



Digital TV Transition: Tour de Europe

A Parks Associates White Paper

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Copy Editor: Jenny Pecht
Published by Parks Associates

© September 2006 Parks Associates
Dallas, Texas 75230

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Printed in the United States of America.

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1.0 The Migration to Digital

The countdown to the digital switchover deadline began years ago in Europe, when each country passed legislation to set the final date for turning off analog broadcasting and switching on digital broadcasting. The motivations are multi-fold: digital broadcasting is a more efficient use of existing spectrums; freed-up spectrums can be re-allocated for other civil uses, or auctioned off to the highest bidders for a nice windfall for the treasury.

Figure 1 provides a summary of major European countries' time tables for digital switchover and the progress of migration in those nations.

Country	Final Deadline	Est. Households Affected	Switchover Progress
Austria	2012	610,000	DTT Trial to start on Oct 26,2006
The UK	2012	5.5 million	Border area first to switch to full digital broadcasting in the second half 2008, followed by the West Country region in early 2009
France	January 1,2011	5.5 million	58% of France's population will have access to DTT coverage
Italy	2012	10.6 million	The first phase of switch-off in Sardinia and Valle d'Aosta regions was delayed to March 1, 2008 and Oct. 2008, respectively
Germany	2008	2.5 million	Timeline determined at local state level. Berlin has completed switchover, followed by Northern Germany, North Rhine Westphalia, and the Rhine Mainz areas
Ireland	2012	300,000	The DTT service trial will start in August 2006 and will last two years as the precursor to a national rollout
Spain	April, 2010	7.4 million	Re-launch of DTT service in November 2005; now 80% of the country is covered
Finland	August 1,2007	400,000	DTT penetration reached 46% of TV households in 2006
Norway	January 1,2008	200,000	DTT service roll-out is expected to begin in 2007, with completion expected by the end of 2009, covering 95% of TV households
Sweden	March 1, 2008	350,000	First analog transmitter turned off in September 2005 on the island of Gotland, followed by the cities of Motala and Gävle
Denmark	October 31,2009	500,000	Initial launch of DTT service started in April 2006, with another three Multiplexes put into use planned for future dates
Portugal	2010	3.2 million	Re-launch of DTT service planned for 2006
Switzerland	2015 (2009 possible)	500,000	The canton of Ticino region completed switchover on July 24, 2006; DTT coverage has been extended to 10-15% of households
Netherlands	November 26,2006	74,000	More than 160,000 households have DTT coverage

Source: DVB.org, national regulatory authorities, Parks Associates

Figure 1: European Digital Transition Progress Report

In execution of the transition, each country's policy orientation and market dynamics lead to different development paths to a digital TV market. Local TV infrastructure, strengths of incumbent service providers, aggressiveness of emerging competitors, and finally consumers' attitudes toward new TV services either expedite or slow down the uptake of digital TV services in these countries.

The uneven pace of digital TV transition is best illustrated by the UK, German, and Italian markets. Italy had the most ambitious plan among the three, originally planning to complete the switchover by the end of 2006. But slower-than-expected adoption of the Digital Terrestrial TV (DTT) service, coupled with role confusion among regional authorities and broadcasters, had forced Italy's Ministry of Communications to delay the deadline twice since early 2005. The Italian authority has now set the final deadline for 2012, six years later than it had planned.

In Germany, the story is more encouraging. The German TV market is regulated at the state level, and each state media authority operates as a more autonomous entity, although the federal government still governs the spectrum allocation. Germany originally set the switchover deadline for 2010, but the country began regional switchover trials as early as November 2002. After a successful analog switch-off in the Berlin region in March 2003, the Germans have accelerated their execution. Further launches have taken place in the Northern Germany, North Rhine Westphalia, and the Rhine Mainz areas. The most recent switchover trial was carried out in Munich, Nuremberg, and parts of southern Bavaria. As a result, Germany now is expected to complete the switchover sometime in 2008. A contributing factor is that Germany has a relatively high penetration of cable and satellite services. Only 5-7% of German households depend on terrestrial TV services; therefore, the task is more manageable.

In the UK, digital transition also appears to be running ahead of schedule, aided largely by consumers' interest in DTT and pay-TV services. From Q4 2002 to Q4 2005, the number of DTT households increased from less than one million to almost seven million,

and the DTT coverage has been extended to 73% of the TV households in the UK.

Although the final switch-off will not occur until 2012, Ofcom, an independent regulatory authority for the UK's communications industry, predicts that by 2010, more than 95% of the UK's TV households will have adopted a digital TV service.

