

Launching DAB+ digital services in Germany – Going national on digital radio –

Dr. Chris Weck

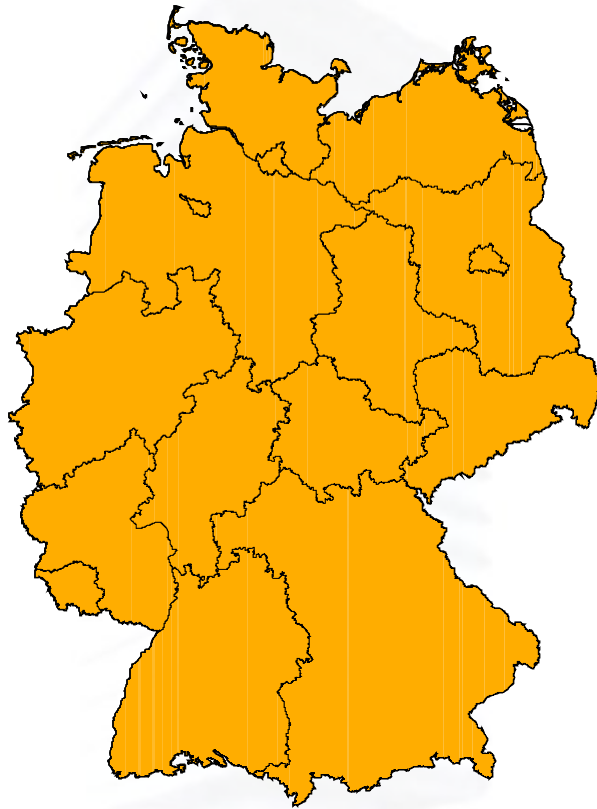
General Technical Manager

Deutschlandradio, the national public radio broadcaster in Germany

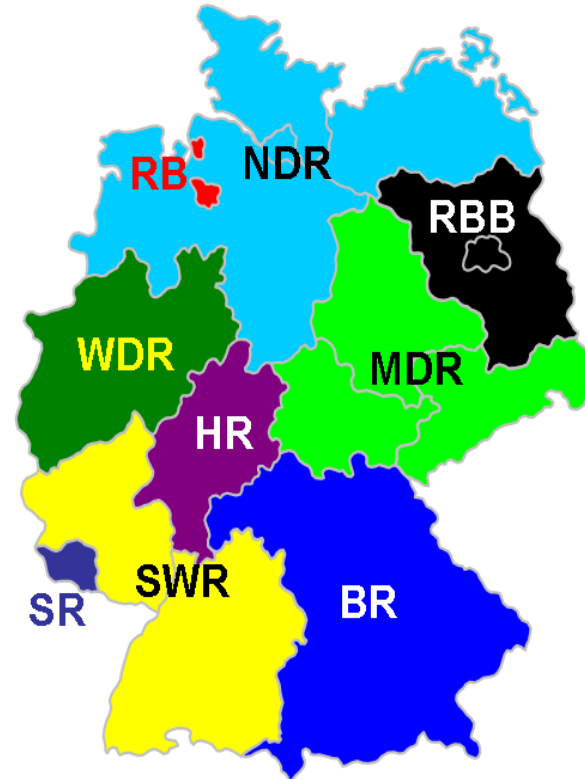
DIGITALRADIO

Radio der Zukunft

Public radio broadcasters in Germany: Deutschlandradio (nationwide) and ARD (regional)



Deutschlandradio



ARD

Deutschlandradio –

public radio programmes on nationwide DAB+

Three commercial-free stations focusing on information, culture and science respectively

Fakten und mehr.®

Deutschlandfunk

Kultur ist überall.®

Deutschlandradio Kultur

Hirn will Arbeit.®

DRadio Wissen

**Documentary and
Debates**

Thinking. Feeling. Knowing.

Deutschlandfunk

- „Facts and more.“
- DAB (temp. MPEG I Layer II)

Deutschlandradio Kultur

- „Culture is everywhere.“
- DAB (temp. MPEG I Layer II)

DRadio Wissen

- „Brain likes to work.“
- DAB+ (AAC V2 HE)

DokDeb - dradio.de

- Special broadcasts e.g. parliamentary debates, also BWS, dradio.de, qAoD,
- DAB+ (AAC V2 HE)

Commercial Broadcasters in Germany

Audience share:

