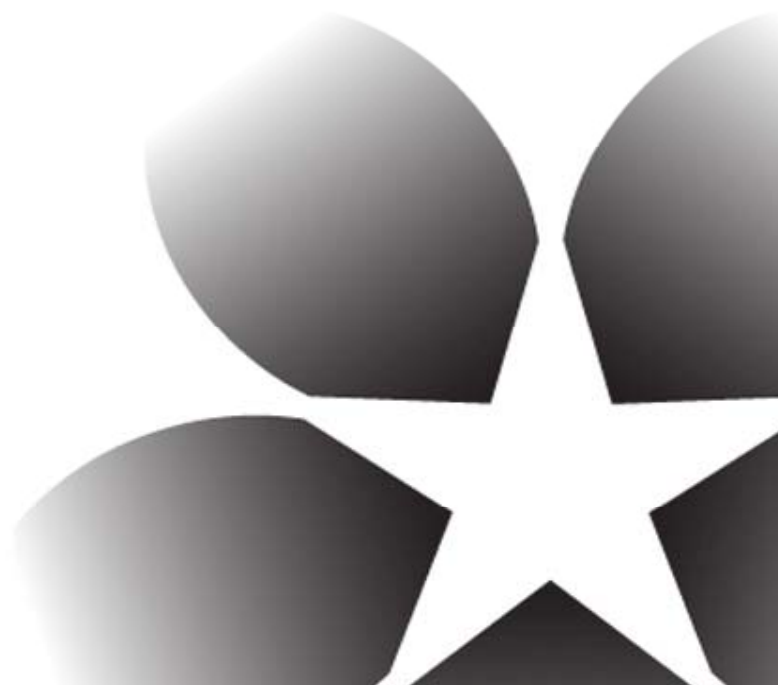


Digital Dividend and the Migration to Mpeg4/HDTV

The Swedish Case

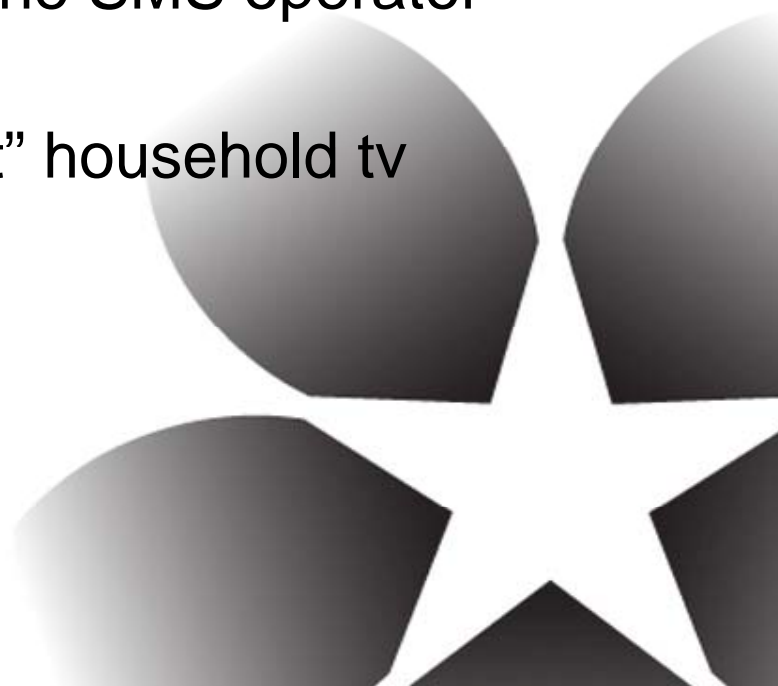
EBU, 3 June 2008

Jan-Olof Gurinder
Head of Distribution, SVT



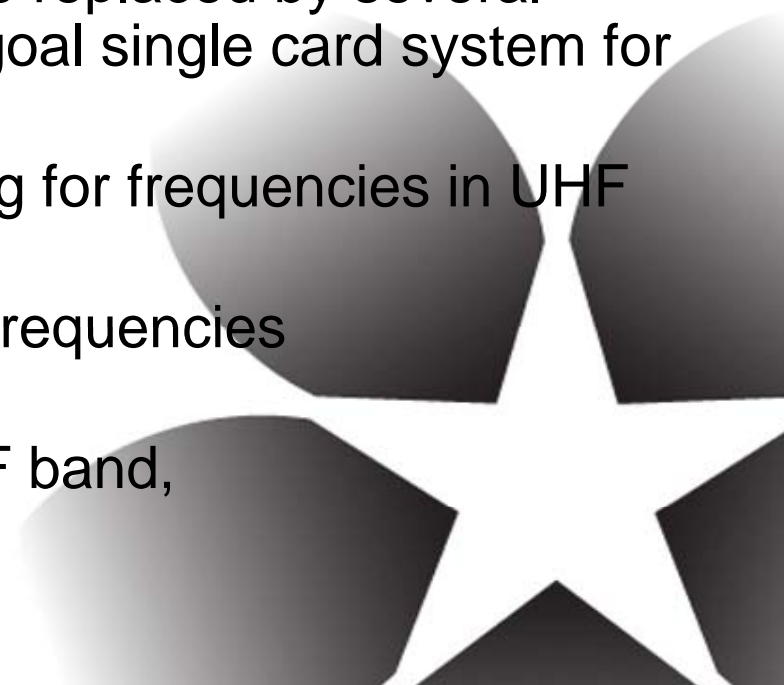
Prerequisites

- Analogue/digital switchover completed in October 2007
- Original analogue services – SVT1 (VHF), SVT2 and TV4 (UHF)
- Today five national muxes + one regional with SVT HD
- One net distributor (state owned), one SMS operator (subsidiary)
- DTT covers 25 % of market on "first" household tv
- DTT has led to pay tv market



Prerequisites 2

- Historically: All broadcasting licenses granted by government
- 2008: Radio & Television board (RTVV) grants licenses with exception for Public Service. License length 6 years
- No auction - Government allocates frequencies and the regulator PTS issues frequency licenses
- The SMS operator monopoly is to be replaced by several competing SMS operators with the goal single card system for CA
- Telecom industry has and is lobbying for frequencies in UHF band
- At WRC 07 government advocated frequencies for telecom in UHF band
