



The Digital Dividend

Case Study Germany

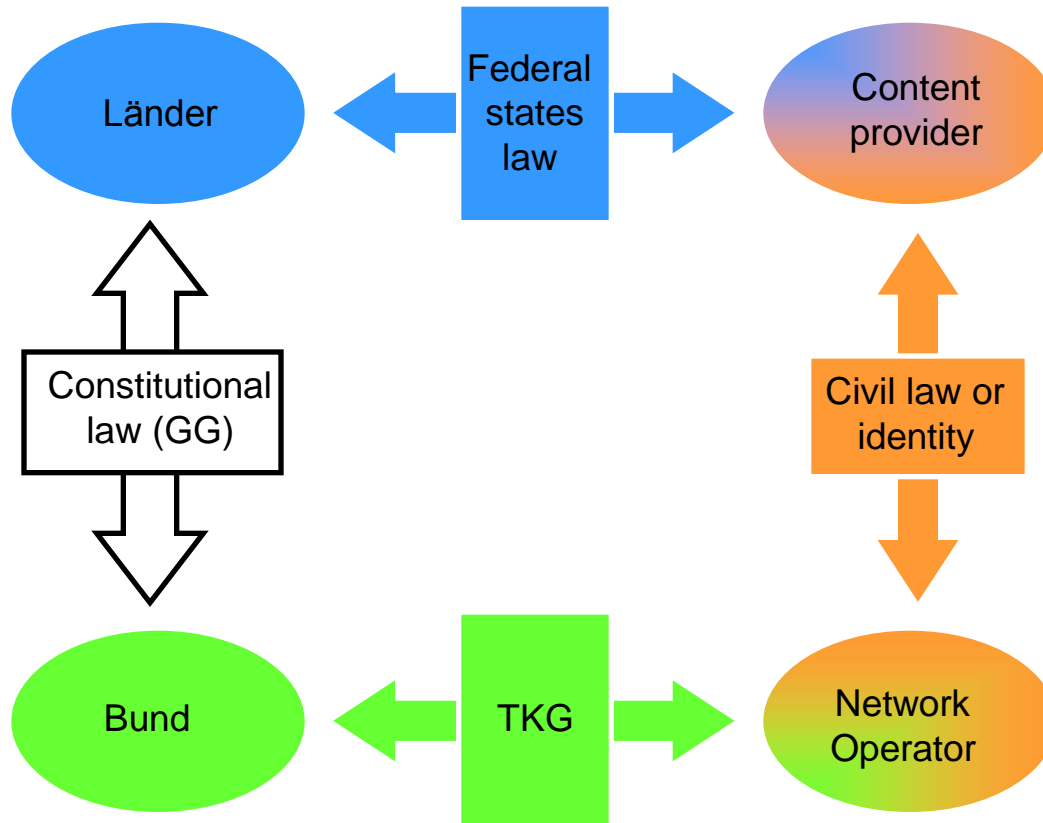
NTRA-Conference, Sharm El-Sheik



Agenda

- Regulatory responsibilities in Germany
- What is the digital dividend
- The Auction procedure

Regulatory responsibilities (1)





Regulatory responsibilities (2)

BNetzA is responsible for frequency management:

- Frequencies are assigned for one-to-many transmissions which may include broadcasting under responsibility of the Federal States and other content
- Frequencies allocated to the broadcasting service may be used only for purposes other than broadcasting if the demands of the Federal States' Authorities for capacity for broadcast transmissions are satisfied



Regulatory responsibilities (3)

Content

- a) Broadcast transmissions under responsibility of the Federal States: capacity management by the media regulator
- b) Non-broadcast transmissions: assignment holder sells capacity without further regulation



Digital Switch-over Process in Germany

- implementation of DTT started on 1 Nov. 2002 in the Berlin region
- phased approach, region by region
- large urban areas with high population density first
- finalised at the end of 2008



What is the Digital dividend ?

Definition (EU Commission)

The digital dividend can be described as the spectrum over and above the frequencies required to support existing broadcasting services in a fully digital environment, including current public service obligations

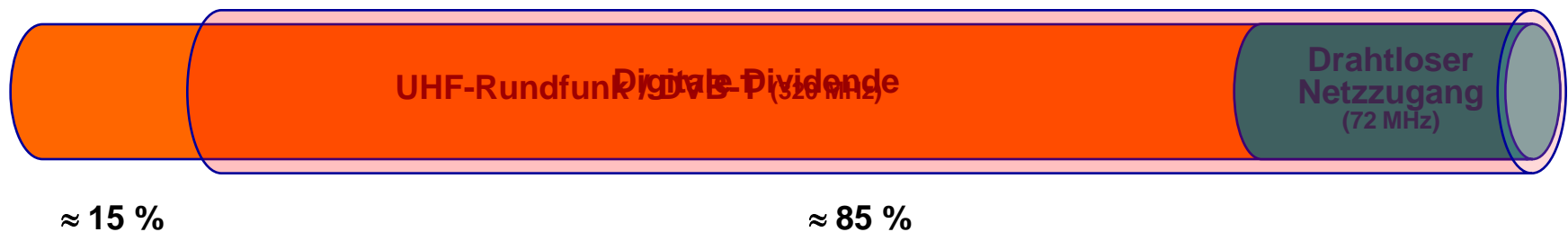


What is the Digital Dividend?

