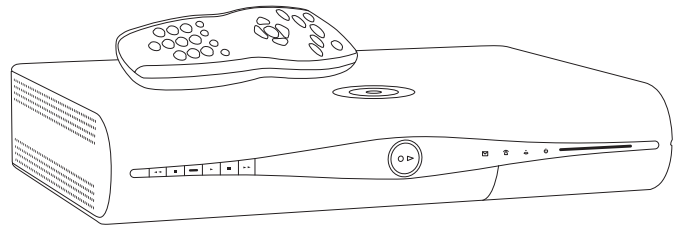


Market Penetration:

Voluntary Agreement on complex
set-top box power consumption

A report for the Digital Interoperability Forum



screendigest

**Market penetration: Voluntary Agreement on
complex set-top box power consumption**

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Background

The Digital Interoperability Forum (DIF) is a trade association representing the interests of various players in the value chain for pay TV (<http://www.difgroup.eu/>). DIF has proposed a Voluntary Industry Agreement on the energy usage of complex set-top boxes (cSTB) put on the market in the EU (the VA). A cSTB is any set-top box with an in-built conditional access system (CAS), the vast majority of which are sold into the pay TV industry.

As of 22 December 2009, 39 companies have given indicative support to the VA.

Within these 39 companies, DIF has both service providers and manufacturers committed to purchasing or selling cSTBs within the EU under the terms of the agreement. Due to the nature of the industry there is a degree of double-commitment where a signatory manufacturer supplies some cSTBs to a signatory service provider.

This report is intended to accurately assess the total volume of cSTBs which will be put on the market in the EU which can be attributed to indicative supporters of the VA. In doing that it will count the number of cSTB shipments from manufacturers and to service providers signatory to the agreement by attributing manufacturer deals and shipment volumes to service providers from manufacturers across the EU.

Current signatories

The current list of companies who have given indicative support to the VA includes the following who either purchase or ship cSTBs for use in the EU:

Service Providers	Manufactures
BSkyB	ADB
BT	Amstrad
Canal+ Group	Cisco
Kabel BW	Humax
KDG	Kaon Media
Liberty Global (UPC)	Motorola
ONO	Netgem
SES-Astra	Pace
Sky Deutschland	Sagem
Sky Italia	Samsung
Sogecable	Tatung
Telenet	Technisat
TopUp TV	Thomson
Viasat	
Virgin Media	
Welho	

A number of service providers in this list (e.g. Liberty Global, Canal + group, Viasat, BSkyB and Sky Deutschland) operate in more than one Member State. This is not uncommon, particularly in satellite operations and has been accounted for in the research.

Methodology

Screen Digest is an international independent media analyst firm operating for over 30 years with almost 50 analysts specialised in tracking and forecasting global media markets. Screen Digest is headquartered in London, UK and has offices in Australia, California, and New York. Screen Digest's expertise in researching and forecasting television markets is long-standing with over 250 service providers individually tracked within the EU by a specialist team of analysts. Each service provider is referenced for subscriber data, technology details and expected growth rates. Forecasts are derived from these data sets and extended dynamically for a five-year period, updated daily by Screen Digest.

The granularity of data referenced for this research on cSTBs in the EU includes data derived from:

1. Service provider subscribers, technology data and growth rates
2. Set-top box shipments model
3. Service provider deals with manufacturers
4. Manufacturer shipment volumes
5. Corroborating data from other technology manufacturers such as CAS, middleware or chipset vendors

The data is collected at the service provider level with forecasts of cSTB shipments by manufacturer based on current deals to each service provider over a time series. Example data points that can be extracted from this analysis include:

- Estimate of shipment volumes from manufacturer A to service provider X
- List of deals and volumes shipped to service providers from manufacturer B
- List of manufacturers and volumes supplied to service provider Y
- Total shipments of cSTBs into the EU

For the purposes of this report cSTB manufacturers which have given indicative support to the VA were assessed for their shipments of cSTBs within the EU. In addition, service providers who have given indicative support for the VA were assessed for their shipment requirements of cSTBs. Finally, the shipment volumes of cSTBs from supporting manufacturer to service provider were assessed based on current service provider requirements of cSTBs

The equation by which total coverage of the EU shipment volumes by supporters of the VA was determined is:

$$S_t = O_t + V_t - E_t$$

where:

- S_t = number of cSTB shipped under agreement in year t
- O_t = number of cSTB shipped to signatory service providers in year t
- V_t = number of cSTB shipped by signatory manufacturers in EU in year t
- E_t = number of cSTB shipped to signatory service providers by signatory manufacturers in year t

where t was calculated for all years 2006 to 2013 inclusive.

and deals with manufacturers. All of the data was forecast over a time series to end of year 2013 with historical data to 2006.

