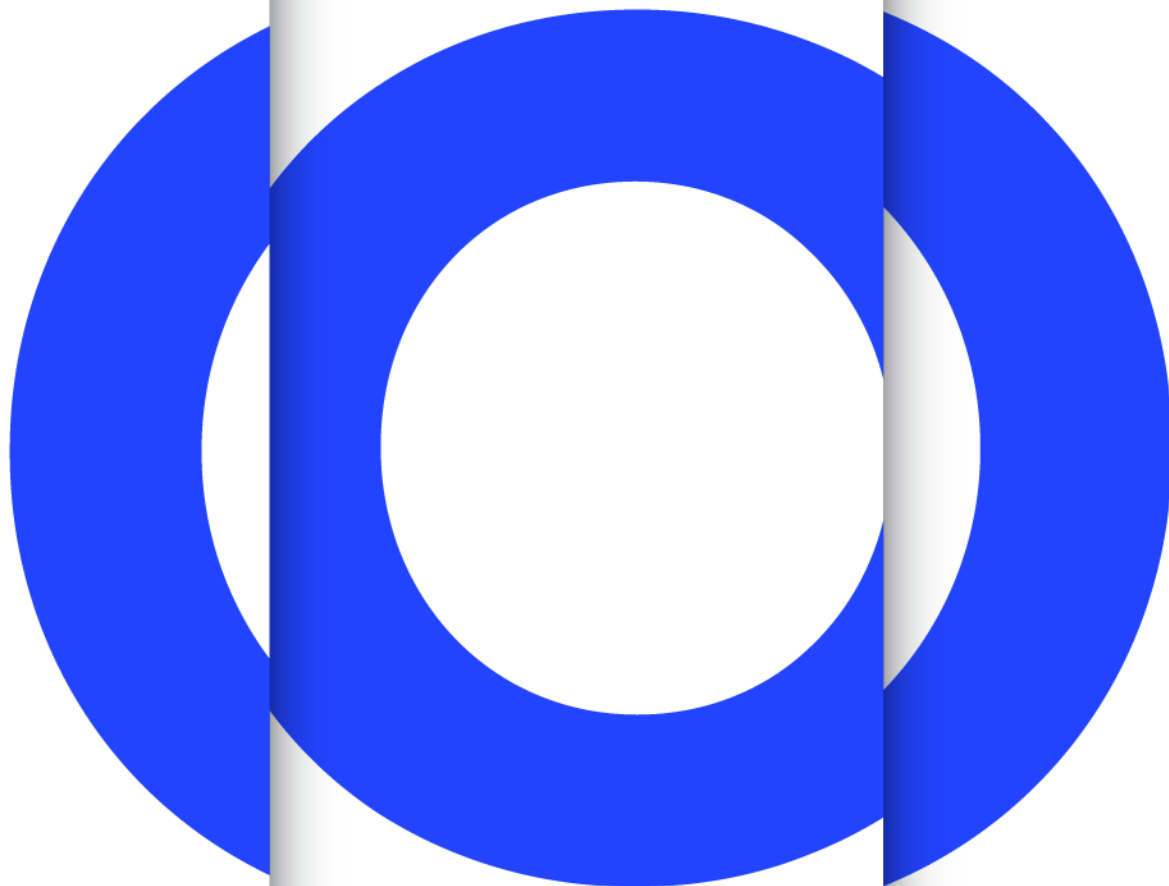


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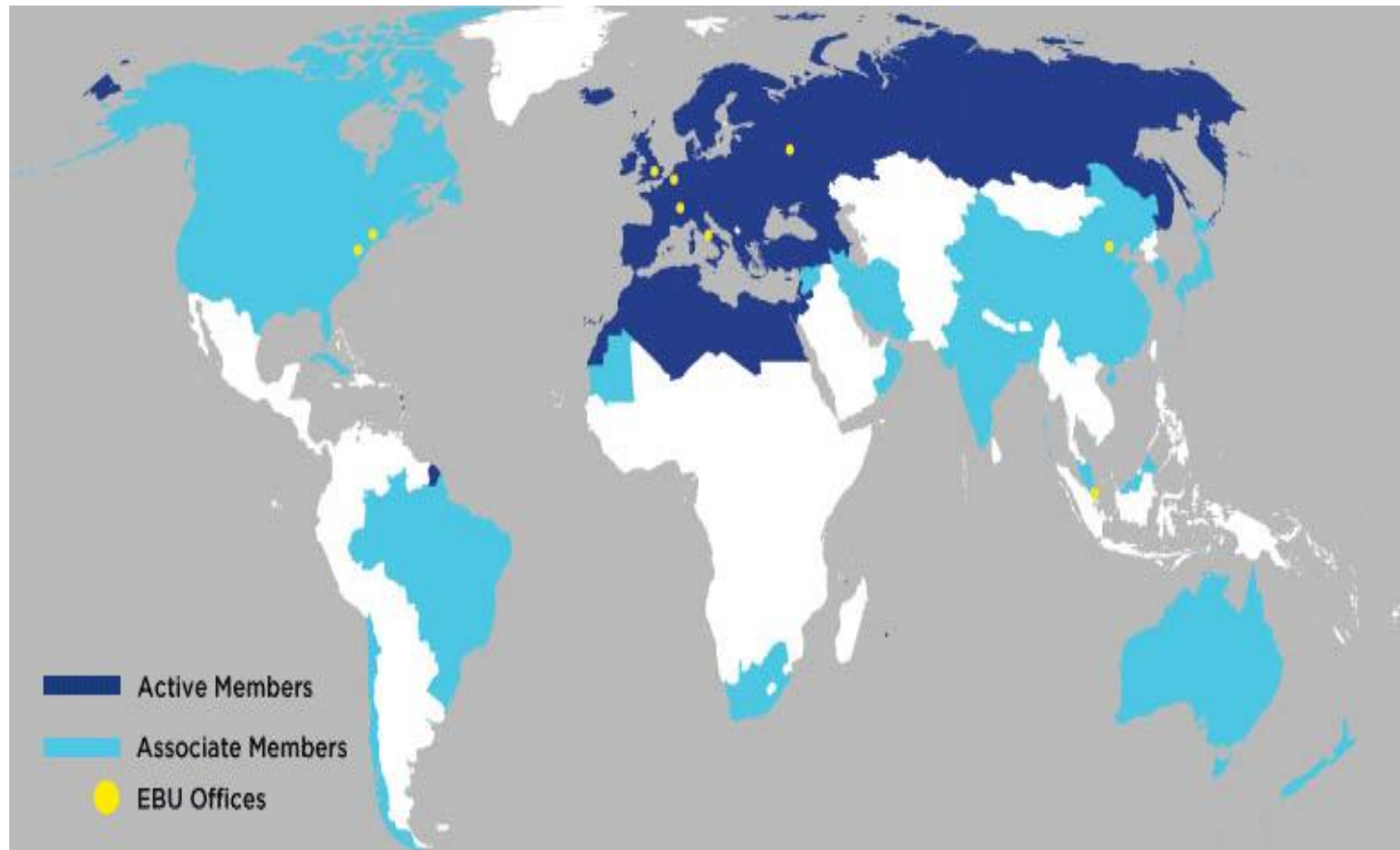


A RADIO VIEW FROM THE EBU

SIMON FELL
DIRECTOR OF TECHNOLOGY & INNOVATION, EBU

5 NOVEMBER 2013
19TH WORLD DMB GENERAL ASSEMBLY,
AMSTERDAM, NETHERLANDS

THE WORLD'S FOREMOST ALLIANCE OF PUBLIC SERVICE MEDIA



- 74 Members in 56 countries in Europe & beyond
- 35 Associate Members in 21 countries

EUROPEAN BROADCASTING UNION

- **1 billion people, ~30 million km², ~1.26 billion mobile phones (1)**
- **All of them have radio services in AM/FM, ~900 members' radio channels**
