FYLDE MICRO

Pioneers in MPT1327 radio trunking

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A world's first for Fylde Micro..

Who are Fylde Micro..

Fylde Micro design, develop, manufacture and supply communications solutions to Original Equipment Manufacturers (OEMS), dealers, and end-users.

In 1985, when the UK Government formed the MPT 1327 working group Fylde saw this as an opportunity in communications for both the UK and world markets. Ever since, Fylde have remained committed to the development of MPT 1327 products and still actively contribute to the Standards Maintenance group.

A World's first for Fylde

The first true MPT1327 system was sold to British Telecom in November 1985. Other systems quickly followed including the world's first MPT 1327 multi-site networks.

Through the late 1980's and early 90's Fylde supplied their phenomenally successful KM225 controller modules to Key Radio Systems. This product enjoyed over 75% of the UK market at that time.

Fylde have supplied infrastructure controllers to Motorola, also mobile and handportable modules to the Kenwood Corporation of Japan.

Fylde MPT 1327 systems are in their 3rd generation of design with many thousands of channels of trunking sold throughout the world.

What is MPT1327 Trunked Radio..

MPT1327 born in 1988

In 1988 The British Ministry of Post and Telecommunications (MPT) defined the MPT 1327 protocol as an open protocol and an international standard, it has since become the most widely used trunked radio protocol in the world.

Inside the trunk radio network

Radios share multiple channels. Queuing and channel assignment are handled dynamically by the system infrastructure. When the radio user places a call, the trunked radio system automatically allocates an available free channel. The result is increased quality of service and reduced infrastructure and operating costs.

Advanced features

Trunking is ideally suited for providing individual or group calls. It offers fast call set up time along with a wide range of advanced features and functionality. Examples of such features include emergency and priority call management, status messaging, dynamic regrouping of users, and data / text services.

MPT1327

MPT1327 uses a digital control channel with analogue voice channels. The digital control channel provides a data gateway that allows enhanced features such as security and subscriber verification, mobile data communications, system administration, and seamless multi-site roaming.

No other protocol allows this kind of versatility and the economy of scale inherent in MPT 1327.

Optimised for reliability..

Fylde system features..

Expandable from a single channel to 800 radio sites all in 1 product.
Fylde MPT1327 systems are optimised for speed and efficiency with incredible reliability.
Fylde infrastructure supports all MPT1327 & MPT1343 compliant radio units.
Radios can be of mixed manufacture either vehicle mounted or portable units.
Super fast call setup times - Local groups 300mS -Ultra wide area groups in under 1.5 seconds.
Site roaming is fully automatic, seamless and transparent to the end user.

Speech features..

Person to Person calls.
Person to Group calls.
Mobile radio to public telephone network (PSTN).
Mobile radio to private telephone exchange (PABX).
PABX or PSTN to group.

Data features..

Data message to individual radio units or groups.
Text messaging to individual radio units or groups.
E-mail gateway to radio units.
Job dispatch to a range of mobile devices, will integrate with existing Customer Relations Management (CRM) applications
Vehicle Location and mapping.

Emergency features..

Single button activation.
Clear down of blocking calls.
Emergency broadcasts.
Forwarding to nominated radio, for example an emergency planner.
Emergency Sweep: ensures all required recipients get pulled into the emergency call.

Control of the system from one terminal.

Fylde Micro's software applications are designed for desktop computers running smoothly alongside other Microsoft Windows® based applications.

Network management

Fylde's System Control Terminal, SYSCON, operates in conjunction with the infrastructure to provide user management and system control functions. SYSCON offers a full set of diagnostic tools, covering every aspect of network operation.

User control

User management allows fine grain control of subscribers and their facilities. Automatic call queuing for called party and channel busy.
Calls automatically connect when a channel or called party becomes free.
Call records: each call made throughout the network is logged.
Calling and called parties are logged, along with 17 other attributes.
Call timers - controlled by call type and time of day or subscriber.
PABX / PSTN - control of prohibited numbers.
Coverage - controls the radios roaming capability.

Remote monitoring

Alarms based on site status - generator fuel - battery voltages - intruder - etc.
Forwarding of system events via e-mail or text message.

Remote client

The Remote Client package allows resellers to remotely configure their allocated users using a web browser interface.

