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Hytera customer publication & channel news

2014 · Issue 5

A Utilitarian Approach

Thames Water Deploys Hytera Radios

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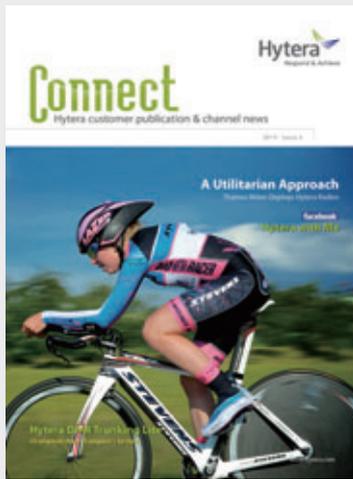
Hytera with Me

Hytera DMR Trunking Lite
Champions Run Champion's System

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Issue 5, 2014

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Radio Rocks

While Hytera's two-way radio solutions being adopted by more government departments and industries, including Venezuela Police, Shenzhen Metro, and Thailand Airport to name a few, we are also pleased to see that our products are popular among enterprise, commercial, and even individual users. Actually there is no secret to such a growth. Our portfolio is growing with the demands of the markets. With Hytera DMR Trunking Lite and Digital Migration Radio series on board, Hytera now has the most complete DMR product line, including both infrastructure and terminal. The DIB-R5 TETRA base station with TEDS (TETRA Enhanced Data Service) has been well proven

to be a current problem solver, who is also ready to evolve as the client requires.

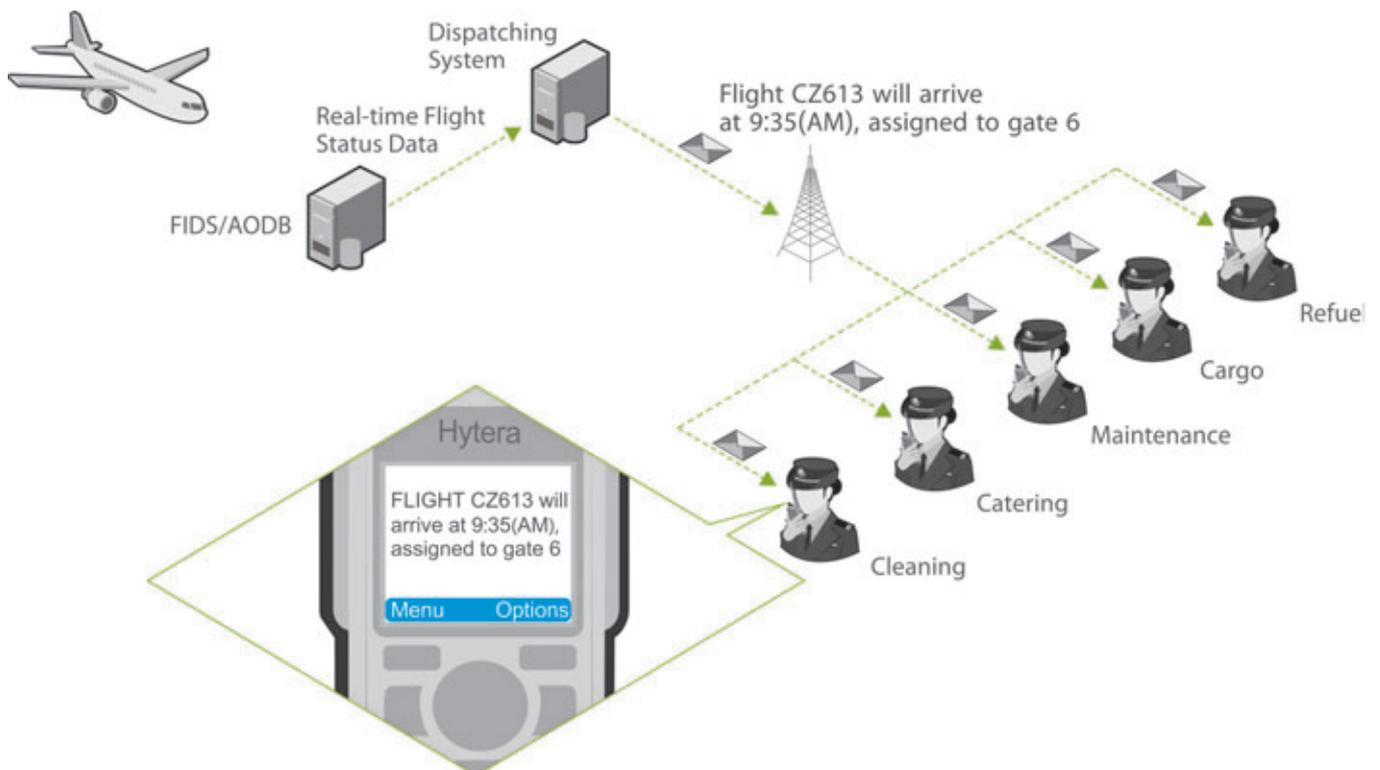
As a solution provider, we are confident in the versatility of our radios, which, however, never means we are losing the ability of being surprised by the creativity of our partners and users. The Thames Water case study has more about how a Hytera partner customized the solution for the utility company. Indeed, Hytera radios are becoming a helping hand for more professionals at work, and the enthusiasts refuse to stop there. To quote one of them, radio rocks. ©

Solution

Civil Aviation Communication Solution

Visualized ground handling & digital radio communication system

Accurate Flight Information Push to Portable Radios





Use Portable Radios to Transmit Workflow Status

Civil Aviation Dispatching System



Ground Handling Dispatcher



Ground Handling Workflow Gantt Chart



History Report



Ground staff can use portable radios to transmit workflow status and the status update will be displayed in dispatcher's gantt chart window.

The integrate interface helps the dispatcher export the workflow record the AODB(Airport Operation Database) automatically.

