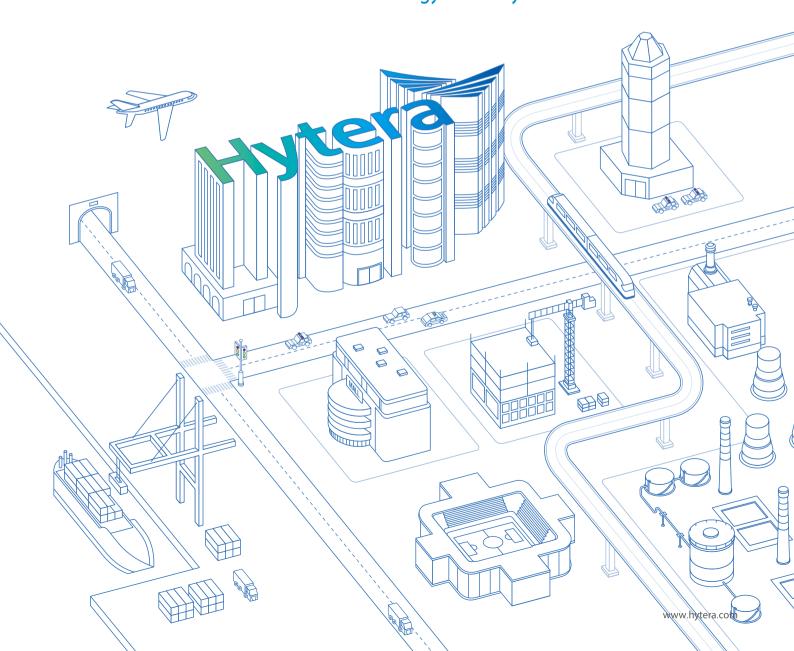




Dr. Guan Bao Talked about the New 5G Applications at MWC2021

Interview with Dr. Bernhard Klinger: "TETRA Will Remain the Decisive Technology for Many Years to Come"







#### 01 Hytera View

• Dr. Guan Bao Talked about the New 5G Applications at MWC2021

#### 02 Leading Technologies

- "TETRA Will Remain the Decisive Technology for Many Years to Come"
- Sinclair's White Paper: Importance of Antenna Isolation
- Norsat's White Paper: BUC/SSPAs
- Hytera Multi-mode Advanced Radio White Paper: Underpin The Future of Critical Communications

#### **05 Digital Marketing**

- Hytera Shone the Spotlight on Emergency Service Frontline Workers at BAPCO Online 2021
- Hytera Mobilfunk Held the Digital Booth at PMRExpo2020
- Hytera Key Opinion Leaders in the PMR Industry
- Norsat & SFU Business Analytics Capstone Project: Partnership with SFU to Deliver a New Digital Experience and Better Data Analysis
- Norsat Implemented a Customer Portal on Its E-Catalogue Site Enabling Channel Partners to View Customized Product Information

Published by Hytera Communications Corporation Limited

**Executive Department** Brand Communication and Marketing

> Graphic Designer Haitao Wang

Contact Us E-mail: marketing@hytera.com

#### 08 Customer Value

- Hytera Mobilfunk Provides Nationwide TETRA Communication System C2000 for Official Regular Operation
- Hytera Mobilfunk Supplies 1000 TETRA Radios to The Republic of North Macedonia
- Hytera Connects Peruvian Airports with DMR Communications System
- Hytera Integrates Pucallpa's Public Safety Communications in Peru
- Hytera Radio System and DMR Hand Portables Helps Leeds Businesses to Fight Crime and Anti-Social Behavior
- Hytera DMR Solutions and Radiocoms Systems Help Wincanton to Enable Staff to Communicate Easily
- Hytera Provides Safe and Reliable DMR Communications at Gazprom Neft's Moscow Oil Refinery
- Australia Zoo's Digital Communication System Put Safety First
- Hytera Radios Help Deliver A Successful El Gouna Film Festival in Egypt
- Hytera Multi-Converge Communications Solution for Dubai Luxury Hotel, Atlantis the Palm

