
Dissemination Report

D6.4

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- ***Deliverable type:**
 - PU = Public,
 - RE = Restricted to a group of the specified Consortium,
 - PP = Restricted to other program participants (including Commission Services),
 - CO = Confidential, only for members of the MobiThin Consortium (including the Commission Services)

- **** Nature of Deliverable:**
 - P = Prototype,
 - R = Report,
 - S = Specification,
 - T = Tool,
 - O = Other.

- *****Version:**
 - Preliminary,
 - Draft 1, Draft 2, ...,
 - Released

Abstract: This objective of this document is to give a complete overview of dissemination activities undertaken (exhaustive list of all the papers, contributions to standardization and public demonstrations published or performed) within the MobiThin project duration) from January 1st, 2008 to June 30th, 2010)

“The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 216946”



Keyword List: Dissemination, Communication

The **MOBITHIN Project Consortium** groups the following Organizations:

Interdisciplinary Institute for BroadBand Technology vzw	IBBT vzw	BE
Deutsche Telekom AG	DTAG	DE
Prologue Software	Prologue	FR
Interuniversitair Micro-Electronica Centrum vzw	IMEC vzw	BE
NEC Technologies (UK) Ltd	NTUK	UK
Institut Télécom, Télécom Sud Paris	referred as TSP	FR
JCP-Consult SAS	JCP	FR

Executive Summary

This document aims at providing a cumulative overview of the undertaken project's dissemination activities; this report is the final document further to the first version provided in D6.2 dated June 2008 [1] and its update provided in D6.3 dated June 30, 2009 [2].

The D6.4 is dedicated to the description of the dissemination measures, including all scientific publications relating to foreground. Its content is made available in the **public domain** thus demonstrating the added-value and positive impact of the project on the European Community.

Contrary to the previous intermediate deliverables D6.2 and D6.3, this last one does not approach the information on the future route to full use (exploitation or use in further research), this aspect being described in the D6.5 "Final Plan for the use and dissemination of foreground".

Finally the part dedicated to the societal implication (statistics and indicators on societal and socio-economic issues addressed by the MobiThin Project) is to be found under the D1.5 "Final Report on awareness and wider societal implications".

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EDITORIAL Change Management

Version	Date	Editor/Author	Comments
Preliminary	May 15th, 2010	JCP-Consult	Creation of document.
Draft		All	Inputs
Released	June 30 th , 2010	JCP-Consult	Finalization of document

1 REFERENCES

- [1] D6.2 – Project Communication and dissemination plan
- [2] D6.3 – Dissemination report
- [3] Project Contract GA 216946 and Annex II (General Conditions)
- [4] Project Contract - Annex 1 “Description of the Work” (DoW)
- [5] MobiThin Consortium Agreement (CA)

2 DEFINITION

All definitions are listed either in the Annex II – General Conditions to the Grant Agreement – or in the Consortium Agreement. [3][4][5].

3 DESCRIPTION OF THE DISSEMINATION MEASURES

3.1. LIST OF DISSEMINATION ACTIVITIES

As mentioned in “Rules for Participation (RfP) - Regulation (Ec) No 1906/2006 Of The European Parliament And Of The Council”, appropriate, open and efficient communications to publicize the results of the MobiThin project is an important part of the project success.

The aim of MobiThin is to define and implement an end-to end architecture using the wireless thin-client paradigm and dissemination has been considered as a strategic activity during the project duration.

In order to help the presentations, as a general tool for dissemination, The MobiThin factsheet has been produced at a early stage of the project (January 31st, 2008) and, at the same time, a poster presenting MobiThin "at a Glance" was designed and printed.

Two technical posters were also printed allowing the presentation of WP3 & WP4's activities during the NEM Summit.

A leaflet has been designed and printed to be distributed during relevant events [annex 1]

The dissemination activities that were performed or are planned by the project are:

3.1.1. INTERNATIONAL AND NATIONAL CONFERENCES AND WORKSHOPS

Project results are published through articles and papers at various international and national conferences and workshops. There are a huge number of such conferences, thus the partners kept a critical eye on the quality of these in order to make a qualified selection of appropriate conferences to participate at.