Three alternatives proposed for use of the digital dividend (RSPG 04-55 final):

- Increase the number of programmes
- Deliver services with higher technical quality (eg HDTV) or to portable and mobile receivers
- Enable electronic communication services other than broadcasting.

Frequency band 470-862 MHz

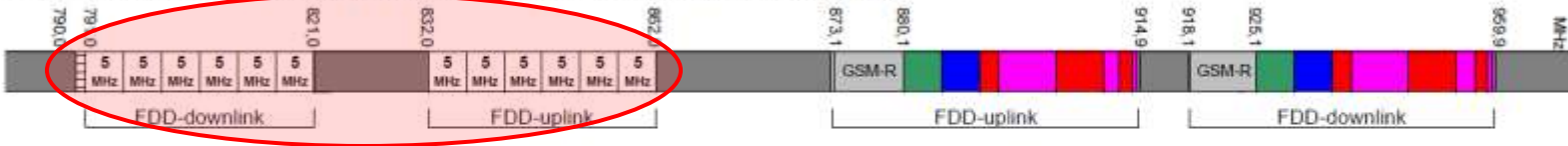




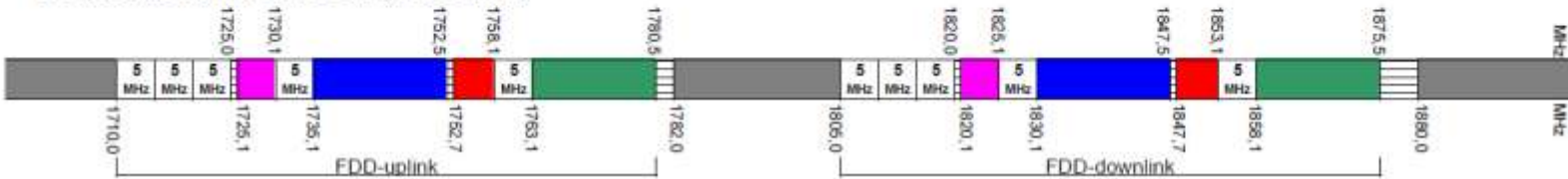
The Spectrum Auction

☐ Schutzkanäle ☐ verfügbares Spektrum 🌈 bereits zugeteiltes Spektrum

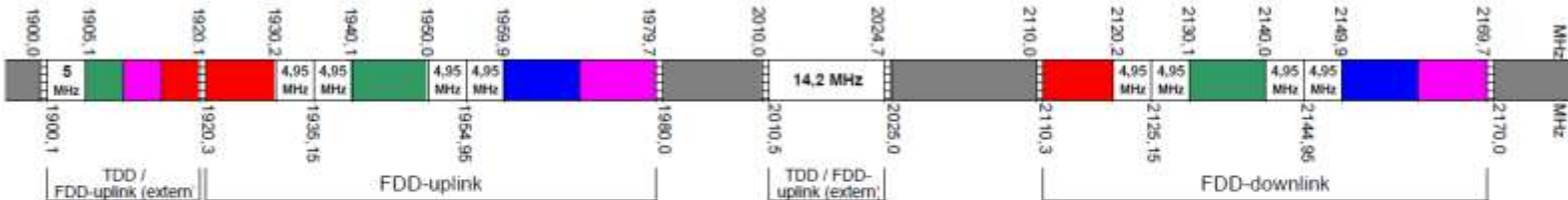
> Frequenzbereich bei 800 / 900 MHz (2 x 30 MHz bei gepaartem Spektrum)



> Frequenzbereich bei 1,8 GHz (2 x 25 MHz)



> Frequenzbereich bei 2 GHz (2 x 19,8 MHz und 19,2 MHz)



> Frequenzbereich bei 2,6 GHz (2 x 70 MHz und 50 MHz)





The spectrum auction in 2010

- The President's Chamber decided to combine proceedings to award spectrum in the bands 790 to 862 MHz, 1710 to 1725 MHz and 1805 to 1820 MHz with proceedings to award spectrum in the bands 1.8 GHz, 2 GHz and 2.6 GHz for wireless access for the provision of telecommunications services (service neutral)

⇒ Reasons: - speed-up the proceedings
- more flexibility for the bidders



Frequency usage conditions § 61(4) No.4

- There are no restrictions as regards the technologies that may be used. Every available technology can be deployed in observance of the usage provisions.
- Assignees may diverge from these conditions if they have made mutual arrangements and divergence is without detriment to the frequency usage rights of third parties. The Federal Network Agency must be informed in writing beforehand



Coverage obligations § 61(4) No.4

- An assignee using spectrum in the band at 800 MHz is obliged to achieve, in every federal state, a degree of coverage of at least 90% of the population in the towns and districts specified by the individual federal states as from 1 January 2016.
- Coverage has to be fulfilled in stages



Actual Bids (19 April 04:00 p.m.)