Network analysis

Automatic creation of usage summary.
Call logging - detailed record of each call.
Call analysis - statistical analysis of the raw data.
Report generation - detailed activity for a radio or a group of radios.

Multi region support

SYSCON Provides full control of the system from one terminal.

Message handling dispatcher

Message handling dispatcher - desktop application

Fylde Message Handling Dispatcher is a software package that sits on a desktop computer running smoothly alongside other Microsoft Windows® based applications. The message handling dispatcher operates as a fixed terminal for small closed usergroups or an entire system. It can connect to a fixed radio via a MAP27 port or directly to a Fylde network.

The terminal operates a stacking system that displays call requests as they are propagated through the network. Calls of a higher importance are displayed using different colours. For example emergency situations are displayed in red.

The operator may initiate calls from the stack or select a specific radio or group. Any status or short data calls will be displayed on the terminal as a text message.

MHD desktop audio interface

When connected directly to a Fylde system up to 16 MHD's can be serviced by each Regional Control Processor (RCP). The MHD Audio Interface provides headset and speaker facilities.

NOTE: The Audio Interface is not required for fixed MAP27 radio connected MHD's.

Click for more information

Vehicle tracking & mapping..

Vehicle tracking and mapping

Vehicles can easily be monitored in real-time, using data transmitted from compliant radio units. Follow a vehicle's movements or check the status of ignition position, gritting on/off etc. All data is automatically recorded, enabling full analysis of events at a later date. See also page 32 for an in system diagram.

Fylde mapping advantage

Vehicle location display in real-time.

Recording of arrival and departure times.

Monitoring of driving practices (speed)

Ignition position (On / off)

Click for more information

Systems in over 38 countries..

Around the world

Fylde have been supplying networks for over 15 years. Working together with its customers Fylde develop dependable systems. Fylde trunking solutions provide communications to remote regions of the world In the Austrian Alps, for example, Fylde communications can be found supporting mountain rescue teams, from sites only accessible during the summer months. This emphasises that systems must be constantly reliable.

The list shown is not an exhaustive list but does show how Fylde can apply its solutions across a wide range of applications. For more information on Fylde case studies visit - www.fyldemicro.com

Selection of applications

Airport	Sharjah - Riyadh - Jeddah - Damman - Middle East
Oil & gas	National network 116 radio sites - Poland
Railway network	45 radio sites - South Africa
Police system	More than 25 radio sites (increasing yearly) China
Public access	Expanding across 4 countries - Netherlands.
County council & fire brigade	22 radio sites - Cornwall region UK
Motorway rescue	Stretches 350 kilometres from Islamabad to Lahore - Pakistan
Oil pipeline	1500km of pipeline - Sudan Africa
Electricity utility	2 radio sites - Louisiana USA
Public transport	2000 vehicles - 5 city centre sites - Manchester UK
Commercial radio network	103 sites between Johannesburg and Cape town - South Africa
Emergency services	2 control centres 10 radio sites - Vorarlberg in the Austrian Alps
Security, emergency	16 radio sites, 2 regions, 48 channels - Slovenia
Mining operations	Supports 17000 workers - Indonesia
Nuclear power station	2 radio sites - Kiev Ukraine
Gas production fields	40 radio sites - Russia

Fylde trunking expanding across europe..

Fylde networks expanding throughout Europe.

Entropia Networks based in Belgium has embarked upon a major new MPT1327 roll-out. Although Entropia were considering MPT for some time the demise of the National Tetra operator was the final catalyst for Entropia to make this considerable investment. Entropia was established in 1990 with a plan to roll out a network across Europe.

System success

Expansion has been vigerous, the trunked radio system currently stands at 145 radio sites with 850 channels. Starting in 2006 Entropia will begin operation at Calais and Duinkerken harbours in northern France as well as a push into western Germany. All of these 214+ radio sites will be interconnected by an Entropia-owned microwave backbone providing seamless roaming over the 4 countries.

Entropia CEO message

Philip Vercruysse CEO of Entropia says -"Worldwide, a dozen system and radio manufacturers continue to be very enthusiastic about their products raising quality through strong competition. Although the basis of this technology stays the same, new applications continue to be developed. Hence trunking keeps on gaining popularity and the end consumer can enjoy the features the system offers".

ENTROPIA
RADIOCOMMUNICATION NETWORK OPERATOR

Fylde trunking in the fast lane..

