Bringing handheld mobile digital video broadcasting to reality

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The new standard for broadcasting digital video to future mobile phones, PDAs and laptops, DVB-H, is now almost complete. The next step is to begin testing the technology, and here the INSTINCT project will continue its key role.

Many industry observers see the broadcasting of video to mobile phones as the next logical development for the Digital Video Broadcasting (DVB) standard. Broadcasting digital video over the existing wireless telecom networks brings a number of technical problems in its wake as capacity in existing third generation mobile communication networks (3G) will be exceeded even by moderate use video streaming services.

So what is the solution? The DVB-H standard, or DVB for Handhelds, is intended to support digital transmission of multimedia content for handheld devices, e.g. mobile phones, PDAs, etc. To reduce the amount of power required to receive the content, DVB-H uses time slicing, which requires the handheld device to be ready to receive data only during certain time intervals.

Which is where the INSTINCT project comes in. Validating the new DVB-H standard has been its primary objective.

Focusing on the DVB-T, DVB-H and DVB-MHP (Digital Video Broadcasting – Multimedia Home Platform) standards, the INSTINCT partners are charged with developing a fully specified and open final platform for the delivery of mobile video services via mobile wireless

and terrestrial broadcast networks.

Once the DVB-H standard is validated, they will apply that technology in small-scale field trials, focusing on deployment to content/service creators, user equipment makers and operators. Large-scale field trials that engage more operators and local communities will follow.

Project coordinator Tom Owens at Brunel University (UK) explains that for the DVB-H standard, broadcasting will be handled by the network operators, with suitable content sourced initially from mainstream broadcasters. The mobile terminals used will initially be 'bimodal' in type, able to act as both a normal mobile phone, and as a mobile receiver of broadcast DVB-H signals.

How does DVB-H overcome the limitations of available bandwidth? Owens answers with an example. "Network operators can transmit a Web page with embedded links as a broadcast page – each link would connect to more specific information on a chosen subject. When users click on a link, they activate a one-to-one download of the information they are interested in, to the broadcast part of their handheld. The advantage for the network operator is that the broadband part of the content is sent to a single receiver only, rather than being broadcast to many receivers – a system which is inherently more efficient in use of bandwidth."

In September 2005, results from one of the world's first commercial DVB H pilots (involving 500 users in Helsinki, Finland) revealed its popularity and a willingness to pay for mobile TV services. The study found that 41% of participants would be willing to purchase mobile TV services, and half thought that a fixed monthly fee of 10 euros was a reasonable price to pay. 58% said that they believed broadcast mobile TV services would be popular.

“The UK will have a commercial offering of some twelve to thirteen programmes in DVB-H by April 2006,” says Owens. And in North Germany, five Länder have announced their intention to work together towards the introduction of DVB-H services. The media authorities in these five regions hope to facilitate a rapid market introduction of ‘Handy-TV’ services, with trial broadcasts planned for the 2006 World Cup Finals, followed by the launch of regular services in 2007.

Source: IST Results