Auktionsrundenergebnis					Höchstbieter und Höchstgebote in der Runde: 44				
Frequenzauktion (0,8 GHz; 1,8 GHz; 2,0 GHz; 2,6 GHz)									
Frequenzbereich	Block	Ausstattung	Höchstbieter	Höchstgebot (€ in Tsd)	Frequenzbereich	Block	Ausstattung	Höchstbieter	Höchstgebot (€ in Tsd)
0,8 GHz (gepaart)	0,8 GHz A	2x5 MHz konkret	To2 GER	21.578	2,6 GHz (gepaart)	2,6 GHz A	2x5 MHz abstrakt	E-Plus Grp	3.829
	0,8 GHz B	2x5 MHz abstrakt	To2 GER	23.031		2,6 GHz B	2x5 MHz abstrakt	Telekom D	4.387
	0,8 GHz C	2x5 MHz abstrakt	Telekom D	23.553		2,6 GHz C	2x5 MHz abstrakt	Vodafone	3.831
	0,8 GHz D	2x5 MHz abstrakt	Telekom D	23.553		2,6 GHz D	2x5 MHz abstrakt	Vodafone	3.831
	0,8 GHz E	2x5 MHz abstrakt	Vodafone	23.458		2,6 GHz E	2x5 MHz abstrakt	Telekom D	4.371
	0,8 GHz F	2x5 MHz abstrakt	Vodafone	23.458		2,6 GHz F	2x5 MHz abstrakt	Telekom D	4.387
1,8 GHz (gepaart)	1,8 GHz A	2x5 MHz abstrakt	Telekom D	2.520		2,6 GHz G	2x5 MHz abstrakt	Vodafone	3.825
	1,8 GHz B	2x5 MHz abstrakt	Telekom D	2.520		2,6 GHz H	2x5 MHz abstrakt	Telekom D	3.815
	1,8 GHz C	2x5 MHz abstrakt	Telekom D	2.520		2,6 GHz I	2x5 MHz abstrakt	Vodafone	4.371
	1,8 GHz D	2x5 MHz konkret	E-Plus Grp	6.843		2,6 GHz J	2x5 MHz abstrakt	To2 GER	4.801
	1,8 GHz E	2x5 MHz konkret	To2 GER	17.026		2,6 GHz K	2x5 MHz abstrakt	To2 GER	4.500
2,0 GHz (gepaart)	2,0 GHz A	2x4,95 MHz konkret	Vodafone	2.510		2,6 GHz L	2x5 MHz abstrakt	To2 GER	4.500
	2,0 GHz B	2x4,95 MHz konkret	Vodafone	5.072		2,6 GHz M	2x5 MHz abstrakt	To2 GER	4.500
	2,0 GHz C	2x4,95 MHz konkret	E-Plus Grp	2.520		2,6 GHz N	2x5 MHz abstrakt	E-Plus Grp	5.175
	2,0 GHz D	2x4,95 MHz konkret	To2 GER	5.961	2,6 GHz (ungepaart)	2,6 GHz O	1x5 MHz abstrakt	Vodafone	2.202
2,0 GHz (ungepaart)	2,0 GHz E	1x5 MHz konkret	To2 GER	1.250		2,6 GHz P	1x5 MHz abstrakt	Vodafone	2.202
	2,0 GHz F	1x14,2 MHz konkret	Telekom D	3.550		2,6 GHz Q	1x5 MHz abstrakt	E-Plus Grp	2.183
Ausgeschiedene Bieter:						2,6 GHz R	1x5 MHz abstrakt	Telekom D	2.183
						2,6 GHz S	1x5 MHz abstrakt	Vodafone	2.183
						2,6 GHz T	1x5 MHz abstrakt	Vodafone	2.183
						2,6 GHz U	1x5 MHz abstrakt	E-Plus Grp	2.195
						2,6 GHz V	1x5 MHz abstrakt	To2 GER	2.183
						2,6 GHz W	1x5 MHz abstrakt	E-Plus Grp	2.510
						2,6 GHz X	1x5 MHz abstrakt	To2 GER	2.183
Summe aller gehaltenen Höchstgebote (€ in Tsd)									273.243
Zahlungsverpflichtung aufgrund zurückgenommener Höchstgebote (€ in Tsd)									0
Summe									273.243

Thank you for your attention

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