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RIEDEL

MEDIORNET MicroN: Decentralized routing convinces French INA

When the training center of INA (Institut national de l'audiovisuel) in France decided that it was time to upgrade their routing capabilities as part of an HD upgrade to its control room R242, they looked no further than RIEDEL. INA installed a MediorNet ring in 2014 to interconnect their control rooms and TV studios, giving each access to the available media resources that it needs including video channels, remote control of the video servers, conversions of formats, and other processing tasks. Their goal was the ability to implement a practical and realistic exercise for their trainees just as the TV broadcasters do it. They are also able to rent fiber connections from their 2 audiovisual training centers : Issy-les-Moulineaux and Bry-sur-Marne.

In an effort to forego the costs and limitations of typical centralized routers, INA decided to go with the innovative new MediorNet MicroN. Since the MicroN can work within their existing MediorNet ring, has integrated processing capabilities, and is fully compatible with 3rd party control solutions such as VSM, they decided that building upon their existing infrastructure was the best way to future-proof their system and provide state-of-the-art training facilities for their students.

The new, completely de-centralised router is comprised of seven MicroNs that provide 98 x 98 HD-SDI IOs, a 14 x 14 HD-SDI IO bridge to the existing MediorNet ring and then 14x MADI, 7x Ethernet, 7x sync in, and 7x sync out.

MicroN offers incredible flexibility and can be used in a number of unique ways that can ultimately save time and money through the incorporation of many functions that would otherwise require separate boxes. This purchase from the INA training center exemplifies their commitment to quality and innovation as they prepare the broadcasters of tomorrow.

MEDIORNET MicroN's Dutch debut

A major broadcast services provider has become the first company to take delivery of the RIEDEL Communications' MicroN 80G media distribution network device. Ten MicroN units will be used in a stand-alone, point-to-point configuration to move up to 60 high definition (HD) feeds between their master control facility and the broadcast facility of a major international sports channel in Hilversum. Competitively priced and equipped with powerful integrated signal processing features, the MicroN units enable flexible and economical transport of HD signals with a minimum of components.

The client already works with RIEDEL's Artist digital matrix intercom system and MediorNet Compact real-time media network solution, so the MicroN was a logical choice when it came time to expand the system. Though the compact MicroN's represents a relatively small part of the operation, they have made a sizeable impact on the efficiency and flexibility that can be achieved moving HD signals between facilities.

Like other products in RIEDEL Communications' MediorNet line of media transport and management solutions, the MicroN offers powerful built-in signal processing features that eliminate the need for many external devices. In a compact 1RU form factor ideal for rackmount applications, the MicroN offers full support for 10G high-speed video, 3G-SDI video, MADI audio, and Gigabit Ethernet. The system includes an integrated video, audio, and data router and sync reference I/Os, including black burst, tri-level, and word clock. Built-in video and audio processing capabilities include automatic format detection, a frame synchronizer and framestore on all video outputs, a 16-channel audio embedder/de-embedder, a test pattern generator, on-screen and system VITC displays, an integrated sample-rate converter, and audio/video delay lines.

"We launched the MicroN devices at the 2015 NAB Show and delivered the units in June," said Lars Höhmann, product manager for the MediorNet product line at RIEDEL Communications. Based on their previous experiences with RIEDEL solutions, the customer decided to order the 11 units before NAB. "In July, the MicroN devices were fully deployed providing a compact yet powerful solution for flexible, reliable signal transport."

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(Konnichiwa!)

¡Hola!

2015 has seen the opening of two new regional offices for RIEDEL.

A new office in Tokyo is rapidly becoming an East Asian hub for design, sales, support, and service. Headed by Cameron O'Neill, director for the Asia-Pacific region, Tokyo fills out the trio of Asian hubs, which also include Sydney and Singapore, and provides a strong position from which to cover the Asia-Pacific region in its entirety. The office is centrally located in the exciting Shinjuku district of the city. For more details contact our team in Tokyo at: **info@riedel.net**

Another office has been established in Madrid that will provide sales and support for customers in Spain, Portugal, Italy, and Greece. Headed by Maribel Roman, sales manager for Spain, this office will provide the localized support that is absolutely required for maintaining a presence in the region. For more details contact our team in Madrid at: **info@riedel.net**

What's NEW

A new AES67 Card for Artist?

Enjoy the benefits of our new AES67 Client Card for Artist – the only device in the market, that can function as a GATEWAY between AVB and AES67!

- AES67 connectivity between Artist and Smartpanel
- AES67 connectivity to 3rd Party devices
- Connectivity to Dante devices via AES67
- 8 independent AES67 connections
- Configuration via Director

State-of-the-ARTIST at China's first 4K OB Truck

In building China's first 4K OB truck, Jiangsu Broadcasting Corporation (JSTV) and systems integrator New Digital Technology Holdings (NDT) chose RIEDEL Communications' Artist digital matrix intercom, MediorNet Compact Pro media network, and RockNet digital audio network to support clear, versatile communications and to enable straightforward fiber interconnection and signal exchange among production units. RIEDEL was chosen not only for their reputation of providing bulletproof broadcast solutions, but also for their ability to support seamless integration into 3rd party control systems such as VSM.

"The RIEDEL intercom solution supplied by NDT provides the exceptional flexibility and performance appropriate for our new 4K OB truck, which we believe will serve as a model for mobile 4K production here in China," said Shuai Sun, broadcasting section head at JSTV.

"JSTV wanted the best for its groundbreaking 4K OB truck, and extensive testing and examination of candidate technologies showed the combination of RIEDEL's Artist, MediorNet, and RockNet systems to be the right solution," said Liu Jun, product vice general manager at NDT. "The quality, simplicity, and versatility of this fiber-based communications solution will help JSTV to make the most of its unique 4K-capable unit."