- GE 06 gave at least 7 muxes in UHF band, 1 mux in VHF band



Prerequisites 3

- The EU definition leads to digital dividend (DD) of 6 ½ muxes for Sweden
- For SVT and other broadcasters DD is the remaining frequencies after media policy decisions
- SVT finds HDTV on DTT (Mpeg4) desirable
- Commercial broadcasters advocates more SD channels and HD channels
- Essential that DTT 's technical development equals satellite and cable
- Very fast expansion on HD Ready flat screens in Sweden (1 million 2007)
- DVB-H tests have been done but are not prioritized
- Mpeg4 STB's may take market shares for SDTV services

Demands from Broadcasters

- Allocation of the whole UHF band to broadcast services until 2014
- Offering migration to Mpeg4
- A possible transition to DVB T2
- Possibility to reallocate digital dividend 2015 onwards (2:nd DD)
- Proposal compatible with EU Commission, GE 06 and WRC 07



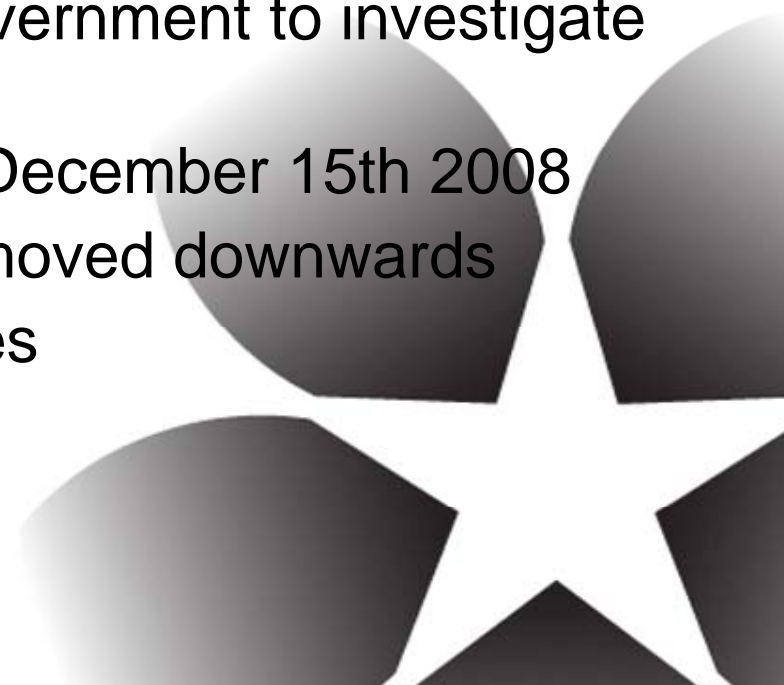
Decisions by government 2007-12-19^{svt*}

- Frequencies above 790 MHz not to be used for broadcast
- Minimum of 6 muxes on frequencies below 790 MHz until Q2 2014
- Opening of VHF mux
- Possibility for white spots solutions



Results...