Automatic generated task menu will remind ground staff of incoming work



Update and close task



Catering



Cargo



Fueling

Visualised Ground Handling System

A ground handling workflow management system integrated with a dispatching system helps the dispatcher know the status of each work order and call the right group easily.

Within the dispatcher application, a Gantt Chart provides the visualisation of each ground handling task process related with a scheduled flight at the airport.

Additional PTT buttons on the right side of the Gantt Chart enables the dispatcher to call radios in a specific ground group assigned to this flight.

Features

- Flight dynamic information notice and accurate push
 - Automatic and manual ground staff assignment
 - Flight gate assignment notice
 - Customised short message notice and query
 - Upload workflow status on portable radio
 - History report query and export
- Adaptable for use with ETSI DMR tier 3 trunking system and TETRA system

Benefits

- Visualised chart helps the dispatcher and administrator monitor ground handling tasks in real time
- Automatic reminders to the dispatcher and ground staff of delayed tasks
- Dispatcher can use a visualised map to monitor all airport gate statuses more easily
- Automatic reporting of each ground handling task helps administrators track responsibility more efficiently



Hytera TETRA Solution

Brings the future of
Critical communication within sight

Total solution of terminal,
infrastructure and applications

Evolve smoothly to the future,
TEDS & LTE capable

Turnkey for stress-free ownership

Reliable system operation

Affordable



MT680



DIB-R5



Z1p



PT580H



PT790Ex

Hytera
Respond & Achieve



Case Study



The Victorian pumping station: A new digital network now provides radio coverage where it wasn't supported before

A Utilitarian Approach

Alex Preston visits a Thames Water treatment works to discover how digital is delivering site benefits

One of the companies tasked with meeting this unquenchable demand is Thames Water.

“I never drink water because of all the disgusting things fish do in it.”

With the notable exception of WC Fields perhaps, we all drink water. Indeed, our consumption of both potable and other household water (showers, washing machines, garden hoses, etc.) is increasing. Londoners, for example, use more water than the national average – 161 litres per day versus 150 litres – and the pattern looks set to be sustained as the capital's population is expected to reach 8.89 million by 2031.

One of the companies tasked with meeting this unquenchable demand is Thames Water. The largest utility in the UK, it serves more than 15 million customers across London and the Thames Valley region. “Our closest customer is three minutes away,” says Richard Hulley operations liaison engineer, as we are taken on a tour of the company's Walton site.

The Walton works are a critical part of the London water supply network. A pumping station was built in 1898 to serve the various reservoirs and filter

beds in the vicinity. In 1926, the site was expanded with the opening of the original water treatment works (WTW)– these were upgraded in 1995 to the Advanced Water Treatment (AWT) technique. Today, Walton AWT treats between 80 million and 100 million litres of water per day, and is one of five AWTs on the Thames Water ring main, ensuring that the ever-increasing demand for high quality drinking water is met.

Amid this effort, a recently installed digital radio system is playing an important behind-the-scenes role.

As Hulley explains, the 15-acre site previously relied on a trio of radio communication solutions: analogue two-way radios, provided by long-term supply partner, Chatterbox, were used by staff for in-building communications; where two-way radio coverage was not achievable, personnel also carried mobile phones. Finally, pagers were used with a SCADA (supervisory control and data acquisition) system to raise alerts on equipment failures.

However, the nature and size of the site and the architectural mix of buildings had an adverse effect on the coverage capabilities of the system.

The previous solution did not provide 100 per cent site coverage – some areas did not support mobile coverage, while certain unique in-building conditions posed issues of interference making the radio handsets inoperable.

“We have various sensitive areas,” explains Hulley, “that don’t like radio frequency at all, and which could set off alarms. For instance, the parameters of the water quality monitoring system could be changed.”

Coverage in the Victorian pumping station was also restricted. Workers in ‘the crypt’, an area situated below the stairwell in the basement of the main pump house where several key services are located, can often work in isolation. In this location there was no radio signal and the noise of the pumps made any conversation inaudible, meaning communicating with personnel had to be physically carried out.

The previous system was also less accurate in terms of location of workers. Then, the onus was on the individual to manually input which of seven prescribed zones they were working in to their radio. Any alarms would be received on a pager, but when the pager system failed and could not be repaired, Thames Water turned to Chatterbox, for an updated radio solution with added functionality.

Following discussions with the utility and evaluating site needs, Chatterbox identified an opportunity to improve the existing three device system, and initiated a migration from analogue to digital based on X1p hand-portables from Hytera.

Replacing the analogue system, the new DMR solution fills in the previous coverage gaps, providing 100 per cent

coverage on the site, even in ‘the crypt’ and areas where traditional communications systems could negatively influence alarm systems.

In Walton’s complex and hazardous environment, the X1p handsets are delivering other benefits, namely in lone worker safety.

Walton AWTW is a key site for Thames Water and health and safety is taken as a priority, as Hulley explains. “The site is manned 24 hours a day, 365 days a year. We have lone workers, and workers on stand-by (out of hours), who come and work, by the nature of the environment, in conditions where they cannot readily be seen. It is key that the company ensures all workers are well looked after.”

With its blend of old and new, some listed buildings and new AWT processes, Walton’s infrastructure presents a wide range of physical and chemical hazards for workers. There are areas of deep, fast flowing water, and as Hulley adds: “Lots of high voltage, lots of water tanks – numerous areas where mobile phones don’t work, and communications are difficult. It is imperative to cover these areas as well as high risk areas where traditional radio systems would set off alarms.”

Because of such risks, the selected X1p is a rugged IP67 compliant handset that provides the much needed blanket coverage and safety through the integration of a third-party app – a localisation system.

Typically, a lone worker has to perform routine monitoring and evaluation duties to keep the site running. As Hulley describes, every four hours the staff member will have to leave the control room and test the lab equipment to prove that water quality sampling is taking place and is accurate. “Other responsibilities could be as diverse as cleaning leaves blown onto the screens and blocking the inlet ducts.”

