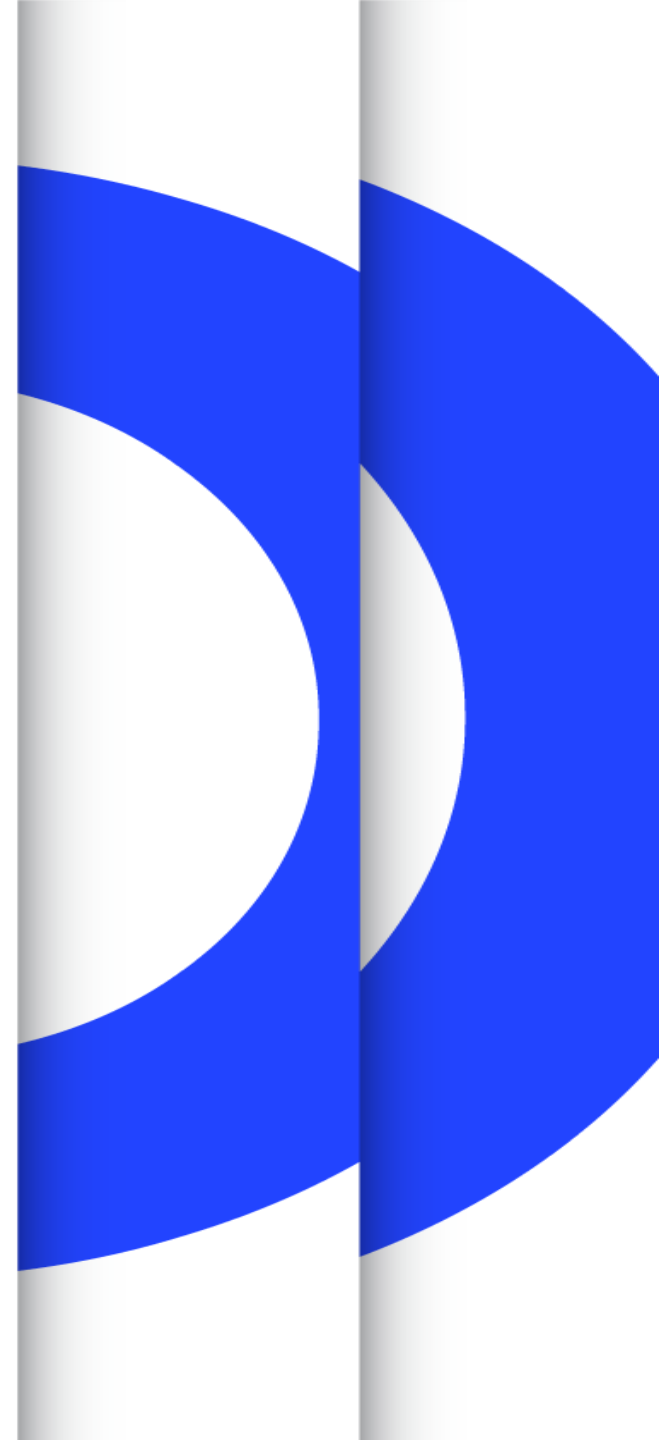


DIGITAL RADIO: THE GATEKEEPERS

**Graham Dixon
Head of Radio, EBU**

**WorldDAB General Assembly
November 2016**



Terrestrial Broadcasting in Europe, EBU R131

Terrestrial networks important for
public service broadcasters ...
suitable for free-to-air delivery;

complete or near-complete
coverage at reasonable cost;

based on open standards;

not controlled by gate keepers.



