can be expected.

Next Generation Search

(Dr. Ricardo Baeza-Yates, VP of Yahoo! Research for EMEA & Latin America)

Content is increasing at very high rates. Even in 2007, the published content was more than 4GB per day, however the private data is even much higher (user generated content more than 80GB per day, private text ~3TB, upper bound of typed text ~700TB). This creates specific trends for search engines: User Generated Content (quality vs. quantity), Social Networks, Real time content creation (people + physical sensors). On the other hand also the search engines are evolving, moving from mining into text into identifying what are the user’s task and context. This affects not only the retrieved information but also the way to present that to the users.

Dr. Baeza-Yates concluded that we are moving from a web of pages to a Web of Objects. Objects are people, places, businesses, restaurants ... (named entities), which have attributes (missing, noisy, etc). Search engines should be intelligent enough to find and retrieve content objects based on the context and the user need. The key feature in search engines will be the user experience (information + presentation).

Visual Search as an architectural component

(Alexis Joly, INRIA)

Visual Search supports already very important applications such as TV channels/archives searching, copy detection (beyond DRM issues like contents links), large scale object retrieval. The next steps in visual search will be visual objects mining, linking visual contents at the object level, visual query suggestion and visual based events tracking. The visual object’s model in the Future Internet it is expected to have neither concepts nor low level features, but support visual objects represented as independent entities.

Panel Presentations and Discussions

Some conclusions based on the discussions are that the term “searching” has quite different usage and meaning in each stratum (networks, content, services). Moreover, there are quite different

mechanisms to discover information, so we should be very careful as the term is evolving. On the other hand, it is obvious that discovery of resources should be inherently supported by Future Internet Architecture.

Another important topic was the conflicting issues between privacy, data security, personalization and user aggregation. Everyone agrees that privacy and security are very important issues. Yet, in order to increase the personalized behavior of the Search Engine more info has to be extracted so privacy is challenged.

Finally the issue of open source search was discussed and proposed as one of the lessons learned by Engineering in Pharos project.

4.1.1.2 FIA Budapest May 2011

the 7th FIA workshop which was held in Budapest, Hungary on 18-19 May 2011. nextMEDIA partner QMUL organised the session: Interactive Media Experience. It should be noted that speakers and panelists of this session were members of the FMI-TF and the FCN group.

Moreover, the FCN member UCL with the support of nextMEDIA organized the session: Information Centric Networking. nextMedia beneficiaries actively participated at this session.

Interactive Media Experience session

Organizers of the session were: Prof. E. Izquierdo, G. Feher

Prof. E. Izquierdo made an introductory presentation for the session and presented the Keynote speakers. The first keynote speech was from **Prof. Nandia M. Thalmann** (University of Geneva, Switzerland), entitled “Virtual Humans”. Prof. Thalmann presented the work of their lab on virtual humans and autonomous agents towards a new approach of not just 3D models of humans but fully functional entities.

- user centric wearable
- presents some visionary scenarios
- the wearable interacts to all electronic devices around us
- augmented i-jacket-> -using i-glasses gets input (and also gets 3D augmented data - e.g. a child running there ...)
- also the i-jacket gets input (visual, auditory, tactile)

The second talk was given from **Prof. Peter Eisert** (HHI, Germany) about “3D video Processing”. In the presentation various technologies of 3D processing were presented towards a more ubiquitous 3D video applications.

The third keynote speech was given from **Peter Kovacs** (Holografika, Hungary), entitled “3D Media accessibility through mobile devices”.

Finally, a panel discussion moderated from **Prof. Noel O'Connor** took place. The panelists were: **Nandia M. Thalmann** (University of Geneva, Switzerland), **P. Eisert** (HHI, Germany), **Z. Korcsok** (iPont, Hungary), **P. Kovacs** (Holografika, Hungary), **E. Izquierdo** (QMUL, UK), **G. Feher** (BME, Hungary)

Most of the discussion was about the autonomous virtual humans and the virtual identity that all avatars should have in order to act on behalf of the actual human user. Part of the audience was also interested to learn more about the future of holographic technologies presented by Holografika.

Information Centric Networks session

Organizers / moderators of the session:

- George Pavlou, University College London, UK. (g.pavlou@ee.ucl.ac.uk)
- Spiros Spirou, Intracom Telecom, Greece. (spis@intracom.com)

The session started with an introductory presentation from George Pavlou about the state of the art on Information Centric Networking and definitions on the area. Then he pointed out some key issues for the future Internet.

- The network grows to an unmanageable size
- Even if optical fiber infrastructure is wider the network reaches its limits
- CDNs and p2p: make the server totally transparent to the user. This is the first step towards the information oriented communication
- Current content naming and security issues. Replication is not easy. We need transparency.
- Another issue is the security of the actual content and not the channel through which we transfer the data (current practice)
- Paradigm shift. From resources sharing to sharing content.
- We should also support not only content access but also services, voice etc.

Challenges

- Scalability
- Security
- Manageability
- Incremental deployment
- Novel business models

Then, each one of the panelists made a 5-min position statement on high-level issues of ICN. The panelists where: **Prof. Torsten Braun** (University of Bern, Switzerland), **Prof. Ebroul Izquierdo** (Queen Mary University, UK) and **Bruno Kauffmann** (R&D Engineer, FT/Orange, France).

Next, a moderated discussion took place, with Q&A between moderator and the panelists.

Finally, EU projects presented their position statements. The EU projects presented are:

- ALICANTE, Evangelos Markakis, Technological Educational Institute of Crete, Greece.
- COMET, Francisco Javier Ramon Salguero, Telefonica R&D, Spain.
- CONVERGENCE, Andrea Detti, University of Rome Tor Vergata, Italy.
- ENVISION, Miguel Rio, University College London, UK.
- PURSUIT, Arto Karila, Helsinki Institute for Information Technology, Finland.
- SAIL, Börje Ohlman, Ericsson Research, Sweden.

The main discussion was on the decision evolutionally vs. revolutionary architectures on ICN. Most of the participants agreed that an evolutionary approach is viable since none of the big Internet companies would like to through all their costly equipment away.

4.1.1.3 FIA Poznan October 2011

In the reporting period, nextMEDIA contributed to the organization of the 8th FIA workshop which was held in Poznan, Poland on 25-26 October 2011.

The session along with their descriptions, where nextMEDIA beneficiaries were either organisers or speakers were the following (nextMEDIA beneficiaries are highlighted):

Session: The future of Networked Media and the Internet: Facts, Reflections and the Road Ahead

Chair of the Session – **Paul Moore (Atos)**

Session Outline

The session divided into several parts where specific areas dealt with in more detail with the perspective of 2 different speakers in each followed by a Q&A session with the audience.

Introduction - **Paul Moore** (Atos, Spain) representing the Coordination Action NextMedia presented the different speakers and set the scene.

Architecture - Krzysztof Kurowski (PSNC Poland), **Theodore Zahariadis** (Synelixis, Coordinator FIArch Working Group)

3D – Krzysztof Kurowski (PSNC Poland), **Ebroul Izquierdo** (QMUL)

Connected TV - Ralf Neudel (IRT, Editor “NEM Strategic Research Agenda “), **Federico Alvarez** (UPM, Coordinator of NextMedia)

Social Media - **Oscar Mayora** (Create-Net), **Paul Moore (Atos)**

Business Models and Wrapup - **Paul Moore (Atos)**

Session: Standardisation

Agenda

Part I: FIA standardisation working group – review of progresses and context evolution

- FIA standardisation WG: review of objectives and progresses, Didier Bourse, (Alcatel-Lucent)
- The Future Networks cluster activities: Key take away, from ETSI Future Networks technologies workshop #2, Gaby Lenhart (ETSI)
- 15 min FI PPP plans for standardization coordination, Mikko Riepula (TivitAalto)
- Interacting with ETPs, Walter Waterfeld from NESSI
- Debate on the role for the standardisation WG, **Tomas Piatrik**, (QMUL)

Part II: Collective review of on-line content

- Organisation and purpose of web content Lyndon Nixon (STI International)
- Interactive review of website content: fitting presentation to project needs, Jean-Charles Point (JCP Consult)
- Concluding remarks Franck Le Gall (inno)

Session: Architectures

Future Internet Key Architectural Challenges

Session organisers: **Theodore Zahariadis (Synelixis, Greece)**, Dimitri Papadimitriou (Alcatel-Lucent, Belgium), Alex Galis (UCL), Bernhard Plattner (ETH, Switzerland), Paul Smith (ULANC, U.K.), Laurent Ciavaglia (Alcatel-Lucent, France), Gerard Nguengang (Thales, France), Panagiotis Demestichas (University of Piraeus, Greece), Miguel Ponce de Leon (TSSG, Ireland)

Closing Panel: Future Internet Architectures

Panel moderator: **Theodore Zahariadis (Synelixis)**

The closing panel was organized by Theodore Zahariadis, who also made the initial presentation. Then the invited panellists presented the Future Internet Architecture from 4 different points of view:

- Dr. Dimitri Papadimitriou (Alcatel-Lucent) present his point of view on the Future Internet Architecture, as it is constrained by a network-wide/global-level architecture.
- Dr. Pau (UCLA) considered some networking approaches world-wide (including hinds to NSF research) and gave emphasis on the pros and cons of evolutionary and revolutionary architectural approaches.
- Prof. Müller (TU Kaiserslautern) presented some considerations on the Future Internet Architecture from a Service-Oriented point of view.
- Dr. Mohr (Nokia Siemens Networks) presented the Future Internet Architecture requirements from a smart energy point of view, putting emphasis on the mobility requirements (e.g. Future Internet and electric cars).

The panel closed with a discussion on the different architectural issues, not only between the panel participants but also between the participants. Theodore Zahariadis closed the panel with a brief wrap-up.

More detailed information can be found at D1.2

4.1.2 FCN group - T1.1 Coordination & Support of the Future Media 3D Internet and Future Content networks Task Forces

After the successful FCN meetings it was decided to invite as many industrial players as possible to be members of the FCN group and participate in FIA Ghent BO sessions– as this was a clear proposition of the reviewing team. As a result, nextMEDIA beneficiaries organised at FIA Ghent the “Architectures” session which was among the main highlights of the FIA event. Below the complete description of the session is given along with the outcome of the session.

Session V: Architecture Group

Chair: Isidro Laso Ballesteros (EC– DG INFSO), Theodore Zahariadis (Synelixis)

Objectives

The objective of this session was to present the activities of the FIArch group towards a Future Internet Architecture, collect feedback and comments from the FIA community and involve more experts presenting their point of view in the activities towards a Future Internet Architecture.

The FIArch Experts Reference Group is composed of representatives of the most relevant FP7 research projects in relation to FI architectures and renowned experts from industry and academy covering in a complementary way all areas related to the Future Internet Architecture. The work of the group is coordinated by the FP7 CSA projects in the area of Future Internet and supported by the EC Units D1: Future Networks, D2: Networked Media Systems, D3: Software & Service Architectures & Infrastructures, D4: Networked Enterprise & Radio Frequency Identification (RFID) and F5: Trust and Security. The aim of the FIArch group is to focus on a few key architectural issues and contribute to an EC research roadmap towards Future Internet Architecture. As a first concrete step, the FIArch group has been working on the identification and categorization of the “Fundamental Limitations of Current Internet” that could eventually prevent a good functioning of foreseen Future Internet applications.

In this FIA session, the current progress was presented and feedback from the FIA research community was received.

Presentations

• Introduction and context	Paulo de Sousa	EC – DG INFSO
• Rationale and Methodology	Dimitri Papadimitriou	Alcatel-Lucent
• Fundamental Limitations of Current Internet	Theodore Zahariadis	Synelixis
• Internet Architecture and Innovation	Isidro Laso Ballesteros	EC– DG INFSO
Open forum (5 minutes each): • R. Nejabati (University of Essex) • W. Colitti (Vrije Universiteit Brussel) • W. Burakowski (Warsaw University) • Ioan Toma (STI)	Moderator: F. Alvarez (UPM) Panel: D. Papadimitriou (Alcatel-Lucent), S. Haller (SAP) H. Tschofenig (NSN) J. Clarke (TSSG) L. Nixon (STI International) P. Moore (Atos Origin)	
• Next steps and wrap-up	Isidro Laso Ballesteros	EC– DG INFSO

The presentations are available on the FIA Ghent website (<http://fi-ghent.fi-week.eu/slides/>)

Summary of Presentations

Rationale and Methodology (Dimitri Papadimitriou)

<http://fi-ghent.fi-week.eu/files/2010/12/1435-Dimitri-Papadimitrio.pdf>

The global Future Internet is a complicated structure that cannot be created by a linear process of engineering and technological design. In order to identify the Fundamental Internet Limitations, the FIArch group is following a 4 steps methodology. Step 1 is to identify the motivations and the design objectives of the FI Architecture, Step 2 is to define common architectural principles, step 3 is to specify the architectural components and finally Step 4 to put all components into a common

model. The goal is to identify what an architectural "limitation" is and characterize it with quantitative and qualitative arguments.

FIArch has defined as "***fundamental limitation***" of the Internet architecture a functional, structural, or performance restriction or constraint that cannot be resolved with current or clearly foreseen paradigms as far as our understanding/knowledge goes. On the other hand, "***challenging limitation***" is a functional, structural, or performance restriction or constraint that could be resolved (as far as our understanding/knowledge goes) by replacing and/or adding/removing a component of the architecture that would in turn change the global properties of the Internet architecture. Moreover, the following terms have been used: "***data***" to refer to any organized group of bits a.k.a. data packets, data traffic, information, content (audio, video, multimedia), etc., and "***service***" to refer to any action performed on data or other services and the related API.

Currently FIArch has made progress in Steps 1 and 2, and the next challenge is Step 3, which will identify the architectural components (i.e. procedures, data structures, state machines, etc.) together with the characterization of their interactions (i.e. messages, events, etc.) and their distribution.

Fundamental Limitations of Current Internet (Theodore Zahariadis)

<http://fi-ghent.fi-week.eu/files/2010/12/1445-Zahariadis-FIArch-Ghent-20101215.pdf>

Since its creation, the Internet is driven by a small set of fundamental design principles rather than a formal architecture that is created on a whiteboard by a standardization or research group. Moreover, the necessity for backwards compatibility and the trade-off between Internet redesign and proposing extensions, enhancements and re-engineering of today's Internet protocols are heavily debated. FIArch has tried to identify and analyse the presumed problems and limitations of the Internet starting from the basic networking layers upwards.

The emergence of new needs at both functional and performance levels, the cost and complexity of Internet growth, the existing and foreseen functional and performance limitations of the Internet's architectural principles and design model put the following base functionalities under pressure:

- ***Processing/handling of "data"***: refers to forwarders (e.g. routers, switches, etc.), computers (e.g., terminals, servers, etc.), CPUs, etc. and handlers (software programs/ routines) that generate and treat data.
- ***Storage of "data"***: refers to memory, buffers, caches, disks, etc. and associated logical data structures.
- ***Transmission of "data"***: refers to physical and logical transferring and exchange of data.
- ***Control*** of processing, storage, transmission of systems and functions: refers to the action of observation (input), analysis, and decision (output) whose execution affects the running conditions of these systems and functions.

The fundamental limitations in each one of these categories were presented. Moreover the high-Level and low-level Design Objectives were highlighted. The conclusion was that extensions, enhancements and re-engineering of today's Internet protocols may solve several challenging limitations. Yet, addressing the fundamental limitations of the Internet architecture is a multi-dimensional problem. Improvements in each dimension combined with a holistic approach of the problem space are needed.

More info on the FIArch work may be found at:

http://ec.europa.eu/information_society/activities/foi/research/fiarch/index_en.htm

http://ec.europa.eu/information_society/activities/foi/docs/current_internet_limitations_v9.pdf

Internet Architecture and Innovation (Isidro Laso Ballesteros)

http://fi-ghent.fi-week.eu/files/2010/12/1515-ISIDRO_IA-and-Innovation.pdf

This presentation was based on a paper prepared by an industrial driven task force from the Future Internet Architecture Group. It contained information about different, and sometimes contradictory, viewpoints about the evolution of the Internet Architecture. The key message of the presentation is that the Internet Architecture is a new policy tool (no longer only a matter of techies) and that it could be used by policy makers to shape the future EU economy by favoring some industry sector while perhaps hindering others. The presentation reviewed a number of application areas (telephone, eCommerce, Social Networks, community-driven content, collaboration environments, Web-based business services, cloud-based enterprise computing, on-line banking, etc) and highlighted how the innovation is hindered by current internet architecture.

The presentation concluded that the decision makers need to know the importance of Internet architecture for all economic industries. The evolution of the Internet affects all economic actors, benefiting some industrial players while perhaps hindering others. Thus any steps taken towards modifying the Internet, whether in terms of technology and architecture or whether in terms of governance can be seen as a policy tool for modifying the economic situation in Europe. We must be aware of the tradeoffs that any changes in the Internet may bring. An increase in security on the net could, for example, foster innovation in health or policing or citizen services. But, unfortunately, this increase in security could hinder innovation in some other areas such as social networking, peer-to-peer or content aware networks.

Some of the issues to be taken into account for future Internet design include:

- Measure and comprehend before considering modification of successful principles
- Quality of Service for Critical Applications
- Relaxed Layering and Security
- A Framework for Intermediary Common Services
- Transport Layer Innovation
- Application Component Eco-System for Continued Application Innovation
- Long-Term Disruptive Approaches

Policy makers should consider these and other Internet architectural design decisions and considerations, as another possible policy tool that can have far reaching positive effects in the European economic space and that allow innovation to increase leading to more and better jobs for Europeans.

More info may be found at:

http://ec.europa.eu/information_society/activities/foi/library/docs/p3-ai-2010.pdf

Panel Presentations and Discussions

The panel was moderated by Dr. Federico Alvarez and interested members of the audience presented their point of view. Among the one that had expressed their interest:

- R. Nejabati (University of Essex)
http://fi-ghent.fi-week.eu/files/2010/12/1535-2-Reza-Nejabati_sfv2.pdf
- W. Colitti (Vrije Universiteit Brussel)
http://fi-ghent.fi-week.eu/files/2010/12/1535-3-presentation_fia_colitti.pdf
- W. Burakowski (Warsaw University)
<http://fi-ghent.fi-week.eu/files/2010/12/1535-4-System-IIP-FIA-Ghent-ver1.pdf>
- Ioan Toma (STI)

Some conclusions based on the discussions are that the Future Internet Architecture should be designed very carefully in order to ensure global acceptance. Flexibility should not be sacrificed in the pursuit of performance, while security will play a very important role. This means that the model for the Reference Architecture should not sacrifice the openness of the internet and its ability to evolve in order to get short-term performance.

After this participation, nextMEDIA progressed in the direction of involving more members of the industrial community. As it is evident from the agendas above, the FCN group is further extended with the participation of the following industrial members, as it was a clear request by the nextMEDIA reviewers:

- G. Feher, BME, Hungary
- P. Kovacs, Holografika, Hungary
- Z. Korcsok, iPont, Hungary
- L. Muscariello, FT/Orange, France
- S. Spirou, Intracom Telecom, Greece
- F. Salguero, Telefonica R&D, Spain
- V. Souza, Ericsson, Sweden

During this reporting period the fifth FCN meeting was held in Poznan, Poland, in parallel with the FIA workshops. Numerous teleconferences took also place prior to the FIA workshop so as to ensure industrial participation to FIA.