The selected X1p is a rugged IP67 compliant handset that provides the much needed blanket coverage and safety through the integration of a third-party app – a localisation system

Richard Blackwell (left), Alex Preston (centre), and Richard Hulley (right)



Hytera's X1p rugged compact handset replaces the need for three technology devices



The selection of the Hytera X1p enabled the deployment of a new geolocalisation system.

In the event of an incident under the old paging system, the individual would receive an alarm on the pager, which they would act upon. However, if they had left the control room, such notifications may not have been received. This meant that the Walton site had to employ a 'buddy system' and double man the control room. This led to high overtime costs, especially during out-of hours (evenings and weekends). In addition, with an emphasis on the individual to manually input the areas they were working in into their radios, the risk of human error was great.

The selection of the Hytera X1p enabled the deployment of a new geolocalisation system. In doing so, it removed the need for extra staffing levels.

Deployed around live operations, PMR Products' SafetyNet Locator is a real-time mapping system which tracks and records the location and movement of radio users in both indoor and outdoor environments, based on a network of beacons.

A module in each X1p handset automatically detects a radio user's movements via the beacon. The Locator Receiver processes the beacon updates and sends position information over the radio to a centrally located decoder. Bluetooth is used for indoor data transfer, while GPS is automatically activated when outdoors.

There are nearly 100 beacons strategically placed around the site. According to Chatterbox's Richard Blackwell, the company worked closely with Thames Water on a site survey to identify where radio users were operating, for the purposes of management of staff movements, security and safety needs. Areas where coverage already existed, and zones carrying a need for antennas were also ascertained.

Each battery-powered beacon is built into a standard cube enclosure, which can be physically attached to a surface such as a doorframe or stairwell through captive screws under the main lid. They can also be glued to a vertical surface, and this approach was necessary at some locations on the site. "Some of the older works contain asbestos," explains Blackwell. "At these locations, resin was used to bond the beacon instead of screwing it in place. This avoided problems of dust."

Chatterbox has online access to the system to remotely monitor the network and provide maintenance. "We don't wait for an issue," says Blackwell. "In real life, you know you have an issue when something happens. We can pre-empt it."

The beacon system collects and displays updates of movements and changes of operational status of radio users within an area. The information is sent back to the control room and displayed on a PC. The control room at Walton typically deals with around 1,700 alerts a day, from SCADA, BMS and operatives, requiring varying responses.

On the main monitor in the control room, the location, time and date are also displayed – a valuable function according to Hulley.

"The time-stamped feature is useful for auditing purposes. Radio communications through the system are automatically logged and recorded. If there is an event – not just health and safety related – such as a burst pipe or a power dip, rather than having to log all the details, you can simply talk into the radio. You can then play it back later to capture what was happening at the time."

Alarms can be raised by the operative pressing the alarm function – a panic button – or the radio being motionless for a set time. The handsets are also programmed for man-down monitoring. An inbuilt mercury switch triggers an alert if the radio is horizontal for an extended period of time.

"Once the radio signal is received by the control room, if it is manned and there are people on the site, you can easily locate those individuals and send the relevant help. If an incident occurs out of hours, and it is the controller themselves who is in trouble," Hulley continues, "the signal is echoed out to staff on standby on mobile devices as an issue. They can then contact the controller directly. If they are unable to reach them, and it may well be a false alarm but all alarms are treated as real, they can attend the site and locate them directly without having to search across the 15-acre site."

"In the event of a power dip, you instantly have all of the team on hand. You can talk to them. You may not necessarily need to see them, but you can advise them on what to do. So you're not really alone on site."





Beacons in the pumping station (above) and 'the crypt' (below right) provide greater safety coverage for lone workers

The X1p handsets are also integrated into the main telephone system so that calls can be transferred to the radios, which can also receive voice messages. Blackwell explains that this is especially useful when the radios are accidentally taken home or found to be in a prohibited area. "A beacon on a gatehouse or in a zone the radio is not supposed to be will recognise the radio and send out a voice message, basically saying 'Put me back!'"

With the new solution in place, combining a state-of-the-art location network and digital radio system, Thames Water operatives now have a compact, handheld device they carry with them that does 'everything', replacing three communication devices. The ease of installing the beacons meant the system was installed in days and operating shortly thereafter with minimal training, although Chatterbox was on hand during the commissioning to respond to questions. The whole solution is Windows-based and very intuitive, according to Hulley. "You can walk up to it and in five or six minutes be able to do what you want it to do. If you can use a mobile phone, you can

use the [Hytera] handsets."

The simplicity of the system and the on-going advantages of digital radio are encouraging Thames Water to consider rolling it out across other water treatment plants so there is a common network across the whole of West London.

Approaching the Victorian pumping house, Hulley remembers an incident from some years back. "About 20 years ago, work was being carried out in a nearby farm and they uncovered an unexploded bomb – 2,500lbs. About 2,000lbs was removed, but the rest was detonated. The windows in the AWT plant were blown out and there was lots of debris across the site. In the pump room, there was one cracked window and a door was blown open!"

A resilient marvel of Victorian engineering which now sits side-by-side with a very 21st century radio communication solution. Let's raise a glass of water to that! ©

The X1p handsets are also integrated into the main telephone system



Digital Radio Takes the Grind out of Industrial Communications

Faced with an ageing analog radio system that was becoming difficult to maintain and which did not provide coverage in important areas of its plant, Australian company Moly-Cop turned to Hytera DMR digital technology to provide a solution.

An installation of three base stations, a combination of handheld and mobile radio units and the SmartDispatch console now provides better, clearer, more reliable communications, enhancing efficiency and safety.

