

TRBOCALL DELIVERS MISSION CRITICAL TWO WAY DIGITAL RADIO SOLUTION TO VENATOR



Venator approached Eemits to implement a mission critical ATEX digital two way radio system across it's expanding site based in the North East and at the same time help improve coverage and voice capacity.

THE CHALLENGE

Venator are a leading global chemical company dedicated to the development and manufacture of titanium dioxide (TiO₂) pigments and performance additives. As a top-tier COMAH and ATEX designated site Venator are committed to safe, sustainable and responsible manufacturing and their on-site communication system is integral to delivering against these commitments.

As part of their continuous improvement programme it was recognised that their existing ATEX analogue radio system had not kept pace with the growth of the site. The analogue system consisted of a number of back-to-back channels with no infrastructure that worked well in close proximity but often fell short when the teams tried to communicate with each from one end of the site to the other or in areas of dense concrete and steel such as blast proof buildings, pipework and container vessels. In addition to the coverage issues the back-to-back analogue system could not accommodate the increase in voice traffic, which often resulted in co-channel interference from competing users attempting to access the same channel at the same time.

Venator needed to update their ATEX analogue system with one that would solve their existing coverage and voice capacity problems on site and support their mission critical work activities.



PRODUCTIVITY
up



EFFICIENCY
raised



SAFETY
increased

TRBOCALL - GREATER THAN THE SUM OF ITS PARTS

THE SOLUTION

We installed Eemits ultra-smart digital two-way radio solution -TRBOCALL – a modular platform comprising the following:



INFRASTRUCTURE

Venator chose:

- Capacity plus for single sites



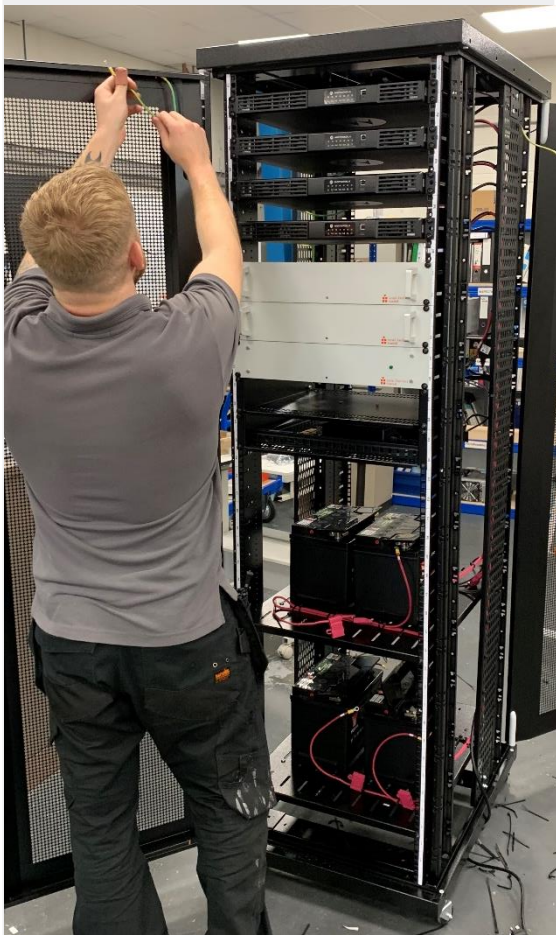
The Benefits:

As the primary objective was to design a system with complete site coverage and voice capacity a comprehensive RF site survey was undertaken. The results showed that the site could be covered using a single RF site in the UHF frequency band with an antenna fixed at the appropriate height and required power output. A CDF-450 Array Antenna, which comprises of four vertical dipoles mounted on a support boom was chosen as it allowed the RF coverage to be fine tuned by aligning the vertical dipoles in the appropriate direction. To support the mission critical requirement of the system it was agreed to install two antennas in the event of potential failure or damage to one of them. Voice capacity was achieved by connecting 4 x Motorola SLR5500 digital repeaters, each with a 12 hours battery backup, to a 4-channel antenna combining system that allowed the four repeaters to operate via a single antenna. In conventional mode this would give radio users 8 separate voice channels to use.

Using a large number of repeaters in conventional mode is an inefficient use of the repeater resource as it can lead to a situation where some repeater channels are used more than others. If there are more than 8 groups of radio users, which was the case for Venator, an 'educated guess' needs to be made on how to load the additional groups on to what repeater channel is required. This is done based on numbers of radio users in each group, how frequently each group of radios are used and how long a typical radio conversation will last. To avoid this inefficiency and guess work the repeaters were loaded with Motorola's CAPACITY PLUS software that changes the system from conventional mode to single site trunking mode.

The addition of this software allows the repeaters to become a pooled resource and channels are allocated dynamically on a first come first served basis. This allows a large number of groups to use the system and more importantly it gave Venator the flexibility it needed to allow the new digital radio system to operate around their needs and work for them rather than being limited by the constraints of a conventional system.