The participants of all FCN meetings can be seen in the table below. Participants from SMEs and Industry are in bold:

No	Participant Name	Affiliation
1	Federico Alvarez	UPM
2	Petros Daras	CERTH
3	Theodoros Semertzidis	CERTH
4	Anastasios Zafeiropoulos	CERTH
5	Theodore Zahariadis	Synelixis
6	Paul Moore	ATOS
7	Oscar Mayora	CREATE-NET
8	Tomas Piatrik	QMUL
9	Ebroul Izquierdo	QMUL
10	Naeem Ramzan	QMUL
11	Adolfo Rosas	Telefonica
12	Pierre-Yves Danet	FT/Orange
13	Peter Stollenmayer	Eurescom
14	Jari Ahola	VTT
15	Irene Lopez	Tekniker IK4
16	Antonio Camurri	University of Genoa
16	George Pavlou	University College London
17	Rafaelle Bolla	University of Genoa
18	Alberto Jose Gonzalez	i2CAT/UPC
19	Dimitris Protopsaltou	University of Geneva
20	Cezary Mazurek	PSNC
21	Vincent Leroy	Yahoo

22	Barla Cambazoglu	Yahoo
23	Yiping Chen	CNRS – Labri
24	Susanne Kuehrer	A1 Telekom Austria
25	Tobias Burger	Salzburg Research
26	Sergios Soursos	Intracom Telecom
27	George Pavlou	University College London
28	Miodrag Temerinac	Uni- Novistat
29	Paul Walland	IT Innovation
30	Yves-Marie Le Paner	Technicolor
31	Francesco Nucci	Engineering
32	Ricardo Baeza-Yates	Yahoo
33	Dimitri Papadimitriou	Alcatel-Lucent
34	Stefan Haller	SAP
35	Hannes Tschofening	NSN
36	G. Feher,	BME, Hungary
37	Z. Korcsok,	iPont, Hungary
38	S. Spirou,	Intracom Telecom
39	V. Souza,	Ericsson
40	F. Salguero	Telefonica R&D
41	Laurent Ciavaglia	Alcatel-Lucent
42	Gerard Nguengang	Thales
43	W. Mohr	NSN

4.1.3 FMI - Task Force - T1.1 Coordination & Support of the Future Media 3D Internet and Future Content networks Task Forces

The 2nd FMI-TF meeting took place in Brussels on 30 November 2010, in EC premises, in parallel with the Fall 2010 concertation meeting. The focus of this meeting was on:

- Classifying the identified research challenges (short/mid/long term)
- Identifying application areas per research challenge with special focus on the Industrial application of each research challenge
- Identifying generic business models to realize the research challenges

The agenda of the meeting was the following:

Tuesday, 30/11/2010		
Time	Topic	Presenter/Moderator
15:30-15:40	Welcome from the EC	Isidro Laso-Ballesteros
15:40-16:30	White paper presentation & Classification of the identified research challenges	Theodore Zahariadis
16:30-17:15	Application areas per research challenge with special focus on the Industrial view on how this research can be applied	All
17:15-17:25	Coffee break	
17:25-17:50	Generic business models to realize the research challenges	All, moderated by Federico Alvarez

17:50-18:30	Business benefits	All, moderated by Petros Daras
18:30-19:00	Discussion on next actions /Time plan +AOB	Petros Daras
	Close of the meeting	

The participants of the meeting are shown in the table below

No	Participant Name	Affiliation
1	Federico Alvarez	UPM
2	Petros Daras	CERTH
3	Theodore Zahariadis	Synelixis
4	Paul Moore	ATOS
5	Oscar Mayora	CREATE-NET
6	Tomas Piatrik	QMUL
7	Hassnaa Moustafa	FT/Orange
8	Xavier Anguera Miro	Telefonica
9	Amar Aggoun	Brunel University
10	David Griffin	University College London
11	Alexandros Nanopoulos	University of Hildesheim
12	Peter Stollenmayer	EURESCOM
13	Marian Ursu	Goldsmiths, University of London
14	Doug Williams	BT
15	Isidro Laso Ballesteros	European Commission

The outcome of the meeting was the classification of the research challenges in short/mid/long term and the identification of application areas, business models and business benefits for the first 2 research challenges. It was decided that the TF members will meet again during the Spring concertation meeting (mid April, Trento, Italy) to continue the work. The final outcome of this exercise will be reported in the D1.3 (M24

The 3rd FMI-TF meeting was held in Trento, Italy on 13 April 2011. The agenda of the meeting was the following

Wednesday, 13th April 2010		
Time	Topic	Presenter
14:00 – 14:15	Meeting objectives	Federico Alvarez
14:15 – 14:45	Presentation of the results of the questionnaires	Petros Daras
14:45 – 15:45	Discussion on the priorities (applications, business benefits and models) for short-mid research challenges:	All

	a) Content and context fusion for improved multimedia access b) Multimedia, multimodal and deformable objects search	
15:45 – 16:00	Coffee break	
16:00 – 17:40	Discussion on the priorities (applications, business benefits and models) for mid-long research challenges: a) 3D content generation leveraging emerging acquisition channels b) Immersive multimedia experiences c) Content with memory and behavior	All
17:40 – 17:50	Discussion on next actions	All
17:50 – 18:00	Wrap-up and conclusions	Petros Daras / Federico Alvarez

The focus of this meeting was on:

- Identifying application areas per research challenge with special focus on the Industrial view on how this research can be applied
- Identifying generic business models to realize the research challenges
- Identifying business benefits

As a result an intermediate version of the report on Research Challenges, Applications Areas and Business Models was created and sent to different lists for receiving comments.

After finishing the discussion and incorporating comments, the TF prepared the report “Research Challenges, Applications Areas and Business Models”. This document has been produced by a discussion forum of experts in the area of media Internet, namely the Future Media Internet – Task Force (FMI-TF). The aim of this report was to shape the research agenda and outline the research challenges in Future Media Internet in the years to come, to map these research challenges to specific application areas taking into account the industrial point of view and finally, to identify potential business models and business benefits that could address these challenges.

The complete report can be found in D1.2

4.1.4 FIA Book - T1.2 Organization of the Future Media Internet Architecture Think Tank

The book on “Future Internet Assembly 2011: Achievements and Promising Technology” was published by Springer, Series: [Lecture Notes in Computer Science](#), Vol. 6656, Subseries: [Computer Communication Networks and Telecommunications](#)

Domingue, J.; Galis, A.; Gavras, A.; Zahariadis, T.; Lambert, D.; Cleary, F.; Daras, P.; Krco, S.; Müller, H.; Li, M.-S.; Schaffers, H.; Lotz, V.; Alvarez, F.; Stiller, B.; Karnouskos, S.; Avessta, S.; Nilsson, M. (Eds.) 1st Edition., 2011, XVI, 465 p.

nextMEDIA beneficiaries Federico Alvarez, Petros Daras and Theodore Zahariadis are among the editors (and reviewers) of this book. More information can be found at: <http://www.springer.com/computer/communication+networks/book/978-3-642-20897-3>

It should be noted that members of nextMEDIA published the following book chapters:

- “Towards a Future Internet Architecture”, Theodore Zahariadis, Dimitri Papadimitriou, Hannes Tschofenig, Stephan Haller, Petros Daras, George D. Stamoulis, and Manfred Hauswirth
- “Scalable and Adaptable Media Coding Techniques for Future Internet” Naeem Ramzan and Ebroul Izquierdo
- “Semantic Context Inference in Multimedia Search”, Qianni Zhang and Ebroul Izquierdo

For the 2012 edition, nextMEDIA participates actively in the preparation of a new FIA book entitled: “Future Internet – from the technological promises to the application in the field”

The call for papers can be found at: <http://www.future-internet.eu/fiabook-2012>. Federico Alvarez is leading this endeavour. nextMEDIA beneficiaries who act as editors are highlighted below.

Editors

Federico Alvarez, John Domingue, Susana Avesanna, Frances Cleary, **Petros Daras**, Alex Galis, Anastasius Gavras, Srdjan Krco, Dave Lambert, Volkmar Lotz, Hennig Muller, Michael Nilsson, Burkhard Stiller, Anne-Marie Sassen, Georgios Tselentis, **Theodore Zahariadis**

4.1.5 FMIA – Think Tank - T1.2 Organization of the Future Media Internet Architecture Think Tank

During this period the FMIA-TT completed the white paper: “Future Media Internet Architecture Reference Model (v1.0)”. This white paper concludes the first phase of the FMIA-TT group by proposing a Future Media Internet Architecture reference model.

The FMIA-TT concluded its activities with the Future Media Internet Architecture White Paper. The paper has been the result of extensive discussions between the FMIA-TT members and external experts.

The FMIA_TT consists of the following members:

Name	Affiliation	Contributor
Jan Bouwen	Alcatel-Lucent	X
Pablo Cesar	CWI: Centrum Wiskunde & Informatica	X
Van Jacobson	Palo Alto Research Centre (PARC)	
George Pavlou	University College London (UCL)	X
Pablo Rodriguez	Telefonica R&D	
Nikos Laoutaris	Telefonica R&D	X
Gerardo Garcia	Telefonica R&D	

Giovanni Pau	University of California, Los Angeles	X
Christian Timmerer	Klagenfurt University	X
Olivier Festor	INRIA	X
Gonzalo Camarillo	Ericsson Research	X
Marcelo Bagnulo	Carlos III University	
Thomas Steiner	Google	X
Amar-Djalil Mezaour	Exalead	X
Sergios Soursos	Intracom Telecom	X
Theodore Zahariadis (Editor)	Synelixis	X
Thanasis Tsiodras	Synelixis	X
Petros Daras	CERTH	X
Paul Moore	Atos Origin	X
Ebroul Izquierdo	Queen Mary University London	X
Tomas Piatrik	Queen Mary University London	X
Federico Alvarez	Technical University of Madrid	X
Maria Alduan	Technical University of Madrid	X
Isidro Laso	European Commission	

Table 1. Future Media Internet Architecture Think Tank - Members list

The activities included a FMIA-TT workshop (EC, Brussels, 15 June 2011), where approximately 15 experts, non members of the FMIA-TT, have sent comments and revisions, which have been integrated to the final version of the white paper.

The workshop agenda follows.

Workshop Agenda

09:30	Welcome	Georgios Kaiafas (European Commission)
09:40	Introduction to the workshop and objectives. Future Media Internet general approach.	Federico Alvarez (UPM)
10:00	The Future Internet Architecture Group activities - Including Q&A from the audience	Dimitri Papadimitriou (Alcatel-Lucent)
10:40	The Future Media Internet Architecture proposal (created by the FMIA-TT) - Including Q&A from the audience	Theodore Zahariadis (Synelixis)
11:10	ALICANTE (FP7 project) media architecture	Christian Timmerer (Klagenfurt University)
11:30	COAST (FP7 project) media architecture	Th. Zahariadis

		(Synelixis)
11:50	ENVISION (FP7 project) media architecture	David Griffin (UCL)
12:10	• NEXOF_RA - Including Q&A from the audience	Piero Corte (Engineering)
12:45	Lunch	
13:45	Presentations from the audience: - what are the new media Internet architectures? - views on new media applications and services	Moderator: Petros Daras (CERTH/ITI)
15:00	Panel and discussion: - How the media delivery platforms and media architectures are going to evolve? - How to cope with the new media services and applications requirements - How to support social networks in the new media Internet?	Panel: - Adolfo Rosas - Federico Alvarez - Theodore Zahariadis - Christian Timmerer
16:00	Way forward, next events and wrap-up	Federico Alvarez

In order to have more technical discussions, the FMIA-TT workshop was open only to a small group of experts. Overall 19 participants from 9 EC countries participated at the workshop. The list of participants follows:

	Name	Affiliation	Country	Type
1	Dimitri Papadimitriou	Alcatel-Lucent	Belgium	Industry
2	David Griffin	UCL	UK	Academic
3	John Cosmas	Brunel University	UK	Academic
4	Daniel Piret	Syneretek	Belgium	Industry/SME
5	Marco Masetti	Softeco SRL	Italy	Industry/SME
6	Bartosz Belter	PSNC (Poznan)	Poland	Academic
7	Christian Timmerer	Klagenfurt University	Austria	Academic
8	Theodore Zahariadis	Synelixis	Greece	Industry/SME
9	Ioannis Koufoudakis	Synelixis	Greece	Industry/SME
10	Petros Daras	CERTH	Greece	Research
11	Tomas Piatrik	QMUL	UK	Academic
12	Henri Quarat	INRIA	France	Research

13	Piero Corte	Engineering	Italy	Industry
14	Federico Alvarez	UPM	Spain	Academic
15	Mika Rantakkoko	Center for Internet Excellence	Finland	Research
16	Maurizio Cecciti	Telecom Italia	Italy	Industry/Telco
17	Adolfo Roza	Telefonica	Spain	Industry/Telco
18	Giorgos Kaiafas	European Commission	EC	
19	Isidro Laso	European Commission	EC	

In addition to the white paper, and based on the FMIA-Think Tank activities the following journal paper has been published:

- Th. Zahariadis, F. Alvarez, P. Moore, “An architectural approach towards Future Media Internet,” Springer Journal of Multimedia Tools & Applications (MTAP), Published on-line 7 June 2011, 10.1007/s11042-011-0826-x

The paper describes the Future Media Internet objectives and proposes a reference Future Media Internet Architecture.

The results of the workshop have been evaluated and a final version of the Future Media Internet Architecture is under finalization.

4.1.6 FIArch - T1.2 Organization of the Future Media Internet Architecture Think Tank

The nextMEDIA project has coordinated in this period the Future Internet Architecture (FIArch) Experts Reference Group (ERG). The FIArch group focuses on a few key architectural issues, contributing to an EC research roadmap towards a Future Internet Architecture. It is composed of representatives of the most relevant FP7 research projects in relation to Future Internet architectures and renowned experts from industry and academy covering in a complementarily way all areas related to the Future Internet Architecture.

Apart from nextMEDIA, the work of the group is coordinated by the FP7 CSA projects in the area of Future Internet: IOT-I, SOFI, EFFECTS+, EIFFEL, Chorus+, SESERV and Paradiso 2 and was coordinated by Isidro Laso Ballesteros.

During this period the group has been coordinated by Theodore Zahariadis (Synelixis), who has also been the editor of the document “Fundamental Limitations of current Internet and the path to Future Internet”.

During the period of 31st October 2010 to 1st May 2010, the group had a number of PhC hosted by the EC (3/12/2010, 7/12/2010, 10/12/2010), where various issues and ideas were discussed and a meeting in parallel to FIA Ghent.

The next steps that were agreed are to:

- Exchange ideas on-line (Phone calls) and off-line (via emails) in order to agree on all points of the document (done within February 2011)

- Finalise the version 1.0 of the fundamental limitations document (done on 1st of March 2011)
- Issue a call for contributions and position paper for the Future Internet Design Principles
- Organize an open workshop in Brussels (date to be confirmed 14 June 2011) in order to present the results and request additional feedback from the research community.

In addition, during this period the FIArch group completed the white paper: “Fundamental Limitations of current Internet and the path to Future Internet”. The white paper includes the fundamental limitations of the current Internet and the design objectives towards the Future Internet. Main editor of this white paper was Dr. Theodore Zahariadis (Synelixis).

The FIArch Contributions are:

Dimitri Papadimitriou	Alcatel Lucent
Hannes Tschofenig	NSN
Adolfo Rosas	Telefonica I+D
Theodore Zahariadis (Editor)	Synelixis Solutions
Petros Daras	CERTH/ITI
Stephan Haller	SAP
Ebroul Izquierdo	QMUL
George Stamoulis	AUEB
Federico Alvarez	UPM
Matteo Melideo	Engineering
Keith Howker	TSSG
Jean-Charles Point	JCP-Consult
Luciano Baresi	PoliMi
Lyndon Nixon	STI2
Saverio Niccolini	NEC
Manfred Hauswirth	DERI
Reto Krummenacher	STI2
Vito Morreale	Engineering

The EC Commission officials which act as caretakers of the FIArchitecture Group are:

Name of the official	DG INFSO – Unit
BABOT Jacques	DG INFSO – F4
DE SOUSA Paulo	DG INFSO – D1
FRIESS Peter	DG INFSO – D4
LASO BALLESTEROS Isidro (coordinator)	DG INFSO – D2

SCILLIA Mario	DG INFSO – F5
ZWEGERS Arian	DG INFSO – D3

After this meeting, and during the period (1/5/2011 to 31/10/2011) also a call for position papers was issued targeting “Design Principles of the Future Internet”. As a result 12 high quality replies have been received. Th. Zahariadis from nextMEDIA issued the call for papers and Synelixis (Th. Zahariadis, I. Missiri, E. Kostopoulou, N. Nikolakis) contributed with a position paper.

After completion of the Future Internet Fundamental Limitations document, the group moved to the next step which is the definition of the Future Internet Design Principles.

In addition, a 3rd FIArch workshop took place in Brussels, 23 May 2011.

Venue: Av. Beaulieu 25, 0/S1. 1160 Auderghem

3rd FIArch Workshop Agenda

10:00-10:10	Introduction • Motivations and Objectives • Positioning (wrt to the FIArch work flow) • Timeline & Targets	I. Laso (EC)
10:10-10:50	Background material • Current principles/Brief overview incl. application of these principles • Mythology and facts	D. Papadimitriou (Alcatel-Lucent)
10:50-11:00	Break (15min)	
11:00-11:50	Open floor presentations • Each presenter 7 minutes • 15 minutes Q&A	Mod: S. De Panfilis • S. De Panfilis (Engineering) • I. González Alonso (Univ. of Oviedo, Spain) • P. Muller (TU Kaiserslautern, Germany) • I. Papafili (AUEB, Athens) • K. Howker (TSSG, UK)
11:50-12:30	Open floor presentations • Each presenter 7 minutes • 12 minutes Q&A	Mod.: D. Papadimitriou • E. Grasa (i2CAT Foundation) • Th. Zahariadis (Synelixis) • W. Chun (ETRI, Korea) • R. Kantola (Aalto Univ., Finland)
12:30-12:45	Internet Architecture - a policy tool for innovation?	Megan Richards (Director, DG INFSO)
12:45-13:00	Ongoing International Activities on Internet Principles?	Andrea GLORIOSO (EC)
13:00-13:25	Open floor presentations • Each presenter 7 minutes • 16 minutes Q&A	Mod.: D. Papadimitriou • P. Martinez (Murcia Univ., Spain) • K. Tutschku (Vienna Univ, Austria)
13:25-14:30	Lunch	
14:30-15:00	• Summary of the contributions • Arguments and Analysis	Th. Zahariadis (Synelixis) D. Papadimitriou (Alcatel-Lucent)
15:00-15:15	Break	
15:15-	Open Discussion	Moderator:

16:30		K. Howker (TSSG)
16:30-17:30	Desicions on the Next Steps (45min) • Results & Objectives • Structure & Outline • Timeline	Th. Zahariadis (Synelixis)

The FIArch group has been very active also during this period and continues even after the end of nextMedia. The impact of the FIArch group, leaded by nextMedia, has resulted in having “Architecture” in 3 sessions in the FIA Poznan event:

- “The future of Networked Media and the Internet: Facts, Reflections and the Road Ahead” session (organized by ATOS), where FMIA was presented
- The Architectures session (co-organized by Synelixis)
- The Plenary Closing Panel focused (organized by Synelixis)

Moreover, the group has implications much beyond than only technical, even on economic sectors. This fact is recognised in the message from **Vice President Neelie Kroes** to the OECD's High Level Meeting on the Internet Economy, where she announced the EC strategy on Internet essentials named “**COMPACT**”, and the 'A' is that Architecture matters⁴.

During the reported period, the Future Internet Design Principles have been proceeded and it foreseen to be completed by the end of the year.

At least another 5 formal PhCs took place during the 2nd and 3rd trimester of 2011 and one full day workshop was organized on 23 September 2011 in EC premises in Brussels. The current version of the FIArch Design Principles was presented in FIA Poznan during the Closing panel session, with an audience of more than 150 participants.

Theodore Zahariadis as the leader of the group also gave an interview to the TV Poznan during the FIA Poznan (it has been available at the FIA Poznan web site) presenting the Future Internet prospects.

The short next steps of the FIArch group are:

- Finalisation of the Design Principles (end of the year)
- EC Publication of the document
- Authoring of a FIA Book chapter combining the Future Internet Design Objectives and Design Principles\
- Organize a conference in EC premises (tentatively end of February) to present the results
- Proposal in IETF/IRTF – Discussion with Architectural Board (end of March 2012, IETF meeting in Paris)
- Discussion with the Architectural Board of the FI-PPP

4.2 WP2 “Coordination of projects towards the FIA activities”

The aim of the 2nd WP of the nextMEDIA is to:

⁴ You can find the speech at: <http://blogs.ec.europa.eu/neelie-kroes/i-propose-a-compact-for-the-internet/>

- Collect, analyse and categorise the different scientific areas that are covered by current and evolving Network Media clusters.
- Support the cross-cluster collaboration objectives in the view of the Future Internet era.

4.2.1 Support the cross-cluster collaboration objectives in the view of the Future Internet era.

During the reporting period the Future Internet activities have been extensively disseminated in the different clusters namely: the Future Media Networks cluster, the 3D cluster and the Search Engines Cluster.

During this period, Synelixis and CERTH contributed to the authoring of the Search Engines Cluster white paper:

“Search Computing: Business Areas, Research and Socio-Economic Challenges”

which was edited and coordinated by the project CHORUS+. Besides contributing, Synelixis also actively participated at the dissemination of the white paper at the different clusters.

UPM, ATOS and CREATE-NET contributed to the common activities of the User Centric Media cluster, where a new position paper has been prepared:

“User and societal aspects of Social Networks and Internet Communities”

The consortium has presented the project activities in the Fall Concertation meeting and distributed a questionnaire on the various standardization activities. Moreover, an interactive form of the questionnaire was created on the nextMEDIA web site.

More than 24 questionnaires were returned completed from related projects of the Unit. The nextMEDIA consortium analysed the responses and completed the D2.3 with the results of the Fall Concertation Meeting questionnaires.

The consortium has presented the project activities in the Networked Media Spring 2011 Concertation meeting (in Trento) and distributed the 3rd Newsletter.

During this period, nextMEDIA has send more than 25 information emails to the Future Media Networks, User-Centric Media and the search engine clusters.

Moreover, nextMedia (Synelixis and Atos) have initiated two sessions in collaboration with other projects of the unit, for the Future Internet Assembly Poznan event:

- Future Internet Architecture Design Principles. After the "Internet Fundamental Limitations", FIArch group works towards the FI Design Principles. The aim of the session is to present to the FIA community the progress and collect feedback/comments
- “The future of Networked Media and the Internet: Facts, Reflections and the Road Ahead”. A Roadmap on Future Media Internet from a detailed analysis of industrial and academic actors including architecture, technology trends and application areas

Both proposals have been very highly ranked by the Networked Media projects, and have been selected for presentation in FIA Poznan. The first session proposal it has been grouped to the “Internet Architecture” session and the second one to the “Networked media roadmap” session.

Moreover, Th. Zahariadis has been assigned by the FIA event organizers to coordinate the plenary closing panel focused on “Future Internet Architecture.

Deliverable D2.4 has been submitted. This is the 4th outcome of the WP2 “Coordination of the activities of the cluster towards the FIA”. The deliverable D2.4 is an updated version of D2.1, D2.2 and D2.3 and is the final deliverable of nextMedia WP2.

As compared to the previous versions, the research areas state of the art of the deliverable has been updated, and a summary/categorization of the projects accepted under FP7 Call 4 and Call 7 is provided. This deliverable has included the results of the questionnaires and additional information about running projects and the Future Internet related dissemination and coordination activities of the Unit projects.

4.2.2 Concertation Meetings preparation

During Spring 2011 concertation meeting, nextMEDIA members presented and contributed to the different clusters of the units.

