

Eureka!

ISSUE 7 • SEPTEMBER 2008

REACHING OUT TO THE WORLDDMB COMMUNITY

The Harmonised Eureka 147 Digital Radio Receiver

One of the consequences of modern consumer electronics is that technical standards do not remain fixed for long. WorldDMB has responded by evolving the original DAB platform into DAB+ and adding DMB for mobile video, the “Eureka 147 Family of Standards”. Countries around the world are free to choose whichever version of the family suits their regulation and broadcasters’ visions of the future. For example, a Korean or Chinese multiplex might carry two DMB mobile TV channels alongside several DAB radio services – using exactly the same DAB standard used in the UK, Denmark and Singapore. Meanwhile, Switzerland will combine DAB and DAB+, and French digital radio will use DMB. Germany and Italy expect to use all three!

Although they all have a common core, manufacturing a universal receiver to decode the audio services is still a major technological challenge. This is an issue in Europe where a highly mobile population expects interoperability of all consumer electronics across the continent. The pan-European car industry cannot be expected to install myriad digital radio equipment on a country by country basis.

In June, the regulators and broadcasters of France, UK and Germany asked WorldDMB to work with manufacturers to create a set of “Receiver Profiles” to ensure receivers work in any country regardless of the choice of DAB, DAB+ or DMB. Working with the EBU and EICTA (the European consumer electronics association), silicon manufacturers and others, WorldDMB’s

“Receiver Profiles Task Force” examined the technical compatibility issues to produce a set of recommendations designed to create harmonised and interoperable radio receivers.

But why is receiver compatibility such a problem? The answer is not easy. Just because a receiver chip can decode DAB or DAB+ doesn’t mean it can automatically decode DMB, or for that matter EPG and Slideshow, and vice versa. The result is a variety of receivers which will only work in a handful of countries. Chipsets are optimised to perform specific tasks and unless a feature is mandatory, manufacturers will not add cost with unnecessary processing power, unused chip memory or decoders with higher patent royalties. Silicon vendors have invested heavily in developing and evolving the millions of successful DAB chipsets on the market today and cannot be expected to now embark on completely new chipsets and receiver modules. The reality is that receiver capability and silicon evolution go hand in hand.

Adding the necessary video decoding for DMB to an existing DAB/DAB+ chip is not a trivial matter. The architecture of a DMB receiver is very different and there are additional IPR costs. Similarly, making a screen display text, graphics and still pictures is not the same as rendering motion video. These complex manufacturing issues have to be set against the reality of consumer behaviour, market demand, and of course the current economic circumstances.

The universal desire for a successful digital radio market has been at the

heart of the “Receiver Profiles” work. Its aim was to gain agreement between manufacturers and broadcasters on core features and functions, defined in a series of Profiles for three classes of receiver. For example a mass market audio-only receiver doesn’t need a colour screen, but should tune and decode DAB, DAB+ and the audio component of DMB in a seamless and consistent way. At the other end of the scale, a fully functioned multimedia receiver, such as a PMP device, should arguably be capable of decoding all the Eureka 147 Family features. In between is a receiver likely to have a colour screen for still pictures and graphics yet capable of being manufactured at mass market prices.

Achieving widespread agreement on these receiver profiles through the Task Force is a major leap towards a truly harmonised digital radio market. It will enable broadcasters to adopt the Eureka 147 standards with greater confidence and remove a major barrier for car manufacturers. Not every type of receiver will be immediately relevant to each country, but with broadcasters and manufacturers willing to see the wider picture, the future for digital radio will be more assured for everyone.

If you’d like to learn more about the Receiver Profiles project and are attending IBC, come along and see the WorldDMB team on the EBU’s stand, number 10.D21.

Quentin Howard
President, WorldDMB Forum

Beijing makes broadcasting history, see page 6



New product launches on pages 8 – 9



Spotlight on IBC, page 11



WORLD
DMB

Frontier Silicon develops multi-region receiver module

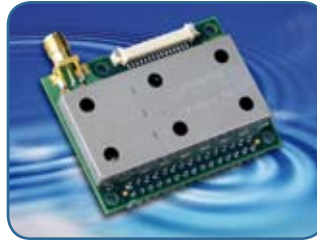
The Eureka 147 family of standards for digital radio and multimedia has grown and developed substantially over the past few years. Different markets have different priorities for digital radio and receiver manufacturers are finding themselves faced with a rigorous set of requirements for ensuring their products interoperate across all territories.

To address the market need for a solution that supports multiple standards, Frontier Silicon announced the first low-cost unified digital radio receiver module in June.