Within the JSTV 4K OB truck, NDT installed three Artist 64 digital matrix intercom systems along with keypanels and user stations, using a RIEDEL RiFace universal radio interface to link wired communication systems with radio systems. The new RIEDEL equipment interconnects seamlessly with an existing Artist system in JSTV's 12-channel HD OB unit and provides a foundation for future expansion of the broadcaster's fiber-based intercom communications.

Installed in the main OB vehicle, in a smaller OB truck, and in the venue, three MediorNet Compact Pro systems together form a fiber ring that supports HD video transport, MADI audio, GigE, and communications during live productions. RIEDEL's RockNet digital audio network makes it easy for JSTV crews to link various Yamaha, Studer, and Soundcraft audio desks through the MediorNet network. The systems are used with Virtual Studio Manager from L-S-B.

"New Digital Technology worked closely with JSTV to ensure that the new RIEDEL solution implemented for the new 4K OB truck could meet all of the broadcasters requirements while offering the opportunity for future system expansion," said Cameron O'Neill, director, Asia Pacific, at RIEDEL Communications. "We're proud that our equipment is part of this exciting new mobile unit, which is a credit to JSTV and China's broadcast industry, and we look forward to completing 4K-capable solutions with NDT and other broadcast customers in the region."

#PanAMAZING GAMES

RIEDEL ensures clear and bullet-proof communications at the breathtaking ceremonies and at the competition and non competition venues at the Pan Am and Parapan Am Games 2015

The Pan Am and Parapan Am Games are the world's third largest international multi-sport games, surpassed in size and scope only by the Olympic Summer Games and the Asian Games. At the recently completed Games in Toronto, technology from RIEDEL was put into use at nearly every venue and at the opening and closing ceremonies, as well.

Assistive Hearing and Audio Descriptive Services

A primary goal of the TORONTO 2015 Pan Am/Parapan Am Games was to ensure that people of all abilities have access to the same experience regardless of venue. To that end, assistive hearing and audio descriptive services of the performances and announcer broadcasts were available in English, French, and Spanish through FM-transmitted devices supplied by RIEDEL Communications. More than 500 audio description units and 1,700 assisted hearing units were put into use.

In addition, more than 1,200 6-channel Mass-Cast devices were put into service for the participants of the opening and closing ceremonies. For the 287 Parapan athletes with visual impairments, there were assisted hearing devices for them, as well.

The Pan American Sports Organization Broadcast Pool

The PASO/ODEPA broadcast pool relied upon RIEDEL Communications to transport baseband HD signals in real time to support all production signals for weightlifting, rhythmic gymnastics, archery, and handball. The RIEDEL deployment also supported Cuban broadcaster ICRT in producing baseball and Argentina's TyC in its production of BMX cycling, rugby, and field hockey.

Signals from each venue were sent to the International Broadcast Centre (IBC), where they were transported via RIEDEL's MediorNet real-time media network between a dedicated OB van and the PASO/ODEPA operations center within the production area. All produced signals then were transported and distributed to a master control room and on to the satellite farm for distribution throughout the continent. Organizer TO2015 also took the pool feeds transported over the RIEDEL MediorNet network.

There were other uses besides boadcast, security, and access control. During pauses and programming breaks at the venues, there was audience interaction like kiss-cams, t-shirt canons and bongo-playing, all enabled by the radio systems. Medal ceremonies were supported, too.

How Much Stuff Did RIEDEL Send to Canada?

More than 5 shipping containers were needed to transport 42 Artist systems with 50 panels, 110 commentator boxes, and 220 beltpacks and headsets. Then there were 37 RiFace interfaces and 400 analogue radios to go with those. Of course, they were all directly integrated into the Artist's. There was a 40 channel FM audio system with more than 4,000 receivers distributed over all of the venues. For the Organizing Committee, transportation services, and the ceremonies, there were 5,000 TETRA digital radios, 1,200 extra batteries, 3,000 earpieces, and nine base stations. Finally, there were 600 radios for wide-area use. That's not to mention the numerous antennas, repeaters, cables of several types, tools, and duct tape.

Putting on a global sporting event is never easy. But the power and simplicity of integrated solutions from RIEDEL are proven again and again whether on a local game or the Pan Am/Parapan Am Games.

BE **BOLD**,
BE LIGHT
BE *ITALIC*
BUT NEVER
BE **REGULAR**

A question for Lars Höhmann

What's the RIEDEL difference?

We are involved in projects worldwide. Big ones, small ones, each with its different characteristics. Being present in so many industries, we have a global view. This provides us with strong feedback on these projects from our customers, which we include in our product development roadmaps. Product Management, Research & Development and Rental Services, all work closely together to build the most flexible solutions.

What does flexibility mean to you?

We are living in a fast moving industry and are always in touch with the latest trends. It wouldn't work without being open minded. Everyday we find new possibilities for different applications, asking ourselves what can handle fiber transport today, centralized routing tomorrow, decentralized routing the day after, and signal processing all the time. With MicroN we now have the missing piece of the jigsaw. The newest addition to the MediorNet family provides a highly versatile signal interface that can be used in productions of every size and complexity. It is exactly this kind of operational flexibility that broadcasters are looking for since shows are always getting more complex. We are finding new applications all the time.

Lars Höhmann
aka Dr. MicroN
Product Manager MediorNet

Broadcasted every year for the last 60 years, the Eurovision Song Contest is the longest lasting annual TV song competition. During the live broadcast, which has become one of the most watched non-sporting events in the world, one of the main technical challenges in maintaining clear and flexible communications among crew members is to establish a high level of reliability. This starts at the power supply, extends to using locally separated signal paths, and even includes double connections at relevant positions.