- 55% listen to public radio broadcasters,
- 45 % to commercial radio stations

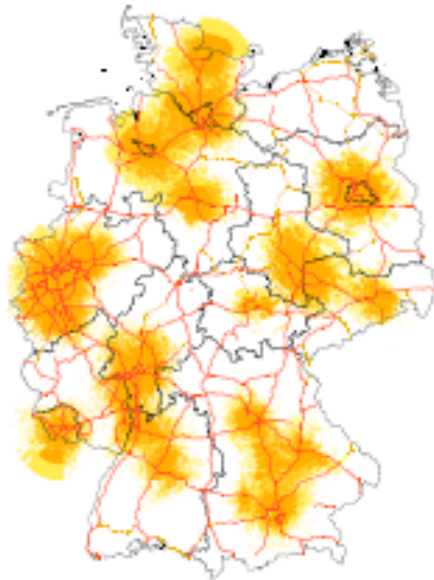
Structure of commercial broadcasters:

- In the past only local and regional commercial radio stations via terrestrial broadcasting available

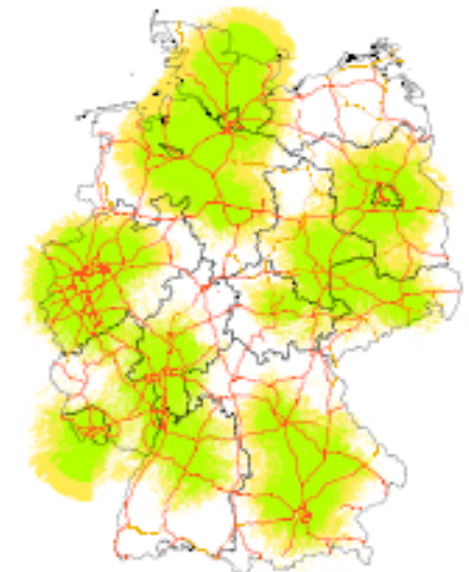
From 1. August 2011 on joined DAB+ multiplex

- DABplus offers the possibility of nationwide commercial radio broadcasting
 - New radio market players – new programmes

27 site network offers reach of: nearly 40 Mio. inhabitants inhouse and > 40% of the area under mobile reception conditions



Reception probability	Covered inhabitants	in %	Covered area [km ²]	in %
Bigger than 95 %	38687160	46,93	77982,1	21,89
Bigger than 70 %	47594730	57,73	128180,4	35,98



Reception probability	Covered inhabitants	in %	Covered area [km ²]	in %
Bigger than 99 %	48941120	59,36	137674,1	38,65
Bigger than 70 %	60054160	72,84	213445,6	59,92

Nationwide Digital Radio

DAB+ Multiplex 14 Programme & 1 Datacast-Plattform

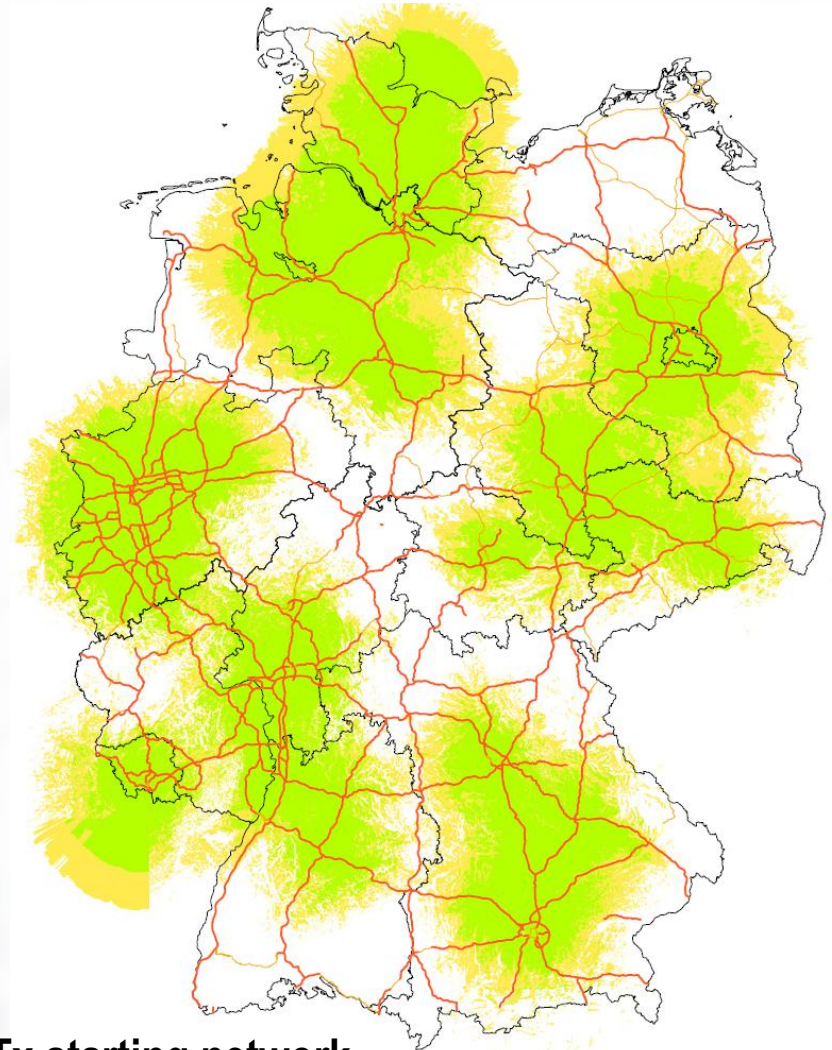
Deutschlandfunk

Deutschlandradio Kultur

DRadio Wissen



Leben mit Gott



Mobile reception of 27 Tx starting network

90elf. is one of the strongest national sport radio services



- Live audio football commentaries
- Up to five matches simultaneously on national DAB+
 - Channel Live 1
 - ...
 - Channel Live 5
- Not available on analogue radio