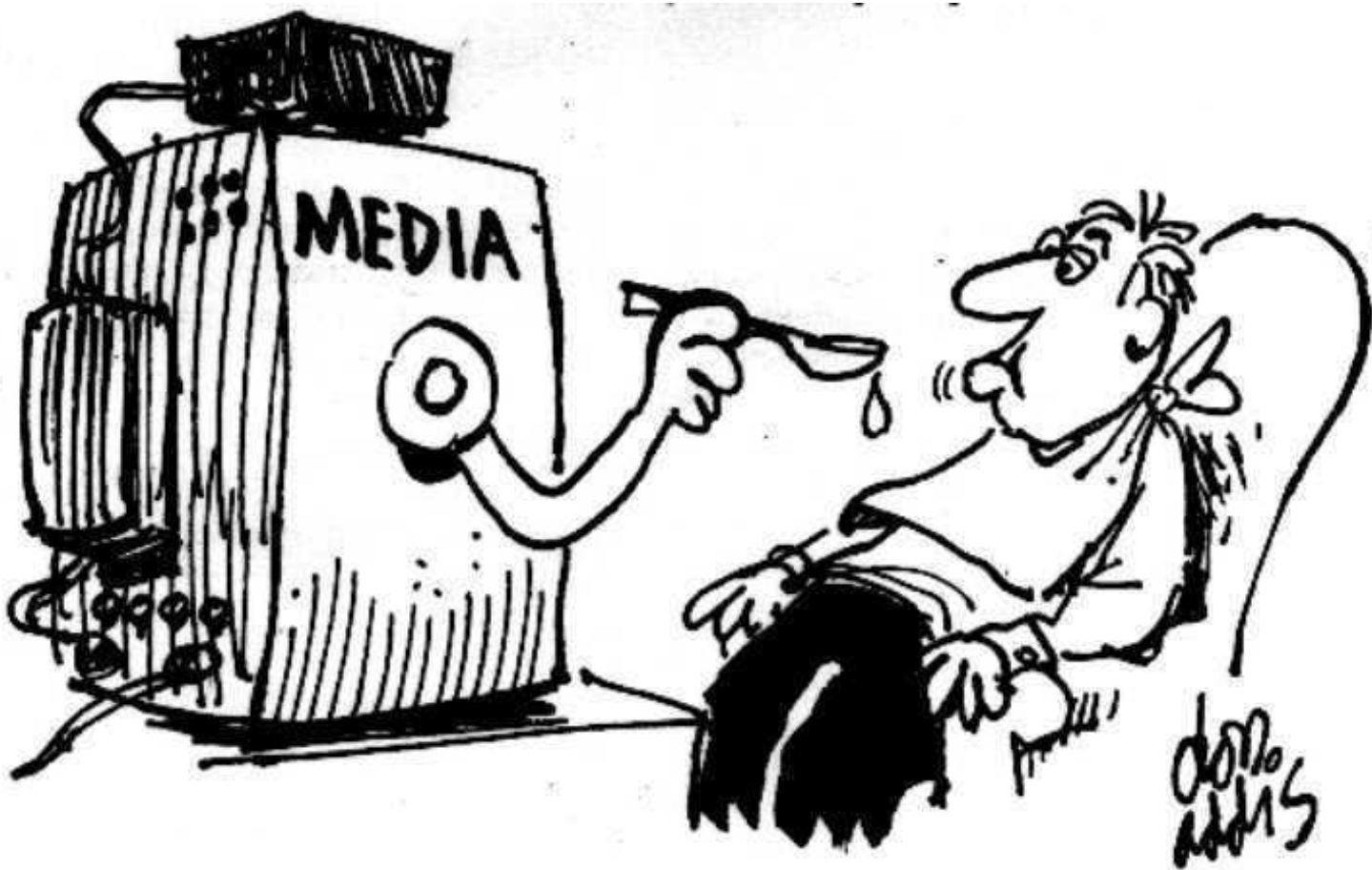


**Pornography, or
vivid news reporting?**



Lessons from television...





**Educate, inform,
entertain, infantilize...**



Alexa, play
WXYZ on
TuneIn...

INTRODUCING
amazon echo

Always ready, connected,
and fast. **Just ask.**



Hey, Siri...

Positive or Negative?



Media as a Public Good

Free to Air:

- information equality
- supporting democracy

Reasonable Cost for Listeners

- pay once, indefinite usage
- no-one excluded by subscription costs, data plans, complex devices

No Gatekeepers

- no filters based on earning potential, political leanings, commercial partnerships

	Excludable	Non-excludable
Rivalrous	Private goods	Common-pool resources
	Food, clothing, housing, cars, parking	Open sea fish stocks, small public beach
Non-rivalrous	Club goods	Public goods
	Internet use, subscription media, cinemas, private parks	Free-to-air media, broadcast use, air to breathe, street lighting, vast public beach



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	Internet use, subscription media	Free-to-air media, broadcast use



...combined use [of broadcast and IP] enables personalized on-demand and interactive media services that neither platform can realise individually. It is the combination of broadcasting and broadband networks that will enable broadcasters to offer the richest range of services. EBU R 131