The solution has been designed to work with all existing Band III and L-Band digital radio standards for Europe and Asia, it will support DAB, DAB+, DMB Audio as well as FM-RDS radio. The new product will be based on the existing Venice 5.1 module as a drop-in replacement for any manufacturers using Venice 5, which provides the foundation to the vast

majority of current DAB radios. As with all Frontier Silicon audio modules, it will include all interfaces necessary for a fully-functional product, needing only power supply, display, keypad, audio amplifier and speakers to complete a radio. The new module will be available for volume production by the end of 2008.

Commenting on the announcement, Frontier Silicon's CEO, Anthony Sethill said: "Globally, the market has now entered a phase where flexibility is required to address the diverse standards requirements of each country – for example, the UK is driven by enhanced audio content delivered through DAB, whereas rich media content based on DMB is a priority for France, and Australia requires bandwidth optimisation using



DAB+. With Frontier's unified receiver solution in their products, manufacturers will be strongly placed to address broadcasters' needs in each country, regardless of any variant chosen". With more countries announcing frameworks for digital radio by the month, the new module reaches the market in time for manufacturers to realise significant economies of scale, enhanced functionality and rationalised international distribution for new and existing audio products.

By Mark Hopgood,
Frontier Silicon

Swedes report on the Future of Radio

After three years and two interim reports, the Swedish Radio and TV Authority (RTVV) has now submitted its final report on the Future of Radio. The document was put forward to the Swedish government and the Minister of Culture, Lena Adelsohn Liljeroth, at the end of June and brings together the views of the Swedish radio industry.

Their consensus is that it is important for radio to continue developing, and that at some point the technology should go entirely digital. When considering the different platforms and standards

available, the industry has concluded that DAB+ is their preferred solution. In the past, Sweden has carried out numerous broadcasts based on the DAB standard, but DAB+ is deemed even more attractive due to the increased number of channels that can be broadcast. With the frequencies that are available in Sweden today, the country could broadcast a total of 80 DAB+ nationwide radio services.

All broadcasters who gave their views for the report felt that the ability to offer a greater choice of channels would make the medium more likely to appeal to

consumers. This is backed up by research that indicated that 45% of Swedish radio listeners wanted more stations and new functions from their radios.

To date, the report has only been published in Swedish, but a full translation into English is expected to become available during September and will appear on the website www.rttv.se.

By Per Gunnarsson,
Teracom AB

Norway backs DMB for mobile TV

The three biggest broadcasters in Norway, NRK, TV 2 and MTG, have set up their own company in order to launch mobile TV via DMB this winter. The initial offering will consist of nine live TV channels, on demand content and other

related services. Broadcasts will start in greater Oslo, an area covering 30% of the Norwegian population.

Gunnar Garfors, Director of Development at NRK, says: "This marks the start of real

mobile TV. This is not about 'mobile phone TV' it is about mobile TV that can be received by other devices too. Our goal is to make mobile TV widely available, easy to use and free of charge".

UK considers analogue switch-off

The UK Government has been called on to agree a clear plan for the migration of radio from analogue to DAB. This recommendation forms part of the Digital Radio Working Group's (DRWG) interim report. The DRWG was set up to present recommendations to Government and Ofcom to help secure the future of digital radio in the UK. They were asked to consider what conditions would need to be achieved before digital platforms could become the predominant means of delivering radio. The Group includes representatives from the radio industry, manufacturers, consumer groups and Government.

The interim report, published in June 2008, set out a number of provisional recommendations which reflect the work of the DRWG in its first phase. The key findings of the report are as follows:

- Radio needs a digital future if it is to remain relevant to listeners, particularly younger listeners
- Whilst delivery of radio on multiple platforms is likely to be a necessity for the foreseeable future, it is not sustainable for the industry to indefinitely fund transmission on two broadcast specific platforms

- As the UK already has a well developed DAB market, with over 7.3 million sets sold to date, the DRWG believe it is currently the most appropriate replacement for analogue

- The long term aspiration should be for all radio to go digital. However, in the case of community and small commercial stations analogue remains the most effective, and cheapest, way of delivering radio to small geographic areas

- While a solution for smaller stations must be found it is unlikely that any such solution can be achieved in a timeframe which addresses the current needs of the sector. Therefore the Group believes that, at least in the medium term, the radio landscape should be a mixed ecology with all national and large local services carried on DAB and all small and community stations on FM. This would allow the MW frequencies to be reallocated for other uses

- The transition to this mixed ecology should be through a Government and industry led migration plan

- The point of migration should be triggered by the satisfaction of two key criteria. First the level of total radio listening



Photo courtesy Arqiva

to DAB. Secondly, an agreed level of current and planned DAB coverage. The DRWG believes the intention should be to meet the migration criteria between 2012 and 2015 with migration completed by 2020.

The DRWG is now entering the second phase of its work with a view to better understanding how the industry can meet the migration criteria, how migration should be implemented and what the impact will be on consumers. The DRWG is due to submit its final report by the end of this year.