#### 14 Community Engagement

- Hytera UK Raised Money for the Save the Children Charity
- Hytera Mobilfunk Fulfils Christmas Wishes for Needy People
- Pursuing The Dream with the Wind
- Hytera Donates Devices to Local Hospital

#### 16 Story of Us

- New Hytera European Team
- Matthias Kreipe from Hytera Mobilfunk, Significant Contribution in Pandemic Times

nsor 💿 Hytera View



oonsor

oonsor

#### 5G工業4.0物聯網和專用網路 5G IoT and Private Networks for Industry 4.0 Panel Discussion 圆桌会议



Aniversidence of Strategic Engagement, GSMA



Material Contract Contract 1999 - Angel Contract Contract Material Contract Contract Contract Material Contract (MCCC) Contract



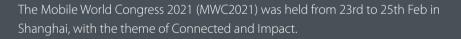


NGC), Zhang Risolong 네이TCD 등 G200호 Head of TCD China Division 비분시키고구 G+D Hobile Security





# Dr. Guan Bao Talked about the New 5G Applications at MWC2021



Dr. Guan Bao, General Manager of Hytera Broadband System Division, attended the MWC2021 Roundtable on the theme of 5G Internet of Things and Private Networks in the Industry. He expressed his professional statements with the guests from Huawei and Jettec Mobile Security of how modern 5G network can provide customized and powerful intelligent solutions to improve the end-to-end manufacturing process, and he also shared Hytera's technology strategic and future plan in the operator market and 5G industrial network.

Dr. Guan Bao talked about new 5G industrial applications during an interview at MWC2021, and emphasized the openness and innovation are the key strategies of Hytera in 5G market.



Dr. Guan Bao General Manager, Broadband Systems Division



# "TETRA Will Remain the Decisive Technology for Many Years to Come"

( Interview with Bernhard Klinger, Chief Business Development Officer, Hytera Mobilfunk GmbH )

In your opinion, what is the importance of the TETRA standard for professional mobile radio today and what role will TETRA play for mission- and business-critical communication in the future?

Especially in times of crisis, mission- and business-critical mobile communication is indispensable for maintaining the security and supply of the population.

Despite all the developments in broadband and the current

5G discussion: for mission- and business-critical voice communication, the current TETRA standard will continue to play a decisive role until beyond 2030 and will be one of the most important technologies used. For this reason, the "3<sup>rd</sup> Generation Partnership Project" (3GPP), a worldwide cooperation of bodies for standardisation in mobile radio networks, is standardising the interplay between narrowband systems such as TETRA and LTE/5G technology, thereby laying the foundation for long-term parallel use of both technologies. Leading Technologies

COME

# WELCOME

Why will TETRA remain the leading technology for mission- and business-critical mobile communications voice communication for a long time to come?

There is now an undisputed need for mission-critical broadband services for professional users in public authorities, organisations and companies. LTE/5G services and systems enable innovative video and data applications. However, they will complement rather than replace TETRA or narrowband systems. And this will be the case for at least the next decade, probably beyond.

TETRA was specifically designed for mission-critical voice and low throughput data services, such as group calls, priority and emergency calls, direct mode and late entry. TETRA stands for guaranteed, extremely fast and deterministic call setup under 500 milliseconds and offers specially adapted terminals for a variety of different applications.

LTE, on the other hand, has its origins in the commercial sector and was specifically designed to transmit large amounts of data efficiently. Although 3GPP is endeavouring to standardise mission-critical voice and data services for LTE (what are known as MCx services), it is still a long and rocky road from standard to mission-capable and guaranteed reliable and secure products and solutions.

All in all, since its introduction over 20 years ago, TETRA has been continuously developed to meet the needs and requirements of its users. LTE/5G and subsequent standards will also have to follow this path. And that simply takes time.

