Technical Bottlenecks and Public Service Broadcasting

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1. Main Access Issues from the Public Service Broadcaster’s Perspective

Public service broadcasters look at technical bottlenecks from two perspectives: that of the market player and that of the public service organization.

From the market point of view, technical bottlenecks can be called gateways which, on account of the relevant technology market, enable one market player (or a small group of market players) to control access to this or to neighbouring markets.

From the public service broadcaster’s point of view, technical bottlenecks can be called those gateways which can prevent or hinder, by means of technology, the fulfilment of the public service broadcaster’s remit, which includes universal reach, by denying or limiting the viewer’s access to public service broadcasting programmes and services.

To take the example of digital television: viewer access to the programmes and services of public service broadcasters requires the digital programmes and services to be capable of being found and received. For this, it is necessary that, on the one hand, public service broadcasters make use of technology which is accessible and affordable for the viewer and, on the other, that the viewer can purchase a receiver to receive free television and pay-TV as well as additional interactive services without needing to choose, prior to the purchase, which services will be available. Thus, where technology can be used by a market player to interfere with this procedure, the issue of technical bottlenecks arises at each stage of transport and reception.

For any broadcaster - and not only a pay-TV operator! - , who wants to deliver any enhanced or interactive television service to the public via an existing platform, the main practical access issues arise on the decoder² side. From the consumer’s perspective this means that the decoder technology and configuration decides whether the consumer will have a free choice over, and easy access to, a plurality of services.

1) This paper is not an official EBU document.
2) The decoder can either be integrated into the television set or be a separate set-top-box.
The following diagram illustrates the most critical components:

- the Navigator provides the basic access menu to all services; it is critical because it determines whether, where and how third-party services can be found and selected and how they are “promoted”;
- the CA system makes it possible to receive scrambled services; it is critical because it determines whether a third party service can be decoded and whether the same smartcard can be used;
- the API system allows various important enhancements (including broadcasters’ specific EPGs) and interactions for broadcast services; it is critical because several different systems are in the market (each of them being highly complex) and many details have to match perfectly in order to display correctly the underlying services;
- further components like hard disks are critical as almost no standards exist on storage management and on the ability to store or access content. Thus, control over these attractive features will be difficult to achieve for broadcasters.

Interoperability means open common technical standards, which allow manufacturers to compete on the basis of price, quality and features, and in turn allow content providers to compete openly for public attention. It exists when all broadcasters have open access to all above decoder components that are relevant for their services.

2. Practical Issues

Any bottlenecks in access will result in limited or blocked competition and a lack of variety in broadcast programmes. The low level of interoperability that currently exists has a number of effects:

- it inhibits consumer appetite for digital television, and is a disincentive for the retail distribution chain;
- it restricts the availability of a strong range of free-to-air services for all consumers;
- it raises costs for service production, reinforcing the dominant position in the process;
- it thus slows down the progress towards analogue-to-digital switchover (not all television viewers want to become pay-service subscribers).

This can be illustrated further by the following example:

In one particular country a broadcaster had to use the vertically-integrated pay-TV platform of its competitor in order to reach digital satellite households. When the broadcaster introduced new information television channels, the platform placed the channels on unattractive positions in the service list of the decoders’ navigator, thereby favouring its own platform channels. Consequently, the first specific access problem was to find an adequate, i.e., fair and non-discriminatory position on a navigator which is controlled by a competing broadcaster. In an open retail market there would be no biased navigator list and the consumer would be able to adjust the list according to his preferences.

To solve the problem and to compensate for the bad location, the broadcaster decided to broadcast a small OpenTV application together with its main programmes, which would provide information about the new services and allow direct zapping to them. The platform, however, did not allow the broadcaster to implement the zapping function - although this would have been technically possible. Again, the competitor's control of the platform created the access problem. An API decoder distributed via an open retail market would have allowed any form of bundling and presenting programmes, including zapping functions, as it has been proven very successful for certain open markets (e.g. the “Free Universe Network” decoder in Germany or decoders in the Nordic countries). Such a multiple EPG scenario would enable the consumer to choose freely the EPG that he prefers.
3. Implications of Regulatory Strategies to Avoid Bottlenecks

The main strategies to ensure interoperability and to avoid bottlenecks are:

- obligations to grant access to existing infrastructure (of whatever kind),
- encouragement and, if necessary, requirement to use common open European standards,
- encouragement and, if necessary, requirement to ensure open retail markets for decoders,

these have quite different practical consequences and have different levels of effectiveness, as will be discussed later.

