

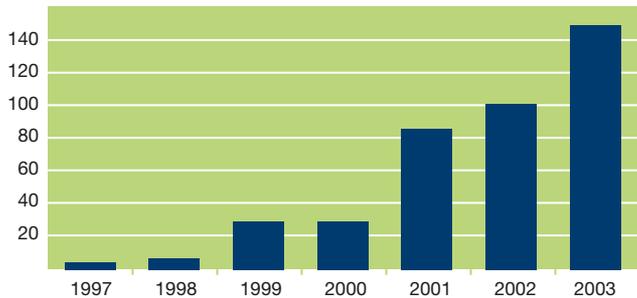


The world is choosing TETRA

Justifiably referred to as the 'leading global digital mobile radio standard for the professionals', TETRA now has users in 65 countries

Results from the Association's latest contracts review carried out in May 2004 have demonstrated once again that TETRA is the leading digital standard for professional radio users. With some of the data still awaited, the preliminary results show that TETRA solutions have now been chosen in 65 countries around the world with the highest growth figures coming from the North of Europe and the Middle East. Comparing this year's review with the numbers from last year, overall contracts stand at 465, representing a rise of 43%. The growth has been across the board – both large and small new systems thanks to TETRA's scalable flexibility, as well as orders for terminals. The trend shown in figure 1 demonstrates the remarkable growth of the standard around the world since the first systems were implemented.

Figure 1: Number of Contracts

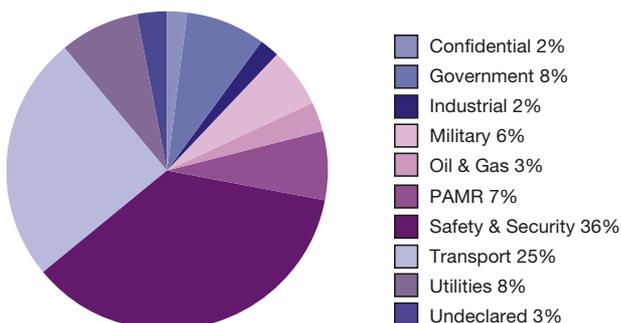


TETRA solutions for a wide range of user organisations

The top two user segments are still Public Safety and Transport which represent over 60% of the market. The complete picture is shown in figure 2. However growth figures over the past year indicate quite clearly that the appeal of TETRA to users outside of the Public Safety sector is becoming significant although the contract sizes always tend to be larger for Public Safety networks.

When finalised in July, an overview of the analysis will be available on the Association's website with full details in the private, members-only section of the website.

Figure 2: Contracts by Sector 2004



TETRA is technology choice in Austria

The Austrian Ministry of Interior (MoI) announced in June that it has selected the TETRA solution proposed by a consortium of Motorola GmbH and Alcatel Austria AG for its new nationwide TETRA Public Safety Network. Telekom Austria AG will provide key services to the consortium.

After a process of evaluation of the responses to the MoI's original tender, the three final consortia bids consisted of two TETRA and one alternative technology proposal. As the MoI pointed out in its press release, the award of the contract was 'preceded by extensive technical tests to guarantee compliance with the specific requirements of a digital radio system.' Another significant factor in their choice was that TETRA had already been deployed in numerous EU countries. Tyrol Province is expected to be the first region to roll out and completion of the full Austria-wide network is planned for 2009.

Kuwaiti authorities go for TETRA

Adding to recent successes for TETRA elsewhere in the Middle East, The Ministry of Interior of the State of Kuwait has selected Nokia TETRA as its nationwide radio communication solution. The system will bring improved security for the radio communications of the Kuwaiti police and public safety authorities. As well as the infrastructure, the contract also covers a significant number of handportable and mobile radio terminals. Equipment deliveries will begin early in the second half of 2004. The first phase of the system is planned to be in operational use by the end of the year, and the whole network by mid-2005.

South Korean Army are the latest military TETRA user

Building on their previous success for Military applications of TETRA, Rohde & Schwarz won a contract with the South Korean armed forces for their ACCESSNET®-T TETRA system. This is their first contract in Korea. Site Acceptance Tests were performed in March and the system went live in May 2004. Once again, the customer choice of TETRA technology was based on the advantages of an open standard and its multi-vendor support from the industry. The TETRA system is used for communications over the entire military zone and for referee voice radio in their national combat training centre.