## How do you think the PMR market will develop over the next 10 years? What fundamental changes do you expect?

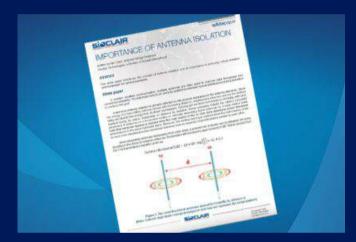
There is no doubt that broadband applications are increasingly finding their way into the professional environment - initially as mission-supporting applications, but in time no doubt also for mission-critical applications. In addition to the communication systems themselves, mission-critical high-bit-rate end-to-end applications will increasingly complement the environment of professional mobile radio.

In addition, commercial broadband networks will continue to be put to the test as to whether and under which legal and regulatory framework conditions these networks can or may be used for mission-critical applications.

On the other hand, the requirements for mission-critical or business-critical communication networks, guaranteed availability and security plus mission-critical applications essential communication services, will remain unchanged in the future and apply equally to voice and data applications in the narrowband as well as in the broadband area.

## Sinclair's White Paper: Importance of Antenna Isolation

In modern wireless communication, multiple antennas are often used to improve data throughput and connection reliability. The antennas need to be correctly isolated to minimize mutual interference during operation to achieve this goal. This white paper introduces the concept of antenna isolation and its importance in ensuring robust wireless communication for various scenarios.



## **Norsat's White Paper**: BUC/SSPAs

As we witness the evolution of integrated communication, we also observe the increased number of requirements for airborne microwave transmission, ranging from satellite to air-to-ground CDL band communications. Airborne applications introduce many challenging design constraints including increased temperature ranges, thermal management, vibration and shock, EMC/EMI, power requirements, and safety, all while maintaining portability as a key factor.



## Hytera Multi-mode Advanced Radio White Paper: Underpin The Future of Critical Communications

The world is now moving into an era of intelligent connectivity. As the demand for the mobile office and high-quality broadband data services grows stronger among critical communications users, it is clear that traditional PMR radios are no longer able to meet all their needs. End-users need a smart radio able to adapt to increasingly complex work scenarios and which helps them focus on the task at hand. Hytera has pioneered the multi-mode advanced 'smart' device, which means end users can get the best of narrowband and broadband on a single device. This provides them with more choice and access to many more services and enables a smooth migration path from narrowband to broadband solutions.







#### Hytera Shone the Spotlight On Emergency Service Frontline Workers at BAPCO Online 2021

Hytera, an official BAPCO Gold Member, was delighted to be part of this year's BAPCO Online Event (2 - 4 March 2021). This virtual event provided an online experience for the critical communications sector like no other, bringing the convenience of a physical show to the home or workplace. The new virtual experience enabled public safety experts and end users to engage in networking, connecting, and exchanging knowledge. This year Hytera's theme continued to highlight their commitment to providing Innovation for Life. Hytera demonstrated the ingenuity and design of communication solutions, which exemplifies their dedication to fire, police, ambulance, and other emergency service sectors. At Hytera's virtual booth, visitors were able to discover innovative solutions aimed at delivering ultra-reliable quality communications products and applications designed to enhance situational awareness and increase safety.

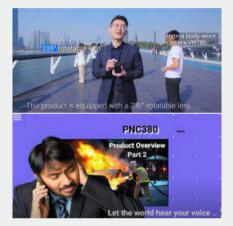
#### Hytera Mobilfunk Held the Digital Booth at PMRExpo2020

# For the first time, PMRExpo, the leading European trade fair for secure communication, was taking place exclusively virtually on the Web - and Hytera Mobilfunk was on board. Over three days (November 24 to 26), there was plenty to discover at Hytera's virtual exhibition stand: the latest PMR solutions and a comprehensive program of exciting presentations and product demonstrations in English and German. Hytera's virtual exhibition stand focused on "Broadband solutions from Hytera - today and tomorrow", the new TETRA partner product ACCESSNET®-T IP SMART and innovative communication solutions for industry and utilities. Visitors were able to discuss the future topics of the PMR industry with the mobile communications experts from Bad Münder in real time and exchange views on innovations.



# Hytera Key Opinion Leaders in the PMR Industry

It's super exciting to see so many colleagues from Overseas Sales Dept actively produced high quality videos of Hytera products. They are super stars with a keen sense of storytelling and product feature explanation. We are impressed by their works and believe that they can become the key opinion leaders in the PMR industry.