Fylde single site solution supports A1 Grand Prix

In 2005, A1 Grand Prix introduced the first opportunity in any area of motor sport for nations to compete on a level playing field. 25 nations come together in a series where technology and innovation are deliberately equalised and performance is determined by human bravery, skill and excellence. A mix of established world-famous venues, exciting new state-of-the-art facilities and tight twisty street circuits, A1 Grand Prix promises to deliver high-speed action at every turn.

Fylde - First to be depoloyed

Transporting 50 cars around the globe, and all the equipment needed to run them, is a huge operation. Before any of the teams arrive at the circuit, it is the responsibility of A1 Grand Prix Operations to organise the safe arrival and begin unloading the A1GP freight. Fylde's radio trunking is one of the first items to be deployed. A portable 5 channel Fylde single site system is used in conjunction with handheld radios to form a total communications solution for all of the circuits on the tour.

Safety first with Fylde

The Fylde single site system provides each of the 25 teams with its own private communications as well as on-demand emergency calls throughout the entire network. To ensure safety is paramount during the races, the safety car is always on standby with an A1 Grand Prix observer permanently in radio contact with Race Control.

A1 GRAND PRIX™

Mission critical applications..

County Council & Fire Brigade - Cornwall region UK

Cornwall Fire Service has introduced a new trunked radio system with top-class performance and the most up-to-date features at an astonishingly low cost!

The new 22 site system delivers county-wide radio coverage with telephone-grade speech quality, it also provides telephony integration, an automatic vehicle location capability and data facilities with mobilising message delivery in under 2.5 seconds.

"We've been absolutely delighted" says Assistant Chief Officer Steve Webster. "We've actually got a far better level of coverage than we ever anticipated."

Expected cost came in 85% under budget

The system was purchased by Cornwall County Council's Estates & Highways Departments as their primary system, also for Cornwall Fire Service as their secondary system.

The new system with its superior wide-area coverage and superb performance has left Cornwall Fire Brigade in the odd position of having a secondary network that out-performs their primary system in every way and is far cheaper to run!

Fylde trunking with altitude..

Information

Mining operation Grasberg irian Jaya Indonesia

Fylde installed and commissioned a six site network on the island of Papua (Irian Jaya) for Freeport-McMoRan Copper & Gold.

The system provides operational and emergency communications for the richest, most remote copper & gold mine in the world - Grasberg.

The mining operation covers from Amamapare on the coast, 120 Kilometres inland to an altitude of over 4,200 metres. The Fylde equipment provides complete coverage of all open face and underground tunnel mining stretching a distance of over 54 Kilometres.

The network provides voice & data communications to support 17,000 personnel with direct dialled connections between radio and telephone users through the company's PABX system.

The Fylde system was chosen for its reliability as the network is crucial to the safe operation of the mine.


Desolate environments, It’s our speciality.
Information

Gas production fields western Siberia Russia

In one of the most desolate environments on earth with temperatures as low as -45^{o} c Fylde trunking can be found supporting the largest gas production fields in Russia.

Advanced features are used to provide wide area group calls. Dispatcher interventon manages emergency situations. Emergency pre-emptive sweep will locate a radio even if in another call. E-mail gateways to the radios and graphical statistical reporting of operating performance are provided as standard.

Many of the radio sites are at gas well heads. Power comes from the gas extraction itself by a closed-cycle vapour turbogenerator system developed for unattended applications. These systems can work for a period of up to 20 years with virtually no maintenance or repair.

Fylde systems are perfect for such applications with its distributed processing technology. Should any one channel fail (transmitter, receiver or processor) the other channels can continue normal operation. Thus, in a five-channel system, a failure of one channel simply reduces the capacity by 20 per cent. If four channels failed, the system would actually operate in single channel mode.

Communications when it matters..

Emergency services - Vorarlberg Austria

The Vorarlberg System is jointly operated by Mountain Rescue, Fire Brigade, Red Cross Ambulance and other emergency agencies of the public authority.