The new single-site digital trunked system also supports its mission critical activities as in the event of a single repeater failure the system will continue operate normally with 3 channels without the loss of a user group, which would be the case if the system was operated in conventional mode.



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HARDWARE

Venator chose:

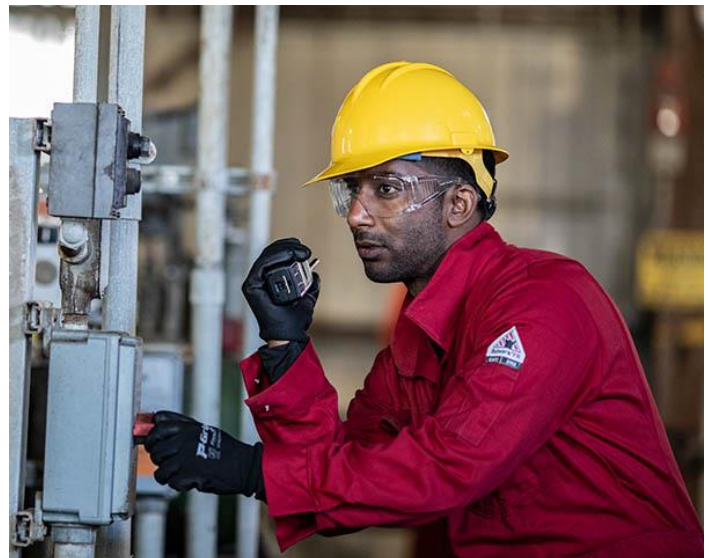
- A series of Motorola DP4801Ex Full Keypad (ATEX) hand portable radios
- Speaker mics (RSMs)
- Fixed desktop radio equipment
- x2 antennas
- x4 repeaters



The Benefits:

Eemits deployed their TRBOcall modular platform to deliver Venator an ATEX digital two way radio system specifically designed around their individual requirements.

As a platinum partner to Motorola, Eemits recommended their DP4801Ex full keypad display radio for Venator as being ATEX certified and with a rugged design they are ideal to use in potentially hazardous environments. The intuitive user interface on the DP4801Ex radio allows users to send and receive private one-to-one calls and group calls with displayed caller ID. These rich calling features eliminate unnecessary chatter and free up channels for mission critical voice communications. The DP4801Ex radios also come with backlit screens which enable users to use them in a night or dark environment, which is essential for manufacturing sites that operate 24/7/365.



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FEATURES

Venator chose the following features on their radios:



Panic Button



Lone Worker



Man Down



Telephone Interconnect



Text Messaging



Rugged ATEX Design

The Benefits:

The range of the features chosen by Venator from the TRBOcall modular platform significantly enhanced the operational performance of employees, whilst also significantly improving their safety and efficiency across the site.

Workers can now be rest assured that they are safe at all times with features such as man down; which sets off an alarm if workers have a trip or a fall or if they remain motionless for a set period time; lone worker where previously workers had be accompanied at all times now allows the work to be carried out safely by one person and an alarm is raised if the worker fails to respond to a regular welfare check generated by the radio system; and a dedicated emergency button on the DP4801Ex radio that can be pressed at any time when workers need to raise an alarm when faced with any kind of emergency incident.

Venator also chose to deploy the text messaging feature so that workers can send pre-determined or freeform messages relating to routine tasks as text messages. This allows workers to use the data functionality embedded within the digital radio system to communicate efficiently even in high-noise environments, ensuring that all messages can be received and understood.

Mobile phones are banned from use on the Venator site but workers found it frustrating and inefficient to have to leave the site for the office to either make or receive a telephone call. To improve productivity on site Venator opted for TRBOcall's telephone interconnect feature that allows radio users to make or receive telephone calls on their Motorola DP4801Ex radio. This feature allows the radio users to communicate easily with members of the team off-site, such as the on call Engineering Manager, or people from other organisations who are an integral part of the production process such as equipment manufacturers and supply chain partners. This feature improves productivity as staff are able to call for assistance and receive the information required quickly and easily, ensuring that production can continue. This means no unnecessary trips are needed to locate land line desk phones, and minimise the need for on-call engineers to attend site when they can easily solve the issue by talking to the operative on-site, or to the site from on-call staff or maintenance teams.