2.0 Impact of the Switchover

2.1 The Rise of Digital Terrestrial TV Service

The switchover mandate has led to a burgeoning digital terrestrial TV (DTT) market in Europe. In countries where cable or satellite services are not dominant, the need to jumpstart the digital terrestrial service is particularly strong. But DTT launch was not a smooth sail in many countries initially. Debacles like Spain's Quiero TV and the UK's ITV during 2001-2002 put a damper on the over-zealous service providers and programming partners lined up for broadcasting licenses. The reasons for these failures varied, but it appeared that both services were built on a pay-TV model which ran afoul with DTT's target audience in these two nations. New DTT services were re-launched subsequently and repositioned as free-to-view services. Apparently such changes paid initial dividends. Spain sold almost two million DTT set-top boxes after a little more than seven months of operation. The UK's Freeview DTT service is regarded as a major success, with a user base closing in on that of BSkyB, the dominant pay-TV platform in the country. Similar success stories can be found in Finland, Sweden and France, although pay-TV channels are also included in the DTT service offerings in these countries. Encouraged by neighboring countries' success, Portugal, Norway, Denmark, Switzerland, and Ireland have also launched or plan to launch their own DTT service. We estimate that more than 15 million households across Europe used DTT services as of June 2006.

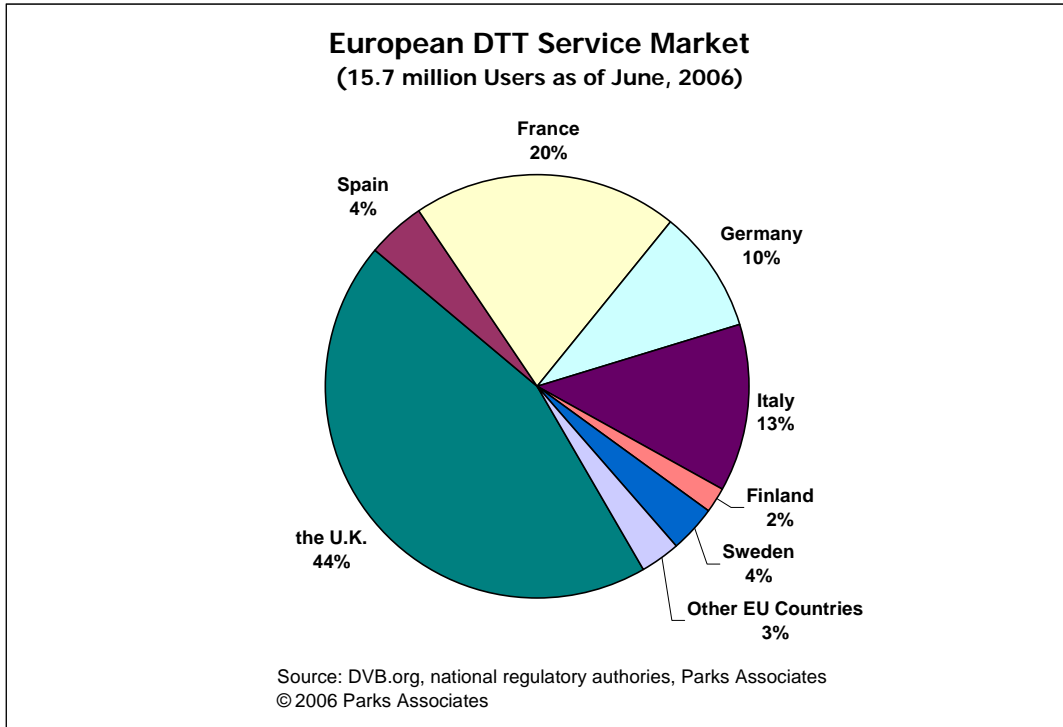


Figure 2: European DTT Subscriber Population

2.2 The Growth Pursuit

Competitors of the DTT providers – mainly cable and satellite operators – are increasingly wary about the strong DTT uptake in countries where commercial deployments or trials are taking place, and the impact on their ability to expand subscriber base. The European market for DTV is already very competitive because of the fragmented local TV infrastructure, the traditionally strong user base of free analog broadcasting networks, and the inroads that telcos have made into the TV market. DTT adds another option to European TV households, and adversely disrupts incumbent TV service providers’ plans to entice analog broadcast viewers to sign up for their DTV platforms. To pursue further growth, DTV service providers in general choose one of the following three paths:

1. Horizontal migration to other TV platforms: This path involves either making a strategic investment in alternative TV delivery platforms or providing hybrid services concurrently to targeted consumers.
2. Vertically strengthening content/channel offerings, providing value-added services to retain existing users and attract new customers.
3. A combination of these two approaches

Canal Plus Group, the No.1 multi-platform pay-TV operator in France, has taken the first approach. Capitalizing on the popularity of DTT services, it first launched a DTT service in early 2005 and later began to distribute a hybrid set-top box capable of receiving both DTT and satellite programming in November 2005. It is estimated that more than 400,000 of these boxes had been shipped by the end of April 2006. Telenor, another multi-platform service provider with a strong market position in the Nordic region, also acquired DTT license to operate in Norway as a means to expand its service appeal in the regional TV market.

