



Interoperability and Freedom of Choice in Mobile TV

A Perspective from the Digital Interoperability Forum

The Digital Interoperability Forum (DIF)* is a cross-sector forum engaged in the promotion of industry-led solutions to interoperability. It includes stakeholders representing all parts of the broadcasting and multimedia value chain: transmission, hardware, software, middleware, platform operation and content provision.

The members of DIF have driven the advance of digital TV and HDTV in Europe through the collective investment of billions of euros. They have helped to set technical standards and have made digital TV a reality through a combination of satellite, cable and terrestrial platforms, as well as broadband, mobile and fixed telephone connections.

Together with the bmcoforum, EBU and GSM Europe, DIF provides the Secretariat of the European Mobile Broadcasting Council (EMBC). DIF members include some of the foremost players in Europe's emerging mobile television industry. This document gives the DIF perspective on mobile TV and aims to dispel some of the myths that have appeared.

Myth:

The European Mobile Broadcasting Council (EMBC) failed to reach agreement and its report should be ignored by the Commission.

Reality:

The experts in EMBC carried out careful analysis the technological and regulatory challenges to launching Mobile TV in Europe and reached consensus on a comprehensive report which included 52 specific Recommendations. The key findings were that there was no urgent need for specific new regulation for Mobile TV and that different market players favoured different technologies for legitimate reasons.

The Commission agreed that the EMBC included "all the main industry players including broadcasters, manufacturers, content providers and telecom operators" so it was regrettable that the Commission decided not to give greater consideration to its conclusions.

* DIF members include: Advanced Digital Broadcast, Arqiva, BSkyB, Deutsche Telekom, Liberty Global, Microsoft TV, Nagravision, NDS, Pace Micro Technology, Premiere, Qualcomm, Samsung, Sky Italia, TF1, Virgin Media and ZetaCast.

Myth:

When industry said that “different market players favoured different technologies for legitimate reasons” it really means that industry needs the help of the Commission to select a single technology.

Reality:

There is no single perfect technology for mobile TV and the industry seeks the flexibility to choose the solution that is best matched to each market situation. Mandating a single solution would remove that flexibility and prevent innovation.

There is a variety of solutions for broadcast Mobile TV in the world market, meeting diverse business needs and enabling different portions of spectrum to be used to best effect. The DAB-IP and T-DMB family of standards are appropriate where VHF or L-band spectrum is available, whilst transmissions based on DVB-H and MediaFLO are well suited to use in the UHF spectrum. Each solution has its own merits, with optimisations that address different business opportunities. In addition to the current range of technologies, further options can be expected to emerge in the future, both in the short term (e.g. DVB-SH) and in the longer term (e.g. DVB-H2). Consumers will only benefit from a competitive market.

Myth:

A “command and control” regulatory regime, where the Commission proactively selects technologies and enforces Europe-wide harmonisation, will encourage industry to invest in mobile TV.

Reality:

The evidence is that industry will invest where it is confident that a market-led regulatory model will be followed, based on the principles of technology and service neutrality. Industry will not invest if it sees a risk of heavy-handed regulation undermining the value of investments or restricting its ability to create viable business plans.

This is illustrated by considering HDTV, where the past failure of regulation-led HD-MAC contrasts with the current success of industry-led digital specifications for HDTV. The Commission itself praised the results of the European High Definition Forum (EHDF) in its February 2006 Communication on Interoperability of Digital Interactive TV Services: “A new paradigm of consensual approach on technical interoperability has emerged in the case of HDTV ... where the EBU and DIF have established a European HDTV Forum”. It went on to state that “The Commission supports such industry-led initiatives...”. It was therefore surprising to subsequently hear EMBC, the equivalent industry-led initiative on Mobile TV, being criticised for being “too consensual”.

Myth:

Lack of agreement on a single specification has delayed commercial launches of mobile TV in Europe.