VRT Klara Continuo
VRT MNM Hits
VRT Nieuws+
ČRo Radio Wave
ČRo D-dur
ČRo Jazz
ČRo Rádio Junior
ČRo Rádio Retro
ČRo Sport
ČRo Regina DAB Praha
DR P5
DR P6 Beat
DR P7 Mix
DR P8 Jazz
DR Nyheder
BR Bayern 2
BR B5 Plus
BR Bayern Plus
BR Puls
BR Verkehr
BR Heimat
MDR Klassik
MDR Schlagerwelt
NDR Info Spezial
NDR Blue

NDR Traffic
RB - Bremen Next
SR Antenne Saar
WDR 1LIVE Diggi
WDR KiRaKa
WDR VERA
WDR Event
WDR info
DRadio Wissen
DRadio Dokumente und Debatten
RTÉ Radio 1 Extra
RTÉ 2XM
RTÉ Gold
RTÉ Pulse
RTÉjr Radio
Rai Radio 4 Light
Rai Radio 6 Teca
Rai Radio 7 Live
Rai Radio 8 Opera
NPO Radio 4 Concerten
NPO Radio 5
NPO Soul & Jazz
NPO SterrenNL
NPO 3FM Alternative
NPO 3FM KX Radio / Serious
Talent
NPO FunX Slow Jams
NPO FunX Dance

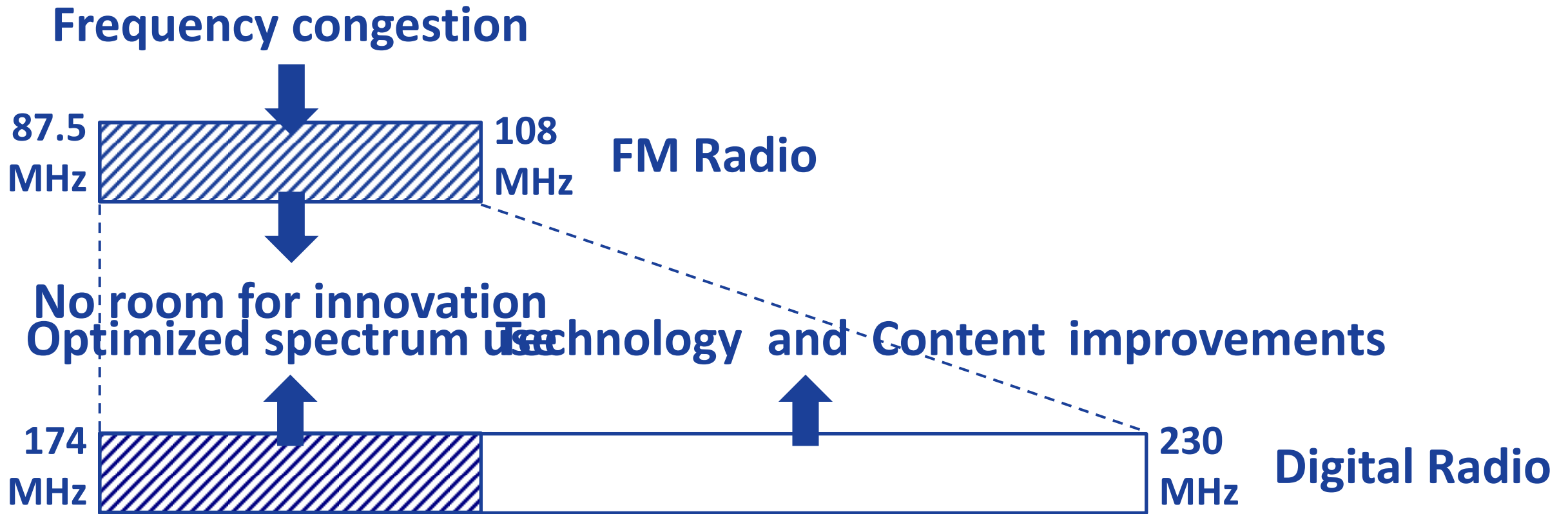
NRK P1+
NRK P13
NRK Folke Musikk
NRK Jazz
NRK Sport
NRK Super
NRK Båtvær
Polskie Radio 24
Polskie Radio Rytm
Polskie Radio Dzieciom
Radio Poland (DAB+ stream)
Radio Romania Radio 3Net
Radio Slovakia Rádio Junior
Radio Slovakia Rádio Pyramída
RTVE Radio Exterior
Swedish Radio P2 Klassiskt
Swedish Radio P3 Star
Swedish Radio Radioapans
knattekanal
Radio SRF 4 News
Radio SRF Musikwelle
Radio SRF Virus
Radio Swiss Classic
Radio Swiss Jazz
Radio Swiss Pop
BBC Radio 1 Xtra
BBC Radio 4 Extra
BBC Radio 5 Live Sports Extra
BBC Radio 6 Music



There's another
gatekeeper...