For this year's contest, the basic topological redundancy of RIEDEL Communications' Artist digital matrix intercom system and MediorNet real-time media network easily met this challenge. The company's new MediorNet MetroN core router proved especially valuable in facilitating dynamic adaptation of signal routing as the event unfolded.

A total of 14 Artist mainframes with more than 500 ports (300 of which were keypanels) supported intercom communications during the shows at the Vienna Stadthalle. In combination, these networked systems allowed all OB vans to be integrated via intercom into the overall communication concept. The intercom headquarters was connected through an extra fiber infrastructure in every hall of the event venue and was easily extended to accommodate the arrival of each OB van (main, main audio backup, and press conference).

The concept for signal distribution between the OB van, TOC, and halls was similar. Within the main hall, RIEDEL placed several nodes as stage boxes, which distributed signals to the appropriate video and audio destinations. Although the planning process was dynamic and routing paths subject to change, the new MediorNet MetroN Core Router provided robust functionality and the required high-speed re-routing — as many as 1,000 connections can be re-routed in less than a second — to support this workflow.

MetroN enables the connection of up to 64 outgoing and incoming fiber optic routes. This enormous capacity made extensions and changes to routing very fast and easy. Five MetroN units were connected with MediorNet Modular frames in order to create a mix of fiber cabling topologies (star, ring, chain) that ran in full redundancy, ensuring that a failure of a fiber cable would not affect the entire system. In the end, more than 400 HD-SDI signals and countless audio signals were handled by the 48 MediorNet frames.

The contest's requirement that the communications solution cover the entire area, including all outside buildings, clearly required the use of a digital radio network. RIEDEL uses TETRA technology to establish such networks, using the technology's ability to handle a high number of devices while providing the necessary bandwidth efficiency (up to four channels per frequency were managed dynamically.)

The connection of the TETRA digital radio network to the Artist intercom system was made by the RIEDEL Juggler, which enables the exchange of up to 64 channels (in a MADI stream) directly into the intercom system with intelligent management.
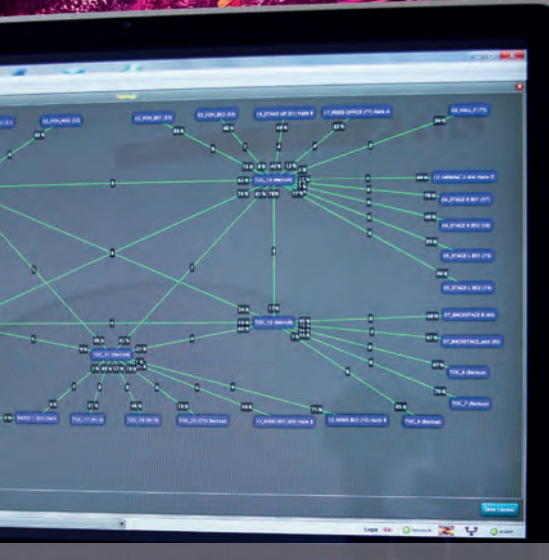
RIEDEL's RiFace UHF radio interfaces were used by crew members for listening to stage directions during rehearsals and the broadcasts. All together there were 600 TETRA devices and 100 analog radios in use.

The access control system at the Eurovision Song Content was key to safety and security at the event with RIEDEL provided 12,000 RF-ID cards for accreditation. The data for each individual was permanently compared with data held by the EBU, and each person was given access to various areas depending on their status. RIEDEL technology even supported the work of the catering company, with RF-ID cards recording the users' eating habits and providing data to the caterer.

Used broadly during the 2015 Eurovision Song Content, RIEDEL Communications technology supported a smooth production of yet another record-breaking broadcast, with 197 million viewers worldwide.

ABC Australia's ARTISTic upgrade

Australian broadcast network ABC installs RIEDEL Artist Trunk Navigator system to support a VoIP-based communications network connecting producers, journalists, and presenters working at ABC bureaus across Australia. By simplifying the networking of geographically diverse Artist digital matrix intercom systems over 80 VoIP trunk lines, the Artist Trunk Navigator facilitates simpler, more efficient, and more reliable communications between sites during production and broadcast.

RIEDEL's Artist Trunk Navigator software enables each of ABC's existing Artist intercom systems to be connected to a central trunk master via a WAN connection. The RIEDEL solution dynamically allocates either analog or digital (AES3) audio trunks between up to 32 Artist intercom systems on VoIP lines.

For example, operators can now make direct calls from an executive producer's panel in Perth to an executive producer's panel in Melbourne. Presenters on the studio floor are equipped with a RIEDEL Artist RCP-1112 control panel that enables them to create their own IFB submixes and make direct calls to production staff at busy times. Autocue operators are now able to create their own presenter mixes. Edit suite operators have the audio output of their editing stations interfaced into the RIEDEL Artist system, so they can listen back to the assets they are editing and be on communications during a news broadcast. ABC also uses local panel GPIs to interface camera tallies out in the field.

In Canberra, ABC has linked its Parliament House and Northbourne site with a 15-kilometer redundant fiber link that allows technical staff to administer the entire system from either site. ABC has also installed multiple nodes at its Ultimo site in Sydney to form an Artist network. Rather than install new CAT5 cabling from a central point, ABC linked multiple Artist nodes via fiber within the site and used existing cabling from the distributed Artist nodes to the Artist key panels.

ABC's VoIP network has been configured as a mesh network with each site connected to many other sites. Thus, in the case of a power failure at a site or when a trunking path is busy, the Artist Trunk Navigator simply finds an alternate path though other ABC site routes. A redundant design enables the Artist Trunk Navigator software to run on two computers simultaneously and to switch seamlessly from one computer to the other in the case of failure.

"By extending and improving communications across its bureaus, ABC has equipped its staff to collaborate more closely and effectively in delivering quality programming," said Cameron O'Neill, director, Asia Pacific, at RIEDEL Communications.