- **Digital Radio is being deployed in Belgium, Czech Republic, Denmark, Germany, Ireland, Italy, Malta, Netherlands, Norway, Sweden, Switzerland, & UK**
- **12 countries, potential of 305 million people (assuming 100% coverage)**
- **Challenge to migrate all EBU members countries from analogue to digital**
- **DVB-T deployed in 41 members countries, potential of 870 million people**

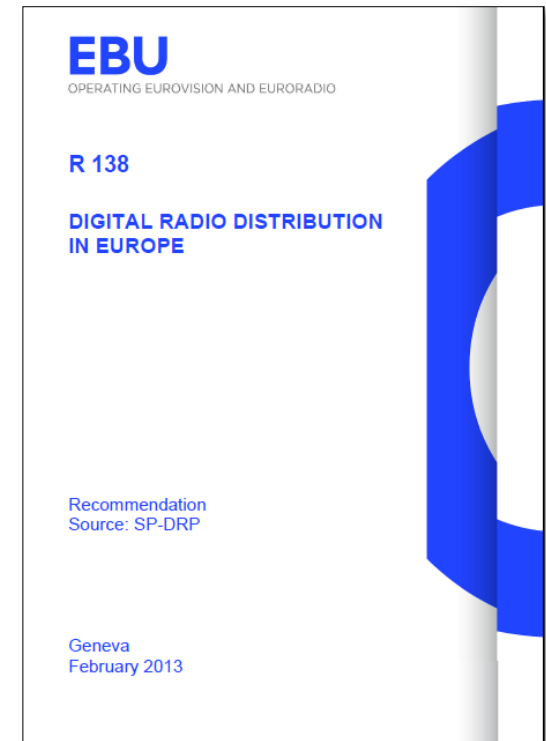
(1) Source: World CIA Factbook

EBU RECOMMENDATION R 138

- **Objective: Set the standards for Europe**

Recommends:

- **DAB+ for immediate deployment. VHF Band III**
- **DRM when DAB+ is not applicable. AM bands, Band II**
- **Enhanced features with text, images, programme guides**
- **Hybrid Services (RadioDNS) alongside broadcast**
- **A co-ordinated strategy for FM switchover can be beneficial**



HYBRID DIGITAL RADIO

RECEIVERS

Home



Car



Mobile

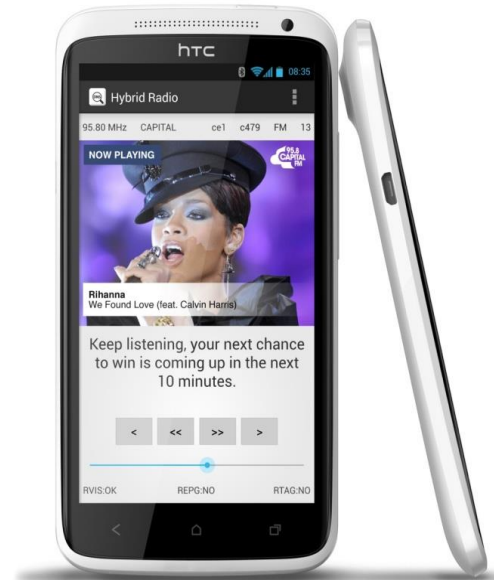
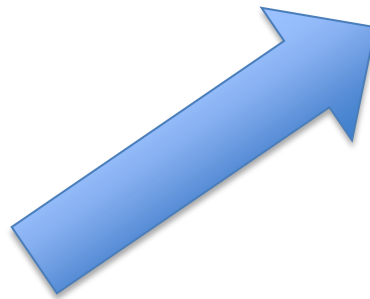


RADIO CHALLENGE ON SMART PHONES



Fragmented IP radio apps

Broadcast app



Hybrid Radio app

Standardised
Automatic Service Following
Enhanced services
Pre-installed on the device

HYBRID DIGITAL RADIO API FOR PHONES

Hybrid Radio app

Radio abstraction layer

Broadcast Radio Tuner

Cellular
Modem

DAB

FM/HD

DRM

IP

- Abstracted APIs
- ‘App-friendly’
 - Scan
 - Services List
 - Event Information

UNIVERSAL SMARTPHONE RADIO PROJECT

Improve access to, and experience of radio in smart phone handsets around the world by developing and supporting a global radio solution delivered via open hybrid broadcast-internet protocol standards and supported by terrestrial radio broadcasters in a number of different countries.

Memorandum of Understanding (MoU) being signed by broadcasters in Europe, US and Australia

EURO-CHIP INITIATIVE

Euro-Chip is not a silicon chip

Marketing initiative from Radio directors in Europe to push for free-to-air broadcast and tuner integration in consumer devices

Memorandum of Understanding (MoU) signed by major public service broadcasters to support the initiative

Promotion to Device manufacturers, Car industry and Mobile Network Operators (MNO).

The logo for ARD (Arbeitsgemeinschaft der öffentlich-rechtlichen Rundfunkanstalten der Bundesrepublik Deutschland), consisting of the letters 'ARD' in a blue, sans-serif font with a registered trademark symbol.The logo for BBC (British Broadcasting Corporation), consisting of the letters 'B', 'B', and 'C' in white, each inside a black square.The logo for Deutschlandradio, featuring the text 'Deutschlandradio' in white on a grey background, followed by three vertical bars in blue, orange, and green.The logo for EBU (European Broadcasting Union), consisting of the letters 'EBU' in a blue, sans-serif font.

OPERATING EUROVISION AND EURORADIO

The logo for NPK (Nederlandse Publieke Omroep), consisting of the letters 'NPK' in a bold, black, sans-serif font.The logo for NPO (Nederlandse Publieke Omroep), featuring the letters 'NPO' in white inside a grey diamond shape with an orange arrow pointing right, and the text 'Netherlands Public Broadcasting' below it.The logo for Polskie Radio, featuring a red square with a white target symbol and the text 'POLSKIE RADIO' in white to its right.The logo for rtbf.be, consisting of the text 'rtbf' in blue and '.be' in white inside a blue circle.The logo for Rai (Radiotelevisione Italiana), consisting of the letters 'Rai' in white inside a blue square.The logo for sverigesradio, consisting of the text 'sverigesradio' in a grey, sans-serif font.The logo for EBU (European Broadcasting Union), consisting of the letters 'EBU' in a blue, sans-serif font.

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- **Digital Radio week: 10-13 Feb 2014**
- **RadioHack 10-11 Feb 2014**
- **Digital Radio Summit: 12 Feb 2014**

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