Pure Access Regulation:

A pure access regulation may be sufficient for some technically simple service aspects (e.g. listing the service in a navigator) but it will fail for more complex services. The typical vertical market will look like this for third party broadcasters:

- In vertical markets subsidized end-user devices are designed to serve exactly the business models of the platform operators. The needs of third-party programme providers will mostly remain unserved.
- The systems used in vertical markets up to now are proprietary, which means that proper know-how is not commonly available. Even widespread technology like OpenTV is “customized” for each single platform so that all of them have their “little secrets”.
- The need to protect investment will result in even less interoperability (or more bottlenecks) than is technically necessary. This results in incomplete information given to third-party programme providers by the platform operators or complicated ways of certifying or integrating services.
- The systems used in vertical markets usually vary between different platforms. This is another bottleneck for broadcasters who want to reach the entire population as they would have to provide their services in multiple technical formats. Re-authoring, i.e., the automatic translation of content from one API to another, is a matter sometimes discussed, but is not a real solution, since it is too complicated and requires significant financial resources, without guaranteeing a sufficient degree of application quality.

Pro-standard Regulation:

The usage of common (!) open standards greatly helps to avoid bottlenecks:

Common standards mean that

- the scope of the infrastructure basically serves the needs of the whole market;
- there is common know-how and there are independent technology sources and tools available;
- the licence fees are fair and low;
- costs for technical components may be lower owing to competition and mass production.

It is very important, however, to note that the application of standards per se does not automatically imply open access. This is because:

- standards usually do not cover the full range of the technology chain (e.g. there is no standard for the implementation of navigators which are crucial even for finding services);
- standards have points where they are open to various market models - even closed ones (e.g. the security model in MHP makes it possible to restrict important resources to one provider. In other words, MHP could be embedded in a decoder box in a way that would make it impossible that services delivered by third-parties can be accessed by the consumer).

Open Retail Markets for the Decoder Part:

An open retail market for the decoders means:

- manufacturers will optimize their devices according to the needs of the end customers, which usually means having optimum access to all services offered;
- the market tends to achieve commonly and widely accepted standards that ensure reliability for the end-users’ investment and thus also for broadcasters;
- competition will lead to the lowest prices for the decoders.
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What Are the Consequences for the Regulatory Strategy?

Achieving interoperability without bottlenecks is crucial for broadcasters – not standards or regulation per se – and no government-mandated interoperability solution is desirable a priori. But, as may be seen today, many market segments are still closed and we have to fear that even bigger closed market segments will follow (e.g. German cable networks). As the interest of the most relevant players in these vertical markets is not focused on optimum interoperability, regulation (whether via encouragement or requirement) remains the only effective means of achieving the crucial political goals.

Pure access obligations do not, as shown above, seem sufficient to remove bottlenecks effectively. Bottlenecks in the proprietary infrastructure of vertical markets cannot be sufficiently overcome by pure obligation as they are in most cases too intrinsic.

Standards will prove to be the decisive basis for minimizing bottlenecks. Only common and open standards will be applicable across various market segments and only standards will grant a sufficient sharing of know-how so that competitive services can be developed. In the field of broadcasting we have decades of very positive experience using standards. In the digital age too, the DVB/ETSI standards have proven that an even higher degree of broadcasting interoperability within all European markets is possible. DVB has been a great success story, not least in terms of European industrial policy. Consequently we see no realistic alternative to use existing standards as far as possible to achieve adequate interoperability. However, standards may fail to be self-fulfilling in terms of openness in certain cases. Consequently, they have to be seen as complementary to other measures rather than as a pure alternative.

As pointed out above, access obligations will fail for services that are technically too complex. Also, open common standards do not cover the full range of the technology chain. Thus, in vertically integrated markets there is still sufficient incentive as well as the possibility to create bottlenecks, even in the case of access obligations on the basis of open common standards. Consequently, as a complementary measure, the establishment of open market development on the decoder technology market would further facilitate the implementation of interoperability.

4. What Role Can Competition Law Play in this Context?

In a “perfect world” and on “perfect markets”, market forces would lead to access to CA systems, to open APIs and to interoperability. In highly-concentrated markets, horizontally as well as vertically, remedies are necessary that enable the market to develop this “perfect market”.

Competition law can provide remedies on the basis of controlling horizontal and vertical agreements, including mergers, and controlling the abuse of dominant market power, which includes the essential facility doctrine.

In particular, the Commission’s merger decisions on pay-TV platforms have an important impact on market developments on the markets for digital television. In some cases, in the absence of specific legislation, they provide for rules that secure access to markets. BSkyB/Murdoch and Newscorp/Telepiù, dealt with below, provide examples.

In Newscorp/Telepiù, the Commission imposed on the merging parties the following access obligation:

“11.1 The Combined Platform [Sky Italia] undertakes to grant third-party operators access to the Combined Platform’s satellite platform, in order to allow such operators to offer channels that compete with the Combined Platform’s retail offer. The Combined Platform’s obligation shall consist in the supply of technical services that are necessary and instrumental to the offering of TV channels in Italy (whether free or pay, commercial or promotional). These services will be offered to third parties at fair, transparent, non-discriminatory and cost-oriented conditions as specified under paragraph 11.6 below.”