Moly-Cop is a division of Arrium, an international mining and materials company with around 10,000 employees and annual sales of almost \$7 billion. Moly-Cop produces grinding media and wire ropes for the mining industry and railway wheels and axles for the transport industry. The company's grinding media mill is located in Newcastle, New South Wales. It is the largest supplier of grinding media in the world, with a nominal capacity of 250,000 tonnes per annum.

"Moly-Cop's Newcastle site had a 20-year-old analog radio system that needed replacement," says Bob Selby-Wood of Radio Industries, the dealership that installed the system. "To give you an idea of what they were up against, they have a foundry plant called the 'ballroom' where they make metal balls the size of cannon balls for the grinding media business. They'd never had radio coverage in the ballroom, due to the microwave furnaces. So we went in and tested Hytera DMR units to demonstrate the difference between digital and the old analog units, and it just belted them out of the park."

Radio Industries recommended a mixture of around 100 Hytera DMR portable and mobile radios (the latter for use in forklifts and trucks around the plant), three base stations and the Hytera SmartDispatch console.

Comprehensive planning was important. "First we went through the testing process, where we installed

20-year-old analog radio system needed replacement - The choice finally fell upon Hytera products!



Moly-Cop is a division of Arrium, an international mining and materials company with around 10,000 employees and annual sales of almost \$7 billion.

a test base station and radios and headsets,” says Selby-Wood. “We did that twice, to show all the key stakeholders that the system would work as planned.

“We settled on a system whereby the base stations are effectively joined together. It’s really a pseudo trunk system. We divided the base stations up amongst the number of people and groups needed.”

The basic portable used is the PD702. For supervisors there is a higher-level portable with a screen, the PD782, from which they can also make and receive phone calls. The MD782 is the mobile radio; it’s also used at the SmartDispatch console. All the units have GPS built in. The three base stations are RD982s, which have telephone interconnects installed.

“Physically, it took around five days to install the system. The radios were all programmed onsite. We sat around in a big room - Hytera, us and the client - and did all of the programming together,”

said Selby-Wood. “We had complete compliance with the customer, 100% from top to bottom, and they had total compliance with us. It was probably the easiest large installation I’d had for years.”

“At Hytera, we put a lot of effort into ensuring the best radio designs and functionality possible, and this has been well proven by the market,” said Terry Feng, Hytera’s sales director. “We’re honoured to be involved with solving real-life problems for our customers.”

This was all just on two years ago now, and the dealer has not had one radio back in for repair, despite the hostile industrial environment. “We did have two radios come back in for servicing because the sound had become a bit muffled, but after we blew the iron filings out of the speaker they worked fine again,” said Selby-Wood with a laugh. ©

Feature Product



Hytera DMR Trunking Lite

Hytera DMR Trunking Lite is a digital trunking system, which is developed from ETSI open standard and focuses on transportation, energy resource, public utilities, enterprise & business, etc. The system, based on RD98XS transceiver supports multi-mode operation and smooth migration, and provides professional users with more choices.



DS-6211 Base Station Overview

Overall Integration

High level integrated 2-carrier 400MHz-470MHz base station supports overall delivery and promises power up to talk on site.

Components Assembly

Base station components can be offered separately, and customers have alternative choice for their own cabinet or IP equipment.

- 1 Power Distribution Unit
- 2 Transceiver
- 3 Transceiver Power Supply
- 4 Transceiver
- 5 Switch
- 6 BS PSU
- 7 Base Station Controller
- 8 2-channel RF System

System Key Features

Open Standard

DMR Trunking Lite is based on DMR tier III standard, defined by ETSI in 2005, which is a digital radio standard for professional radio users. With dedicated control channel, DMR Trunking Lite can achieve versatile functions.

Integrated RF System

Integrated 2-carrier RF system, significantly reduces the space and cost for divider, combiner and duplexer.

Open API

Open API satisfies further development based on different customers' need, such as billing system, e-mail gateway, etc.

Smooth Migration

DMR Trunking Lite transceiver supports smooth migration from conventional to trunking. Multi-modes provide you different choices for continual investment.

Interconnection with Different Systems

Different gateways can be achieved the interconnection between DMR trunking and other standard, such as PSTN gateway, analog conventional gateway, MPT gateway, DMR conventional gateway, etc.

IP Architecture

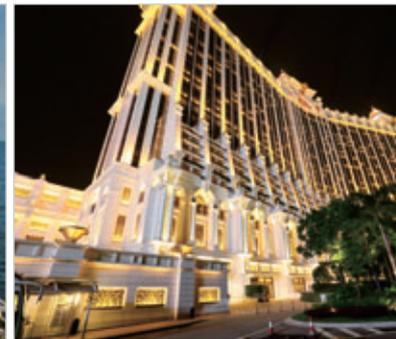
All devices are based on IP architecture to ensure flexible networking and system expansion.

Versatile Services

Voice services, data services, priority, late entry, call back, recording, PSTN call, ESN check, authentication, E2EE, kill, GPS, emergency alarm, etc.

Non-centralized Structure Design

Non-centralized structure can be used in 1 up to 5 base stations network to ensure a cost-effective and flexible network.



Application Industries

Transportation

Highway, Public bus, Taxi, Airport, Port, etc.
Characteristic: Medium network, a large user number, special application, information system interconnection.

Commercial Industry

Hotel, Property, Supermarket, Construction site, Park, etc.
Characteristic: Single Site, medium user number, special application.

Energy Resources

Petrochemical industry, Mine, Smelter, Electric Power, etc.
Character: Multi-site, large user number, explosion-proof, high degree of protection.

Public Utilities

Education, Forestry, Water Conservancy, etc.
Characteristic: Multi-site, small user number, data transfer, telemetry.



Hytera with Me

Stories from Hytera Radio Fans

“Two-way Radios and Me” photo contest at [facebook](#)

This year, Hytera organized a “Two-way Radios and Me” photo contest on Facebook. The participants could win one of three different Hytera professional DMR digital as X1p, PD78X and PD60X by uploading any two-way radio picture to the contest page and share it on Facebook with their friends to get the most votes. The response

was overwhelming! A lot of interesting, funny or professional photos were shared by participants; the contest was a complete success.