- one presentation in the Future Media Networks cluster describing the Network Overlay issues and the IETF CDNi BOF and
- one presentation in the Search Engines cluster describing the FIArch activities, the FMIA-TT activities and the IETF CDNi BOF.
- Presentation in the User Centric Media cluster for the Social Networks Media research.
- Presentation of the coordination activities for the project towards FIA.

During the reporting period the following off-line activities have taken place:

- Off-line communication and information of the various clusters meetings.
- Drafting and organization of the FMN and UCM cluster agenda
- Participation in the UCM, FMN, Search and 3D cluster meeting and presentations/discussion of the FIA related activities.

4.2.3 Coordination of the IETF CDNi activities

During the Spring 2011 concertation meeting (Trento, 14-15 April 2011), Th. Zahariadis proposed a joint contribution from the complete Future Media Networks cluster to the IETF CDNi.

After that, the IETF CDNi moved from BOF to WG and more projects were interested on the activity. On 20/7/2011 a PhC was organized. The projects participated have been: OCEAN, COAST, NextMEDIA, COMET, ENVISION and ALICANTE

The result was that nextMedia (Synelixis) will edit a joined draft targeting IETF 82, which will be held in Taiwan from 13-18 November. The cut-off for drafts is 24 October (initial document) and 31 October (final document).

To meet the above deadlines the following schedule was agreed within the PhC:

- 5th September: brief overview (title and 2 sentence description) of proposed use cases from each project
- 6-9th September: discussion by email on which use cases to expand, merge, etc.
- 20th September: expanded description (~1 page each) of each use case
- 21st September @ 12:00CET: conference call to plan next steps

Detailed minutes of the PhC follow:

4.2.3.1 FMN cluster PhC on joint contributions to IETF CDNi WG

Participants:

1. Gilles Bertrand, Orange
2. Yannick Le Louédec, Orange
3. Theodore Zahariadis, Synelixis
4. Yannis Koudoudakis, Synelixis
5. Chris Hawinkel, Alcatel-Lucent
6. David Florez, Telefonica
7. David Griffin, UCL
8. Emile Stephane, Orange
9. Petros Anapliotis, Technological Educational Institute of Crete
10. Bram Tullemans, UBU Spiros Spirou, Intracom

Projects: OCEAN, COAST, NextMEDIA, COMET, ENVISION and ALICANTE

Minutes:

Emile gave an overview of the CDNi WG status, charter and current drafts. There are around 10 documents, none of which are WG documents yet. The initial selection of WG documents will be discussed in the WG meeting on 28 July at IETF 81. Current focus is on the interconnection of 2 CDNs, with more complex cases to be added later.

The current use cases concentrate on the short-term needs of driving the work in the CDNi WG and cover: footprint expansion of CDNs (region to region interconnection) and traffic offload (to mitigate CDN dimensioning difficulties, to offload requests between CDNs to avoid overloads and to extend capabilities, e.g. support other devices or other access networks).

While everyone is able to comment on and discuss the current use case draft in the WG meeting and on the CDNi mailing list it is unlikely that suggesting more advanced use cases to be added to the draft would be welcomed at this stage given the role of the use case draft to concentrate on relatively simple and short-term interconnection scenarios to drive the initial specifications of the WG.

It was agreed that the best strategy for a joint contribution from the projects would be on creating a new draft containing a set of more advanced CDN interconnection use cases from the projects which could be a useful catalogue of scenarios that could drive future expansion of the WG.

Some projects already had a clear idea on which use cases might be contributed, others needed more thought, a brief summary per project is

below:

OCEAN: main use cases are already in the current draft which is a strong candidate for being adopted as the WG use-case document. The project has other more advanced use cases, some of which might just be sub-cases of the main ones, but are good candidates for the joint document/draft.

COAST: has one or two use cases to contribute.

COMET: is focussed on content mediation and some thought needs to be put into how the project's use cases might be aligned with CDN interconnection.

ENVISION: is looking at overlay-ISP cooperation with content caching being one of the services offered by ISPs - interconnection of CDNs is not directly in scope and some thought is needed to see how an extended project use case might fit the scope of the document.

ALICANTE: could contribute a use case based around HTTP adaptive streaming.

NextMEDIA: does not have specific contributions of their own as they are a coordinating project, but they offer to collate the contributions and edit the joint document and its evolution into an Internet Draft.

Theodore agreed to take this role.

It was agreed that each project would provide a brief overview (a couple of sentences) of the use cases they could contribute and in a second phase we would decide which should be described in more detail (~1 page each), if any could be merged or which might be dropped.

IETF 82 will be in Taiwan from 13-18 November. The cut-off for drafts is 24 October (initial document) and 31 October (final document).

To meet the above deadlines the following schedule was agreed:

- 5th September: brief overview (title and 2 sentence description) of proposed use cases from each project
- 6-9th September: discussion by email on which use cases to expand, merge, etc.
- 20th September: expanded description (~1 page each) of each use case
- 21st September: conference call to plan next steps

The next conference call will take place at 12.00 CEST on 21 September.

We will use the FMN-cluster mailing list to exchange contributions for the time being, if this generates too much traffic we may consider spawning a specific list in the future.

--- end of minutes ---

Frequent off-line communication and information towards the different clusters, including announcements related to FI and Call for papers,

During this period, coordination activity in the FMN Cluster led to the submission of a common IETF draft entitled "Catalogue of Advanced Use Cases for Content Delivery Network Interconnection," draft-fmn-cdni-advanced-use-cases-00, 24 Oct. 2011. The authors are: Th. Zahariadis, (Synelixis and draft Editor), Y. Le Louedec (Orange Labs), Ch. Timmerer (UNI-KLU, S. Spirou (Intracom), D. Griffin(UCL).

The draft acknowledges the following projects (in alphabetic order):

- ALICANTE (FP7-ICT-248652; <http://www.ict-alicante.eu/>),
- COAST (FP7-ICT-248036; <http://www.coast-fp7.eu/>),
- COMET (FP7-ICT-248784; <http://www.comet-project.org/>),
- ENVISION (FP7-ICT-248565; <http://www.envision-project.org/>),
- NEXTMEDIA (FP7-ICT-249065; <http://www.fi-nextmedia.eu/>) and
- OCEAN (FP7-ICT-248775; <http://www.ict-ocean.eu/>).

And the list of contributors are:

- Andrzej Beben, Warsaw University of Technology, Poland;
- Christian Timmerer, UNI-KLU, Austria;
- David Florez Rodriguez, Telefonica R&D, Spain;
- David Griffin, Yiannis Psaras, Raul Landa, UCL, UK;
- Daniel Negru, Labri, France;

- Evangelos Pallis, Petros Anapliotis, TEIC, Greece;
- George Xilouris, DEMOKRITOS, Greece;
- Isidro Laso Ballesteros, European Commission, Belgium
- Klaus Satzke, Alcatel-Lucent Bell Labs, Germany;
- Michalis Georgiadis, PrimeTel, Cyprus;
- Ning Wang, University of Surrey, UK;
- Spiros Spirou, Intracom Telecom, Greece;
- Theodore Zahariadis (editor), Synelixis, Greece;
- Yannick Le Louedec, Orange Labs, France;
- Yiping Chen, Daniel Negru, CNRS-LaBRI, France.

The draft has been presented in the last IETF meeting and a submission of the main points to ETSI is also under discussion.

4.2.4 Presentations – Leaflets

During the spring 2011 concertation meeting the nextMEDIA 3rd Newsletter was distributed. The newsletter was also sent to the Future Media Networks, the Search Engines and the User Centric Clusters. In addition, the newsletter will be distributed to the participants in the Fall Concertation meeting 13th December 2011.

4.3 WP3 “Future Media Internet international roadmap”

During the last period the aim of WP3 of nextMEDIA is to produce a Roadmap for future research in the area of the Future Media Internet. The main work in this WP was divided in 3 steps; in fact, the two of them were almost finalized such as:

- The analysis of the current situation as well as the research areas that are most important in Europe.
- A similar analysis of our parts of the world, especially USA and Japan.

The last step is almost finishing:

- A comparison of these 2 situations leading to conclusions about what areas should be priority for Europe in terms of investment in research in the Future Media Internet.

As was previously explained in the previous periodic report, there was a need of comparison with the results of the questionnaires that have been distributed to the experts. As noted in the previous period a special effort was made to include the industrial point of view in this analysis.

Because of the problems associated with differentiation, in overall terms, between research done in Europe versus other parts of the world, the work in Tasks 3.1 and 3.2 has been carried out together – in general the same Consulting reports apply and the same questionnaires have been used.

During this period the work on the Roadmap was continued, both in terms of working towards a final version but also in terms of taking into account the reviewers comments from the review which took place in May, 2011. Then the whole idea to a Roadmap, analyzing and formulation of the identification of Future research areas with the main objectives such as the virtualisation in multimedia, security, trust and privacy was materialized and completed.

In the last trimester the roadmap document was finished and submitted. A finalized version of a roadmap will be presented at the Annual Review of NextMedia in December 2011.

In task T3.4 – Additional measures for exploitation of the roadmap, arrangements were made for participation in the International Broadcasting Conference (IBC) (www.ibc.org) where the Roadmap could be shown to commercial companies for feedback. IBC is the principal commercial broadcasting event in Europe and is more and more oriented towards new media, internet technologies and the Future Media Internet.

The Roadmap was presented as a possible session for the Poznan FIA event at the end of October. In the end the session has a slightly wider focus – Future Media Roadmapping (rather than just the NextMedia Roadmap) but Paul Moore, leader of WP3 acted as the session chair and the Roadmap has been presented

Another important task associated to the Roadmap that has been initiated in this period is the collaboration with the FISA initiative. FISA is coordinated by the EU and brings together all of the roadmapping initiatives in different Coordination Actions in the EU. A number of audio conferences have taken place and a workshop is being prepared for FIA Ghent and others.

4.4 WP4 “Coordination Actions for European Research Promotion at International Level”

4.4.1 Workshops on Content Networks and 3D Media Internet

During this period it was prepared the organization of a workshop to be included in CASON 2011 Conference. The workshop proposal was submitted and accepted as a Special Session on *Technologies and Applications for Social-Networks and Internet of Things Integration* during the Third International Conference on Computational Aspects of Social Networks (CASoN 2011) in Salamanca, Spain (Oct. 19-21 2011). The focus of the conference was the presentation and discussion of results about all aspects (theory, applications and tools) of intelligent methods applied to Social Network, and the practical challenges encountered and the solutions adopted.

In this special session explored the different challenges involved in the integration of data originated from both physical (IoT) and online (Social Networks) sources taking into consideration to different research topics: e.g. large scale data integration, participatory sensing from multiple sources, correlation of physical-digital information, geo-located and online social networks correlations, trust and security.

Mobile devices, wearables and wireless sensor networks have been lately used to monitor and sense real world. On one hand, processing of information that has been sensed in the real world is used to detect human activities, environmental and urban state, healthcare conditions, proximity and concentrations of people, epidemic trends, network and routing planning and other natural and human-generated situations describing aspects of the real world. On the other hand, the evolution of the web in terms of user-generated content and the proliferation of online social networks have generated tremendous amount of information, describing dynamic interaction of people with each

other, with their surroundings and brought together through their common interests in both, virtual and real worlds.

The special session aimed to foster discussions on a comprehensive list of challenges; including, but not limited to:

- Mobility and geo-localization and their impact to/from social networks
- Wireless sensor networks, mobile devices and social network sensing
- Implications to system design of integrated physical and social network sensing
- Correlation from personal & virtual group spaces and sensors
- Impacts of searching and mining the Internet of things to social networks
- Multi-source information integration
- Search in pervasive social databases
- Models and representations of real-virtual dynamics
- Participatory sensing
- Case studies and applications of mixed sensing and mining
- Content centric networks
- Social metrics for network operation
- Middleware for mobile, wsn and social networks
- Web dynamics and grid/cloud computing
- Security, privacy, reputation and trust issues
- Users studies and human factors in real-online combined sensing
- Applications of physical-online sensing

Detailed information of the Special Session organized by NextMedia is published in:

<http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=18.htm>

Organization

Session Co-Chairs:

Federico Alvarez, Universidad Politécnica de Madrid, Spain

Paul Moore, ATOS, Spain

Oscar Mayora, CREATE-NET, Italy

List of Accepted Papers

- *Simulation of Online Social Networks with Krowdix*, Diego Blanco, Ruben Fuentes and Juan Pavón
- *Entropy Based Community Detection in Augmented Social Networks*, Juan David Cruz, Cecile Bothorel and Francois Poulet
- *On the Temporal Analysis of Scientific Network Evolution*, Frederic Amblard, Arnaud Casteigts, Paola Flocchini, Walter Quattrociocchi and Nicola Santoro
- *Implicit Groups in Web-based Interactive Applications*, Miguel Rangel Pais, Carmen Morgado and Jose Cunha
- *Mining Shared Social Media Links to Support Clustering of Blog Articles*, Darko Obradovic, Fernanda Pimenta and Andreas Dengel
- *Enabling fine-tuned relationship and privacy in social networks*, Antoine Fressancourt, Colombe Hérault, Marie Blin and Stéphane Cauchie
- *A Comparative Study of Spatial, Temporal and Content-based Patterns Emerging in YouTube and Flickr*, Milan Mirkovic, Dubravko Culibrk, Symeon Papadopoulos, Christos Zigkolis, Yiannis Kompatsiaris, Gavin Mcardle and Vladimir Crnojevic

- *Personalized adaptive media interfaces for multimedia search*, Silvia Uribe, Federico Álvarez and José Manuel Menéndez
- *Multimedia Search and Retrieval over Integrated Social and Sensor Networks* Paul Moore and John Soldatos
- *SoSIReČR – IT Professional Social Network* Peter Vojtáš, Jaroslav Pokorný, Martin Nečaský, Tomáš Skopal, Kamil Matoušek, Jiří Kubalík, Ota Novotný and Miloš Maryška

Additionally, a workshop was proposed and accepted for ICADIWT (The IPsON Workshop on Physical-Virtual Integration of sensing on Social Networks (to be held in Wisconsin, USA in conjunction with DIRF Conference), but was cancelled due to limited number of submissions.

4.4.2 Industry Panels in cooperation with relevant Conferences:

The work in this period consisted in the conclusion of preparation of D4.2 with the previous achieved results.

4.4.3 Organization of Networked Media Track in Scientific Events:

In this period, the Workshop organized by nextMEDIA during INFOCOM took place (Shanghai, 10 April 2011). All the arrangements of the workshop including CFPs, website setting, coordination of submission of papers for the proceedings, organization of the workshop on-site and post-workshop activities with INFOCOM organization were completed.

The activities in this task included also the follow-up on each of the ongoing Special Issues as follows:

- Special Issue on User Centric Media. Springer Journal on Multimedia Tools and Applications: The assignments for the review process have been constantly monitored and re-assigned when necessary and this special issue was published during this period.
- Special Issue on Future Media Internet. IEEE Communications Magazine: This special issue was concluded in this period and is currently on press
- Special Issue on User Centric Media. Springer Journal on Multimedia Tools and Applications has concluded the review process.

As part of the activities done in this task, it was prepared, submitted and accepted the final report of NextMedia INFOCOM Workshop to IEEE Global Communications Letters that was published in September 2011. A copy of the published report is included below:

Global Communications Newsletter

September 2011

International Workshop on Future Multimedia Networks and IP-based TV (FMN-IPTV 2011)

By Oscar M. Bonastre, Oscar Mayora and Federico Alvarez, Co-Chairs of FMN-IPTV 2011, Spain

The International Workshop on Future Multimedia Networks and IP-based TV (FMN-IPTV) took place on 10 April 2011 at the Shanghai International Convention Center, China, and was held in conjunction with the 30th IEEE International Conference on Computer Communications (INFOCOM 2011). This scientific event was organized by Dr. Oscar M. Bonastre (Operations Research Center, Miguel Hernandez University, Spain), Dr. Oscar Mayora (CREATE-NET International Research Center, Italy), and Dr. Federico Alvarez (Technical University of Madrid, Spain).

FMN-IPTV was a half-day scientific workshop focused on the recent disruptions in the future media networks and how these will shape the IP-based television of the future. The workshop covered ample interaction, networking and discussion among participants on research topics of emerging trends in the area of seamless media delivery and how the networks, current and future, will support the converged multimedia. As a successful result, FMN-IPTV provided the community with those recent advances in IP video and IP-based Television that will impact the media networks of the future. Additionally, the special track of FMN-IPTV dealing with IP-based TV technologies was linked to the third edition of the International Workshop on IPTV Technologies and Multidisciplinary Applications (IWITMA). As a consequence, it was consolidated with the success of the last editions of IWITMA that were held in conjunction with the

IEEE International Conference on Multimedia and Expo (ICME 2010) and the International Conference in Telecommunications (ConTEL 2009), respectively.

In particular, the technical program of FMN-IPTV started with an opening session and a talk given by Co-Chair Oscar M. Bonastre about Emerging Trends in Future Media Networks and IP-based TV. Then, six technical papers, accepted from a total of sixteen submissions, were presented through two sessions moderated by Dr. J. Liu (University of North Dakota, USA) and Maria Alduán (Polytechnic University of Madrid, Spain), respectively. Next, Prof. Keith W. Ross (Polytechnic Institute of New York, USA) gave the keynote lecture, "You Can't Hide: On the Privacy of IP-Video." To finish, Co-Chair Oscar Mayora completed the workshop with a closing ceremony and the presentation of the best workshop paper award to "Learning in User-Centric IPTV Services Selection in Heterogeneous Wireless Networks," authored by M. Khan, S. Marx (DAI-Labor, Technical University Berlin, Germany), and H. Tembine (SUPELEC, Paris, France).

As a final point to this short article, we want to thank all authors contributing to the technical excellence of FMN-IPTV 2011, and all the members of the Technical Program Committee for their effort in providing timely and constructive reviews, which ensured the scientific excellence of this international workshop. The success relied also on the valuable contribution of the invited speaker, who gave a high quality keynote, as well as promoted the participation of the attendees, who triggered many lively discussions. We hope the event fulfilled the expectations of the workshop participants and audience of INFOCOM. Special thanks go to the sponsors of the workshop. FMN-IPTV was supported by the European Union through the project NextMEDIA, and by the Ministry of Science and Innovation (Spain) through the project "Game theory applications to resource management and socio-economic problems" (MTM2008-06778-C02-01 and ACOMP/2011/129).



The invited speaker Prof. Keith W. Ross giving the keynote at FMN-IPTV 2011.



The FMN-IPTV 2011 General Chairs Oscar M. Bonastre and Oscar Mayora with keynote speaker Prof. Keith W. Ross

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Other activities in this period included the follow-up on NextMedia Journal Special Issues. From the two active special issues in this period, the one in IEEE Communications was published and the one in Springer Multimedia Tools and Applications is now on press and is expected to be published shortly.

Additionally, in this period it was submitted and accepted the organization of a Journal Special Issue in Mobile Networks and Applications Journal (MONET) in the topic of Mobility and Social Networks Confluence. Details about this special issue follow in the open call for papers:

Special Issue on Mobility and Social Networks Confluence
ACM Springer Mobile Networks and Applications (MONET) Journal
Journal Web Site: <http://www.springer.com/engineering/signals/journal/11036>

Mobile devices, wearables and wireless sensor networks have been lately used to monitor and sense real world. On one hand, processing of information that has been sensed in the real world has been used for a wide set of applications. These applications include detection of human activities,

environmental and urban state monitoring, estimation of healthcare conditions, proximity and concentrations of people, epidemic trends, network and routing planning and other natural and human-generated situations describing aspects of the physical world. On the other hand, the evolution of the web in terms of user-generated content, crowd sourcing and the proliferation of online social networks have generated tremendous amount of information, describing dynamic interaction among people and their surroundings in both, digital (online) and real worlds, making people-generated information to become a new type of virtual sensor.

In this respect, the amount of information available from the connected world, either belonging to virtual or to physical sources, can describe aspects of reality in a detailed manner if both sources are combined. The kind of dynamics that the integration of digital and physical worlds may generate will have an impact at different levels, involving the human-social-environmental dimensions as well as at the network organization. In this regard, a set of novel research challenges will arise for dealing with such integration of information. This Special Issue intends to report advances on applications, methods and approaches envisioning to address the new challenges in this field.