This obligation includes access to conditional access management services for conditional access technology or technologies, and accessibility to all (sold and rented) decoders used by the merging parties’ active customers who access the merging parties’ offer; the right to be included in the automatic tuning immediately following all the channels offered by Sky Italia, and the right to be included in Sky Italia’s electronic programme guide, which may not be reorganized without objective justifications. It also includes access to the application programme interface (API) so far as is necessary.

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to develop interactive services compatible with the decoders used by the Combined Platform’s customers at fair, transparent, cost-oriented and non-discriminatory prices.\(^3\)

The Commission justified imposing this obligation in the absence of any statutory regulation, on the grounds of the near-monopoly of the merged platform.\(^4\)

Nevertheless, the effects of competition law are limited, for the reasons set out below:

- A merger procedure is restricted to the merging parties. Commitments imposed on them do not create obligations for other market participants.
- The merger procedure is subject to strict time constraints in accordance with the merger regulation. However, the study of the commitments and their appropriateness often need more time and a more transparent discussion with affected third parties, as the commitments tend to be of a regulatory character and to set the legal framework for the whole market.
- The European merger regulation allows for the imposition of behavioural commitments, such as access obligations. However, it leaves the surveillance of compliance to the market competitors. This ultimately leads to a scenario similar to the abuse of a dominant market position.
- Merger (and other competition law) decisions rely on market definitions. These markets tend to change very rapidly in the media field. The merger regulation does not provide for sufficient flexibility to take account of these changes after the decision has been made.

The BSkyB/KirchPayTV merger too highlights these limits. In BSkyB/KirchPayTV, the Commission obliged the merging parties to grant competing platforms access to the merging parties’ platform Premiere by concluding a simulcrypt agreement. After a competing platform had requested access to the programmes and had asked if they could conclude the agreement without KirchPayTV reacting, it was up to three arbitrators to decide such questions as how to define a platform within the meaning of the Commission’s decision and what level of security would have to be accepted by the requesting platform on the basis of the Commission’s decision. The arbitration court was not able to find a solution before KirchPayTV filed for bankruptcy.

As regards the abuse of dominant market power, it needs to be considered that it applies when a market player and/or the competition authority can prove that there has been such an abuse. This ex post scenario also applies to the essential facility doctrine, which therefore cannot be regarded as a remedy equivalent to (ex ante) access regulation. Furthermore, the scope of applicability of the essential facility doctrine is currently more than unclear.

The ex post approach will also apply to horizontal and vertical agreements, since as of May 2004 they will not have to be notified to the Commission but will be controlled ex post following a complaint by a competitor or ex officio by the Commission.

Finally, it needs to be considered that competition law does not take into account aspects that go beyond market power, such as media pluralism and cultural diversity.

5. What Role Can Specific Media Regulation Play in this Context?

In competition law it is already difficult, although possible, to define relevant markets and to assess, particularly in cases of vertical integration, market power. However, it is established that market regulation is necessary but insufficient to guarantee a sustainable degree of media pluralism. Consequently, there needs to be specific media regulation securing media pluralism independent from “significant market power”. Because the European Union has limited competences in this area, it is currently for the Member States to deal with this issue.

To take just one example: as EPG and the API are directly linked to public service programmes and necessary to secure media pluralism – independently of the question of market power of a network operator – it would be justified if Member States extended the access obligations to interactive applications including EPGs to permit reception of free-to-air television services across all platforms.

\(^3\) However, it seems doubtful whether the conditions are sufficient. For example, the commitments do not explicitly allow for a multiple EPG that gives the consumer the choice between the platform’s EPG and the EPG provided by third programmes.

\(^4\) It did so although the regulatory communications package is to be implemented by Italy later in 2003. Nevertheless, the Commission was right to ignore this since it is not yet clear by when and with what exact content the package will be adopted. The Italian Communications Authority will have to see in due course whether there are additional obligations to be imposed in accordance with the package.
At the Commission level it would be welcome if the Commission would, for example within Article 18 of the Framework Directive, encourage the Member States to consider the structural separation of vertically-integrated platforms as regards decoders. In all probability, standards and interoperability would emerge as being much more useful for the market as a whole – and we consider them to be very useful. Thus bottlenecks could be kept at a minimum in the most “natural” way, which means that a detailed regulation of which standards to use, or where and how to grant access, could possibly be avoided. It is only in open retail markets that all of the many benefits that standards offer can develop optimally, to the benefit of the complete existing and potential market.

6. Conclusion

Access obligations, common open standards and structural separation of the decoder market are complementary measures that are necessary in order to achieve interoperability, guarantee media pluralism and ensure that public service broadcasters can fulfil their obligation vis-à-vis all households possessing a television.