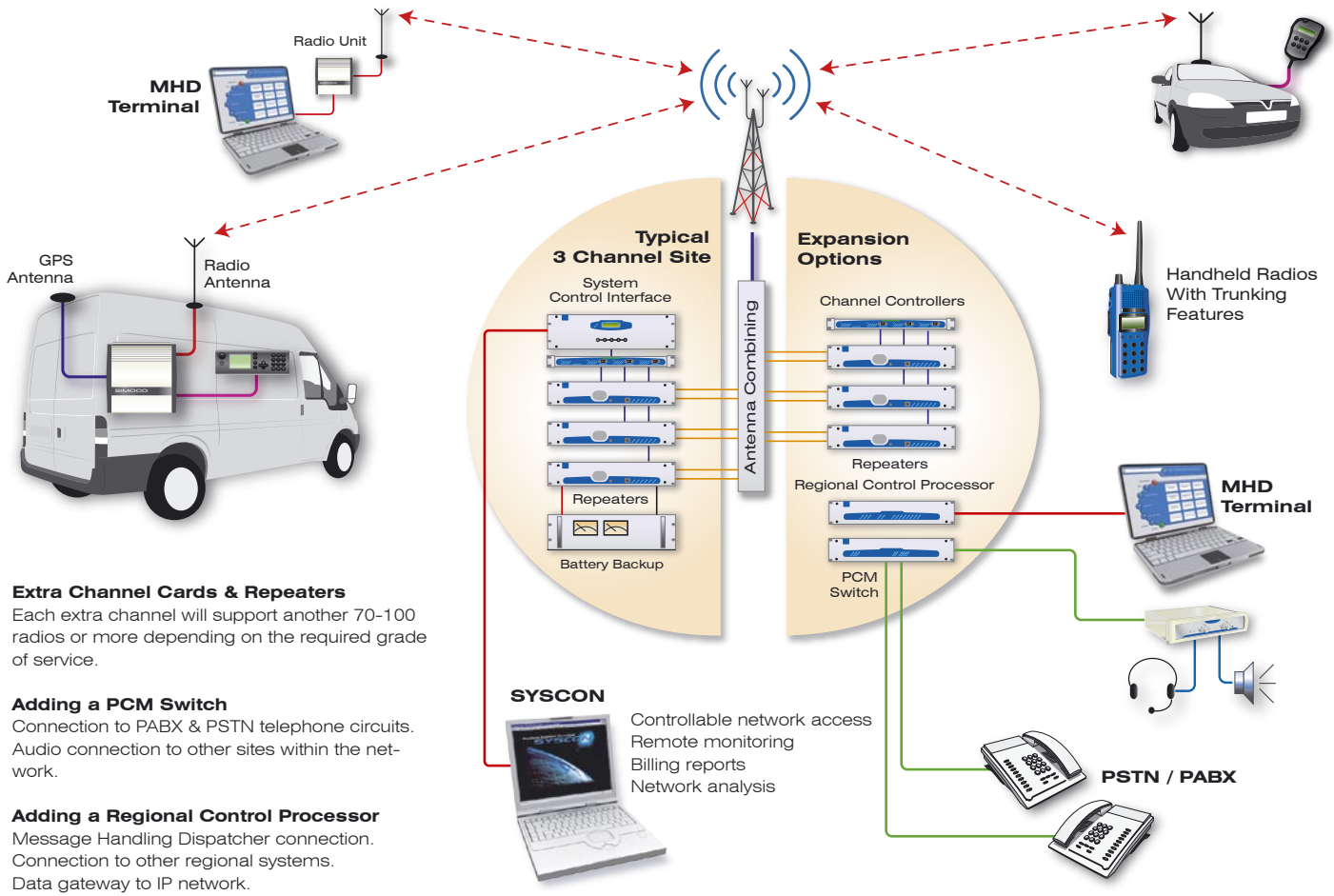
The Fylde system was chosen for its reliability. With some of the sites only being accessible for a few months of the year continuous operation is of paramount importance.

The Fylde System used for the command and control centres, enables efficient management and co-ordination of the rescue teams, in the event of fire, accidents, emergencies or natural disasters.

This regional system has been fully operational for over 10 years without a single outage. The system is currently undergoing expansion.

Fylde's systems are designed with expandable capabilities

Expandable from a single radio site, single channel all the way up to 800 plus radio sites, all from one product. Fylde systems allow network operators to expand features and functionality by simply adding components to their network, for example, adding an extra Channel Card & Repeater will allow for up to 70 to 100 extra radios or more on the network (depending on the the required grade of service).