Analogue radio is itself a gatekeeper



The Data Gatekeeper...

	25 euro per month maximum							
	Data allowance (GB)	Euro per GB	128kbps hours per day	listening cost per hour	listening cost per day	64kbps hours per day	listening cost per hour	listening cost per day
France	20	1.25	11.57	0.07	0.17	23.15	0.06	0.15
Germany	0.5	50	0.29	2.88	6.97	0.58	2.49	6.02
Italy	3	8.3	1.74	0.48	1.16	3.47	0.41	1.00
Spain	0	0	0.00	N/A	N/A	0.00	N/A	N/A
UK	2	12.5	1.16	0.72	1.74	2.31	0.62	1.51
Average	6.4	18.0	3.69	1.04	2.51	7.38	0.90	2.17

Daily listening in Europe, 2:42 hours – data in five major markets (France, Germany, Italy, Spain, UK).

25 EUR does not always give sufficient data for daily radio listening.

35 euro per month maximum								
	Data allowance (GB)	Euro per GB	128kbps hours per day	listening cost per day	listening cost per day	64kbps hours per day	listening cost per hour	listening cost per day
France	20	1.75	11.57	0.10	0.24	23.15	0.09	0.21
Germany	1	35	0.58	2.02	4.88	1.16	1.74	4.22
Italy	7	5	4.05	0.29	0.70	8.10	0.25	0.60
Spain	3	11.6	1.74	0.67	1.63	3.47	0.58	1.41
Uk	20	1.75	11.57	0.10	0.24	23.15	0.09	0.21
Average	10.2	11.0	5.90	0.64	1.54	11.81	0.55	1.33

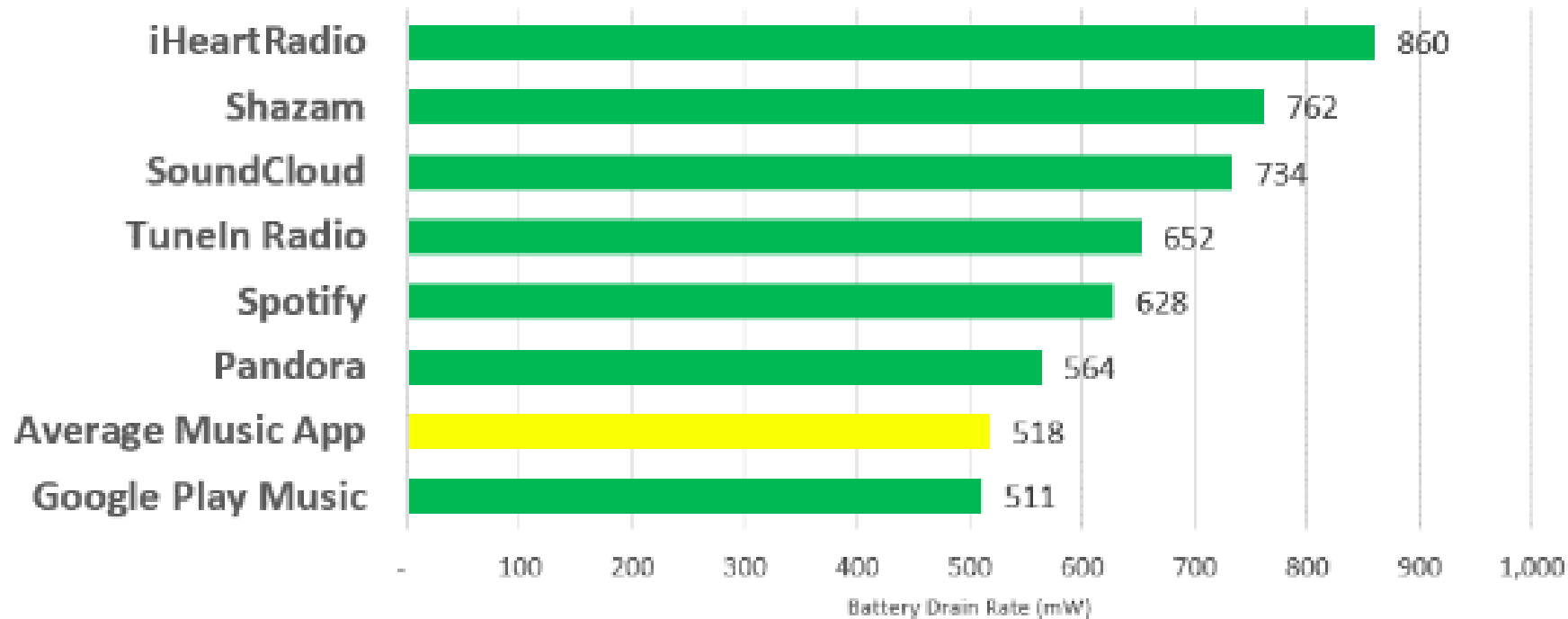
In this case, radio would cost around 480 euros per year.