➤ The events that have been attended from January 2008 till June 2010 are:

- **NOC 2008** [<http://noc2008.fh-krems.ac.at/>]
1 – 3 July, Krems, Austria
- **ATNAC 2008** [<http://www.trc.adelaide.edu.au/ATNAC2008/>]
7 – 10 December 2008, Adelaide, Australia
- **WiOpts 2009** [<http://www.wiopt.org/>]
June 23-27, 2009, Seoul, Korea
- **ADAMUS 09** [<http://www.adamus.ua.ac.be/>]
13-17 July 2009 London, UK,

- **Sigcomm 2009** [<http://conferences.sigcomm.org/sigcomm/2009/>]
17-21 August, 2009 Barcelona, Spain
- **SPIE annual meeting** [<http://spie.org/>]
3-6 August 2009, San Diego, CA-USA
- **SPIE Photonics Europe International Symposium** [<http://spie.org/>]
12-16 April 2010, Brussels – Belgium
- **EUVIP 2010** [<http://www.univ-paris13.fr/euvip/>]
5-7 July, 2010, Paris – France

The consortium has kept a particular attention to present the MobiThin vision and progress at events of high added value organized in its technical domain of interest.

3.1.2. DISSEMINATION AT CONCERTATION AND CLUSTER MEETINGS

The MobiThin project, committed to Clustering, attended all Concertation meetings and events of the European Union. Attending such events was seen as a real opportunity for dissemination and coordination and useful to present our results to a broader audience.

It also enabled us to get feedback from other projects, and is even part of our exploitation, since we want to get results considered for standardization.

The creation of the ETSI ISG Group on “Mobile Thin Client” was also intended to naturally lead to the set-up of a specific cluster on wireless thin client.

➤ The events that have been attended from January 2008 till June 2010 are:

- **The 1st FP7-FP6 Concertation Meeting “The Network of the Future”**
March 11-12, 2008, Brussels, Belgium
- **The Future of Internet** – [www.fi-bled.eu/]
31 March – 4 April 2008, Bled, Slovenia
- **The 2nd FP7-FP6 Concertation Meeting “The Network of the Future”**
September 30 & October 1-2, 2008, Brussels, Belgium
- **ICT-2008 Event**, 25-27 November 2008, Lyon, France
[http://ec.europa.eu/information_society/events/ict/2008/index_en.htm]
- **The Future of Internet** –
[www.future-internet.eu/home/future-internet-assembly/madrid-dec-2008.html]
9 – 10 December 2008, Madrid, Spain
- **The 3rd Concertation Meeting of ICT-FP7-FP6 “The Network of the Future”**
February 17th, 2009, Brussels, Belgium
- **Future Internet Assembly** [www.fi-prague.eu/]
11-13 May 2009, Prague, Czech Republic
- **The 4th FP7-FP6 Concertation meeting “The Network of the Future”**
29th September 2009, Brussels, Belgium
- **Future Internet Assembly** [www.fi-stockholm.eu]
23-24 November 2009, Stockholm, Sweden

- **The 5th FP7-FP6 Concertation meeting “The Network of the Future”**
26-28 January, 2010 - Brussels, Belgium
- **The Future Internet Assembly (FIA) 2010**
15-16 April 2010 - Valencia, Spain

3.1.3. CONNECTIONS WITH TECHNOLOGY PLATFORMS

MobiThin partners were active in the technology platforms, and part of the MobiThin dissemination activities is to contribute and disseminate the results to the platforms activities. Mobithin also used the already existing technology platform dissemination tools to communicate on the Mobithin project results. Technology Platforms that have been identified are NEM, NESSI and eMobility.

The dissemination activities to be reported are:

- Contribution to the Strategic research Agenda activities
- Active participation in the planned events that have been organized by the TPs; during those events, publications have been accepted (see table xx – page tbc) and several presentations were made.
 - **ICT-MobileSummit 2008** [<http://www.ict-mobilesummit.eu/2008/>]
10 - 12 June 2008, Stockholm, Sweden
 - **2008 NEM summit** [<http://www.nem-summit.eu/>]
13-15 October 2008, Saint-Malo, France

Besides the IBBT presentation, entitled "Bringing Thin Clients to the Mobile World", a booth has been booked and demonstrations were performed. In particular, two demonstrations were given. The first one titled “We have a problem” as described in section 7.3 of D5.1, where the shortcomings of existing thin client protocols are illustrated. And the second one titled “Protocol adaptivity” as described in section 7.5 of D5.1, where a protocol developed within the MobiThin project is able to adapt to the graphical content. Through posters of the WP3 and WP4 activities and an attractive demo with state-of-the-art thin client devices (Asus EEE), visitors were attracted mainly from academia and universities. It has been the occasion to identify other related projects, e.g. Surrey University VISNET II.