The system consists of six base stations and a switch with a redundant switch for added security. TETRA terminals and a dispatcher system were also included in the contract. As well as providing equipment to operate in a special frequency range of 368.5 – 394.5 MHz, Rohde & Schwarz collaborated with Sepura to develop a Korean MMI (Man Machine Interface) and Korean (Unicode) SDS transmission instead of the customary ASCII transmission.



TETRA World Congress 2004 – update

The steering committee for the World Congress has been busy reviewing the submissions for papers at this year's World Congress in Vienna on the theme of Realising Business Benefits. New speakers this year include Javier Quiroga from Madrid's Municipal Medical Services and Vladimir Voronin from the Russian Ministry of Transport and Communications. Snr Quiroga will replay how TETRA helped his organisation cope with the aftermath of a terrorist attack in Madrid and Mr Voronin will share rail operators' experiences and compare the benefits of TETRA to GSM-R. In addition, a representative of the Swedish Emergency Management Agency will be giving an insight in RAKEL, their new nationwide network.

Delegates and speakers need to start planning now

For non-users, an 'early-bird' discount of 10% will be offered for registrations before the end of September. User discounts will be in the brochure, expected in August and suggestions on packages to attract East European delegates are being explored. Speakers need to be planning presentation well ahead as they must be submitted one month before the event – Friday 22nd October.

Vienna – city of art, music, culture... and delicious cakes!

The main sponsor for this year will be Sepura who have secured the Platinum Sponsorship for the event. Put the dates in your diary – November 22nd to 25th. There's going to be great deal to attract delegates after the conference programme has finished with so many wonderful sights in this city as well as the famous Viennese coffeehouses with their tempting cakes. For all the latest information, visit the World Congress website at www.iir-tetra.com.

London's Metropolitan Police Service chooses its terminals for Airwave



The Metropolitan Police Service, whose aim is to make London the safest major city in the world, have chosen Motorola's MTH800 handportable terminal after extensive testing and feedback from officers. Known as 'The Met', they are Britain's largest police force with 31,637 officers policing an area of 620 square miles and a population of 7.2 million. The contract will cover the supply of over 30,000 terminals which, according to Motorola, will help increase The Met's responsiveness, efficiency and enhance officer safety.

Chief Superintendent Peter Goulding, Chair of the Selection Board, said: "This announcement is really good news for all radio users in The Met. We have worked with manufacturers to push the technology boundaries for radios, ensuring that we can make the most of digital services now and in the future."

Gateway radios for specialist vehicles

Sepura's SRG2000 Gateway Repeater radio will also become part of The Met's communication portfolio. Their radio has been chosen to provide specialist vehicles with advanced TETRA mobile functionality. In gateway mode, it extends network coverage and in repeater mode the radio will widen the Direct Mode coverage area.



Interest in TETRA moves up a gear in Hungary

Over 150 delegates attended the first seminar hosted by the new Hungarian TETRA forum, held in June in Budapest. Ministerial Commissioner István Pesti described the recent preparations for the issue of a long awaited tender to provide a national public safety network for Hungary. Whilst Mr Pesti was unable to offer any firm dates for the programme due to decisions awaited from the government he hoped that following a tender release any resulting contract would be placed in the next 12 to 14 months. At a later round table session, delegates pressed for this process to be speeded up. Further pressure was added with news of the recent Austrian contract for a Public Safety TETRA network.

Pleasant surprise for the authorities

In his presentation Mr Gyula Simon, director of the National Communications Authority, expressed his surprise at the high level of interest in TETRA shown by the attendees at the conference, of whom almost 50% represented prospective end users. Board members presenting at the event included its CEO John Cox as well as Jeppe Jepsen and Anssi Kuusela whose presentation on the application of TETRA to Crisis Management was received with great interest.



TETRA Association's Middle East event attracts 200 people

This year's Middle East TETRA Conference and Exhibition in May, 2004 attracted 200 people from more than 20 countries of the world. The Dubai based conference was opened by ETSI Deputy Director General, Jørgen Friis. Commenting after event, Jørgen said, "This conference was a great success and the TETRA MoU can be happy to have organized it".