For five major European markets, 35 euros is sufficient data.

60 euro per month maximum								
	Data allowance (GB)	Euro per GB	128kbps hours per day	listening cost per hour	listening cost per day	64kbps hours per day	listening cost per hour	listening cost per day
France	20	3	11.57	0.17	0.42	23.15	0.15	0.36
Germany	5	12	2.89	0.69	1.67	5.79	0.60	1.45
Italy	14	4.3	8.10	0.25	0.60	16.20	0.21	0.52
Spain	8	7.5	4.63	0.43	1.05	9.26	0.37	0.90
Uk	20	3	11.57	0.17	0.42	23.15	0.15	0.36
Average	13.4	6.0	7.75	0.34	0.83	15.51	0.30	0.72

60 euros give enough data in all markets, but cost is not sustainable in low income groups, undermining universality.

The Battery Gatekeeper...



DAB Receiver



Energy consumed in one hour:

DAB+: 6.8J

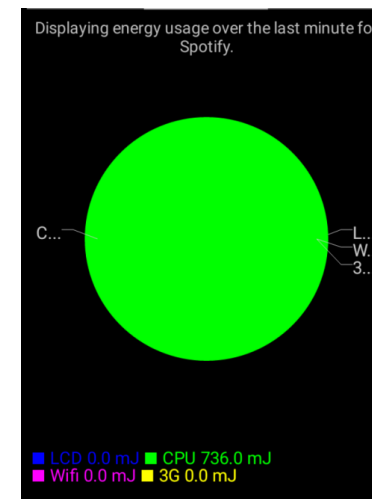
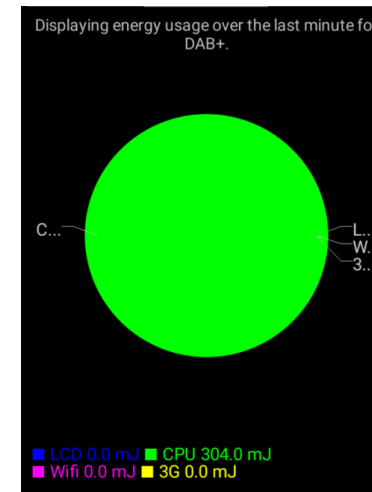
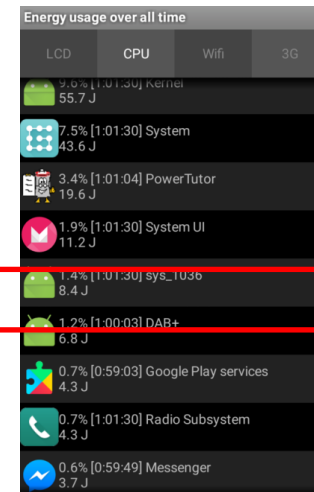
Spotify: 59.9J

Average power consumption

DAB+: 304mW

Spotify: 736 mW

Streaming consumes much more power than DAB.



Measurements taken with Power tutor app, tested on LG Stylus2

EBU Values

UNIVERSALITY

Audience reach
Platform reach
Accessibility
Social cohesion

INDEPENDENCE

Governance
Funding
Editorial decision-making
Trust
Serving democracy

EXCELLENCE

Improvement process
and quality control
Research on audience
and audience satisfaction
Transmission
and technical facilities
Training

DIVERSITY

Programming
Interaction with the audience
Organization

ACCOUNTABILITY

Transparency
Reporting
Stakeholders
Fulfilment of public service
(measurement)

INNOVATION

Content
Technical innovation
Partnerships

EUR(O)RADIO

OPERATED BY EBU

