

Services to Wireless, Integrated, Nomadic, GPRS-UMTS & TV, handheld terminals

DVB-H is the new European standard which fosters network co-operation between terrestrial broadcast and mobile telecommunications technologies, thus materializing the vision of wireless broadband access anywhere, anytime. DVB-H provides streamed IP multimedia contents to handheld devices, such as mobile phones and PDAs, with an unequalled efficiency in terms of power consumption and reception performance. Wing TV aims to validate the DVB-H standard, giving an in-depth view of all the capabilities of the new technology.

Main focus

The mission of the Wing TV project is to contribute to speeding up the worldwide adoption of the DVB-H standard by validating the technology and providing adequate inputs to forums and standardization bodies.

DVB-H (ETSI EN 302 304) provides a coherent set of features – including time-sliced service transmissions, additional link layer protections known as MPE-FEC, new DVB-T physical layer modes and signaling – in order to efficiently serve battery-powered mobile handheld terminals.

By combining DVB-H, IP Datacast, and MPEG-4 technologies, brand-new multimedia broadcast services to mobile devices can be possible, thus opening huge business opportunities, especially when combined with 2.5G and 3G networks that will provide the interactive channel.

The project will test in detail all aspects of the standard by performing both laboratory test and field trials in different countries.



Wing TV

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Partners

Åbo Akademi University Turku, Finland
Antenna Hungaria, Hungary
DIBCOM, France
DIGITA OY, Finland
Elektrobit Ltd., Finland
Ericsson, Sweden
Mier Comunicaciones, Spain
Nokia Corporation, Finland
Nozema Services, Netherlands
Philips Research, Netherlands
RAI (CRIT), Italy
Retevisión (abertis telecom), Spain
Rohde&Schwarz, Germany
SIDSA, Spain
Tampere University of Technology, Finland
TeamCast, France
Technical University Braunschweig, Germany
Telefónica I+D (TID), Spain
Teracom, Sweden
Thales Broadcast & Multimedia, France
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Project web site

www.celtic-initiative.org/projects/ecosys

Approach

The Wing TV consortium includes a broad scope of knowledge and capacities:

- knowledge in RF issues in general and DVB-H standard in particular.
- capacity to develop chipsets for terminals and IP encapsulators.
- capacity to integrate components into terminals and network elements.
- ability to integrate the preceding into networks and deploy them.
- capacity to perform laboratory and field tests.

The participating organizations do not only form a well-balanced consortium in terms of the project needs, but also include many of the leaders in the broadcast industry and in telecom research in Europe. The geographical spread is consistent with the pan-European ambitions of the project, which is underlined by the fact that the consortium includes a company from the new EU member states.

This composition of the consortium will enable comprehensive trials, always at DVB-H level, i.e. link and physical layer, that will bring a deep knowledge of the capacities and limits of the standard. In addition, the project will take care of the interoperability among different manufacturers and with existing DVB-T systems. Each company will contribute independent trials. However, two common sessions, both in the laboratory and in the field, will be organized, the first ones being held in Turin and Barcelona during the second quarter of 2005, and the last ones during the first half of 2006.

Main results

There will be many important outputs of the Wing TV project for the industry and standardisation bodies. Main outputs are:

- the “Wing TV reference receiver” that will serve to network planners and terminal manufacturers who want to know the current characteristics and evolution of the typical DVB-H receiver.

- the “DVB-H measurement guidelines” that provide about a reference on how and what to measure in DVB-H systems.

- the “DVB-H implementation guidelines”, the main document that serves as a major reference to network and service operators.

Besides, Wing TV will be in an excellent position to provide valuable inputs to different organizations, like the technical module of the DVB, the ITU and IEC.

Impact

Currently, DVB-T is a moderately mature technology. While at most stages of the DTT system chain several vendors are offering reliable and cost-effective products, some network elements still need further R&D efforts, and network planning will still benefit from consolidation following a wider deployment of networks for portable and mobile (in-vehicle) reception. However, services and networks for handheld reception are an almost absolute novelty in the broadcast world. Few DVB-H networks, none of them commercial, are currently deployed and therefore a number of technical issues remain open. Wing TV has strategic relevance for the industry since the results obtained will be of invaluable importance for all players in the broadcast arena, from chipset manufacturers to service planners.

About CELTIC

CELTIC is a European research and development programme designed to strengthen Europe's competitiveness in telecommunications through short and medium term collaborative R&D projects. CELTIC is the only European R&D programme fully dedicated to end-to-end telecommunication solutions.

Timeframe: 5 years, from 2004 to 2008

Cluster budget: in the range of 1 billion euro, shared between governments and private participants

Participants: small, medium and large companies from the telecommunications industry, universities, research institutes, and local authorities from 33 countries

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