



## TETRA World Congress, Nice 2001

The Fourth TETRA World Congress took place in Nice, December 2001. Coming at the end of a somewhat turbulent year for radio and telecommunications, the World Congress sent a very positive message to the marketplace. Over 900 people attended the event, significantly outperforming industry and conference trends elsewhere.

### 2001 – a good year for TETRA

There were a number of highlights in 2001 for TETRA. In the UK, Airwave, the largest TETRA public safety network in the world became operational. Elsewhere, TETRA continued its growth into new geographical markets. The conference message was clear that, "despite a tough telecoms market, TETRA is alive and growing". A record number of new products and applications were launched or announced during the World Congress.

The last official engagement for outgoing TETRA MoU Chairman Phil Godfrey was to open and address the conference with evidence that demonstrated the outlook for TETRA was very healthy. With a value of just under 3 billion Euros for TETRA contracts awarded to-date and with a clearly established role



Phil Godfrey's opening address at the TETRA World Congress

to play alongside other ETSI standards, the TETRA market continues to live up to its expectations.

All around the conference was evidence of the

maturity of TETRA. New entrants to the market offering specialised products and services. Live applications were on show demonstrating the business benefits for a whole spectrum of users in public safety and commercial organisations. The key benefit of an open standard was also in evidence with an initiative promoted by the TETRA MoU – the IOP initiative. As delegates walked around the exhibition area they saw terminals from different manufacturers working live on a variety of manufacturer's systems.

### TETRA MoU's Press Conference highlights key issues

During its annual press conference, the MoU panel focused on two key issues for TETRA. First was the process of replacing the Test and Certification body for TETRA, the body that issues IOP certificates. It also supports and gives real assurance to users that terminals from different manufacturers are compatible with and will work with each other on the same infrastructure system. Second, reinforcing one of the main conference themes, was a call for all public safety communications systems to be based upon a common technology platform in order to ensure compatibility, efficiency and better safety.

### The TETRA Awards for 2001

The Annual TETRA awards attracted the largest ever list of nominations. The winner of the best TETRA product went to Simoco for their new small SRP2000 hand portable; the best service went to the Hong Kong police and the best application award went to HW Communications for their 'Tele-Medic' application used in conjunction with a mountain rescue team. John Merrifield won the Outstanding Contribution to TETRA Award for his unstinting energy and drive as Chairman of the TETRA MoU's Business Solutions Group.

## Unanimous industry commitment for TETRA interoperability

**The TETRA MoU is currently negotiating a contract to provide for a new TETRA Testing and Certification Body.**

The TETRA industry has united in a unique approach to support the initiative that will ensure the continuity of the interoperability activities. The majority of TETRA vendors have committed themselves to take up the testing and certification services provided by the to-be-selected Certification Body. "It is marvellous to see how the Directors of TETRA companies take

this as a high priority item and commit themselves to ensure a rapid and successful deployment of the TETRA MoU new testing and certification regime" said John Cox, the secretary of the TETRA MoU. "Good interoperability is a key success factor for smaller TETRA manufacturers" adds Alfredo Calderon, the TETRA Project Manager from the Spanish terminal vendor Teltronic. The initiative is strongly supported also by the end-users and operators as the chairman of the TETRA MoU

Operator/User Association Hans Borgonjen puts it "Interoperability is not only about competition and lower terminal prices with a wider choice in an open market but, and quite importantly, a necessity to maintain and increase safety in the borderless Europe".

The goal is to conclude the negotiations during the first quarter of this year and to have the first test session supervised by the new Testing and Certification Body in May 2002. The greatest challenge in achieving this, apart from closing the

contract, is the training. TETRA is a very complex technology, requiring insight not only into the telecommunication protocols but also into the ways and methods public safety and professional users practice in the field. However, Tero Pesonen, the chair of the TETRA Testing and Certification Body Selection Committee believes that with hard work, and an open-minded approach supported by the strong commitment from industry and user, the TETRA community can achieve the goal.



## A note from the new Chairman



It is with a sense of excitement and expectation that I set out in my term of office as the TETRA MoU's new chairman. My priority goal is to provide the membership with an improved return against their investment. To achieve this, the MoU Board is proposing to increase its dedicated resources at the business and strategic level and rely less on the voluntary contribution of its hard pressed Board members. I have also set a new TETRA MoU communications plan into action starting with the creation of our first Business Plan. Another major goal is to put in to place an accredited IOP TIP testing regime. I am pleased to report that we are on target to place a contract this spring.