By Barry Cox,
Digital Radio Working Group

Update on Malta's DAB+ trials

In the last edition of Eureka! Sergio D'Amico from Digi B Network reported on the start of DAB+ trials in Malta. Since then, the Maltese Broadcasting Authority has confirmed that a range of stations

can commence regular transmissions on 1st October 2008. To date this approval encompasses the simulcast of 11 national analogue stations, one community station and the rebroadcasting of 36 foreign

digital radio stations. It is also expected that new content will become available at, or soon after, the October launch.

Telematics Munich 2008 6-7 November, Munich, Germany

Telematics Munich 2008 is set to be the biggest European Telematics conference & exhibition of the year. With an impressive top speaker line-up including **BMW, Panasonic, Telenor, Nissan, Garmin, Blaupunkt, and Volvo**, this is an event NOT to be missed.

*** Want to get in on the action? Visit www.telematicsmunich.com**

For more information contact Precksha Saksena on + 44 (0) 207 375 7198 or precksha@telematicsupdate.com.

The show will sell out! Book your place now at www.telematicsmunich.com/register and quote "Partner1440" to receive your **€350 discount**

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Italian Technical Table leads to new draft regulation

Regulating towards a digital radio market was started by the Italian Communications Authority (AGCOM) in March 2005. Although a lack of Band III spectrum hampered further immediate developments, early 2008 saw positive progress. At the request of the radio broadcasting sector, AGCOM launched a technical table in conjunction with the major associations to discuss the revision of the existing regulation. The results of the GE06 conference, the implementation of the new frequency plan and the transition to digital TV are all now making the launch of Eureka 147 digital radio possible in Italy.

In order to understand the impact of the GE06 plan and the real spectrum needs, a case study was carried out by a subgroup of AGCOM which looked at Sardinia, the first all-digital area in Italy. The results of the case study clearly showed that a transition to digital radio in Band III would be possible if the GE06 plan were implemented.

After various meetings and analysis of the subgroup results, AGCOM has announced that it will present new draft regulation to radio operators this September. It is expected that this will include a number of innovations. National, regional and local networks are all likely to be allocated in Band III and in some critical areas, where there is sufficient demand and no other option, L-Band spectrum may be allocated. The primary coding technologies are likely to be DAB+ and DMB, making possible additional services such as Visual Radio. The first areas expected to launch are the analogue switch-off areas of Sardinia and the Aosta Valley. These are moving to digital-only TV in Autumn 2008.

Italy is supportive of the call for a harmonised European receiver profile.



Until such a time that these universal products become available, the Italian radio industry and regulators are considering the possibility of discouraging the sale of DAB receivers in order to avoid creating consumer confusion.

By Hanns Wolter,
Club DAB Italia

B20. B WITH YOU

Enjoy around the world

B20's external antenna is designed to receive all DAB frequency basebands (L-Band/Band-3) in any country around the world. You can receive FM, DAB+, or DMB programs in almost all regions around the world, if you simply touch the "receiving area" button to receive the frequency of baseband signal of your choice in any country you are traveling in. (40 countries)

Receive digital datacasting programs

It provides DLS services to help you obtain the information about the title of the song you are listening on DAB/DMB, the artist, album information, studio photos, album jacket pictures, and slideshows.
* Europe : Supports EPG(electronic program guide).

Powerful external antenna + Earphone antenna

B20's powerful external antenna and earphone antenna make it possible to enjoy clear sounds and video images under all circumstances.

Internal speaker

It equipped with speakers will make it possible for everyone around to enjoy sounds of mini-digital devices. It will give a new kind of pleasure, as it will allow many people to enjoy the sounds, even during outdoor activities.

Podcast : Enjoy content from all over the World Wide Web with the Podcast Ready service. (Podcastready.com)



WORLD WIDE PLAYER Enhanced Digital Radio+TV Multimedia Player

B20 adopts dual-band antenna covering all place where Digital radio and DMB services are offered. iRiver's core competence in multimedia area and enough experience with DMB technology makes B20 more pleasurable than any other device.



Digital radio goes green



PURE ONE Mini

Consumers across the world are becoming increasingly environmentally aware and a new breed of DAB digital radios is ready to tap into this ever-expanding green market.

Leader of the pack is PURE Digital, who have recently got seven of their digital radios endorsed by the Energy Saving Trust. To earn this status, the products had to satisfy an independent panel of experts and meet strict criteria; using less than 1W power in standby mode and 3.5W while active. This makes them good for the environment and also cheaper to run. Tamara Mauro, spokesperson for the Energy Saving Trust, said: "The Energy Saving Recommended logo is a widely recognised benchmark for excellence in energy efficiency and highlights the most energy efficient products in the marketplace. We urge other manufacturers to follow PURE's lead and get their products accredited in order to give consumers more energy efficient options."

