MONITOR Process

SCoUT
System solution for tracking and alerting of people and mobile equipment underground

- Innovative transponder system
- Real-time display on control monitors on the surface
- Precise tracking of people and raising of alarms – even in enclosed spaces or vehicles underground

VMT

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As the world's leading supplier of surveying and navigation systems for tunnelling projects, VMT is now offering, with SCoUT, a newly developed, comprehensive solution for tracking people, vehicles and mobile equipment underground and raising alarms. The name SCoUT stands for Safety Coordination by Underground Tracking and describes a system solution comprising software, the SCoUT Control Center, receiver and transmitter hardware and, depending on project requirements, specially developed locating tags.

Precise and in real time
On tunnel construction sites and in underground mines, the innovative VMT system solution SCoUT accurately tracks people, vehicles and mobile equipment carrying tags in real time. The precise position information, which is always up-to-date, is shown clearly on the monitors in the SCoUT Control Center on the surface. The design of the SCoUT Control Center's browser-based user interface means that it can be operated simply and intuitively and provides a clear display which can be understood quickly.

Faster information
The information displayed in the SCoUT Control Center allows the safety officer to make fast, informed decisions in the event of an emergency. Rescue measures can be triggered according to the current situation and efficiently coordinated: Rescue teams can be directed specifically to the location of the accident without delay, for example, or people can be guided out of danger zones to the nearest protected area.

Benefits

Improved industrial safety
- Precise people tracking and rapid alarm generation in emergencies
- Optimum basis for decisions for rescue scenarios
- Signal transmission even in enclosed spaces or vehicles
- Option: collision avoidance

Increased productivity
- Efficient asset management
- More economical job site processes

Less installation and maintenance work
- Integration of tag into cap lamp means no additional equipment required
- Central monitoring of battery charge status, charging cycles and self-surveillance of locating tag functionality
- Reduction of cost and time for commissioning and training due to intuitive, browser-based Control Center software

Modular and scalable, and thus future-proof
- Project-specific solutions
- Simple adjustment of scope of system

The highest standards of safety
VMT is setting new standards with the SCoUT tag concept: with all tag types, registration of the signal (2.4 GHz ISM band) is automatic and contactless. This allows continuous tracking in real time, thus guaranteeing maximum safety. Due to the bi-directional transmitter-receiver principle of the tags, an alarm can be issued to workers underground by the safety officer in an emergency – but they can also send an alarm themselves to the control room.

SCoUT Transponder

Smart cooperation
The SCoUT tag has been designed in such a way that it can be integrated into a wireless cap lamp and, together with the lamp, provides a bi-directional alarm generation system: In an emergency, the safety officer in the control center can cause the cap lamps to flash and thus send an alarm to the workers. Conversely, any worker underground can use the button on the lamp to trigger an alarm call to the SCoUT Control Center. A powerful battery supplies the tag and the cap lamp at the same time and guarantees a minimum of 11 hours of operation (main light intensity / permanently switched on). The battery's charge status is displayed continuously in the SCoUT Control Center. No additional equipment needs to be carried, maintained or kept in stock.

Cap lamp

Maximum compatibility
The SCoUT system solution can be used with any IP-based network infrastructure, and so no new investment is required in this area. However, if preferred, SCoUT can also be supplied with the complete network infrastructure including communication facility. The position information is transmitted to the SCoUT server via receivers mounted on the tunnel or passage wall. All data can be accessed at any time by authorised users via a web browser.

Future-proof and up-to-date
The system solution is easily scalable. SCoUT's modular concept and the specialist expertise of the VMT engineers guarantee that individual project specifications or changing legal requirements can be implemented at any time, quickly and cheaply: the tracking precision, for example, can be increased to be accurate within a few metres and adjusted in line with rising or falling employee numbers.

Safety innovation
With SCoUT, VMT is, for the first time, offering a system in which the tags underground can always reliably transmit and receive tracking and alarm generation signals even in enclosed spaces or vehicles

Interesting expansion potential
In addition to the alarm generation and rescue assistance function, the expansion of SCoUT into a collision awareness system significantly increases industrial safety on construction sites underground. The system of tags and Control Center also has the potential to be further developed into an efficient asset management facility which can increase the economic efficiency of job site processes.