90elf.

can also display information via DAB+ slide show



Blitztabelle

Pl.	Tend.	Mannschaft	Diff.	Pkte.
1.	▲	Borussia Dortmund	+39	61
2.	—	Bayer Leverkusen	+39	61
3.	▼	Hannover 96	+39	61
4.	—	Mainz 05	+39	61
5.	—	FC Bayern	+39	61



TORALARM

2. Minute - Tor in München



Hannover 96 - Bayern München

▶ 1:0

Seven national music brands

– wide range of genres



Rock and pop



Rock



Electronic



*Dance, hip hop, R'n'B
urban*



Dance, pop, rock



Classical



Chill out, jazz, lounge

Further commercial / private channels

Two religious programmes



Protestant



Catholic

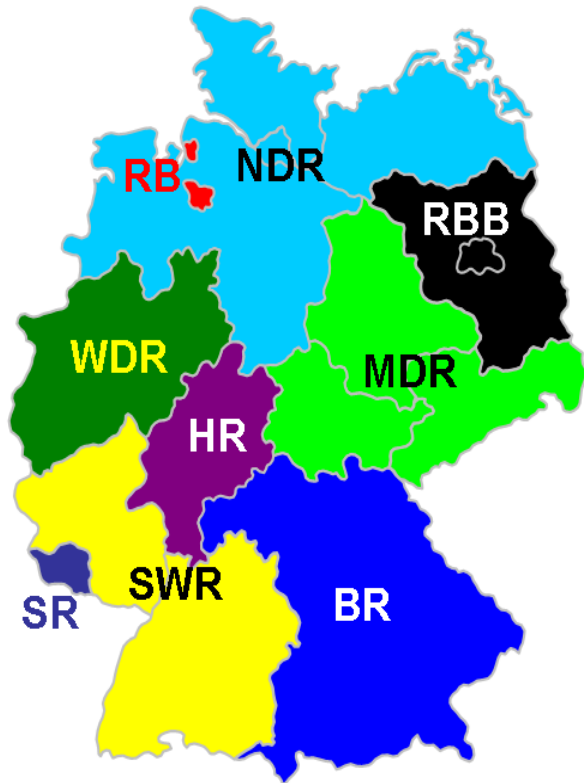
Datacast channel

- E.g. TPEG information



Regional DAB+ Programmes

ARD – German public broadcaster



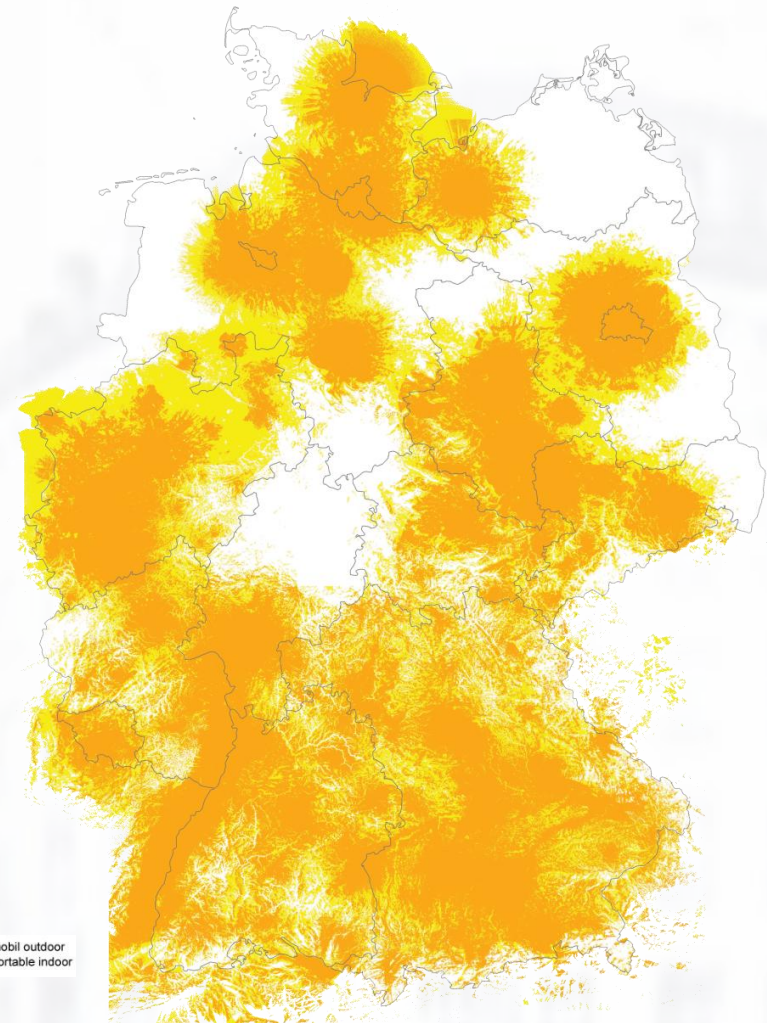
**More than 60 regional ARD
public radio programmes
are on air now**

