

Twelfth General Assembly

12th February 2018 EBU, Geneva

General Assembly

14:00 - 17:00

https://radiodns.org/organisation/general-assembly/ga-feb-18/general-assembly/



Introductions

Walter Huijten, Chair



Welcome New Member

HYUNDAI

MOTOR GROUP



Agenda

Members' Business

2017 Review and Discussion

Coffee

2018 Plans & Discussion

https://radiodns.org/organisation/general-assembly/ga-feb-18/general-assembly/



Meeting Format

Round table / open-line

Interactive presentation / discussion

Honest, open, engaged

You are the "shareholders" of RadioDNS



Members' Business

Ben Poor, Secretary



Voting

For each vote we will ask

- All those who agree say "yes"
- All those who disagree say "no"



Vote

Do you approve the minutes of the **Eleventh**

General Assembly?

VOTE NOW



RadioDNS Accounts

Our accounts are **reviewed** each year by an independent chartered account.



As a small organisation we are exempt from **audit**, which would be disproportionately expensive.

View the accounts in full at

https://radiodns.org/organisation/general-assembly/ga-feb-18/general-assembly/



Accounts 2017

	2017	2016
Income	78,000	68,991
Costs	66,725	84,960
Surplus / (Deficit)	11,275	(15, <mark>923)</mark>



EUR 1.12 USD 1.38

AUD 1.77 NOK 11.01

CHF 1.29





2017 v 2016

Additional Members (Three New Members)	+£9k	Income Increase	+£9k
Cost of Staff (First full year of Project Director)	+£4k	Marketing, Education Costs (Reduced presence at RadioDays)	-£6k
Travel (More trips to USA)	+£6k	Software Development (2017 spend deferred to 2018)	-£8k
Legal Costs (End of trademark applications)	-£14k	Expenditure decrease	-£18k
		Total Change 2017 v 2016	+£27k



Balance Sheet

Opening Balance 2017	£19,443	£40,000 —	
Surplus 2017	£11,275	£20,000 —	
Closing Balance 2017	£30,718	£10,000 —————————————————————————————————	
		03	Funds

RadioDNS Limited is registered as a not-for-profit organisation, so does not pay tax on its normal activities, but cannot distribute its surplus to members.

In the event of RadioDNS being wound up, its assets must be transferred to an organisation pursuing the same aims as RadioDNS.



Vote

Do you approve the 2017 Accounts?

VOTE NOW



Steering Board Election

Travis Baxter (Bauer Media) resigned 18th Oct 2017

Steering Board decided to appoint a new member through election

Nomination period: 2nd - 30th January 2018

Election period: 31st January - 7th February 2018



Nominations

A **member** can nominate any individual to be a Steering Board member

That individual must act in the **best interests of the members of RadioDNS**

Legal requirements for a UK Company Director



Steering Board Election

One candidate:

Nacho Seirul-Lo, NXP Semiconductor

Nominated by: EBU

Sufficient votes received from members

Nacho is appointed to the RadioDNS Steering Board



Steering Board 2017

Review of Actions and Decisions



Steering Board Members 2017

Walter Huijten (Chair) NPO	Ben Poor (Secretary) EBU	
Travis Baxter (until 18/10) Bauer Media	Nicolas Bresou ma.radio	Kath Brown Commercial Radio Australia
Joe D'Angelo	Alexander Erk	John Farrell
Xperi Inc.	IRT for ARD	Frontier Silicon



Steering Board Meetings 2017

The board met 5 times:

SB25	28th March 2017
SB26	6th July 2017
SB27	2nd October 2017
SBx3 (Extraordinary Board)	13th November 2017
SB28	18th December 2017

https://radiodns.org/organisation/steering-board/steering-board-2017/steering-board-meetings-2017/





Technology Education Organisation





RadioDNS Technology

Technology Standards

Operating the DNS service

Providing Technical Support



Technical Standards

"Durable"

No changes to standards published in 2017

Wider implementation of standards has not exposed any significant problems

Changes to the SPI (RadioEPG) and Visual Slideshow (RadioVIS) standards are done in consultation with WorldDAB Technical Committee