The seven radios that can use the logo are: PURE Move, EVOKE-1S; Siesta; Chronos II; TEMPUS-1S; ONE Mini and ONE Elite. PURE also has its own 'green' initiative, EcoPlus™: a growing range of fifteen products with reduced power consumption, packaging materials from recycled and sustainable sources and components selected to minimise their environmental impact.

Roberts Radio have also made a move to reduce the toll on the environment, with their new solarDAB. A first of its kind, this portable radio has a large solar panel which absorbs sunlight and charges the built-in battery pack. Once fully charged, the radio can then run for up to 27 hours. And if the sun's no longer shining when the battery life is coming to an end, the radio can also be recharged by a conventional mains adaptor. It's available in a choice of colours (white, black, red, green or pink) and its launch has been supported by extensive on air and newspaper advertising in the UK.

Roberts SolarDAB



Another eco-friendly product comes from Freeplay Energy. They're the company that developed the world's first wind-up radio in 1996 after being inspired by inventor Trevor Baylis. Freeplay have now extended their range of self-powered products to include DAB digital radio. The Freeplay Devo (named after a young Burundian refugee) can be powered in a variety of different ways. It can run off mains electricity or the built-in rechargeable battery, which gives 6 hours DAB listening from a full charge. Or if you want to burn some calories, you can wind the handle and convert 74% of your own kinetic energy into electricity for the radio. When reviewed by the UK's Telegraph newspaper, the product was deemed to be "Ideal for those who love their gadgets as much as the planet".



Freeplay Devo

Despite some people believing that DAB digital radio does not yet count as one of the most power-efficient of technologies, the above developments show that it can become more environmentally friendly. Manufacturers are always keen to innovate and find as many ways as possible to answer the changing needs of consumers. As a result, it's highly likely that we'll soon see the launch of even more products that give listeners an opportunity to cut down on using the earth's resources and therefore find guilt-free ways of listening to digital radio.

For more information on products please visit www.worlddab.org.



Beijing creates Broadcasting History

On 08/08/08 Beijing made broadcasting history when it opened the 29th modern Olympic Games and the very first digital Olympics. For the duration of the Games, Beijing Jolon Digital Media Broadcasting Co is offering a range of mobile TV and radio services based on the Eureka 147 family of standards.

Spectators, participants and organisers can use their DMB devices to receive four special mobile TV channels, packed full of Olympic content:

- **CCTV-1** provides an overview of the Olympics with news round-ups and

coverage of sports such as: swimming, diving, weightlifting, athletics, football, basketball, volleyball and synchronised swimming.

- **CCTV-2** mainly carries coverage of sports which are of interest to Chinese audiences like football, basketball, volleyball, archery, rhythmic gymnastics, equestrian, sailing and also judo, wrestling, taekwondo, rowing and canoeing. For the duration of the Games this channel is available live, on a 24-hour basis.

- **CCTV-5** (The Olympic Channel) highlights the events in which Chinese

athletes are participating: shooting, gymnastics, table tennis, badminton, athletics, swimming. This content will be supplemented with football, basketball, volleyball and fencing.

- **CCTV-7** this channel already enjoys high coverage and ratings in China's rural areas. Its content is added to with special Olympic broadcasts and replays of top-level competitions for those in rural areas.

In addition to the TV channels, consumers can also access around 15 DAB digital radio services in the Beijing area. These include services from Beijing People's Radio and China Radio International.

The market for DAB/DMB devices is already well established in China: numerous retailers stock a broad range of products, primarily from domestic Chinese manufacturers. Receivers available to buy include mobile phones, PMPs, GPS devices and USB adaptors. And with 150,000 products already in use around the Beijing area, the first digital Olympics should find that it attracts healthy audience levels.



Looking Ahead to MODIBEC

The EU-funded MODIBEC project will hold its China National Event on 27- 28 October 2008 in Beijing.

This conference paves the way towards greater EU-China collaboration in the field of digital broadcasting technologies – especially the convergence with mobile communications. Workshops and panel discussions will cover:

- The convergence of Mobile Broadcasting and Telecoms
- In car applications
- Interactive Broadcast Services
- Opportunities and Constraints

It is hoped that this will lead to the development of joint EU-China research projects in these areas.

MODIBEC partners include: ERTICO – ITS Europe, WorldDMB, The China State Administration of Radio, Film and Television (SARFT)/The Academy of Broadcasting Science (ABS), Beijing Jolon Digital Media Broadcasting Co, Shanghai Oriental Pearl Group (OPG), China Satcom, China Radio & TV Equipment Industrial Association (CRTA), PTV, Nokia Siemens Networks (NSNB), Blaupunkt, Guangdong Mobile TV Media Company (GTM), Autonavi, Thomson and Motorola China.