- **ICT-MobileSummit 2009** [<http://www.ict-mobilesummit.eu/2009/>]
10 - 12 June 2009, Santander, Spain
 - Including a MobiThin chaired session dedicated to “the Sustainable Communications”
 - Including a MobiThin chaired session dedicated to “Fixed-mobile Convergence”
 - Including a presentation [“Demanding Applications on Resource Constrained Mobile Devices through Thin Client Computing “] that has been made during the Future Internet Architecture session
- **2009 NEM summit** [<http://www.nem-summit.eu/>]
September 28-30, 2009, Saint-Malo, France
- **Future Internet EU-Japan workshop**, October 12 – 15, 2009
- **Future Network & MobileSummit 2010**
16 - 18 June 2010 - Florence, Italy

- Including a presentation [“A Cross Layer Approach to Save Energy in 3GPP LTE Terminals”] that has been made during the Energy Awareness session and a presentation [“An adaptive approach to optimize thin client protocols”] that has been made during the Future Internet Architecture and Protocol Design session, and a presentation [“Static Context Inference of Header Compression for Wireless Video Broadcast”] that has been made in the FI – Wireless & Mobility issues.
- MobiThin objectives were presented to the NEM platform through their newsletter Nr 9 issued in March 2008.

3.1.4. DISSEMINATION THROUGH OTHER RELEVANT PROJECTS

Possible coordination has been checked with the main current initiatives aiming at standardization and unification of middleware solutions, owing to FP6 and FP7 projects (SSA and CAs).

FP6 COPRAS does not have successors but the creation of the MTC (Mobile Thin Client) ISG does not require anymore to link with a SSA on standardization.

One successor of BREAD is EIFEL: MobiThin has been actively involved in the FIRE and EIFEL initiatives of the EC: Piet Demeester and Jean-Charles Point participated to

- the **EIFEL think tank meeting** (Frankfurt, 30 September - 1 October 2008) and to
- the **FIRE technical expert group meetings** hold in Paris/France, 10-11 Sept 2008, Brussels/Belgium 8-9 Jan 2009 and Luleå/Sweden 29 June - 3 July 2009.
- The **Eiffel think tank meeting**, (Cambridge, June 25, 2010)

3.1.5. PUBLICATIONS, MAGAZINES ETC

We focused on technical publications but have had real opportunities to disseminate in publishing in different kind of events and / or supports in the sense of commercial or general public publication.

The list of the publications (**PEER REVIEWED**) that have been submitted and accepted are listed in the table to be found page 15.

In April 2010, MobiThin partners took also in heart to answer properly to the EC questionnaire covering dissemination and use of foreground.

3.1.6. PROJECT WEBSITE

This website that has been regularly updated with all public information; it is intended to facilitate contacts and exchanges with other research and industrial initiatives on the relevant topics. This web site will kept updated about general public project information, public deliverables and other results that may interest the public at least for one year after the project ends.

The MobiThin website (www.mobithin.eu) has been set-up just after the kick-off meeting and was officially delivered to the EC (Deliverable D6.1) on March 30th, 2008.

Home News Events Documents Deliverables About Mobithin Partners Contact Us

ABOUT MOBITHIN

Intelligent distribution of demanding services and applications to mobile thin client devices
Thin client solutions have been extremely successful in wired LAN settings because of cost reductions, inherent data security and privacy, more efficient use of resources and ubiquitous data and service access

The MobiThin impact is to run your applications everywhere

More >>

NEWS

- Call for Papers: MediaWIN 2009 July 5, 2009
- ICT MobileSummit 2009, Santander, Spain June 10, 2009
- ICT - Future Internet in Prague, Czechia May 11, 2009
- ICT - Future Internet in Madrid, Spain December 10, 2008
- European Union and the Future Internet August 24, 2007

More news

EVENTS

- 1st NEM Summit has been held in Saint-Malo, France 13-15 October 2008 -
- ICT-MobileSummit 2008 Stockholm, Sweden from 10 to 12 June 2008 -
- ICT 2008 Event will take place on 25-27 November 2008 in Lyon, France November 25, 2008 -
- ICT-MobileSummit 2009 10 - 12 June, 2009 - Santander, Spain
- 2009 NEM Summit - "Towards Future Media Internet" September 28-30, 2009 - Saint-Malo, France
- MobiSys 2009 June 22-25, 2009 - Kraków, Poland
- MediaWIN 2009 5 July 2009 - Sousse, Tunisia
- MobiHand 2009 - Call for paper August 17, 2009 - Barcelona, Spain

More events

MOBITHIN DOCUMENTS

- Factsheet Mobithin
- Poster Mobithin WP3 - Thin Client Protocol Optimization
- Poster Mobithin WP4 - Distributing demanding services and applications to mobile thin client devices

More documents

MOBITHIN IN THE PRESS

- Mobithin press-release (PDF)
- MobiThin, the European future of the thin mobile client. (French link)
- The development of tomorrow's thin mobile clients. (French link)

MOBITHIN PARTNER ZONE

LOGIN ProjectPlace

Dedicated area for Mobithin partners (Requires registration at: ProjectPlace)

JCP-C Prologue NEC Empowered by Innovation NEC technologies (R&D) imec IBBT TELECOM

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 216946

Its goal is to appeal to a large audience to get them involved within the wireless thin client environment and development area.

