



TETRA grows and grows

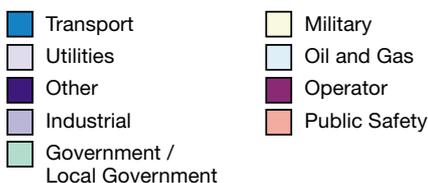
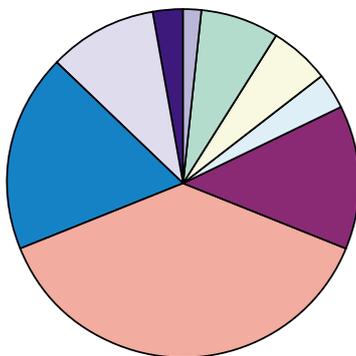
The total number of contracts let for TETRA around the world is now well over 170. This is a significant increase from the last time the numbers were reviewed, just before the TETRA World Congress in December 2001. It demonstrates, above any other measure, the worldwide belief and confidence in the TETRA standard. Like most things in life, if you believe in something you are positive to invest in it. When organisations are considering new communication solutions, the investment to support their belief will be considerable – measured in millions of Euros.

The review of data supplied by the TETRA industry was commissioned by the TETRA MoU in June 2002. The study of worldwide contracts confirmed substantial growth for the TETRA standard all around the world. A closer look at the new analysis reveals some interesting facts that challenge some of the often misinformed comments about TETRA.

TETRA is only in Europe, isn't it?

No!! 25% of contracts are outside Europe. In fact, much of the recent growth has come from the Asia-Pacific region. And, all around the world there are yet more major contracts under negotiation or being developed.

TETRA CONTRACTS BY USER TYPE



TETRA is only Public Safety, isn't it?

No!! The top three user segments are Public Safety (37%), Transport (19%) and Operators (14%). Together they represent just over two-thirds of the contracts let around the world.

TETRA is only 380 – 430 MHz band, isn't it?

No!! Many contracts are for TETRA systems in the 800MHz frequency band.

Figures conservative by nature

Some TETRA users, by virtue of their job, demand that their systems remain confidential because of their need for high levels of security. This means that a number of contracts are not available for disclosure and are therefore not included in the overall data. Also, information for this review is only gathered from infrastructure and terminal contracts let. There are, of course, many supplementary contracts for control room equipment, applications, service, accessories etc.

More details on the contracts review will be found on the TETRA MoU Association's website www.tetramou.com.

Interoperability News

Goals for TETRA IOP work for the next 12 months set

The TETRA Interoperability Profile (TIP) specification creation process is recognised as working well. The focus is now on enhancing the TIP test plan creation and the TIP certification process. The target is to have all TIP test plans created for existing TIP specifications and to publish them for TETRA MoU Members so TETRA Operators and Users can optimise their field testing and acceptance testing to items beyond TIP certification.

ISCTI in operation

ISCTI supervised the first TETRA IOP testing and certification session according to the new TIP Compliance Testing Process in July 2002. The session, held in Helsinki, involved six TETRA terminal manufacturers covering all TIP certifiable functionality.

New TIP certificates issued

TIP certificates for Packet Data, Authentication, Dynamic Group Number Assignment (DGNA) and Short Data Service (SDS) have been issued. Five TIP specifications are going through the member's enquiry process. Details are available in the Technical Forum section of the MoU's website www.tetramou.com.

Dolphin finds a buyer for its UK business

Dolphin Telecommunications Ltd., the UK mobile business telecommunications provider, had some good news in June. Having spent almost a year in Administration, the news was announced that Inquam had acquired their UK business and some of their assets.

Tony Greaves, formerly of O2 and Airwave, will lead the existing management team at Dolphin as CEO. Commenting on the acquisition, he says: "We believe that with the right strategy, sound execution, and secure funding, Dolphin can be turned around. We will continue to provide a good service, a reliable network and win new business customers in niche markets."

Whilst the business may have been on hold during the past year, terminal manufacturers have been busy. Existing and new customers of Dolphin will be able to benefit from the second generation TETRA terminals that have been developed by a number of handset manufacturers. www.dolphin-telecom.co.uk.



STOP PRESS!

WG4 has selected the multi-carrier solution technology for TETRA High Speed Data – watch the MoU website for breaking news.



Russia – exhibits interest

Russian TETRA Forum in action

The Forum participated at the Svyaz Expocomm 2002 exhibition in Moscow, this May, where they promoted TETRA to a variety of interested users from Russia. In October, the Russian Forum will be co-ordinating a Russian TETRA Congress to be held in Moscow. For more details contact tetraforum@myu-net.ru.