Changes to the Lookup and SPI standards are awaiting publication



Technical Standards

List of requests to investigate technical standards

Renewed interest in formalising the RadioTAG standard

NPR (US, National Public Radio) have adopted SPI (TS 102 818) as their in-house metadata exchange standard

Technology Group now manages standards - Ben will report later



Operating the DNS service

Multiple cloud instances globally

99.99% uptime in 2017

3 hours outage on one server

Typical response time <50ms (same region)

Investigating performance, scaling and management improvements

Also operating hbbtvdns.org using DNSSEC



Operating the DNS service

All requests are validated

Change requests (switching DNS records from one service provider to another) are validated with the incoming service provider and broadcaster

>90% of valid change requests processed within 1 working day

Preferring registration requests by submitting URL to Sl.xml



Technical Support

One-on-one support for members

Helping with implementation and policy questions

Documentation (including HOWTO documents)

Ideas and hints - e.g. generating FM & DAB test signals

Identifying and fixing problems with implementations



Support Tools

SI Generator / Editor - si.radiodns.org

Test signals - audio streams and live DAB ETI streams for bench testing

Service testing tools - quick debugging

Utilities and library code - open source

Device testing platform - prerequisite for certification







Broadcasters

Manufacturers

Technology and Service Providers



Durable Interoperable



Broadcasters

"Publishing your content using our standards will give you the widest coverage of devices, and give you the freedom to switch between service providers

Require RadioDNS compliance from your service provider"



Manufacturers

"RadioDNS standards are durable, and interoperable, which means they will operate through the lifetime of your vehicles, and have no single point of failure"

Require RadioDNS compliance from your technology provider(s)".



Service and Technology Providers

"Supporting RadioDNS standards does not preclude you offering or acquiring content using other methods.

RadioDNS compliance testing only validates your implementation of RadioDNS"



RadioDNS in the chain Metadata & Content Licence **RadioDNS Technical Standards** Optional Optional Technology Service Hardware Broadcaster Manufacturer Provider Provider Provider **Receiver Compliance Service Compliance** Non RadioDNS **Test Point Test Point** Services / Content Only tests compliance Only tests compliance / Broadcasters of RadioDNS services of RadioDNS services



Shows and Conferences

Education in Person



RadioDNS In Real Life

Making the vision real and tangible

Showing devices, services

Interactive discussion

addressing business specific questions

Making new contacts















2017 Tour

NPR Metadata Summit Washington, February EBU Digital Radio Summit Geneva, February		ABU Digital Broadcast Summit Kuala Lumpur, March	
RadioDays Europe Amsterdam, March	NAB Show Las Vegas, April	Radioplayer Deutschland Hamburg, May	
RDS Forum	IBC	RadioAlive!	
Montreux, June	Amsterdam, September	Melbourne, October	
WorldDAB General Assembly Paris, November	CES Las Vegas, January	Dadia	
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Organisational Activity

- 1 Steering Board member resigned
- 1 Steering Board member elected

Technical Group established

Continued working closely with WorldDAB

Automotive User Experience Working Group

HRadio Project - supervisory role



Strategy Day 2017

Vision

"RadioDNS is the global standard for enhancing the experience of radio with additional functionality delivered using internet connectivity."



Strategy Day 2017

Five Year Goal

"RadioDNS is adopted as the standard for hybrid radio combining broadcast and IP in the majority of new connected cars in Europe and North America"



Strategy Day 2017

Objectives / Deliverables

Services delivered for the majority of radio listening in key countries, which are broader & better quality than those delivered by broadcast or IP alone.

Good quality implementations in the majority of (connected) vehicles, which offer a broader & better user experience than that delivered by broadcast or IP alone.

A variety of service & technology providers profitably supporting RadioDNS

Demonstrable value to all parts of the ecosystem, from broadcaster to listener.

To keep other market opportunities under regular review.