Our intention is to present valuable information about the general news in the area, the events in the domain and the important headings of the European Commission and other related projects.

The web site / Deliverables page / also presents our public deliverables after they have been accepted by the Commission, following to the review process.

3.1.7. LIAISON AND DISSEMINATION IN THE APPROPRIATE STANDARD BODIES

The main contributions that are identified are:

- A. The **Creation of an ISG group within ETSI: the MTC ISG** [<http://portal.etsi.org/mtc/>] that has hold its kick-off meeting on May 20th, 09 in Sophia-Antipolis (FR)

The screenshot displays the ETSI e-Standardization portal. At the top, there is a navigation bar with menus for People, Manage, Approval, Guide, Help, and Search. The main header includes the ETSI logo, the text 'e-Standardization', and the date '28 May 2009 - 16:20:11 (GMT+2) Sophia Antipolis - France'. Below this is a grid of sub-groups including GA, BOARD, FC, IPR, OCG, 3GPP, ATTM, BRAN, BROADCAST, DECT, EE, eHEALTH, EMTEL, ERM, ESI, GRID, HF, INT, ITS, LI, M2M, MCD, MESA, MSG, MTS, PLT, RRS, RT, SAFETY, SAGE, SCP, SES, STQ, TETRA, TISPAN, USER, and ISG. The ISG sub-group is highlighted in blue.

Below the grid are several content panels:

- General Information - MTC:** Contains links for 'MTC Member Agreement', 'MTC Participant Agreement', 'Agreement Signature Instructions', 'Mobile Thin Client', 'Terms of Reference', 'List of members', 'GS Template', and 'Work Item form'.
- Meeting Calendar - MTC:** Shows a selection for 'Half year' and a date range 'This Half year 2009-05-25 to 2009-11-24'. It lists '1 meeting(s) found' with a table entry for '01 Oct MTC#2' in Saint Malo FR.
- Work Item Monitoring - MTC:** Displays '1 WIs, Work in progress, displaying 1 to 1'. It shows a table with columns for 'Work item number', 'Version', 'Current status', and 'Next state'. One item is listed: 'DGS/MTC-02 Arch (GS)' with status 'Start of work (2009-05-20)' and 'Early dr'.
- Publications - MTC:** Shows a date range '25-31 May 2009' and a message: 'No deliverable was submitted for approval procedure or published'.
- Meeting Documents - MTC:** Shows 'Meeting (See details) MTC#1 (2009-05-20 to 20)' and 'Document Content Type --ALL--' with '8 document(s)'.
- Officials - MTC:** Lists '3 person(s) found' in a table:

Name	Role	Organization
Point Jean Charles	Chairman	JCP-Consult SAS
Dhoedt Bart	Vice Chairman	IBBT vzw
Mancini Estelle	Support Co-ordinator	ETSI
- Email Archives - MTC:** Shows '1 list(s) found' with a table entry for 'MTC' and 'MTC_ISG'.

The ISG gathers IBBT, IMEC, Deutsche Telekom, Prologue, Institut Telecom and JCP-Consult; the group decided in a first stage not to lobby much for additional partners, and rather to concentrate on the production of first deliverables.

The 2 first work items to be produced have been defined and approved as follows:

1. Mobile thin client use cases and requirements: the work will identify the requirements and functionalities related to mobile thin client architecture by
 - collecting and detailing comprehensive scenarios and use cases
 - deriving and analyzing resulting requirements
 - defining global functionalities of the system
2. Mobile thin client architecture document: based on the requirements document, the present work item will:
 - define the different building blocks of mobile thin client architecture
 - identify the interfaces needed between these building blocks

Both documents entitled

- “DGS/MTC-0001 Reqmts “Mobile Thin Client (MTC); Use Cases and Requirements” and
- “DGS/MTC-0002 Arch “Mobile Thin Client (MTC); Architecture”

have been finalized approved for publication within ETSI on April 16th, 2010. This has allowed to adapt the results deliverables D2X and D2.Y to ETSI formalism and publish them.

A new work item has been started on interface specification for mobile thin client; the work has been launched during MTC#4 meeting that has been held in May 2010 and is expected to be finalized by the end of 2010.

According to a request from NEC, the ISG has also extended their scope by changing their terms of reference, so that the specifications produced can be used for fixed and nomadic situation (initially the ISG was focused on mobile situations only).

Calendar:

The meetings of MTC have been organized co-located with internal project meetings as follows:

- May 20th, 09 in Sophia-Antipolis (FR)
- October 1st, 2009 in Saint-Malo (FR), also co-locate with the NEM Summit 2009
- January 14th, 2010 in Brussels (BE)
- May 6th, 2010 in Sophia-Antipolis (FR)
- The next meeting of MTC is scheduled to be hold in Ghent (BE) on September 14th, 2010.

