

Mobile TV: developments

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Traditional broadcasting is undergoing a process of change



DVB-H demonstration



With the move towards an all-digital broadcasting environment, new tools make the personal consumption of media possible. The advent of personal video recorders (PVRs), video-on-demand and the multiplication of programme offerings have enabled viewers to personalize the content that they want to watch and choose when to watch it.

As part of this trend, and in parallel to the growth of mobile telephony, new technologies have enabled viewers to watch television services on mobile receivers. The place of viewing is no longer limited to the television set at home, but widened to allow personalized television watching while “on-the-go”.

Mobile operators have already demonstrated their interest in offering television services to mobile telephones. Providing video streaming services using their UMTS, or third-generation networks, mobile operators have offered video services such as news, sports and music clips.

Yet the configuration of the mobile telephone network, based on one-to-one communications, makes it costly to provide television services to a large audience. A broadcast network, based on the transmission of information to a large audience, is preferable.



TV: developments



Solutions

The Digital Video Broadcasting to a Handheld (DVB-H) standard makes it possible to deliver live broadcast television services to a mobile handheld device. Developed by the DVB Project, the DVB-H standard builds upon the mobile capabilities of the well-tryed standard for digital terrestrial television (DVB-T). DVB-H can be used together with mobile telephone technology and thus benefit from access to a mobile telecom network as well as a broadcast network.

Elsewhere in the world other broadcast systems have been developed to provide similar services. The Digital Multimedia Broadcast (DMB) standard delivers mobile television services by building upon the infrastructure of the Digital Audio Broadcast (DAB) standard. The Integrated Services Digital Broadcasting Terrestrial (ISDB-T) standard, developed in Japan for its digital terrestrial television, also provides the possibility to broadcast to mobile devices. MediaFLO is a system developed by Qualcomm that uses a similar technical configuration as DVB-H and for which nationwide frequency spectrum has been licensed in the United States. In Germany the DXB Project seeks combine the

advantages of DMB and DVB-H into a single system.

Business model

With the development of these new technologies, broadcasters will need to carefully consider their content strategy for this nascent market, and since mobile receivers will likely incorporate the functionalities of a mobile phone, broadcasters will also need to determine how to best collaborate with mobile telecom operators.

While a suitable business model must try to leverage the strengths of broadcasters and mobile telecom

operators, it will ultimately depend upon the investment of each. Finding a business model that can appeal to both broadcasters and mobile telecom operators will require responses to the following questions:

- What kinds of services are offered to consumers?
- Who manages the end-relationship with consumers and who can market the service offering?
- What billing mechanism – if any



– will be used to channel income (i.e. subscription fee, pay-per-view)? What other sources of income are applicable (i.e. public licence fee, advertisement)?

- Who has access to the necessary resources (i.e. frequency spectrum, networks, etc)?
- Who can develop and deliver appealing content?
- What are the investment capabilities of each organization?

Deciding how to manage the relationship with the end-user will help clarify the business model. Broadcasters have established a trusted relationship with their viewers who value their brand. Similarly, mobile telecom operators have developed a large customer base

which they may easily convert to mobile television using their impressive marketing skills.

While mobile television services could be offered without associated telecommunication possibilities, it would require the establishment of a new “horizontal” receiver market. Alternatively, mobile telecom operators could take the leading role by aggregating the content, encrypting the programmes, offering the service and maintaining the networks, and marketing television as an extra feature of their mobile handsets.

Content

With their experience in creating and aggregating content, broadcasters

have a privileged role in the provision of mobile television services.

While not all existing television content is suitable for watching on a mobile device, the live broadcast of the existing television programmes could be relatively simple to achieve and attractive for viewers. Yet as mobile television consumption is likely to take place in snatched moments between other activities, conventional schedules based on hour and half-hour segments are not well suited. Rather, the format of the content will probably consist of short and self-contained sequences.

Given that screen sizes will resemble those of mobile phones and personal



DVB-H standard prototype



digital assistants (PDAs), some types of traditional television programmes risk becoming unusable. This is likely to be the case with sports such as football and ice-hockey. Minor editorial intervention, however, can allow broadcasters to select a window within the normal broadcast image to capture the part for display on the mobile receiver's screen. In this way the action in a football match follows the ball, the players in contact with the ball and the goal mouth. By cropping unnecessary details such as the grass, spectators and other players, broadcasters can zoom in on the action, all of which is extracted from the conventional television picture.

Broadcasters may also be able to develop more fully interactive services. Television services integrated in a mobile telephone facilitate easy viewer interaction and enable sophisticated television programmes. While interactivity may be as simple as SMS voting in a first phase, it could later lead to the development of fully interactive programme formats which could, in turn, help generate revenue.

As a low-cost alternative, broadcasters can re-purpose material for a repeated cyclical presentation. Appropriate material can be edited to the desired length and a suitably sized title and closing elements added. The material is then loaded into a carousel for repeated transmission.

From experience with content delivered on UMTS telecom networks, football video downloads, footage from reality television programmes and comedy clips have proven popular. Early information suggests that users are more likely to

pay UMTS call charges for entertainment rather than for information. However, broad-casters can benefit from their well-known and respected reputation to leverage their information services.

As new services can stimulate new viewing behaviour, it may be premature to draw conclusions. Only tangible experience will demonstrate what viewers will want to watch from a mobile television.

New busines

Mobile television can lead to the development of new markets. As viewers will be able to watch television outside of the traditional peak evening hours, broadcasters will have more occasions during the day to reach their audiences. And, perhaps, broadcasters will be able to create teasers to tie in with programmes watched later at home.

New sources of revenue may be possible. Some market studies suggest that viewers may be willing to pay between €8–12 per month to access six to eight different television programme channels. Given that viewers are counted as individuals rather than households, the amount collected can be quite substantial.

With advertising budgets increasingly spent in new media, mobile television services provide a new advertisement opportunity in an appealing format. While providing advertisers with a new forum to market their goods and services it also enables broadcasters to increase their advertisement revenue.

With a return channel, advertising can be tailored for its intended audience. Advertisers will be able to locate the user, better understand user behaviour and benefit from viewer interaction.

Current DVB-H trials

As a leading standard to provide mobile television services, DVB-H

trials are currently being carried out in many parts of the world.

Successful trials have already taken place in Finland and Germany. Other trials are currently underway around the world and include Australia, France, the Netherlands, Switzerland, the United Kingdom and the United States. Further trials are expected to take place in Denmark, Spain and Sweden.

The enthusiasm for mobile television exists. The technology makes it possible. The next step will be finding the right business model.



GPRS DVB-H