Relevant topics

This special issue envisions contributions highlighting the different challenges and opportunities involved in the integration of Mobile Sensing and Social Networking as a bridge between the real and digital worlds. Some relevant topics include:

- Mobility, geo-localization and social networks
- Wireless sensor networks, mobile devices and social network sensing
- System design implications of mixed physical and social network sensing
- Correlation from real & virtual spaces and sensors
- Searching the internet of things and social databases
- Multi-source information integration
- Models of real-virtual dynamics
- Case studies and human factors in mixed worlds sensing and mining
- Social metrics for network operation
- Participatory mobile sensing, crowd sourcing and social media mining integration
- Middleware for mobile, WSN and social networks
- Web dynamics and grid/cloud computing
- Security, privacy, reputation and trust in mixed online-physical worlds
- Applications of mixed physical and social network sensing

Guest Editors:

Oscar Mayora Ibarra, CREATE-NET, Italy

Ryoichi Shinkuma, Kyoto University, Japan

Schedule:

- Manuscript submission deadline: March 16th 2012
- Notification of acceptance: April 30th 2012
- Submission of final revised paper: May 30th, 2012
- Publication of special issue: 3rd or 4th Quarter, 2012 (Tentative)

4.4.4 Events with Third Countries

In this period the organization of the events in third countries evolved as follows:

The Eu-Japan Workshop on Social Networks was held in Kyoto, Japan. The workshop included the following agenda (presentations are available at <http://www.create-net.org/ubint/Nextmedia/agenda.html>)

MORNING SESSION

9:00 - 9:20 Welcome and Introduction - Ryoichi Shinkuma and Oscar Mayora

9:20 - 10:40 - Session I - Chair - Ryoichi SHINKUMA

Hideyuki KOTO - KDDI R&D Labs. Inc

"Statistical Characteristics of Social Network Structure revealed by Analysis of Telecommunication Services"

Oscar MAYORA - CREATE-NET, Italy

"Social Networks and Participatory Sensing"

Shinichi DOI - C&C Innovation Research Laboratories, NEC Corporation

"Pro-Social Activity Promotion in Symbiotic Social Intelligence System"

Koji ZETTSU - National Institute of Information and Communications Technology (NICT)

"Japan Information Services Platform for Real-World Awareness via Social Sensing"

10:40 - 11:00 Coffee Break

11:00 - 12:20 - Session II - Chair - Oscar MAYORA

Hendrik BERNDT - DOCOMO Communications Laboratories Europe GmbH

"Challenges in taking Social Networking Services to the Real World"

Ryoichi SHINKUMA - Kyoto University

"Social metric based network and service control"

Kiran YEDUGUNDIA - CREATE-NET

"Emerging business models and trends using online social networks"

Kazuhiro YAMAGUCHI - Kobe Digital Labo

"Structuring and searching method of the data defining social relationship"

AFTERNOON SESSION

13:30 - 14:30 - Brainstorming and Discussion on Research Challenges and Opportunities (in two separate groups)

14:30 - 16:00 - Definition of table of contents of White Paper and assignment of responsibilities + (individual video interviews in parallel)

16:00 - 16:20 - Wrap up & Closing

For the EU-USA Workshop nextMEDIA had 2 options: one was prepared to be organized jointly with UCLA (together with Prof. Giovanni Pau), but unfortunately the dates planned were out of the nextMEDIA lifetime. The second option was to promote the nextMEDIA results in an event with Canada, and due to the time limitations finally was the chosen option.

The major objective of this event was to explore prospects for deeper exchange and collaboration between the Canadian and European research communities in the area of "Future Internet (FI)" in Europe.

It took place in March 2011 in the Canadian city of Waterloo which is home to the most respected Canadian university in the areas of computer science and mathematics (University of Waterloo). As well, it is home to Research in Motion, the company behind the Blackberry as well as being the most vibrant area for start ups and high tech companies in Canada (*"the Canadian Silicon Valley"*). The event was co-sponsored by the EU and the National Research Council of Canada.

The agenda for the event can be found at <http://www.futureinternet-internetdefutur.nrc-cnrc.gc.ca/eng/index.html>

The major outcome of the event was to provide the opportunity to connect directly researchers from Canada and the EU to explore potential opportunities for collaboration as well as allow these researchers to clearly see what is being done in the other region.

For NextMedia the major outcome was to increase awareness of the project amongst the Canadian research community. To that end contacts were made who especially expressed interest in receiving a copy of the deliverable D3.3 Future Media Internet Roadmap.

4.4.5 NextMEDIA Final Workshop

As part of this period's activities, it was organized the Final nextMedia Workshop as part of FIA Poznan as the main industrial partners of Future Internet were present in the event which was organized by the European Commission.

The Final NextMEDIA workshop has been organised within the FIA workshop in Poznan. The decision to bring nextMEDIA final outcomes to the community during the FIA workshop rather than in a separate event has been made based on following reasons:

- NextMEDIA has been strongly involved in participating to the past FIA events
- The event was live broadcasted and several industrial members were informed to follow the event via webcasting
- FIA brings together around 150 research projects and other researchers engaged in Future Internet research which gives us great opportunity to target wide and right audience.
- FIA workshop in Poznan is well timed in the end of the October 2011 (the official last month of the NextMEDIA project).
- The FIA sessions organised by nextMEDIA will have a significant impact on FIA roadmap and further planning of the next FIA events.

During the workshop there were presentations from NextMedia representatives and from other external speakers.

The session was named: "The Future of Networked Media and the Internet: Facts, Reflections and the Road Ahead"

The chair of the session was Paul Moore (Atos) with the shepherd of the Session Christophe Diot (Technicolor). The session has been attended by a wide audience of around 60 people, including the

new Head of Unit Net Media Viriol Peca. The session could be followed via live streaming and is still available via VoD.

The session has been divided into several parts where specific areas were dealt, with the perspective of two different speakers respectively, followed by a Q&A session with the audience. The short summary of each presentation is given below.

Introduction

Paul Moore (Atos, Spain) representing the Coordination Action NextMedia presented the different speakers and set the scene.

Architecture

Krzysztof Kurowski (PSNC Poland) and Theodore Zahariadis (Synelixis, Coordinator FIArch Working Group) presented different perspectives on the needs and requirements and future evolution of Future Internet Architecture were presented.

3D

Krzysztof Kurowski (PSNC Poland), and Ebroul Izquierdo (QMUL, Coordinator of NoE 3DLife) examined future scenarios and challenges in the area of 3D.

Connected TV

Ralf Neudel (IRT, Editor “NEM Strategic Research Agenda “) and Federico Alvarez (UPM, Coordinator of NextMedia) focused on portraying the evolving landscape of Connected TV in Europe. A technology overview was presented and the current market situation in Europe explained including a quick outlook on future trends and open challenges in this domain.

Social Media

Oscar Mayora (Create-Net) and Paul Moore (Atos) presented different perspectives on the Social Media and its impact. It is becoming more and more difficult to clearly separate the social networks from the media internet. Google is Google search but it is also Youtube and Google+. Facebook’s goal is to become the gateway to internet media (Spotify and Netflix now available from inside Facebook for example.) Is Daily Motion a social network or a video platform? Social media are rapidly expanding to business media as companies come to realize the power and efficiencies of social media to resolve many of today’s business problems.

Business Models and Wrap-up - Paul Moore (Atos) closed the session with discussions about the Business Models. More and more the question of business models is coming to the fore in any discussion of the Future Media Internet. The battle between Apple, Google, Facebook, Amazon, etc. for the hearts and minds (but especially wallets!) of internauts over the next 10 years is partly a struggle for technological supremacy but just as important will be the struggle for business model supremacy.

The Outcome of the Session

The results of a questionnaire survey were presented, which revealed the fact that Research Challenges such as “*3D content generation leveraging emerging acquisition channels*” and “*Immersive multimedia experiences*” appear to be in the mid-term future interest while “Content with memory and behaviour” is believed to be a challenge in the long-term. In order to support such technologies, the network design has to adapt 3-D content, link different heterogeneous devices and create new models for content distribution involving social and user contextual aspects.

Moreover, bringing rich-media experience to home users, the “Connected TV” conception has to deal with many different challenges in order to become a standard in the TV industry. Hybrid Broadband TV can deliver the specifications to this field of research. Currently, only 3 EU countries are operating the HbbTV technology, while seven more exist which are on a trial or service-announcement phase.

Finally, an extended talk was given for a “Participatory Sensing World” of an IoT network where the Real World and the Online World should be bridged. The huge amount of user data that is available through billions of mobile devices and different social networks, like location, activities, posts to social networks, surroundings environment, behavior etc., can lead to new application scenarios and emerging technologies like management of emergency services, monitor of environment and pollution, healthcare, games and entertainment.

The details of the session included:

Future Internet Assembly

TIME	NAME	PLACE
	Session 1.2 - Networked media roadmap (Final NextMedia Workshop)	Room 2
PRESENTATION	Introduction	
PRESENTERS	Paul Moore, Atos, Spain	
PRESENTATION	3D	
PRESENTERS	Ebroul Izquierdo, QMUL, Coordinator of NoE 3DLife, Dr Krzysztof Kurowski, Poznan Supercomputing and Networking Center	
PRESENTATION	Connected TV	
PRESENTERS	Dr Federico Alvarez, Coordinator of Infinity Project, Coordinator of NextMedia, UPM, Ralf Neudel, IRT, Editor "NEM Strategic Research Agenda"	
PRESENTATION	Social Media	
PRESENTERS	Paul Moore, Atos, Spain	
PRESENTATION	Social Media, Participatory Sensing and IoT	
PRESENTERS	Oscar Mayora, Create-Net	
PRESENTATION	Business Models and Wrap up	
PRESENTERS	Paul Moore, Atos, Spain	

4.5 WP5 “Dissemination and standardisation coordination”

4.5.1 T5.1 ETSI ISG on Future Media Internet

Communication with IRTF chair triggered further discussions between NextMEDIA partners about the options and future plans to accomplish this task. Furthermore, members of the FIArch group have been involved in discussions regarding the creation of the standardisation group in order to hear also from the experts outside the project consortium. As a result, NextMEDIA partners decided to get strongly involved in the upcoming IETF meeting and join the BOF session on Content

Centric Networking. The 80th IETF meeting has been held in Prague from 27 March to 1 April together with workshop on Interconnecting Smart Objects with the Internet on 25 March.

After internal discussions between NextMEDIA partners and members of the FIArch group, it has been decided to get strongly involved and join the BOF session on Content Centric Networking. nextMEDIA participated in the IETF content Delivery Networks Interconnection (CDNI) BOF during the 80th IETF meeting held in Prague. The session ended with a discussion of the proposed charter which is in large accepted by the attendees.

The final step of asking the community if there is support for such an action was positive, i.e., most of the CDNI BOF attendees were in favour of this becoming a WG. NextMEDIA has expressed interest in helping with shaping the charter of the group and disseminating the group to the wider community.

NextMEDIA continued with supporting CDNI WG in its starting phase. Theodore Zahariadis (Synelixis) participated to the PhC on joint contributions to IETF CDNI WG.

During the CDNI PhC it was agreed that the best strategy for a joint contribution from the projects would be on creating a new draft containing a set of more advanced CDN interconnection use cases from the projects which could be a useful catalogue of scenarios that could drive future expansion of the WG. NextMedia as a coordination action offered supporting work in creating CDNI documents. Theodore Zahariadis agreed to collate the contributions from other projects and edit the joint document and its evolution into an Internet Draft. The next conference call took place at 12.00 CEST on 21 September where NextMEDIA representatives were present.

Meanwhile, nextMEDIA participated in the coordination conference calls and agreed to collate the contributions from other projects and edit the joint document and its evolution into an Internet Draft. nextMEDIA has been coordinating the production of this work until the release of the final version. The CDNI draft has been produced by the Future Media Networks (FMN) cluster of the Networked Media Systems FP7 projects, namely NextMEDIA, ALICANTE, COAST, COMET, ENVISION and OCEAN . The list of contributors can be found below:

- Theodore Zahariadis (editor), Synelixis, Greece;
- Andrzej Beben, Warsaw University of Technology, Poland;
- Christian Timmerer, UNI-KLU, Austria;
- David Florez Rodriguez, Telefonica R&D, Spain;
- David Griffin, Yiannis Psaras, Raul Landa, UCL, UK;
- Daniel Negru, Labri, France;
- Evangelos Pallis, Petros Anapliotis, TEIC, Greece;
- George Xilouris, DEMOKRITOS, Greece;
- Isidro Laso, European Commission, Belgium (on a personal basis);
- Klaus Satzke, Alcatel-Lucent Bell Labs, Germany;
- Michalis Georgiadis, PrimeTel, Cyprus;
- Ning Wang, University of Surrey, UK;
- Spiros Spirou, Intracom Telecom, Greece;
- Yannick Le Louedec, Orange Labs, France;
- Yiping Chen, Daniel Negru, CNRS-LaBRI, France.

Thodore Zahariadis is an editor of the Internet Draft and he has been strongly involved in shaping the document. The draft is accessible at the following site <http://tools.ietf.org/pdf/draft-fmn-cdni-advanced-use-cases-00.pdf>

Tomas Piatrik disseminated CDNI group during the Standardisation Session in FIA Poznan.

ETSI:

Following the feedback from the review meeting, NextMEDIA investigated other possibilities to create the standardisation WG under ETSI. The proposed idea was to create standardisation WG under ETSI through the FIA steering board. Creating WG via FIA steering board would bring greater long-term impact even after the NextMEDIA project is finished. NextMEDIA made contacts with FIA members and proposed the plan. After the discussion with ETSI regarding the standardisation group on Future Internet Architectures, nextMEDIA contacted members of the FIA steering board and proposed to take over and create the group under the FIA umbrella. The planned discussions about the issue took place during the FIA in Poznan where Tomas Piatrik (QMUL) and Theodore (Synelaxis) met with representatives of ETSI, FIA Steering Board members and other industry representatives. The discussions resulted in mixed opinions and where the majority agreed there is a need for such group, however the lack of industry partners interested in creating it, seems to be the remaining problem. Discussions continue offline.

4.5.2 T5.2 Standardisation monitoring and regulatory implications of Future Media Internet

NextMEDIA continued with monitoring standardisation activities related to Future Media Internet. Theodore Zahariadis and Tomas Piatrik has participated in the Workshop on "Interconnecting Smart Objects with the Internet", held in Prague. The workshop has been organised by members from the following groups: Internet Architecture Board (IAB), the IETF (Internet, Routing and Applications Areas), together with the Future Internet Architecture Group of the Future Internet Assembly.

NextMEDIA has actively participated in the discussions during the workshop and submitted two position papers:

- Theodore Zahariadis, Helen C. Leligou, Panagiotis Trakadas, Mischa Dohler, "Building trust among Virtual Interconnecting Smart Objects in the Future Internet",
- Naeem Ramzan, Tomas Piatrik, Ebroul Izquierdo, "Scalable Video Coding in Networked Environment".

Furthermore, important contacts with IETF beneficiaries have been made during the Workshop and IETF meeting.

NextMedia carried on with monitoring standardisation activities of existing regulatory bodies related to Future Media Internet, namely IETF (/W3C) IETF/IRTF, ETSI and MPEG. CERTH produced reports on recent standardisation activities in MPEG and IETF. These reports were used for finalising FISA documents on standardisation activities. QMUL continued with leading FISA networked media oriented activities. Tomas Piatrik has attended number of conference calls and supported organisation of the FIA Standardisation session in Poznan. He has also actively participated to the session as a speaker, presenting the goals of the FISA group and the road ahead. He highlighted the benefits that community can get from the support group in creating standards.

Further, he presented NextMedia analysis results for projects interest in standardisation. The focus of the last part of his presentation has been put on IETF CDNI WG and the NextMedia proposal on creating the ETSI ISG on Future Internet Architectures. The presentation triggered long discussions from the audience. The FISA work is ongoing and the next conference call is planned on 22 November. Tomas Piatrik will participate to the call and support the group's activities.

NextMEDIA participated in various FISA teleconferences to shape the action plan and documents about standardisation activities. NextMEDIA has been helping with creating dissemination materials of the FISA group and identifying the roadmap. QMUL has prepared presentation slides introducing NextMEDIA activities in standardisation that have been presented during the FIA in Ghent and prepared a FISA poster.

Tomas Piatrik (QMUL) covered FISA Stand in FIA Ghent and presented the objectives of the FISA group to the FIA participants during Standardisation Workshop and FIA. Furthermore, QMUL has participated in creating an essential FISA document for the FI-related projects, summarising existing pre-standardisation schemes in the standardisation bodies. Documents summarising existing pre-standardisation tracks in various standardisation bodies have been updated. Tomas Piatrik will represent NextMEDIA project and FISA group during the FIA in Budapest with presentation about the pre-standardisation paths and practises in the Media Internet sector.

4.5.3 T5.3 Web page and dissemination material

NextMEDIA website has been updated with all new project related information, such as upcoming events, working groups and publications and dissemination material.

In this period the 2nd issue, 3rd and 4th issue of NextMEDIA newsletter has been finalized giving readers a summary of all new activities and achievements during the second half of the year. In these issue readers can find information about NextMEDIA recent events, workshops, dissemination and standardisation activities, and the cooperation with the projects of the networked media and search engines area. Furthermore, in the 3rd issue we included the results from our analysis on the networked media research orientations & standardisation focus in current and evolving networked media projects.

In order to distribute the newsletter to the right audience, NextMEDIA has created the special distributing channel combining mailing lists of projects from D2 unit and other NextMEDIA working groups, including FCN, FMI-TF, FMIA-TT and FIArch. 3rd NextMEDIA newsletter has been distributed during the spring 2011 concertation meeting in Trento and it has been sent to the Future Media Networks, the Search Engines and the User Centric Clusters. The 4th will be distributed in the Concertation Meeting which will take place in December 2011.

All dissemination activities carried out during the first year of the project together with the future plans has been reported in the updated version of the deliverable D5.3, and have been covered in D5.4 the second year activities. The production of this deliverable was led by QMUL gathering inputs from other nextMEDIA partners. Furthermore, QMUL has updated the deliverable D5.3 with standardisation activities, analysis of the results from the standardization questionnaires and FISA supporting activities.

The 4th NextMedia Newsletter summaries all important project activities and relevant events. Newsletter has been distributed to the projects and companies related to areas of Networked Media and Future Media Internet. Furthermore, the final deliverable on dissemination and standardisation activities (D5.4) has been finalised. The production of this deliverable was led by QMUL gathering inputs from other nextMEDIA partners. NextMEDIA website has been updated with all new project related information, such as upcoming events, working groups and publications and dissemination material.

Regarding the web-site, and according to our records, we have 45000+ pages visited from our website in the last 12 months (figure that is comparable to other big projects of the unit):

Firefox - future media internet - Ad...

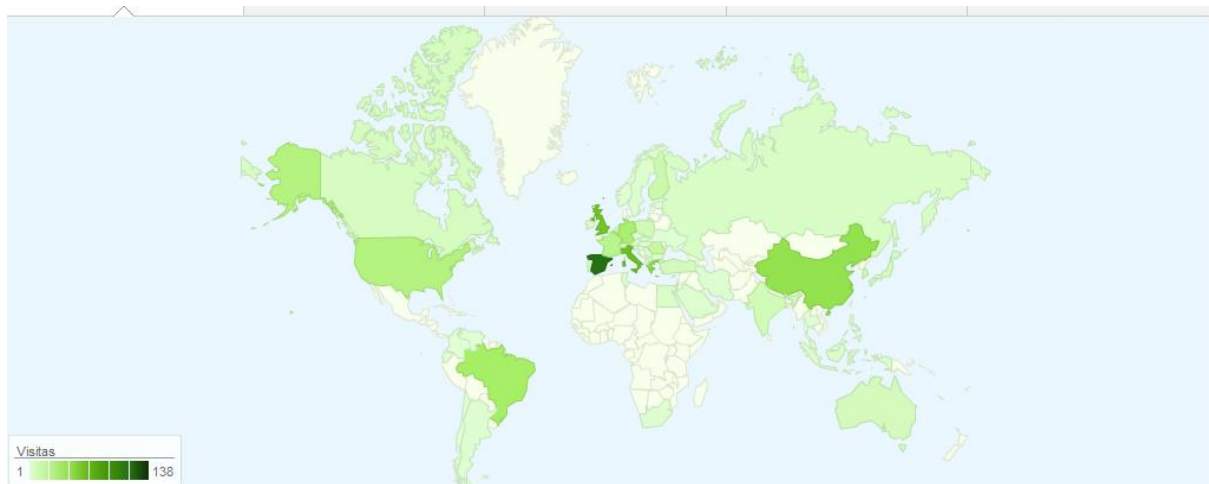
www.gatv.ssr.upm.es/nextmedia/administrator/index.php?option=com_content

Más visitados Comenzar a usar Firefox Últimas noticias www.trabber.com - Bu... Welcome to RiVET - PL... Marcadores