Having recently retired as a UK government official, I can now dedicate my energy to further the work of the TETRA MoU. Whilst embarking on this mission, I must reflect on the considerable contribution made by my predecessor, Phil Godfrey, who devoted many additional hours to the MoU whilst maintaining his 'day job'. Thank you Phil on behalf of the membership.

Please keep a regular date with the MoU web site. We have plans to make even more improvements and additions to it over the next few months.

**Ray Ginman, Chairman of TETRA MoU Association**

## TETRA MoU Association – Status Report

### Membership update

The MoU continues its successful growth with 89 members from 27 different countries. In addition there are now 7 affiliated Forums which add over 100 more affiliated Members. Further Forums are expected to become active around the world during 2002.

As the TETRA standard continues to mature, it attracts commercial interest from new applications and integration companies. This continued success is reflected in the membership of the TETRA MoU. Four of the recent new members and five pending applications are from this sector. Also as evidence of the global interest in the standard, the companies concerned are from Sweden, Germany, UK, Finland, Switzerland and Norway!

### New Chairman and Board members

At the Annual General Meeting which took place before the start of the TETRA World Congress in Nice, December 2001, our new Chairman, Ray Ginman was unanimously voted to succeed Phil Godfrey. Phil, who stepped-down from the chair following the completion of his term in office, will be missed by the MoU and by his colleagues at Simoco Digital Systems which he left in October last year to set up his own consultancy. We all wish him well in his new enterprise.

The terms of office of a number of Board Members were completed and only one (Hans Borgonjen) was available for re-election. Following an election by the members, the new MoU Board consists of the following personnel:

**Ray Ginman, Chairman** – newly elected

**Ken Osborne (Airwave mmO<sub>2</sub>)** – newly elected

**Charly Hengevoß (R&S Bick Mobilfunk)** – newly elected

**Roger Dowling (Simoco Digital Systems)** – newly elected

**Egil Bovim (KoKom, Norway)** – newly elected

**Hans Borgonjen (ITO, Holland)** – re-elected

**Doug Gray (Motorola)** – existing member

**Risto Toikkanen (Nokia)** – existing member

**Steve Borrill (Marconi)** – existing member

The MoU Association Secretariat continues in the secure hands of John Cox. The Board has already met for its first Board Meeting in January 2002 and is currently engaged in driving a number of key initiatives including the replacement TETRA Testing and Certification Body and the restructuring of the Association to bring even better returns on member's investments.

### Communications and activities

In January, the MoU and ETSI arranged a very successful High Speed Data Workshop in order to collect user data requirements first hand. These will be input into the TETRA Release 2 User Requirements Specification.

## Australasian interest in TETRA grows

**The newly formed Australasian TETRA Forum Limited (ATF) holds its first General Assembly meeting on 20th February. Board Elections will take place and the Members will have the opportunity to vote on the proposed direction and priorities of the new Forum, which will be fully affiliated to the TETRA MoU Association. Look for more details on the meeting in the next edition of the TETRA News.**

## Focus on Russia

The Russian TETRA Forum was founded in June 2001 in Moscow under the presidency of Mikhail Rybatchenkov. The objectives of the Forum are to:

- promote TETRA technology
- facilitate the exchange of information
- help secure sufficient radio spectrum
- represent the members' interests towards regulatory bodies and through industrial cooperation
- support the work of TETRA MoU Association in the territory of Russia

The Forum already has a large and active membership with over thirty industrial, commercial and government organisations represented as founder members. The work of the Forum will be carried-out in seven committees: TETRA Manufacturers, Frequencies & Licensing, Russian manufacturers of software & equipment (applications), Corporate & Industrial users, System Integrators, Commercial operators and a TETRA Marketing & PR committee

The first TETRA contract in Russia was awarded by the St Petersburg Metro and recently SIBNEFT has ordered 1,500 TETRA radios. Further strong interest in TETRA communication solutions is being shown by other Energy, Utility and Public Safety organisations. For further information about the Russian TETRA Forum please visit their website at [www.tetraforum.ru](http://www.tetraforum.ru) or e-mail them at [tetraforum@mtu-net.ru](mailto:tetraforum@mtu-net.ru).