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SERVICE WRAP

Venator chose:

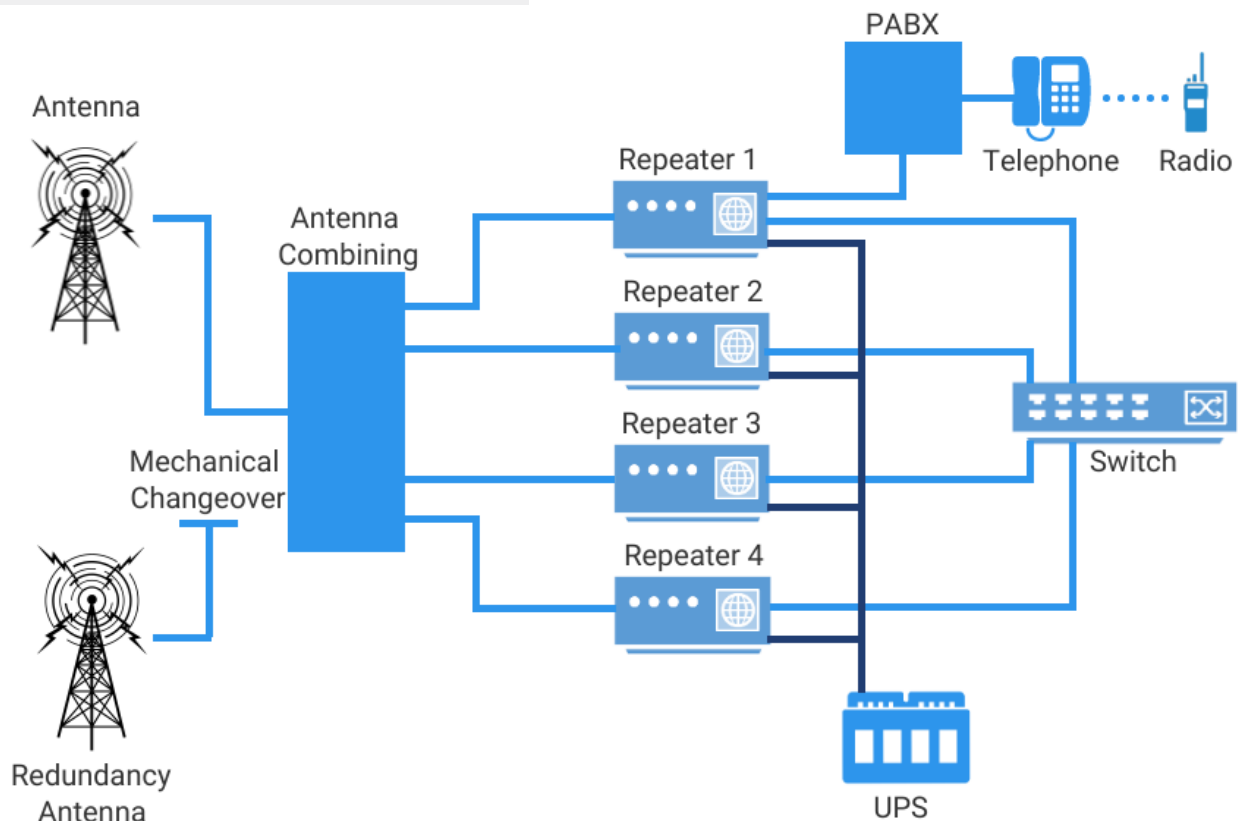
- Motorola Service from the Start (SFS) Fully Comprehensive Cover
- Business Hours Reactive Maintenance
- Annual Preventative Maintenance
- Telephone Technical Support

The Benefits:

Eemits has provided Venator with a comprehensive service wrap that enables the company to have full peace of mind. With a guarantee that Eemits will respond to any major faults 24 hours a day, 7 days a week and 365 days a year, we will endeavor to ensure that any problems are dealt with as swiftly as possible to ensure that downtime is reduced.

Should any damage occur to their Motorola DP4801Ex radios, Venator have an opted to take Motorola's enhanced warranty cover which protects against accidental damage. On top of this, Venator also have the annual preventative maintenance package which consists of an annual one day visit where the equipment is inspected and serviced.

Venator also chose the 24 / 7 / 365 telephone technical support package which guarantees a point of contact who can provide technical assistance over the telephone for any issues that may arise with the system. This package helps to reduce downtime and helps to keep Venator operating.



WHAT THEY SAY ABOUT US:

Venator now have a mission critical ATEX digital system that works around their operations and provides the coverage and voice capacity required to operate effectively and productively.

Eemits are now working with Venator to provide additional software applications from the TRBOcall platform to further enhance productivity, efficiency and safety at their site.

Eemits innovative modular platform TRBOCALL - a unique combination of hardware, bespoke software applications and digital features - together create an ultra-smart two-way radio system. Combined with unrivalled wide area network coverage, our customers have the flexibility to build their own system with all, or a combination of infrastructure, hardware, software service wrap, features and accessories that suite their individual business needs.

TRBOCALL - GREATER THAN THE SUM OF ITS PARTS

EEMITS CLIENTS BENEFIT FROM:

Productivity
increased by up to

40%

PER SITE

Efficiency
raised by up to

1 hr

PER
EMPLOYEE
PER DAY

Safety
improved for

100%

OF YOUR
WORKFORCE VIA
DIGITAL RADIO
WHERE EVER THEIR
LOCATION