

FINLAND – TWO YEARS AFTER THE SWITCHOVER

- **Case Studies: Different stages of ASO**
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FINLAND IS ALL DIGITAL

- Analogue switchover (ASO):
Terrestrial TV – September 2007
Cable networks – February 2008
Standard DVB-T, MPEG 2 (launch 2001!)
The 4 terrestrial digital multiplexes cover 99.9% of the population. 1 mobile TV mux.



FACTS ABOUT FINLAND

- 2.2 million TV households, terrestrial/cable 50:50
- 7% of all households – no television
- Satellite households 8% of all TV households
- PVR set-top-boxes 41% of all TV households
- PAY TV services, 28 % of all TV households
- More than one set-top-box in household, 44%
- Set-top-boxes with conditional access, 72% of all TV households
- Terrestrial PAY TV gave a boost to digitalisation



THE TWO YEARS AFTER ASO

- Viewing: 13% increase in viewing 2001-2008, specially in age group 45-64, decrease in age group 15-24
- In households having PVR, time shifting is 13% of all viewing
- How many channels people do watch? Average 5 per day and 9 per week. Analogue tv only 4 national channels – now 27 channels; 11 freeview, 16 PAY DTT
- Refuseniks? During 2007-2008 altogether 53000 households, 2.4% of all licence payers. The core group it students under 35, 22% don't have TV set. So they say!



THE TWO YEARS AFTER ASO

- Shadow areas? Only 1300 households in the terrestrial shadow.
- Problem solved by satellite antenna, subsidized by TV-companies, the cost per household only 50 euros + installation cost.
- Lack of quality criteria! Now in preparation: reliability of the delivery system (99.9-98.8%), standard of coverage (100%), the quality of tv-programs (ITU-R BT.500 Standard) etc.



NEXT STEPS. HDTV

- The Ministry of Transport and Communications is launching next year HDTV transmissions, 2 multiplexes, utilizing VHF frequencies and new standard DVB T2 + MPEG4. Network licence was submitted to DNA Oy (telco). New devices are needed – confusing?
- And still to come 1 national UHF multiplex and 1 local UHF-multiplex
- Existing DVB T channels (MPEG 2) will operate at least until the end of year 2016 or even beyond
- All licenses will expire 2016
Next steps are market driven!



NEXT STEPS? BROADBAND

- The Finnish government has outlined a plan to make high-speed (100 Megabits!) broadband connections available by the end of 2015 to nearly all permanent residences throughout the country, according to demand.
- Intermediate target: basic speed of 1 Mbps.
- Government aid would apply to the building of networks.
- The user will still procure and pay the costs of their subscriber connection. Help credit promised.



CABLE AND ASO

- Cable wanted to be part of the digital family since the launch of DTT:
- Digitalization of analogue channels release more capacity for HDTV
- All PAY TV channels already in digital form
- Must carry rule; A cable television operator is obliged to transmit programs by public service broadcaster and broadcasters with a national program license. Signal must be carried in original digital form !!



CABLE AND ASO

- The act of public broadcaster, tv-signal to everybody
- Analogue delivery old-fashioned
- PAY DTT promoted also PAY Cable!!
- Open market, 85% of all set-top-boxes for cable homes were sold by retailers
- Big discussion about "central" set-top-boxes, which were allowed in apartment houses providing that also digital signal is available in all apartments. Outcome – no big deal!



CABLE AND ASO

- Mutual cooperation around the country; information desks in the market places, competitions, as rewards thousands of set-top-boxes etc
- Cable Open weekends in cable networks, encrypted channels were open to everybody
- Validation: "Cable Ready". Next step is " Cable Ready fo HDTV" and "Terrestrial Ready for HDTV" + card pairing.
- Validation is responsibility of independent organization: Finnish Federation for Communications and Teleinformatics



CABLE AND ASO

- Not always sunshine!
- 2 months before cable ASO some cable networks were nervous – we will loose our clients.
- AfterASO – Total silence – No complaints



GOVERNMENT:STRATEGY

- DTT is more efficient in use of spectrum
- Improved picture quality and better sound
- Subtitling for the hearing-impaired
- Voice subtitling for visually-impaired
- Possibility to choose the subtitling language
- Reduction of future transmission costs
- Electronic Programme Guide (EPG)+PVR (Personal Video Recorder)



COST OF DIGITALISATION IN FINLAND

- Household purchases of set-top-boxes amounted 520 million euros
- Antenna network upgrades in older properties 130 million euros
- Investments in terrestrial transmission networks, cable television networks and the systems of television companies necessitated by the switchover 65 million euros
- (Termination of parallel analogue broadcasts reduced the cost of tv-companies by 30 million euros per year)
- Communications 2.5 million euros



COST OF DIGITALISATION IN FINLAND

- Theoretical cost per household 326 euros. Range from 50 to 600 euros.
- All digital set-top-boxes in Finland require 60 MW of power. In the cold season, the power consumed by boxes is put to use in heating.
- The net increase in a households' electric bill per set-top-box is 4 euros per year, taking into account the heating benefit.



LEARNING BY DOING FINNISH EXPERIENCE

- Roadmap to ASO must hold. Decisions taken must be kept
- Success in close collaboration with all key players
- Not too long license period for operators
- Single-card solution in PAY DTT
- PAY DTT is strong booster during the transition period
- Subsidies? If yes, decisions must be taken at the launch stage
- Task Group chaired by Ministry or Regulatory Authority, members in the group represent key players



LEARNING BY DOING

- High level advisory board is needed
- Geographical shadows. Get ready for surprises
- Surveys and more surveys: penetration rate of digital households mont by month, attitudes, device development
- Validation of set-top-boxes is definitely necessary by independent validation unit
- Quality of signal needs own standards
- Meet the nation
- The switchover to digital must be branded



LEARNING BY DOING

- Regular monthly contact to stakeholders.
- DigiTV Info – Hotline together with tv-companies and importers.
- Voluntary, non-governmental, organisations are willing to join in the project and install the set-top-boxes of elderly people.
- Remember the minorities. Also schools, hospitals and prisons.
- And finally: CONTENT IS THE KING!



THANK YOU

- DTT Helpdesk is an initiative to bring information from the Nordic DTT and other successful DTT operations to EU members and other countries.
- www.dtthelpdesk.tv