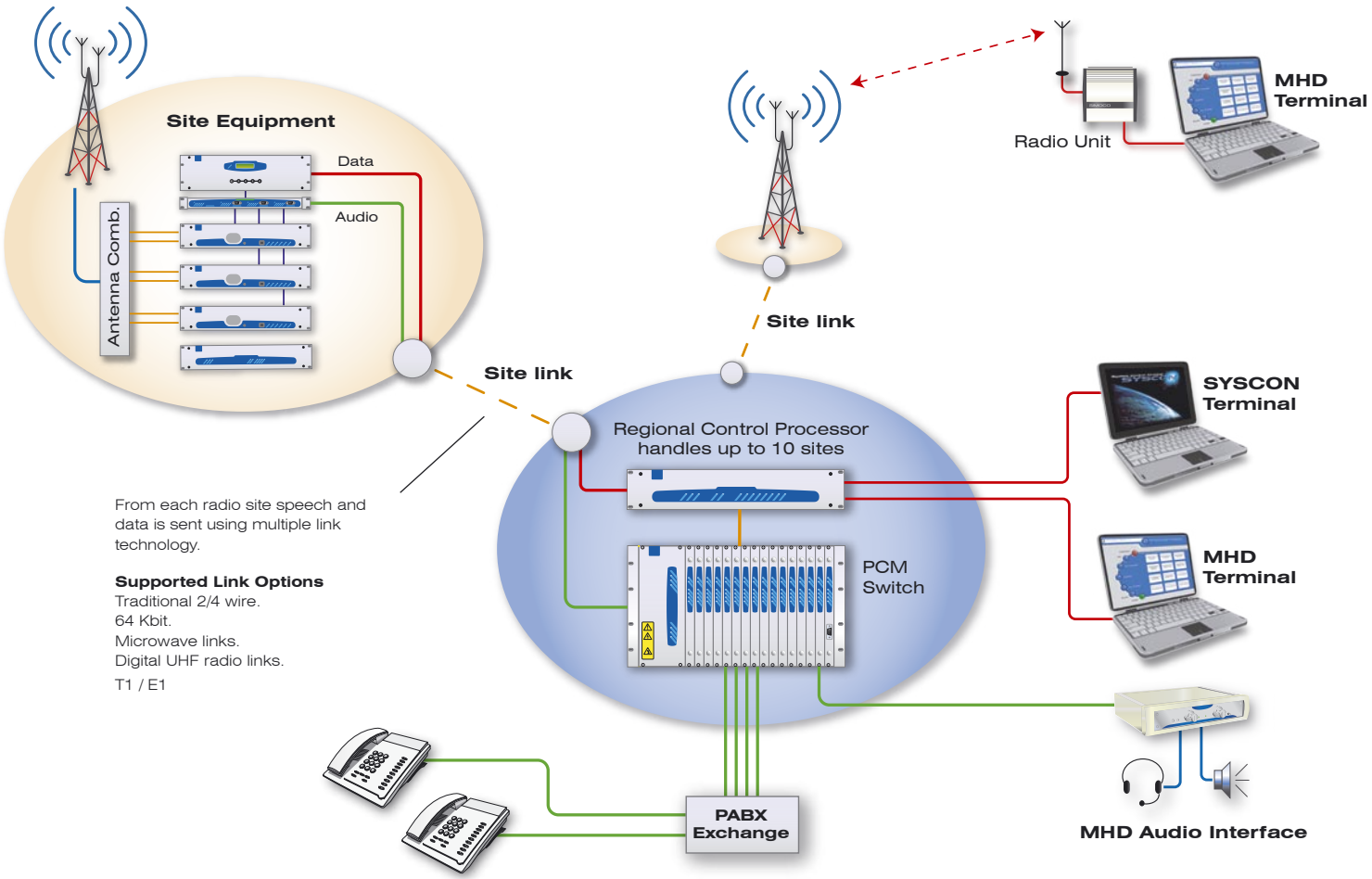
Extra Channel Cards & Repeaters
Each extra channel will support another 70-100 radios or more depending on the required grade of service.

Adding a PCM Switch
Connection to PABX & PSTN telephone circuits.
Audio connection to other sites within the network.

Adding a Regional Control Processor
Message Handling Dispatcher connection.
Connection to other regional systems.
Data gateway to IP network.
Call divert facility.