Strategy

Continuing discussion

Continue focus on Project Logo - a recognisable problem / solution "Pivot" from a technology-led pitch to a commercial / strategic pitch Improve our demonstration capabilities
Improve our support and testing tools





Membership

Members at start 2017	25	
Members resigned	0	
Members removed	1	
Members joined	1	
Members at start 2018	25	

Membership drive for 2018 planned - list of prospects has been drawn up



Coverage Growth

United States

Australia (Commercial Radio expanded)

Belgium (Commercial Radio added)

Ireland (Commercial Radio added)

Austria (Commercial Radio added)



DNS Entries

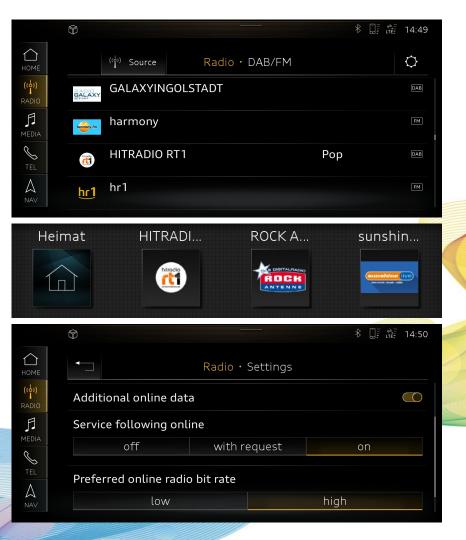
43% increase in FM radio stations

10% increase in DAB/DAB+ radio stations



The New Audi A8

The first production vehicle in the world to feature integrated RadioDNS functionality



Single station list navigation with accurate station logos

Automatically chooses the best way to listen

Single push presets

Always finds the station you want

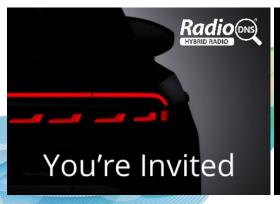
Automatic switching between broadcast radio and IP streaming

Continuous listening



Dedicated Marketing







You're invited to find out why Audi chose **RadioDNS** for its world-class hybrid radio implementation.

RadioDNS Hybrid Radio® creates a new experience of broadcast radio in the connected car. Our open standards are licence free, decentralized, durable and interoperable.

Find out more:

radiodns.org/audi

Ask questions: feedback@radiodns.org

RadioDNS is the not-for-profit membership organisation that promotes open standards for hybrid radio globally





features integrated RadioDNS Hybrid Radio

Open Standards for Hybrid Radio

Interoperable and durable

Perfectly aligned with DAB+

Enhanced visuals, metadata, interactivity

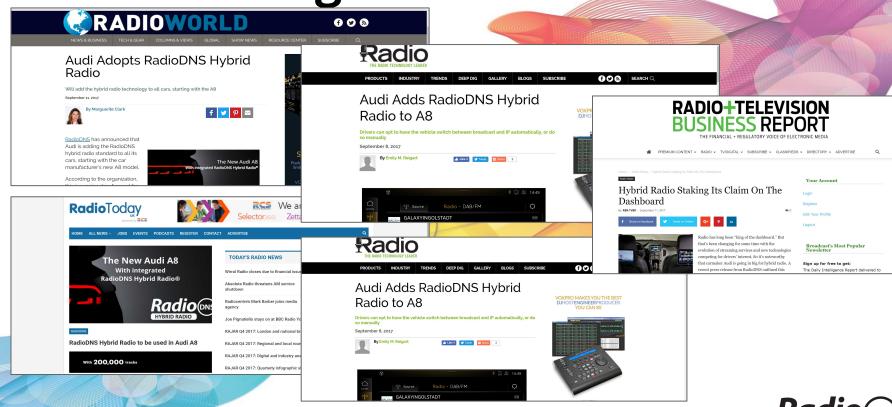
Automotive, Mobile, Home

radiodns.org





Press Coverage







Steering Board Decisions 2017

- 1. Signed agreement to provide DNS services to HbbTV
- 2. Created the Technical Group
- 3. Agreed to elect a new Director to the board
- 4. Removed one member due to unpaid fees
- 5. Agreed 2018 Plan and Budget
- 6. Renewed Project Director contract to January 2019



Voting

Do you approve the decisions of the **Steering**

Board in 2017?

