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Deliverable D1.1

Detailed Dissemination and Standardisation Plan

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Abstract:

Deliverable 1.1 defines the detailed plans for dissemination and standardisation work. This includes Public Relations work as well as anticipated demonstrations and promotion of the project. It also takes into account the objectives of INSTINCT with respect to standardisation.

Keyword list:
CISMUNDUS, CONFLUENT, demonstration, dissemination, standardisation

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1 Introduction

The combination of a digital portable TV-set and a personal IT terminal in a single handheld or mobile device is already attractive from a market point of view. The real value of such a device, however, can be exploited in the environment of co-operating broadcasting and wireless telecom networks and services. This cross-over service concept will become extremely attractive to the end-user as well as to all players in the A/V and the telecommunications market (content, service and network providers, consumer equipment manufactures, etc). It is expected that INSTINCT will play a decisive role in realising this most attractive service concept and, consequently, in opening this highly promising market. As a basis for disseminating the INSTINCT knowledge and to take into account the work of standardisation bodies, Deliverable 1.1 constitutes the INSTINCT Dissemination and Standardisation Plan.

Chapter 2 deals with plans for possible contributions to standardisation bodies describing the different groups and their relation to the project.

Chapter 3 gives an overview of tools that have been set up for effective exchange of project information and documents and describes the idea of having Internal Workshops to exchange knowledge and agree on plans and strategies to disseminate the knowledge between the partners.

Furthermore chapter 4 presents the expected dissemination activities to be undertaken by the project consortium and by the partners individually. This includes the distribution of press releases and flyers, creation and maintenance of the project website, participation in conferences and symposia and the submission of papers for publications presenting the concept and results of the project. It also includes technical demonstrations and presentations of the project developments at different exhibitions and trade fairs.

2 Standardisation

2.1 Motivation for a liaison to standardisation bodies

The project will make its results available to all interested parties including standardisation bodies. Results of the technical developments will be communicated to the standardisation bodies as appropriate. Recommendations for standardisation and regulation have force when made across industry sectors and through telecommunications administrations as then the recommendations have governmental support. This project brings together partners across industry sectors that jointly are able to make a very broad input to European standardisation and regulation initiatives.

The partners of the consortium are experienced in international standardisation work (both for technical and frequency issues) and are well represented in all international initiatives and standardisation bodies relevant for the INSTINCT project. The wide range of different working groups, standardisation bodies, alliances and forums in which INSTINCT partners participate is indicated in **Table 1** below.

Participant	Specification Bodies					Regulatory and Standardisation Bodies	
	DVB	3GPP	OMA	EICTA	IEC	ITU (WRC/RRC)	EBU
DiBcom	X						
FTRD	X	X	X		X	X	
IRT	X					X	X
MPCS	X			X			
MotLabs	X	X	X				
PS	X						
RAI	X						
R&S	X						
Siemens	X	X					
TDF	X					X	X
TBM	X			X	X	X	
T-Systems	X						
TU-BS	X						

Table 1: INSTINCT partners in different standardisation bodies (list non-exhaustive)

The direct involvement of INSTINCT participants in standardisation and regulatory bodies ensures a widespread dissemination of the results to the relevant bodies. In view of the number of different bodies accessible, the INSTINCT members will carefully coordinate their actions. The project has defined different responsible coordinators for each relevant standardisation body (see **Table 2**). The responsible coordinators monitor the on-going activities in the different bodies and if necessary place relevant results and findings of the INSTINCT developments directly in the corresponding working groups of the standardisation organisation. The scope of each group and the possible relation to INSTINCT is described in **Section 2.3**.

Bodies	Responsible Partner
ABERT	USP
CENELEC	IRT (if necessary)
DigiTAG	IRT
DTG	DiBcom
DVB-CM	IRT
DVB-TM	IRT, TU-BS, RS, RAI
DVB-H	FTRD, TU-BS, T-Systems, RS
DVB-CBMS (former DVB-UMTS)	FTRD, Motorola
DVB-IPI	FTRD, TDF
DVB-GBS	FTRD
DVB-MHP	IRT
DVB-MHP Auto	TU-BS
DVB-MG (Measurement Group)	IRT, RS
DVB-PVR	IRT
EBU-BMC	IRT
EBU-NMC	IRT
EICTA	Motorola
ETSI	Via DVB
ELETROS	UEA
IEC	Thales
IPDC	DiBcom, Motorola
IETF IP-DVB	TDF
ITU-R WRC-07 and –10 (incl. preparation by ITU-R and CEPT)	IRT, TDF
ITU-R RRC 04/05: Revision of Stockholm 61 Television Plan (including preparation by ITU-R (WP 6E and TG 6/8) and CEPT (WG FM, SE etc.)	FTRD, IRT, TDF
ITU-R (SG 6 and 8)	IRT, Thales
ITU-D	Thales
MPEG-Groups	Siemens
OMA	FTRD, Motorola, Siemens
TVAnytime	IRT
WWRF	FTRD, Motorola
3 GPP/MBMS	FTRD, Motorola

Table 2: INSTINCT responsible coordinators in different standardisation bodies

Based on the results of the INSTINCT project, relevant issues for possible new standards (if necessary) and/or extensions to existing standards will be identified and proposed, e.g. for protocols at the session layer to handle mobility and variable QoS aspects. This is described in chapter 2.4.

Pertinent inputs will be forwarded to these organisations after careful validation of the INSTINCT system in laboratory and field tests. The standardisation work of INSTINCT will be in strict coordination with other European projects and standardisation initiatives to ensure the necessary coherence with respect to network and interface compatibility. For this goal INSTINCT partners are actively collaborating in different standardisation groups.

2.2 Standardisation in former EU-projects

For more details on activities of ad hoc standardisation groups and why they are of interest to INSTINCT see **Section 2.3**.

2.2.1 CISMUNDUS

The focus of the EU-funded project CISMUNDUS was set on contributing to the DVB ad hoc-groups DVB-UMTS and DVB-CBMS while monitoring several other standardisation groups. Note that most monitoring activities (OMA, UMTS Forum, DVB-GBS, DVB-IPI, DV-AVC…) consumed very limited resources as such monitoring was performed either by parsing meeting minutes or "piggybacking" partner's internal standardisation projects.

CISMUNDUS organised its standardisation activities along three major axes.

2.2.1.1 Monitoring Mobile Telecommunication related activities

France Telecom RD mainly performed this task, attending the ad hoc 3GPP RAN, SA, GERAN and MBMS workshop held in Baden, Austria in October 2003. The collected Information was disseminated to project partners but was also crucial for conducting Tasks on business modeling and ensuring adequate positioning of telco/ broadcast convergence solutions vs. genuine telco solutions such as MBMS.

OMA standardization was monitored even though that work was not active until very recently on the topic of mobile broadcast.

Finally the UMTS Forum was also monitored: The ICT group, issued back in 2001-2002, a study on Telecommunication-Broadcast convergence but did not issue any new similar study.

2.2.1.2 Contributions to the DVB standardisation group

DVB standards are adopted worldwide and are known to provide a major advantage for Europe's digital broadcast industry. The CISMUNDUS partners were active in DVB standardisation and monitoring of work and progress of several DVB groups.

Most of the CISMUNDUS-relevant standardisation work is handled within DVB-UMTS (now known as DVB-CBMS). Philips, Motorola, and FTRD were indeed very active members of DVB-UMTS. Many CISMUNDUS originated concepts and ideas were captured in current DVB-UMTS originated documents, including the RC-GPRS document, DVB-UMTS handbook, and Draft I-MT specification.

A dedicated liaison to DVB-IPI was also established in 2003 in order to monitor the activities of this group. DVB-GBS, DVB-AVC and DVB-CPT were also monitored.

2.2.1.3 Regulatory related initiatives

Regulatory bodies of interest to CISMUNDUS were mainly national regulators[1] (through which it can be envisaged to impact national regulation), currently at work to transpose European regulations in national regulations. Each partner, by performing demonstrations and trying to raise awareness among executive management both internally and amongst their company's customers, contributed to a lobby for regulations enabling true telco-broadcast cooperation. For example FTRD made presentations to the French telecom operators while both the French broadcast and telecom operators attended the BSTC conference organised by TDF in Metz, October 22-23, 2003, specifically dedicated to the issues related to broadcast services and telecommunication convergence.