#### Norsat & SFU Business Analytics Capstone Project: Partnership with SFU to Deliver a New Digital Experience and Better Data Analysis

Norsat is partnering with one the most renowned school of business in BC (SFU Beedie School of Business) to work with its students to improve its user experience throughout the digital platforms as well as the whole lead generation processes with more data collection and analysis. Throghout the first Quarter, the Marcom department will liaise with the students to tailor new layouts and fine-tune automation systems.



#### **Norsat** Implemented a Customer Portal on Its E-Catalogue Site Enabling Channel Partners to View Customized Product Information

Norsat created a new customer portal login that enables its channel partners to view additional product information by logging in, such as shipping weights and dimensions, MSRP, in-stock quantity and shipping lead times, datasheets, and other additional training documents like product brochures and manuals tailored to their specific needs. The tool is only the latest update in a series of improvements proposed by Norsat, that will culminate in complete digital transformation by the end of 2021.



Band: H

Band: Ku-Band Output Power (Rated): 16W

ATOM 16W Ku-Band BUC

Product Family: ATOM

ATOMBKU016E1

MSRP: \$9,800.00 In Stock: 1 Lead Time In Days: 20 1 Request Quote View Datasheet

Compare



The new mission-critical TETRA communication network of the Dutch security and rescue forces (C2000) in the Netherlands has been in regular operation since the beginning of the year. The Hytera Mobilfunk team has thus completed the extended aftercare phase as scheduled. The nationwide TETRA communication system meets the highest possible technological standards and is stable and reliable. On the night of 28 January 2020 the old network was shut down and the new, state-of-the-art ACCESSNET® T-IP system from Hytera Mobilfunk was commissioned at the same time. Since then, the entire Dutch police, fire brigade and all rescue services have been communicating via the new C2000 system.

#### Hytera Mobilfunk Supplies 1000 TETRA Radios to The Republic of North Macedonia

Hytera Mobilfunk has supplied 1000 new TETRA handheld radios to the North Macedonian Ministry of the Interior. With this delivery, Hytera Mobilfunk continues the trustful and reliable cooperation with its local partner Sectron Dooel Skopje in the Republic of North Macedonia. Emergency services of authorities and organizations with security tasks have been communicating via a nationwide TETRA mobile radio network from Hytera since 2009. The security forces mainly use Sepura TETRA terminals, but also models from Hytera. The North Macedonian Ministry of the Interior has now chosen Sepura's SC20 portable terminals for the current equipment upgrade. Hytera Mobilfunk is a fullservice provider of communications solutions and has TETRA radios from Sepura in its portfolio. "We are very pleased with the decision to choose the SC20. Together with our partner Sectron Dooel Skopje, we have recommended the latest

TETRA terminal generation to the North Macedonian Ministry of the Interior, as they fit the requirements perfectly," says Tsvetomir Benchev, Sales Director East and South Europe at Hytera Mobilfunk.





Hytera completed the delivery of an integrated mission critical communications system to Pucallpa, the capital of the Ucayali province, Peru, with a convergent platform that unites critical communications, CCTV and the emergency services of the public.

Pucallpa is one of the most populated centers in the Peruvian jungle. Here an important urban and rural population converge that, being disconnected from other cities, requires rapid response public security. Hytera's state-of-the-art TETRA system integrates the voice, video and data functions for public safety of Pucallpa in the Ucayali Province. This region of the Peruvian Amazon rainforest will have an advanced critical communications service to protect the well-being of the local population. This project has state-of-the-art TETRA infrastructure from Hytera, with DIB R5 Advanced base stations and an Integrated Command and Control Center (ICC) that allows the management of emergencies, field resources and incident analysis in an efficient and timely manner. Likewise, Hytera's SmartOne system makes it possible to unify various technologies to seamlessly interconnect the different local first responders. Together with Hytera's modern PT580H-plus portable radios and MT680 plus mobile radios, the improved safety coverage across the town is evident to the population. Additionally, Pucallpa opted for innovation by integrating Hytera's VM780 LTE Bodycam to improve their situational awareness and thus make effective decisions with accurate information in real time.