VOTE NOW



Coffee Break

20 Minutes

SSID: RadioWeek WiFi Code: RadioActive



Plan for 2018

Strategy, Plan and Budget

SSID: RadioWeek WiFi Code: RadioActive



2018 Actions

Clearer communication

Focus on Automotive

Improve our **presentation**

Redesign / restructure website

Explain the benefit of RadioDNS Membership

More unique member benefits

Recruit new members



2018 Actions

Project Logo

Making it a radio and automotive industry **standard**

Launch Standard Licence

Launch Service Compliance Testing and Fault Reporting

Technology group

Publish changes to **Lookup** and **SPI** standards

Investigate new requirements

Grow Membership





Wider implementation in 2018



Project Logo

Specific requirement for more accurate radio station logos in the dashboard

Easy to explain to broadcasters and manufacturers

Easy to implement

Working in conjunction with WorldDAB





Implementation

Sufficient **coverage** to be viable

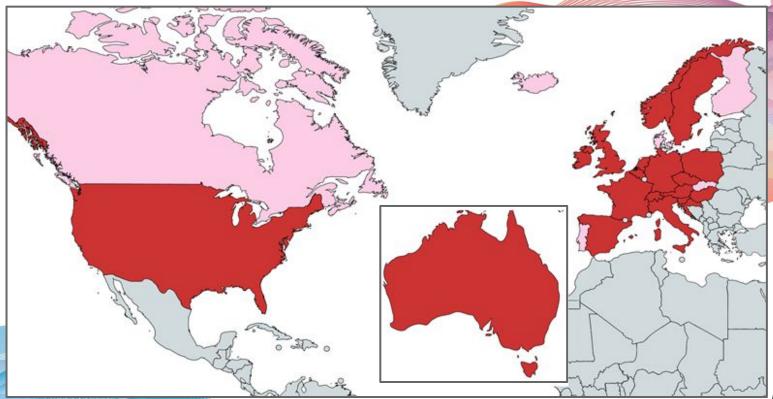
 Using RadioDNS does not prevent "fallback approaches" where RadioDNS / DAB SPI is not available

Logos (metadata) need to be licensed

Implementations (Service Providers and Technology Providers) need to be compliant



Coverage





Proposal to Industry

RadioDNS, EBU, WorldDAB will

provide practical support to allow all broadcasters to participate

Automotive Industry will

work with their technology suppliers to become Project Logo compliant (RadioDNS and / or DAB SPI)

Meetings with manufacturers and ACEA (European Automotive Manufacturers Association)



Standard Licence

Clarity for broadcasters and manufacturers



Principles

Licence enforces technical compliance and implementation compliance

Broadcasters provide metadata for free

Manufacturers must use it correctly, as defined in the Implementation Guidelines

Licence agreement is **implicit** by use

Broadcasters must include a link to the licence in their SI file

Broadcasters can use a **bespoke licence** but manufacturers may not want to incur costs to review / sign if the content isn't of sufficient value



Standard Licence

RadioDNS will create the a **standard licence** and make it publicly available on a permanent URL on our website

Similar in style to a **Creative Commons** licence

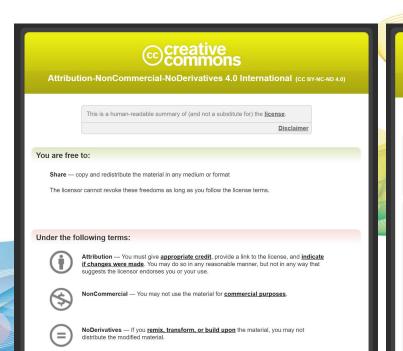
RadioDNS will **not be a party** to the licence

Our drafting of the licence is being informed by real-world discussions with broadcasters and manufacturers.



Creative Commons

"Human Readable" and "Legal Text" versions



cc creative commons

Attribution-NonCommercial-NoDerivatives 4.0 International

Official translations of this license are available in other languages.