2.2.1.4 Other related standardisation initiatives

Other standardisation initiatives considered at some level by CISMUNDUS were:

- Evolution of 3G systems towards a wider capacity (HSDPA, OFDM), B3G-related pre-standardisation initiatives such as ITU-R/WP8F and the recent evolution of WLAN standardisation towards new wide range, wide area and possibly mobile systems. The idea was not for CISMUNDUS to contribute to such initiatives but rather to assess possible competition and its impact on CISMUNDUS roadmap business opportunities. FTRD monitored these initiatives.
- Other Telco/Broadcast-related initiatives such as EBU/B-SYN, IP-Datacast Forum. TDF is part of EBU/B-SYN and Motorola and Philips are part of IP-Datacast.

[1] Basically the 2003 World Radio Conference decided that the question of possible requirements for dedicated mechanisms to allow telco/ broadcast convergence was not clear and would be examined again in 2010 if real issues appear by then.

- IETF standards for allowing efficient and robust mobile multicast such as those proposed by IETF RMT WG (FLUTE, ALC) or proposed for encryption key management (MYKEY) were also of the highest interest for CISMUNDUS. They appeared, however, at a stage of the project where most protocol-related studies had been closed, considering these protocols would probably not have changed the fundamentals of CISMUNDUS system; such consideration was left for evaluation in the follow-up project INSTINCT.

2.2.2 CONFLUENT

Within the EU-project CONFLUENT there were great achievements in two areas:

Firstly, the development of mobile, power-efficient DVB-T receivers and, secondly, the development of an extended MHP platform for in-car and mobile use.

The improved mobile reception of DVB-T has a direct impact on the commercial exploitation of this technology, without any need for changing the DVB-T standard. The developed MHP extensions, however, have to go through the standardisation process at DVB, before they can become a product.

A number of presentations were given within CONFLUENT, a growing interest was generated in the industry for the enhanced mobile reception techniques (space diversity) and to foster new, mobile MHP versions. The DVB group MHP Automotive was launched to find the commercial requirements for such an MHP-based software platform for the car environment.

2.3 Target Groups of INSTINCT

The main target groups for standardisation are without doubt the various ad-hoc and working groups of the DVB Commercial and Technical Modules (DVB-CM and DVB-TM). Several groups[2] are potentially important for liaison with INSTINCT in view of subsequent standardisation actions by ETSI:

Among the most important are presumably DVB-CBMS and DVB-H that explicitly target to propose the new DVB framework for mobile terrestrial broadcasting. In connection with these groups are DVB-MHP, but also DVB groups dealing with Generic Data Broadcasting & Service Information Protocols (DVB-GBS) and IP Infrastructure (DVB-IPI) as well as the DVB Measurement Group (DVB-MG).

[2] A list of all DVB groups is available under http://www.dvb.org. For MHP see also http://www.mhp.org.

Worldwide standardisation of both technical issues and spectrum usage is achieved by ITU-R (all wireless services) and ITU-T (all wired services). INSTINCT partners are especially active within ITU-R Study Groups 6 (Broadcasting Services) and 8 (Mobile services), see [1].

The project monitors major cellular radio-communication standardisation initiatives, namely (for Europe) 3GPP and OMA and INSTINCT project partners will make pertinent contributions. The goals of such a monitoring action are the following:

- Monitor 3G technology and 3G development to propose an efficient and accurate collaboration scheme between 3G and broadcasting, both from a technical point of view (interconnection) and a service point of view (supported service features).
- Have a special look at on-going native 3G broadcast layer standardisation, known as 3GPP MBMS (Multimedia Broadcast Multicast Service) that could provide a complementary media to Telco/Broadcast convergence (limited to 64 kBit/s though). 3GPP MBMS, radio resource management, radio dimensioning and network architecture specifications are of particular interest to the project.
- Also monitor the recently introduced OMA work item on broadcasting to mobiles.

It should be noted that, being part of both 3GPP/OMA and DVB activities several project members will be in a position to foster, when technically and economically appropriate, adoption of some common solutions by mobile telecommunication and broadcasting standardisation initiatives, hence ensuring wider acceptance for associated standards.

On the European level, spectrum allocation issues and frequency plans are dealt with by the CEPT (*Conference Européenne des administration des Postes et des Télécommunications* or, in English, European Conference of Postal and Telecommunications Administrations) [2] and its preparatory groups for the ITU-R WRC's (World Radiocommunication Conferences) and ITU-R RRC's (Regional Radiocommunication Conferences). Some of the European partners have a very strong working relationship with CEPT, beneficial for any radio-communication issue that may arise during the INSTINCT project phases. The Brazilian partners are potentially involved in both the ITU-R and the American counterpart to CEPT, the Inter-American Telecommunication Commission CITEL (in Spanish: *Comisión Interamericana de Telecomunicaciones*) [3]. They are also influential with the ABERT (Association of South-American broadcasting industry). In the following paragraphs the work items of the different groups are described and the relation to the project is considered.

ABERT/SET

The Digital TV ABERT/SET Technical Group was founded in 1994 by ABERT - Associação Brasileira de Emissoras de Rádio e Televisão (Brazilian Radio and Television Broadcasting Association), which congregates Brazilian radio and television companies, and by SET - Sociedade Brasileira de Engenharia de Televisão e Telecomunicações (Brazilian Television and Telecommunication Engineering Society), that congregates companies and professionals working in the area of Television, Radio, Telecommunication and Multimedia engineering.

Since its foundation, the ABERT/SET Group has participated actively in the activities conducted by the COM-TV - Comissão Assessora para Assuntos de Televisão (Advising Commission for Television Matters), established by the Ministry of Communications in 1991, whose main objective was the study and analysis of the "High Definition TV" programme in progress in some countries and under discussion in the UIT sphere. After the advent of digital systems, it was known as "Digital Television".

Attempting to learn from the experience and expectations of other countries vis-à-vis the digital television technology, the ABERT/SET Group published and presented its activities in various seminars and conferences in Brazil and in other countries, such as El Salvador, Argentina, Kenya, Japan, the Netherlands, the USA and Switzerland. Furthermore, it has sent specialists to a number of countries to observe the implementation of Digital TV projects in Argentina, Japan, England, the USA, Australia and Germany. The ABERT/SET Group has been visited by several international delegations from Japan, South Korea, Mexico, Argentina and Chile, such as ATSC, ISDB, ARIB, JEITA and DVB, which are interested in discussing its activities.

Aiming to broaden the knowledge of the various aspects involved in the implementation of the digital technology in Brazil, the ABERT/SET Group held a number of meetings with government institutions, including the BNDES – Banco Nacional de Desenvolvimento Econômico e Social (Brazilian Development Bank), the Ministry of Communications, ANATEL – Agência Nacional de Telecomunicações (National Agency of Telecommunications), the Ministry of Science and Technology, the Ministry of Industry and Commerce and FINEP – Financeira de Estudos e Projetos (Financer of Studies and Projects). Moreover, it has also developed several activities in conjunction with the chief representatives of the Brazilian consumption industry. Similarly, it conducted different pieces of research, and defined the nomenclature of digital TV, the broadcasting patterns and the basic requirements of the receptors.

ABNT

Founded in 1940, the ABNT – Associação Brasileira de Normas Técnicas (Brazilian Association for Standardization) – is responsible for the technical standardization in Brazil.

It is a non-profit making private entity, and is recognized as the only National Forum of Standardization.

ABNT is the only representative of the following international entities in Brazil: ISO - International Organization for Standardization, IEC – International Electrotechnical Comission, COPANT – Comissão Panamericana de Normas Técnicas (Panamericana Comission for Standardization) and AMN - Associação Mercosul de Normalização (Mercosul Standardization Association).

