DVB-H turns your cell phone into a multimedia center

A very small image makes it big

No doubt: The cell phone has been an impressive success story. What years ago was launched on the market as a two-pound portable telephone now fits in your pocket. And the new models also store the photos from your last vacation and your favorite group's latest video, not to mention the MP3 files of your favorite CD. And now, the multi-talented mobile device can do TV, too. Exactly what you are used to, with sound and in color, just smaller.

The new broadcasting standard DVB-H (Digital Video Broadcast, Handhelds) makes this possible. Cell phones and other mobile end-devices currently use this technology to receive digital radio programs. MEDIA BROADCAST the media service specialist provides the infrastructure for mobile TV in Germany and offers all the services companies need from one source.

Intelligent energy control

The technology for the new transmission path is based on the DVB-T standard, which has already replaced analog antenna television in many German cities. Although this technology does make it possible to receive TV and radio wirelessly via small rod antennas, it is not designed for reception on cell phones and PDAs. Decrypting the digital signals for this requires too much computer capacity and overtaxes the small end-devices' power supply.

DVB-H, however, is designed for these activities, since it only requires the end-devices to exert a small amount of energy. The reason is that the receiving devices are not permanently connected to the broadcaster, but rather receive the data in portions - in so-called data packages. Between receipt of the packages at regular intervals, the device switches over to idle operation, and thus uses less energy. New encryption procedures also reduce the data rate as compared to other transmission technologies. A data rate of 256 kbit/s is sufficient for a resolution of 320 to 240 pixels for displaying most

contents on displays that are smaller than 8 inches. This means that at the current data flow of around 5 megabits per second, one DVB-H channel can carry up to sixteen programs. In comparison, DVB-T needs an average of around 3.5 megabits per second for each program and carries four programs in a group.

There's enough for everyone

Unlike wireless networks, DVB-H not only transmits data with a higher data rate, it also makes program signals available to all authorized receivers simultaneously. It therefore makes no difference whether one or one hundred thousand viewers are watching a program on their cell phones.

The combination of radio and wireless technology results in a hybrid network for mobile TV, which combines the strengths of both formats into one completely new, interactive service platform. Large amounts of data reach users quickly and cost-efficiently with DVB-H. The platform transmits data centrally, as is the case with conventional TV or radio – regardless of whether the receiver has turned on their end-device.

However, the strengths of mobile technology really come into play for the interactive reverse channel. For example, it makes broadcast-related services such as viewer voting and participation in sweepstakes possible, therefore turning traditional television images into interactive applications.

Strong references

Media&Broadcast has already demonstrated the capabilities of DVB-H at two global events. At the 2006 FIFA World Cup Germany™, sixteen channels broadcasted by both public and private TV stations in the cities of Berlin, Munich, Hamburg and Hanover could be viewed on mobile end-devices. At the Asian Games in Doha/Qatar in December 2006, viewers could tune in to thirteen channels throughout the entire broadcasting area. In July 2007,

MEDIA BROADCAST also set up a turnkey DVB-H network with an initial offer of twelve TV channels for Dubai in the Persian Gulf.

In Europe, DVB-H is already being used in Italy and Finland. France, the Netherlands, Switzerland and Spain are set to follow soon. In Germany, mobile TV will be available commercially and to a wide area starting in the summer of 2008.

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