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Compliance and Certification

Verifying RadioDN\$ Implementations



RadioDNS in the chain Metadata & Content Licence **RadioDNS Technical Standards** Optional Optional Technology Service Hardware Broadcaster Manufacturer Provider Provider Provider **Receiver Compliance Service Compliance** Non RadioDNS **Test Point Test Point** Services / Content Only tests compliance Only tests compliance / Broadcasters of RadioDNS services of RadioDNS services



Compliance Testing

Operational **now:**

Technology testing (Core, Visuals, EPG)

In **2018**:

Service testing

Fault reporting





Test and Development Platform

Current Client (change)
Revo PiXiS RS (NP Test) (0.01)

Passes 62 Failures 1 Incomplete 1

Radio DNS Core

CODE 14

CORE-3B

DNS CNAME resolution based on received PI code	pass	Perform Test
CORE-1B DNS CNAME resolution based on received ECC matching a previously calculated value	pass	Perform Test
CORE-1C DNS CNAME resolution based on received ECC not matching a previously calculated value	pass	Perform Test
CORE-2 Repeating DNS CNAME resolution when PI code changes	pass	Perform Test
CORE-3A DNS SRV resolution for RadioVIS application (HTTP transport)	pass	Perform Test

untested

Technology Certification

Tests validate the **end-experience**, the intermediate processes are not investigated

Issued to a **specific** (device + firmware) version

Only tests compliance with RadioDNS functionality

If a radio station is providing **RadioDNS** services, they must be presented to the end-user in accordance with the specifications, the guidelines and the licence.



Service Certification

Launching in 2018, similar approach to Technology certification

Tests validate the **service presentation** for compliance with the standards

Issued to a **specific** platform version

Only tests compliance with RadioDNS functionality



Fault Reporting

Additional functionality to Service testing

Allows a manufacturer/technology provider to investigate why something is wrong

If it's a service provision failure, report it directly to the service provider

Saving time and money chasing problems



Trademarks

We will issue **Trademark Licenses** to organisations

Trademark Licence will allow use only on products holding a validation certificate

Currently only **members** can use the Test and Demonstration platform, and therefore use trademarks

We are telling broadcasters and manufacturers to look for RadioDNS compliance



Membership

Growing in 2018



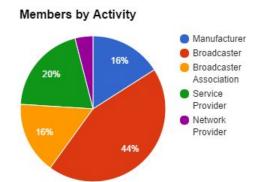
Membership

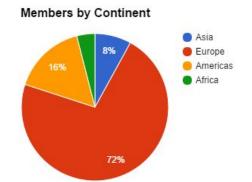
We are **entirely** funded by our members

Currently (2018)

Target (start 2019) 27 Members

25 Members







Unique Member Benefits

Project Office support will be prioritised to members

The Technical Group will only be accessible to members.

Testing tools will only available to members

The fault checking and reporting service

Certification and trademark licensing

We will charge for non-members to attend our events (except in exceptional circumstances)



Staying Open

Technical standards

The SI construction tool, and a basic "monitoring" tool

HOWTO documents on technical implementation

Presentations materials that we have used publicly

Minutes of Steering Board and General Assembly meetings

Code under recognised open source licences

Market data about the rollout of RadioDNS services



2018 Tour

EBU Digital Radio Summit Geneva, February	ABU Digital Broadcast Summit Kuala Lumpur, March	RadioDays Europe Vienna, March
NAB Show	RDS Forum	IBC
Las Vegas, April	Montreux, June	Amsterdam, September
WorldDAB General Assembly November	CES Las Vegas, January 2019	

(Events to be confirmed)



Budget 2018

Funding our Plans



Budget 2018

No change in membership fee in 2018

Increase our spend on education / marketing

Significant investment in developing testing tools

Option to add project administration support



Budget 2018

Opening Bank Account	£30,734		
Memberships (27)	£79,000		
HbbTV Revenue + other	£6,000		
Income	£87,000		
Project Office	£38,000		
Web Hosting	£ 500		
Web Hosting	E 300		

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Bank / Financial	£ 1,500		
Bad Debts / Unpaid Fees	£ 3,000		
Events and Marketing	£ 27,300		
Test and Demo Platform	£ 16,000		
Legal	£ 8,500		
Deficit 2017	(£10,700)		
Closing Bank Account	£20,034		



2018 Budget v 2017 Actual

	2018 Budget	2017 Actual
Income	£87,000	£78,000
Operations	£43,000	£37,538
Hosting & Technology	£2,900	£2,285
Marketing	£27,300	£22,272
Legal	£8,500	£2,041
Projects	£16,000	-
Surplus / (Deficit)	(£10,700)	£13,655



Technical Group

RadioDNS General Assembly 2018
Ben Poor, TG Chair



Overview

New group within RadioDNS

Formed from within RadioDNS membership, but can invite external observers/experts

Successor to **Application Teams**, which have successfully developed and pushed standards work

Responsible for all technical development of standards, and related work.