METRON ROUT'EM ALL

When tens of thousands of heavy metal fans descended upon the small town of Wacken, Germany, for the Wacken Open Air festival held from July 30 to Aug. 1, organizers were ready, having deployed a comprehensive communications solution built on RIEDEL Communications' MediorNet real-time media network and Artist digital matrix intercom system. The RIEDEL equipment provided the fiber backbone and communications infrastructure necessary to support security, radio communications, and audio and video transport throughout the expansive festival site.

Each summer, prior to Wacken Open Air, the small town of Wacken transforms into a festival venue with multiple stages, fields in which festivalgoers can camp, and the infrastructure required to handle thousands of fans. The communications system supplied by RIEDEL since 2,000 plays a key role not only in supporting audio and video distribution during the four-day event, but also in enabling festival organizers to ensure the safety of each and every guest.

This year, two MetroN core routers with a huge total routing capacity of 2 x 640Gb provided the heart of the MediorNet installation, adding further flexibility to the well-known convenience of the MediorNet installation and providing redundancy for the overall security concept. With its 10Gb links, the MetroN system supported the interfacing of two MediorNet rings and, in turn, the transport of multiple HD-SDI signals — from the stages to the production compound and back to the multiple screens — and several separate IP networks and audio streams.

Each of the nine stages at Wacken Open Air 2015 had a large video wall, and a further five free-standing video walls were scattered throughout the grounds. Video from each stage was sent back to the operations center via the MediorNet network so that any video could then be displayed on any screen as "infotainment" for guests. A RIEDEL Artist intercom panel and line level audio at each stage allowed security to talk directly to each PA mixer to instruct the band to stop playing for an emergency announcement, such as a weather warning. Voice announcements could then be routed through the PA systems and any other information displayed on screen.

Thirty remotely controlled IP-based cameras were installed throughout the grounds for security surveillance. Data transported to and from these cameras was delivered to the Wacken Open Air Security Center through the RIEDEL MediorNet fiber backbone. RIEDEL also supplied nearly 700 TETRA trunked radios to ensure that security staff and stewards maintained clear communications throughout Wacken and the festival grounds. The radios were interfaced directly with the Artist system to ensure comprehensive communications. Because the mobile radios of the security vehicles patrolling the vast campsites were GPS-enabled, organizers were able to determine the user's location immediately in the event of a problem or emergency.

For fast and trouble-free accreditation of the hundreds of working crew members, the organizers arranged a check-in location at the very border of Wacken. To welcome the team members with the right spirit and keep the local staff connected to the live event, RIEDEL deployed the company's new STX-200 broadcast-grade professional interface. Capable of bringing any Skype user anywhere into the professional broadcast environment, the STX-200 was used to transfer live feeds from the stages into the check-in via the available public Internet connection and to facilitate a Skype connection between the production compound and the staff check-in area.

"Wacken is a truly spectacular event, and we've been privileged to be part of this immense show for the past 15 years," said Simon Korzen, project manager, and Lutz Rathmann, deputy head of global events at RIEDEL Communications. "It was a great pleasure and great fun to provide the Wacken organizers with a flexible, reliable solution that met their requirements for on-site media, infotainment, and a sophisticated security concept, in turn helping to make this year's festival a huge success for everyone involved."

2015 marked the 30th anniversary of Rock am Ring and the show, and its requirements, were bigger than ever. With very little pre-existing physical infrastructure, the organizers' required an extensive, flexible, and rugged IP network that could support smooth communications — from production to security — and enable CCTV coverage from main stages, even in the most extreme weather conditions. The network supporting Rock am Ring was designed, delivered, and installed by RIEDEL Communications, while Frankfurt based RIEDEL Networks provided Internet via a dedicated fiber line, with a bandwidth of 1-Gb full duplex.

The IP network covered for the entire event area so that all trades, authorities, organizers, and event staff could maintain continual access to communications and the Internet. Deployed across the venue and complemented by radio links, there was total coverage throughout the venue. The IP network also supported the transport of 25 camera feeds to the control tower and police building for monitoring, and to the SWR production unit, which in turn fed video to the organizers' offices and to projectors and displays within VIP and sponsor lounges. A MediorNet core formed a ring around the infield and provided the connections linking audio and video signals from the two stages to the SWR TV and Radio production unit as well as the program broadcast feeds back to the media lounges and VIP areas. MediorNet is normally thought of

as a baseband solution for signal transport using a proprietary layer 1 protocol for transmission. But, in this case, MediorNet was performing baseband transport as well as proving the IP backbone for the entire infrastructure.

Overall, the installation included more than 16 kilometers of fiber, 60 switches, 600 CAT6 patch cables, and 150 VoIP telephones with a merged emergency call function. From the switch, RIEDEL created subnetworks for different user groups. Eight RIEDEL engineers were on site to install and maintain the network, and German VoIP specialist toplink GmbH also supported the network.

Networked N' Loud

RIEDEL rolls out network for Rock am Ring's Mendig debut

In planning for the 2015 World Alpine Skiing Championships in Vail and Beaver Creek, Colorado, system reliability through a fully redundant video and audio network was of the utmost importance. Following the great success of the technical setup for the World Equestrian Games, EPC decided to acquire additional frames to be able to interconnect all of the production feeds (graphics, timing building, etc...) as well as service the needs of the 10 rights holders on site. This was all realized through a permanent fiber backbone implemented in and between both venues, Beaver Creek and Vail, which are approximately 10 km apart.

Host-broadcaster EPC's fiber backbone accommodated more than 100 cameras positions, 60 HD video signals, 100 audio signals, Ethernet, and intercom, in a single flexible infrastructure that reduced both the time and cost of installation. The setup benefitted the production team and rights holders, as well as the broadcasters organizing committee's who were able to use some tunneling for IPTV and CIS distribution for all of the venues in the valley.