Existing cable operators and telcos usually take the second approach. Kabel Deutschland, the largest cable MSO in Germany, is committed to upgrading its existing analog cable subscribers to the digital tier in response to competitive pressure from DTT and satellite services. Its blueprint calls for a continual network digital overhaul until 2009 and the ability to offer six hundred digital channels and triple-play services in addition to such value-added services as pay-per-view and an enhanced interactive programming guide. NTL/Telewest, the largest cable operator in the UK, promotes to its user base interactive TV services like VoD, gaming, TV e-mail, and one-button access to multiple screens.

The telcos' video strategy is to strengthen the breadth and depth of video programming and add PVR, PPV, and VOD capabilities in order to match competitors' offerings. At the same time, telcos can leverage the two-way capability of the IP network to offer additional interactive TV content for service differentiation. Italy's FASTWEB, for example, includes functionalities such as video conferencing on the TV, on-demand gaming, checking e-mail on the TV, and TV voting in its FastWeb TV package.

British Sky Broadcasting (BSkyB), the UK's top pay-TV operator, has taken the third approach. Besides being aggressive in launching digital and interactive TV services on its traditional satellite TV platform, BSkyB has been actively expanding service scope and tapping opportunities to distribute its video programming through other platforms. In 2004, it made a strategic investment in a TV consortium that later successfully acquired the operating license of the UK's DTT service (now Freeview). In 2005, it partnered with Vodafone to launch a mobile TV service. And in early 2006, it acquired Easynet, a broadband networking company, to begin offering broadband access services and distributing Sky TV content through the Internet. These strategic moves helped the company to quickly build a cross-platform TV package and extend the "Sky" brand to millions of consumers in the UK and Ireland.

3.0 The Future is in Integration

Recent trends and developments in Europe's communications and home entertainment market clearly indicate that its TV market cannot be analyzed in isolation anymore. As the entire consumer market is moving toward a converged, multi-platform, multi-play service model, TV/video service will be the core offering in any package. All service providers understand this fact and will move aggressively to acquire network capability and content distribution rights. But the long-term success of their strategy hinges on the ability to integrate. In particular, they will be able to achieve:

1. Integration of the network infrastructure and provisioning capability to flexibly deal with network resource requirements from different service categories like voice, video, and data; quickly diagnose network problems; and proactively manage network traffic at the back end and head end.
2. Integration of hardware, software, content, and third-party services to create an enjoyable experience in using customer premise equipments (CPE) for consumers.

3. Integration of multiple billing systems and customer service operations to give consumers a superior service experience.
4. Integration of all of the above three links in a multi-platform delivery environment to score utmost customer satisfaction.

All of these integration jobs are easier said than done and require operators to invest heavily over the next decade. Due to resource constraints, diverse operation backgrounds, varying levels of competitive pressure, and split views on market dynamics and corporate competences from decision-makers, operators are selecting different integration approaches. European cable operators might follow their U.S. counterparts' step to deploy switched video solutions instead of overhauling to a complete IP network. Satellite companies, like BSkyB, are choosing to be a platform aggregator (versus a service integrator from one platform) as the current strategy to deliver triple-play services. But in the future, if they can get their hands on a more robust network infrastructure (such as WiMAX), no one can rule out the possibility that they can launch their own mobile voice and data services to replace the current Vodafone partnership, and/or deliver fixed/mobile broadband access services beyond Easynet's footprint. As for the telcos, although they choose to base their services on the IP network, there are still the architecture choices of using the existing DSL infrastructure, or the fiber technology (FTTP, FTTN, or FTTC) that requires heavy upfront investment. No matter what their final choices are, the first three integration tasks are mandatory for successful execution of operators' video strategies in Europe.

About the Author:

Harry Wang studies the consumer electronics and entertainment service industries with a focus on fixed and portable CE hardware, software, and associated applications and services. He also covers online media trends and the advertising industry, as well as the emerging digital home healthcare market. Harry has presented his research at numerous industry events including CES, Digital Hollywood, Photo Marketing Association Annual Show, CONNECTIONS™, and Fall Focus™.

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