The following articles are about the participants, the story of their picture or their passion to Hytera radios.



Two-way Radios and Me

PHOTO CONTEST



Piotr Bartłomiej Soltysik – A lucky winner of Hytera radio

Piotr was the lucky winner of our Hytera photo contest and received a Hytera DMR X1p radio with standard accessories – We wish him a lot of fun with it.

As a volunteer firefighter in Poland, Piotr uses Hytera radios for rescue activities in the fire brigade in analog mode VHF. Flawless functioning of the radios has to be given because accessibility among the team members has always been top priority. Therefore Hytera radios have to be very durable and resistant to damage and water.

One hobby arose another one. Finally, Piotr got more and more interested in radios and became a ham. Last year in August he started testing Hytera products with the radio HYT TM-610U. By winning the \$1,000 USD gift certificate of the Hytera Christmas and New Year Sweepstakes in 2013, he managed to

have the radios PD785 and MD785 on the VHF band from a Hytera dealer. He decided to build a switching power supply and integrated housing base by himself.

“Hytera radios are well suited for application ham radios and the best choice”, Piotr said. We thank him very much for his confidence in our productions. ©



Geoffrey Bolle – His companion is Hytera DMR portable radio PD785G



Geoffrey works as a railway engineer for the international railway company in Belgium. His largest passion is being a ham (call sign ON5ZZ). Geoffrey found the optimal radio for himself, Hytera DMR radio PD785G. According to his description “Hytera PD785G is doing a great job”. Mainly Geoffrey uses his radio for contacting other hams. Preferably, they apply the ON0GRC repeater in Ghent.

Radios connect people – not only virtual. The picture for our photo contest was taken during a reunion with ham radio members of the Ghent radio amateur radio club (GRC). Geoffrey was a loyal member about ten years. To honour their great time at GRC, all the members have an annual meeting. Hytera radios didn't miss the party. This year the result of it was a very nice evening with a lot of talking, drinking and coming to the idea testing the Hytera radio PD785G in a glass of Hoegaarden!

We thank the ham radio members of GRS very much for showing us what the use of a radio could also be.

Last but not least PD785G passed the test – of cause! ©

Testing Hytera PD785G in a glass of beer

Michael Vmq – A experienced Hytera user

Michael is convinced of the toughness of Hytera radios. He told us that he had dropped a Hytera DMR digital radio PD780 from a tower at a height of 15 meters but it still worked.

Michael uses Hytera radios at work as well as in amateur radio activities. He is a telecom system engineer who has a lot of experiences with Hytera radios. Hytera PD780 radio is, in his point of view, the best among all DMR

radios on market. When he works for tunnel telecom projects, Hytera PD780 performs really well under extreme heat, humidity, dust and noisy environment. After work he only needs to put the radio under the tap to wash for a few seconds and it's like brand new.

As a ham, Michael is active in an amateur radio emergency service (ARES) and in various voluntary events for communication support. In these activities, he uses his own Hytera

DMR radio PD780 and Hytera DMR pocket-size radio PD360. The programmable features of Hytera radios are very useful for amateur users, Michael said. He traveled with some amateur users to a different city once, and they wanted to access to its local repeaters. While other users were busy in taking out their computers and cables for reprogramming, he could easily program his radio on the keypad. ©

Alberto Sagredo – “Hytera radio rocks”

Alberto's career as an enthusiastic ham started seven months ago from now. His first couple of equipments, Hytera DMR mobile radio MD785 and portable PD605, aroused his interest in Hytera radios. Shortly afterwards he reserved the second seat in our Facebook photo contest thus guaranteed him another DMR radio PD785. But it shouldn't stop there; just a few days later he decided to buy the X1P for continue testing Hytera radios. "I'm in love with it!", there is probably no greater compliment for us. And for this reason he couldn't bring himself to light on the blender you can see on his picture.

In his experiences, Hytera radios have numerous features but ease of use. As a ham he uses them as analog with analog repeater

and started to create links between networks. Furthermore he would like to deploy Hytera DMR radio repeaters around Spain, his home country.

But not "only" a ham, Alberto wants to become a professional! Actually, he is a voip engineer and training manager. Now, he has ambitious plans: establishing his own company with the aim to integrate home automation and voip a radio. He interconnects radios to phone lines which make it possible to open doors for example. In the spirit of his motto: "Future is Digital Radio", we wish him much luck and success for realizing his business idea. ©

Can a Hytera PD605 pass this test?



Finally,
Hytera says THANK YOU
to all the participants of the Facebook photo contest



Le Mans 24 Hours Motor Race

The 24 Hours of Le Mans motor race is the greatest endurance driving events in the world and Hytera products were on hand to make sure the event go smoothly.

The 24 Hours of Le Mans (24 Heures du Mans) 2014 is the world's oldest sports car endurance race and one of the most famous and influential in motorsports history. The event was created and is organised by the Automobile Club de l'Ouest (ACO), which has been running this major fixture in the motor sport calendar since it began in 1923.

From June 14th to 15th in France, Hytera, working with local partners Satcom Racing and Maine Radiocom, offered over 400 DMR terminals PD705/PD785/PD505 and 5 repeaters RD985 to Pegasus Racing Team. The radio system ensured seamless communication between the team and the Car No. 29, which finished the race at 16th position. Hytera also provided DMR radios to 24 Hours of Le Mans 2013. ©







Dream Walker

Dream Walker consists of a group of people and is also a project designed for people who let their dreams come true. They are originally from Poland and the name of their project "DREAM WALKERS AROUND THE WORLD IN 80 JUMPS" says everything. Each destination for the project is selected by two main criteria: beauty and height. They travel around the world and jump from the highest, most special and beautiful places they could find. Thereby world records become offend or really break. The team's idea behind Dream Walker is to open a hermetic environment of extreme sport professionals for everyone. Thanks to Dream Jump technology, it is possible to allow maximum free fall capacity with maximum safety. It is a patented technique jumping off heights using a belay system, dynamic ropes and pulleys. Because of the long free fall, not only one jumper has unlimited ability for acrobatic

performances but also multi-person jumps or jumps with objects are possible.