3GPP/MBMS

The 3rd Generation Partnership Project (3GPP) is a collaboration agreement that was established in December 1998. 3GPP brings together a number of telecommunications standards bodies that are known as "Organizational Partners". The current Organizational Partners are ARIB, CCSA, ETSI, T1, TTA and TTC.

The original scope of 3GPP was to produce globally applicable Technical Specifications and Technical Reports for a 3rd Generation Mobile System based on evolved GSM core networks and the radio access technologies that they support (i.e., Universal Terrestrial Radio Access (UTRA) both Frequency Division Duplex (FDD) and Time Division Duplex (TDD) modes). The scope was subsequently amended to include the maintenance and development of the Global System for Mobile communication (GSM) Technical Specifications and Technical Reports including evolved radio access technologies (e.g. General Packet Radio Service (GPRS) and Enhanced Data rates for GSM Evolution (EDGE)).

Multimedia Broadcast and Multicast Services (MBMS) is a major work item for 3GPP UMTS Release 6 and basically defines an in-band UMTS broadcast channel for multicast/broadcast IP services[3].

Goals of MBMS are to:

- Provide an efficient use of radio-spectrum resources. Data is possibly transmitted over a common radio channel. The decision to use a common radio bearer is taken either *a priori* upon service resource reservation (Broadcast) or dynamically according to users demand (Multicast).
- Provide video-centred content e.g. streaming services (8-128 kbit/s). These services would be charged to the client or to a third party (which would allow e. g. business models based on TV-like advertisements).

End-to-end support of IP multicast protocols is also considered.

The target completion date for the MBMS work item is currently set to September 2004, and good progress has been made towards this goal. Nevertheless implementation by vendors and operators will probably take more time (in 2004 Release 99 is being rolled out, then R5 will come and then R6). Some extension of MBMS capabilities might also take place in future Release 7.

[3] MBMS is more precisely defined as «Point to multipoint downlink bearer service for IP packets in the Packet Switched domain» (not supported in Circuit Switched Domain).

The reasons for monitoring 3GPP/MBMS are the following:

- Some IP multicast service mechanisms that are candidates for DVB-CBMS are also considered by MBMS. Hence INSTINCT and its members could seek to contribute to both groups.
- From a service provisioning point of view, DVB-H and MBMS show different advantages (distinct time frame, service capability, design and targeted spectrum resources). Both should be considered by actors seeking a solution to render optimum multicast/broadcast mobile services.

For further information see http://www.3gpp.org.

CENELEC (European Committee for Electrotechnical Standardization)

CENELEC's mission is to prepare voluntary electrotechnical standards that help develop the Single European Market/European Economic Area for electrical and electronic goods and services removing barriers to trade, creating new markets and cutting compliance costs.

Recently CENELEC has set up an ICT unit (Information and Communication Technologies) in order to enhance its profile in this field. This unit works in close cooperation with CEN and ETSI. In addition to the traditional European standard deliverables, the dynamic Workshop (CWA: CENELEC Workshop Agreement) has been included in its portfolio, offering an open platform to foster the development of pre-standards for short lifetime products where time-to-market is critical [4].

DigiTAG

DigiTAG promotes the widespread introduction of Digital Terrestrial Television (DTT) and seeks to ensure a thriving terrestrial television market within Europe and elsewhere, wherever the DVB-T Standard is used [5].

DTG

The Digital TV Group (DTG) established a Mobile TV Applications Group in September 2003 to consider the possibilities for mobile TV from both a commercial and technical point of view; to raise awareness amongst both industry and government circles and to mount demonstrations in furtherance of its aims. Terms of Reference are as follows:

- To consider commercial requirements for mobile TV services.
- To scope technical issues for possible applications in order to advise business interests.
- To maintain a close involvement in relevant work by other groups including DVB-H, DVB-UMTS, DVB and IST CONFLUENT.
- To promote interest in mobile TV services within government and industry, both before and after switchover and to promote support for technical trials and demonstrations to raise awareness.
- Emphasis should be on broadcasting, defined as the transmission of content to many people simultaneously, although many applications will use a GPRS / UMTS back channel for associated one-to-one traffic.
- To examine the pre- and post-switchover reception conditions for mobile use.

DVB-CM

The Commerical Module is the key distinguishing organisational element of the DVB Project. CM is where the commercial issues around a DVB work item are discussed, with the consensus embodied in a set of "Commercial Requirements" governing each and every DVB specification.

DVB's success is underpinned by a market-led approach driven by the CM. This ensures that technical work is completed to a set of functional requirements, cost targets and deadlines.

The group first produces commercial requirements, and then validates each technical specification against these commercial requirements before passing it for final approval to the DVB executive board, the Steering Board [6]

DVB-TM

The Technical Module works according to requirements set down by the Commercial Module. It delivers specifications for one or more Standards via the Steering Board to the recognised standards setting entities, notably the EBU/ETSI/CENELEC Joint Technical Committee.

It provides a conduit to other relevant standardisation activities including MPEG for the purpose of meeting the objectives of the DVB Project.

DVB-CBMS

After drafting commercial requirements in an ad hoc IPDC DVB-CM group for sending broadcast IP data to handset terminals, Nokia set very recently (end 2003) a new impetus to the DVB-UMTS ad hoc TM group.

Indeed the mission of DVB-UMTS changed to definitively target a fully specified system for providing IP interactive services over the newly developed DVB-H physical layer by the end of 2004. Of course the targeted interaction channel remains a 2G/3G telecommunication networks channel. The name changed too as the group was subsequently renamed DVB-CBMS in March 2004.

After a first call for technologies, a non-normative guideline document was issued for those DVB partners that wish to implement DVB-H + 2G/3G pilot networks. This document was reviewed by DVB-TM and made public. This document mainly focused on I_MT. Then the focus was set on deriving technical requirements and drafting a call for technologies for DVB. The current target is to have technical requirements and a call for technologies ready for the next plenary meeting of the DVB-TM group and released by the end of June 2004.

Subsequent work by DVB should then involve several other ad hoc groups. The current plan is still not available for DVB but a possible scenario could be that:

- DVB-CBMS would maintain the general system/ architecture and evaluate technologies in a global concept
- DVB-GBS ad hoc DVB-TM group (General Data & SI) would focus on standardising in common service discovery and transport protocols for broadcast IP services, be it on xDSL or DVB-H+2G/3G radiocommunications.
- DVB-IPI ad hoc DVB-TM group (IP infrastructure group, targeting a fixed home appliance interface to an IP network transporting DVB services) and DVB-IPTV ad hoc CM group will also probably have to liaise with the DVB-CBMS initiative.

Basically DVB-CBMS will refine its technical requirements for one more month and then issue a call for technology mid-June 2004. INSTINCT partners will probably contribute to both tasks and then, later, contribute to the evaluation of proposed technologies/system description. The current technical requirements document will drive June's CfT and currently covers System architecture, Service Discovery and Selection protocols and metadata structure, Content Delivery Protocols, Electronic Service Guide structure, Coding Formats and codecs, Services Purchase, Protection, Provision, Terminal Capabilities, DVB-H as a Broadcast Bearer, Quality of Service, Mobility, Roaming and Related QoS and finally Technical Field and Conformance Tests.

DVB-GBS

DVB **G**eneric **D**ata Broadcasting and **S**I Protocols group focuses on DVB metadata and signalling and had till recently the following mandate from DVB-TM:

1. Finalize the work on TV Anytime
2. In co-operation with DVB-AVC and DVB-IPI provide functionality equivalent to those natively proposed by DVB SI signalling on the three transport layers MPEG-2-TS / IP unidirectional / IP bidirectional and for the newly adopted "DVB AAC/AVC" content formats
3. Create a transport layer for IP broadcasting of newly adopted "DVB AAC/AVC" content formats
4. Become centre of competence for service discovery and service selection for the forthcoming second phase of the DVB-IPI specification workplan
5. Provide deliverables to IPI and to UMTS regarding service discovery and service selection

Recent information on the 2004 DVB-GBS workplan indicated that in 2004 the importance of item number 5 could grow and GBS could thus become instrumental in building specifications for DVB-H related service discovery and selection mechanisms, of relevance to INSTINCT partners.