- Broadcasters accepts - government decision 19th December
- No compelling decision from government on migration to Mpeg4
- But this is anticipated within new frequencies and in long run all frequencies
- Regulator PTS commissioned by government to investigate and coordinate frequency conditions
- Report to government no later than December 15th 2008
- Transmitters above 790 MHz to be moved downwards
- Coordination with neighbour countries within GE 06 frame
- Application of WRC 07

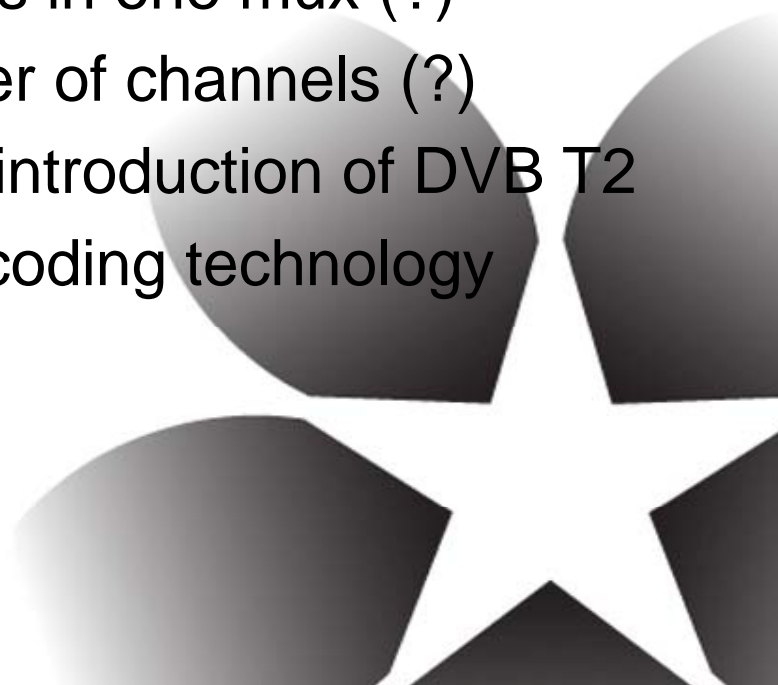


What's happened after government frequency decisions

- Broadcasters has agreed on the demands to be placed on SMS operations and SMS operators
- RTVV has granted broadcast licenses for muxes 2-6 for the period March 2008 to March 2014. Mux 6 to be in Mpeg4. Migration to Mpeg4 also expected on muxes 2-5
- Mux 1; SVT migration depends on parliament decision spring 2009
- Mux 6 planned to be operational January 2009
- PTS report on frequency coordination in December 2008. New services in the 800 MHz band at the earliest in 2009
- RTVV will evaluate demands on Mpeg4 in muxes 2-5 in Q1 2009
- RTVV has declared that VHF MUX is to be used for HD.

What's next for SVT

- Allocate space for HD channel
In short term on regional UHF and long term on VHF
- Financing of increased capacity
- Other Mpeg4 services
- Long term planning for all services in one mux (?)
- Consideration on reducing number of channels (?)
- Evaluation of pros and cons with introduction of DVB T2
- Increase frequency efficiency – encoding technology