Hytera supported them with professional mobile radio equipments, Hytera PD60X radios, especially for their third of 80 expeditions. This event took place in Greece, over one of the most beautiful beaches – Navagio on the island of Zakynthos in June this year. It turned out to be a beautiful event, which is still widely discussed by the international media. Dream Jumps were the main attraction of the island throughout the month of June. Finally, Dream Walker set some new records. For the first time in the history of jumping, BASE jumpers and DREAM jumpers stood together on the same platform. Amateurs with professionals shared the same emotions and experiences.

Hytera supported them with professional mobile radio equipments, PD60X and TC-610 radios.





“Hytera radios were one of the basic and most important elements of every Dream Walker”, said Agata Majerczak, the founder of Dream Walker. Each jumper has a radio tightly fastened to the harness. Hytera radios have been proved to be efficient, continuous, trouble free and even excellent communication between team members at any time during the project, in every most extreme situation, on the ground, in the air or in the water. Dream Walker expeditions are not only about jumps. Before jump events can be held, they need a few days to assemble a complicated system, consisting of kilometer ropes and many tons of heavy equipment. Also each installation is preceded by a few days journey; during the traveling, Hytera radios helped them to maintain constant communication between the cars of

their convoy. Without excellent communication, the assembly of ropes would not be possible. Moreover, the members of the technical team were separate from each other by hundreds of meters and sometimes by kilometers, but always by big chasms.

The 4th edition of Dream Walkers will be their first architectural edition. It will take place in Spain at the very top of Bali – the highest hotel in Europe – 186 meter pure of adrenaline and beautiful landscapes. Dream Walker – Around the World in 80 jumps expedition is an amazing event, very professionally prepared, and guarantees full of unforgettable memories! It is a pioneering, strong and creative project and we are very pleased to be a part of it. ©

“Hytera radios are witnessing enormous, first and unique emotions. They are always the first to “hear” our great joy after putting the first jump, satisfaction when the job is done.”

*Agata Majerczak
Founder of Dream Walker*





Team Stevens-Hytera

Hytera radios have become a fixed part in the equipment of Team Stevens-Hytera

This year we are very pleased to support one of the few professional feminine racing teams in Germany – Team Stevens-Hytera.

In Germany the professional cycling for women is not yet widespread. This great sport is at its beginning and we are therefore all the more delighted to be a part of this exiting period.

Under the leadership of Mr. Eric Schneidenbach, the racers participated in the German Bicycle Cup and started regularly at the German Cycling League in different races all over Germany. The team also attends international competitions; the women have at least one race every week. In addition to the ordinary sponsorship, Hytera supports the team with professional mobile radio equipments. The team cars are equipped with two units of Hytera DMR digital mobile radio MD785. Ten Hytera DMR digital

X1e handhelds with headsets are provided for the racers. For other team members, Hytera DMR digital handheld radio PD605 are provided.

Due to legal requirements, Team Stevens-Hytera uses the radios in analog mode but still achieve good audio quality and radio coverage. The models used are lightweight and have a compact design with high capacity battery and they are easy to stow in the tricot. Hytera radios are proven to be robust because of their IP67 water/dust resistance, which is also essential for a cyclist during bad weather. An efficient radio communication allows immediate exchange of information and it is critical during the racing competition. During the races, Hytera radios accomplish an informative advantage. By using the radios, team members are able to inform each other about, e.g. intervals, situation about the race, etc. and they are independent of the organizer. Moreover, it



is possible to get in contact with the racers during the race so that other team member can actively intervene in the race. Via the convenient earphone all information, forthcoming difficult sections of the road or only cheering words, can be transferred explicitly to the racer. These are the reasons why Hytera radios are not only suitable for customers of

the industry or utility market, but also for professional sport teams, like cycle racing.

We are very proud to support such a dynamic and ambitious team and wish them still a lot success and good luck for the future. ©

We found a reliable partner in Hytera which provided us decisive competitive advantage in many situations.





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Venezuela Police to Use Hytera TETRA Solution

Caracas/Bad Munder, August 20, 2014 - Hytera Mobilfunk GmbH confirms the successful conclusion of the negotiations with the Ministerio del Poder Popular para Relaciones Interiores (Government Procurement Office) in Venezuela. Together with its partners APD and Cobra, the next step will be the implementation phase of the project.

In the process, the latest generation of technology will be employed in Venezuela: the DIB-R5 TETRA base stations with TEDS support (Tetra Enhanced Data Service). In addition, the order covers the complete bandwidth of the Hytera TETRA product

portfolio. From the PT580H TETRA hand held mobile radio via the MT680 TETRA mobile radio up to the DIB-R5 base stations, only TETRA technology from Hytera will be used. The TETRA system will be used by the police in Caracas. Approximately 4000 hand held and mobile radios will help to ensure that the task forces on site can completely rely on the police mobile radio system.

An important point in planning was the geographical situation of Caracas, since the city is situated in a region of Venezuela that is at an extremely high risk of earthquakes. Redundancies were integrated into the network equipment in case any base station

should ever fail. This means that the DIB-R5 all have a backup base station which is placed at a different location and can take over the radio coverage of the region of a failed DIB-R5 if needed. This ensures that the system will be available at any time, even in case of unforeseeable events.

