

The Digital Dividend - an EU perspective -

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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.*



Overview

1. Definition of the digital dividend
 2. The transition towards digital broadcasting
 3. Approach to the allocation of the digital dividend
 4. Commission proposal for an EU approach
 5. State of play
 6. Next steps
 7. Conclusions
- references



Driving momentum towards digital broadcasting

- ❑ **improving the quality of broadcasting:**
 - > picture quality,
 - > more channels
 - > interactivity

- ❑ **technically efficient spectrum usage:**
 - > digital transmission uses less spectrum than analogue transmission per transmitted programme
 - > spectrum becomes available



Involvement of the Commission

- ❑ **digitalisation of broadcasting:**
 - > setting out likely target date for transition completion: 2012
 - > Member States submitting action plans for the transition

- ❑ **RRC-04, RRC-06:**
 - > call for flexibility of usage when planning broadcasting bands

- ❑ **WRC-07**
 - > proposal for changing allocation of UHF band

- ❑ **digital dividend:**
 - > Opinions by the Radio Spectrum Policy Group (RSPG)
 - > Communication on the digital dividend



Current status of transition towards digital broadcasting



SUMMARY

5 EU countries already switched-off

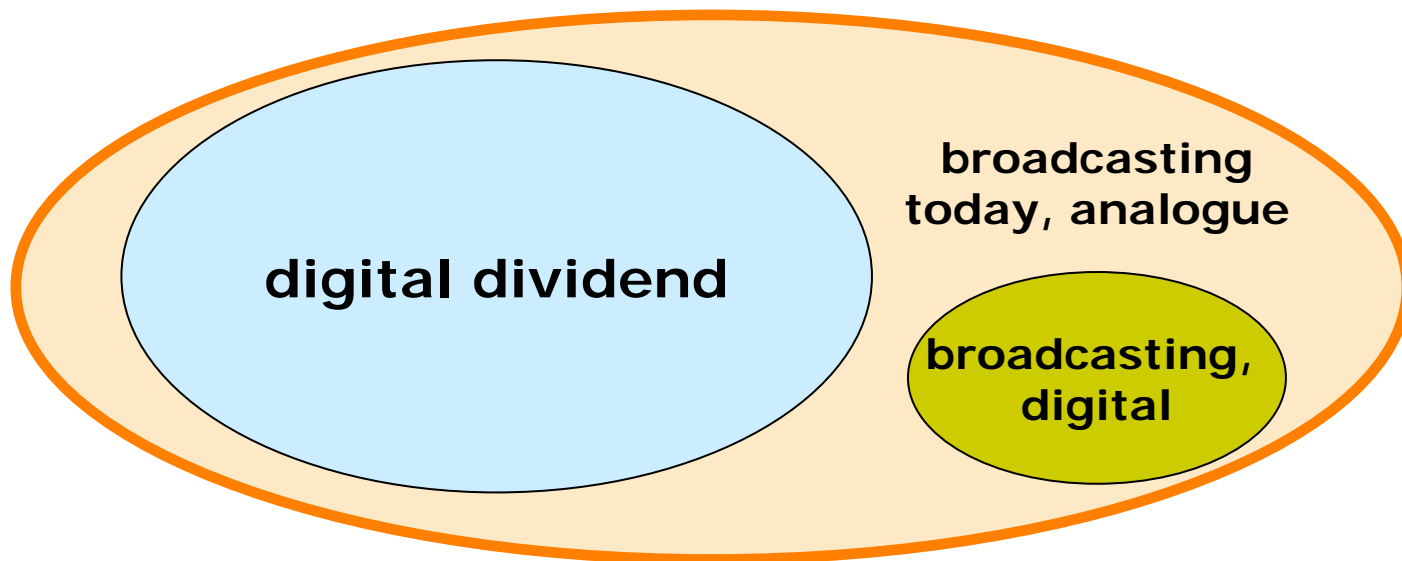
- 6 more by 2010
- 14 more by 2012
- PL later
- IE no decision yet

Legend

- Switched off
- Switch-off by end 2010 or earlier
- Switch-off By 2012 or earlier

The digital dividend: a reality

- ❑ „fresh“ spectrum freed by the transition to digital broadcasting transmission
- ❑ Quality of spectrum : propagation, transmission capacity
- ❑ definition of the digital dividend:



- ❑ Unique opportunity to meet the challenge of an increased demand for spectrum.

How much spectrum does the digital dividend represent ?

