



RadioDNS Broadcasters, Services & Information 2015

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@RadioDNS



What is Hybrid Radio?

Hybrid radio seamlessly combines the strengths of Broadcast radio and the Internet.

Your broadcast signal (FM, HD, DAB, DAB+) continues to carry audio (and some data), but a radio with an Internet connection (WiFi, 3G, 4G, LTE) can seamlessly connect back to your station for multimedia and interactivity. It's an app-like experience of broadcast radio.

Why do we need it?

Broadcast radio (FM, DAB/DAB+, HD etc) is the right technology to deliver radio to lots of people across towns and cities. It's a very economic way of achieving ubiquity – radio that's receivable in the home, in the car, in the office and in all the places in between.

The Internet (IP) is the good way to deliver multi-media and interactivity, but it's not a great way to deliver live radio to large numbers of people. The costs to the broadcaster rise with demand, the devices are more expensive and require a subscription with a network, and it's an inefficient way of delivering radio to people on the move.

Hybrid Radio combines broadcast with the internet - effectively making radio better.



What can you do with Hybrid Radio?

Visuals

Our visualisation application works alongside FM, DAB+ and HD Radio to deliver timely, relevant visuals alongside audio content. "Glance-able" content such as now playing information, artist images, news, weather and more can dramatically improve the overall experience.

Metadata

Providing detailed information about radio stations and programmes in an open, standardised format helps power next generation radio user interfaces. Service following allows devices to automatically switch between broadcast and internet audio streams as reception changes.

Interaction

When the listener wants to know more about what's on the radio tagging allows the simple tap of a button to record their interest, with the ability to revisit the content later on an associated mobile phone, tablet or desktop device at a time to suit them.



What's RadioDNS?

RadioDNS is the open technology that creates and maintains the technical standards for Hybrid Radio.

The RadioDNS Project is a not-for-profit association that sets and supports these technical standards. Our members are from every part of the radio business in countries all over the world. Members pay a small fee and contribute to developing the strategy and standards of Hybrid Radio.

You don't have to be a member of the RadioDNS Project to use Hybrid Radio. All our technology and standards are open source, which means they're free for supporters of RadioDNS to use and implement.

RadioDNS Members 2015





Overview 2014

2014 was another busy period for the RadioDNS Project.

We spoke and exhibited at conferences and events in Berlin, Las Vegas, Istanbul, Tokyo and Amsterdam, continuing to talk about RadioDNS Hybrid Radio, and demonstrating how easy it is to make radio better using our open source standards. The Project Office deals with daily requests for information from broadcasters and manufacturers wanting to implement RadioDNS Hybrid Radio

Standards

The publication of the RadioDNS Lookup Specification by ETSI represents another milestone in establishing an open and interoperable ecosystem for hybrid radio globally.

Our specification for using DNS to link broadcast radio services with IP delivered services is the foundation of all our applications. The specification has existed since 2008, and is already implemented by broadcasters and manufacturers globally, and has proven to be a robust and reliable technical solution.

ETSI's publication of our specification as one of their technical standards (TS 103 270), alongside other established standards such as DAB Digital Radio and DVB, marks a milestone in creating an open and interoperable approach to hybrid radio at a global level.

Getting to this point has been an important goal for us. We know that many manufacturers see ETSI standards as a guarantee of accuracy, reliability and longevity, and it removes objections to integrating hybrid radio into products that are expected to work correctly for years or even decades.



Overview 2014

In the coming months, the functionality of RadioVIS and RadioEPG will also be integrated into ETSI standards, meaning we can provide a complete chain of functionality endorsed by one of the most respected global technical standards bodies.

The EBU launched a new technical recommendation in February 2013, Recommendation R-138. This represented the first agreement among EBU members on digital radio distribution, and amongst its key points stated that hybrid services should be deployed to take advantage of additional internet-delivered content - for example using the RadioDNS Hybrid Radio system.



www.radiodns.org

In summer 2014 RadioDNS launched a new website at <u>www.</u> radiodns.org

The new site is fully responsive, with an intuitive navigation structure, and a fresh, clean design. There's lots of information on hybrid radio, and easy to read documents to help broadcasters, developers and manufacturers launch RadioDNS services.