#### Hytera Connects Peruvian Airports with DMR Communications System

Hytera has recently handed over a Digital Mobile Radio (DMR) system to Peruvian Corporation of Airports and Commercial Aviation (CORPAC S.A.). The system interconnects and guarantees quality and efficient communications service for 15 Peruvian airports administered by CORPAC.



CORPAC is the body responsible for aviation safety in Peru. This DMR system links airports in cities of Andahuaylas, Atalaya, Chimbote, Cuzco, Huánuco, Ilo, Jaén, Jauja, Juanjui, Mazamari, Nazca, Rioja, Tingo Maria and Yurimaguas with the CORPAC headquarters in Callao. The integration is key to optimize resources allocation and ensure the compliance to operation safety standard at national and international levels.

The state-of-the-art DMR solution consists of portable and mobile radios, IP-based repeaters and SmartDispatch software suites. Given its flexibility and scalability, it keeps the 15 airports connected as a single national network. Control tower staff, ground service team, firefighters and supervisors are able to work in dedicated groups for their daily operations and to respond together to emergencies in a highly coordinated way.



#### A Hytera DMR XPT Radio System and DMR Hand Portables Is Helping Leeds Businesses Work Together to Fight Crime and Anti-Social Behaviour in the City Centre and Outlying Areas

Hytera DMR XPT radio systems and DMR hand portables are helping Leeds businesses work together to fight crime and anti-social behaviour in the city centre and outlying areas. This sucess story demonstrates how Hytera and Radiocomms (Partner) enabled BACIL (a Leeds City Council Public Security initiative) to overcome their communication challenges.



"From portability to ease of use, the BACIL team found that the handsets and hardware were better than we hoped for. All-in-all, the right decision! We would recommend Hytera to anyone looking at setting up their own system."

Sean Walker, Business Crime Manager, BACIL

#### Hytera DMR Solutions and Radiocoms Systems Ltd Are Helping Wincanton, a Leading Supply Chain Partner for UK Business, to Enable Staff to Communicate Easily While Adhering to Social Distancing Measures

Hytera DMR solutions are helping Wincanton, a leading supply chain partner for UK business, to enable staff to communicate easily while adhering to social distancing measures.

Hytera partner Radiocoms recommended trialling a Hytera multi-site Digital Mobile Radio (DMR) repeater system at one of the retail sites first to see how it performed. Pleased with the result of the trial, Wincanton purchased a DMR system for each of this retailer's sites. The DMR systems run independently on each site with additional repeaters installed to support expanded coverage and to eliminate blackspots.

The Hytera PD600 Series hand portable radios have now been deployed at five Wincanton sites, where they were installed in August 2020.

A mixture of devices are used on site including PD605 non-keypad and keypad variants with individual, group and broadcast calling and text messaging for keypad terminals with display screens for smoother communications between teams. The particular type of hand portable distributed depends on the employee's job role and function.

Hytera DMR terminals were chosen as the Wincanton staff liked the form factor of the handsets and because the radios supported the functionality they required. The radios help staff rationalise all the products across the retail accounts. The set pricing structure, familiar engineering, trust in the product and the service provision from Radiocoms also played a part in the selection process.

The new DMR two-way radio system is helping Wincanton to monitor and reduce costs. Two-way radios provide the ideal workplace social distancing tool, as employees can make individual or group calls from wherever they are working, which helps to minimise movement around the warehouses.



## Hytera Provides Safe and Reliable DMR Communications at Gazprom Neft's Moscow Oil Refinery

Gazprom Neft is a vertically integrated oil company engaged primarily in oil and gas exploration, production, and refining, as well as the production and sale of petroleum products. It is the third largest oil producer in Russia and third for refining throughput.

The DMR Tier 3 trunking system provides reliable coverage across the Moscow refinery site. However, as modernization work continues the RF profile of the site is changing constantly. To overcome this problem, Hytera provides Gazprom Neft with a factory upgrade every year, so that communication blind spots are removed and coverage is augmented where there is RF signal deterioration at the edge of the base station cell.