DVB-H

The DVB-H group is a sub-group of the DVB Technical Module and works in the framework laid down in its Terms of Reference. The group reports regularly to the DVB TM. Over the last year, the DVB-H group has developed the standard for the delivery of DVB services to handheld devices. This includes up-dates and modifications of several ETSI standards and DVB specifications (DVB-T, DVB-SI, DVB Data Broadcasting, DVB SFN synchronisation). The DVB-H group is also organising, in collaboration with INSTINCT, validation tests of the new up-dated standards, and is drafting Implementation Guidelines for the DVB-H system that shall provide a knowledge base available to all parties that intend to work in this area.

The validation tests are likely to start during the second quarter of 2004 and should be concluded by the end of this year. Partners will contribute to the validation of DVB-H specification currently handled by DVB-H. This includes first software and lab evaluation of foreseen DVB-H performances and then the specification development and laboratory tests of DVB-H equipment

DVB-IPI

The IPI group was initiated in September 2000. The work is divided in two phases. The main deliverable produced by DVB-IPI up to now is the Phase 1 DVB-IP Handbook. Phase 2 is just starting.
The goal of the IPI group is to specify the interfaces between IP network and retail receivers, enabling the end user to buy a DVB-IP receiver in any shop, connect it to a broadband network, switch it on and, without further a do, start to receive DVB services over IP-based networks.

Phase 1:

IPI has finished the Phase 1 DVB-IP Handbook. This handbook provides a first set of standardised specifications for early deployments of DVB services over bi-directional IP networks. The phase 1 work is limited to MPEG-2 DVB services encoded with MPEG-2 technology and covers both Live Media Broadcast services (i.e. TV or radio styles) and Content on Demand services (CoD). These specifications define the mechanisms required for a consumer to be able to buy a standard DVB Home Network End Device, take it home, plug it into an IP network, choose and consume DVB services available over the IP network.

Phase 2:

Phase 2 will address the new DVB content format, as specified by the TM-AVC group. Home networking will be dealt with in more detail than was possible in Phase 1. Authentication and data integrity issues will be taken into account.

Added values from DVB-IPI to INSTINCT are:

- Service Discovery and Selection (covers the mechanisms used for service discovery, service selection and the delivery of services)
- Transport of MPEG-2 TS over IP (transport stream encapsulation, network requirements)
- Transport of content in the new format, as specified by TM-AVC, for DVB-H.

DVB-MHP

One of the major Commercial Module activities, indeed DVB activities, is the Multimedia Home Platform.

Now three standards, a licensing regime, a conformance regime and the subject of an intense patent pooling activity, DVB-MHP all started with a comprehensive set of commercial requirements drafted in the MHP sub-group of the Commercial Module.

DVB-MG

The DVB Measurement Group is a sub-group of the DVB Technical Module. For about two years, DVB-MG has been in stand-by mode after the conclusion of the up-date of the Measurement Guidelines document and the related specification for a SNMP MIB for the exchange of data derived from measurements.

Recently DVB-MG announced to the DVB TM that there will be a request to open new work items, at least one of these will be focused on the definition of test and measurement parameters and procedures for DVB-H specific issues. The current planning foresees the start of the work during the second quarter of 2004 and the conclusion of the work items by the end of 2004.

DVB-PVR

A subgroup of the DVB Commercial Module DVB-PVR deals with all issues in the area of Personal Video Recording (PVR), especially with the definition of requirements as a basis for the development of attractive services and for maintaining interoperability in the DVB-market.

EBU-NMC

Network Technology Management Committee (NMC)

The use of telecommunication networks has always been a foundation stone for broadcasting. Indeed much of the day-to-day operational activity of the EBU is aimed at facilitating the availability of broadcast material, both for its members and others. This ranges from News Exchanges via Eurovision, through the provision of point-to-point connection for members, to organising the delivery of broadcast contributions from major events. To be successful, the EBU and its member organisations need to be able to understand and exploit the latest developments in networking technology. The role of the NMC is to contribute to this understanding and to help the members and the EBU, through its Operations Division, to exploit network technology successfully.

EBU-BMC

Broadcast Systems Management Committee

EBU Members need to be part of the technical evolution of broadcasting. It is important for them to contribute to and influence technological advances, and to be part of the creation of the Information Society. The BMC assists in this process. A number of EBU Members have research and development departments or interests, and the BMC works with them in developing technical solutions, evaluating new systems, and in planning transnational aspects of television and radio coverage areas. The BMC meets regularly to review critical strategic developments in broadcasting, and to set in motion Project Groups focused on specific issues that will help EBU Members. The BMC guides the EBU's representatives in international standards bodies such as the ITU and the TV Anytime Consortium [7]. The BMC also guides EBU representatives in discussions with European Community authorities in Brussels.

The BMC's work can be divided into two general areas:

?? The development of new broadcast systems
?? Frequency planning and spectrum management

EICTA (European Information, Communications and Consumer Electronics Technology Industry Associations)

EICTA has been developing a specification of the DVB-T/H front end for mobile reception that is currently used by chip manufacturers, including Philips, DiBcom, and Motorola, to design such front-ends. This specification was initially requested by CEPT in order to derive spectrum requirements for mobile broadcast services. The impact of this specification should become visible in 2004/2005. [8]

ELETROS

ELETROS membership comprises the largest and major national manufacturers of electrical appliances and electronic equipment which are common consumer goods in Brazil. It was founded in August of 1994, as a non-profitable civil association. It has three main objectives: (1) identify and defend the interests of its members, (2) represent them before national or international public or private institutions, and (3) promote the growth of the sector.

This association adopts the following principles:

- To contribute to the industrial development of Brazil without causing harm to the environment and within a market economy that promotes favourable conditions for new investment, consequently generating more employment.
- The manufacturing of more competitive products which are aimed at national and international markets.
- The pursuit of lower costs and higher quality to satisfy the needs and desires of the consumer.

IEC (International Electrotechnical Commission)

IEC has two groups dealing with standardisation related to broadcasting equipment: TC103 for the transmitters and TC100 for the consumer equipment. TC103 will take into account the INSTINCT results in the standard related to the measurement methods and guidelines for digital TV transmitters.

IETF IP-DVB

IP-DVB is a working group of the IETF that was formed in January 2004. Its main task is to develop new protocols and architectures to enable better deployment of IP over MPEG-2 transport and provide easier interworking with IP networks. Specific properties of this subnetwork technology include link-layer support for unicast and multicast, large numbers of down-stream receivers, and efficiency of transmission.

The specific focus of the group is on the use of MPEG-2 transport in next generation networks and is not concerned with the development, replacement, or retention of existing protocols on the existing generation of networks. The working group favours open standard technologies and takes into account the existence of Multiprotocol Encapsulation (MPE), with which new protocols will have to coexist. IPv4 and IPv6 datagrams will be supported by the protocols defined in this working group.

This group could have a clear impact on INSTINCT whose services are strongly dependent upon IP/DVB technologies and especially MPE, which is promoted by DVB-CBMS.

IP Datacast

IP Datacast Forum is an industry forum aiming at promoting IPDC services, in particular, by attempting to flatten the regulatory barriers.

ITU-D

ITU-D is one of the three ITU groups (ITU-R, ITU-D and ITU-T). The role of the ITU-D is to establish a channel of technical exchange with developing countries for all system recommendations and to facilitate the system deployments.

ITU-R RRC-04/06 (Regional Radiocommunication Conference)

The **ITU Radiocommunication Sector** (**ITU-R**) is a standards body subcommittee of the International Telecommunication Union relating to radio communication. Its role is to regulate the allocation of radio frequencies and so to reduce the interference between radio stations in various countries. It also has responsibility for regulating the orbital positions of satellites relating to radio communications [9].