Marco Martinato, Vice President Sales Key Projects and the person in charge of the project at Hytera Mobilfunk GmbH: "After intensive negotiations, we can now start the next phase of the project. With Hytera, the Ministerio del Poder Popular para Relaciones Interiores has a strong partner at its side, and we are looking forward to the collaboration." ©

The Motorcycle Escorts Selected Hytera to Guarantee the Communication System

Beijing, October 21st - China resumed motorcycle escorts for visiting foreign leaders, including them in the motorcade of Tanzanian President Jakaya Mrisho Kikwete as he travelled from the airport to the Diaoyutai State Guesthouse in central Beijing. Hytera supported communication products to the motorcycle escorts.

At the beginning of 2014, Hytera came to an agreement with the supplier to develop a customized communication system for the motorcycle escorts. Based on the existing DMR mobile radio, Hytera has developed a communication system with both DMR and TETRA two-way radios which ensures the communication between command centre and



Photo Courtesy to Xinhuanet

motorcycle escorts. Also, the dual audio access technology in both wireless and wire transmission ensures a reliable communication environment.

Hytera will also provide communication system to motorcycle escorts to ensure the safety during the APEC. ©

Hytera Awarded TETRA Projects by Shenzhen Metro

Shenzhen, China, July - Hytera has recently been awarded with TETRA communications project by Shenzhen Metro. The project value is over 12 million USD.

The TETRA system is to serve Shenzhen Metro phase III, including Line 7, 9 and 11. In this project, Hytera will provide 2 switch

centers, 72 base stations and 1500 portable radios for TETRA System. Along with TETRA system, Hytera DMR Trunking Lite will also be provided, including 1 switch center, 72 base stations and 1950 portable radios.

Shenzhen Metro is the underground system for the city of Shenzhen, Guangdong

province, China. Line 7, 9 and 11 will have 62 stations, and 107.247 kilometres of total trackage in operation. Shenzhen is one of the largest cities in China with a population of over 10 million. ©

Hytera Awarded TETRA Project for International Airports of Thailand

Shenzhen, China, 21st March 2014 - Aeronautical Radio of Thailand Limited, a state enterprise under the Ministry of Transport and Communications of Thailand, recently announced that Hytera Communications Co., Ltd has won the contract to supply TETRA radios for Suvarnabhumi and Don Muang Airport in Bangkok, Thailand.

Aeronautical Radio of Thailand Limited (AEROTHAI), founded in 1948 by airlines with the consent of the Royal Thai Government, aims to provide air traffic control and aeronautical communication services

for airline operations. AEROTHAI built an integrated TETRA system network covering Bangkok International Airports since 2007, and it was used by the ground crews and logistic company for daily operational communications.

Provided by AEROTHAI, Suvarnabhumi and Don Muang Airport in Bangkok, Thailand, among the top 15 busiest airports in the world, have been using Hytera TETRA radios since April 2013 for trial. The use of portable radios PT580H and mobile radios MT680 ensures more convenient and reliable

communications for crews in airports. MT680 enables quick access to the TETRA network and roaming services, and the superior voice quality of PT580H is ideal for communications in the clamorous environment of airports. The outstanding performance of Hytera TETRA radios during the trial is critical for winning the contract of AEROTHAI. It is expected that more TETRA terminals from Hytera will be deployed in these two airports to facilitate their operation in 2014. ©

Hytera America Delivers another Successful **DMR Boot Camp Training**



Miramar, Florida, October 2014 - In 2013, the Hytera North America Technical and Channel Sales Teams joined forces to organize and deliver a world class DMR Technical Training Program designed to elevate Hytera's business partners' DMR technical competencies.

For the first time since the program's inception, Hytera America took their DMR Boot Camp training on the road, selecting Denver, Colorado as their host city. Over a two-day period, technicians from 25 U.S. dealers trained on the basics of DMR technology, advanced radio programming and IP Connect (RD98X). This hands-on training,

the fourth boot camp of its kind in the past two years, represents a significant investment by Hytera in establishing a competent and knowledgeable local dealer-technician infrastructure to better serve end-users.

Jose Rodriguez, Technical Service Manager and Nicholas Bacigalupi, National Channel Sales Manager were instrumental in the successful development and flawless execution of the DMR Boot Camp Training program, "together Jose and I have improved the curriculum of each session since our early beginnings a few years ago" noted Nicholas. Expressing confidence in the program and pleasure with the positive feedback generated

by attendees, Gary Lorenz, Vice President of Sales for Hytera North America indicated that the training road show would take a cross-border venture into Canada in the upcoming months, "the consensus of the 25 attendees was overwhelmingly positive and several other U.S. Hytera Dealers whom I've talked to are very excited about Hytera America holding additional Boot Camp sessions in North America" Gary added.

Jose and Nicholas will be introducing the 5th DMR Boot Camp Training session in 2015; it will be the first to be hosted in Hytera America's newly completed state of the art Training Center at HQ in Florida. ©

Hytera Supports **Earthquake Relief in Yunnan China**

Yunnan, China, August 12th 2014 - On August 3, 2014, a 6.5-magnitude earthquake struck Nudian County, Yunnan Province, China, causing death of at least 500 people and thousands injured. In the immediate aftermath of the earthquake, Hytera donated emergency communications equipments DMR Tier III system to local public

security and emergency authority of the earthquake-stricken areas. A team of Hytera engineers was dispatched to Nudian County for communications support.

During the earthquake, the public communications network of Nudian County was seriously damaged, bringing great

difficulties to the rescue efforts. To support the earthquake relief, Hytera engineers shipped and installed a DMR Tier III system which included MSO, Base Station and over 100 digital portable radios. It has been used by the rescue commanding center and the teams. ©

Hytera Awarded Project for **Chongqing Public Security Bureau China**

Shenzhen, China, July 29th, 2014 - Hytera has recently been awarded a PMR project by Chongqing Public Security Bureau, and Hytera DMR Trunking Pro systems will be installed across the city. Because of the complicated topography, the analog system cannot satisfy the requirement of the public

authority of Chongqing. With different kinds of base station, switch centre and digital terminals, this city wide DMR Tier III trunking system will replace the existing analog one. Moreover, Hytera dispatch solution will be integrated into the local police commanding system.

