The transition to Digital Terrestrial TV and utilisation of the digital dividend in Europe

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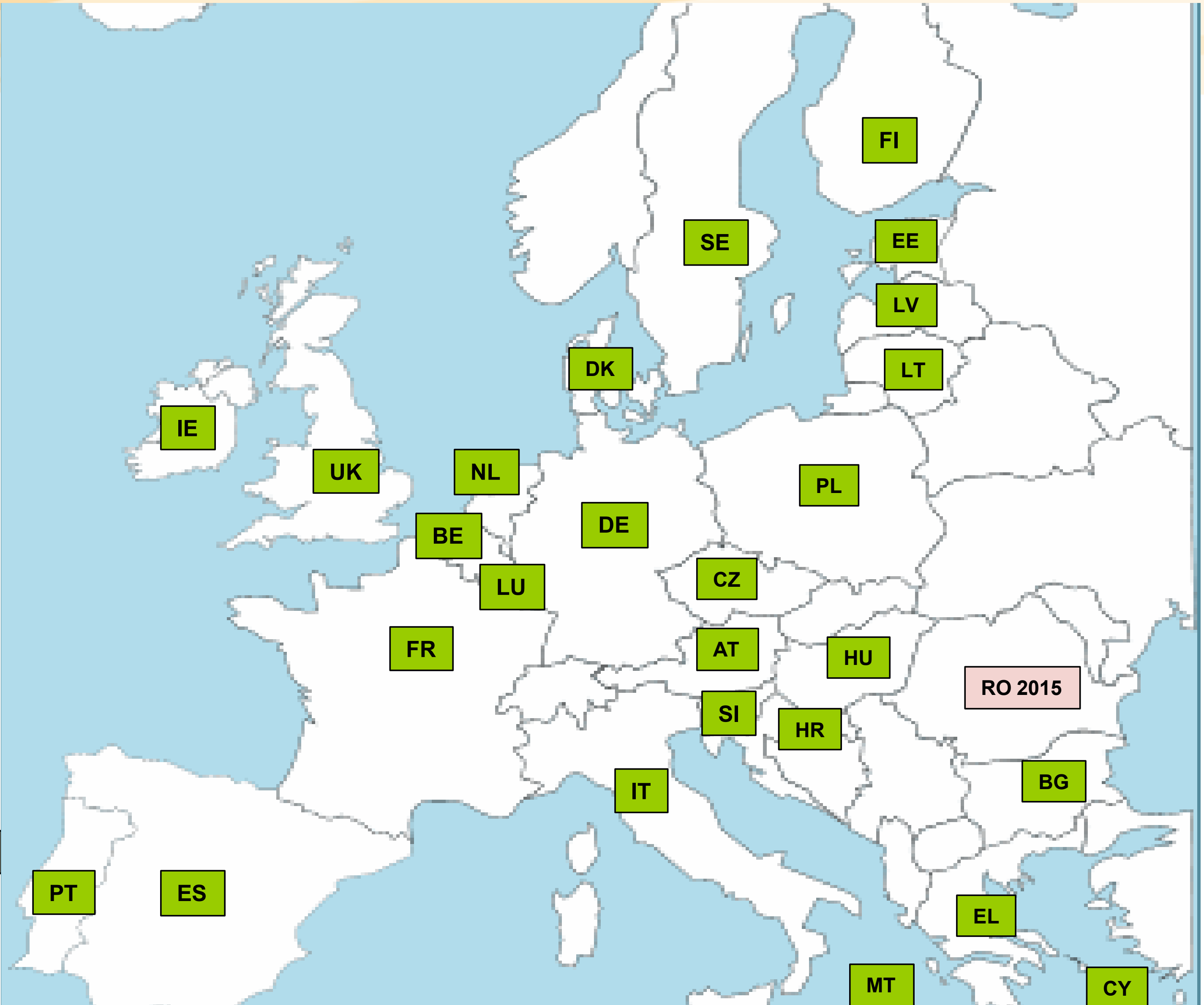
** Disclaimer: the views expressed are those of the author and cannot be regarded as stating an official position of the European Commission.*

Switch-off of analogue terrestrial TV in the EU



SUMMARY

27 EU countries already switched-off

- **RO in 2015**

Legend

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Early Digital Switchover Documents

- Commission Communication in 2002
  - EU Member States asked to define their digital transition plans by end 2003 (part of the eEurope Action Plan)

- Commission Communication on switchover (May 2005)
  - Key proposal: Deadline of 1 January 2012 for switch-off of analogue terrestrial TV in the European Union

Success factors for Switchover in Europe

- Process should be driven by market demand
- Clear benefits (Digital TV and Digital Dividend) and strategy for their achievement
- Clear timetable of stages
- Spectrum planning
- Cross-border spectrum coordination
- Consumer awareness campaign

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What consumers should know

- Switch on / switch off dates
- Fixed / portable / mobile reception
- Antenna requirements (none/room/roof)
- Geographical dimension of the above
- Channelling tables
- Pay TV information
- Additional services (wide-screen/HDTV, interactive TV)
- Available programming information for recording
- List of capable reception equipment with indicative prices
- Accessibility services: e.g. subtitles, sign language, EPG
- Information on all transmission networks: e.g. terrestrial, cable, satellite, DSL