# Emergency Multimedia over TETRA

In collaboration with Simoco Digital Systems Ltd. and Langdale/Ambleside Mountain Rescue Team (LAMRT), HW Communications Ltd. recently completed an innovative project to bring the advanced voice and data capabilities of TETRA to a mountain rescue team. The project was to develop a multimedia system to support the mountain rescue operations. This application won the '2001 TETRA Most Innovative Application Award' at the World Congress.

The Tele-Medic system gives the mountain rescuers the capability to send GPS positioning information, text and status messages, digital images and medical information such as ECG, Pulse Rate, Blood Pressure and Oxygen Saturation level (SpO<sub>2</sub>) from the casualty site on the mountain to the mountain rescue base. The position information is useful for effectively managing search and rescue operations from the base. The digital images of injuries and medical data transmitted over TETRA from the casualty site will give a better indication of the condition of the casualty, and a doctor can remotely give immediate advice to the rescuers in the field in administering advanced treatment.



## Vital information on the move

A portable hardware kit consisting of the battery-powered Tele-Medic box, a TETRA radio, a PDA, a GPS receiver, a digital camera and a medical vital signs monitor (Propaq) is carried by the rescue team. Once they reach the casualty site, if the patient is in a critical condition medical telemetry can be transmitted back to the base over TETRA. In addition, a digital image of the casualty and/or location can be transmitted.

The receiving end applications display the medical information (e.g. ECG trace, pulse, blood pressure, and oxygen saturation levels), image, GPS position and text messages on a PC monitor. This is useful for coordinating rescue operations and remotely monitoring the condition of the casualty in order to provide immediate advice to the rescuers by a doctor at the mountain rescue base. This is particularly significant if bad weather means a long wait for air

transport off the mountain. Health monitoring during this period of waiting is essential. TETRA has proved ideal for this critical application. The system can be employed in an Ambulance as well. Doctors in the A&E department of the hospital can remotely monitor the condition of a patient who is en-route to the hospital.

## TETRA makes Hong Kong a safer place

The Hong Kong Police force has developed a radio network regarded as a shining example of what TETRA technology can do. At the 2001 TETRA World Congress, it won the award for the 'Most Innovative TETRA Service'.

Peter Halliday, the Force's Assistant Commissioner for Communication Systems, chose TETRA for its clear advantages over other systems. Says Halliday: "TETRA is a digital standard – it is more reliable than analogue and can support both voice and data. Second, as TETRA is an open standard, we can use equipment from more than one vendor. Third, TETRA has the advantage of interoperability. Fourth, TETRA can provide better spectrum efficiency. Only TETRA could do all this." The TETRA system is to make it easier for different organizations to cooperate during incidents, to bring the highest levels of safety to the citizens of Hong Kong.

In 1999, the Force's Marine Police department awarded a contract to Nokia for a TETRA network to consist of five sub-systems. The Voice and Automatic Vessel Location sub-systems have been completed and the Crime and Security department sub-system is due for completion by the end of 2002.

Experience so far has been good. A tender has been issued to equip the Land Police with a TETRA network, for a planned switch-on date of 2005. All the force's TETRA networks are a vital part of the Third Generation Command and Control system. This will eventually unify all the territory's public security services communications under one structure.

## TETRA lights the mountains of Austria



Typical operating terrain for TETRA

**In two of the 9 regions that make up Austria, KELAG is the predominant supplier of electricity in Carinthia in the South and Energie AG in Upper Austria, in the north. Apart from their common interest in supplying energy they have another common factor – TETRA. The operation of both organisations is now dependent on their TETRA radio systems, supplied by Frequentis using a Simoco/Frequentis infrastructure solution with Simoco terminals.**

The centre of operations for KELAG's 1270 staff is the capital of Carinthia, Klagenfurt, from where all generation and load management is controlled. Here too is the TETRA system's heart - a main and standby switch, the dispatch centre and the network and subscriber management systems that allow live changes to user profiles. Currently, the 33 site network supports 250 radios with plans to grow this to 500.

The TETRA system is the latest service to use KELAG's in-house telecommunications network which comprises a mix of optical, radio and copper circuits. One TETRA site is even controlled using digital power line carrier.