Our new RadioDNS website features:

- Clear explanations about RadioDNS Hybrid Radio functionality
- A library of presentation resources (presentations and videos)
- A library of easy to read HOWTO documents to make starting with RadioDNS Hybrid Radio much easier
- An online tool to help stations create RadioDNS Hybrid Radio metadata (XSI) files
- New source code for developers

The new structure means that non-technical people can immediately understand what RadioDNS Hybrid Radio is, and how it can work for their business, while developers have a wealth of tools and technical information immediately available to them.



Devices



Radio is everywhere.

The pervasiveness of radio has remained almost unmatched for over 70 years. No other device has infiltrated so many places - bedrooms, kitchens, living rooms, bathrooms, workplaces, shops, cars. In the UK, each home has an average of 6 radios - but, increasingly, they don't look like a radio; radio is now included within multi-function devices like MP3 players, and smartphones. Radio is included as a function on many devices that are also becoming connected to the Internet in some way or another.



There are many commercially available devices supporting RadioDNS services displayed over the next few pages, including the recently released Samsung phones - the Galaxy Grand 2 and the Core.

Revo PiXisSRS

Revo's PiXiS RS is capable of receiving a full range of digital radio standards including DAB, DAB+, FM with RDS and internet radio. Next generation multimedia services such as DAB Slideshow and RadioVIS are also supported.



Galaxy Grand 2

The Galaxy Grand 2 features 1.5GB RAM, a screen with 720P resolution, 8GB internal storage and an 8MP primary camera and a 1.9MP front camera. The phone supports RadioDNS Hybrid Radio.





Revo AXiS X3

Updated model for 2014 and sporting a fresh new gunmetal livery, X3 benefits from the addition of an Apple Lightning dock for iPhone 5/5S/5C connectivity, as well as improved Bluetooth® streaming quality. Where radio and the online world converge: a compact, 'connected' dAAigital radio with touchscreen interface and docking for iPod and iPhone. Supports RadioVIS on DAB and FMA



Philips Micro music system DCB852/10

Enjoy clear and interference-free DAB+ radio, with full control via the free DigitalRadio iPhone app and rich visuals. Supports RadioVIS on DAB, when using the iPhone app.



Philips Docking Station AJB7038D10
Play and charge your iPod/iPhone
simultaneously while enjoying a powerful,
deeper bass from the Bass Reflex Speaker
System. Free DigitalRadio app with RadioVIS
and control of DAB+/FM.







Philips Original Radio Mini ORT2300C/10

A modern interpretation of the iconic Philetta, delivering DAB+ and FM radio, as well as music from smart devices wirelessly via Bluetooth. Free DigitalRadio app with RadioVIS and control of DAB+/FM



PURE Sensia

Sensia is an internet-connected digital audio system with Flow technology and a large colour touchscreen, giving you a unique way to enjoy internet radio content, podcasts, digital and FM radio stations. Supports RadioVIS on DAB and FM.



PURE Sensia 200D Connect

A fully featured portable music streaming and radio system.
Connect Sensia 200D Connect to the internet using Wi-Fi and you can listen to thousands of internet radio stations. Supports RadioVIS on DAB and FM.





Country Overview

- This document lists radio stations that have contacted RadioDNS, and have told us they are providing, or want to provide, hybrid radio services.
- RadioDNS does not require radio stations to tell us when they start or stop offering services.
- Radio stations can choose which services they provide:
 - RadioEPG with logos and station descriptions
 - RadioEPG with streaming information
 - RadioVIS using STOMP
 - RadioVIS using COMET
- Radio Stations may provide services on FM, DAB, DAB+ or HD. They do not have to provide services on all systems.
- RadioDNS accepts DNS entries from radio stations in all countries, provided they can be <u>officially verified</u>
- RadioDNS standards are open, so any broadcaster or manufacturer can implement a service without telling RadioDNS





Australia

Station	Location	Audience	Status
ABC Dig Music	Sydney, Melbourne, Adelaide, Brisbane, Perth	Not published	DAB only
Sky Sports Radio	Sydney	Not published	DAB only









Information

Commercial Radio Australia and Southern Cross Austereo represent ~80% of radio listening in Australia.

Commercial Radio Australia is a member of RadioDNS, and represented on our Steering Board by Kath Brown. Southern Cross Austereo is a also member, and we are in close contact with them over RadioDNS.





