

Mobile television

1. There are currently several competing technologies to provide mobile television on a 'one-to-many' basis. The main competing technologies are:
 - DVB-H—a variation of the digital video broadcast (DVB) standard that is used in the UK;
 - MediaFLO—a technology developed mainly by Qualcomm in the USA; and
 - Digital Multimedia Broadcasting (DMB), which uses the same spectrum and much of the same coding as DAB radio.
2. Currently most video received and watched on mobile phones in the UK is sent on a 'one-to-one' basis that is quite inefficient. Each of the above competing technologies allows a one-to-many service with a transmission multiplex carrying several programme streams. This allows broadcasters to send the same signals to multiple handsets.
3. The European Commission recently stated that DVB-H would be the recommended mobile television standard for member states,¹ but the announcement drew criticism from some commentators.

DVB-H

4. A variation of the DVB standard that is used in the UK is DVB-H, a standard that has been specifically developed for the broadcasting of television signals to handheld devices such as mobile phones.
5. DVB-H has been trialled at a few locations in the UK and in many other countries around the world. It is in full service in some countries.

MediaFLO

6. MediaFLO is a technology developed by US wireless technology specialist Qualcomm. It is currently undergoing standardization process within ETSI.²
7. BSkyB previously undertook a mobile television pilot in Cambridge with Qualcomm. The two-month technical trial featured 11 Sky channels broadcast via Qualcomm's MediaFLO solution to Qualcomm-supplied handsets.

Digital Multimedia Broadcasting

8. DAB digital radio offers additional data capacity, which can be creatively linked to the audio programme, or can be used for other data, audio and visual transmission. This

¹http://ec.europa.eu/information_society/industry/broadcasting/mobile/index_en.htm.

²European Telecommunications Standards Institute—an independent, non-for-profit, standardization organization of the telecommunications industry in Europe.

is often referred to as Digital Multimedia Broadcasting and uses the same spectrum as DAB.

9. BT has previously run a television service (that could be received as mobile television) within spare capacity on the Digital 1 national DAB radio multiplex. DAB multiplex licences allow for a maximum of 30 per cent of capacity to be used for non-radio services.

Transmission requirements for mobile television

10. The transmission requirements for mobile television differ from those for DTT. While DTT is broadcast to a fixed receiver—normally through an elevated directional antenna (generally on the roof of the house)—mobile television aims to reach people indoors or on the move, without an antenna. For this reason, the trials of mobile television in the UK have often been broadcast from adapted mobile base stations.
11. The exact density required for effective coverage of mobile television will depend upon the spectrum and the technology used. Higher frequency spectrum is not able to propagate as far as lower frequencies—increasing the required density of broadcast sites. In addition, the various technologies have differing characteristics. For example, MediaFLO operates with a different coding and site regime than the other technologies and is generally claimed to achieve a larger coverage area for a given power.