Regionally connected radio sites

The Regional Control Processor (RCP) in conjunction with a PCM switch is used to connect together up to 10 radio sites (up to 240 channels) to form a regional coverage network. The RCP performs all the Inter-site call set-up management tasks, including PSTN, PABX's and hardwired dispatchers (MHD). SYSCON provides seamless control of the system from one terminal.



From each radio site speech and data is sent using multiple link technology.

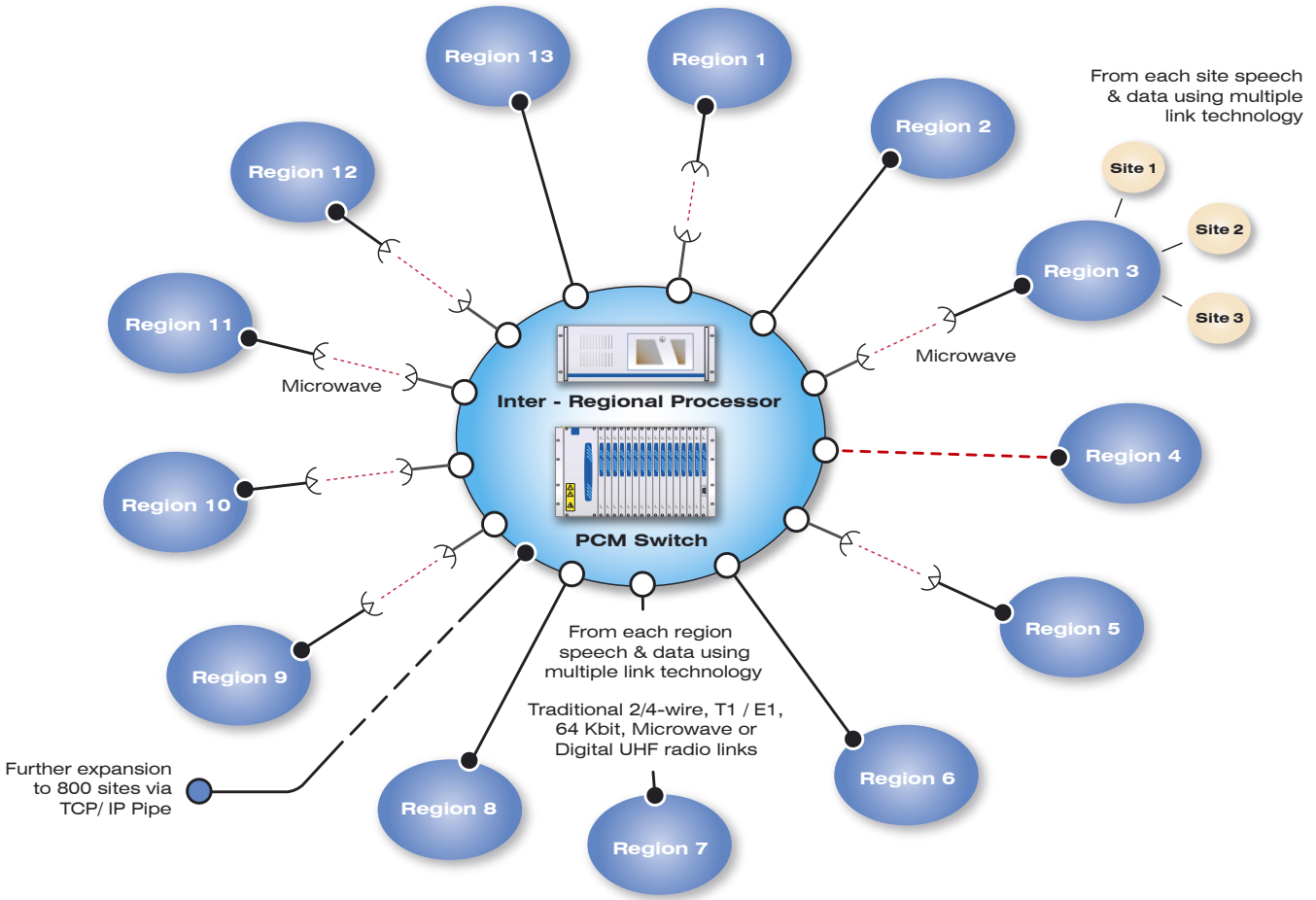
Supported Link Options
Traditional 2/4 wire.
64 Kbit.
Microwave links.
Digital UHF radio links.
T1 / E1