Group future:

Now that the activity is on steady state, the ISG has decided to be active in contacting potential new members; in parallel the ISG will consult ETSI to check the potential for collaboration or merging with existing technical body on cloud computing (namely the TC – Cloud).

B. The Contribution to ISO/IEC JTC 1/SC 29/WG 11 (MPEG) standardization

The main standardisation activity within MPEG is connected to MPEG-4 (BiFS, LAsER) and represents a key activity for the MobiThin results dissemination. While initially led by Télécom Sud Paris (TSP) which is one of the main French contributors in MPEG, the MobiThin framework allowed Prologue to enter this very challenging activity. Now (at the end of the project) a very strong and efficient synergy was established between TSP and Prologue and further mutual standardisation activities are scheduled.

The four 2008 MPEG meetings (Antalya in January, Archamps in April, Hanover in July, and Busan in October) allowed the MobiThin consortium members to monitor the technological developments connected to the MPEG-4 in general and to the BiFS and LASER in particular. Under this framework, the most representative for the project are the documents M15732 (connected to the amendments on scene representation) and M15793 (about the Rich Media UI framework).

The preliminary results of MobiThin project (Phase I) concerning a novel MPEG-based remote viewer were presented at the 2009 Winter and Spring MPEG meetings (held in Lausanne, February 2009 and Maui, April 2009 respectively), cf. document entitled authors. The positive and enriching feed-back thus received allowed the MobiThin consortium to contribute on a regular basis in this field: Xi'an (October 2009), Kyoto (January 2010), Dresden (April 2010). As the project results pointed out to several limitations in the BiFS/LAsER standards, and as the MobiThin consortium was considered by the MPEG community as very strong, future actions are planed in order to update the standard (cf. the MPEG output document #W11135) in the near future (about 1 year).

Although not initially forecasted, a second MPEG standardisation direction emerged during the project: specify, design and demonstrate collaborative multi-users multi-media MPEG scenes. Because of its huge potential business impact (both inside and outside MobiThin), this direction testified an explosive activity, cf. MPEG inputs for 4 successive meetings: London (June 2009), Xi'an (October 2009), Kyoto (January 2010), Dresden (April 2010). Led by TSP (as an academic player) and Prologue (as an industrial player), these activities will go beyond MobiThin, with mid-termed expected results (the first collaborative multi-user MPEG scene will require about 2 years for its final standardisation).

C. Contribution to IETF: it has been initially forecasted in the DoW that some contributions to IETF could be made ("Internet Area" working group and "real-time applications and infrastructure area). With regard to the Man/Months resources available in WP6, the partners decided to focus on the **ISG ETSI (MTC)** creation and to keep a high level contribution in **MPEG-4 standardization (BiFS, LAsER)**.

D. The table below summarize the MobiThin Contributions to standards.

Authors	Contribution title	Standardization organization	Place	Date	Effect on the standard
M. Mitrea, P. Simoens, B. Joveski, B. Vankeirsbilck, A. Taguengayte, F. Prêteux.	Novel approaches to remote display representations: BiFS-based solution and its deployment within the FP7 MobiThin project	MPEG meeting	Lausanne	February 2009	ISO/IEC JTC 1/ SC 29/WG 11 M16058
B. Joveski, M. Mitrea, P. Simoens, I-J Marshall, F. Prêteux	BiFS-based solution and its deployment within the FP7 MobiThin project: event handling and streaming.	MPEG meeting	Maui	April 2009	ISO/IEC JTC 1/ SC 29/WG 11 M16465
B. Joveski, I-J Marshall, M. Mitrea, P. Simoens, F. Prêteux	Active and reactive components participative, distributed and collaborative BiFS scenes	MPEG meeting	London	29 June - 3 July 2009	ISO/IEC JTC 1/ SC 29/WG 11 M16676
B. Joveski, M. Mitrea, F. Prêteux, I-J. Marshall, P. Simoens, B. Dhoedt	BiFS vs. LAsER remote display solutions for mobile thin clients	MPEG meeting	Xi'an (China)	October 2009	ISO/IEC JTC 1/ SC 29/WG 11 M16882
B. Joveski, I-J Marshall, M. Mitrea, F. Prêteux, P. Simoens, A. Taguengayte, B. Dhoedt	A study of the MPEG potential for active and reactive components in participative, distributed and collaborative BiFS scenes	MPEG meeting	Xi'an (China)	October 2009	ISO/IEC JTC 1/ SC 29/WG 11 M16883
B. Joveski, I.-J. Marshall, M. Mitrea, F. Prêteux,	Towards adoption of collaborative BiFS technologies for use in immersive environments	MPEG meeting	Kyoto (Japan)	January 2010	ISO/IEC JTC 1/SC 29/WG 11 M 17269