Collision awareness system
Cramped, barely discernible pathways, restricted vision, increased noise, large items of equipment: The working conditions underground on tunnel construction sites and in mines mean that accidents are more likely to occur. SCoUT can help here, because the system can be expanded into a collision avoidance system that effectively minimises collision risks through reciprocal signalling. For this, all people, vehicles and machines underground must be equipped with tags communicating with each other. Existing SCoUT tags can be retrofitted with this function.

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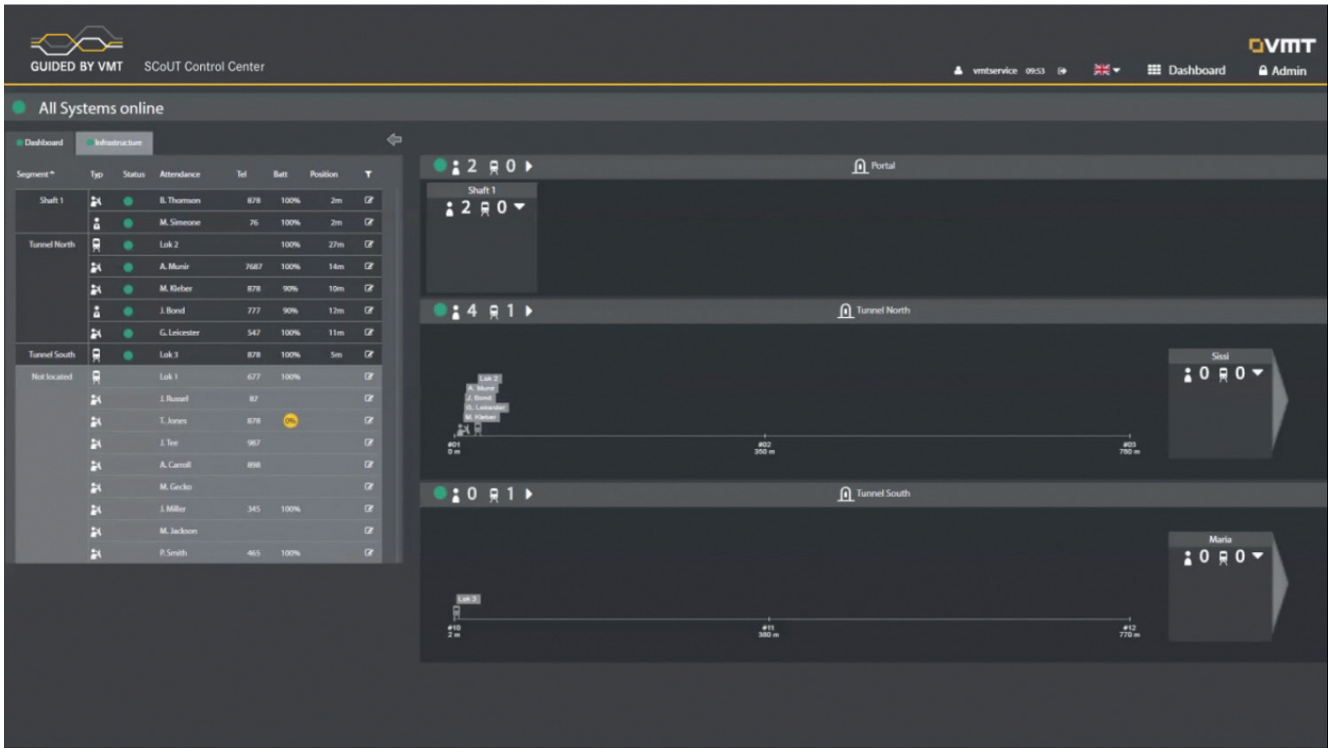
Features

- Precise, real-time tracking and detection of people and rapid alarm generation
- Reliable support in the coordination of rescue measures
- Can be expanded into a collision awareness system and asset management system
- Fully automatic, contactless tracking and detection with high level of precision (1-3 m)
- Active personal tag with battery life of min. 30 days to be fixed on cap, belt or clothing
- Active tag integrated into cap lamp with charge status monitoring
- Modular, easily adjustable and scalable system
- Browser-based software for detection, tracking and alarm display in Control Center
- Easy to use user interface
- IP67 compliance for rough ambient conditions underground
- Complete stand-alone solution or integration into existing IP network
- Comprehensive advice and worldwide service from VMT



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