Chongqing is a major city in Southwest China and one of the five national central cities in China. Administratively, it is one of the PRC's four direct-controlled municipalities (the other three are Beijing, Shanghai and Tianjin), and the only such municipality in inland China. ©

Hytera to Support **Nanjing Public Security Bureau to Secure the Youth Olympic Games**

Nanjing, China, July 22nd, 2014 – The Youth Olympic Games will be held in Nanjing Olympic Sports Centre Gymnasium on 16th August 2014. In order to maintain security during the event, Hytera will provide DMR Tier III solution which includes 14 DMR base stations, 8 BDA and over 3000 DMR two-

way radios for Nanjing Public Security Bureau and help them ensure the security among 15 venues.

The existing analogue systems cannot satisfy the huge requirement of communication for Nanjing Public Security Bureau during the

Youth Olympic Games. Hytera will provide task and deliver seamless communication signal over the stadium, which will help communication network of Nanjing Public Security Bureau change into digital mode smoothly. ©

Hytera Becomes the Official Radio Supplier of **WGC-HSBC Champions 2014**

Shenzhen, China, October 15th 2014— Hytera today announced the partnership with WGC-HSBC Champions 2014. Hytera will provide its latest digital radios and tailor-made communication solution for the world's top golf tournament which will be on show from November 6th to 9th at Sheshan International Golf Club in Shanghai, China.

a prestigious global golf tournament with great reputation in the last decade, which is a perfect stage for Hytera to present its progressive international strategy to the global customers. It will be also a great honor for Hytera to witness the birth of the tenth champion of the WGC-HSBC Champions in this special year.”

According to Hytera, their latest launched DMR products including PD3, PD5 and PD6 series of portable radios will be massively utilized during the whole WGC-HSBC Champions period from Oct 15th to Nov 10th, 2014. ©

The WGC-HSBC Champions is one of four World Golf Championships sanctioned and organized by the operational committee of the International Federation of PGA Tours. It is known as “Asia’s Major”, and the marquee players who grace the event has also earned it the title of “Championship of Champions” making it as one of the world's biggest men’s tournaments. This year, the WGC-HSBC Champions will celebrate its 10th anniversary and a decade of unprecedented golf development in China.

Dylan Liu, Marketing Director of Hytera said “Since its first event at Sheshan in 2005, the WGC-HSBC Champions has grown as



Events



Hytera TEDS System was Showcased in CCW 2014



Hytera Showed DS-6801 in ISNR 2014



Comms Connect 2014 in Melbourne, Australia



Hytera Showcased DMR System in IWCE 2014



End-user Seminar for Hong Kong/Macau 2014 & New DMR Products Launch



Hytera Digital Launching Event in Malaysia

Digital Migration Radio

DMR
DIGITAL MOBILITY RADIO ASSOCIATION



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Hytera Communications Corporation Limited

CHAMPIONS RUN ON CHAMPION'S SYSTEM

As the market leader in **DMR Tier III Trunking** solution, Hytera has so far offered over 6,000 channels to institutions of different sizes and industries, and various departments of governments, who rely on the system for seamless and resilient communications. Hytera empowers professionals and organizations to work more efficiently, and gain edges to stay ahead of the competition.

Hytera DMR Trunking Lite

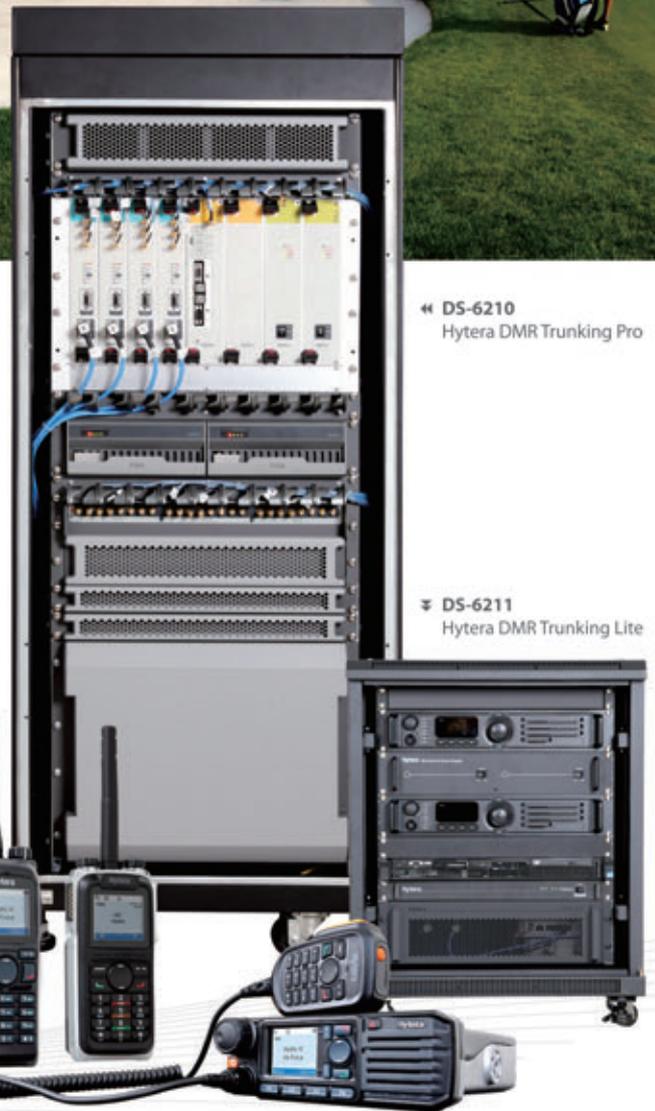
- Alternative Topology
- Fast Deployment
- Lower Total Cost of Ownership



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PD79X Ex

PD78X

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MD78X