A full programme

The one day programme was strongly supported by MoU Board Members who attended and included a full agenda of interesting presentations and still left time for delegates to visit the well supported exhibition area. John Cox, CEO of the TETRA Association who organised the event said, "I am delighted that we have been able to satisfy the high demand for TETRA information from delegates in the Middle East. We have already had a number of requests for the event to be repeated again next year."



Faster IOP certification

– Interoperability test certificates available in record time

The TETRA Association's Technical Forum has been working closely with all parties involved in the interoperability testing process to accelerate and improve all of the processes involved. For users and equipment manufacturers, the availability of an Interoperability Certificate is vital to formally demonstrate conformance to the tests. Focus to improve the cycle-time of TETRA interoperability certification is now bearing fruit as witnessed from the most recent testing and certification session of the Rohill TETRA Node system in May.

Weeks not months

Draft certificates for participants to cross-check were issued just two weeks after the test session. This is a dramatic improvement from the past where certificate production times took several months. "This is something we were looking for as ISCTI was selected" says Tero Pesonen from Nokia, the chairman of the IOP certification body selection committee, "but there are yet more improvements to come" he continued. Plans are well in hand by the TETRA MoU Technical Forum to change and improve the certificate layout to make it easier to understand. In addition, work is progressing on clarification of the testing process as well as the certificate award criteria.

Business Solutions Group – under new management



Alistair Montgomery, Marketing & Communications Manager for the London Underground Connect project (LUL Connect) has taken over as the Chair of this group which in his words aims to "build the community between operators and users and application developers as well as manufacturers." Known as the BSG, the group reports to the Operators and Users Association of the MoU.

REALISM AND OBJECTIVITY

One of the new ideas is to develop a database of TETRA users, applications and, perhaps most importantly, a description of applications that they would like. Alistair gives an example from his own experience. "LUL Connect users need to access information held on trains using the TETRA communications network. There are many aspects to this such as choosing the train, choosing the timing of the request etc. At the heart of this, the performance of the TETRA's PEI (Peripheral Equipment Interface) is vital."

As an 'open' marketing tool, the database would bring a number of benefits. Users will know their requirements are being clearly identified whilst application developers and manufacturers will have an accurate vision of existing needs that reduce the speculation and risk associated with new product development.

MAKING A DIFFERENCE

The initial focus of working group activities will be to support the MoU's Technical Forum work on the PEI with first results expected to be announced at the TETRA World Congress in November. Between now and then, it is likely to be a busy time, combining a full time job supporting the LUL Connect project and guiding the activities of the BSG. In any spare time Alistair finds, his interests are reading, theatre and socialising, which with his own style of humour he sums up as "doing anything that avoids radios!"

* New Contracts Review

The following are a small selection from the many new contracts for TETRA around the world.

Argentina – probably the highest TETRA network in the world will be supplied on behalf of Nokia by Omnilogic to Minera Argentina Gold, S.A. (MAGSA) a leading international gold company. The system will be used at the Veladero gold mine, located 4,600m above sea level.

Brazil – The professional mobile radio operator Telcom Telecomunicações do Brasil Ltda has selected a Nokia TETRA system to cover three main Brazilian cities, São Paulo, Rio de Janeiro and Brasília.

Kazakhstan – Teltronic has delivered a TETRA Nebula infrastructure to ALSI Telecom. They claim it is the first TETRA system for this region and it will supply communications for the city of Almaty.

The Netherlands – The Flevoland region will be the first to go operational on the C2000 network. The Police and Fire Brigades in the region have selected Motorola handportable terminals.

Switzerland – Bus Operators in Lausanne and Geneva as well as those across the border in Grenoble have chosen Teltronic terminals.

Taiwan – Motorola will provide Taiwan's Coast Guard Administration (CGA) with a TETRA network on PengHu Island. The solution will have an integrated AVL system that enables the closest vehicle or vessel to be dispatched to any incident.

Top team – top technology



Team Telefonica Movistar Honda, current leader of the MotoGP championship, is using TETRA technology for their communications

Communications between the mechanics and rider Sete Gibernau, of the Telefonica Movistar Honda MotoGP – Gresini Racing team, are provided by a TETRA system supplied by OTE SpA. The Gresini team's mechanics and management are enjoying the fast, reliable and secure wireless communications of the system. Using the group communication and management features of TETRA, each Chief Mechanic (one for each of the team's two riders) can communicate with his group of mechanics. The team manager can supervise the two groups and coordinate whenever required using the higher priority he is assigned.

