





## DAB+ Digital Radio - Technical Workshop New developments for DAB+ systems

18-20 July 2023, 08:00-09:30 UTC / 16:00-17:30 MYT / 09:00-10:30 BST

**Moderator: Dr Les Sabel** 

## Day 1-18 July - The business case

08:00	Opening remarks
	Ms Bernie O'Neill, Project Director, WorldDAB
	Dr Veysel Binbay, Director of ABU Technology & Innovation, Asia-Pacific
	Broadcasting Union
	Dr Adnan Salhab, Head of the Technical Training Department, Arab State
	Broadcasting Union (ASBU)
08:10	Economics, environment, emergency – the business case for DAB+
	Mr Patrick Hannon, President, WorldDAB
08:25	DAB+ technical update
	Updates to the DAB+ standards for ABU and ASBU regions
	Mr Lindsay Cornell, Principal Systems Architect, BBC Digital (Chair, WorldDAB
	Technical Committee)
08:40	Distributing radio: Broadcast, IP or 5G?
	How can 5G be used for broadcast distribution?
	Dr Les Sabel, Chair, WorldDAB APAC Technical Group
09:00	Use case: DAB+ for national emergency warning
	Case study: Germany
	<ul> <li>Why and how should DAB+ be used?</li> </ul>
	Issues to be resolved
	Mr Carsten Zorger, Director, Digitalradio Büro Deutschland
	Mr Andreas Gorsak, Project Consultant, Emergency Warning Systems, Digitalradio
	Deutschland e.V.
09:20	Q&A
09:30	Close
	l .







## Day 2–19 July - Getting started

08:00	Introduction
08:05	DAB+ system features
	Basic and advanced features
	Receivers
	Hybrid radio
	Dr Les Sabel, Chair, WorldDAB APAC Technical Group
08:15	DAB+ headend systems
	Encoding and multiplexing options
	Case study examples
	Mr Wolfgang Peters, Managing Director, AVT Audio Video Technologies, Germany
08:30	DAB+ transmission
	Transmitter input to antenna output
	Monitoring
	Mr Alexander Kurz, Sales Director–DACH & CEE, GatesAir
08:50	Initial DAB+ steps (Panel session)
	Outline of first steps towards establishing DAB+
	What needs to be done – commercial / regulatory
	What needs to be done – technically – equipment and measurements
	Discussion on issues, pitfalls, and roadblock resolution, transitioning from
	trials/demonstrations to regular services
	Moderator: Dr Les Sabel, Chair, WorldDAB APAC Technical Group
	Mr Dave Cherry, Radio Broadcast Consultant, Dave Cherry Consulting, South  Africa:
	Africa  Ms Orașri Srizasa Division Director NRTC Thailand
	Ms Orasri Srirasa, Division Director, NBTC, Thailand     Mr Kamel Hai Ammar, Director of Commercial Affairs, ONT, Tunisia
00.20	Mr Kamel Haj Ammar, Director of Commercial Affairs, ONT, Tunisia
09:20	Q&A
09:30	Close







## Day 3-20 July - Building out the network

08:00	Introduction
08:05	<ul> <li>DAB+ network design</li> <li>Coverage requirements and field strength reference levels</li> <li>When to use MFN vs SFN</li> <li>Mr Jerome Hirigoyen, Head of Business Development and International Broadcasting, TDF</li> </ul>
08:20	<ul> <li>DAB+ network implementation</li> <li>High power vs low tower implementations</li> <li>Mr Hanns Wolter, Technical Director, DAB Italia (Chair, WorldDAB Spectrum &amp; Network Implementation Committee)</li> </ul>
08:35	<ul> <li>Small-scale DAB</li> <li>What is small-scale DAB?</li> <li>How and why, it fits into the DAB+ ecosystem</li> <li>Dr Lawrie Hallett, Operations Director, Future Digital Norfolk</li> </ul>
08:50	<ul> <li>DAB+ measurements and monitoring (Panel session)</li> <li>Discussion on the various aspects from implementation to operations</li> <li>Systems performance measurement for system commissioning</li> <li>Field testing for coverage verification including antenna performance</li> <li>On-going network operations</li> <li>Mr Hanns Wolter, Technical Director, DAB Italia (Chair, WorldDAB Spectrum &amp; Network Implementation Committee)</li> <li>Mr Christian Strøm, Broadcast System Architect, Telenor Norge AS, Norway</li> <li>Mr Kenny Skillen, Head of Engineering – Media &amp; Broadcast Platforms, Arqiva, UK</li> </ul>
9:10	Q&A
9:20	Workshop closing remarks  Ms Bernie O'Neill, Project Director, WorldDAB  Dr Veysel Binbay, Director of ABU Technology & Innovation, Asia-Pacific  Broadcasting Union  Dr Adnan Salhab, Head of the Technical Training Department, Arab States  Broadcasting Union (ASBU)
9:30	Close