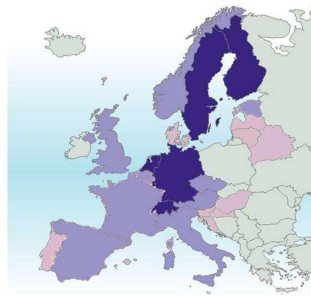





## Digital Switchover in Europe

Natalie Mouyal  
*Dreams on Demand*,  
Tallin, Estonia  
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### DSO status in Europe




- Countries having launched DVB-T
- Countries with ASO process underway
- Countries completed analogue switch off (ASO)




### Different DSO strategies

Market Type	Characteristics	Simulcast Period	Strategy
Terrestrial markets	<ul style="list-style-type: none"> <li>□ Free-to-air platform is dominant business model</li> <li>□ Many new services are offered to viewers</li> <li>□ France, UK, Italy, Spain</li> </ul>	Long simulcast period	Strategy
Cable markets	<ul style="list-style-type: none"> <li>□ Limited new services offered</li> <li>□ Emphasis on portable/mobile reception</li> <li>□ NL, CH, Belgium</li> </ul>	Short simulcast period	
Mixed (Nordic) markets	<ul style="list-style-type: none"> <li>□ Mixture of free-to-air and pay services offered</li> <li>□ Aggressive ASO strategy</li> <li>□ Sweden, Norway, Finland, Denmark, Estonia</li> </ul>	Short simulcast period	



### National DTT offer

Country	Free-to-air	Pay	Analogue
France	18 (+3 HD)	9	3 (+3)
Italy	31	PPV	10
Spain	20	TBC	5 (+1)
Czech Rep	12	0	4
UK	40	PushPVR	4 (+1)
Belgium	2/3	TBC	2
NL	3	21	3
CH	4	0	4
Germany	~24	2	3-12
Austria	6	0	3
Denmark	4	25	2
Finland	15	19	4
Norway	5	20	2
Sweden	10	27	3




### Announced ASO dates

Country	DTT Launch	ASO Date
Sweden	1999	Completed
Finland	2001	Completed
Switzerland	2001	Completed
Germany	2002	Completed
Belgium, Flemish	2002	Completed
Netherlands	2003	Completed
Luxembourg	2006	Completed
Denmark	2006	2009
Austria	2006	2010
Estonia	2006	2010
Norway	2007	2009
UK	1998	2012
Spain	2000/2005	2010
Italy	2003	2012
France	2005	2011
Czech Republic	2005	2011
Lithuania	2008	2012
Portugal	2009	2012



### Current DTT penetration

Country	Terrestrial dependency	DTT penetration	DTT coverage	Years since DTT launch	Years ASO process
UK	49%	38%	80%	11 years	4 years
Spain	82%	61%	96%	9 years	2 years
Italy	78%	34%	80%	5 years	4 years
France	58%	35.8%	89%	4 years	2 years
Germany	9%	9%	90%	7 years	0-9 months



### Are countries ready for ASO ?

Countries	ASO plan issued	ASO org	ASO comms	ASO pilot	ASO under way
UK	Yes	Yes	Yes	Yes	Yes
Spain	Yes	Yes	Yes	Yes	Yes
Italy	Yes	Yes	Yes	Yes	Yes
Norway	Yes	Yes	Yes	Yes	Yes
Austria	Yes	Yes	Yes	Yes	Yes
Czech Rep	Yes	Yes	Yes	Yes	Yes
France	Yes	Yes	Yes	Yes	No
Denmark	Yes	Yes	Yes	No	No
Estonia		Yes	Yes	Yes	No
Slovenia	Yes	Yes	No	No	No
Croatia	Yes	Yes	No	No	No
Hungary	No	Yes	No	No	No
Lithuania	No	No	No	No	No
Portugal	No	No	No	No	No