- ❑ With today's technology (DVB-T, MPEG-2):
 - 0 → 100 → 200 MHz (according to Member State)
 - „White spaces“: locally unused spectrum

- ❑ Expected technical developments:
 - Increased efficiency of usage by broadcasting (compression techniques, coding, SFN,... DVB-T2)
 - Digital dividend is bound to grow



Approach to the allocation of the digital dividend

Key issues to take into account:

- Anticipated demand for usages
- Electronic communications are evolving
- Technical constraints
- Coordination at EU level
- Reform of spectrum management



Approach to the allocation of the digital dividend (1)

Demand for usages and their „efficiency“

- ❑ **broadcasting**
 - > maintain current offer
(incl. ancillary usages such as wireless microphones)
 - > enable development: increase service offer, quality
- ❑ **wireless broadband access**
 - > *ubiquitous* broadband access
 - > *mobile* wireless access
 - > overcoming the *digital divide*
 - > ICT and broadband: Lisbon goals, economic revival initiative
- ❑ **public services**
 - > security, civil protection
- ❑ **unlicensed usages**
(general authorisation of spectrum usage)
 - > innovation, technical usage efficiency
 - > new applications (RFID, health, etc.)



Approach to the allocation of the digital dividend (2)

Electronic communications are evolving:

- ❑ **digitalisation spurs convergence:**
 - > towards the end of the traditional link networks / services
 - > example: “definition of broadcasting” (content / transmission)
 - > new services formats:
 - multi-media transmission, interactivity, peer-to-peer, on-demand, etc.

- ❑ **“mobile society”**
 - > wireless access: fixed → nomadic → mobile

- ❑ **The internet as lifeline for information**
 - > internet services
 - > information / culture through the internet
 - > Web 2.0
 - > Internet of things



Approach to the allocation of the digital dividend (3)

Technical constraints:

- ❑ **interference** due to the coexistence of different networks
- ❑ **Technically efficient usage** of scarce resource
 - > guard bands to separate neighbouring networks
 - balance between planning and liberalisation of spectrum ?
 - > shared usage of spectrum where possible



Approach to the allocation of the digital dividend (4)

Coordination at EU level:

- ❑ UHF band so far:
 - > traditional planning from a broadcasting / national perspective, taking international coordination into account
 - > RRC-06: plan GE-06 + “flexibility” (largely untested)
 - > no demand analysis taking non-broadcasting applications into account
 - > WRC-07: Band 790-862 MHz co-primary status for “mobile communications” as of 2015 (or earlier)
- ❑ national planning
 - > coordination with geographical neighbours required
 - > non-coherent applicability of WRC-07 results
 - > broadcasting: national / local audiences
- ❑ synergy advantages of EU-wide equipment and service markets



Approach to the allocation of the digital dividend (5)

Reform of spectrum management and policy:

- ❑ **review of the regulatory framework**
 - > spectrum in the core of the debate
- ❑ **flexibility of spectrum usage („WAPECS“)**
 - > technology/ service neutrality
 - > spectrum user decides about usage
 - > justified exceptions possible for services of general interest (broadcasting)
- ❑ **a simplified access to radio resources:**
 - > secondary trading of spectrum
 - > unlicensed use of spectrum
- ❑ **a better coordination at EU level**



Approach to the allocation of the digital dividend (6)

Conclusions for approach to digital dividend:

- ❑ **Create conditions for a flexible usage:**
 - > neutral, future proof band planning as far as possible
 - > users to decide on usage
 - > prevent interference
 - > technically efficient usage of scarce resource
- ❑ **Services of general interest (e.g. broadcasting)**
 - > possibility to designate spectrum
 - > justification ! (a national decision, but proportionate, transparent, objective)
- ❑ **EU coordination**
 - > common objectives through consensus of member states
 - > national decisions over the digital dividend, hence national flexibility in an EU setting must be preserved



Communication on the digital dividend (1)

- ❑ **identification of expected main usages:**
 - > focus on broadcasting / wireless broadband / multimedia mobile services

- ❑ **call for a coordinated approach at EU-level**
 - > overcoming the present fragmentation,
 - > make use of GE-06 permitted flexibility
 - > creation of EU-wide market opportunities through the reinforcement of the internal market, interoperability, capitalisation on innovation potential

Communication on the digital dividend (2)

- ❑ „clustering“ of band by network types (not services):
 - > initial cluster proposal (evolved since):
 - * unidirectional high power networks
 - * unidirectional low to medium power networks
 - * bidirectional low power networks
 - > initially: no specification of cluster *location* nor *size*
 - > WRC-07 re allocation decision of the 790-862 MHz band