Austria

Station	Location	Audience	Status
Kronehit	Vienna	150k (9.9%)	Live
Lounge.fm	Vienna	37k	Live





Information

Kronehit and Lounge.fm are both broadcasting live.

We are in discussion with VÖP (Verband Österreich Privatradio – Austrian Commercial Radio Association) about RadioDNS services in Austria.



Belgium



Station	Location	Audience	Status
La Premiere	S. Belgium		Trial
Vivacite	S. Belgium		Trial
Music 3	S. Belgium	4.5 (0.5%)	Trial
Classic 21	S. Belgium	1.5m (35%)	Trial
PURE FM	S. Belgium		Trial
RTBFI	S. Belgium		Trial
Radio 1	N. Belgium		Trial
Radio 2	N. Belgium		Trial
Klara	N. Belgium		Trial
MNM	N. Belgium	4.4 (070()	Trial
Studio Brussel	N. Belgium	4.4m (67%)	Trial
Klara Continuo	N. Belgium		Trial
MNM Hits	N. Belgium		Trial
Nieuws+	N. Belgium		Trial



















RTBF are the national French-speaking broadcaster for South Belgium. VRT are the national Flemish-speaking broadcaster for North Belgium. **Both RTBF and VRT are RadioDNS Members**





Canada

Station	Location	Audience	Status
CJOC	Alberta	34k	Live
CJCY	Alberta	Not published	Live





Information

We have worked with Communications Research Centre of Canada (CRC) on Hybrid Radio.





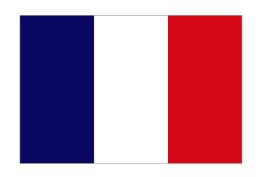
Finland



Information

YLE, the national broadcaster of Finland, are supporters of RadioDNS





France

Station	Location	Audience	Status
Radio 100FM			Trial
OUI FM	France		Trial
Nova	Paris		Trial
Radio FG	France		Trial
RTS FM	S. France		Trial
France Inter			Trial













Information

Radio France have RadioDNS trials on all their FM transmittersfor France Inter.





Germany

Station	Location	Audience	Status
ARD Stations (see below)	Germany	36.6m daily	DAB only
Antenne Bayern	Bayern	4.04m daily	Live
Rock Antenne	Germany	325k daily	Live
Antenne Thuringen	Germany	121k daily	Live
TOP40	Germany	40k daily	Live
Hit Radio FFH	Germany	2.6m daily	Live
Planet Radio	Germany	35k daily	Live
Radio Regenborgen	Germany	1.5m daly	Live
RTL 104.6	Germany	1.08m daily	Live









Information

Germany is a key market for RadioDNS development

The 60 ARD Radio stations are providing RadioDNS for DAB+ and are considering enabling for FM.

After successful extensive testing, Germany's private radio broadcasters prepared to implement Smart Radio nationwide throughout 2014.

The test phase, first announced at <u>Mediantage Munich</u>, allowed the broadcasters to test RadioDNS services first, and create the ideal conditions for hybrid radio broadcast.

VPRT, the Association of Commercial Broadcasters and Audiovisual Services, is calling for manufacturers and the car industry to bring Smart Radio to devices by supporting and implementing RadioDNS.

This brings the total number of listeners receiving RadioDNS in Germany to 46.8m daily.

VPRT are testing a practical trial with AUDI, Antenne Bayern and the network operator MEDIA BROADCAST to broadcast the ECC via RDS over FM in Bayaria.



Hungary

Station	Location	Audience	Status
MR1 Kossuth Radio	Hungary	3m Daily	Trial
MR2 Petofi Radio	Hungary		Trial
MR3 Bartok Radio	Hungary		Trial







Information

Magyar Rádió is the public service broadcaster for Hungary, and they are trialling RadioDNS services









Information

RTE, the national broadcaster of Ireland, is a RadioDNS supporter.

Communicorp, one of the largest private broadcasters in Ireland, is a supporter, as is Digital Radio Limited.





Italy

Station	Location	Audience	Status
RTL 102.5	Italy	6.6m Daily	Trial
RTL 102.5 DAB+	Italy		Trial / DAB+
RTL Italian Style	Paris		Trial / DAB+
RTL Groove	France		Trial / DAB+
RTL Classic	S. France		Trial / DAB+









Information

RTL 102.5 is the biggest radio station in Italy. They are supporters of RadioDNS.