On the initiative of the CEPT, the council of the ITU decided to organise a Regional Conference of Radiocommunications (RRC), allowing all participating countries to establish an agreement and associated frequency plan for the Radiocommunication Region 1 (parts of Region 1 situated to the west of meridian 170°E and to the north of parallel 40°S) and in the Islamic Republic of Iran, respecting an equitable access between the states of digital terrestrial broadcasting services (DVB-T and T-DAB) in the frequency bands 174-230 MHz (III) and 470-862 MHz (IV and V).

This Conference, prelude to the extinction of the analogue television broadcasting and to the advent of "all-digital" broadcasting, will be held in two sessions:

- ?? A first session for approving the technical parameters and the working methods will take place in Geneva from 10 to 28 May 2004.
- ?? A second session for developing the “all-digital” frequency plans, on the basis of requests from the concerned countries, as well as the procedures for transition. This session is scheduled for the beginning of 2006.

The first session of RRC-04 was prepared by an ITU-R Joint Task Group (TG 6/8) that elaborated the reference technical report for this first session of the conference. The last meeting of this group was held in Geneva from 15 to 17 September 2003.

CEPT (European Conference of Postal and Telecommunications administrations)

The European Conference of Postal and Telecommunications Administrations deals exclusively with sovereign/regulatory matters, including co-operation on commercial, operational, regulatory and technical standardisation issues. The CEPT has established a committee on radiocommunications issues: ERC (European Radiocommunications Committee). The main purposes of this committee are to draft long-term plans for future use of the radio frequency spectrum at a European level and to conduct studies and consultations on specific topics or parts of the frequency spectrum. [10]

CEPT Working Group Frequency Management (WGFM)

The main ongoing work of this group is to develop Digital Broadcasting and plan for the RRC-04 conference, and to contribute to the preparation of CEPT positions for RRC by the development of European Common Proposals for the conference and guidelines for CEPT administrations on RRC-04. FM24, a sub-group of WGFM, prepares regulatory and technical aspects of the CEPT planning exercises for RRC04/06.

CEPT Working Group Spectrum Engineering (WGSE)

The main ongoing work of this group is to develop technical guidelines for the use of frequency spectrum by various radiocommunication services and to develop sharing and compatibility criteria between radiocommunication services, systems or applications using the same or different frequency bands. SE27 is a sub-group of the WGSE that has a direct impact on INSTINCT. Its task is to study the compatibility between terrestrial digital broadcasting and all other types of services in the Bands III, IV and V.

OMA

The mission of the Open Mobile Alliance is to facilitate global user adoption of mobile data services by specifying market driven mobile service enablers that ensure service interoperability across devices, geographies, service providers, operators, and networks, while allowing businesses to compete through innovation and differentiation.

Since its inception in June 2002, the Open Mobile Alliance has grown to more than 300 companies representing mobile operators, device and network suppliers, information technology companies, and content providers.

OMA recently conducted a study (a B.o.F. in OMA terminology) on suitability of introducing a work item on mobile broadcast and this recently led to such a work item.

Besides knowing more about mobile multimedia services requirements, i.e. typical requirements to seek when targeting a handset-based mobile terminal platform, targeting OMA will allow the INSTINCT project partners to follow and support this work item.

For further information see http://www.openmobilealliance.org/

TV-Anytime

As part of its formation, the TV-Anytime Forum has established four fundamental objectives for the organisation, which are:

- The TV-Anytime Forum will define specifications that will enable applications to exploit local persistent storage in consumer electronics platforms.
- The TV-Anytime Forum is network independent with regard to the means for content delivery to consumer electronics equipment, including various delivery mechanisms (e.g. ATSC, DVB, DBS and others) and the Internet and enhanced TV.
- The TV-Anytime Forum will develop specifications for interoperable and integrated systems, from content creators/providers, through service providers, to the consumers.
- The TV-Anytime Forum will specify the necessary security structures to protect the interests of all parties involved. [7]

2.4 Plans for standardisation

Whilst all parties are active with respect to standardisation, the INSTINCT project relies especially on those stressed in this section, given their enormous experience with standardisation bodies.

DiBcom

During the monthly meetings of the Mobile TV Applications Group DiBcom presents the latest developments and performance of Mobile DVB-T receivers together with an update of the progress of the INSTINCT project. DiBcom will have a presentation on May 27th within the framework of DTG during the conference session of the Mediacast exhibition: "Mobile TV. Is the future Mobile ? Mobile in practice". This will be a good opportunity to communicate about the INSTINCT project.

FTRD

FTRD is an active member in the DVB-H, DVB-CBMS, DVB-GBS and DVB-IPI working groups of the DVB project:

- FTRD will contribute to the validation of the DVB-H system parameters
- FTRD will contribute to the identification of required higher layer mechanisms currently under consideration in DVB-CBMS.
- Finally FTRD will also contribute to standardisation of those identified mechanisms in ad hoc DVB-TM subgroups (DVB-CBMS, DVB-GBS and DVB-IPI as major candidates)

FTRD is an active member of the 3GPP and OMA and hence will monitor the progress of mobile broadcast related work items.

The general idea is to benefit from the unique capability of FTRD to be a significant actor in both DVB and mobile telecommunication related standardisation to:

- Ensure INSTINCT orientation and technical options fit to current standards status and foreseen evolution
- Possibly contribute to standardisation initiatives on mobile broadcast aspects, based on results and experiences gained from INSTINCT participation.

FTRD also significantly contributes to several other initiatives, e.g. ITU, IEEE on future mobile radiocommunication interfaces and will seek to keep some coherency and consistency in all these initiatives that relate, as INSTINCT does, to worldwide “Beyond 3G” research framework.

Finally, FTRD is a member of WWRF and could offer liaison with some WWRF related initiatives.

IRT

The IRT is a contributor to all major media standardisation bodies including ITU-R, ITU-T, ISO (MPEG), ETSI, CEN, EBU or SMPTE. IRT is also heavily involved in the work of CEPT, notably the preparation of RRC-04. In co-ordination with the INSTINCT project partners, standardisation inputs will in particular be made to DVB-MHP, both to the commercial and the technical sub-group and to DVB-IPI. The standardisation activities will include support of MPEG-4 A/V-applications by future amendments of the DVB-MHP standard and, in the case of DVB-IPI, inputs as a result of IRT's work on the enhancement of the MHP Reference Implementation with the IP-interface as a further network for distributing DVB-Services and applications. IRT will contribute to the implementation and evaluation of the specification of DVB-IPI Handbook Phase 1. Recently, as a result of that on-going process, a few bugs in terms of XML-schemes in the SD&S part of the specification were sorted out. Currently IPI Phase 2 is under discussion. IRT is involved in the actual brainstorming activities within the group.

Motorola

In the context of INSTINCT, Motorola Labs plans to continue contributing in DVB-CBMS; consistent with the tasks Motorola Labs is involved with in the project, namely service discovery aspects and terminal aspects.

Rohde & Schwarz

For more than 10 years, R&S has been an active contributor to the standardisation process in DVB. This will continue with active support for the DVB-H validation tests from 2nd quarter 2004 onwards by the provisioning of test and measurement equipment and a laboratory testbed for the validation of performance parameters.

The next step will be the channelling of the results into an up-graded version of the DVB Measurement Guidelines document. The definition of DVB-H related test and measurement sections for the DVB Measurement Guidelines will be the most voluminous work item in DVB-MG although other work items will be dealt with during the same period. Holding the chair in DVB-MG, R&S is strongly committed to actively contribute and organise this work in the course of 2004.

A formal request from DVB-MG to DVB TM for the opening of appropriate work items is scheduled for the June 2004 TM meeting.

TDF

TDF participates and contributes in the following bodies for normalisation for an optimal use of radio spectrum: ITU-R, CEPT and EBU for the normalisation of the new systems, the definition of the rules of compatibility and sharing with existing services, the planning and following of the implementation.

Thus, TDF-C2R benefits from a global vision on the current and prospective spectrum management in France, in Europe and on an international scale.

In this field, TDF will promote INSTINCT outputs in these groups in cooperation/coordination with IRT.

Concerning DVB IPI, current plans are that the contribution to DVB-IPI would be limited. However, the validation of DVB-IPI service discovery and selection concepts in INSTINCT, as well as the trials of MPEG2 TS/IP could suggest modifications to the DVB-IPI guidelines.