The event will be held at Swissôtel Beijing, Hong Kong Macau Centre, No. 2 Chao Yang Men Bei Da Jie, Beijing 100027, P.R. China.



To find out more or to register visit www.worlddab.org/events/registration/18.

For general information about the MODIBEC project, please visit www.modibec.org.

Israel moves towards Nationwide Licence

The Israeli Ministry of Communication has recently announced the tender for a permanent DAB+ country-wide licence. This follows on from the government's decision to introduce digital radio and TV services and a subsequent three year period of preparatory work.

The licence will be awarded for a period of 14 years and the winning bidder is expected to meet certain criteria. These include launching within 12 months of

the award date, making provision for an initial 36 channels (rising to 54 channels) and achieving a coverage area of 80% (rising to at least 90%). The MOC is also considering allowing additional services to be broadcast using DMB. Commenting on the process Minister Atias said: "Digital radio will improve the quality of broadcasting, solve coverage and reception problems and will enable various communities in Israel to access the airwaves for the first time".

At present, the Israel Telecommunications Corporation, Bezeq, is running pilot DAB transmissions. These have been available since 1996 and the trial multiplex carries seven stereo programmes. The trial network comprises six transmitters (250W to 1kW) in an SFN configuration (Givataim, Haifa, Beer Sheva, Jerusalem Eitanim and Hadera) covering about 85% of the Israeli population.

Countdown to Launch in Australia

Australia's targeted DAB+ digital radio switch-on date is less than six months away and the entire Australian radio industry is working together to create an integrated launch. Overseas experience shows that for digital radio to succeed, the radio industry must work closely with all stakeholders to ensure everyone is well prepared. Commercial Radio Australia has continued collaboration with the advertising, retail, and manufacturer sectors to ensure each area understands how the launch of free to air digital radio broadcasting will transform what it means to broadcast, advertise on, and listen to radio in Australia.

Successful tenders have been announced for the equipment and infrastructure to deliver the new technology to millions of Australians. The industry's technical advisory committee continues to review progress of network roll out and provide recommendations on spectrum and coverage issues, multimedia and receiver development, intelligent transport and other cutting edge applications. DAB+ offers many opportunities in both new and existing audio services and associated or third party data. Commercial and Government broadcasters are keen to offer these features to listeners, and to add value to advertiser clients.

An industry-wide communications campaign showcasing the digital radio brand, logo and marketing plans will be revealed mid September. In late October, a multi-million dollar on-air campaign promoting digital radio and

its advantages will be on all stations in the five major launch markets: Sydney, Melbourne, Brisbane, Adelaide and Perth. A digital radio consumer website will be launched at the same time to create an information gateway where consumers can easily access information about what digital radio is, where they can buy one and where they can hear it. It will also incorporate digital radio training modules for retailers and the advertising industry.

All the major Australian networks will be migrating current radio brands to digital from early 2009, so listeners will immediately have a richer experience and more information on their favourite stations, as well as new digital only channels and data services. The Digital Radio Advertising Advisory Group continues to meet regularly to provide advice and guidance on advertisers' needs surrounding the introduction and implementation of digital radio. Australia's leading retailers and product manufacturers have formed the Broadcasters, Retailers and Receiver Manufacturers Digital Radio Advisory Group, which meets monthly to discuss launch strategy. It is a significant feat bringing retailers and manufacturers together, particularly those with competitive commercial interests, but it is essential to plan a uniform approach to timelines, training and marketing, so that a full range of DAB+ products can be in store in the lead-up to Christmas 2008.

As well as pre-Christmas on-air activity (designed to raise awareness and encourage listeners to purchase digital



radio receivers prior to switch-on) planning is also underway for a national listener focused "Event". This will be held early in 2009 after the January summer holiday period and will involve all major Australian networks and key on-air talent. Ideally, after the on-air campaign begins in October, listeners will have seen and heard the advertising campaign, will visit the website to find out more about what digital radio will mean for them; undertake a postcode search to check where broadcasts will be available and which retailers will stock digital radios and then will purchase a new receiver ready for January switch-on.

By Joan Warner,
CEO Commercial Radio Australia

Latest in the receiver market



Denon D-M37

The Denon D-M37 has DAB on Band III with an AM/FM RDS tuner. The D-M37 has MP3 and WMA which are supported by CD or USB playback, and it has iPod connectivity. It is currently available for approx €380.

Onkyo CS-525

Onkyo's CS-525 has 40 presets for DAB/AM/FM RDS with CD and CD-RW playback and a USB port for MP3 output. The interactive remote control is compatible with the iPod RI dock. It incorporates Wide Range Amplifier Technology and retails at approx €360.