Contract awarded to Marconi for Russian pipeline system

Marconi is to supply a TETRA system to SvyazTransneft Tlc, Russia's state-owned oil transportation operator. The first of the communication links will be deployed along an 800 km stretch of a new Baltic Pipeline System from Primorsk to Yoroslav, including a site in Saint Petersburg. A second order has recently been signed for the Samara region.



Vatican City TETRA System inaugurated by the Pope

His Holiness John Paul II officially inaugurates Motorola's TETRA communications system at the State of Vatican City

PITO confirms DMO performance OK

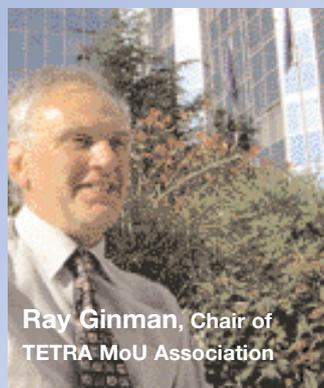
The UK's Police Information Technology Organisation (PITO) and members of the Direct Mode User Group, with the assistance of personnel from the Metropolitan and West Yorkshire Police, recently concluded a series of tests of TETRA terminals operating in direct mode. The tests were performed on the outskirts of London around an area that offered a range of environmental options including open terrain, semi-urban, wooded and high rise shopping centre buildings.

Wide range of terminals tested

Vehicle radios from Cleartone, Motorola, Sepura and Teltronic and handheld radios from Motorola and Sepura were tested. Using a commercial TETRA analyser, power output was set and measured at 1 watt for handportable and 3 watts for vehicle terminals.

The tests were designed in consultation with the manufacturers through the Airwave TOPS forum to concentrate on performance in terms of voice clarity and range in the different environmental scenarios. Voice based tests were carried-out using group calls and emergency button operation. All communications were in 'clear' mode (i.e. no encryption).

A note from the Chair



Ray Ginman, Chair of TETRA MoU Association

Plans for this year's TETRA World Congress are already well advanced. The TETRA MoU, working closely with the planning team of IIR, are developing an exciting and wide-ranging programme for this year's event. The venue will be Nice again, but a little earlier than last year, November 18th-22nd. The conference is a must to attend as its theme is to focus on the User Experiences of TETRA Services. Turning to shared systems for Public Safety, I am pleased to note the

recent UK Fire Service's dramatic decision to abandon its previous procurement strategy in favour of a national strategy. Let's hope this will lead to the UK's Public Safety organisations following the rest of Europe in providing an efficient, shared, national and accountable radio communication system.

Finally, I must say how pleased I am to see the news concerning Dolphin in the UK. This is another very positive event for the TETRA world and good news for all the subscribers to the Dolphin service.

New contracts

Marconi has won another transport contract in Singapore. Their TETRA system has been chosen for use on the Circle Line, part of the Mass Rapid Transit (MRT) system for the island.

Motorola has won its first system order in Latin America for TETRA. The Government of the State of Táchira (Venezuela) has awarded them a contract for a three-site system.

Test results

Inter-working was achieved in direct mode between all four manufacturers' terminals. Generally a high quality of voice reproduction was achieved. Emergency button activation was received by other terminals in the group, together with a Calling Party Identity.

Mobile performance – In very favourable conditions a maximum range of 4 miles (6.4km) was achieved between vehicle sets. However, this was significantly reduced in a high density urban shopping centre when an operational range should be regarded as 2 miles (3.2km) or less. The drive-by tests of vehicle based sets and vehicle to vehicle communication at closing and parking speed showed no adverse effect on the quality of signal.

Handportable performance – In favourable conditions, on flat terrain, a range in excess of 1.5 miles (2.4km) was achieved between handportable and a vehicle based recorder. However, this was significantly reduced (by up to 50%) when tested in a high density urban shopping centre or through a flat wooded area. Handheld to handheld signalling in an underground car park was successful, both on the same level and between two levels.

Conclusions

Police Officers participating in the tests confirmed direct mode performance, in terms of range and voice quality, met their operational requirements.

Worldwide interest in TETRA – Conference Reviews

In recent months, three conferences around the world have focussed user's attention on TETRA – in Singapore, Paris and London.