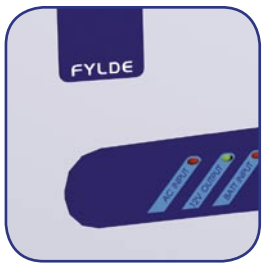
Sites that are regionally connected & regions that are connected via a central node

Adding an Inter-Regional Processor (IRP) allows systems of greater than 10 radio sites to be constructed. With expansion up to 800 plus radio sites to form a nation-wide system.

Supported regional link options

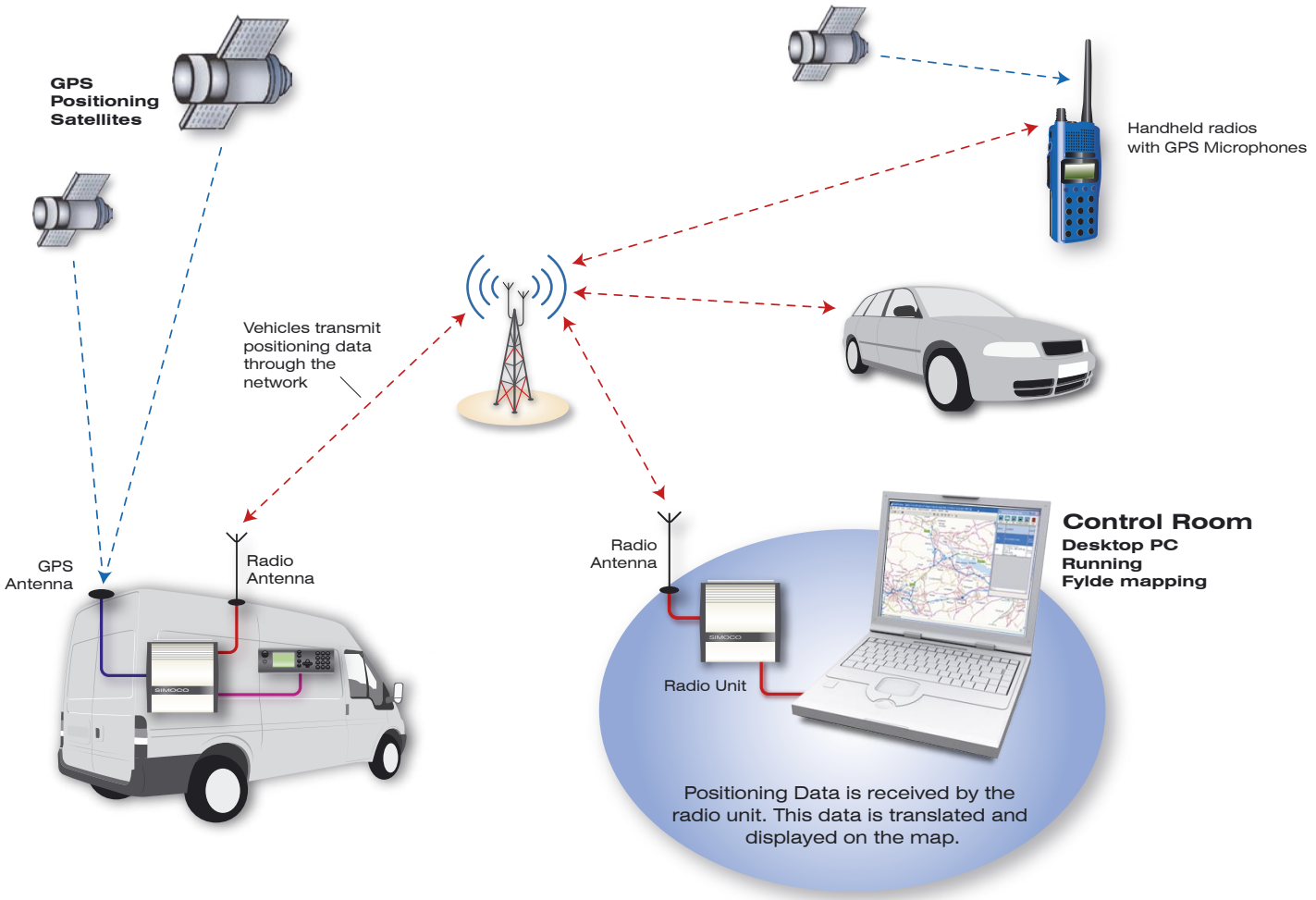
Traditional 2/4 Wire - 64Kbit - Microwave links - Digital UHF radio links - T1/E1 - TCP/IP