RAI, the Italian State broadcaster, is a supporter of RadioDNS, along with the organisation EuroDAB





Netherlands

Station	Location	Audience	Status
NL Radio 1	Netherlands	~9.2m weekly	Trial
NL Radio 2	Netherlands		Trial
NL 3FM	Netherlands		Trial
NL Radio 4	Netherlands		Trial
NL Radio 5	Netherlands		Trial
NL Radio 6	Netherlands		Trial
NL FunX	Netherlands		Trial
NL 24Nieuws	Netherlands		Trial
NL Top2000	Netherlands		Trial









Information

NPO is the national radio broadcaster for the Netherlands, and is a member of RadioDNS.





Poland

Station	Location	Audience	Status
Radio Wroclaw	Poland		Trial
Radio RAM FM	Poland		Trial



Information

Radio Wroclaw are supporters of RadioDNS.





Slovenia

Station	Location	Audience	Status
Radio Prvi	Slovenia		Trial
Val202	Slovenia		Trial
ARS	Slovenia		Trial



Information

Radio Prvi, Val202 and ARS are all on FM trials operated by RTVSLO.





Spain

Station	Location	Audience	Status
COPE Barcelona	Barcelona		Trial
COPE Madrid	Madrid		Trial

Information



COPE are supporters of RadioDNS.





Sweden

Station	Location	Audience	Status
SR P1	Sweden		Trial
SR P2	Sweden		Trial
SR P3	Sweden		Trial
SR P4 Stockholm	Stockholm		Trial
SR P2 Musik	Stockholm		Trial
Metropol 93.8	Stockholm		Trial
SR P6	Stockholm		Trial











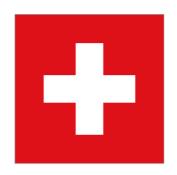


Information

Sveriges Radio is the national broadcaster and is a supporter of RadioDNS

SBS Radio is the biggest private radio broadcaster and is a supporter of RadioDNS





Switzerland

Station	Location	Audience	Status
Swiss POP	Switzerland	454k daily	DAB only
Swiss JAZZ	Switzerland		DAB only
Swiss CLASSIC	Switzerland		DAB only
RSR La Premiere	French Speaking Area of Switzerland	816k daily	Trial
RSR Espace 2			Trial
RSR Couleur 3			Trial
RSR Option Musique			Trial













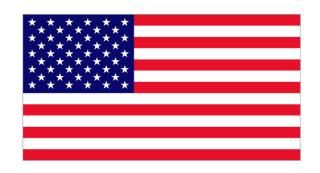


Information

Swiss POP/JAZZ/Classic and part of SSATR, a member of RadioDNS.

We also work with SSR SRG, the national broadcaster, of whom RSR is a part.





USA

Station	Location	Audience	Status
ClearChannel Group (850 stations)	USA	243,000k monthly	Part trials
COX Media	USA		Interest
Emmis	USA		Interest













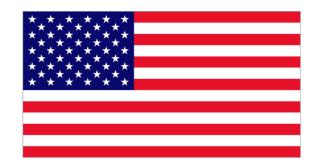












USA

Information

The USA is a **key market** for RadioDNS development We work closely with the **National Association of Broadcasters (NAB)** who represent radio stations across the USA

ClearChannel are members of RadioDNS are are trialling RadioDNS in selected markets.

Cox Media and **Emmis Interactive** are also members of RadioDNS, and carrying out trials and developments.

Our target is for 40% of radio listeners to have RadioDNS services in 2014.





UK

Station	Location	Audience	Status
BBC Radio 1	UK	29,000k / week	Launched
BBC Radio 2	UK		Launched
BBC Radio 3	UK		Launched
BBC Radio 4	UK		Launched
Classic fm	UK	15,000k / week	Launched
Capital	UK#		Launched
Heart	UK#		Launched
XFM	London, Manchester		Launched
Kiss	UK#	13,000k / week	Launched
Bauer Local Stations	UK North		Launched













































UK

Information

The UK is the **most developed market** for RadioDNS (and DAB Radio)

We work closely with the **BBC**, **Global Radio**, **Bauer Radio**, **Digital Radio UK and RadioCentre** representing 80% of Radio Listening in the UK.

76% of radio listeners have RadioDNS services today.