Singapore – The Asia Pacific TETRA Congress, May 2002

Ray Ginman set the scene for the conference, reviewing TETRA's strong performance in turbulent times for telecoms overall and ending with a strong message of 'don't wait for Release 2!' – the standard's development is a natural progression. Professor Zhang from the Chinese Ministry of Information Industry emphasised the importance of TETRA in China. Calling for Operators to leverage TETRA PAMR services, not grab existing public mobile telephone markets, he ended with a challenge to handset manufacturers – is there a way to bring TETRA handset prices more in line with those for GSM handsets?

The full conference included user reports from the region, for example Hong Kong Police, and technical papers from a variety of users and industry experts. An open and honest appraisal of performance was the key to all presentations.

Paris – Congrès de la Radiocommunication Professionnelle, May 2002

This conference is the most important in France for professional radiocommunication users. TETRA was well represented with member organisations from Espace TETRA (the French TETRA Forum) including ETELM, Nokia, Motorola, and Sepura (ex-Simoco) displaying TETRA products. Christian Ollivry (Motorola, France) and Bob Lovett (TETRA MoU) gave a joint presentation to the crowded conference, updating the audience on TETRA's progress around the world, DMO performance, applications and a glimpse of the future roadmap for TETRA. With eight contracts in France already, the future for TETRA is looking 'très bon'.



London – BAPCO, April 2002

The premier event for Public Safety Communications in the UK was the stage for a variety of TETRA focussed exhibits and conference papers. TETRA terminals chosen by the UK's police for use on Airwave from Motorola, Clearstone and Sepura were keenly scrutinised by visitors. The conference focussed on 'joined-up' communications for public safety organisations.

With faint echoes of September 11th, the conference heard strong arguments in a number of papers and presentations that the investment in Airwave would only be fully realised when Fire, Ambulance and other Public Safety organisations all used the service. Like our Chairman's recent statements and the UK National Audit report, the conclusion of the debate was that this was a one-off opportunity for the UK and should not be lost.

News from Scandinavia

Copenhagen Public Safety services to benefit from TETRA

Danish TETRA operator TetraNet is to run a pilot test with the City of Copenhagen for Public Safety communications. Søren Brydholm, Assistant Chief of Copenhagen Fire Brigade, said: "Copenhagen Municipality plays a very important role in the safety and protection of the citizens of Copenhagen. We hope this is the first step towards what, we hope, will develop into a national decision to deploy TETRA." The public safety and municipal agencies will communicate more effectively using the services provided by TetraNet. The extra seconds saved by using a common communications platform may be the difference between life and death in an emergency situation.

T-Cell goes live in Denmark

T-Cell is the first TETRA network in Denmark to go operational. They have worked with Nokia since the company was granted its TETRA civil band licence, in October 2001. Bjørn Steenberg, Managing Director of T-Cell, is happy to enjoy Nokia's previous experiences in supplying nationwide TETRA networks. Steenberg said "Nokia also provides great product performance, and excellent service and support for the system. These are all things that will be valuable in our TETRA network." Looking to the future, Nokia's support for the TIP (TETRA Interoperability) and ISI (Inter Systems Interface) are also very important elements for the daily – and future operation of the TETRA network.

Norway moves towards a national TETRA network

Following on from a successful pilot phase, the Norwegian TETRA-project has issued a Request for Information (RFI). This is a further step towards the implementation of a national Norwegian TETRA system for Public Safety organizations. Plans are on track for a full technical specification for the system to be available by 2004 for interested suppliers.

Nokia achieves Type Approval in Brazil

Nokia has obtained type approval for its 800MHz TETRA equipment from the Brazilian National Telecommunications Agency (ANATEL). Approvals cover Nokia TETRA Base Stations and Nokia TETRA Terminals. These approvals are important milestones for the Brazilian Public Safety forces in their programme to adopt TETRA for their communications needs.

Nokia selected OCP-TELI, one of eight ANATEL-nominated institutions that are legally constituted to certify the compliancy of the products with the regulations. Many in Brazil are now hoping for Brazilian decision-makers to set a high priority for the radio communications needs of Public Safety organizations.



5th TETRA World Congress – Nice, November 18-22



Fulfilling User Expectations... The next World Congress is only four months away! Come along and add your voice to the debate – hear and learn from those who have already trodden the TETRA path. Gain an invaluable insight into the future of TETRA for Public Safety, Private and Operator driven communication networks.

What's different? We've listened carefully to your feedback from the last World Congress. You told us that you wanted to hear from new speakers addressing new topics. You wanted a simpler programme with more time to

network. The good news is that we have been able to achieve a lot of what you wanted. New speakers and topics in the programme – these represent new TETRA projects or new phases of existing projects. Wherever possible, we have asked the user to give their appraisal of the unique and practical benefits TETRA brought to their organisation. You will also be hearing from some of the senior administrators and government officials associated with national TETRA projects to understand more about their confidence in massive TETRA investments in their countries.