Authors	Contribution title	Standardization organization	Place	Date	Effect on the standard
P. Simoens, A. Taguengayte, B. Dhoedt					
B. Joveski, M. Mitrea, F. Prêteux, I. J. Marshall, P. Simoens, B. Dhoedt	Data setup for a comparative study between BiFS & LAsER performances for thin client player	MPEG meeting	Kyoto (Japan)	January 2010	ISO/IEC JTC 1/SC 29/WG 11 M 17272
B. Joveski, I.-J. Marshall, M. Mitrea, F. Prêteux, P. Simoens, B. Dhoedt	LAsER based remote viewer within the framework of FP7 MobiThin project	MPEG meeting	Dresden Germany	April 2010	ISO/IEC JTC 1/SC 29/WG 11 M 17570
B. Joveski, I.-J. Marshall, M. Mitrea, F. Prêteux	An experimental framework for use of collaborative technology in multi-user, multimedia and immersive applications	MPEG meeting	Dresden Germany	April 2010	ISO/IEC JTC 1/SC 29/WG 11 M 17462

3.1.8. UNIVERSITIES AND COLLEGES

In total 3 partners of the MobiThin Consortium [IBBT, IMEC & IT/TSP] in the project have close relations to University and Colleges. These partners will ensure that project visions and results are disseminated among educational staff and students. The intention is that project ideas shall be included in different training activities as student projects, incorporation into lectures etc.

- For instance, within the major on HTI (HighTech Imaging) opened at TELECOM SudParis for graduating MS students, new topics on BiFS & LAsER have been added in the Fall of 2008. Note that such a topic is of interest for the engineering school students not only for the courses but also for some internship.
- MobiThin illustrations on the emerging BiFS & LAsER applications are also included now in lectures delivered at Université Paris XIII (since 2009) and at l'Ecole Supérieure de telecommunications de Tunis (since 2008).
- MobiThin's demos are presented on several occasions to attract new students into software development studies, for example on Abiturients days and bachelor info days in Ghent University. In the course on Design of Distributed Software, MobiThin is used to introduce the thin client paradigm. In 2009 – 2010, a graduating Master student will perform thesis work on a thin client / MobiThin related topic.
- IMEC has guided a number of PhD students through research activities focused on Cross-Layer solutions. They have achieved important contributions in this domain. Also, some demos presenting the achievable energy gains with Cross-Layer have been presented during IMEC workshops to students and general public.

3.1.9. PARTNER INTERNAL DISSEMINATION

All partners in the project disseminated project results internally in their organizations (through their own communication tools: newsletter, website, ...)

3.2. LIST OF SCIENTIFIC (PEER REVIEWED) PUBLICATIONS

LIST OF SCIENTIFIC (PEER REVIEWED) PUBLICATIONS, SORTED BY PUBLICATION DATES								
NO.	Title	Main authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages
1	Power Efficiency Of Thin Clients	W. Vereecken, L. Deboosere, P. Simoens, B. Vermeulen, D. Colle, Ch. Develder, M. Pickavet, B. Dhoedt, P. Demeester.			European Transactions on Communications	Accepted for publication.		
2	Energy Efficiency in Telecommunication networks	W. Vereecken, L. Deboosere, D. Colle, B. Vermeulen, M. Pickavet, B. Dhoedt, P. Demeester			Networks & Optical Communications (NOC)	Krems, Austria	July 1-3, 2008	<i>pp. 44-51</i>
3	Power Consumption Of Mobile and Wireless Thin Clients	W. Vereecken, W. Haerick, C. Develder, D. Colle, B. Vermeulen, M. Pickavet, B. Dhoedt P. Demeester			Wireless World Research Forum Meeting 21, (WWRF)	Stockholm, Sweden	Oct. 13-15 2008	<i>Published in proceedings on CD-ROM</i>

NO.	Title	Main authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages
4	Bringing Thin Clients to the Mobile World	B. Vankeirsbilck, P. Simoens, L. Deboosere, B. Dhoedt, F.-J. Westphal, T. Plantier, B. Lecroart, F. Prêteux, A. Dejonghe, J.-C. Point.			NEM Summit	Saint-Malo, France	Oct. 13-15, 2008	<i>pp. 104-108</i>
5	Design and implementation of a remote display protocol to optimize multimedia experience on thin client devices	P. Simoens, P. Praet, B. Vankeirsbilck, J. Dewachter, L. Deboosere, F. De Turck, B. Dhoedt, P. Demeester.			Australasian Telecommunications Networks and Applications Conference (ATNAC)	Adelaïde, Australia	Dec. 8 -10, 2008	<i>pp. 391-396</i>
6	Bandwidth Optimization for Mobile Thin Client Computing Through Graphical Update Caching	B. Vankeirsbilck, P. Simoens, J. De Wachter, L. Deboosere, F. De Turck, B. Dhoedt, P. Demeester			Australasian Telecommunications Networks and Applications Conference (ATNAC)-	Adelaïde, Australia	Dec. 8 -10, 2008	<i>pp. 385-390</i>
7	Demanding Applications on Resource constrained Mobile Devices	B. Vankeirsbilck, P. Simoens, L. Deboosere, F. De Turck, B. Dhoedt, P. Demeester			ICT MobileSummit	Santander, Spain	June 10-12,2009	<i>pp. 1-8</i>