Reality:

There are several major issues that have the potential to delay the launch a mobile TV service, e.g. spectrum availability, content rights and the creation of viable business models. Lack of agreement on a single standard is not one of them

The evidence from the marketplace is that the availability of multiple specifications for mobile TV tends to accelerate mobile TV launches, e.g. by making it possible to launch on different spectral bands.

Myth:

International roaming is the most important application of mobile TV.

Reality:

There is no evidence from the marketplace that international roaming (receiving foreign mobile TV services when visiting another country) is of significant interest to most consumers. It should not be assumed that consumer requirements for mobile TV are the same as those for mobile telephony; the evidence is that they are more akin to those for normal television.

There is not sufficient terrestrial spectrum to allow all mobile TV services to be broadcast throughout Europe. This is no different than the situation that already exists for conventional television broadcasts. In any area, transmission spectrum will be allocated to content that is popular in that service area, which is likely to be the local regional or national services. Although the ability to receive such local services would be of interest to some visitors, it should not be allowed to be the “tail that wags the dog” when considering consumer requirements. A form of “roaming” that would be of more general interest would be the reception of home services when away from home, if allowed by the content rights. However, the shortage of spectrum means that such services would have to be provided by non-broadcast means, such as IP streaming – a capability that can be integrated into a mobile TV handset.

Myth:

If all of Europe used DVB-H then consumers would be able to use their handsets in any country.

Reality:

DVB-H defines only the transmission layer, which in itself provides no guarantee of interoperability from a consumer's point of view.

A number of alternative solutions to the higher layers of a DVB-H Mobile TV system have already been deployed in the market, including Windows Media, OMA BCAST and DVB-IPDC. Even within a single specification there is often a range of incompatible sub-options. One example of this relates to Service Purchase Protection System, where OMA BCAST is split between the DRM Profile and the Smart Card Profile and DVB-IPDC is split between the Open Security Framework and the 18Crypt solution.

Furthermore, market development via operator investments in handset subsidies has been a key enabler for mobile telephony. Such subsidies substantially reduce the barriers to the take up of new technologies by supplying a handset either free-of-charge or at a significantly reduced price. In return, the operator is able to recover the subsidy through a monthly subscription fee for a fixed period. The operator's investment during this time is protected by commercially linking handset functionality to their network; the handset would not operate on another network, even if it would otherwise have been technically possible for it to do so.

Myth:

OMA BCAST and DVB-IPDC are open standards and their use is therefore royalty free.

Reality:

Open standard technologies are not free-to-use technologies.

Groups of companies holding IPR in OMA BCAST and DVB-IPDC are currently in the process of forming patent pools. As yet, there has been no public statement of the likely scale of royalty charges. The only obligation on IPR holders under ETSI rules is to make IPR available under fair, reasonable and non-discriminatory terms.

Myth:

The ETSI requirement to make IPR available under fair, reasonable and non-discriminatory (FRND) terms ensures that royalty charges are always commercially acceptable.

Reality:

The FRND requirement actually excludes very little. In practice, the primary moderating factor is the operation of market forces combined with the availability of competing technology solutions. If the market were to be distorted by mandating a single technology solution then this moderating influence would be removed.

The recent experience in MHP licensing demonstrates the potential danger of deploying a specification with elements that commit implementers to significant IPR costs before these costs are known or even estimated. It may take several years following the publication of a standard before details of the IPR regimes are finalised. However, once mass market deployments have taken place it would be difficult, if not impossible, to remove any element whose IPR costs were subsequently found to be commercially unacceptable.

Myth:

If regulators permit the deployment of multiple technologies, the market will become hopelessly fragmented, locking consumers into several years of incompatible handsets.

Reality:

It is technically and commercially feasible to create chips and handsets that support multiple standards; some have already been announced. A single monolithic standard is not the only way of achieving interoperability.

The replacement cycle for advanced feature handsets is under 24 months. This relatively short replacement cycle for mobile handsets spurs innovation by allowing the introduction of improved interoperability or other new capabilities that were not previously supportable. For example, the early generations of GSM handsets were restricted to a single band of operation. Tri-band and quad-band devices, giving improved international interoperability, are now readily available.