Not responsible for technical operational matters, e.g. running DNS servers

"Creating an open and transparent process for technical standards"



Terms of Reference

Defined by the Steering Board (SB)

- Creating and defining the terms of reference of Project Teams (PT);
- 2. Overseeing the work of the PTs to ensure they adhere to the processes and their terms of reference;
- 3. Managing the relevant standards based on outputs from PTs.
- 4. Promoting and facilitating communication on project progress and other technical matters between members, PTs and the SB.
- 5. Increasing member engagement on technical matters and their involvement in technical developments.



Project Teams

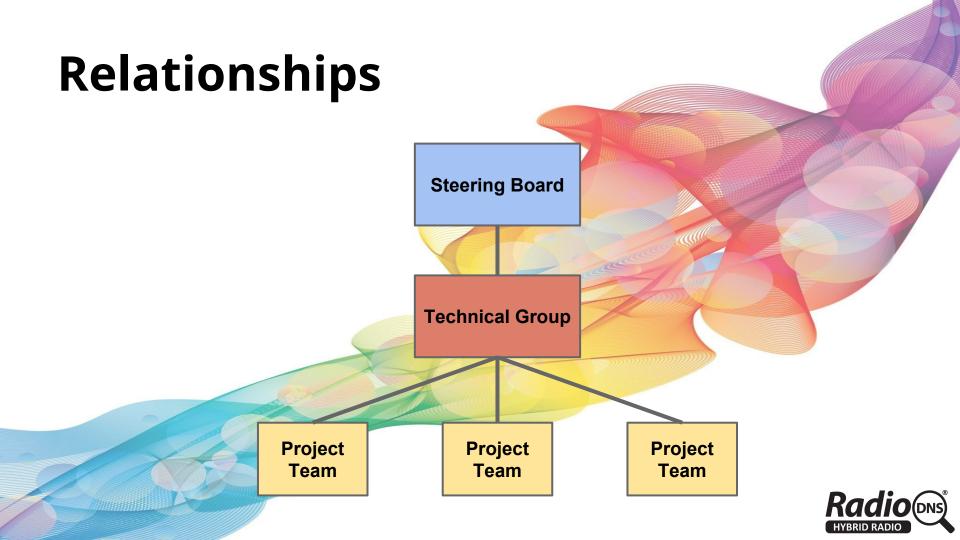
Created by the Technical Group to undertake specific packages of work

Timebound, defined, deliverables - not ongoing discussion groups

Vehicles for the delivery of technical and standards work within RadioDNS

Reports back to the Technical Group





Objectives

Transparency, Predictability, Visibility

A view of past, current and proposed work

Timetable of activities for the next 12 months

A public page giving details of the technical activities of the TG

Regular meetings

Clear separation between the Steering Board and the Technical Group



Formation

October 2017: Proposal made to the SB (SB26/6b)

November 2017: Approved by the SB (EBM)

December 2017: Call for participants, Election for Chair/Vice-Chair, Chair approved by SB, Vice-Chair left absent for 2018