NO.	Title	Main authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant Pages
8	MobiThin Management Framework: Design and Evaluation	L. Deboosere, B. Vankeirsbilck, P. Simoens, F. De Turck, B. Dhoedt, P. Demeester, M. Kind, F-J. Westphal, A. Taguengayte T. Plantier			3 rd international workshop on Adaptive and DependAble Mobile Ubiquitous Systems (ADAMUS'09), <i>in conjunction with the ACM International Conference on Pervasive Services (IPCS)</i>	London, UK	July 13-17 2009	<i>Published in proceedings on CD-ROM of ICPS'09</i>
9	Characterization of Energy Consumption in thin clients due to protocol data transmission over IEEE 802.11	P. Simoens, B. Vankeirsbilck, L. Deboosere, F. De Turck, B. Dhoedt P. Demeester, R. Torrea-Duran, C. Desset			International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WIOPTS)	Seoul, Korea	June 23-27, 2009	<i>Published in proceedings on CD-ROM</i>
10	BiFS based approaches to remote display for mobile thin clients	M. Mitrea, P. Simoens, B. Joveski, B. Vankeirsbilck, A. Taguengayte, F. Prêteux			Mathematics of Data/Image Coding, Compression, and Encryption with Applications XII part of the SPIE Optics & Photonics	San Diego, CA - USA	August 2009	Published in Proc. SPIE Vol. 7444A

NO.	Title	Main authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages
11	Self Management of a Mobile Thin Client Service	L. Deboosere, B. Vankeirsbilck, P. Simoens, F. De Turck, B. Dhoedt, P. Demeester			Workshop on Networking, Systems, Applications on Mobile Handhelds (MobiHeld) co-located with ACM SIGCOMM 2009	Barcelona, Spain	Aug. 17-21, 2009	<i>Published in proceedings on CD-ROM of SIGCOMM09</i>
12	Reducing power consumption of mobile thin client devices	F. Azmat Ali, P. Simoens, B. Vankeirsbilck, L. Deboosere, B. Dhoedt, P. Demeester, R. Torrea-Duran, C. Desset			NEM Summit	Saint-Malo, France	Sept. 28-30, 2009	Oral presentation, <i>Published in proceedings on CD-ROM</i>
13	A scheduled approach for remote display	F. Fok, B. Lécroart, E. Chan, P. Simoens			NEM Summit	Saint-Malo, France	Sept. 28-30, 2009	Oral presentation, <i>Published in proceedings on CD-ROM</i>
14	An adaptive approach to optimize thin client protocols	F. Fok, B. Lécroart, E. Chan, P. Simoens, B. Dhoedt			Future Network & Mobile Summit 2010	Firenze, Italy	June 2010	Oral presentation, <i>Published in proceedings on CD-ROM</i>
15	A Cross Layer Approach to Save Energy in 3GPP LTE Terminals	R. Torrea-Duran, C. Desset, A. Dejonghe			Future Network & Mobile Summit 2010	Firenze, Italy	June 2010	Oral presentation, <i>Published in proceedings on CD-ROM</i>
16	Static Context Inference of Header Compression for Wireless Video Broadcast	Xavier le Bourdon, Jean-Charles Point			Future Network & Mobile Summit 2010	Firenze, Italy	June 2010	Poster presentation, <i>Published in proceedings on CD-ROM</i>