Bush TR04

Bush recently launched the TR04 DAB radio, with a touch screen that features a two line scrolling text display. 10 presets are available for both FM and DAB and there is a headphone socket. This product retails at approx €65.

Roberts SolarDAB

The Roberts SolarDAB can run on solar, battery and mains power, with Band III and L band reception. Available in different colours, it features a backlit LCD display and a line-in socket for iPod/MP3 playback. There is also a headphone socket and it retails at approx €100.



LG FA163

The LG FA163 offers DAB and AM/FM with CD function, and WMA/MP3 playback via a USB port. It also offers a USB recording feature, a line-in and an iDock which can be controlled remotely. Currently this product retails for approx €330.

Cowon P5 PMP

Cowon's P5 PMP has a 5" touch screen and standard USB and USB-host jacks, with T-DMB mobile TV, FM radio, Bluetooth, TV-out (component, S-Video, and composite) and stereo speakers. It supports WMV, MPG, MPEG4, MP3 and WMA. Available in a choice of colours, it is currently retailing in Korea for approx €285.



Samsung STT-D370 GPS

The Samsung STT-D370 GPS incorporates 3D map technology, has a dynamic navigation feature supported by TPEG and has DMB reception. Bluetooth Navigator is installed, meaning users can make and receive calls and text messages using its 3.7" touch-screen. The STT-D370 also has an MP3 and PMP player, and currently retails in Korea at approx €400.

Revo iBLIK

The Revo iBLIK RadioStation features DAB and DAB+ as well as FM with RDS and Wi-Fi internet radio. There is MP3 streaming available from both PC and Mac, and an iPod docking station. With full electronic alarm facilities, the iBLIK RadioStation is currently priced at approx €230.



Latest in the receiver market

LG KH1400

The LG KH1400 is a mobile phone with an integrated DMB receiver and a 2.2" display screen which slides horizontally. Bluetooth connectivity is also featured, along with a music player, a 2 mega pixel camera, a memory expansion slot and HSDPA capability. Available on the Korean market, it retails for approx €320.



PURE ONE Elite

The PURE ONE Elite receives DAB (Band III and L-Band), FM RDS with 50 presets available, has iPod/MP3 connectivity and a controllable scrolling text display. There is a ReVu function to enable the user to pause and rewind live radio for up to 15 mins, and it runs from both mains and battery power. Featuring a radio or tone alarm, the PURE ONE Elite is available now, retailing at approx €90.

PURE ONE Mini

The PURE ONE Mini is a portable DAB Band III radio with FM RDS and controllable RadioText with 16 available presets and iPod/portable CD connectivity. Featuring a USB socket for future upgrades, it has an optional ChargePAK for 20 hours of portable listening. Available in different colours, it retails for approx €50.



NAD Viso 2

The NAD Viso 2 DVD/CD Surround Sound Receiver has a DAB tuner and plays DVD-V, VCD, SVCD, CD, CD-R, CD-RW, MP-3, J-PEG, WMA, DivX and DVD Audio. There are 30 presets for FM/AM stations with RDS Tuner, built-in amplification and an optional iPod dock. Currently available, the Viso 2 retails at approx €890.

Alfred Dunhill Meridian AD88

The Alfred Dunhill Meridian AD88 incorporates DAB Band III, FM and AM. A slot loading CD player supports CD-DA, CD-R/RW, MP3, WMA, DualDisc, DVD-V, and DVDR/RW. With an iPod dock and dual function radio alarm, it is available now for approx €2635.



Magic Box Clarus Plus

The Magic Box Clarus Plus is an internet radio with DAB/FM and offers 24 presets. Wi-Fi enabled, there is a streaming function for WMA, MP3 and Real Audio Files. With an alarm clock and a two-line backlit display, it costs approx €100.

Eton Porsche P9123DAB

The Eton Porsche P9123DAB has a separate iPod docking station, an OLED alphanumeric display panel and three 1.5" full range speakers. It features DAB and FM tuners with 20 presets and a metal remote control. With a 12 or 24 hour clock and battery back up for the alarm, it retails at approx €610.



Professional Equipment

RadioScape's fusion V6

fusion V6 is RadioScape's latest broadcast system. It adds significant functionality including DAB+ Audio Coding, STI and IP transport, as well as full conditional access support. Based on 1U separate units for all major components, it includes a front panel display for easy status monitoring and control. Compact and robust, it shrinks a 10 channel DAB system to 8U, or a 22 DAB+ system to 13U, with full data capabilities.



RadioScape's fusion Field Monitor

The fusion DAB/DAB+/DMB Fully Portable Field Monitor is supplied with a laptop to allow monitoring, configuration and data logging, and a GPS receiver to provide positional information. It can be used either to ensure the correct operation of an existing network, or as a tool in drive-trials to support network coverage predictions. Highly portable, it replaces large, bulky, costly, mains driven units needing vans to house them.