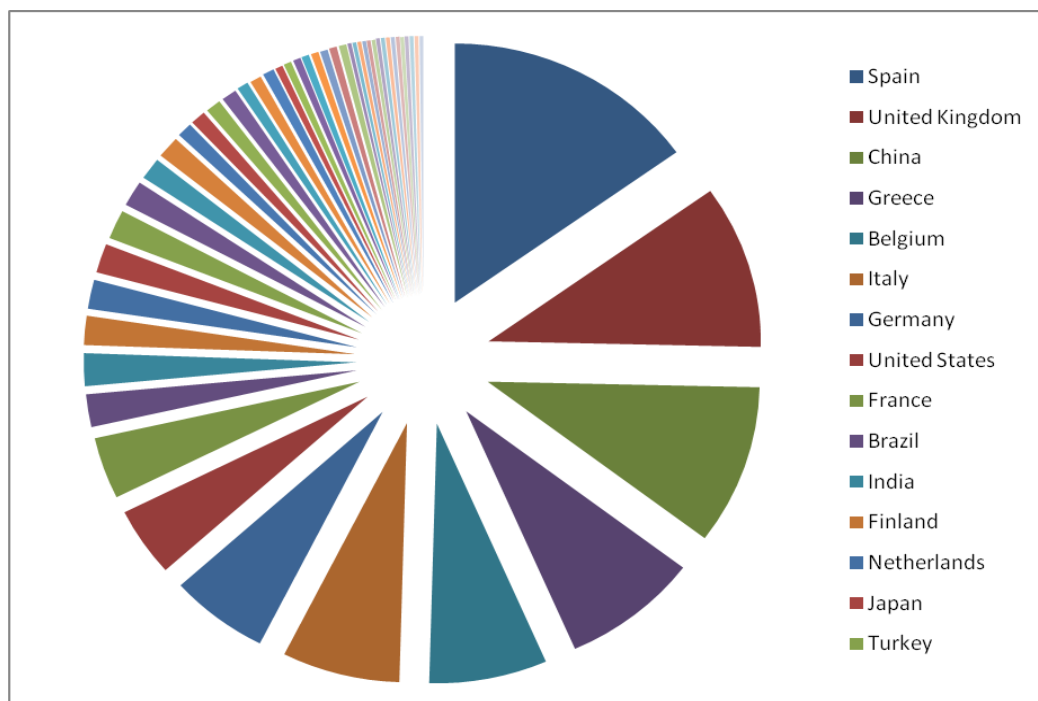
ID	Titulo	Imagen	Estado	Publico	Categoría	Subcategoría	Autor	Fecha	Visitas	Orden	
1	Universidad Politécnica de Madrid		✓	✓	Público	NextMedia	Partners	Administrator	19.11.09	4712	4
2	Center for Research and Telecommunication Experimentation for Networked Communities		✓	✓	Público	NextMedia	Partners	Administrator	19.11.09	4542	24
3	nextMEDIA special session: International Conference on Telecommunications and Multimedia (Chania, Greece) 14-16 July 2010		✓	✓	Público	News and Events	Past	Administrador Nextmedia	08.03.10	3627	38
4	Future Content Networks		✓	✓	Público			Administrador Nextmedia	10.02.10	2110	33
5	Deliverables		✓	✓	Público	Results	Deliverables	Administrator	19.11.09	1824	11
6	Welcome to NextMedia Project		✓	✓	Público			Administrator	18.11.09	1756	1
7	Partners		✓	✓	Público			Administrator	19.11.09	1607	22
8	Register in our activities		✓	✓	Público			Administrator	19.11.09	1468	21
9	NextMedia social networks		✓	✓	Público			Administrator	19.11.09	1347	20
10	Future Media Internet: Architecture		✓	✓	Público			Administrador Nextmedia	10.02.10	1342	34
11	Calendar		✓	✓	Público			Administrator	19.11.09	1297	18
12	Questionnaire		✓	✓	Público			Marta Barrilero	05.04.10	1273	47
13	Links		✓	✓	Público			Administrator	20.11.09	1264	27
14	white papers		✓	✓	Público	Dissemination	White Papers	Administrador Nextmedia	07.04.10	1154	49
15	Logo		✓	✓	Público	NextMedia	Logo	Administrator	19.11.09	1065	8
16	leaflets		✓	✓	Público	Dissemination	Leaflets	Administrador Nextmedia	10.02.10	1029	36
17	Future Media Internet: Task Force		✓	✓	Público			Administrador Nextmedia	10.02.10	995	35
18	Newsletter		✓	✓	Público	Dissemination	Newsletters	Administrador Nextmedia	17.11.10	953	74
19	Contact		✓	✓	Público			Administrator	20.11.09	877	28

17:25 05/12/2011

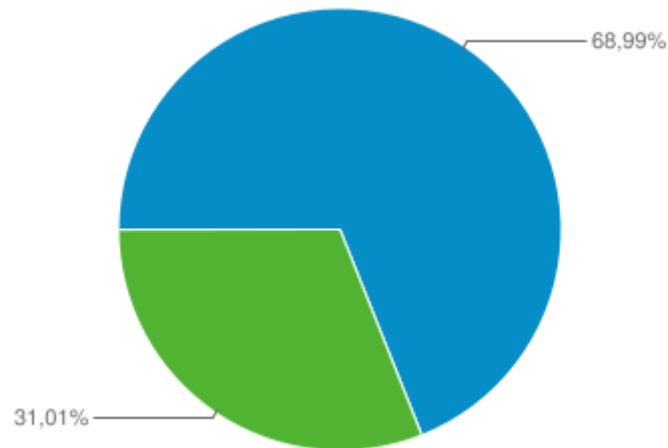
The website received visits from several parts of the world as the following picture indicates:



We can underline the number of visits received from 59 different countries, many from Japan and US, which is high for an EU funded project, from different regions:



The number of unique visitors is around 200-400 per month, where in the last 6 months the returning visits have been 68,99% new visits and 31,01% returning visits



These figures are comparable to the small projects of the FP7 (with similar budget), a little weaker compared to other medium size projects (it has to be mentioned that although the reported number of visits in our counters and in the statistics vary and that the number of pages visited is higher compared to medium size projects).

Viewing: Visit Duration

Visit Duration	Visits	Pageviews	Percentage of total	
			Visits	Pageviews
0-10	435	462	75.26%	51.51%
11-30	26	57	4.50%	6.35%
31-60	23	53	3.98%	5.91%
61-180	43	130	7.44%	14.49%
181-600	23	67	3.98%	7.47%
601-1800	23	95	3.98%	10.59%
1801+	5	33	0.87%	3.68%

4.5.4 T5.4 Participation in exhibition events

NextMEDIA has brought project outcomes to the broad research community during FIA in Ghent. FIA Ghent was a part of the Future Internet Conference Week, a series of events concerning different aspects of the Future Internet. The overall project outcomes and its standardisation activities have been presented in the FISA slot and closing session of the FIA event. Further, NextMEDIA has co-organised two BO sessions, namely “Search as an architectural component” and “Architectures”. More details about the outcomes of these sessions are reported in the WP1.

Secondly, nextMEDIA beneficiaries were active in contributing to the upcoming 7th FIA workshop in Budapest. nextMEDIA organized different sessions on “Interactive Media Experience”. More details about this session can be found in the section 1.1.1 (T1.1). NextMEDIA will also have a representative (Tomas Piatrik) during the standardisation session in FIA, who will disseminate standardisation activities of the project. All nextMEDIA partners will participate in the FIA in Budapest.

Thirdly, nextMEDIA members made a special contribution to the 8th FIA workshop Poznan, which was already widely covered in this report.

The 2011 NEM Summit was hosted by Politecnico di Torino on 27-29 Sept. 2011, in the centre of Torino, Italy. The NEM Summit is an annual Conference and Exhibition annually organised by the NEM Initiative under the aegis of the European Commission (DG Information Society and Media). The event, both for the conference and exhibition parts, addresses ICT at large and more precisely topics related to networked and electronic media such as:

- Media-related applications and business models
- Content creation
- Networking and delivery infrastructure
- Content search and media presentation
- Technology drivers and enabling technologies

NextMEDIA distributed project leaflets and newsletter during the event in order to disseminate project activities to large ICT community.

Another important industrial event was the participation at IBC – International Broadcasting Conference - (www.ibc.org/) which is the most important event for the broadcasting industry in Europe with the participation of almost 50.000 professionals from around the world. The general profile of visitors to IBC is eminently industrial with representatives from all of the important broadcasters and companies in the media and broadcast sphere.

IBC takes place annually in Amsterdam and this year ran between Sept 9 and Sept 14, 2011. Atos Research & Innovation had a booth in the Connected World section of the conference and NextMedia was one of the projects and assets that Atos presented to visitors. Another important aspect is internal dissemination in Atos. Most of the European Atos Account Managers for broadcast and New Media attended IBC and visited the booth where projects and activities such as NextMedia could be described to them. Furthermore, these Account Managers brought important clients to the booth to learn more about the different research activities.

Specifically, the following material was distributed to visitors:

- leaflets of NextMedia
- the NextMedia Newsletter
- a near final version of the NextMedia Future Media Internet Roadmap
- a NextMedia poster was part of the booth (see Figure 12)
- copies of White Papers coordinated by NextMedia (“Research *Challenges* and the Road Ahead”, Social Networks Trends and Research Challenges”)

Atos was represented by Paul Moore, David Salama and Irene Schmidt.



Figure 1: Paul Moore in the Atos booth during the ICB conference

4.5.5 T5.5 Talent support

nextMEDIA continued with collecting recorded talks and presentations from recent conferences, workshops and exhibitions related to the future internet. This material will be complementary to the existing list of talks published on the website.

The talent support continued with collecting recorded talks and presentations from recent conferences, workshops and exhibitions related to the future internet. The final amount of future internet oriented talks uploaded to the website reached 50 hours.

4.6 WP6 “Management”

General Administrative tasks for the Management of the project were handled in order to control in the correct development of the Project Activities.

In the WP6, we have set up general nextMEDIA meetings and a number of phone conferences, which are detailed in the section 7.

In addition, during this period the set up of a group of CSAs by the European Commission has taken place. nextMEDIA is participating in several activities (architecture vision, organisation of FIA, portal, FIA book, roadmap for FP8, standardisation and international collaboration) and leading the FI Architecture.

The coordination with other projects was another important activity.

A number of Conference Calls and many informal discussions have taken place in order to homogenize views and progress with the system design.

4.7 Detailed activities per partner

As a Review of the project was conducted every 6 Months, this section is organized to reflect the work done by the partners from month 13 to 18, and to better explain the work done, divided into trimesters.

4.7.1 UPM

4.7.1.1 Work from month 13 to 15

• WP1, T1.1 ○ UPM has been involved in the FIA session on architectures organization and in the FIA Architecture group and their respective workshops. • Organisation of two sessions for Ghent (“FI Architecture” and “Searching as an integral component of the FI Architecture”), • UPM is member of the FIA book Editorial team and edited the FIA book. • Review of several papers of the FIA book • Organization and participation in the Task force meeting • WP1, T1.2 ○ FMIA-TT • Participation in the Think Tank reference architecture document • Participation in the FIArchitecture document (FIArch) • FIArch organization and FIArch workshop
• WP1, T2.1 • FIA Break Out Session organisation (architectures) • WP2, T2.2 • Participation in the Fall concertation meeting • Presentation of the activities of nextMEDIA in the concertation meeting of unit D2
• WP3, T3.3 • Participation in the elaboration of the roadmap

• WP4, T4.2 –Preparation of potential approach regarding new panels. • WP4, T4.3 - Organization of Networked Media Track in Scientific Events: During this second period the following events were prepared and organized: • Setup of Workshop for INFOCOM and activities related to CFPs, website setting, etc. were coordinated in conjunction with co-chairs. • Contribution to D4.2
• WP5, T5.1 ○ Participation in discussions and planning the creation of the standardisation group • WP5, T5.3 ○ 2nd NextMEDIA newsletter ○ Finalisation of the Deliverable D5.3 ○ Web site updating • WP5, T5.5 Gathering recorded talks from UCMedia conferences and workshops related to Future Internet
• WP6 • Management of nextMEDIA • Meetings and teleconferences organization • Liason with other projects • Administrative tasks

4.7.1.2 Work from month 16 to 18

• WP1, T1.1 ○ UPM is heavily involved in the FIA organization and in the FIA Architecture group • UPM is member of the FIA book Editorial team. • Organization of the TF meetings and participation in the 3rd TF meeting ○ Preparation of the intermediate version of the report on Research challenges, business models and business benefits • WP1, T1.2 ○ FMIA-TT • Participation in the TT reference architecture document updating • Participation in the FIArchitecture document (FIArch)
• WP1, T2.1 • FIA Budapest BO Sessions organisation • FCN group organization • WP2, T2.2 • Participation in the Spring concertation meeting
• WP3, T3.3 • Participation in the elaboration of the roadmap

• WP4, T4.1 • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm) • INFOCOM workshop preparation
• WP5, T5.3 • Contribution to the 3rd newsletter • Web-site update
• WP6 • Management of nextMEDIA • Meetings and teleconferences organization • Liason with other projects • Administrative tasks

4.7.1.3 Work from month 19 to 21

• WP1, T1.1 ○ UPM was heavily involved in the FIA Poznan organization & FIArch • UPM (Federico Alvarez) is the new FIA book 2012 editor-in-chief and participated in the 2011 editorial team • Preparation of the Task Force 2nd white paper (Research challenges, business models and business benefits) • Authored one paper which was published in Springer Journal of Multimedia Tools & Applications (MTAP) • Preparation of the deliverable D1.2 • WP1, T1.2 • Participation in the FMIA-TT reference architecture document • Participation in the FIArchitecture document (FIArch) • Participation in D1.4
• WP2, T2.1 • FIA Poznan BO Sessions participation in the organization • WP2, T2.2 • Participation in the UCM white paper on Internet communities • Support in the organization of the UCM cluster • Participation in D2.4
• WP3, T3.4 • Participation in the elaboration of the roadmap • Participation in D3.3

• WP4, T4.3 • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm) • Participation in D4.3 • WP4, T4.4 • Participation in D4.4
• WP5, T5.1 • Monitoring and reporting of the standardisation groups and starting of the movements for ETSI new try. • WP5, T5.3 • Website update and communication • WP5, T5.5 • Contribution to talent support • Participation in D5.4
• WP6 • Management of nextMEDIA • Meetings and teleconferences organization • Liason with other projects • Administrative tasks

4.7.1.4 Work from month 22 to 24

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• WP1, T1.1 ○ UPM was heavily involved in the FIA Poznan organization & FIA Architecture group • UPM continued the telcos to organize the call for papers of the FIA book 2012 as editor in chief • Contribution to the final version of the report on Research challenges, business models and business benefits • Preparation of the deliverable D1.2 • Participation in the closing plenary of the FIA • WP1, T1.2 • Participation in the FMIA-TT reference architecture document • Participation in the FIArchitecture document (FIArch) • Participation in D1.4

• WP1, T2.1 • FIA Poznan BO Sessions participation • WP2, T2.2 • UCM white paper finalisation • Participation in D2.4
• WP3, T3.4 • Participation in the elaboration of the roadmap • Participation in final version of D3.3
• WP4, T4.3 • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm) • Participation in D4.3 • WP4, T4.4 • Participation in D4.4 • WP4, T4.5 • Final workshop preparation and organization in Poznan • Speaker at the workshop
• WP5, T5.1 • Monitoring and reporting of the standardisation groups IETF, IRTF • WP5, T5.3 • Website update and dissemination material production • Newsletter contributions • WP5, T5.5 • Contribution to talent support • Participation in D5.4
• WP6 • CERTH participated in all meetings and telcos

4.7.2 ATOS Origin

4.7.2.1 Work from month 13 to 15

• WP1, T1.1 ○ ATOS involved in the FIA organization & FIA Architecture group • Organisation of two sessions for Ghent (“FI Architecture” and “Searching as an integral component of the FI Architecture”), • Review of several papers of the FIA book • TF • Participation in the 2nd TF meeting • WP1, T1.2 ○ FMIA-TT • Participation in the TT reference architecture document • Participation in the FIArchitecture document (FIArch)
• WP1, T2.1 • FIA BO Sessions organisation • WP2, T2.2 • Participation in the Fall concertation meeting
• WP3, T3.3 • Coordination and Participation in the elaboration of the roadmap
• WP4, T4.2 • Contribution to the deliverable D4.2
• WP6 • ATOS participates in all meetings and telcos
• WP1, T1.1 ○ CERTH is heavily involved in the FIA organization & FIA Architecture group • Organisation of two sessions for Ghent (“FI Architecture” and “Searching as an integral component of the FI Architecture”), • CERTH is member of the FIA book Editorial team. • Review of several papers of the FIA book • TF • Participation in the 2nd TF meeting • WP1, T1.2 ○ FMIA-TT • Participation in the TT reference architecture document • Participation in the FIArchitecture document (FIArch)

4.7.2.2 Work from month 16 to 18

• WP1, T1.1 ○ ATOS is involved in the FIA organization & FIA Architecture group • Editorial of the FIA book • Paper in FIA Book • TF meeting organisation • Participation in the 3rd TF meeting • Preparation of the intermediate version of the report on Research challenges, business models and business benefits • WP1, T1.2 ○ FMIA-TT • Participation in the TT reference architecture document • Participation in the FIArchitecture document (FIArch)
• WP2, T2.1 • FIA Budapest BO Sessions organisation • WP2, T2.2 • ATOS Participation in the Spring concertation meeting
• WP3, T3.3 • Coordination and Participation in the elaboration of the roadmap
• WP4, T4.3, T4.4 • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm)
• WP5, • Contribution to the newsletter
• WP6, • ATOS participated in all meetings and telcos

4.7.2.3 Work from month 19 to 21

• WP1 During this period, Atos participated in T1.1 and T1.2 by supporting the outline of next coordination activities such as NextMedia participation in FIA Poznan and FCN activities.
• WP2 Participation in the spring concertation meeting in Trento.

- WP3

Atos is the leader of WP3 and as such has led the activities associated with the elaboration of the Roadmap as well as preparing for future events (IBC, FIA) where the Roadmap will be presented.

- WP4

During this quarter Atos activities in WP4 included:

T4.3 –Workshops on Content Networks and 3D Media Internet:

During this period Paul Moore participated in the organisation of the Special Session in CASON 2011 Conference where some submissions were collected and distributed to reviewers.

T4.4 – Events with Third Countries

In this period, Paul Moore contributed to the preparation of workshops in the USA and/or Korea.

T4.5 – NextMedia Final Workshop

There were submitted proposals to organize sessions in FIA Poznan in order to present the results of NextMedia.

- WP6

General Administrative tasks for the Management of the project were handled in order to control in the correct development of the Project Activities.

A number of Conference Calls and many informal discussions have taken place in order to monitor timely advance of the project. Paul Moore attended the review in Brussels May 26, 2011.

4.7.2.4 Work from month 22 to 24

• WP1, T1.1 ○ ATOS is involved in the FIA organization & FIA Architecture group • Editorial of the FIA book • Paper in FIA Book • TF meeting organisation • Participation in the TF meeting • Preparation of the intermediate version of the report on Research challenges, business models and business benefits • Preparation of the final version of the report on Research challenges, business models and business benefits • WP1, T1.2 ○ FMIA-TT • Participation in the TT reference architecture document • Participation in the FIArchitecture document (FIArch)
• WP2, T2.1 • FIA Poznan BO Sessions participation and organisation • WP2, T2.2 • Participation in D2.4
• WP3, T3.3 • Coordination and Participation in the elaboration of the roadmap • Finalisation of the roadmap document, Preparation and participation in D3.3
• WP4, T4.3, T4.4 • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm) • Contribution and preparation of the FI conference in Poznan • FIA Poznan - October 2011 Chair of the session • Participation in D4.3 and D4.4
• WP5, • Contribution to the newsletters and whole tasks of wp5
• WP6, • ATOS participated in all meetings and telcos

4.7.3 CERTH

4.7.3.1 Work from month 13 to 15

• WP1, T1.1 ○ CERTH is heavily involved in the FIA organization & FIA Architecture group • Organisation of two sessions for Ghent (“FI Architecture” and “Searching as an integral component of the FI Architecture”), • CERTH is member of the FIA book Editorial team. • Review of several papers of the FIA book • TF • Participation in the 2nd TF meeting • WP1, T1.2 ○ FMIA-TT • Participation in the TT reference architecture document • Participation in the FIArchitecture document (FIArch)
• WP1, T2.1 • FIA BO Sessions organisation • WP2, T2.2 • Participation in the Fall concertation meeting
• WP3, T3.3 • Participation in the elaboration of the roadmap
• WP4, T4.2 • Contribution to the deliverable D4.2
• WP6 • CERTH participates in all meetings and telcos

4.7.3.2 Work from month 16 to 18

• WP1, T1.1 ○ CERTH is heavily involved in the FIA organization & FIA Architecture group • CERTH is member of the FIA book Editorial team. • Editorial of the FIA book • Paper in FIA Book • TF meeting organisation • Participation in the 3rd TF meeting • Preparation of the intermediate version of the report on Research challenges, business models and business benefits • WP1, T1.2 ○ FMIA-TT • Participation in the TT reference architecture document • Participation in the FIArchitecture document (FIArch)
• WP1, T2.1 • FIA Budapest BO Sessions organisation • WP2, T2.2 • Participation in the Spring concertation meeting
• WP3, T3.3 • Participation in the elaboration of the roadmap
• WP4, T4.1 • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm)
• WP5, T5.3 • Contribution to the newsletter
• WP6 • CERTH participated in all meetings and telcos

4.7.3.3 Work from month 19 to 21

• WP1, T1.1 ◦ CERTH was heavily involved in the FIA Poznan organization & FIA Architecture group • CERTH is a member of the FIA book 2012 Editorial team • Preparation of the final version of the report on Research challenges, business models and business benefits • Preparation of the deliverable D1.2 • WP1, T1.2 • Participation in the TT reference architecture document • Participation in the FIArchitecture document (FIArch) • Participation in D1.4
• WP1, T2.1 • FIA Poznan BO Sessions participation • WP2, T2.2 • Participation in D2.4
• WP3, T3.4 • Participation in the elaboration of the roadmap • Participation in D3.3
• WP4, T4.3 • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm) • Participation in D4.3 • WP4, T4.4 • Participation in D4.4
• WP5, T5.1 • Monitoring and reporting of the standardisation groups IETF, IRTF • WP5, T5.2 • Preparation of the search-related standards MPEG-7, MPEG21, JPSearch • WP5, T5.5 • Contribution to talent support • Participation in D5.4
• WP6 • CERTH participated in all meetings and telcos

4.7.3.4 Work from month 22 to 24

• WP1, T1.1 ○ CERTH was heavily involved in the FIA Poznan organization & FIA Architecture group • CERTH is a member of the FIA book 2012 Editorial team • Preparation of the final version of the report on Research challenges, business models and business benefits • Preparation of the deliverable D1.2 • WP1, T1.2 • Participation in the TT reference architecture document • Participation in the FIArchitecture document (FIArch) • Participation in D1.4
• WP1, T2.1 • FIA Poznan BO Sessions participation • WP2, T2.2 • Participation in D2.4
• WP3, T3.4 • Participation in the elaboration of the roadmap • Participation in D3.3
• WP4, T4.3 • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm) • Participation in D4.3 • WP4, T4.4 • Participation in D4.4
• WP5, T5.1 • Monitoring and reporting of the standardisation groups IETF, IRTF • WP5, T5.2 • Preparation of the search-related standards MPEG-7, MPEG21, JPSearch • WP5, T5.5 • Contribution to talent support • Participation in D5.4
• WP6 • CERTH participated in all meetings and telcos

4.7.4 CREATE-NET

4.7.4.1 Work from month 13 to 15

• WP1 • During the second quarter CN participated to the FIA in Ghent attending and summarizing different sessions. • CN participated in the preparation of the newsletter of the EU (coordinated by Anne Marie Sassen) •
• WP4, T4.2 – Summarization and preparation of documents related to NEM panel for distribution. Preparation of potential approach regarding a new panel to be possibly organized in a Workshop during CASON 2011 Conference • WP4, T4.3 - Organization of Networked Media Track in Scientific Events: During this second period the following events were prepared and organized: • Setup of Workshop for INFOCOM and activities related to CFPs, website setting, etc. were coordinated in conjunction with co-chairs. • Special Sessions in Journals ○ Special Issue on User Centric Media. Springer Journal on Multimedia Tools and Applications received submissions. Review process is currently being monitored. • T4.4 – Events with Third Countries Preliminary work and advertisement on: • Workshop at DIRF on EU-USA Collaboration Workshop in Kyoto on EU-Japan Collaboration

4.7.4.2 Work from month 16 to 18

WP1 • During this period, CREATE-NET participated in T1.1 and T1.2 by supporting the outline of next coordination activities such as NextMEDIA participation in FIA, FCN, and Task forces.
WP3 • In this period a preliminary analysis on the situation of Europe vs Japan and USA on FMI was conducted as a preparation for the meeting organized in T4.4. Moreover, some relevant information was analyzed for preparing the roadmap on T3.3 considering some potential synergies with third countries.