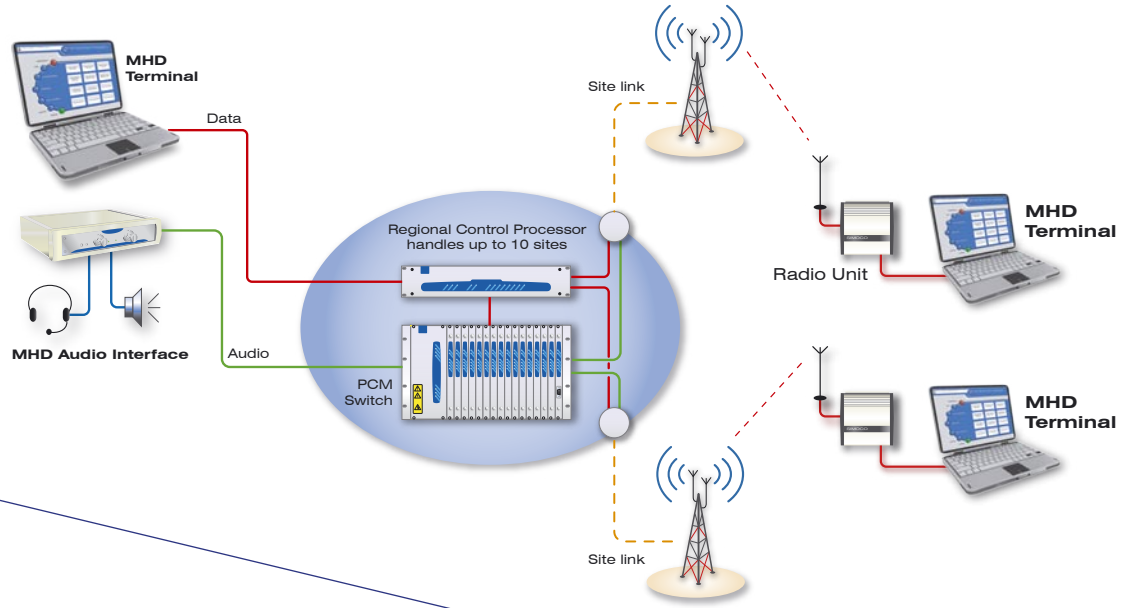


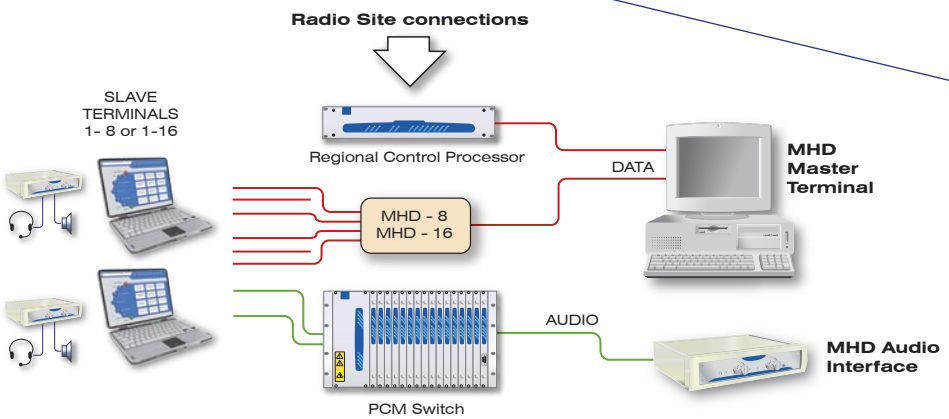
Fylde Vehicle location and mapping

Vehicles can easily be monitored in real-time, using data transmitted from compliant radio units. Simply follow the vehicle's movements or check the status of ignition position etc: All data is automatically recorded, enabling full analysis of events at a later date.



MHD PC & Audio interface in system schematics





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