SomerData's DABSTOR-Rx Monitoring Receiver

SomerData has added off-air Ensemble Logging and Ensemble Monitoring to its recently introduced DABSTOR-Rx product range. Designed for broadcasters and network operators, the DABSTOR-Rx Monitoring Receiver provides evidence of transmission, with live monitoring, logging and off-line analysis of a complete DAB/DAB+/DMB Ensemble. The Ensemble Logger application provides continuous, capture using sequential-file endless-loop recording.

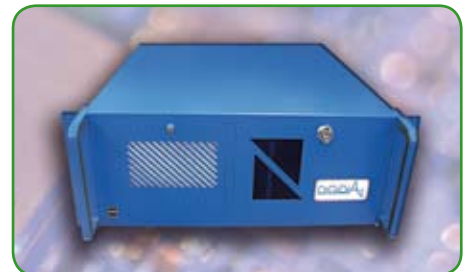


VDL DAB+ encoders

VDL is again at the forefront of technology by marketing its DAB+ encoders in two versions: hardware and software. The range comprises: a hardware DAB encoder (D-Audience), a hardware DAB+ encoder (D-Audience+), a software multi-channel DAB+ encoder (D-Audience+S) and a worldwide successful DAB/DMB multiplexer (D-Vaudax). This enables VDL to provide an end-to-end solution for digital radio with cost effective, reliable and up-to-date products.

DIGIDIA FlexiDAB

The DIGIDIA FlexiDAB platform has been developed to cater for the rapid changes in the digital radio market, such as advanced coding technologies (AAC+), new transport protocols based on IP and new enhanced data features. The product is based on the "one box = multiple functions" concept rather than the existing, traditional "one box = one function" concept. This allows broadcasters to easily play with software and define by themselves the products which meet their key requirements.



Harris DMB670

The Harris DMB670 transmitter features Harris' exclusive Power Smart™ technology, giving it best in class efficiency. It has a compact design and is both RoHS compliant and CE marked. The power capacity ranges from 125W to 10kW and the product boasts hot swappable PAs and PSs.

WorldDMB at IBC, Amsterdam

12th – 16th September 2008



The IBC 2008 at the Amsterdam RAI Exhibition and Conference Centre promises to be a truly exciting event showcasing the latest technology and focusing on the foremost business ideas in broadcasting and media.

Come and visit WorldDMB at the **EBU pavilion, Stand No 10.D21**, to learn about all of the applications now available to content providers and consumers on DAB, DAB+ and DMB, participate in demonstrations and see the latest products on the market. You may even take home one of the fantastic **PURE Elite DAB+ digital radio's we're giving away!**

This year attendees at IBC will be able to watch and listen to live on-air demonstrations of DAB, DAB+, DMB and the applications now available as part of the Eureka 147 family of standards which make this the only truly 'Digital Multimedia Broadcasting' platform. Learn more about the applications which allow content providers to offer the consumer a greater choice of interactive digital radio and mobile TV; EPG, DLS, Journaline, Slideshow/visual radio, Surround sound, TPEG, Intellitext and MOT. To see a demonstration of BIFS, please visit the ETRI stand at 12E.A31a.

WorldDMB will also be showing a range of DAB, DAB+, DMB products which support these applications as well as some of

Members Networking Drinks Party
– on the WorldDMB stand on
Saturday 13th September at 16:00

the latest products on the market, some of the lower cost products and the range of eco-friendly products now on sale.

In partnership with Fraunhofer IIS WorldDMB is offering a **VIP Taxi Service** to and from the venue; a 5 series 530i BMW is available in which you can experience DAB/DAB+ digital radio Surround Sound and Journaline. For further information or to book your VIP taxi please come to the WorldDMB stand during the IBC event.

With special thanks to our IBC Partners:

Arqiva, BBC, Cowon, CRC, Digital Broadcast DV, DRDB, EBU, Fraunhofer IIS, Frontier Silicon, GCap Media plc, Harris Corporation, IET, Intempo, iriver, KIICA London, Pure, Radio 1 Netherlands, Radioscape, Roberts, RTL France, TELEKO, VDL.

WorldDMB in association with The Institution of Engineering and Technology will be running a **FREE conference session** titled "Digital Delivery: Getting Content to the Consumer" on **Monday 15th September 2008**, 11.30 – 13.00, in Room A.

This session will be chaired by *Mr Leonardo Chiariglione*, Chief Executive Officer of CEDEO.net, Italy and promises to be an exciting look at how to target consumers.