NO.	Title	Main authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages
17	MPEG-4 interactive image transmission on mobile thin clients	B. Joveski, M. Mitrea, F. Preteux			The SPIE Optics, Photonics and Digital Technologies for Multimedia Applications		Submitted for review	
18	Design of Grids for Mobile Thin Client Computing	L. Deboosere, P. Simoens, J. De Wachter, B. Vankeirsbilck, F. De Turck, B. Dhoedt, P. Demeester			Chapter in "Grid Technology and Applications: Recent Developments", Nova Publishers ISBN: 978-1-60692-768-7		2009	
19	Upstream bandwidth optimization of thin client protocols through latency-aware adaptive user event buffering	P. Simoens, B. Vankeirsbilck, L. Deboosere, F. Azmat Ali, F. De Turck, B. Dhoedt, P. Demeester	International Journal of Communication Systems	12	Wiley		Under review	
20	Cross-layer optimization of radio sleep intervals to increase thin client energy efficiency	P. Simoens, F. Azmat Ali, B. Vankeirsbilck, L. Deboosere, F. De Turck, B. Dhoedt, P. Demeester R. Torrea-Duran	IEEE Communication Letters	12	IEEE		Under review	
21	Autonomic Resource Management for Mobile Thin Client Computing	L. Deboosere, F. Fok, B. Vankeirsbilck, P. Simoens, B. Dhoedt, F. De Turck	European Transactions on Communications		European Transactions on Communications		Under review	

		P. Demeester					
22	Grid Design for Mobile Thin Client Computing	L. Deboosere, B. Vankeirsbilck, P. Simoens, B. Dhoedt, F. De Turck, P. Demeester.	Future Generat Computer Syst	12	Elsevier		Under review

The MobiThin leaflet – Annex I

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ADDRESSED CHALLENGES

- Customer experience with internet in a mobile context
- Resource demanding future multimedia applications
- Energy efficiency of devices and networks
- Intelligent network functions using context information for optimised service environments
- Business opportunities for telecommunication and internet service providers

STARTING SITUATION

- Thin client approaches are not aligned with physical constraints of wireless network
- Increasing but still expensive bandwidth availability in wireless technologies
- Image transmission technologies improve continuously
- Traditional thin clients focus on enterprise environments

MOBITHIN WORK APPROACH

- Definition of the vision
- Analysis of requirements
- Development of system architecture and components
- Identification of business models
- Research on cross layer adaptive protocol
- Architecture validation in demonstrators and real world lab trials
- Contribution to standardization



INTELLIGENT DISTRIBUTION OF DEMANDING SERVICES AND APPLICATIONS TO MOBILE THIN DEVICES

Project start date: January 1st, 2008
 Project duration: 30 months
 Contacts: Bart Dhoedt
 bart.dhoedt@intec.ugent.be
 Jean-Charles Point
 pointjc@jcp-consult.com
 Website: <http://www.mobithin.eu>

PARTICIPANTS



ETSI

ETSI
 Founders of the ETSI I68 MTC Industry Specification Group on Mobile Thin Client
http://portal.etsi.org/Portal_CamaraView.asp



INTELLIGENT DISTRIBUTION OF DEMANDING SERVICES AND APPLICATIONS TO MOBILE THIN DEVICES

www.mobithin.eu

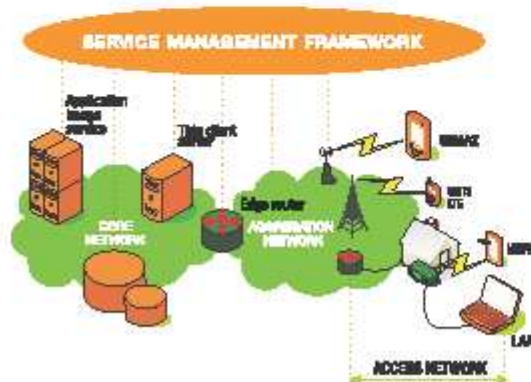


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OBJECTIVE

The objective of MobIThin is to allow intelligent and flexible distribution of applications, services and content to mobile users in a wireless WAN setting, mirroring the success of wired thin client solutions.

MOBITHIN SYSTEM APPROACH



SYSTEM ARCHITECTURE

- Identify sound scenarios and analyze requirements
- Describe components
- Integrate external services for application and personal user data storage



BUSINESS SCENARIOS

- Improve real world applicability
- Define potential bottlenecks

MOBITHIN USE CASES



Customer experience

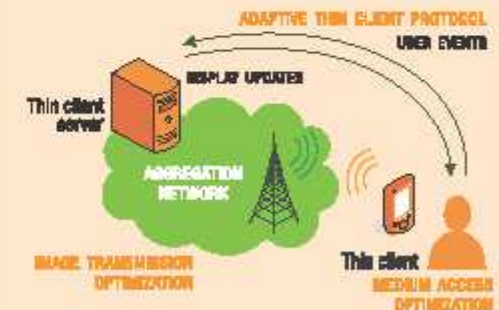
SERVICE MANAGEMENT FRAMEWORK

- Control the Infrastructure
- Optimize QoS functionality
- Support business frameworks



THIN CLIENT PROTOCOL

- Establish client - server communication



DEMONSTRATOR

- Validate developments of management framework, thin client protocol and overall system approach
- Cover functional aspects in lab and real world environments through proof of concept