### Cost of DSO

Country	Purpose	Amount	Source
UK	Help Scheme	€693 million	BBC
	Marketing activities	€230 million	Digital UK
	DSO total	€4.37 billion	Private/public
Italy	Help Scheme	€50 per qualifying HH	Government
	ASO pilots	€55 million	Government
	DTT roll-out	€33 million (2007)	Government
Spain	DTT subsidy	€220 million (illegal)	Government
	DSO projects	€75 million	Government
	DSO as of March 09	€1.2 billion	Private/public
Sweden	Help Scheme	No special budget	Government
	Marketing activities	< €1 million	Government

### DSO costs: France

Activity	2009	2010	2011	Total	Remark
National Communications & Information Campaign	5 M€	5 M€	5 M€	15 M€	2009 Finance Law Project
France Télé Numérique Funding – Government	6 M€	40 M€	74 M€	120 M€	2009 Finance Law Project
France Télé Numérique Funding – Broadcasters	6 M€	40 M€	74 M€	120 M€	Expected
Help Scheme	4 M€	27 M€	52 M€	83 M€	2009 Finance Law Project
Targeted home assistance for elderly and disabled	3 M€	19 M€	37 M€	59 M€	Prime Minister announcement
<b>Total</b>	<b>24 M€</b>	<b>131 M€</b>	<b>242 M€</b>	<b>397 M€</b>	<b>277 M€ State Funding</b>

### Future trends for the DTT platform

- Development of pay services
- HDTV
- Allocation of the digital dividend

	Country	DTT launch	Free-to-air	Pay	Compression technology
Phase 1	UK	1998	8	22	MPEG-2
	Spain	2000	6	15	MPEG-2
Phase 2	UK	2003	40	PushPVR	MPEG-2
	Italy	2004	31	PPV	MPEG-2
	Germany	2004	~24	0	MPEG-2
	France	2005	18 (+3 HD)	9	MPEG-2/MPEG-4
	Spain	2005	20	TBC	MPEG-2
	Austria	2006	6	0	MPEG-2
Phase 3	Czech Rep	2006	12	0	MPEG-2
	Denmark	2006	4	25	MPEG-2/MPEG-4
	Estonia	2006	7	24	MPEG-4
	Slovenia	2006	7	TBC	MPEG-4
	Norway	2007	5	20	MPEG-4
	Lithuania	2008	12	28	MPEG-4
	Hungary	2008	3 (+3 HD)	2	MPEG-4
	Portugal	2009	4	TBC	MPEG-4
	Latvia	2009	5	30	MPEG-4

### Soon-to-launch countries

Country	Launch date	Free-to-air platform	Commercial platform	Compression format	ASO date
Bulgaria	2009	2 Muxes	3 Muxes	MPEG-4	2012
Ireland	2010	1 Mux	3 Muxes	MPEG-4	2012
Poland	2009	1 Mux	1 Mux	MPEG-4	2013
Slovakia	2010	1 Mux	2 Muxes	TBC	2010
Croatia	2009	2 Muxes	TBC	MPEG-2 / MPEG-4	2011
Romania	2010	TBC	TBC	MPEG-4	2012
Serbia	TBC	TBC	TBC	MPEG-2 / MPEG-4	TBC

### HD/DTT services

#### Launching HD services using DVB-T

- Sufficient capacity to provide 3 HD services per multiplex
- France, Hungary, Spain, Poland
- France & Spain: All HD TV sets must include an HD MPEG-4 AVC decoder



#### Launching HD services using DVB-T2

- Benefiting from an estimated compression gain of 30 – 50%
- United Kingdom, Finland



### Digital Dividend

- The European Commission has pushed for the adoption of market-based mechanisms for the allocation of spectrum
- Already 8 countries will reserve frequencies from 790-862 MHz for IMT services
- Regulators must balance the offerings from broadcasters, mobile telecom operators, and potentially others



### And in the future...

- ASO
- Launch of HD/DTT services?
- Technical conversions – MPEG-4 AVC, DVB-T2
- Ensuring future viability of DTT platform
- Digital dividend

