

# MING-T



**Multistandard integrated network convergence for global mobile and broadcast technologies**

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| Action lines:      |                |
| Clusters:          |                |

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| Number of partners:   | 9   |

## **Main objectives:**

1. Develop an architecture that can provide seamless access in converged digital broadcasting and mobile communications networks.
2. Incorporate Chinese DTMB into the multi-standard framework.
3. Apply advanced scalable coding techniques for the services in the converged digital broadcasting and mobile communications networks environment.
4. Conduct field trials to provide validation support for the usability of the developed technologies.

## **Technical approach:**

1. Identification of the reference network scenario (addressed access technologies, involved business entities and relationships among them, etc.) and detailed definition of requirements of the target mobility service.
2. Design of the initial system architecture, which will mainly focus on the middleware design, a scalable coding implementation and the mobility solutions within the different broadcasting and mobile communication technologies using a multi-standard terminal.
3. Definition of goals and design principles for the design of the final system architecture, which will include a complete description of all the functional elements and logical interfaces, based on the outcomes of the research activities carried out during the project lifetime.
4. Field test in China to verify the overall system architecture and initial implementation. The field trials in Beijing will concentrate on the interoperability and handover between DTMB and DVB-H.

### **Key issues:**

Multiple mobile digital broadcasting technologies are emerging all over the world. At the moment, at least five similar but different and incompatible systems for mobile television (T-DMB, DVB-H, DTMB, MediaFLO and ISDB-T) exist and are being pushed for political rather than technical reasons, but the upcoming generation of multiprotocol receiver chipsets is expected to handle all those standards. In order to provide a uniform platform for those standards, the problem of interoperability and handover needs to be resolved first and foremost. MING-T targets these issues, focusing on the convergence of the European DVB-H standard with the new Chinese standard DTMB (Digital Terrestrial/Television Multimedia Broadcasting).

Of course, communication networks including GSM, UMTS, or WLAN can be used to provide a feedback channel for the broadcast system to form what we call the integrated network, which improves the user-experience with interactive services like electronic program guides, e-voting, e-shopping, etc. This convergence between broadcast and mobile communication networks is the second major aim of the project.

Finally, the project will cover how to deliver these services with a consistent level of quality to rich media applications across mixed broadcast networks, and in particular on how scalable video coding may address this issue.

### **Expected impact:**

Since different digital broadcasting standards will coexist in the future even in the same country, by working with the Chinese digital broadcasting standard (DTMB) creators, MING-T will create closer research cooperation between the European and Chinese mobile-broadcast convergence research forces, and provide for Europe an improved industrial competitiveness potential. As China is already the largest single market for digital communication, a cooperation with Chinese academics and companies based on DTMB is likely to benefit European companies willing to operate on a worldwide scale.

Mobile television is expected to reach millions of users worldwide in the future, an effect which has been tested during such major international sports events like the Winter Olympics in Torino 2006 and the 2006 Soccer World Cup in Germany. At the 2008 Beijing Summer Olympics, China will test the DVB-H standard as well as its own new DTMB system developed recently by the MING-T partner Tsinghua University.