MediorNet's ability to route signals in real time was critical to the event. In total, 10 MediorNet frames were installed, providing complete path and signal redundancy for a large number of HD video signals, Ethernet tunnels, and audio channels used for the championships. In addition to the MediorNet infrastructure, EPC also purchased Rocknet to complement ones already in their inventory, allowing the audio team to gather live sounds from the course and to provide dolby coverage on all races. In all, more than 150 km of fibers and audio/video cables were used to achieve the setup.

"The overall setup would have been much more challenging and not nearly as flexible without the RIEDEL technology," said Franck Choquard, Managing Director at Eurovision Production Coordination. "With three independent, yet fully redundant, optical rings for MediorNet, and another ring for RockNet, we were able to completely cover a huge area and service all of the stakeholders with ease."

MEDIORNET has a strong showing at Vail/ Beaver Creek

Tough mountains, awesome scenery, smooth technology: RAI networks Giro D'Italia with MEDIORNET

RAI Leverages RIEDEL Communications Real-Time Fiber Network Systems to Support Coverage of 2015 Giro d'Italia

As the 98th Giro d'Italia cycling race wound its way from the Italian Riviera to Milan from May 9 to 31, RIEDEL Communications equipment provided Italian broadcaster RAI with a flexible decentralized fiber-based network supporting real-time distribution of audio, video, and communications signals. Host broadcaster RAI deployed RIEDEL MediorNet Compact Pro and RockNet systems to link the announce booth, finish line, helicopters, and other key production areas to enable thorough coverage of each race stage. The equipment was supplied by RIEDEL partner Broadcast Solutions SRL.

RAI used its RIEDEL gear to create a distributed real-time network made up of four fiber rings, which together included 102 fiber links with 712 audio, video, and data connections. Key connection points included the international OB van and a second OB truck with replay; the commentator van, a graphics van, a radio van, two vans providing links for helicopter and motorcycle signals; the Italian national feed; an edit truck; and the "mule," a compact mobile unit ideal for tight mountainside locations.

Combined with RIEDEL's network management software, the modular design of RIEDEL's MediorNet real-time media network and RockNet audio network allowed RAI to configure and reconfigure frames quickly according to the demands of each day. Supporting both routing and transport, the RIEDEL systems enabled RAI to make every signal available at every node as needed. The overall fiber network served as a flexible and space-, weight-, and time-saving solution for establishing quality connections across an extremely challenging landscape.

During the 21-stage race, the RAI used the mule unit and its RIEDEL gear to complete connections of up to 2 kilometers from the main production area. Positioned near the finish, this small truck supplied the camera base stations and gear for a commentary position and connection point at the finish line, where all baseband signals originated. Able to supply signals from various remote points without signal degradation or loss, RAI provided exceptional footage facilitating worldwide coverage of the race, the first of the year's three Grand Tours.

"The Giro d'Italia is a hugely popular sports event, and this year it was televised around the world in 171 countries," said Maribel Roman, international sales manager for spain at RIEDEL Communications. "With its MediorNet and RockNet systems, RAI was able to offer extensive live and pre-produced content each day of the race while also providing, as host broadcaster, the reliable feeds critical to global coverage of the event."
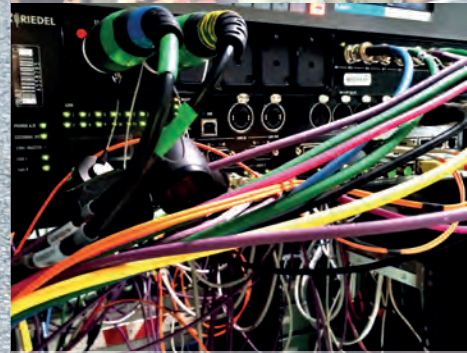
√ RIEDEL EQUIPMENT + CREATIVE TECHNOLOGY =
EQUIPMENT³

Creative Technology (CT), one of the world's leading suppliers of A/V equipment, was on hand for the inaugural European Games 2015 in Baku, Azerbaijan. With 65 MediorNet frames acting as the backbone, twenty Artist systems were deployed across the competition venues along with 120 keypanels, 60 commentary panels, 40 beltpack master stations, 400 beltpacks, 60 radio interfaces, and 400 radios. AVB and RAVENNA/AES67 were both put into use with the Artist acting as a bridge. The fiber-based signal distribution network also had 23 RockNet modules, 65 switches, 13 RF systems (supporting fixed and roaming cameras), and 50 kilometers of cabling. The resulting network gave event organizers and staff the means to communicate seamlessly across venues, including the National Stadium that was home to the opening and closing ceremonies, and to deliver audio and video signals as needed for comprehensive coverage of the competition.

CT has also recently expanded its supply of RIEDEL Communications' pioneering real-time video, audio, data, and communications solutions. The new MediorNet Compact PRO's and C3 digital beltpack/master stations and headsets will improve CT's ability to meet the communications and signal transport requirements of any sports, corporate, exhibition, or entertainment event.

"Our success as a staging services provider is a direct result of our innovative application of the latest technology alongside the very best technical and operational personnel," said Dave Crump, CEO at CT for Europe and the Middle East. "We have been using RIEDEL equipment in the U.S. for some time, and this new investment underlines the confidence we have in RIEDEL gear and the critical role it plays in enabling our teams worldwide to provide high-quality, high-performing solutions tailored to the demands of the customer and event."

EURO TV's CEO Günther Polder about gut feelings and confidence

Euro TV has been in the business for 35 years and differs from many other companies in the broadcasting sector. Their specialty is providing first class solutions for even the most complex productions. A conversation with CEO Günther Polder.

What do you know that the broadcast world isn't aware of yet?