WP4

During the sixth quarter of the project CREATE-NET activities in WP4 reflected specifically on:

- T4.1 –Workshops on Content Networks and 3D Media Internet:

During this period Oscar Mayora prepared, submitted and got accepted the workshop proposal to be included in CASON 2011 Conference. Similar result was of being accepted a workshop on ICADIWT but it didn't receive enough submissions.

- T4.3 - Organization of Networked Media Track in Scientific Events:

In this period, Oscar Mayora prepared the final details and attended the Workshop organized by nextMEDIA during INFOCOM.

- Special Issue on User Centric Media. Springer Journal on Multimedia Tools and Applications: This special issue was published during this period.

- Special Issue on Future Media Internet. IEEE Communications Magazine: Create-Net collected the information for this special issue for start processing of D4.3

- Special Issue on User Centric Media. Springer Journal on Multimedia Tools and Applications has concluded the review process.

- T4.4 – Events with Third Countries

In this period Oscar Mayora and Silvia Rensi continue preparation of the Eu-Japan Workshop on Social Networks (to be held in Kyoto, Japan in conjunction with ICC Conference). In particular, a meeting with the Japanese counterpart (Prof. Ryoichi Shinkuma) was held in Trento for detailing the organization of the Workshop. As follow-up of such meeting the website was updated and all the contacts for local arrangements were done. Additionally, the invitations to the attendees were finalized.

- T4.5 – NextMEDIA Final Workshop

It has been decided in this period to organize the final NextMEDIA workshop in co-location with NEM Summit 2011 in Turin, Italy. Create-Net starting coordination activities with the project coordinator for organizing such event.

WP5

Activities in this period included monitoring ETSI working groups activities. The result of this work do not allow to envision potential collaborations within ETSI for NextMEDIA. Regarding other activities in this WP, some videos from previous UCMedia event were processed in order to render them available for dissemination of the talent support and for exhibitions and other videos related to the event to be held in T4.4 were outlined in scope and expected content.

WP6

General Administrative tasks for the Management of the project were handled in order to control in the correct development of the Project Activities.

A number of Conference Calls and many informal discussions have taken place in order to monitor timely advance of the project. Besides, several physical meetings have been held in this period including Concertation, Task Force and FIA meetings.

4.7.4.3 Work from month 19 to 21**WP1**

- During this period, CREATE-NET participated in T1.1 and T1.2 by supporting the outline of next coordination activities such as NextMedia participation in FIA Poznan and FCN activities.

WP3

More relevant insights regarding the analysis on the situation of Europe vs Japan on FMI was conducted after the workshop organized in T4.4

WP4

During the sixth quarter of the project CREATE-NET activities in WP4 reflected specifically on:

T4.1 – Workshops on Content Networks and 3D Media Internet:

During this period Oscar Mayora advertised the Special Session in CASON 2011 Conference and some submissions were collected and distributed to reviewers.

T4.3 - Organization of Networked Media Track in Scientific Events:

In this period, Oscar Mayora prepared the final details and attended the Workshop organized by NextMedia in Kyoto, Japan on Social Networks and Real World Integration.

- Special Issue on Future Media Internet. IEEE Communications Magazine: This special issue was published in this period
- Special Issue on User Centric Media. Springer Journal on Multimedia Tools and Applications is on press.
- Special Issue in the topic of Mobility and Social Networks was submitted to ACM-Springer MONET Journal.

In this period, the articles from all the Special Issues and Workshops organized by NextMedia have been collected for analysis towards preparation of D4.3

T4.4 – Events with Third Countries

In this period the Eu-Japan Workshop on Social Networks was held in Kyoto, Japan. As part of the activities all the pre-meeting preparation, the meeting and the post-meeting feedback were prepared by Create-Net in conjunction with local organizers from Kyoto University. The information of this workshop as well as the presentations are available from <http://www.create-net.org/ubint/Nextmedia/agenda.html>. As part of follow-up activities its being prepared a report with relevant contributions from the workshop attendees.

T4.5 – NextMedia Final Workshop

There were submitted proposals to organize sessions in FIA Poznan in order to present the results of NextMedia.

WP5

In this period, Create-Net participated in this WP by creating relevant material for the webpage related to the EU-Japan Workshop. As part of these materials, several video-interviews capturing the contributions and comments on the future of social networks and real world integration from the different attendees to the workshop were produced in order to be rendered available in the final quarter.

WP6

General Administrative tasks for the Management of the project were handled in order to control in the correct development of the Project Activities.

A number of Conference Calls and many informal discussions have taken place in order to monitor timely advance of the project.

4.7.4.4 Work from month 22 to 24

CREATE-NET breakdown activities by WP in the period included:

- **WP1**

- During this period, CREATE-NET participated in T1.1 and T1.2 by supporting the outline of next coordination activities such as NextMedia participation in FIA Poznan and FCN activities.

- **WP3**

More relevant insights regarding the analysis on the situation of Europe vs Japan on FMI was conducted after the workshop organized in T4.4. CREATE-NET participated in the final deliverable about roadmapping on WP3.

- **WP4**

During the last quarter of the project CREATE-NET activities in WP4 reflected specifically on:

T4.1 –Workshops on Content Networks and 3D Media Internet:

During this period Oscar Mayora advertised the Special Session in CASON 2011 Conference and some submissions were collected and distributed to reviewers.

T4.3 - Organization of Networked Media Track in Scientific Events:

- Special Issue on Future Media Internet. IEEE Communications Magazine: This special issue was published in this period

- Special Issue on User Centric Media. Springer Journal on Multimedia Tools and Applications is on press.

- Special Issue in the topic of Mobility and Social Networks was submitted to ACM-Springer MONET Journal and the CFPs is currently published in the Journal website.

Additionally, the deliverable D4.3 summarizing all workshops/conferences/special sessions/journal special issues organized by NextMedia in Scientific and Technical events was produced. The deliverable included a summary of all papers produced and an accurate list of which projects were involved in these workshops.

T4.4 – Events with Third Countries

In this period, Oscar Mayora followed-up the Workshop organized by NextMedia in Kyoto, Japan on Social Networks and Real World Integration for producing a Joint White Paper between European and Japanese Counterparts in the topic of the workshop.

As part of the activities in T4.4 it was concluded the D4.4 summarizing the activities conducted on this task.	
T4.5 – NextMedia Final Workshop It was organized a session during FIA Poznan for presenting details and results of NextMedia project. The details of the session included:	
Future Internet Assembly	
TIME	NAME
11:30 - 13:30	Session 1.2 - Networked media roadmap
-PRESENTATION	Introduction
-PRESENTERS	Paul Moore, Atos, Spain
PRESENTATION	3D
-	Ebroul Izquierdo, QMUL, Coordinator of NoE 3DLife, Dr
-PRESENTERS	Krzysztof Kurowski, Poznan Supercomputing and Networking Center
PRESENTATION	Connected TV
-	Dr Federico Alvarez, Coordinator of Infinity Project,
-PRESENTERS	Coordinator of NextMedia, UPM, Ralf Neudel, IRT, Editor "NEM Strategic Research Agenda"
-PRESENTATION	Social Media
-PRESENTERS	Paul Moore, Atos, Spain
-PRESENTATION	Social Media, Participatory Sensing and IoT
-PRESENTERS	Oscar Mayora, Create-Net
-PRESENTATION	Business Models and Wrap up
-PRESENTERS	Paul Moore, Atos, Spain
• WP5 In this period, Create-Net participated in this WP by providing inputs to the final dissemination deliverable.	
• WP6 General Administrative tasks for the Management of the project were handled in order to control in the correct development of the Project Activities. A number of Conference Calls and many informal discussions have taken place in order to monitor timely advance of the project.	

4.7.5 QMUL

4.7.5.1 Work from month 13 to 15

• WP1, T1.1 ○ Co-organisation of the FIA session on Architectures ○ Participation in the 2nd TF meeting ○ Contribution to the D1.1 • WP1, T1.2 ○ FMIA-TT • Participation in the TT reference architecture document
• WP2, T2.1 ○ FIA BO Session organisation • WP2, T2.2 ○ Participation in the Fall concertation meeting
• WP3, T3.3 ○ Contribution to the D3.1 on Current situation of Streaming technologies in Europe, USA, Japan and Korea
• WP4 ○ Tomas Piatrik (QMUL) is an Editor of the Special Issue on User Centric Media. Springer Journal on Multimedia Tools and Applications
• WP5, T5.1 ○ Participation in discussions and planning the creation of the standardisation group • WP5, T5.2 ○ Participation in FISA teleconferences ○ Preparation of the supporting documents for standardisation ○ Active participation in FISA Stand during the FIA in Ghent ○ Preparation of the presentation slides for the FIA Ghent • WP5, T5.3 ○ Finalisation of the 2nd NextMEDIA newsletter ○ Finalisation of the Deliverable D5.3 and updating the document with standardisation activities • WP5, T5.4 ○ Presenting project results and FISA activities during the FIA event • WP5, T5.5 ○ Gathering recorded talks from recent conferences and workshops related to Future Internet

4.7.5.2 Work from month 16 to 18

• WP1, T1.1 • QMUL is heavily involved in the FIA organization by organising the session on “Interactive Media Experience” • QMUL is involved in the FIA Architecture group • QMUL is member of the FIA book Editorial team. • QMUL has published the book chapter on “Semantic Context Inference in Multimedia Search” • Participation in the 3rd TF meeting • Preparation of the intermediate version of the report on Research challenges, business models and business benefits • WP1, T1.2 • Contributor to the FMIA-TT white paper “Future Media Internet Architecture reference model) • Participation to the FMIA-TT documents
• WP2, T2.1 • Participation to the spring 2011 concertation meeting
• WP3, T3.3 • Participation in the roadmap elaboration
• WP4, T4.3 • Tomas Piatrik (QMUL) is an Editor of the Special Issue on User Centric Media. Springer Journal on Multimedia Tools and Applications
• WP5, T5.1 • Contributed to the creation of the IETF CDNi BOF • Dissemination of the CDNI BOF • WP5, T5.2 • Monitoring the relevant IETF and MPEG standardization activities • Contribution to the IETF/IAB workshop in Prague • Participation in FISA activities • Preparation of the supporting documents for standardisation • WP5, T5.3 • Production of the 3rd nextMEDIA newsletter • Newsletter distribution during the spring 2011 concertation meeting in Trento • WP5, T5.4 • Organisation of the FIA session in Budapest • WP5, T5.5 ○ Gathering recorded talks from recent conferences and workshops related to Future Internet
• WP6 • Participation in all meetings and telcos

4.7.5.3 Work from month 19 to 21

• WP1, T1.1 • QMUL is heavily involved in the FIA organization by organising the session on “Interactive Media Experience” • QMUL is involved in the FIA Architecture group • QMUL is member of the FIA book Editorial team. • QMUL has published the book chapter on “Semantic Context Inference in Multimedia Search” • Preparation of the intermediate version of the report on Research challenges, business models and business benefits • WP1, T1.2 ○ FMIA-TT • Participation to the FMIA-TT workshop in Brussels • Tomas Piatrik (QMUL) was a session moderator during the FMIA-TT workshop in Brussels
• WP1, T2.1 • FIA Budapest BO Session organisation • FIA Budapest standardisation session participation • FIA Poznan standardisation session proposal and organization
• WP3, T3.4 - Participation in the elaboration of the roadmap
• WP4, T4.3 • Editor of the Special Issue on User Centric Media. Springer Journal on Multimedia Tools and Applications
• WP5, • FISA participation in PhCs • FISA standardisation documents creation • Monitoring and reporting of the standardisation groups ETSI and MPEG • FIA Budapest standardisation session organisation and participation • Collection of videos from relevant conferences for the talent support task • Organisation of the standardisation session in FIA Poznan
• WP6 • Participation in all meetings and telcos

4.7.5.4 Work from month 22 to 24

• WP1, T1.1 • Organisation of the FIA “Standardisation” session in Poznan • QMUL is involved in the FIA Architecture group • FCN group participation • WP1, T1.2 ○ FMIA-TT • Participation to the FIArch Workshop in Brussels
• WP2, T2.1 • FIA Poznan standardisation session organisation and participation • WP2, T2.2 • Contribution to and Editoring the white paper on “Vision 2020 on Web Applications
• WP2, T4.5 • Organisation of the Standardisation Session in FIA Poznan • Participation to other BO Sessions in FIA Poznan
• WP5, • FISA participation in PhCs • FISA standardisation documents creation • Monitoring and reporting of the standardisation groups ETSI and MPEG • Organisation of and participation to the FIA Poznan standardisation session • Collection of videos from relevant conferences for the talent support task • Discussion with ETSI and industry partners regarding the ISG proposal during FIA Poznan • 4th NextMEDIA newsletter preparation • D5.4 Deliverable preparation • Participation to other BO Sessions in FIA Poznan

4.7.6 Synelixix

4.7.6.1 Work from month 13 to 15

• WP1, T1.1 ○ Synelixix is heavily involved in the FIA organization and is leading the FIA Architecture group • Synelixix organized and leaded two sessions for FIA Ghent (“FI Architecture” and “Searching as an integral component of the FI Architecture”). • Synelixix is member of the FIA book editorial team (authored the chapter introductions for the FI Architecture and Content” • Reviewed of several papers of the FIA book and authored one paper that has been accepted ○ Future Internet Task Force • Participation in the 2nd TF meeting • WP1, T1.2 ○ Future Media Internet Architecture –Think Tank • Leaded and edited the FMIA-TT reference architecture document • Leaded and edited the FIArchitecture limitations document (FIArch) • Initiated the Future Internet Architecture Design principles document and distributed a call for position papers on this issue.
• WP1, T2.1 • Organized two FIA Breakout session • Often informed the various clusters of the FIA activities
• WP2, T2.2 • Prepared and circulated a Questionnaire on the Standardization Activities • Participation in the Fall concertation meeting • Processed the results of the questionnaires and included the results of the Fall Concertation Meeting questionnaires in D2.3
• WP4, T4.2 • Participated in the organization of an industrial panel in Kyoto, Japan on Future Internet • WP4, T4.3 • Finalised the special session on the IEEE Communication Magazine on Future Media Internet and edited the Guest Editorial paper • Contribution to the deliverable D4.2
• WP5, T5.2 • Monitored the various Standardization activities related to Future Media Internet • Contributed in the organization of the IETF Content Delivery Networks Interconnection (CDNI) BOF • WP5, T5.4 • Contributed with a position paper to the IETF workshop on Connected Objects which will take place in Prague on 25 March 2011

- WP6
 - Synelaxis participates in all meetings and telcos

4.7.6.2 Work from month 16 to 18

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| <ul style="list-style-type: none"> • WP1, T1.1 <ul style="list-style-type: none"> ○ Synelaxis is heavily involved in the FIA organization & is leading the FIA Architecture group <ul style="list-style-type: none"> • Synelaxis is member of the FIA Book Editorial team. • Review of several papers of the FIA book • Authored a chapter for the FIA book that was accepted for publication. ○ FMI-TF <ul style="list-style-type: none"> • Editor of the book in FMI. Initial selection of authors • WP1, T1.2 <ul style="list-style-type: none"> ○ FMIA-TT <ul style="list-style-type: none"> • Organized and participated in a number of FMIA-TT PhC. • Editor of the FMIA-TT white paper “Future Media Internet Architecture reference model) • Principal editor of the FI Architecture Fundamental Limitations document (FIArch) • Issued the FIArch Call for Position papers on the FI Design Principles • Contributed with a paper to the FIArch call • Organizing the FIArch Open Workshop on 23 May 2011 |
| <ul style="list-style-type: none"> • WP3, T3.3 <ul style="list-style-type: none"> Participation in the elaboration of the roadmap |
| <ul style="list-style-type: none"> • WP4, T4.3 <ul style="list-style-type: none"> • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm) • WP4, T4.4 <ul style="list-style-type: none"> • Discussions and email communication for organizing workshops in USA and/or Korea. |
| <ul style="list-style-type: none"> • WP5, T5.2 <ul style="list-style-type: none"> • Monitoring the relevant IETF standardization activities • Contributed to the creation of the IETF CDNi BOF • Contribution to the IETF/IAB workshop in Prague |
| <ul style="list-style-type: none"> • WP6 <ul style="list-style-type: none"> • Synelaxis participated in all meetings and telcos |

4.7.6.3 Work from month 19 to 21

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|--|
| <ul style="list-style-type: none">• WP1, T1.1<ul style="list-style-type: none">○ Synelixix has been was heavily involved in the FIA organization & is leading the FIA Architecture group• Synelixix was member of the FIA book 2011 Editorial team.• Synelixix is a member of the FIA book 2012 Editorial team• Synelixix Authored one paper which was published in the FIA Book 2011• Synelixix Authored one paper which was published in Springer Journal of Multimedia Tools & Applications (MTAP)• Preparation of the intermediate version of the report on Research challenges, business models and business benefits
<ul style="list-style-type: none">• WP1, T1.2<ul style="list-style-type: none">○ FMIA-TT<ul style="list-style-type: none">• Leader and editor of the FMIA-TT reference architecture document• Organization/Speaker/moderator of the FMIA-TT workshop in Brussels 15/6/2011• Organized a number of PhC dedicated to the FMIA-TT○ FMIArch Group<ul style="list-style-type: none">• Leader of the FIArchitecture Group(FIArch)• Issued the call for contributions for the FI Architecture Design Principles• Contributed to the FI Architecture Design Principles with a document• Organized a number of PhC for the FIArch Group• Organization/Speaker/moderator of the FIArch workshop in Brussels 23/5/2011• Synelixix has created and and updated/managed aa FIArch group email reflector• Synelixix has updated the FIArch Group web site frequently |
| <ul style="list-style-type: none">• WP1, T2.1<ul style="list-style-type: none">• FIA Budapest BO Sessions organisation• FIA Poznan BO session proposal and organization• FIA Poznan Closing Plenary panel organization
• WP2, T2.2<ul style="list-style-type: none">• Participation in the Spring concertation meeting• Contributed to the Search Engines Cluster white paper: “Search Computing: Business Areas, Research and Socio-Economic Challenges” coordinated by the project CHORUS+.• Coordination of the FMN cluster towards a common IETF draft contribution. A PhC has been organized/minuted and a schedule for contributions has been drafted. |
| <ul style="list-style-type: none">• WP3, T3.4
Small Participation in the elaboration of the roadmap |

• WP4, T4.3 • Promotion of the NEM Summit event • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm) • WP4, T4.4 • Translation and publication of a paper in RTI, Brazil • Contribution to the preparation of workshops in Japan.
• WP5, T5.2 • Monitoring and reporting of the standardisation groups IETF CDNi and IRTF
• WP6 • Synelaxis participated in all meetings and telcos

4.7.6.4 Work from month 22 to 24

• WP1, T1.1 ○ SYN was heavily involved in the FMIA, FIA Poznan organization & FIA Architecture (FIArch) group • Co-organized the Architectures session in FIA Poznan • Organized the Plenary Closing panel in FIA Poznan • Invited speaker in nextMedia session in FIA Poznan • TV interview in FIA Poznan • SYN is a member of the FIA book 2012 Editorial team • Contribution to the final version of the report on Research challenges, business models and business benefits • WP1, T1.2 • Leded the FMIA-TT reference architecture document • Leded the FIArchitecture document (FIArch). Organized a number of PhC and the FIArch workshop in Brussels on 23/9. • Authored D1.4
• WP1, T2.1 • Organization of the FIA Poznan BO Sessions participation • Off-line communication with clusters. • WP2, T2.2 • Drafting FMN cluster agenda • Authored D2.4
• WP3, T3.4 • Participation in the elaboration of the roadmap • Participation in D3.3

• WP4, T4.3 • Contribution to the preparation of the CASoN Conference in Salamanca (http://www.mirlabs.org/cason11/index.php-c=main&a=show&id=2.htm) • Participation in D4.3 • WP4, T4.4 • Participation in D4.4 • WP4, T4.5 • Speaker at the nextMedia FIA workshop
• WP5, T5.2 • During this period, coordination activity in the FMN Cluster led to the submission of a common IETF draft entitled “Catalogue of Advanced Use Cases for Content Delivery Network Interconnection,” draft-fmn-cdni-advanced-use-cases-00, 24 Oct. 2011 (edited by Th. Zahariadis) • Monitoring and reporting of the standardisation groups IETF, IRTF
• WP6 • SYN participated in all meetings and telcos

5 Deliverables and milestones tables

Deliverables (excluding the periodic and final reports)

TABLE 1. DELIVERABLES ⁵									
Del. no.	Deliverable name	WP no.	Lead beneficiary	Nature	Dissemination level	Delivery date from Annex I (project month)	Delivered Yes/No	Actual / Forecast delivery date	Comments
D3.2	Situation in Europe versus the one in Japan and United States	3	ATOS	R	PU	M13	Yes	M15	
D4.2	Comparative Analysis on Positioning Approaches of several International actors	1	CREATE-NET	R	PU	M15	Yes	M16	
D2.3	Report on current research and business targets V3.0	2	SYN	R	PU	M16	Yes	M16	
D1.2	Reports on organisation and results of the TFs and FCNs group meetings. Version 2.	1	CERTH	R	PU	M24	Yes	M24	
D1.4	White paper on the Future Media Internet Architecture	1	CERTH	R	PU	M24	Yes	M24	
D2.4	Report on current research and business targets V4.0	2	SYN	R	PU	M22	Yes	M22	

⁵

For Security Projects the template for the deliverables list in Annex A1 has to be used.