Following its successful implementation of a TETRA voice network, KELAG is now running data trials. One gas powered generating plant can be controlled using the TETRA system. Data updates are received regularly and using data messages in the reverse direction the stations generation parameters can be controlled. An extension of this service will be to control the hydro generators. Video imaging over the TETRA system has been installed to enable operators to view sensitive areas of the water storage for physical hazards such as trees, which may block outflow.

Energie AG's network consists of 34 base station sites and is following closely behind the KELAG implementation programme. It currently supports 100 hand-held SRP1000 radios with a planned expansion to 500 by the end of the year.



# A common communications platform for times of crisis

Doug Gray (Board Member & Marketing Manager of the TETRA MoU Association) in his presentation at the Board's Press Conference during the World Congress said: "For historical reasons, different operational models may have evolved in the various Public Safety services. Any differences should now be forgotten and a common communications platform should be embraced for all services."

The Schengen agreement (and the European Police Co-operation Council) called for a common public safety communications network that is interoperable, uses common frequencies and is based on a technology specification that is a European Norm.

Gray reflected on events in 2001 in the USA: "Because of the different radio systems employed, New York emergency service personnel carried three portable radios in order to be fully in-touch. In Washington, all emergency services were using the same technology and working on a common frequency, so only one radio was required."

There is a danger that the UK may fall into the trap of procuring multiple communication solutions for the emergency services, thereby destroying the goal of 'joined-up' communications. Fire Brigades are not being mandated to use Airwave, which could result in interoperable arrangements being worse than the inadequate facilities currently in place!

## TETRA related Events & Conferences for 2002

Event	Date	Information
TETRA Seminar, Norway	25th-27th February, Oslo	<a href="http://www.tetraforum.no">www.tetraforum.no</a>
TETRA Applications Conference	10th-12th April, London	<a href="http://www.tetra2002.com">www.tetra2002.com</a>
TETRA Africa	17th-19th April, Johannesburg	<a href="http://www.iir.co.za">www.iir.co.za</a>
BAPCO Conference & Exhibition	23rd-24th April, London	<a href="http://www.bapco.co.uk">www.bapco.co.uk</a>
TETRA MoU Members Workshop	June (date & location to be advised)	<a href="http://www.tetramou.com">www.tetramou.com</a>
5th TETRA World Congress	18th-22nd November, Nice	<a href="http://www.tetra2002.com">www.tetra2002.com</a>

## Contracts Update

In spite of the delayed announcements for some nationwide contracts compared to original forecasts, the projected figure of TETRA contracts to be worth 10 Billion Euros by 2004 is still seen as realistic. Here are just a few of the 50 TETRA contracts awarded in the past year:

- **SIBNEFT (Siberian Oil)** – Simoco Digital Systems have won an order to supply 1,500 TETRA radios for use along the oil pipeline.
- **Vatican City, Italy** – Motorola won the contract to supply a new TETRA system to provide a highly secure system for the Vatican security services.
- **Airwave (UK)** – handset, mobile subscriber, ICCS and managed services awards have been announced for Securicor Information Services, Simoco Digital Systems, Clearstone and Motorola. In addition, Motorola won a contract from mmO<sub>2</sub> for technical support services to the Airwave network.
- **Asia Pacific** wins for Nokia include from the Hong Kong Fire services and in China from the Beijing Hua Xun Group.
- **Finland** – the Finnish Defence Forces have awarded Nokia a contract.
- **South America** – Marconi have won contracts in Brazil (Brazilian Army), Mexico (Electricity Utility) and Venezuela (Tucupita Police).
- **Spain** – Nokia has been awarded a contract by the Bilbao Metro.

## Health Research Programme

Following the publication of the response by the UK Independent Group on Mobile Phones, and the Group's recommendations for further research in this field, a Programme Management Committee was set up to advise on the research programme. The selected research projects were recently announced as part of the Mobile Telecommunications and Health Research Programme (MTHR).

One project specifically concerns TETRA and will consider the distribution of RF power from handsets. The expected completion date is March 2003. The MTHR programme will compliment the precautionary research being managed by the U.K. Home Office. A report on the non-epidemiological Home Office managed research is anticipated in similar timescales to those of the MTHR. More information about the MTHR programme can be found at [www.mthr.org.uk/funded\\_projects](http://www.mthr.org.uk/funded_projects).

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