Members Exhibiting at IBC

Arqiva	1.B61	Media Broadcast GmbH	1.B79
BBC Research & Innovation (PRISM Project)	12E.B47	Norkring, Telenor	1.C41
BBC Training & Development	11.A75	NXP Semiconductors	1.D10
Digidia	8.D20a	Panasonic Automotive Systems Europe GmbH	8.F40
Dolby Laboratories, Inc	2.B28	<i>by invitation only</i>	
Electronics and Telecommunications Research Institute (ETRI)	12E.A31e <i>and 12E.A31a</i>	Pixtree, Inc. (co-exhibiting with Korean Pavilion)	12E.A31a
ENENSYS Technologies	12P.A21	Qualcomm MediaFLO	M269
European Broadcasting Union (EBU)	10.D21	Radioscape plc.	8.B02
European Telecommunications Standards Institute (ETSI)	12P.A44	Samsung	1.B81
Factum Electronics AB	8.C92	Siano Mobile Silicon	M592
Fraunhofer IIS	8.C81	SomerData	8.C97
Fujitsu Ten Europe	4.B75	Sony Deutschland GmbH (co-exhibiting with INCOM Storage GmbH)	8.D21
Harris Corporation	7.G20	TDF (co-exhibiting with Media Broadcast GmbH)	1.B79
Institut für Rundfunktechnik (IRT) (co-exhibiting with EBU)	10.D21 <i>and 10.F51</i>	Teracom AB	8.C25
Irdeto	1.D51	Unique Broadband Systems	M597
JVC (co-exhibiting with INCOM Storage GmbH)	8.D21 <i>and 10.D41</i>	VDL	8.B92
		VRT	12E.A43

Upcoming events

20-23 October
Le Radio, Paris

27-28 October (new dates)
MODIBEC National Event, Beijing

Free for members

26-29 October
NAB Europe, London

29-31 October
Medientage, Munich

3-4 November
WorldDMB General Assembly, Beijing

Free for members

5-8 November
BIRTV, Beijing

6-7 November
Telematics, Munich

18 November
MODIBEC, Brussels

19-25 November
Asian Broadcasting Union General Assembly, Bali

New WorldDMB Members

ENENSYS Technologies has years of experience in the design and manufacturing of Digital TV transmission systems. Its unique expertise in MPEG-2 TS distribution over IP is now being adapted to DAB networks in order to provide reliable distribution of ETI streams over IP networks. ENENSYS Technologies (www.enensys.com) is headquartered in Rennes, France, in the heart of the European Digital Broadcast Cluster.

Jasmin Infotech specialises in providing complete end-to-end embedded signal processing solutions in the areas of Digital Home and Automotive Infotainment. The company has extensive knowledge in home theatre audio standards including encoders, decoders, post processing

formats. It also offers hardware design and prototyping services. Jasmin is based in Chennai (formerly Madras), a south Indian city.

Thomson Grass Valley France SA is a leading provider of Network Integrated Solutions such as Digital TV, radio broadcasting systems, equipment platforms for IPTV services (TV services over Internet Protocol), video-on-demand, as well as Mobile TV. Thomson Grass Valley can offer end-to-end solutions for the fast-growing IPTV, Mobile TV and Digital terrestrial transmission (DTT) markets. Thomson's acquisition of Thales Broadcast & Multimedia in early 2006 has reinforced relationships with telecom operators and broadcasters.

New Remote Monitoring DAB/DMB Receiver from SomerData

DABSTOR-Rx Service Monitoring Receiver

The DABSTOR-Rx from monitoring specialists, SomerData, is a professional DAB/DAB+/DMB Receiver that enables multiple users to simultaneously access audio, video and data services at one or more remote locations.

Options include an Ensemble Logger, with up to 90-days history, and a comprehensive Ensemble Monitor/Analyser including SNMP and alarms.

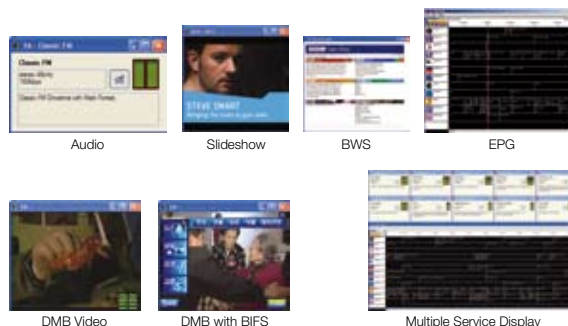
Designed for broadcasters and network operators, the DABSTOR-Rx Monitoring Receiver provides evidence of transmission, with live monitoring, logging and off-line analysis of a complete DAB/DAB+/DMB Ensemble.

For more information, contact sales@somerdata.com or visit www.somerdata.com



DABSTOR-Rx
Receiver with multi-service streaming Publisher

DABSTOR Subscriber Audio, Video and Data Service Viewers



Audio

Slideshow

BWS

EPG

DMB Video

DMB with BIFS

Multiple Service Display