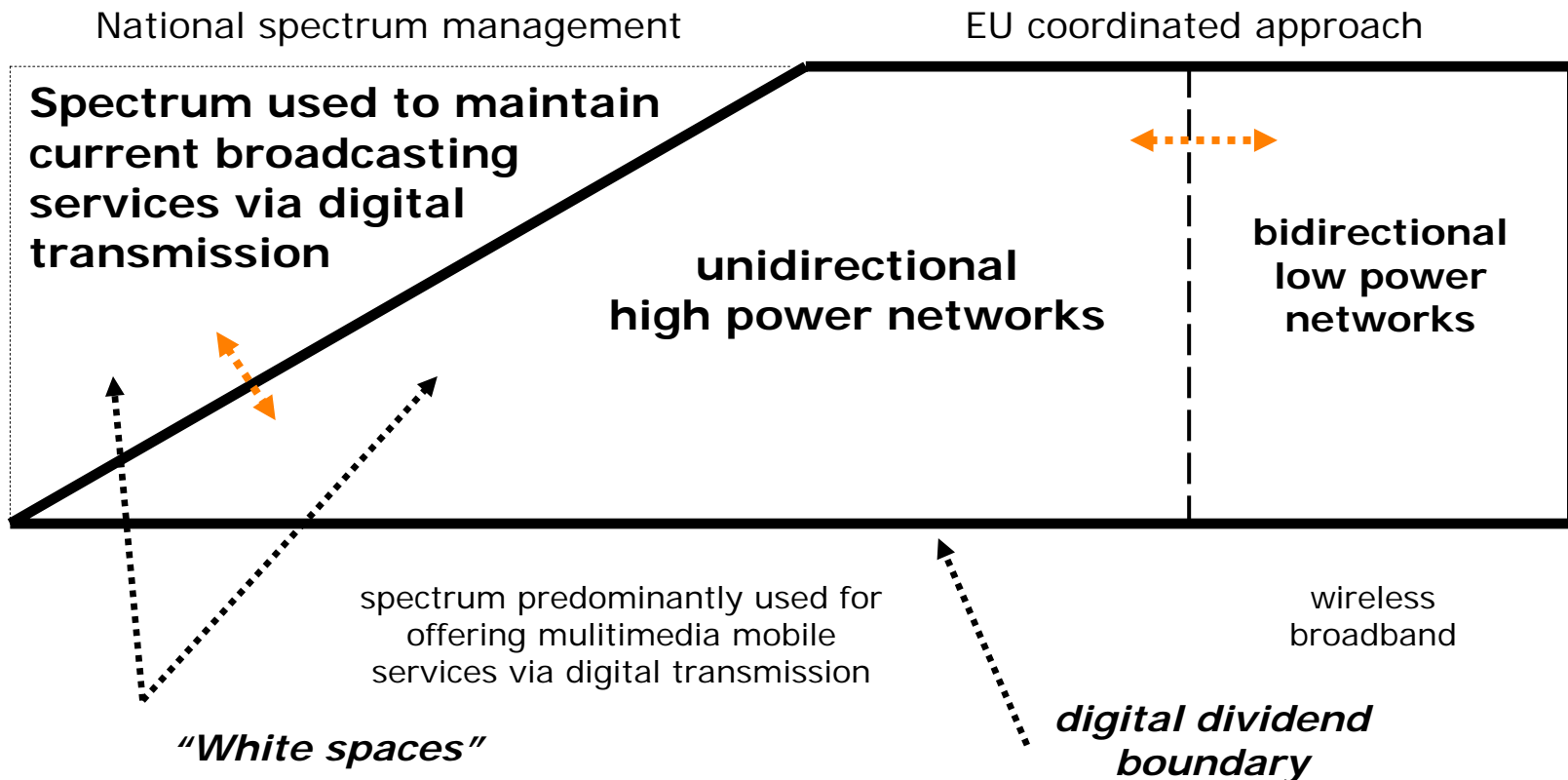
- ❑ **proposal for a „flexible coordination“:**
 - > national management of spectrum in combination with EU coordination of the usage made of the flexibility allowed in the band.
 - > GE-06 applies as reference frame !