Concerning IETF IP-DVB, TDF would offer to test some aspects of the new protocols defined by the working group, when implementations become available, and provide feedback to the group about the benefits/drawbacks compared to well-known MPE mechanisms from the point of view of a broadcast operator.

THALES BROADCAST & MULTIMEDIA

For more than 15 years, THALES BROADCAST & MULTIMEDIA has participated and contributed in the following standardisation bodies for an optimal use of radio spectrum: ITU-R, ITU-D and IEC for the standardisation of new systems, the definition of the compatibility and sharing rules with existing services, the planning and the implementation follow-up. Also THALES BROADCAST & MULTIMEDIA participates and contributes in DVB-IPI and in DVB-MHP group as an active partner in different workshops promoting new DVB developments.

Moreover THALES BROADCAST & MULTIMEDIA sells equipment in more than 170 countries all over the world and has relationships with most of the regulatory bodies and associations of Broadcasters such as EBU, ABU, ASBU and SMPTE in the various countries, which means that THALES BROADCAST & MULTIMEDIA can promote and disseminate the important results of INSTINCT in a very efficient way.

Thus, THALES BROADCAST & MULTIMEDIA benefits from a global vision of the current and prospective spectrum management in France, in Europe and on an international scale.

In this field, THALES BROADCAST & MULTIMEDIA will promote INSTINCT outputs in these groups in co-operation / co-ordination with TDF and with other INSTINCT partners.

In the IEC, THALES BROADCAST & MULTIMEDIA representatives are managing the TC103 (International Chairman and Secretary).

In the ITU-D, THALES BROADCAST & MULTIMEDIA has contributed many times and is able to disseminate the results of INSTINCT towards the developing countries.

T-Systems

T-Systems is an active member in the DVB-H working group of the DVB project and will contribute to the validation of the DVB-H system parameters. T-Systems will offer to equipment manufacturers pertinent lab measurement facilities and a test environment.

T-Systems is an active member of the DVB-CBMS working group that will specify interfaces and protocols for convergent mobile communications and broadcast networks.

T-Systems is an active member in the EICTA MB-RAI working group to specify a portable and mobile receiver for DVB-H and DVB-T.

TU-BS

TU-BS contributes to a number of DVB working groups including DVB-H, DVB-GBS, DVB-CBMS, DVB-MHP and DVB-MHP Automotive. In co-ordination with the INSTINCT project partners, standardisation inputs will be made to all of these groups. In the light of the work carried out by TU-BS in INSTINCT, a special focus will be put on all standardisation activities with a connection to mobile variants of DVB-MHP.

UEA

In the context of INSTINCT, UEA plans to contribute in Brazilian standardisation work with ABERT and ABNT.

3 Preparation for Dissemination

3.1 Project Information Exchange

An FTP site was set up in Brunel University to make the exchange of documents available within the Project. Each work package has its own e-mail reflector, in addition to the general INSTINCT mailing list. For external dissemination, the INSTINCT web page is being built; the process of obtaining the domain name "ist-instinct.org" has been concluded.

3.2 Internal Workshops

As a fundamental for action, internal brainstorming sessions are foreseen in Workpackage 1, which will allow for a thorough assessment of a pertinent dissemination strategy. This includes both, plans for public events, symposia, etc. as well as for substantial inputs to standardisation entities. Furthermore the structure and layout of the INSTINCT training workshops, which are foreseen to be held in phase two of the project, will be discussed and the objectives and target groups for the training sessions will be defined.

To disseminate knowledge between the partners and to ensure the compatibility of the components developed by different partners, internal technical workshops are foreseen, mainly at the two integration platforms in Metz (TDF) and Munich (IRT).

TU-BS plans to hold an INSTINCT-internal workshop for the Brazilian partners. This workshop will focus on all relevant DVB activities, including, but not limited to DVB-T, DVB-H, DVB-CBMS, DVB-MHP and newer activities like DVB-MHP Automotive. This workshop will also offer the opportunity to see demonstrations of all relevant research activities of TU-BS concerning DVB and the results of former EU-projects like CONFLUENT.

4 Dissemination

4.1 Initial Project Presentation

4.1.1 Public Relations

4.1.1.1 Press release

This task includes press releases covering the relevant achievements of INSTINCT. In the framework of the anticipated demonstrations of INSTINCT, in particular during IBC'05 and CeBit'05, press releases will be distributed. In the context of Latin America, a version of the press release will be prepared in Portuguese and Spanish languages.

4.1.1.2 Internet-site

One of the project's main dissemination channels is the project website. Different domain names have been registered by the project coordinator to present INSTINCT in the World Wide Web.

The project website is already online and can be accessed through the URL address http://www.ist-instinct.org. The site will be continuously updated with the deliverables and results of the project as well as other relevant information related to the project, such as information about partners, presentations and publications, quick links to other relevant and related sites.

The site will have both a public and an internal area. The public space will provide project related public information, project news, published papers and links to related sites such as projects and standards organisations, among others. All INSTINCT public deliverables will be made available for downloading by interested visitors.

The project partners will use the private area for the exchange and discussion of technical documents, as well as for project management. Furthermore, an ftp server has been set up to alleviate large file exchanges.

An appropriate version of the site for Brazil and Latin America will be done in Portuguese and Spanish.

4.1.1.3 Project flyer

A project flyer will be produced covering the INSTINCT ideas of cooperating DVB-T/H and cellular systems/networks. The tasks of the different workpackages will be explained in detail and the expected developments within the first two years of the project will be described.

An article has already been written for the magazine dvb-scene giving a summary and covering the main objectives of the project. This article will be used as the initial version for the Project Flyer.

A flyer version will be prepared in Portuguese and Spanish language.

4.1.1.4 Logo

The project board considered 20 proposals by various partners and graphical designers for selecting the INSTINCT-logo. With the principle in mind that less is more, the logo depicted in **Figure 1** served as the basis for the final INSTINCT logo. The final logo is incorporated in the headline of all documents and shows on a globe the two different continents Brazil and Europe, where partner are participating from. It also highlights the letters **i**, **s** and **t** to stress that INSTINCT is an IST-funded project.

Figure 1: Basis for the final INSTINCT logo

4.2 Demonstration and Promotion

4.2.1 Exhibitions

This section describes events where INSTINCT partners are planning to present the ideas and the developments of the project. It has been decided that the project will focus on two major exhibitions, one should be broadcast related and the other one telecommunication oriented. IBC 2005 and the 3GSM World Congress have been chosen to act as those main events.

3GSM World Congress

The 3GSM World Congress takes place every year in Cannes. It is one of the most important events regarding 3G technology, business and strategies. Mobile and Interactive TV was already the subject for one session at the 2004 event. It has been stated that the mobile industry has discovered that the mass usage TV can generate for revenue-streams such as SMS is one with much potential for growth. The addition of MMS and even video to mobile phones stands to further close the gap between TV production and mobile content. In this context the INSTINCT project will also give a presentation at the 3GSM World Congress 2006. In addition a practical demonstration of the system could be given at the exhibition that goes with the conference. [11]

International Broadcasting Convention (IBC)

Established in 1967 as a showcase for broadcasting technology in Montreux, IBC moved to Amsterdam where it attracts 40000 attendees from 120 countries annually. On the show floor are 1000 exhibitors including every major supplier of technology for the creation, management and delivery of entertainment content. The IBC conference tackles all key technical, management and creative issues. The project plans to submit research/ industrial papers to the conference and will present the project in 2005. This could be a part of the "IST Village" where IST Projects in D2 Unit have a joint exhibition area. [12]

CeBIT

CeBit is the world's leading showplace for information and communication technology. As an annual exhibition, it has been hosted every spring in Hanover since 1986. In 2003 there were approximately 6500 exhibitors spread over a display area of 355000 square meters, 43 percent of exhibitors came from abroad. The trade fair lasts for seven days and is attended mainly by representatives of business, science, politics and media. If the project has developed something that could be demonstrated in spring 2005, it makes sense to give a presentation at this important trade fair where convergence and multimedia becomes more and more popular. [13]

COMDEX 2004 and 2005

COMDEX Brazil is the most important event in the field of Information Technology (IT) of Latin America. It is a reference for suppliers, producers and users. This event gathers major exhibitors in the area of telecommunications, storage, distributors, safety, digital imaging, information equipment and systems, software platforms and commercial automation. Thus, it links to the IT chain around the world.