#### Australia Zoo's Digital Communication System Put Safety First Many zoos seem designed around separation and observation from a distance, the animal enclosures at Australia Zoo are open and sprawling. When

Queensland's world famous Australia Zoo needed a new radio system, it was Hytera to the rescue with a state-ofthe-art digital trunking solution.

AUSTRALIA



#### Hytera Radios Help Deliver A Successful El Gouna Film Festival in Egypt

Hytera TETRA and analog radios provided excellent communications at the 2020 El Gouna Film Festival in Egypt. The new radio solution enabled the event to be properly and efficiently coordinated to ensure the festival ran smoothly and safely. The Hytera radio solution provided by Middle East for Trading delivered high quality audio across the whole festival site and overcame the previous RF issues caused by weak signals that had affected communications in previous years. The presence of specialized engineers from the technical team at the festival ensured any problems were dealt with immediately.

#### Hytera Multi-Converge Communications Solution for Dubai Luxury Hotel, Atlantis the Palm

Hytera supplied a POC Solution with MDM and DMR Tier II solution with Rugged Hand portable radios at Atlantis the Palm, Dubai, a luxury hotel resort located at the apex of the Palm, helping them for enhanced coverage, greater reliability and a wider range of additional features.





# **Community Engagement**



Hytera UK was proud to be part of a nationwide effort participating in Save the Children's Christmas Jumper Day Charity on 11th December 2020! Hytera staff working at home, or at the offfice premises wore festive jumpers and pledged genrous donations in support of this very important cause. This charity was created to raise money for under-privileged children with the objective of transforming and improving their quality of living and their future. Every pound raised will give children in the UK and around the world the chance to grow up healthy and happy, and change their future for the better.



# Hytera Mobilfunk Fulfils Christmas Wishes for Needy People

In December, the employees of HMF took part in the so-called "wish tree campaign" and fulfilled small Christmas wishes for needy people from the local area. A charitable club organises this fundraising campaign every year at Christmas time, collects the wishes and this year, passed them on to HMF. Each employee could then choose which wish he wanted to fulfil. The wish list mainly included necessary and practical things for everyday life, for example warm clothes for senior citizens, warm shoes and school utensils for children, but also small wishes that the affected people normally cannot afford, for example a book, a ball or a calendar.

The HMF employees procured and lovingly wrapped the Christmas presents and then handed them over to the association. The volunteers then distributed the gifts at Christmas. The HMF staff liked the campaign so much that all the wishes were fulfilled - and HMF was thus able to bring joy to many people this year.





Hytera's PD788, MD788 and SmartDispatch platform supported reliable communication service for Formula 4 Macau Grand Prix.



Hytera local distributer provided walkietalkie TF515 as a present for stable and non-contact communication during visiting central hospital in Kazakhstan.







#### New Hytera European Team

We are delighted to confirm our new Hytera Europe CBU (Channel Business Unit) organisation – a new organisational structure supporting European channel business.

Hytera Europe's committment to all European-wide

channel partners underpins an operationally sound ousiness backed by a strong team of experts. We look forward to working together with all our partners to ointly stimulate growth and cement our brand in the European market as we embark on this journey ahead.

## Matthias Kreipe from Hytera Mobilfunk, Significant Contribution in Pandemic Times



Although the current conditions regarding the COVID-19 is serious, Matthias Kreipe, Project Engineer at HMF, has travelled to Kuwait and Algeria, among other places, to implement projects for customers especially of the oil & gas sector. In this way, he has made a significant contribution to our customers being able to realise their projects on schedule – this is quite remarkable in this special pandemic situation. Matthias Kreipe was associated with several quarantine periods, strict regulations regarding the pandemic and numerous corona tests, special entry permits and administrative work, as well as corona-related significantly longer and more difficult travel conditions. During his deployment he had been supported intensively by HMF and returned to Germany healthy and safe. However, as a committed member of staff, he is already ready for his next assignment.



## Hytera Refinery Solution

# Realize High Efficiency and Safe Production

- Intrinsically-safe Devices
- Enhanced Coverage
- Advanced LTE Solutions



Hytera

0