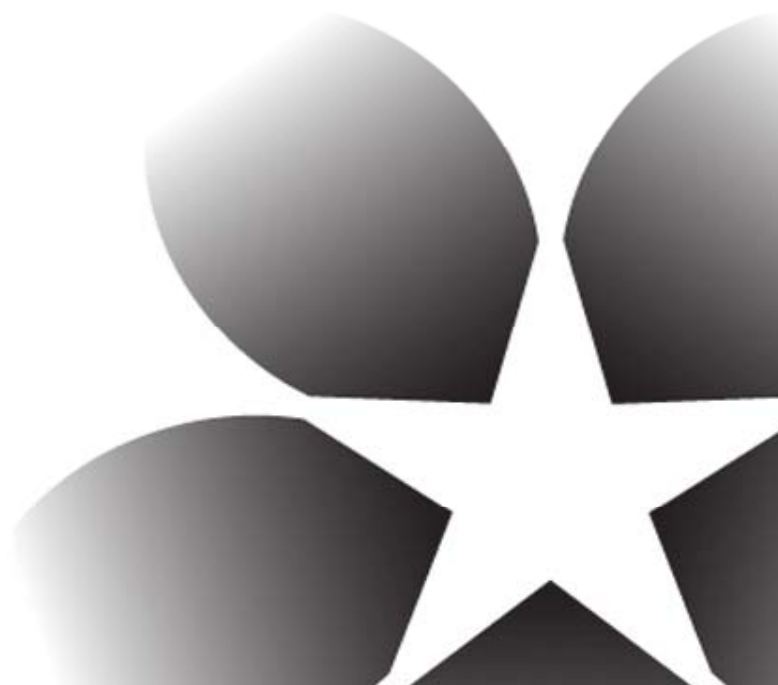
Consequences...

- Government view on the process within EU
- No more frequencies for other services before 2015
- Continued focus on national right to decision making
- Emphasis on media policy decisions on digital dividend
- Broadcasters increased their share of the digital dividend
- Broadcasters not negative to other use of DD after 2014
- Modernization of DTT
- Important driver for home electronics market
- Dialogue with telecom industry on other services



Conclusions

- Not a total victory but...
- ...broadcasters influenced government decision and...
- ...for once broadcasters joined forces...
- ...in a pragmatic view and handling of decisive issues!

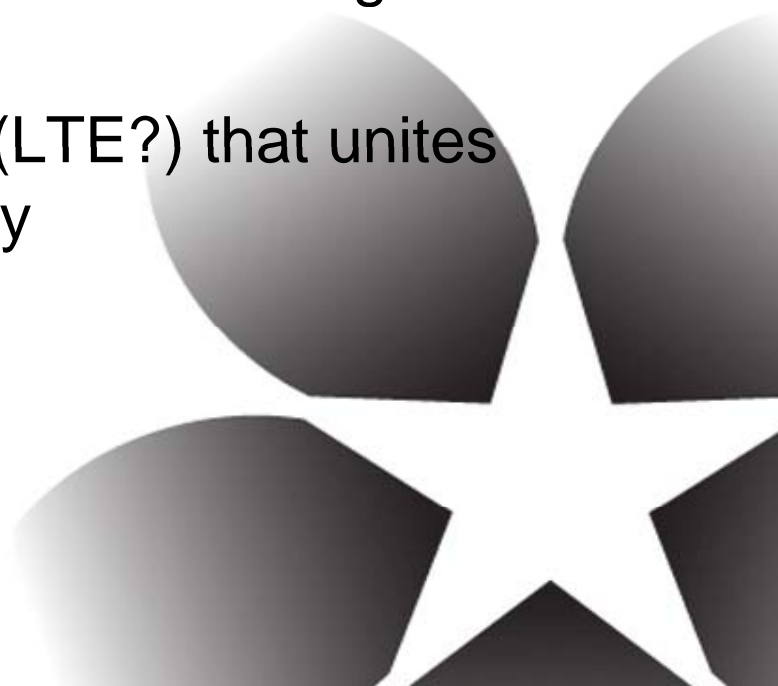


Problems ahead

- DTT is a highly mature market after DSO
- Competition between operators on DTT can weaken a dedicated commercial commitment to Mpeg4 migration
- RTVV's choice on programme services in mux 6 not commercial enough to enforce a migration to Mpeg4
- Teracom is to be sold to private interests
- SVT's role in migration not clear – to be defined Q2 2009
- Aggressive expansion of IPTV (for example Telia-Sonera)
- Teracom becoming a IPTV operator as well as DTT operator
- DTT not the dominating distribution platform
- Telecom industry aims for bands below 790 MHz

Challenges ahead

- What TV related services will develop on DTT?
- Is there a big enough commercial driving force for DDSO?
- Need to carry out a Mpeg4 migration and a switchover to DVT-2 to guarantee a strong position on 2:nd generation DD
- Introduction of new technologies (LTE?) that unites broadcasters and telecom industry



Thank you!