Internationale Funkausstellung (IFA)

IFA, the world's largest consumer electronics exhibition, is held in Berlin every two years for six days. It is aimed at industry insiders as well as the general public and is regarded as the leading international ordering platform. All of the world's leading manufacturers are present at IFA showcasing a full spectrum of consumer electronics products. Six special sections focus on the entire range of consumer electronics on display at IFA: audio systems, high-end electronics, car media, television, video, camcorders, digital imaging, information and communication electronics, entertainment, online services, antennas, satellite systems, broadcasting and studio technology, and mobile/ stationary telecommunication **Error! Reference source not found.**.

INSTINCT and especially the German partners IRT, RBB and T-Systems plan to present results of the INSTINCT project at IFA'05 in Berlin.

T-Systems will present in a showcase the performance and potential of DVB-H to a large audience. End user devices from different manufacturers should be presented as well as broadcast DVB-H content.

IRT has traditionally organized the exhibits of public service broadcasters at the TWF (Technical and Scientific Forum). The TWF occupies a full hall at IFA to show future technologies. It also offers a lecture theatre for symposia like presentations.

Net@Home 2004/5

Net-atHome™2004 is the 7th edition of the event hosted annually by Homega Research and targeting companies and industry associations already active in the field of Home Networks and Gateways, Connected Appliances and Integrated Services, or interested in penetrating European and worldwide markets in this field. The themes covered are not just limited to home networking or residential gateways, to technological aspects or mere business models, but take in all issues related to the development of the markets for Home Networks and Gateways, Connected Appliances and Integrated Services. Net-atHome™ therefore offers participants a really broad framework for assessing the current state and future prospects of markets and the opportunities this field offers. The projects in the D2 Unit exhibit annually at an exhibition space called "IST-village".

In addition the Italian Broadcaster's Exhibition "Satexpo" is a place where RAI usually makes technology demonstrations.

4.2.2 Publications

This section describes for each partner the regular channels for publication of R&D results. The INSTINCT findings will be made available through these channels.

Brunel

Brunel University publishes RTD results in specific academic research conferences, electronic letters, magazines and journals such as the IEEE International Conference On Multimedia and Expo, IEEE Transactions on Multimedia, and the International Journal of Services and Standards.

France Telecom R&D

FTRD plans to contribute to joint overview publications that the consortium will have selected, providing a global telecommunication operator and service provider perspective. One such major target could be the IBC2005 conference.

Additionally, as already done in CISMUNDUS, FTRD will strive to propose some (one to two a year targeted) publications and public presentations featuring the outcomes of the various R&D activities carried out within or in close relationship to the INSTINCT project.

Finally, FTRD will seek maximum dissemination of INSTINCT related business opportunities to France Telecom executives (Orange will be especially targeted), but also where appropriate to France Telecom business partners or to the French administration (e.g. regulatory authority). Such R&D dissemination and lobbying actions could either take the form of corporate seminars or service concept demonstrations. FTRD will also submit reviews of the INSTINCT concepts to internal corporate R&D publications.

IRT

The IRT regularly publishes RTD results in specialised broadcast industry trade magazines, (including IRT's own "Rundfunktechnische Mitteilungen" incorporated in the journal for TV, film and electronic media, FKT) and reports regularly at international broadcast conventions worldwide, e. g. at the NAB (National Association of Broadcasters) Show and Convention in Las Vegas, the IBC (International Broadcasting Convention) in Amsterdam, the EBU (European Broadcasting Union) special seminars, the annual EC symposium ECMAST/Media Futures Symposium and others. Much work is reported also on IRT's Web pages. IRT also updates the public service broadcasters by means of internal technical communications (http://www.irt.de).

NETikos

NETikos publishes a monthly newsletter (news@NETikos) sent to approximately 5,000 people around the world, and occasionally participates in main events, related to mobile communications, VAS services, billing, and more, like the SMAU (Italy's biggest exhibition on ICT) and the 3GSM World Congress, especially in Italy, Finland, and Brazil.

Much work is also reported on the NETikos Web site (http://www.netikos.com).

Rohde & Schwarz

Regarding DVB-H, R&S is committed to contribute to the publication of the results of the validation tests for the new standard, and present its findings and perceptions at the above mentioned workshop that is likely to take place in late 2004 or early 2005. In addition, articles are planned to describe the results of the work in the DVB Measurement Group when it has finalised its DVB-H related up-grade of the Measurement Guidelines.

With their focus on QoS related issues, R&S also plan to publish concepts and realisations of QoS test probes, tools and systems, first as an exchange of information with other projects (e.g. ENTHRONE), then as papers and presentations at suitable symposia. This dissemination activity is likely to be ongoing for most of 2005 since the installation of new networks and the broadcasting of new services will result in new perceptions that will need to be communicated appropriately.

It goes without saying that R&S will support the INSTINCT demonstrations at IBC 2005 with equipment and tools. R&S also plans to submit papers to the IBC symposium 2005.

RAI

The Rai Centre for Research and Technology Innovation usually presents its research results in the magazine "Elettronica e Telecomunicazioni". This magazine can also be found on-line, at http://www.crit.rai.it/eletel/indice.htm. The magazine is in the Italian language, however the abstracts are in both English and Italian.

In general, information for a broader audience can be found at http://www.crit.rai.it. On this web site, information about the INSTINCT Project will be uploaded, to improve the dissemination of the results and the vision of this Project.

RBB

The recently re-launched RBB website www.rbb-online.de has an area dedicated to RBB's involvement in EC-funded projects including a page on INSTINCT. This German language page will provide an introduction to the main activities and aims of the project, it will incorporate the INSTINCT logo and provide a link to the official INSTINCT website. Contact details to responsible members of staff within RBB will also be supplied. RBB is currently producing a promotional video for the IST projects SAVANT and CONFLUENT and proposes doing the same for INSTINCT.

TDF

TDF plans to contribute to joint overview publications that the consortium will have selected, providing a broadcast operator and systems integrator perspective. One such major target could be the IBC2005 conference. Additionally, TDF will strive to propose publications on the outcome of the protocol engineering activities. For this matter, IEEE certified conferences would be favoured. Finally, TDF will submit an overview article of the INSTINCT concepts to the French broadcast industry magazine 'Antennes'.

THALES BROADCAST & MULTIMEDIA

THALES BROADCAST & MULTIMEDIA will disseminate the INSTINCT results through IEC and ITU-D publications. Obviously THALES BROADCAST & MULTIMEDIA will support the INSTINCT demonstrations at IBC 2005 and will contribute to promote the INSTINCT concept around the world at many events.

T-Systems

T-Systems plans to contribute to joint overview publications that the consortium will have selected, providing a broadcast operator and systems integrator perspective. One such major target could be the IFA2005 conference. Additionally, T-Systems has proposed two publications for EuroIndia2004 and Mobile Summit 2004 to present results of the CONFLUENT project and to give an outlook to INSTINCT.

TU-BS

The Institute for Communications Technology (IfN) of TU-BS regularly publishes its research results in a number of national and international conferences and magazines. National conferences are for example the FKTG (Fernseh- und Kinotechnische Gesellschaft) workshops and conferences, the MMC (Multiradio Multimedia Communications) workshop, Dortmunder Fernsehseminar (ITG-Fachberichte), or VDI Conferences (e.g. Elektronik im Kraftfahrzeug). International conferences include conferences of the IEEE (e.g. ICCE), ITU-T Workshop on multimedia or similar conferences. Presentations at international fairs like IFA and IBC will be carried out in the scope of INSTINCT. Links to papers published so far can also be found on the Institutes web sites (http://www.ifn.ing.tu-bs.de)

UEA/PUSP

UEA and PUSP will publish RTD results in specific academic research conferences, electronic letters, magazines and journals like The Journal of Television Engineering the official journal of the Brazilian Telecommunication and Television Society, SET, that regularly publishes technical information about products, technological convergences, research results and other pieces of information related to the world-broadcasting scenario. This journal is directed at, engineers, technical directors, teachers, students, TV operators, radio and TV stations, manufacturers and suppliers of equipment and people interested in broadcasting and telecommunication.