Needless to say, much of the work is carried out in a very noisy environment – sometimes noise levels of more than 130dB are common. A special set of audio accessories supplied by Davies Industrial Communications combined with TETRA's audio processing allows fully comprehensible speech in this extremely noisy environment. Team Manager, Fausto Gresini said: "The top-of-the-class performance of TETRA is what we were looking for. But fighting for the world championship also requires flexibility and reliability to support rapid decisions, and this is what we get from the OTE system."



OTE's award-winning TETRA handportable goes ATEX

OTE SpA has just announced an intrinsically safe version of its Puma TETRA handportable radio. The company say their new PUMA-T3Ex has been designed for operation in potentially explosive environments in compliance with ATEX standards. The radio is classified as 2G ib IIC T4 and should be suitable for use in the Gas & Oil industries or with Fire and Rescue Services.

The PUMA-T3Ex is easily recognised by its fluorescent red case. A special ATEX battery and ATEX accessories are available. The radio can be supplied for use in 380-430 MHz and 410-470 MHz bands. It can also be used as a conventional analogue FM terminal. OTE say that this unique feature helps to protect users' investments and allows a smooth transition from analogue to TETRA networks.



More New Products:

The TETRA industry is constantly busy developing new products and solutions for users. The following are some highlights:

MULTIPLE ACCESS COMMUNICATIONS have announced three major improvements for their ultra-fast scanning CatchAll receiver: base station signal location area decoding, integrated real-time map information and distance based sampling from wheel pulse inputs to ensure evenly spaced samples regardless of vehicle speed.
www.mactd.com

TELTRONIC and **CRYPTO-AG** have jointly developed an end to end encryption solution called SEETRA for implementation on Teltronic's NEBULA infrastructure.
www.teltronic.es

ROHDE & SCHWARZ'S latest product, the Portable TETRA radio cube has been designed for rapid deployment of additional network capacity or coverage. The new ACCESSNET®-T Cube is a portable TETRA base station with power supply and antenna coupling network, and can be deployed as a single-cell mobile radio system within a few minutes.
www.rohde-schwarz.com

Association membership up by 10%

Reflecting the continuing interest in TETRA and the strong market growth around the world, membership of the Association is also showing consistent growth. Membership now stands at 113, representing a 10% increase from last year. The Association is delighted to welcome a further 6 new members:

Beijing Taiji United Laboratory Technology Co Ltd (China)
Swedish National Police Board (Sweden)
Swedish Rescue Services Agency (Sweden)
T-Systems International GmbH (Germany)
Thunderbird Industries (US)
UK Government Office for the South West (UK)

First for TETRA at Bahrain Grand Prix

Safety and security at the Middle East's first Formula 1 Grand Prix in April 2004 was assured with the help of Nokia TETRA technology. The Gulf Air Bahrain Grand Prix also marks the first time TETRA has been used at a Formula 1 race. At peak times more than 1,000 users per base station relied on the network including track marshals, fire, recovery and medical teams, civil security guards and the armed forces.

As well as providing reliable communications for race management and medical support, the Nokia TETRA system met the Bahrain Ministry of Interior's stringent security demands. TETRA TEA3 encryption was used to provide absolute security against eavesdropping.

Scottish Police Forces unite under TETRA

All of Scotland's eight independent police forces will be using the Airwave network, and all eight have made a joint decision to choose the MTH800, Motorola's newest Airwave terminal, for their officers. This decision is significant in terms of collaborative action for Scottish Police Forces in the choice of terminal for their officer's operational communications. Strathclyde's Assistant Chief Constable Ricky Gray commenting on this procurement exercise said it was "a major milestone in the successful implementation of the Airwave Service in Scotland".

TETRA Events Diary 2004

EVENT	DATE	VENUE	INFORMATION
TETRA MoU Association Asian Conference	Sept	South Korea	www.tetramou.com/events
All Russian TETRA Conference & Exhibition	4 - 6 October	Moscow	www.tetraforum.ru
7th TETRA World Congress	22 - 25 November	The Austria Center Vienna, Austria	www.iir-tetra.com

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