D3.3	nextMEDIA roadmap	3	ATOS	R		M24	Yes	M24	
D4.3	Report on Scientific Papers presented in Networked Media Track	4	CREATE	R	PU	M24	Yes	M24	
D4.4	Report on collaboration events with third countries	4	CREATE	R	PU	M24	Yes	M24	
D5.4	Final Report on Dissemination activities	5	QMUL	R	PU	M24	Yes	M24	
D6.3	Final project report	6	UPM	R	PU	M24	Yes	M25	

Milestones

TABLE 2. MILESTONES							
Milestone no.	Milestone name	Work package no	Lead beneficiary	Delivery date from Annex I	Achieved Yes/No	Actual / Forecast achievement date	Comments
1.2	Setup new goals for the existing groups and task forces ver 2.	1	CERTH	(M15)	Yes	M15	
2.3	Networked Media Spring Concertation Meeting – 2011	2	SYN	(M16)	Yes	M16	
6.5	Fifth project general meeting	6	UPM	(M16)	Yes	M16	
M6.6	Sixth project general meeting	6	UPM	(M20)	Yes	M20	
M2.4	Networked Media Fall Concertation Meeting – 2011	2	SYN	(M23)	Yes (see explanation)	M25	The EC delayed until M25 the meeting, but we contributed
M1.7	Final version of the white paper on FMI Architecture	1	CERTH	(M24)	Yes	M24	
M4.4	Final nextMEDIA workshop	4	CREATE	(M24)	Yes	M24	

6 Project management

Since the proposal initiation, the consortium management has been carefully prepared in order to achieve the best performance with minimal overheads. Thus, each partner in the project has very clear role, focusing on the areas of his expertise and performing research and development in these areas.

In nextMEDIA all partners have a relevant role and we are cooperating together to fulfil the project objectives. The good performance of the partners has helped to achieve smaller overheads, faster and simpler decision-making mechanisms and better results so far.

On the other hand, project leader has followed closely every activity, while conference calls, email exchanges and plenary meetings achieved homogenous and productive results, which will be compatible and thus more easily to be integrated in the rest of the project.

6.1 Project Consortium Communication

A number of methods have been applied to achieve efficient project communication.

6.1.1 Plenary meetings

Regular plenary meetings have taken place.

During the plenary meetings, progress in each workpackage against success criteria, deviations from planned progress, results and milestones have been reviewed.

Plenary/WP meeting	Place	Dates
Short Plenary	Ghent, Belgium	16-17 Dec. 2010
Plenary	Trento, Italy	13 th May 2011
Short Plenary + rehearsal	Brussels, Belgium	25 th May 2011
WP1/WP2 meeting	Brussels, Belgium	14-15 th June 2011
Plenary	Poznan, Poland	26 th October 2011

Moreover, bilateral meetings took place between partners that participate at the same workpackage.

6.1.2 Meetings attended

Conferences or workshops attended (if organised by the project please indicate so)

Num.	Partner	Date (Start/End)	Meeting place	N° of persons	WP/Task/expected results/details
1	All	28/11-3/12/2010	Brussels, Belgium	6	Concertation meeting
2	All	28/11-3/12/2010	Brussels, Belgium	6	FMI-TF meeting

3	UPM, ATOS, Create-Net, QMUL, Synelixis	16-17/12/2010	Ghent, Belgium	5	FIA 2010, Ghent meeting
4	Synelixis, QMUL	25/3/2011	Prague, Czech	2	IETF/IAB Smart Objects Interconnection Workshops
5	QMUL	26/3-1/4/2011	Prague, Czech	1	IETF 80 th Meeting
6	All	13/4/2011	Trento, Italy	6	3 rd FMI-TF meeting
7	All	14-15/4/2011	Trento, Italy	6	Spring concertation meeting
8	CREATE-NET	10/6/2011	Kyoto, Japan	1	WP4, T4.4, organized by Nextmedia
9	SYNELIXIS	21-23/9/2011	Brussels, Belgium	1	FIArch workshop
10	All	25-27/10/2011	Poznan, Poland	1	FIA

6.2 Conference Calls

Within the reported period a number of conference calls took place. Some of them were more organized with more than 3 participants, while other can be considered as every day's communication.

A list can be found here below:

N.	Partners	Date (Start/End)	Called by	Hosted by	N° of persons	WP/Task/expected results/details
1	All	4/11/2010	Synelixis	EC	10	FMIA-TT PhC
2	All	23/11/2010	Synelixis	EC	8	FMIA-TT PhC
3	Synelixis, UPM, QMUL, ATOS	3/12/2010	Synelixis	EC	12	FIArch PhC
4	Synelixis, CERTH, UPM	3/12/2010	EC	EC	15	FIA Book PhC
5	Synelixis, UPM	7/12/2010	Synelixis	EC	9	FIArch PhC
6	Synelixis, UPM	10/12/2010	Synelixis	EC	6	FIArch PhC
7	All	18/1/2011	UPM	ATOS	7	General telco
8	Synelixis, UPM	4 Feb. (9:00-11:00)	SYN	EC	12	FIArch
9	Synelixis, UPM	18 Feb (10:00-13:00)	SYN	EC	8	FIArch
10	All	18 th February	UPM	ATOS	6	All
11	Synelixis	22 Feb (16:00-17:00)	SYN	EC	10	FMIA-TT
12	Synelixis	25 Feb (10:00-11:00)	SYN	EC	8	FIArch

13	All	13 April (16:00-19:00)	UPM	CREAT E_NET	7	FCN (parallel telco)
14	SYN	9/5/2011	T. Zahariadis	EC	12	FIArch PhC
15	All	10/5/2011	F. Alvarez	Atos	8	nextMedia Status Review Preparation
16	SYN	13/5/2011	T. Zahariadis	EC	12	FIArch PhC
17	UPM, ITI, SYN	21/6/2011	J. Domingue	Open Univesi ty	11	WP1, T1.2 FIA Book 2012
18	SYN	20/7/2011	T. Zahariadis	UCL	10	FMN cluster/ CDNi Contribution
19	SYN, CERTH	29/7/2011	T. Zahariadis	EC	5	WP1. T1.2 FIArch
20	Synelixis, CERTH, UPM	26/8/2011	Synelixis	EC	12	FIArch
21	QMUL	8/9/2011	FISA group	EC	1	T5.1 and T5.2
22	Synelixis	9/9/2011	Synelixis	EC	8	FIArch
23	Synelixis	14/9/2011	EC	EC	6	Organization of FIA panel
24	All	15/9/2011	UPM	UPM	10	All WPs
25	Synelixis	16/9/2011	Synelixis	EC	9	FIArch
26	All	29/9/2011	UPM	UPM	10	All WPs
27	UPM, CERTH	30/9/2011	UPM	UPM	9	FIA book 2012
28	All	9/10/2011	UPM	UPM	10	All WPs
29	Synelixis	10/10/2011	Synelixis	EC	6	FIArch
30	QMUL	12/10/2011	FISA group	EC	1	T5.1 and T5.2
31	Synelixis	18/10/2011	Synelixis	EC	7	FIArch
32	QMUL	20/10/2011	FISA group	EC	1	T5.1 and T5.2

Overall, more than 60 bilateral telephone calls (formal and informal) have taken place within this 12 months.

6.3 Email Exchanges

Even from the kick off meeting 7 of email lists have been created, 6 for each workpackage and 1 for all the project participants. The email lists are:

wp1@fi-nextMEDIA.eu

wp2@fi-nextMEDIA.eu

wp3@fi-nextMEDIA.eu

wp4@fi-nextMEDIA.eu

wp5@fi-nextMEDIA.eu

wp6@fi-nextMEDIA.eu

all@fi-nextMEDIA.eu

Overall more than 600 emails have been exchanged via the email lists, between the consortium partners and with the European Commission.

6.4 Documents Naming & FTP server

For better documents exchange since the kick-off meeting a string documents naming scheme has been adopted and followed throughout the reported period.

Moreover, a repository has been set up and it is hosted by UPM. Each partner has access to all workpackages and can upload or download the latest version of the deliverables.

6.5 Consortium Management problems

No major problems throughout the reported period.

6.6 Changes at the Consortium

No changes at the consortium throughout the reported period.

6.7 Other Management Issues

Additionally in a number of cases, there was a need to start some tasks earlier or extend some tasks. This was due to the need to: a) have a task that would normally start latter to give input to a task that is already active, b) need to cause a better impact to the research community , c) meet a number of deadlines, for example a FIA meeting.

All milestones have been met in time or with small details, and no significant deviation has been reported.

One significant deviation is a short delay in the deliverable 3.2.

A second deviation in the activities was caused by the delay of the 6th FP7 Networked Media concertation meeting 45 days. nextMEDIA activities continued according to the schedule, and we recovered our activities to return on track.

7 Explanation of the use of the resources

The work performed by the partners is summarised as follows:

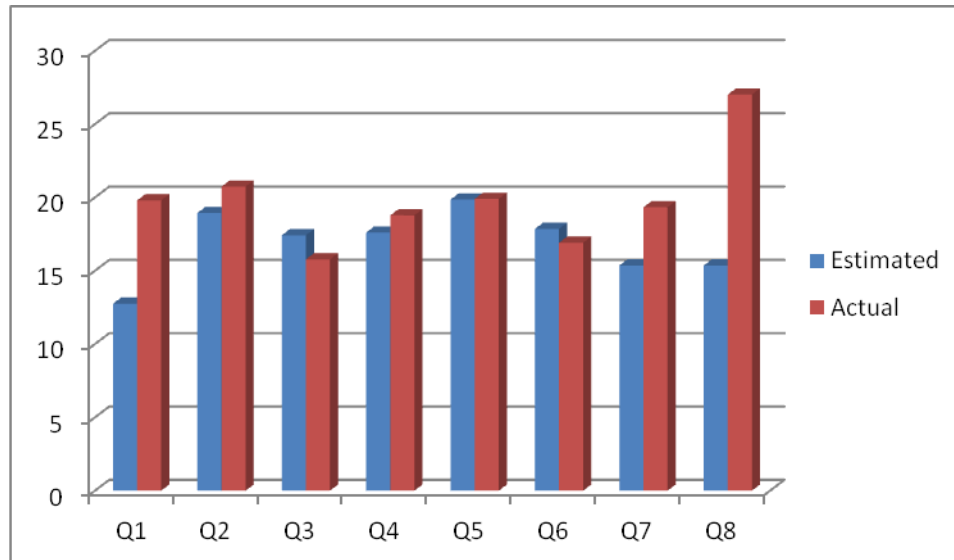


Table 2. Total Planned vs. Actual Effort spent (per quarter)

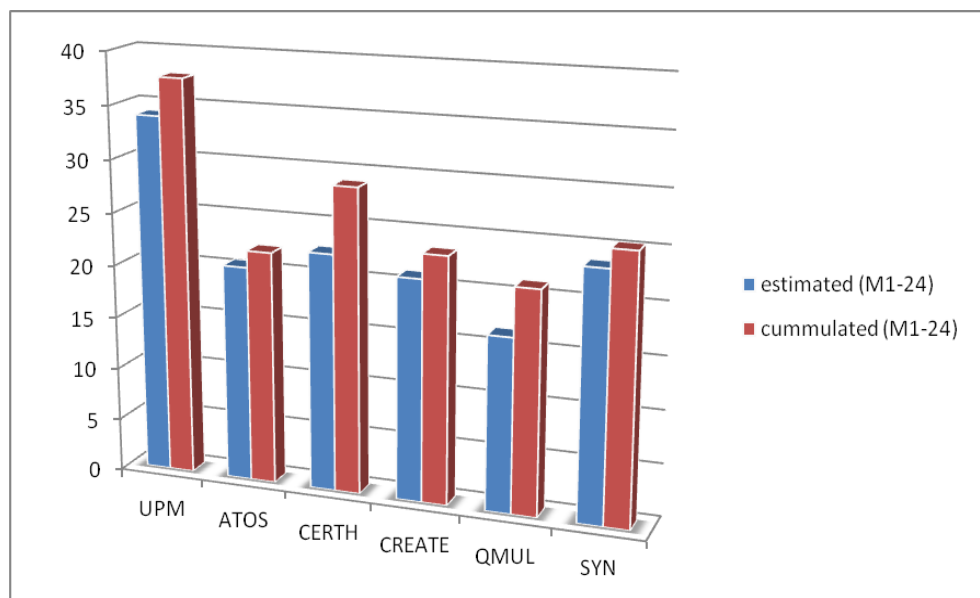


Table 3. Planned vs. Actual Effort spent per partner (project duration)

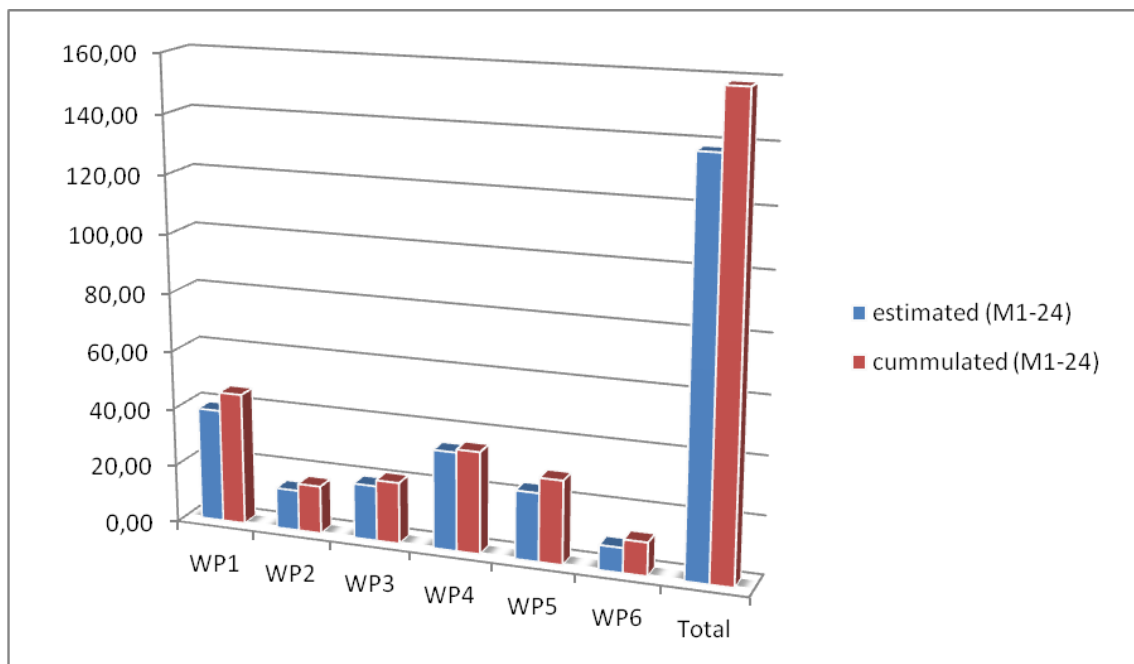


Table 4. Planned vs. Actual Effort spent per workpackage (project duration)

	UPM			ATOS			CERTH			CREATE			QMUL			SYN			Total			
	Plan	Act	Cum	Plan	Act	Cum	Plan	Act	Cum	Plan	Act	Cum	Plan	Act	Cum	Plan	Act	Cum	Plan	Act	Cum	Remain
WP1. Coordination and Support of the FMI-	1	1,6	10,6	0,5	0,52	3,15	1,25	1,51	12,9	0,50	1,08	4,27	0,50	0,25	3,70	1,13	1,65	10,87	4,88	6,61	45,48	-6,478
T1.1 Coordination & Support of the Future Media	0,38	0,6	4,45	0,13	0,12	1,5	0,63	0,63	6,38	0,25	0,63	2,37	0,25	0,15	2,2	0,5	0,87	5,07	2,125	3	21,968	-4,968
T1.2 Organization of the Future Media Internet A	0,63	1	6,1	0,38	0,4	1,65	0,63	0,88	6,56	0,25	0,45	1,9	0,25	0,1	1,5	0,63	0,78	5,8	2,75	3,61	23,51	-1,51
WP2. Coordination of projects towards the F	0,14	0,5	3,15	0,1	0,11	2,6	0,14	1	4	0	0	0	0	0,1	1,35	0,29	0,55	5,36	0,668182	2,26	16,46	-2,46
T2.1 Coordinate projects on FIA activities	0,09	0,2	1,8	0,05	0,05	1,34	0,09	0,3	2,35	0	0	0	0	0	0,75	0,09	0,35	2,11	0,318182	0,9	8,35	-1,35
T2.2 Cross-projects FIA activities Coordination	0,05	0,3	1,35	0,05	0,06	1,26	0,05	0,7	1,65	0	0	0	0	0,1	0,6	0,2	0,2	3,25	0,35	1,36	8,11	-1,11
WP3. Future Media Internet international re	0,5	0,5	3,55	0,5	1,78	10,6	0,25	0,25	2	0,25	1,2	2,92	0	0	1,45	0,25	0,2	0,57	1,75	3,93	21,12	-2,12
T3.1 Situation in Europe	0	0	0,45	0	0	2	0	0	0,5	0	0	0	0	0	0,4	0	0	0,05	0	0	3,4	-0,4
T3.2 Situation of Europe regarding Japan and USA	0	0	1	0	0	1,25	0	0	0	0	0	1,25	0	0	0,65	0	0	0	0	0	4,15	-0,15
T3.3 Elaboration of a Roadmap	0	0	1	0	0	5,4	0	0	1	0	0	0,47	0	0	0,3	0	0	0,12	0	0	8,29	0,21
T3.4 Additional measures for exploitation of the	0,5	0,5	1,1	0,5	1,78	1,98	0,25	0,25	0,5	0,25	1,2	1,2	0	0	0,1	0,25	0,2	0,4	1,75	3,93	5,28	-1,78
WP4. Coordination Actions for European Re	2,28	1,9	7,65	0,66	0,97	3,49	0,82	1,44	4,85	2,47	2,41	12,6	0,66	0,5	2,34	0,82	0,68	4,15	7,727273	7,9	35,0625	-1,0625
T4.1 Workshops on Content Networks and Media	0	0	0,4	0	0	1,25	0	0	0,47	0	0,31	1,61	0	0	0,4	0	0	0,6	0	0,31	4,73	-0,73
T4.2 Industry Panels in cooperation with relevant	0	0	0,8	0	0	0,3	0	0	1	0	0	1,65	0	0	0,4	0	0	0,58	0	0	4,73	3,27
T4.3 Organization of Networked Media Track in	0,38	0,4	3,75	0,09	0,1	0,65	0,19	0,21	1,38	0,56	0,4	4,54	0,09	0	0,84	0,19	0,11	1,32	1,5	1,22	12,4825	-4,4825
T4.4 Collaboration with Third Countries	0,41	0	1,2	0,07	0,12	0,44	0,14	0,23	1	0,41	0,2	3,24	0,07	0	0,2	0,14	0,18	1,26	1,227273	0,73	7,34	1,66
T4.5 Final Workshop	1,5	1,5	1,5	0,5	0,75	0,85	0,5	1	1	1,5	1,5	1,54	0,5	0,5	0,5	0,5	0,39	0,39	5	5,64	5,78	-0,78
WP5. Dissemination and standardisation coo	0,63	0,75	5,85	0,38	0,55	1,52	0,38	0,8	4,07	0,31	0,56	2,58	1	1,15	11,7	0,25	0,2	2,99	2,9375	4,01	28,735	-5,235
T5.1 ETSI ISG	0,13	0,15	1,8	0,13	0,2	0,52	0,13	0	1,02	0,13	0	0,44	0,25	0,15	2,95	0,13	0	0,3	0,875	0,5	7,025	-0,025
T5.2 Standardisation monitoring and regulatory in	0,13	0	0,05	0	0	0	0,19	0,5	2,27	0	0	0	0,25	0,2	3	0,06	0,2	1,5	0,625	0,9	6,8175	-1,8175
T5.3 Web page and dissemination material	0,25	0,3	3,4	0	0	0	0	0	0	0	0,56	1,12	0,25	0,6	3,75	0	0	0,2	0,5	1,46	8,47	-4,47
T5.4 Exhibition and training	0	0	0	0,25	0,35	1	0	0	0	0,06	0	0,4	0,13	0,1	0,73	0,06	0	0,99	0,5	0,45	3,12	0,88
T5.5 Talent support	0,13	0,3	0,6	0	0	0	0,06	0,3	0,78	0,13	0	0,62	0,13	0,1	1,3	0	0	0	0,4375	0,7	3,3025	0,1975
WP6. Management	0,75	1	6,85	0,06	0,1	0,71	0,06	0,51	0,97	0,06	0,49	0,98	0,06	0,06	0,54	0,06	0,15	1,35	1,0625	2,31	11,4025	-2,9025
T6.1 Project Coordination	0,5	0,7	4,6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,5	0,7	4,6	-0,6
T6.2 Project Assessment	0,25	0,3	2,25	0,06	0,1	0,71	0,06	0,51	0,97	0,06	0,49	0,98	0,06	0,06	0,54	0,06	0,15	1,35	0,5625	1,61	6,8025	-2,3025
Total	5,3	6,25	37,6	2,19	4,03	22,1	2,9	5,51	28,8	3,6	5,74	23,3	2,22	2,06	21,1	2,8	3,43	25,3	19,02045	27	158,26	-20,258