We developed an innovative concept as a niche product that goes beyond a classic OB van, a compact and functional trailer that offers space for eleven working stations. But, at this point, I don't want to reveal too much. What I can tell you is that, with our concept we will rely on innovative RIEDEL technology – we choose MediorNet MicroN.

Who decides first, the head or the gut?

The head. There is no space for feelings when it comes to technical questions. For us, the following aspects were decisive:

Flexible system design, connecting options, and functions – MicroN allows the setup of a decentralized routing structure and offers as a high-density signal interface with a wide range of connecting options like 12 3G/HD/SD-SDI Inputs and outputs, two MADI ports, and eight 10G-MediorNet high-speed links. Functions like audio embedding and de-embedding are a big bonus.

The weight – Let's take a 108 x 108 video matrix. Looking just at the cabling material, we have calculated that with MicroN we can save nearly 300 kg. This is quite a lot if you consider that we have to fight for 100 kg in order to be able to hit the road with our trucks of 40 tons. In addition, there's the ecological factor through less material. Thus, together with RIEDEL, we make an important contribution to sustainability.

The length of connections – With MicroN we clearly shorten the cable distances. If we do a renovation of the vehicle in the future – cars live longer than the technology – we do not have to change the cabling thanks to MicroN. This saves time and money.

> **"RIEDEL builds innovative eco-systems that are created through their networked approach to signal management and the tight integration between all of their products."**

Flawless data transmission – The shorter the cable length, the less is the error rate. With a cable length of four meters, the connectors can be crimped less than perfectly and we still always have our data throughput. Under these conditions, replacement and service are easier, of course.

What would you say about RIEDEL in your memoirs?

Confidence and integrity. That's what I connect with the company RIEDEL and with their CEO, Thomas. I also would mention RIEDEL's strength in innovation and eco-systems that they create. RIEDEL stands for networked solutions, which they have shown with MediorNet. The fact that RIEDEL extends the MediorNet family with MetroN and MicroN proves that they still focus on maximum networking. A system in which everything works together as a unit – that's what RIEDEL lives, markets, and continues to develop further.

And last, but not least, we have RIEDEL's partnership. In a time where products are developed with the customer, RIEDEL is always a partner, providing close support.

Ever been in despair over a device?

We grew up in a generation where processors and IT technology were new and the devices had errors that you could never expect. These errors have driven us crazy because you believe in the product and you assume that it must be your mistake. So you are sitting in front of the device for hours and, at the end, the error is located on the device itself. But there was never a RIEDEL product amongst them.

Stepping once again into the political arena with MEDIORNET

RIEDEL Communications supplied a robust communications solution for the ITV Leaders pre-election debate, held April 2nd at MediaCityUK. During the live broadcast event, leading broadcast and production facility provider dock10 used the RIEDEL Artist digital matrix intercom system and MediorNet real-time media network to enable flexible, reliable transport of video, data, and communications signals to the three main broadcasters — Sky, BBC, and ITV — as well as to the Media Hub Centre hosting more than 300 other members of the global press.

"RIEDEL's MediorNet real-time network came into its own during this event, offering valuable flexibility, reliability, and stability throughout an exciting, action-packed day that was full of surprises," said John O'Shaughnessy, head of technology operations at dock10. "With such a dependable solution underpinning signal transport, the dock10 technology team could deliver all that was asked of it on a very demanding day."

In addition to serving as the regular production facilitator behind popular U.K. television programs such as "The Voice" and "Dragons' Den," dock10 provides MediorNet real-time media links to ITV and BBC, as well as The Pie Factory production base at MediaCityUK. For the ITV Leaders debate held in advance of the U.K.'s May elections, dock10 was able to use its campus-wide fiber connectivity to link all areas across MediaCityUK and enable transmissions to and from a host of broadcasters. The MediorNet CWDM option enhanced this capability and offered increased capacity that ensured flexibility and reliability in signal delivery.

The ITV Leaders Debate main program was produced at HQ1, dock10's 12,500-square-foot studio. ITV news pool feeds, providing pictures to the world's press, were coordinated from another dock10 studio gallery, HQ3. dock10 deployed one MediorNet at the Piazza in front of the studios to provide video, data, and communications to Sky, the BBC, and ITV at their OB positions in front of the building. A second MediorNet system was deployed in the Media Hub Centre, which housed additional press, and enabled additional broadcaster live feeds.

"Our MediorNet and Artist systems have been engineered to provide the versatility and quality critical to live broadcast events of all sorts, from sports and entertainment to the political arena," said Paul Rivens, U.K. general manager at RIEDEL Communications. "We have worked closely with dock10 on a variety of high-profile productions, and the company once again made the most of our gear to support an important event leading into the U.K.'s 2015 general elections."
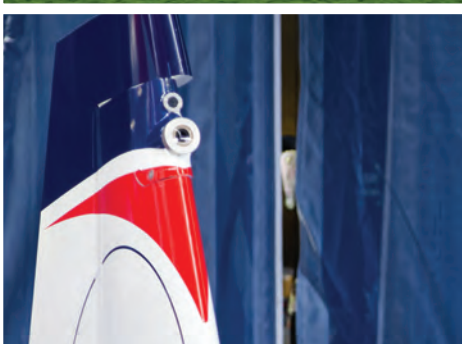
MEDIORNET MetroN streamlines the Red Bull Air Races

For the 2015 edition of the Red Bull Air Races, RIEDEL engineers again built a signal distribution infrastructure for video, audio, communications, and data based on a MediorNet real-time media network. TVN Mobile Productions, together with its partner EURO TV, is in charge of the production of the international broadcast.

With the introduction of MediorNet MetroN last year, the number of MediorNet frames required for this massive infrastructure has been reduced by 75% but available bandwidth has increased. MetroN moves all of the HD signals for the broadcast MCR, on site video walls, and race control with less hardware and less cabling.