Regional radio services of ARD via DAB/DAB+



Digital radio coverage of ARD and regional commercial broadcasters

- Growing number of regional commercial broadcasters
- ARD programmes with additional data services, „minimal set“ with
 - DL/DL+,
 - EPG, Journaline
 - Slide show,
 - Traffic information
- Continuous extension of the coverage area
- Central information portal
 - www.digitalradio.de



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Digitalradio – Multimedia Data Services

<p>Audio</p> <p>Programmes</p> <p>Traditional and digital-only programmes Special formats</p>	<p>DLS/DL+</p> <p>Radio text:</p> <p>Titel- and Interpret, Programme information, Hotline, Moderator etc.</p>	<p>Slide show (SLS)</p> <p>Pictures:</p> <p>CD-Cover, Traffic jam, weather, news, Logo, etc</p>
<p>Journaline</p> <p>Textual information</p> <p>Structured text in different categories like news, sport, press, weather, playlists, background info, etc.</p>	<p>EPG</p> <p>Electronic programme guide</p> <p>Detailed programme information</p>	<p>TPEG</p> <p>Traffic information</p> <p>24/7 editorial prepared news and control information for traffic navigation</p>

Why Digital Radio now ?

- Restricted services in FM
 - Closed market
 - more than 60 years old technology
- No frequencies available in FM

Digital radio DAB+ offers

- More and new programmes
- New multimedia services
- Better and full area coverage
- Better quality
- High frequency efficiency (SFN)
- Energy savings (up to 80 % Tx power)
- 3 to 5 times lower transmission costs

DIGITALRADIO
Radio der Zukunft

**Digitalradio
in Deutschland**

Start am
1. August
2011

Key factors for successful start

- **Joined start of commercial and public radio broadcasters**
- **Coordinated start**
 - Programme and network providers and receiver manufacturers
 - Support of ministry of commerce (BMWi) and federal states
 - Organisation of working groups
- **Central digital radio project office**
- **Strategy for radio distribution**
 - Free and affordable for everybody everywhere



Next steps

- Organisational support of project office
- Extended marketing activities
 - Workshops for retailers
 - Information package for schools
- Extension of the coverage area
- New regional commercial programmes on DAB+
- Paneuropean digital radio strategy
 - Switch-over plan from FM to DAB+
 - Because of better efficiency
 - Obligatory digital receivers



www.digitalradio.de – the information portal for digital radio

Overview and list of programmes for each region

Individual coverage information

- via maps and via postal codes

Overview and information of more than
130 DAB+ receivers

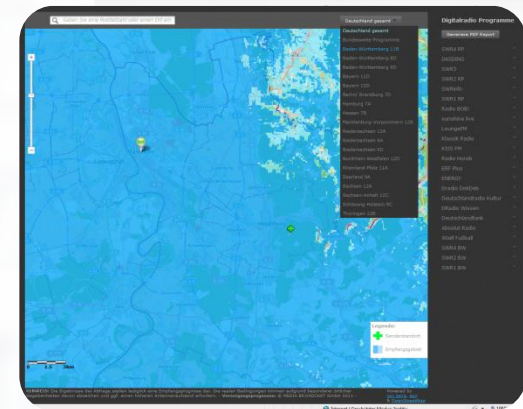
- Sortable on price, functions, features

Newsletter and News

- on digital radio all over the world
- on receiver manufacturers

Information material for download

- Flyer, logos and leaflets for marketing
- Retailers: handel@digitalradio.de



Digitalradio – Radio can be so beautiful



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Dr. Chris Weck

General Technical Manager at Deutschlandradio

Deutschlandradio
Hans-Rosenthal-Platz, 10825 Berlin
Raderberggürtel 40, 50968 Köln

Telefon +49-(0) 30-8503-7900
Telefon +49-(0) 221-345-3900
E-Mail: Chris.Weck@dradio.de

**Thank you
for your
attention!**