Mindful of the complexity of the market, special care was taken to accurately account for double-counting data. This applies where a service provider was purchasing cSTBs from a manufacturer where both have indicated support for the VA. This data was based on shipment expectations to each service provider and information regarding current deals and relationships with vendors. The overlapping shipment volume accounted for 35 per cent of total shipments from supporting manufacturers and to supporting service providers. In total, the EU market will ship 23 million cSTB in 2010, of which 17 million are accounted for by supporters of the VA. However, supporting manufacturers alone ship 16.6 million cSTBs and supporting service providers purchase a further 9.4 million cSTBs. The overlap of almost 9 million cSTB is based on the major service providers and manufacturers supporting the VA already engaging in significant volume deals. This overlap is obviously key to the accuracy of this work and significant effort has been exacted to ensure the research is robust to this level of scrutiny.

Coverage

Using the methodology cited above, Screen Digest has created a market sizing based around the current indicative supporter list of manufacturers and service providers across the EU. This includes all shipments of cable, IPTV, satellite and terrestrial cSTBs.

Current indicative supporters of the VA account for 75 per cent of the total EU market for cSTBs shipped in 2010. This figure will remain stable for the forecast period through to 2013 fluctuating by only 1.5 per cent at its extremes and reaching a maximum of 75.3 per cent in 2013.

There are currently 13 manufacturers who give indicative support to the VA, accounting for 72 per cent of shipments in the EU in 2010. These manufacturers represent all of the top 10 cSTB suppliers forecast for 2010 in the EU based on current active deals and service provider growth expectations. Over 50 manufacturers ship into the EU to cover 95 per cent of shipments.

There are currently 16 service providers, some of whom operate in more than one Member State. These service providers account for around 40 per cent of total cSTB shipments into the EU and seven out of the top 10 volume buyers. However, within the EU there are over 250 significant national service

providers across all platforms, making up just over 90 per cent of total cSTB purchases in the EU. The remaining 10 per cent of volume is derived from hundreds of smaller cable and IPTV operations.

Extending coverage

With most of the largest service providers and manufacturers accounted for in the current group, there will be rapidly decreasing numbers of additional cSTB shipments that can be accumulated by signing up other manufacturers or service providers.

The next largest 5 manufacturers shipping to EU service providers are Coship, Echostar, Hyundai, Pirelli and Techno Trend. Adding all five will increase the coverage in 2010 from 75 per cent to 81 per cent while adding only the largest will increase coverage to only 76 per cent. The proprietary cSTB which Free in France manufactures itself would add a further one per cent coverage. In order to extend coverage to 90 per cent without signing up any new service providers would require around 35 manufacturers in total, an additional 24 on the current supporting group. To cover 95 per cent would require around 50 manufacturers in total, an increase of over 35 new supporters, almost doubling the number of companies in the current VA.

The service provider side is more diverse and a total of almost 250 service providers are needed to make up 90 per cent of shipment volume. To raise the group to 80 per cent will require four additional

Set-top box shipment volumes - EU CA-enabled for pay TV

		2006	2007	2008	2009	2010	2011	2012	2013
Total (EU)	000s	16,001	20,759	22,662	25,304	22,799	23,738	25,330	25,656
Total signatories	000s	11,993	14,551	15,983	17,882	17,043	17,780	18,697	19,308
Signatories % of total	%	75.0%	70.1%	70.5%	70.7%	74.8%	74.9%	73.8%	75.3%