Another new RIEDEL product, the STX-200 professional Skype interface, played a key roll at the races in Spielberg. This event had the unique situation where the airport was quite far from the course. In this instance, moving baseband signals to the airport would have been extremely difficult and expensive. But, by using the STX-200 and streaming video and communications to the remote airport, the pilots and support staff there could remain connected to the event with just an Internet connection.

Each of the 14 planes is equipped with two HD cameras – one at the aircraft's tail and one in the cockpit – that are delivered via a RIEDEL wireless system to the ground. All 28 cameras are remotely controllable from the ground. In addition to the video, all aircraft telemetry uses this RF link, as well. The video signals and data are then passed to race control, the individual teams, and TVN via the MediorNet. The complete onboard systems weigh just 3.4 kilos. Additional cameras on the ground were also fed through MediorNet.

On top of all of this, RIEDEL provides the IT backbone for the entire event without adding a single piece of cable since the IT data is tunneled through the existing MediorNet MetroNs.

All communications for the production teams are based on a RIEDEL Artist digital matrix intercom. The communication needs for race stewards, directors, and judges are made possible with wireless products. With the Artist serving as the communications backbone, RIEDEL's Juggler seamlessly integrated a digital trunked (TETRA) radio installation. In total, the TETRA base stations supported more than 500 handheld digital radios, while RiFace interfaces allowed analogue radios to be integrated and used, as well. The largest group operating on the network is emergency services – primarily ambulance and fire authorities. It is also used by race and flight operations to maintain safety.

The Red Bull Air Races pose a significant challenge to the 17 RIEDEL professionals who support the races. The combined power and flexibility of MediorNet MetroN, Artist digital intercom, RockNet, and wireless solutions for comms, data, and video, help to ensure not only a successful broadcast at a significantly lower cost with less cabling, and less overall complexity, but also the safety of the entire event...from pilots to spectators and from Abu Dhabi to Las Vegas.

MEDIORNET MetroN

FRESH & LIVE

Bildquadrat Videoproductions changes how we think about OB Vans

Niklas Windeck and Moritz Wermeister are aware of the advantages of a smaller OB van concept not only through designing their new trailer, but also through working on professional productions with customers like ZDF, WDR, BBC Sport, REWE and Thyssen Krupp. They have taken a 3.5 ton trailer, attached it to a Sprinter, and loaded it up with MediorNet MicroN, Tango, and Smartpanels. With these signal transport and communications backbones in place, the advantages of this new and modular approach to broadcast production become very clear.

MediorNet MicroN is a compact and multi-talented Signal-Interface that requires only 1 RU for its 80G of bandwidth. The Tango TNG-200 expandable communication platform is based on the RAVENNA/AES67 and AVB standards that greatly simplify the wiring needed to support it. The RSP-2318 Smartpanel can also leverage these same standards to further simplify cabling while providing an expandable and beautiful intercom interface.

With its small size, the van can get to places that a full-sized OB simply can't. And with its pre-wired, modular design inside, customers can substantially reduce costs while getting nearly all of the functionality of a mid-sized OB van. As a bonus, the workflow is completely file-based including the playout server and recording functions.

"There is one thing we have in mind with our OB van: we want to offer our customers a flexible concept through a significant price advantage – and with pioneering technology from RIEDEL. This means: no compromises in terms of the latest technology, quality and durability", says Moritz Wermeister.

What are you doing Reinhardt?

Reinhardt Wolf (Head of Logistics)

In this photo, you can see me picking a packing list for a dry-hire sales order. In this specific case, I am grabbing a RCP-1112, which is part of a larger delivery. After the picking is completed, we hand it over to the shipping department.

I am also the person in charge of the management and optimization of logistic processes in the areas of storage, inbound goods, goods issue, shipping, and inventory.

During my daily business I have a lot of other tasks including logistic reporting in order to always improve our work. For the optimization we need to continuously improve the internal transport routes in our new logistic halls and to readjust and streamline storage locations in the new shelving system. With this continuous control we can reduce picking times through shorter paths.

In the course of the opening new offices, the Logistic Department had to be enlarged to handle the increased volume of orders. The new logistics area combines all rental equipment as well as general inventory, radio repair and assembly, and quality & testing. The sales department is also integrated into the new logistics area.

With more than 4,000 m², including 2,700 m² of shelf space, four truck ramps, a sprinter ramp, a ground-level loading and unloading hall, intermediate storage areas, and sufficient maneuvering space, it is now possible to manage big projects quickly and effectively. The newly created infrastructure enables us to load or unload several trucks or containers at the same time.

RIEDEL project pictures

Your daily update

Follow us for more …

Recent Installations (selected)