Table 5. 24 months cumulated (including in the column with title “act” the Q8 figures) Planned vs. Actual Effort spent per partner

	Project			Q1		Q2		Q3		Q4		Q5		Q6		Q7		Q8	
	Contracte	Estimate	Summar	Estimate	Actual	Estimate	Actual	Estimate	Actual	Estimate	Actual	Estimate	Actual	Estimate	Actual	Estimate	Actual	Estimate	Actual
WP1. Coordination and Support of the FMI-related	39	39	45,478	4,88	7,62	4,88	6,24	4,88	5,12	4,88	4,35	4,88	4,89	4,88	4,59	4,88	6,06	4,88	6,61
T1.1 Coordination & Support of the Future Media 3D Internet a	17	17	21,968	2,13	4,48	2,13	3,04	2,13	1,98	2,13	1,90	2,13	2,70	2,13	2,13	2,13	2,74	2,13	3,00
T1.2 Organization of the Future Media Internet Architecture Th	22	22	23,51	2,75	3,14	2,75	3,20	2,75	3,14	2,75	2,45	2,75	2,19	2,75	2,46	2,75	3,32	2,75	3,61
WP2. Coordination of projects towards the FIA activities	14	14	16,46	1,30	1,69	2,00	2,62	2,00	1,87	2,00	2,00	2,00	2,07	2,00	1,50	2,00	2,45	0,67	2,26
T2.1 Coordinate projects on FIA activities	7	7	8,35	0,95	1,44	0,95	1,47	0,95	0,97	0,95	0,55	0,95	1,01	0,95	0,82	0,95	1,19	0,32	0,90
T2.2 Cross-projects FIA activities Coordination	7	7	8,11	0,35	0,25	1,05	1,15	1,05	0,90	1,05	1,45	1,05	1,06	1,05	0,68	1,05	1,26	0,35	1,36
WP3. Future Media Internet international roadmap	19	19	21,12	1,50	0,95	1,50	1,35	2,00	1,70	2,00	2,35	4,25	4,30	4,25	3,99	1,75	2,55	1,75	3,93
T3.1 Situation in Europe	3	3	3,4	1,50	0,95	1,50	1,35		0,30		0,40		0,40		0,00		0,00		0,00
T3.2 Situation of Europe regarding Japan and USA	4	4	4,15		0,00		0,00	2,00	1,20	2,00	1,65		0,30		0,40		0,60		0,00
T3.3 Elaboration of a Roadmap	8,5	8,5	8,29		0,00		0,00		0,20		0,30	4,25	3,60	4,25	3,59		0,60		0,00
T3.4 Additional measures for exploitation of the roadmap	3,5	3,5	5,28		0,00		0,00		0,00		0,00		0,00		0,00	1,75	1,35	1,75	3,93
WP4. Coordination Actions for European Research Promc	34	34	35,0625	1,08	3,32	6,56	4,73	3,73	2,88	4,73	6,00	4,73	4,72	2,73	2,58	2,73	2,93	7,73	7,90
T4.1 Workshops on Content Networks and Media Internet	4	4	4,73	0,67	1,10	3,33	2,57		0,10		0,25		0,00		0,30		0,10		0,31
T4.2 Industry Panels in cooperation with relevant Conferences i	8	8	4,73		0,00	2,00	0,85	2,00	0,90	2,00	1,45	2,00	1,38		0,15		0,00		0,00
T4.3 Organization of Networked Media Track in Scientific Even	8	8	12,4825		1,91		0,66	0,50	1,00	1,50	3,45	1,50	1,34	1,50	1,26	1,50	1,64	1,50	1,22
T4.4 Collaboration with Third Countries	9	9	7,34	0,41	0,31	1,23	0,65	1,23	0,88	1,23	0,85	1,23	2,00	1,23	0,87	1,23	1,05	1,23	0,73
T4.5 Final Workshop	5	5	5,78		0,00		0,00		0,00		0,00		0,00		0,00		0,14	5,00	5,64
WP5. Dissemination and standardisation coordination	23,5	23,5	28,735	2,94	4,83	2,94	4,43	2,94	2,93	2,94	2,92	2,94	2,68	2,94	3,00	2,94	3,94	2,94	4,01
T5.1 ETSI ISG	7	7	7,025	0,88	1,78	0,88	2,13	0,88	0,58	0,88	0,38	0,88	0,42	0,88	0,49	0,88	0,75	0,88	0,50
T5.2 Standardisation monitoring and regulatory implications of	5	5	6,8175	0,63	0,74	0,63	0,79	0,63	0,84	0,63	0,68	0,63	0,66	0,63	0,61	0,63	1,60	0,63	0,90
T5.3 Web page and dissemination material	4	4	8,47	0,50	1,85	0,50	0,90	0,50	0,40	0,50	1,50	0,50	0,65	0,50	0,90	0,50	0,81	0,50	1,46
T5.4 Exhibition and training	4	4	3,12	0,50	0,05	0,50	0,35	0,50	0,75	0,50	0,22	0,50	0,65	0,50	0,52	0,50	0,13	0,50	0,45
T5.5 Talent support	3,5	3,5	3,3025	0,44	0,41	0,44	0,26	0,44	0,36	0,44	0,14	0,44	0,30	0,44	0,48	0,44	0,65	0,44	0,70
WP6. Management	8,5	8,5	11,4025	1,06	1,39	1,06	1,37	1,06	1,28	1,06	1,16	1,06	1,24	1,06	1,25	1,06	1,40	1,06	2,31
T6.1 Project Coordination	4	4	4,6	0,50	0,70	0,50	0,70	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,70
T6.2 Project Assessment	4,5	4,5	6,8025	0,56	0,69	0,56	0,67	0,56	0,78	0,56	0,66	0,56	0,74	0,56	0,75	0,56	0,90	0,56	1,61
Total	138	138	158,258	12,76	19,80	18,94	20,74	16,61	15,78	17,61	18,78	19,86	19,90	17,86	16,91	15,36	19,33	19,02	27,02
			Cumulative	12,755	19,8	31,695	40,54	48,302	56,32	65,909	75,1	85,766	94,998	103,62	111,91	118,98	131,24	138	158,26

Table 6. Planned vs. Actual Effort spent per Quarter

TABLE 3.1 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR DIRECT COST ITEMS FOR UPM FOR THE PERIOD			
Work Package	Item description	Amount	Explanations
WP1-WP6	Personnel costs	87913€	19 PMs - management and WP activities
WP1-WP6	travel	7.762,98 €	Federico Alvarez, Brussels, 28/11/2010 – 3/12/2010. FIArch, meetings, nextMEDIA Review (1478,39€) Federico Alvarez, Ghent, FIA 10 -16/12/2010, FIA Ghent (525 €) María Alduán, Shanghai, INFOCOM workshop 8/4/2011 (2127€) Federico Alvarez, Trento, 12/04/2011 – 15/04/2011), FMI-TF+general meeting + Concertation meeting (1033,04€) Federico Alvarez, Budapest, 18/05/11 - 20/05/11, Participation in Future Internet Week (712,57 €) Federico Alvarez, Brussels, 26/05/11 - 27/05/11, NextMEDIA 3rd REVIEW (501,19 €) Federico Alvarez, Poznan, FIA Poznan 27/10/2011 (1385,79€)
	Indirect costs	63.034 €	
TOTAL COSTS (EC Contribution, calculated with 7% of indirect costs)		102.373,30 €	

TABLE 3.2 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY 2 (ATOS) FOR THE PERIOD			
Work Package	Item description	Amount in € with 2 decimals	Explanations
WP1-WP6	Personnel direct costs	60,060.00 €	13,00 PMs salaries of senior researchers
	Subcontracting		
WP1-WP5	Travelling expenses	6,122.59 €	Travels to various conferences and all project meetings – all by Paul Moore • Concertation Meeting, FMI-TF, 1st year review, Brussels, 28/11-3/12/2011 • nextMedia Plenary meeting, Concertation Meeting, FMI-TF, Brussels, 12/4-15/4/2011 • FIArch Group and 3rd Review, Brussels, 22-26/5/2011 • FMIA-TT Workshop, Brussels, 14-16/6/2011 • FIArch Workshop, Brussels, 21-23/9/2011 • FIA Poznan, 25-27/10/2011 • Final Review, 13-15/12/2011
	Remaining direct costs	2,000.00 €	Payment for IBC Amsterdam, Stand
	Indirect costs	18,782.00 €	Overheads
TOTAL COSTS (EC Contribution, calculated with 7% of indirect costs)		86,964.99 €	

TABLE 3.3 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR BENEFICIARY 3 (CERTH) FOR THE PERIOD			
Work Package	Item description	Amount in € with 2 decimals	Explanations
WP1-WP6	Personnel direct costs	68.809,44	15,45 MMs
	Subcontracting		
WP1-WP5	Travelling expenses	7.056,40	Daras Petros, Brussels, 28/11/10 -03/01/11, Concertation Meeting, NextMedia Rehearsal Meeting, NEXTMEDIA 2nd Review (1.423,63 €) Daras Petros, Trento, 12/04/11 - 13/04/11, Project Meeting (792,31 €) Semertzidis Theodoros, Budapest, 18/05/11 - 20/05/11, Participation in Future Internet Week (818,56 €) Zafeiropoulos Anastasios, Budapest, 18/05/11 - 20/05/11, Participation in Future Internet Week (818,56 €) Semertzidis Theodoros, Brussels, 24/05/11 - 27/05/11, NextMEDIA 3rd Review (876,28 €) Daras Petros, Brussels, 26/05/11 - 27/05/11, NextMEDIA 3rd REVIEW (447,93 €) Daras Petros, Brussels, 14/06/11 - 15/06/11, Participation in the Workshop Future Media Internet Architectures (955,36 €) Zafeiropoulos Anastasios, Poznan, 24/10/11 - 26/10/11, Presentation of Project Work in Future Internet Assembly (923,77 €)
	Remaining direct costs		
	Indirect costs	61.928,50	
TOTAL COSTS (EC Contribution, calculated with 7% of indirect costs)		81.176,45€	

Note from CERTH:

1. An initial amount of 22.324€ had been allocated to travel expenses for CERTH. During the 2nd year of the project an adjustment was made, after proper communication with the coordinator of the project, and an amount of 13.064,86€ was allocated to travels. The remaining 9.259,14€ were transferred to personnel costs. This transfer raised the overall MM consumption of CERTH which were devoted mainly to WP1 (2 more white papers were produced), WP2 (many FIA activities including FIA books editorial and new groups like FIArch) and WP5 (standardisation monitoring).
2. An adjustment of 2.346,11€ to the 1st reporting period was made for CERTH due to salary decrease of P. Daras

**TABLE 3.4 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR
BENEFICIARY 4 (CREATE-NET) FOR THE PERIOD**

Work Package	Item description	Amount in € with 2 decimals	Explanations
1, 3, 4, 5, 6	Personnel direct costs	89.478,41	1 Senior researcher (O. Mayora) + 1 post-doc (C.Costa) + 1 Junior researcher (F.Botto) + 1 Communication expert (S.Rensi) + 1 Administrative (R.Pro)
	Subcontracting		
1, 4, 6	Major cost item Travel	7.374,81	7.593,90 (INFOCOM workshop, EC Review in Brussels, Kyoto workshop, FIA meetings in Poznan, FIA meeting in Gent, Rehearsal meetings)
4	Remaining direct costs	219,09	(Hosting expenses for Japanese partner guests, other conference fees)
	Indirect costs	6.795,06	
TOTAL COSTS (EC Contribution, calculated with 7% of indirect costs)		103.867,37	

**TABLE 3.5 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR QMUL
FOR THE PERIOD**

Work Package	Item description	Amount in € with 2 decimals	Explanations
WP1-WP6	Personnel direct costs	65472.37	Salaries
WP1-WP5	Travelling expenses	10391.14	Review meeting Brussels Concertation meeting Brussels IETF meeting Brussels FIA Budapest Concentration meeting Trento FMIA-TT meeting
	Remaining direct costs	0	
	Indirect costs	5310.45	
TOTAL COSTS (EC Contribution, calculated with 7% of indirect costs)		81173.96	

**TABLE 3.6 PERSONNEL, SUBCONTRACTING AND OTHER MAJOR COST ITEMS FOR
BENEFICIARY 6 (SYN) FOR THE PERIOD**

Work Package	Item description	Amount in € with 2 decimals	Explanations
WP1-WP6	Personnel direct costs	55568	12,59PMs (0,75PMs for Management and 11,84PMs for coordination)
	Subcontracting		
WP1-WP5	Travelling	5918,8	• Zahariadis, Concertation Meeting, FMI-TF, 1st year review, Brussels, 28/11-3/12/2011 (965,68€) • Zahariadis, nextMedia Plenary meeting, Concertation Meeting, FMI-TF, Brussels, 12/4-15/4/2011 (719,63€) • Nikolakis, FIA Budapest, 17-20/5/2011 (763,02€) • Zahariadis, FIArch Group and 3rd Review, Brussels, 22-

			26/5/2011, (1013,11€) • Zahariadis, FMIA-TT Workshop, Brussels, 14-16/6/2011 (511,09€) • Zahariadis, FIArch Workshop, Brussels, 21-23/9/2011 (562.88€) • Zahariadis, FIA Poznan, 25-27/10/2011, (733,39€) • Zahariadis, Final Review, 13-15/12/2011 (650€?)
WP1-WP5	Remaining direct costs	130€	Consumables
	Indirect costs	12323€	
TOTAL COSTS (EC Contribution, calculated with 7% of indirect costs)		73940€	

Annex I: Profiles of the Future Media Internet Architecture – Think Tank members

Jan Bouwen joined **Alcatel-Lucent Bell Labs** in 1998. He has worked on VoIP architectures and standards, Internet media distribution, interactive TV applications, User Generated Content and on-line gaming network architectures. Between 2000 and 2003, he worked in Network Strategy Group where he contributed to the definition of the company's strategy in IPTV. In 2003 he returned to research to start up the Residential Networked Applications project, which created the interactive IPTV applications AmigoTV and MyOwnTV. Currently he's leading the Visual Communication Department, a multi-disciplinary team researching and designing immersive and engaging communication experiences at home and in the office. Real-time video communication and 3D virtual environments constitute the technological roots on which the team grafts its research activities. Before joining Alcatel-Lucent, Jan was responsible for procurement in an engineering company active in process automation and worked as a project manager in the aerospace industry. Jan holds a Master's degree in electrical engineering from the University of Leuven.

Dr. **Pablo Cesar** is a tenure track researcher in interactive systems at **CWI** and member of SEN5. He received his Ph.D. from the Helsinki University of Technology in 2006. He has (co)authored over 50 articles (conference papers and journal articles) about multimedia systems and infrastructures, social multimedia, multimedia content modelling, and user interaction. He has been active in a number of European projects such as Passepartout, SPICE, iNEM4U, and TA2. He has given tutorials about multimedia systems in prestigious conferences such as ACM Multimedia and the WWW conference, and is co-editor of the book "Social Interactive Television: Immersive Shared Experiences and Perspectives"

Van Jacobson is one of the primary contributors to the TCP/IP protocol stack which is the technological foundation of today's Internet. He is renowned for his pioneering achievements in network performance and scaling. He joined PARC as a research fellow in August 2006, and also serves as Chief Scientist for Packet Design in the adjacent Xerox complex. Prior to that, he was Chief Scientist at Cisco Systems and group leader for the Network Research Group at Lawrence Berkeley Laboratory. Jacobson is best known for his work in IP network performance and scaling; his work redesigning TCP/IP's flow control algorithms (Jacobson's algorithm) to better handle congestion is said to have saved the Internet from collapsing due to traffic in 1988-1989. He is also well-known for the TCP/IP Header Compression protocol described in RFC 1144, mainly meant to improve performance over low-speed links, popularly known as Van Jacobson TCP/IP Header Compression. Furthermore he has co-written a few widely used network diagnostics tools, such as

traceroute, pathchar and tcpdump. For his work, Jacobson received the 2001 ACM SIGCOMM Award, the 2003 IEEE Koji Kobayashi Computers and Communications Award, and was elected to the National Academy of Engineering in 2006.

Prof. George Pavlou holds the Chair of Communication Networks at the Dept. of Electronic & Electrical Engineering, **University College London**. Over the last 20 years he has undertaken and directed research in networking, network management and service engineering, having extensively published in those areas. He has contributed to ISO, ITU-T, IETF and TMF standardisation activities and has been instrumental in a number of key European and UK projects that produced significant results.

Pablo Rodriguez is the Research Director at **Telefonica R&D** as well as the Director of the Barcelona R&D Lab. He is also an adjunct faculty professor at the department of computer science at Columbia University, New York. Prior to Telefonica, he worked at Microsoft Research, Cambridge and as a Member of Technical Staff at Bell Labs (NJ, USA). During his career he was also worked as a software architect and developer for various startups in the Silicon Valley including Netli (acquired by Akamai), Inktomi (acquired by Yahoo!) and Tahoe Networks (now part of Nokia). He received my Ph.D. from the Ecole Polytechnique Federale de Lausanne, EPFL, Switzerland while working at Institut Eurécom with Prof. Ernst W. Biersack. During his Ph.D. he also worked at AT&T Labs - Research, Florham Park, NJ. He obtained postgraduate studies at EPFL and King's College, London respectively, and an a B.S./M.S. in Telecommunication Engineering from the Public University of Navarra.

Nikolaos Laoutaris is a senior researcher at the Internet research group of **Telefonica Research** in Barcelona. Prior to joining the Barcelona lab he was a postdoc fellow at Harvard University and a Marie Curie postdoc fellow at Boston University. He got his PhD in computer science from the University of Athens in 2004. His general research interests are on system, algorithmic, economic, and performance evaluation aspects of computer networks and distributed systems with emphasis on content distribution, overlay networks, P2P, and multimedia communications.

Dr. **Giovanni Pau** is a Research Scientist at the Computer Science Department of the University of California, Los Angeles (**UCLA**). He obtained a Laurea degree in computer science and a Phd. in computer engineering from the University of Bologna. He is currently serving as secretary for the ComSoc Multimedia Technical Committee. His research interests include: Mobile computer network environments, including both wired and wireless (ad hoc) networks, with a focus on the design, implementation, and performance evaluation of network protocols in mobility situations. Distributed systems, including Internet information systems, replication, peer-to-peer and overlay networks, with an emphasis on mobility applications.

Christian Timmerer received his M.Sc. (Dipl.-Ing.) in January 2003 and his Ph.D. (Dr.techn.) in June 2006 (for research on the adaptation of scalable multimedia content in streaming and constraint environments) both from the **Klagenfurt University**. He joined the Klagenfurt University in 1999 and is currently a Assistant Professor (Ass.-Prof.) at the Department of Information Technology (ITEC) – Multimedia Communication Group where he also chairs the IT administration group. At the university, he has been working on coding-format agnostic resource adaptation within the MPEG-21 Multimedia Framework. Other research interests include the transport of multimedia content, multimedia adaptation in constrained and streaming environments, distributed multimedia adaptation, and Quality of Service / Quality of Experience.

Gonzalo Camarillo works for **Ericsson Research** in Finland. He received M.Sc. degrees in electrical engineering from the Stockholm (Sweden) Royal Institute of Technology and from Universidad Politecnica de Madrid (Spain). His research interests include signaling, multimedia applications, transport protocols, and networking architectures. He has authored a number of RFCs, books, patents, and scientific papers on these areas. Gonzalo has co-authored, among other standards, the SIP (Session Initiation Protocol) specification (RFC 3261). He has served on the IAB (Internet Architecture Board) and has chaired a number of IETF (Internet Engineering Task Force) working groups. Currently, Gonzalo is the director of the RAI (Real-time Applications and Infrastructures) area at the IETF. He is also the IETF liaison manager to 3GPP.

Thomas Steiner is a Research Scientist at **Google**, and a PhD student at UPC.edu. His main research interests these days are the Semantic Web, Linked Data, and the architectural style REST. He holds two Master of Computer Science degrees, one from the Technical University of Karlsruhe, Germany, and the other from the École Nationale Supérieure d'Informatique et de Mathématiques Appliquées de Grenoble, France.

Dr. Amar-Djalil MEZAOUR received his PhD from University of Paris Sud, in 2005 and is Research and Development project manager at **Exalead**. He was previously Researcher Assistant at LRI in IASI team (Artificial Intelligence team) and member of the INRIA GEMO project. Within the research and innovation group of Exalead, Dr Mezaour worked on integrating advanced semantic technologies for information extraction in Exalead software. He also managed European and French research projects like ALIS. In Quaero, he is in charge of developing machine translation tools operating on multimedia content.