UPM

The Radiation Group of the UPM usually publishes in prestigious academic journals on antenna design and measurement. These are mainly:

?? Electronics Letters

?? IEE Proceedings Part H

?? IEEE Transaction on Antennas and Propagation.

?? IEEE Antennas and Propagation Magazine.

The studies and designs of this project, developed by the UPM, will be submitted to these magazines for publication.

Some work is also reported on the Web pages of the Radiation Group of the UPM (http://www.gr.ssr.upm.es).

4.2.3 Symposia

This section gives an overview of different international symposia that are in the focus of the project and where INSTINCT partners want to contribute.

DVB-World

DVB-World, an international symposium around DVB and multimedia delivery systems is yearly organized in Dublin by the DVB organisation. The last DVB-World symposium took place in Dublin from March 3rd to 5th 2004, where a presentation was given by Brunel University and IRT about the INSTINCT concept, the project phases and objectives in the session "Go DVB Young Man!". (http://www.iab.ch/)

EURO-INDIA2004

The EuroIndia2004 Co-operation Forum on the Information Society, funded by the European Commission, is the fourth in a series of international co-operation events to showcase the European vision on Information Society Technologies (IST) and enrich it further through international cooperation. The EuroIndia2004 programme aims to provide a stimulating mix of plenary presentations and innovative parallel workshops along distinct streams and themes of relevance to Europe and India. T-Systems will make a presentation on the INSTINCT Project.

Euro-China

Organised within the framework of the BIP IST project and under the aegis of the European Commission and of the Chinese authorities, a Euro-China Workshop on Home Networks and Platforms is organised in Beijing (Beijing International Convention Centre) on April 27, 2004. This event aims at giving European and Chinese organisations active in this field a unique opportunity to meet and network, exchange information and visions, and possibly initiate or strengthen cooperation projects. During the workshop, presentations will be made by European and Chinese organisations. Presentations from European organisations will essentially focus on the status and perspectives of ongoing FP5 and FP6 projects included in the portfolio of the D2 Unit of DG Information Society. Brunel University will make a presentation on the INSTINCT Project.

IST Event 2004/2005

The conference will gather high-level decision-makers from the public sector, private industry and the world of research in the same place, tackling the same challenge: to improve the prosperity, security and quality of life for all Europeans through the development of a user-centric European Information Society. Major European strategic initiatives will be presented and debated: from IST research policies and the establishment of a European Research Area in the sector to the roll-out of broadband and mobile services and telecom deregulation. Other conference workshops will focus on identifying tomorrow's major technological trends and organizing the European research required to turn vision into reality.

Medientage

The "Medientage" in Munich, a politically driven event with conferences and discussions on media developments gives the opportunity to present INSTINCT at one of the most important media conventions in Germany. In parallel to the congress a trade fair, where IRT usually has a booth, allows practical demonstrations of the INSTINCT developments [15].

Mobile Communications Summit

This conference is organized yearly with help of the European Commission. Bringing mobile and wireless technologies closer to people's needs, making them easier to use by everyone while being optimally connected anywhere and anytime. These are the challenges of European research initiatives of the IST program towards personal and wireless mobile communication systems and networks, including their terrestrial and satellite components. The Mobile Communication Summit will also be a key event to confront visions on future mobile and wireless technologies and systems, to identify new business opportunities, and to discuss the future roles of all the parties involved in the Information Society Technologies

An INSTINCT presentation that will cover the results of the IST project CONFLUENT will be jointly given by DiBcom, R&S and T-Systems in the year 2004.

Others

UEA

An international symposia will be organized in Manaus, Brazil, by UEA that will focus on disseminating concepts underpinning the INSTINCT project.

UPM

The expected conferences where the results of work carried out within the INSTINCT project by the Radiation Group of the UPM will be presented are the following:

?? 2004 Spanish URSI meeting. Barcelona. September 10th-12th, 2004

?? ICAP 2005 Conference. March/April 2005. Greece

?? 2005 IEEE Antennas and Propagation Society International Symposium and URSI North American Radio Science Meeting. July 5, 2005 - July 9 2005, Washington, DC.

?? 2005 Spanish URSI meeting

?? 14th IST Mobile & Wireless Communications Summit 200519-22 June 2005. Dresden, Germany

?? European Microwave Conference 2005. October 2005.

These conferences represent the best selection on antenna topics. Apart from the above mentioned meetings a 12 hours short course about nomadic TV techniques (principles, standards and receiver characteristics) will be provided next July 2004 for the under-graduated students in UPM. The material of this course (in Spanish language) will be available on line initially from a link on http://www.gr.ssr.upm.es.

RBB

In-house/ARD Dissemination

RBB will disseminate information about INSTINCT within the ARD network of public service broadcasters in Germany.

RBB's initial dissemination activity is planned for 1st April 2004 when its involvement in INSTINCT and the project's aims and objectives will be presented to the ARD Online Coordination team at RBB Potsdam. Online departmental heads from ARD and all regional public broadcasters in Germany will be in attendance. The aim of this meeting is to raise the awareness of other broadcasters regarding convergent services and the opportunities and challenges they present to broadcasters.

Further dissemination activities will include presentations to the RBB Board of Directors, the broadcasting commission in addition to interested key RBB employees, and also to the Electronic Media School, a training institution for future broadcast and multimedia journalists which is partly hosted by RBB.

Having hosted the ARD Digital Play Out Center since 1997, RBB operates as the focus of ARDs digital activities. Through this connection INSTINCT developments will be disseminated to the Center technology and editorial departments as well as to the DVB coordinator of the ARD. It also opens communication channels to lobby organisations such as the MHP Alliance, the MHP Action Group and ARD's office in Brussels.

T-Systems

In addition to the appearances and presentations described above, T-Systems plans a workshop with the provisional title: DVB-H for Broadcast Mobile Convergence

Within this two-day international workshop all questions related to DVB-H implementation should be discussed, including network planning aspects, receivers, services. It is planned for January 2005 in Berlin and should collaborate with other EU projects, e.g. DAIDALOS, ENTHRONE and national initiatives, e.g. HYNET. This workshop should address technical aspects and decision makers interested in DVB-H implementation. This workshop may take up the MMC (Multiradio Multimedia Communications) conference series initiated by the EU projects DRIVE and MCP in Berlin in the year 2000.

4.2.4 Final Open Workshop

A final workshop presenting the results and developments of the project and the current situation of technology and standardisation related to INSTINCT (e.g. DVB-H) will be held at the end of the first project phase. Based on the success of former European projects workshops (CISMUNDUS, SAMBITS), the experts from different work packages as well as other experienced people from the industry, broadcast or telecommunication-side, will give speeches and invite the visitors to discuss questions of convergence. The workshop will incorporate demonstrations of the developments and an exchange of views by all who are interested in future aspects of Broadcast and Telecommunication technology and their combination. The CISMUNDUS workshop proved the interest in such a workshop by all the players in this field, broadcasters, device manufacturers, network operators and cross-content providers.

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References

[1] http://www.itu.int

[2] http://www.cept.dk

[3] http://www.citel.oas.org/

[4] http://www.cenelec.org/

[5] http://www.digitag.org/

[6] http://www.dvb.org/

[7] http://www.tv-anytime.org/

[8] http://www.eicta.org/

[9] http://www.itu.int/ITU-R/

[10] http://www.cept.org/

[11] http://www.3gsmworldcongress.com/congress/

[12] http://www.ibc.org/

[13] http://www.cebit.de/homepage_e?x=1

[14] http://www.ifa-berlin.de

[15] http://www.medientage-muenchen.de/frame_html.html