SPAIN,
Santander
Palacio de Festivales
de Cantabria
(Theater Installation)
AC PF

NETHERLANDS,
Hilversum
Ericsson Holland
(Facility Installation)
MN

UK,
London
HotCam Ltd
(Outside Broadcast)
AR

SWITZERLAND,
Genève
Radio Télévision
Suisse
(Outside Broadcast)
MN

GERMANY,
Hessen
ZDF
(Outside Broadcast)
AR

CANADA,
Toronto
Solotech
(Live Event Production)
AR

USA,
Ohio
FOX Sports
(Broadcast Studios)
AR

USA,
California
Awsomeness TV
(Broadcast Studios)
TNG

MEXICO
Mexico City
Televital
(Outside Broadcast)
AC AR

MEXICO,
Mexico City
Televisa
(Outside Broadcast)
PF MN

PUERTO RICO,
San Juan
Liberty
(Broadcast Installation)
PF MN

CHILE,
Santiago
Chilefilms
(Outside Broadcast)
AR

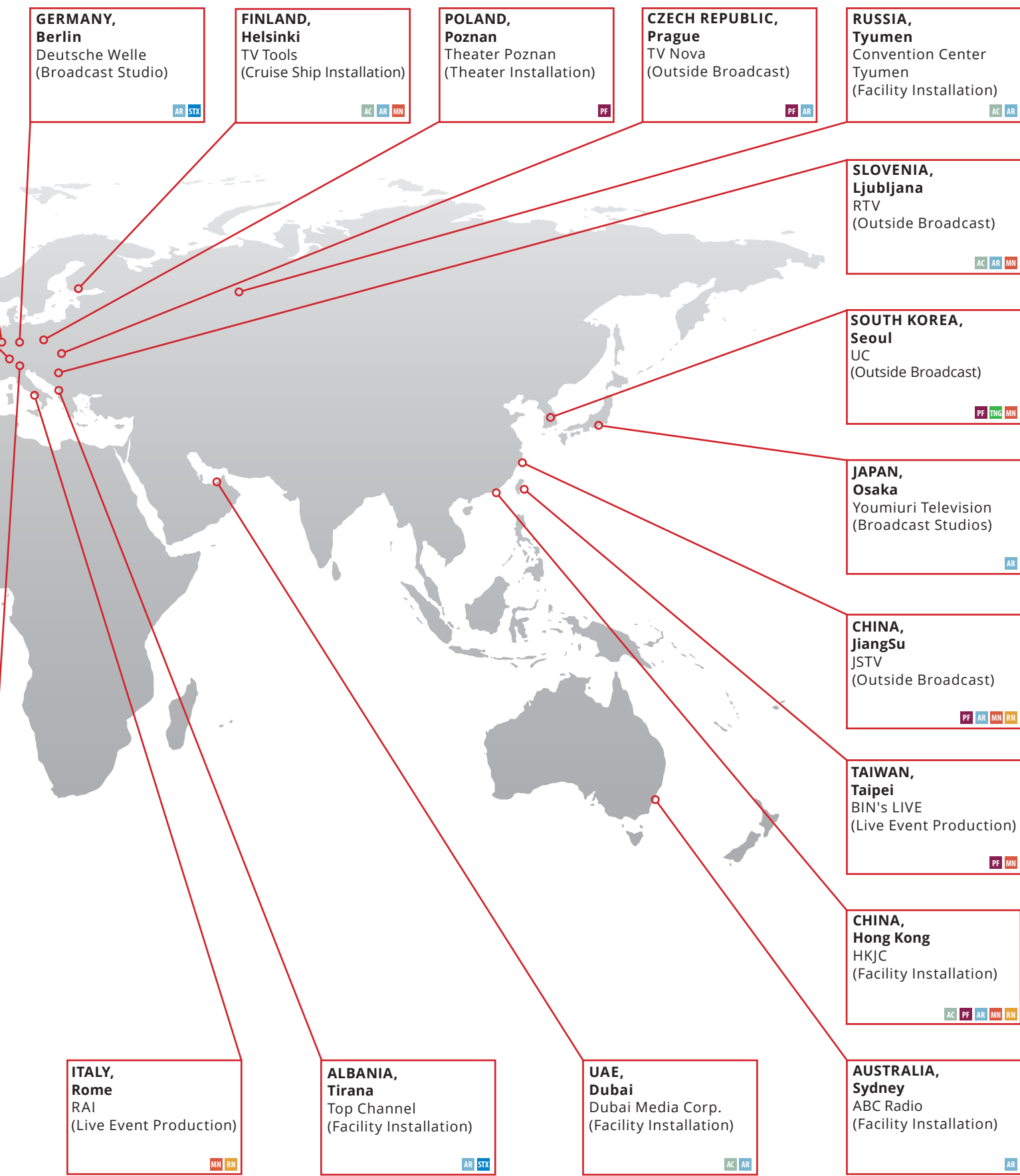**BRAZIL,**
Curitiba
RPC
(Broadcast Studio)
STX

BRAZIL,
Rio de Janeiro
Globosat
(Broadcast Studios)
MN

FRANCE,
Paris
Institut national de
l'audiovisuel
(Video Control Room)
MN TNG

AUSTRIA,
Steiermark
Oper Graz
(Theater Installation)
AR

Legend:
- Acrobat `AC`
- Performer `PF`
- Artist `AR`
- MediorNet `MN`
- RockNet `RN`
- Skype TX `STX`
- Tango TNG `TNG`

GERMANY, Berlin
Deutsche Welle
(Broadcast Studio)
`AR` `STX`

FINLAND, Helsinki
TV Tools
(Cruise Ship Installation)
`AC` `AR` `MN`

POLAND, Poznan
Theater Poznan
(Theater Installation)
`PF`

CZECH REPUBLIC, Prague
TV Nova
(Outside Broadcast)
`PF` `AR`

RUSSIA, Tyumen
Convention Center Tyumen
(Facility Installation)
`AC` `AR`

SLOVENIA, Ljubljana
RTV
(Outside Broadcast)
`AC` `AR` `MN`

SOUTH KOREA, Seoul
UC
(Outside Broadcast)
`PF` `TNG` `MN`

JAPAN, Osaka
Youmiuri Television
(Broadcast Studios)
`AR`

CHINA, JiangSu
JSTV
(Outside Broadcast)
`PF` `AR` `MN` `RN`

TAIWAN, Taipei
BIN's LIVE
(Live Event Production)
`PF` `MN`

CHINA, Hong Kong
HKJC
(Facility Installation)
`AC` `PF` `AR` `MN` `RN`

ITALY, Rome
RAI
(Live Event Production)
`MN` `RN`

ALBANIA, Tirana
Top Channel
(Facility Installation)
`AR` `STX`

UAE, Dubai
Dubai Media Corp.
(Facility Installation)
`AC` `AR`

AUSTRALIA, Sydney
ABC Radio
(Facility Installation)
`AR`