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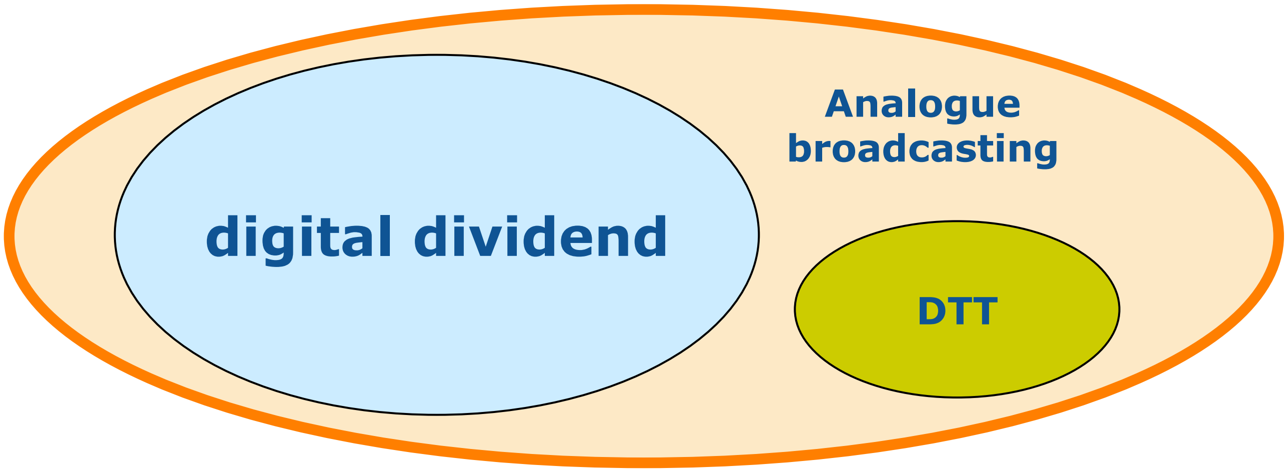
Financing the Upgrade

- Careful analysis of all costs and benefits required
- Multi-platform approach to coverage may reflect market dynamics and contribute to transmission cost savings
- Funding examples in Europe:
  - EU structural funds were used to increase coverage
  - Subsidies examined case by case under EU competition and state aid rules. In certain cases Set Top Boxes were subsidised.

Switchover has created the digital dividend (DD): spectrum freed by the transition to digital terrestrial television (DTT)



(size of spectrum needs not to scale….)

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Implementing the DD strategy: Basic political decisions on the DD

- **EU Recommendation on the DD:**
  - ***2009 Recommendation European Commission***:
    > **Completion of SWO by 2012** recommended
    > Member States to support regulatory efforts towards harmonised usage conditions for the 790-862 MHz sub band

- **Outlining the roadmap:**
  - ***2009 Communication by the European Commission:***
    > start **harmonisation of usage conditions of 800MHz band**
    > proposes **future measure to cease using the 800 MHz band for high-power broadcasting services**
    > calls for **efficient spectrum use** (investigating benefits of TV compression techniques, the use of DVB-T2, SFN; promoting better receiver interference immunity performance)
    > need to ensure spectrum availability for **PMSE** equipment

Implementing the DD strategy: Making the DD available

- **Defining common usage parameters for the 800 MHz:**
  - *2010: Harmonisation Decision for the 800 MHz:*

    > based on mandated CEPT technical study and report

    > **binding usage conditions *once 800 MHz band is made available*** *for Wireless Broadband (WBB)* at national level:

    * prevents fragmentation, while preserving "phase-in" approach

    * coexistence broadcasting/WBB across borders in EU: need for coordination

    > timing of **opening of the 800 MHz band not mandatory**
- **Setting the timeframe:**
  - *2012 Radio Spectrum Policy Programme (EU Decision), art. 6(4)*

    > **deadline 1/1/2013**: Member States shall carry out the **800 MHz band authorisation processes**.

    > **derogation possible until end 2015** when encountering "exceptional national or local circumstances" or when cross-border coordination prevents the availability of the band.

    > after 2015, annual derogation may be granted if coordination problems persist

    > derogations are granted by Commission Decision (procedure specified in the Radio Spectrum Decision specifying harmonisation procedures)

Lessons learned

- **Early agreement on a reference timeframe for Switchover is key**
  > realistic compromise, acceptable for early movers and latecomers
- **Countries supporting the DD strategy should be given the option of "gradually gearing in":**
  > clear announcement of commitments / timetable
  > safeguard / derogation procedures (no opt out option, clear rules)
- **DD debate should not be dominated by interests of specific sector**
  > process should involve all relevant sectors on the basis of common objectives: look for win-win situation, equitable repartition of financing changes, etc.
- **Careful choice of spectrum planning frame amongst supporting countries:**
  > coordination mechanisms amongst involved countries needed
  > coordination with third countries or at regional level to be taken into account
- **Derogation mechanism is unsatisfactory**: substantial delays in assignments in the 800 MHz band

Record of SWO: devices in use

- **Set-top boxes**
  played a role in early consumer transition,
  loosing importance as analogue TV receivers were naturally replaced
  price: typically 20-50 €

- **Integrated TV receivers**
  new TV sets now offer integrated DTT receivers (DVB-T2 (and HEVC) increasingly important).

- **Digital recorders**
  "successor" generation to STBs or included in TV set →
  HD + software to support recording
  twin tuners (watching / recording)

- **Integrated OTT modems**
  supporting combined DTT / OTT reception
  with EPG, catch-up TV etc.

The outlook

DTT technology and service evolution

- **Improvement of service under DTT: (U)HD, HEVC and DVB-T2**
  Important to decide early on number of channels vs. broadband capacity, what technology to use and give clear signals to consumers and industry.

- **DTT services vs. WBB service evolution**
  Changing content consumption mode (non-linear, Internet content), but only slowly.

- **Convergence**
  Convergence of services is happening. Broadcasting (DTT/Sat/cable) is complemented in the same device by broadband connectivity.

  Convergence of distribution networks less certain.

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Thank you for your attention !

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