Simplified daily agenda Mornings will be Plenary sessions for all delegates, afternoons will be devoted to specialist topics that match the three general delegate profiles: Government & Public Safety, Private Networks and TETRA Solutions. There should be no timetable conflict for those delegates who want to hop between streams as there is no closing plenary each day. Session Chairs and speakers will also be running to a strictly enforced timetable. The last day is entirely plenary and ends just after 15:00 in order to allow you to get to the airport to catch your flight home.

New Workshops TETRA Seminars on Monday 18th and Masterclasses on Friday 22nd complement the Conference agenda and enable delegates to attend highly focussed and interactive training and education sessions. All of this, plus the opportunity to visit the large exhibition and spend time networking with your TETRA colleagues.

November 18th to 22nd, Nice. A full week of TETRA. We hope it will meet your expectations. Come along and find out. Visit www.tetra2002.com for more information.

TETRA Events Diary

| Event | Date | Information |
|--------------------------|--------------------------------|--|
| Russian TETRA Congress | 7th-11th October, 2002, Moscow | www.tetraforum.ru |
| 5th TETRA World Congress | 18th-22nd November, 2002, Nice | www.tetra2002.com |

TETRA for the Military Markets

The recent review shows at least 10 Military contracts for TETRA (some must remain confidential). Attracted by a combination of TETRA's data, security and encryption capabilities, military procurements are looking increasingly at the benefits of 'Commercial off-the Shelf Solutions' (COTS) to help their budgets go further. A case of COTS saves costs! MoU Board Member, Charly Hengevoss, has been asked to look specifically into the potential for military TETRA markets. He has noted all around Europe that many military organisations, reviewing their communication needs for the future, are asking questions about TETRA.

TETRA sees action in Kosovo

The Finnish Defence Forces have awarded Nokia a contract for a container based TETRA system including Nokia TETRA DXT256 switches, Base Stations, Dispatcher Workstations, Network Management System and relevant services such as training. The contract is worth about 1.8 Million Euros. The system is in a specially fitted container for rapid, rugged and easy deployment. Designed for operation anywhere in the world, the system has mainly been deployed in Kosovo to support the communication needs of Finnish forces during peacekeeping operations.

News from the Secretariat

New Members

Interest in the TETRA MoU continues to grow and we welcome Bundesministerium fur Inneres Abteilung II/25-TK from Austria as a new member. Applications from three other organisations are in progress.

Thousands access website

This interest is further emphasised by the activities on the MoU Web Site www.tetramou.com which in May saw 1.5 million hits and almost 20,000 user sessions downloading over 16,000 files of information. 2,000 copies of Issue 1/2002 TETRA News were downloaded in addition to 25,000 copies that are printed and distributed globally.

Board membership changes

Steve Borrill has stepped down from the Board as a result of a change in career and we wish him every success and thank him for his contribution to the MoU. Roberto Rubbieri is proposed as a temporary replacement until formal elections in November.

IOP Test & Certification

As we go to print the new body, ISCTI, is running its first test session for IOP Certification, which will result in them issuing their first certificates later this year. Between 200 and 400 copies of each IOP test certificate on the web site have been downloaded so far this year demonstrating the value and importance of this aspect of the MoU activity.

More information on products and companies in this edition can be found at www.tetramou.com>signatories

Subscribe at www.tetramou.com/subscribers/index.asp

For any other information contact the TETRA MoU Association's Secretary e-mail: secretary@tetramou.com or visit the TETRA MoU's website at www.tetramou.com.

Published by:

The TETRA MoU Association Ltd. PO Box 88 St Ives PE27 6PD UK

Compiled and edited on behalf of the TETRA MoU by Bob Lovett.

This magazine is published in July 2002 by the TETRA MoU Association. Reproduction is permitted in whole or part if referring to the source.

The views expressed in this magazine are not necessarily those of the editor or The TETRA MoU Association Ltd. While every effort has been made to ensure that the information in this publication is correct and accurate, the editor and the TETRA MoU Association cannot accept any liability for any consequential loss or damage, however caused, arising as a result of using the information printed in this magazine. Printed in the UK, 2002.

The TETRA logo is registered to The TETRA MoU Association Ltd.

All other trademarks and logos are the properties of their respective owners.