Analogue switch-off in Italy

Alberto Sigismondi, DGTVi
Terrestrial TV is the main TV distribution platform in Italy

**TV Platforms Penetration in Italy - June 2008**

- **Analogue Only**: 11,900 (52.0%)
- **DTT**: 6,066 (26.5%)
- **SAT**: 8,490 (37.1%)
  - **Free**: 3,541 (15.5%)
  - **Pay**: 4,949 (21.6%)
- **IPTV**: 360 (1.6%)

**TV Platforms Penetration in Italy - Trends**

- **Digital TV penetration is growing in Italy**: more than 14 Million digital households (more than half of total HH)
- **The gap between DTT and SAT is narrowing**: today ≈ 6 Mn households have access to Digital Terrestrial TV
- **IPTV expected to remain a niche platform with limited penetration rates compared to DTT/ SAT**

Source: Booz & Company, Makno Research June 2008
On September 10th the government has published the timetable for Italian ASO - 16 technical areas to be switched-off in 4 years and 3 months

Map of Technical Areas

Technical Areas and Households Involved

<table>
<thead>
<tr>
<th>Switch-off Date</th>
<th>Technical Areas</th>
<th>Households in DSO</th>
<th>% of comulated digital HH referred to total Italian HH</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>• Sardinia</td>
<td>0.66 Mn</td>
<td>3%</td>
</tr>
<tr>
<td>2009</td>
<td>• Aosta Valley, western Piedmont, Trentino e Alto Adige, Lazio, Campania</td>
<td>6.65 Mn</td>
<td>30%</td>
</tr>
<tr>
<td>2010</td>
<td>• Eastern Piedmont, Lombardia, Emilia Romagna, Veneto, Friuli Venezia Giulia, Liguria</td>
<td>9.98 Mn</td>
<td>68%</td>
</tr>
<tr>
<td>2011</td>
<td>• Marche, Abruzzo, Molise, Basilicata, Puglia</td>
<td>3.61 Mn</td>
<td>81%</td>
</tr>
<tr>
<td>2012</td>
<td>• Tuscany, Umbria, Sicily, Calabria</td>
<td>4.94 Mn</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Booz & Company
Sardinia has been set as the pilot area for Italian switch-off -- a region with 1.6 Mn population to be all digital by November ‘08

Sardinia

Sardinia’s Switch-off Timetable

Switchover of 2 Networks in South Sardinia (in green in the map)

Analogue Switch-off of all Networks in Sardinia (whole island)

Switchover of 2 Networks in Northern Sardinia (in red in the map)

March ‘07

November. ‘07

October ‘08
On October 31st Sardinia analogue switch-off has been completed - the wider all digital area in Europe with a Single Frequency Network

Switch-off benefits

- 14 frequencies “switched-off” in the island
- 22 national MUXes - 20 local MUXes (some with partial coverage) - 4 radio MUXes
- DTT offering of 59 digital channels
  - 29 national
  - 30 local
The SFN transition generates a frequency “domino effect”, every equal multi frequency switch-off needs to be synchronized

**Frequency “domino effect”**
Example of Analogue Frequency 55

<table>
<thead>
<tr>
<th>Site</th>
<th>Analogue Broadcaster</th>
<th>Analogue Frequency</th>
<th>Digital Broadcaster</th>
<th>Digital Frequency</th>
<th>Switch-off date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monte Ortobene</td>
<td>Retequattro HD_Dvb</td>
<td>55</td>
<td>Mux-Rete4</td>
<td>52</td>
<td>October 21</td>
</tr>
<tr>
<td>S. Antioco</td>
<td>MBONE_Dvb</td>
<td>55</td>
<td>MuxMBONE</td>
<td>26</td>
<td>October 18</td>
</tr>
<tr>
<td>Monte Oro</td>
<td>D-FREE_Dvb</td>
<td>55</td>
<td>MuxD-Free</td>
<td>53</td>
<td>October 27</td>
</tr>
<tr>
<td>Monte Serpeddi</td>
<td>TCS</td>
<td>55</td>
<td>MuxATCS</td>
<td>55</td>
<td>October 17</td>
</tr>
</tbody>
</table>
To face the frequency “domino effect” the Sardinia’s ASO was developed by a Master Plan based on 4 technical areas

Sardinia: 4 technical areas


ASO Master Plan

- 15 days of frequency transitions (15 - 31 October) on 820 implants
- Each selected broadcaster switched-off his analogue implants at 9:00 am on their scheduled day
- Coordination of implant ASO by SMS to the Task Force, replied by mail
- ASO transition database updated in real time by Fondazione Bordoni
- Communication Ministry monitored all the process, no issues were highlighted
Today - with Sardinia ASO completed - DTT penetration reaches almost 92% of total households in Sardinia

DTT vs. Digital Television Penetration in Sardinia
% of HH

Source: Makno, analysis Booz & Company
The audience share of the DTT in Sardinia grew rapidly with the ASO date approaching - in the last two months +30%

Source: Auditel, analysis Booz & Company
With Sardinia’s ASO, Interactive Services usage boosted - “Chi vuol esser milionario?” MHP application had a +300% in registration

“Who Wants to be a Millionaire?” Interactive Application
Screenshot of the MHP application during the show

<table>
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<tr>
<td>“WWTBAM?” MHP application registration boosted after Sardinia’s ASO</td>
</tr>
<tr>
<td>– 6208 new registration during the last week (Nov. 9 - 13) best record ever for a week (69% increase vs. the week before)</td>
</tr>
<tr>
<td>– 1553 registrations in one day (Nov. 10) best record ever for a day</td>
</tr>
<tr>
<td>An increasing value of +300% registration compared to the previous season</td>
</tr>
</tbody>
</table>
Analogue switch-off in Italy

Alberto Sigismondi, DGTVi
Over years, a regulatory framework set the context for the transition from analogue to digital terrestrial TV in Italy

**Foundation of AGCOM (Italian Communication Authority)**
- Introduction of Digital Terrestrial Television in the Italian regulatory framework

**Broadcast Television Systems transfer and renewal**
- Broadcasters must renew and update (at own expenses) broadcasting systems to be compliant to the electromagnetic level indicators established with Law 381/1998
- Start of the “analogue to digital” network conversion

**Opening of DTT market**
- Broadcasters operating on analogue television are allowed to transmit over DVB-T technology
- **Allowance of frequencies trading**: frequencies can only be used for DTT broadcasting
- RAI, Mediaset and Telecom Italia Media must sell 40% of their DTT bandwidth (MUXes) to third parties at fair and competitive prices

**Every broadcaster’s DTT network must cover at least 50% of the population**: broadcasters are supposed to upgrade and extend their network coverage (at own cost) if required

**RAI and Mediaset are mandated to accelerate the MUX conversion to DTT**, presenting a detailed programme to AGCOM and realizing it within 9 months after the approval

Source: AGCOM; Book “Il nuovo ordinamento delle comunicazioni” Giuffrè Ed.; Booz & Company analysis