- ❑ **gradual implementation** of new organisation of the UHF band



Communication on the digital dividend (3)

Proposed approach to the digital dividend (schematic representation)



current status (1)

Council Conclusions (10/6/08):

- ❑ support for general approach
- ❑ EU *coordination* supported, but keeping national *decisions* no binding EU measures
- ❑ study of options for band arrangement requests (results expected for 2008)

Report of the European Parliament (25/9/08):

- ❑ support for general approach, digital dividend estimated to 100 MHz
- ❑ supporting a strong EU coordination, based on national strategies
- ❑ requests a „win-win“ strategy (balance of general interest objectives (broadcasting, social services) against targets to promote wireless communications (broadband access, overcoming the digital divide)
- ❑ recognises spectrum needs for PPDR applications; for more unlicensed bands; etc.
- ❑ requests a Commission proposal by 2009



current status (2)

CEPT (2006-2009): technical studies (EU Mandates)

- ❑ **„Clustering“ concept validated:**
 - > Report A: coexistence of unidirectional networks
 - > Report B: coexistence of uni / bi-directional networks;
 - > confirmation: „WAPECS“ approach for cluster for bi-directional networks.
 - > Report C: „white spaces“

- ❑ **new mandate (on-going):**
 - > flexible band plan for „WRC-band“ (790-862 MHz), „WAPECS“ compatible
 - > results: 2009



current status (3)

Spectrum for wireless broadband and the digital dividend

- ❑ WRC-07 follow-up: Increasing number of Member States work towards opening the 790-862 MHz band for wireless broadband: DE, F, K, SUE, FIN
- ❑ Broadband strategies in several MSs refer to spectrum in the UHF band.
- ❑ Some Member States considering making available several bands together for wireless broadband:
 - > 2,6 GHz (new)
 - > 900/1800 MHz (opening up)
 - > 2.1GHz (unused UMTS spectrum)
 - > parts of the digital dividend (the present discussion)



next steps (1)

definition of a common “roadmap”

- ❑ Preparation of the roadmap
 - > possible scenarios and impact analysis
 - > transparent public discussion
 - > close association of Member States (RSPG)

scope of the “roadmap”

- ❑ orientation frame for Member States:
 - > definition of clusters,
 - > implementation targets
 - > timing
 - > allowed national exemptions to the roadmap
- ❑ basis for subsequent harmonisation measures ()
 - > technical implementing measures, where necessary (procedure: Radio Spectrum Decision)

validation of the “roadmap”

- ❑ Commission proposal to the European Parliament and to Council
- ❑ Inter-institutional adoption of the roadmap



next steps (2)

Study to assist in developing the roadmap

(on-going)

- ❑ **stock-taking** of the situation in the Member States
- ❑ **socio-economic analysis** of the impact of the different usages of the digital dividend
 - > societal, cultural, economic aspects
- ❑ analysis of **external constraints**
 - > technical feasibility (referring to CEPT studies)
 - > impact of anticipated technical development
- ❑ **development of roadmap options** and their scripts, incl. cost / benefit assessment
- ❑ **recommendation for a road map**



next steps (3)

Important milestones

- ❑ **stakeholder hearings: 6 March 2009**
- ❑ **Member States consultation (via RSPG): 1 April 2009 (t.b.c.)**
- ❑ **First RSPG position paper (input to roadmap development):**
RSGP#19, 13 May 2009
- ❑ **study draft results: June 2009**
- ❑ **ad hoc RSPG meeting on DD: September 2009 (t.b.c.)**
- ❑ **RSPG Opinion: November 2009**
- ❑ **Commission proposal road map:**
preliminary version fall 2009 (t.b.c.);
final proposal end 2009



Conclusions

- ❑ Member States to recognise **digital dividend as unique opportunity**
- ❑ **potential win-win situation for many users and usages**, provided careful and early planning is applied
- ❑ **flexible usage** as guiding target:
 - > be bold in overcoming traditional “appropriations” of UHF
 - > future proof approach required
- ❑ **complex situation in the EU**: Fragmentation, “legacy usage”, different situations and needs in Member States
- ❑ yet: recognise **added value of a coordinated EU approach**
- ❑ **gradual implementation**, but do not lose time !
- ❑ **political challenge**: Lisbon objectives / competitiveness objective for the EC / innovation potential



Thank you for your attention !

references:

- **general information "eCommunications"**
(reference documents (review, 13.Implementation report,etc.; on-going activities etc.)
http://ec.europa.eu/information_society/policy/ecom/index_en.htm
- **Spectrum policy**
(reference documents , on-going activities etc.)
http://ec.europa.eu/information_society/policy/radio_spectrum/index_en.htm
- **European Regulators Group – (ERG)**
<http://www.erg.eu.int>
- **Radio Spectrum Policy Group - (RSPG)**
(reference documents RSPG, on-going activities etc.;)
<http://rspg.groups.eu.int>
- **Radio Spectrum Committee - (RSC)**
(reference documents RSC, on-going activities)
http://ec.europa.eu/information_society/policy/radio_spectrum/activities/rsc_work/index_en.htm
- **Digital Dividend Study**
http://www.analysismason.com/EC_digital_dividend_study