January 2018: First meeting of the TG



Current Membership

















Workplan Development

	Specification (if applicable	Proposer	Title	Summary	Priority	Complexity	Assigned	Proposed Delivery
	1 ETSI TS 102 818 (Hybrid SPI)	RadioDNS	GeoRSS XSD Fixes	Previous versions of the specification incorrectly linked to the 1.1 GeoRSS XSD URL, using the 1.0 namespace. This was fine at publication time as this pointed to the 1.0 XSD. However, they have since restructured their websits and have now corrected this, causing some validation errors in some parsers.	10,710	LOW	Andy Buckingham Ben Poor	April 2
_	2 ETSI TS 102 818 (Hybrid SPI)	NPR	Contributors and Creators	A fix would be to ensure that the 1.0 namespace is using the 1.0 XSD. Future updates would take this to 1.1. Define production, contribution, creation taps against	LOW	MEDIUM		
				individual programmes for data exchange purposes	1111			
	3 ETSI TS 102 818 (Hybrid SPI)	Audi	Phonemes	Define metadata for phonemes and graphemes in various languages and phonetic schema.	HIGH	MEDIUM	Andy Buckingham	June 2
	4 ETSI TS 102 818 (Hybrid SPI)	TBC	Service Language	Add language indicators for a service, to indicate that a service is either wholly in one language or has a mix of main languages. This should indicate the general service language, and can be overriden by individual programmes.	LOW	LOW		
	5 ETSI TS XXX XXX (Tagging and Bookmarking)	RadioDNS	Bookmarking and Tagging specification	Compiter and publish the specification document for bookmarking and tagging a radio service. A mature draft is in circulation, with some detailed comments from members of the Steering Board that will need to be addressed. This is linked to the CPA specification (ETS) 13 100 407) that defines the methods of authentication or devices.	MEDIUM	HIGH	Daisuke Ozaki Andy Buckingham Ben Poor	June 2
	6 ETSI TS 103 407 (CPA)	TBC	CPA for Voice Control devices	Extensions to the specification to allow for CPA on voice control only devices, or more detailed guidance on pairing a visual console (e.g. smartphone) with such a device to allow CPA to work.	DESCOPED			
	7 ETSI TS 103 270 (RadioDNS Lookup)	RadioDNS	Client API Key	Guidance on providing an authorisation key for RadioDNS services in order to authorise/customise the response. Particularly applicable for the implementation of 'trusted' relationships for SPI data.	HIGH	LOW	Ben Poor	April 2
	8 N/A	TG	Technical Group working platform	Define and implement a working platform for the group that would assist the communication and implementation of technical projects. This should include: workspace for documentation, forum for discussions. SCM for code and working documents, calendar for meetings, issue tracking and collision. Obes to members of the TG only.	MEDIUM	MEDIUM	Ben Poor	September 2
	9 ETSI TS 101 499 (Hybrid Slideshow)	TBC	Clarification on CategorylD/SlideID	Clarification is required on the format of CategorylD and SlideID for visuals over IP, carrying this information in HTTP or Stomp headers.	LOW	LOW		
•	IO ETSI TS 102 818 (Hybrid SPI)	EBU poor@ebu.ch	Hybrid Data Platform	Participation in an opensource collaborative reference platform for Hybrid SPI, alonside EBU, IRT and others.	DESCOPED			
	11 ETSI TS 102 818 (Hybrid SPI)	TBC	Mutiple term declarations	Clarification and definition on how multiple terms and licenses can be carried within the SPI data and how these should be interpreted by clients.	MEDIUM	LOW		
-	12 ETSI TS 103 270 (RadioDNS Lookup)	TBC	Bearer definitions for HD to support multicast channels (e.g. HD-2)	Extension of the bearer definitions for the HD radio platform to support multicast channels.	LOW	LOW		
3	13 ETSI TS 102 818 (Hybrid SPI)	RadioDNS	Cascading term declarations	Adding the ability to define a term override on a per-service level, to cope with individual services having more restrictive licensing that the service provider.	MEDIUM	LOW		
	ETSI TS 102 818 (Hybrid SPI)	RadioDNS TG	SPI extensibility	An investigation into the current extensibility of the SPI, and whether additional functionality can be easily added to the document. Should assess how further extension can maintain usability, and how different use cases can be accomplished.	HIGH	нан	Ben Poor	October :

16 existing tasks

2 descoped

Rest classified:

- PRIORITY
- COMPLEXITY



Priorities

XSD Schema Fixes (SPI)

Client API Key (Radio DNS Lookup)

Phoneme Support (SPI)

Work for these is largely done, but needs to be verified and tested

Proposals for Project Teams received, Suggested delivery dates April - June 2018

Additional Tasks

Tagging and Bookmarking Specification

Recent updated draft document, needs review and verification

Technical Group Working Platform

A simple platform for TG collaboration (issue management, document management, workspace)



Next Steps

- Project Team Kickoff
- 2. Workplan Completed
- 3. Calendar of activities established
- 4. Standards work submitted



Get Involved!

We would welcome additional members

Open to suggestions for additional work, projects, ideas

Your chance to shape the technical work that RadioDNS does





Any Other Business

Discussion



Close of the Twelfth General Assembly

Drinks and Networking