Source: Screen Digest

Breakdown of details - shipment volumes

		2006	2007	2008	2009	2010	2011	2012	2013
Set-top box signatories	000s	10,677	12,604	14,475	17,311	16,608	17,279	18,205	18,847
Other manufacturers	000s	5,324	8,155	8,187	7,993	6,191	6,458	7,125	6,809
Operator signatories	000s	8,381	8,666	9,569	9,203	9,430	9,696	10,371	11,077
Other operators	000s	7,620	12,093	13,093	16,101	13,369	14,042	14,959	14,579
Overlap	000s	7,064	6,719	8,061	8,632	8,996	9,196	9,879	10,616
Overlap	%	37.1%	31.6%	33.5%	32.6%	34.5%	34.1%	34.6%	35.5%

Source: Screen Digest

operators. Adding the next 10 largest service providers to impact the overall group adds 10 per cent to raise the total to 85 per cent of the EU cSTB shipments. These next ten are Cyfrowy Polsat (Poland), Dolce TV (Romania), Deutsche Telecom Group (Germany), Free (France), N (Poland), Numericable (France), Telecolumbus Group (Germany), Telewizja na Karte (Poland), Unitymedia (Germany) and Ziggo (Netherlands). A further 200 service providers are required to make up the next five per cent of total shipment demand to a total of 90 per cent.

Overall, key manufacturers or service providers to consider approaching are not necessarily obvious since many service providers will currently be receiving shipments from supporting manufacturers and visa verse. For example, service providers wholly reliant upon shipments from current manufacturer supporters will not contribute a net increase in volume - Netgem is the sole supplier to SFR subsidiary Neuf Cegetel, in itself a sizable service provider but gaining SFR as a supporter of the VA will not result in additional coverage since Netgem is already a supporting the VA. For new opportunities service providers like Dolce TV represent the bulk of Coship volume into the EU, and Cyfowy Poland similarly for Echostar. Gaining both Coship and Dolce TV or Echostar and Cyfowy Poland will therefore only add the shipment volume to the total once due to double counting.

In general, satellite service providers are very large and centralised and non-signatory companies may contribute significant volumes still, especially in Eastern Europe where manufacturers shipping volume are more likely to vary from the current supporter's list. However, satellite cSTB manufacturers are quite consolidated and many are current supporters. Cable is much more fragmented but manufacturers are still very consolidated and many are current supporters of the VA so cable offers the lowest opportunity to gain coverage with new supporters. IPTV is also very fragmented, but in both service providers and manufacturers. Since there

are a few large and fast growing IPTV operations in the EU, this offers a good opportunity to expand coverage. The top 5 service providers added to satellite, cable and IPTV respectively add 6.4 per cent, 1.9 per cent and 3.8 per cent to the total once double counting is accounted for.

For satellite this group includes:

Canal Digitaal (Netherlands), Cyfrowy Polsat (Poland), Dolce TV (Romania), N (Poland) and Telewizja na Karte (Poland)

For cable this group includes:

Numericable (France), Telecolumbus Group (Germany), Unitymedia (Germany), Euskatel (Spain) and Ziggo (Netherlands)

For IPTV this group includes:

Belgecom (Belgium), Deutsche Telecom Group (Germany), Free (France), Telecom Italia (Italy) and Telefonica (Spain)

Overall, increasing the coverage of current signatories of the EU market for cSTB shipments will be possible up to another few percentage points from key manufacturers and service providers. Past this any additional coverage increases will require cooperation from an exponentially larger number of service providers and from manufacturers with little EU business most of whom are based outside of the EU.

Coverage of vendors and operators

	Number of manufacturers	Number of service providers
Current coverage (75%)	13	16
- additional 5%	18	16
- additional 10%	35	16
- additional 15%	50	16
Current coverage (75%)	13	16
- additional 5%	13	20
- additional 10%	13	26
- additional 15%	13	242

Source: Screen Digest

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About Screen Digest

Screen Digest is the pre-eminent firm of industry analysts covering global media markets. Headquartered in London, with offices in New York and Monterey, California, we employ a team of 40 specialist analysts covering film, television, broadband, mobile, cinema, home entertainment and gaming. Our online services and reports provide the information and analysis that hundreds of media companies worldwide base their decisions on. Most recently we have launched Global Media Intelligence (GMI), a new service which provides research and analysis specifically for media-focused institutional investors.



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