
One comprehensive C3 Solution

Optimized services, perfect safety and efficient operations
in the area of command, control, communications



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Atos

Energy, transportation, public safety and security organizations are all facing the challenge of managing their operational fleets with the highest level of security, reliability, and effectiveness, regardless of the network technology involved.

Wherever communications and the dispatching of personnel or machinery become mission-critical, control centers are a decisive tool for success. This applies especially to all public safety services as well as to the operation of industrial and transportation facilities, where optimized communications help enhance service quality, security and reliability. Practical examples can be found in the operation of onshore and offshore oil and gas facilities, utility companies, onshore & offshore wind farms, as well as large industrial complexes. In addition to these, any transportation network requires similar command, control and communication services, as do harbors, airports and non-tactical military forces on peacekeeping missions.

The communications between control center and field staff must be dependable and always guarantee the required level of security and reliability.

“A modern control center has to make the dispatching process as efficient as possible, give the operator intuitive access to all necessary information and functionalities and be easy to operate at the same time.”





The question : One platform for all C3 needs ?

With a specific focus on communications, a control center can offer more than just safety and reliability. Obviously, such a system must be easy to use despite the complexity of the task at hand. This requires an intuitive graphical user interface that provides operators with all key information at their fingertips-clearly structured and uncluttered, with a graphical representation of ongoing events and each user's position and status.

This means including GIS (Geographical Information System) information and integrating an Automatic Vehicle / Person Location Service (AVLS/APLS), interfacing them to the Network Management System (NMS) and other external systems.

Where actual customers and not just personnel are involved, the ideal solution should provide interfaces to access enhanced subscriber management functions, such as subscriber tagging for predefined scenarios and favorite definitions. Airport operators, for instance, can make valuable use of real-time information about passengers, airport staff and mobile equipment. Knowing the exact position of passengers inside the terminal enables the operator to send relevant information to their smartphones - for example, to guide them to the check-in counter or baggage claim.

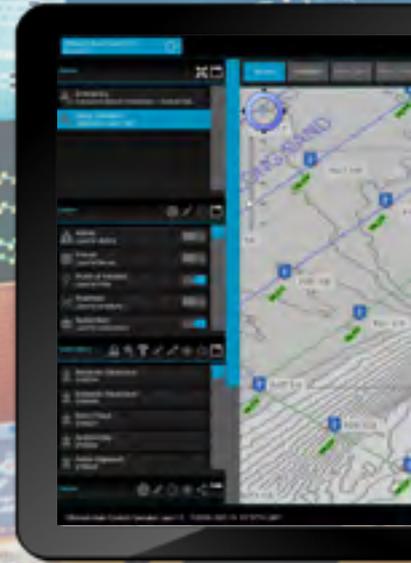
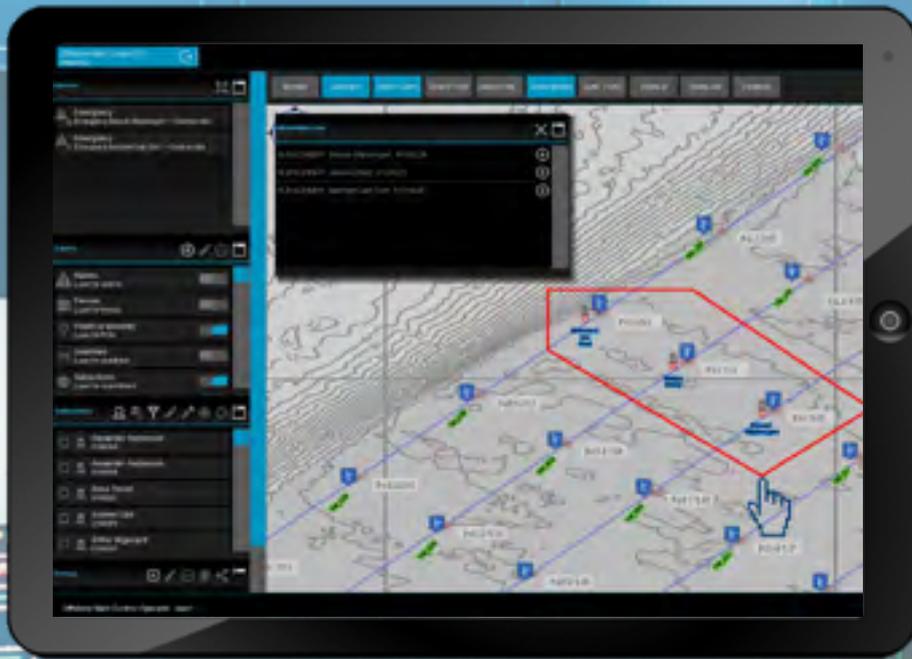
At the same time, having information about the locations of airport staff enables airport operators to enhance security, operate efficiently and reduce costs. Multi-monitor and touch-screen as well as enhanced drag-and-drop control capabilities would enable them to dispatch complex subscriber groups, significantly increasing their productivity

and effectiveness. What's more, this real-time information may be anonymized for statistical analysis at any time, helping optimize services and passenger flow and preventing bottlenecks before they occur.

To help the operator save investment costs, the new system should be able to integrate any legacy systems still in use and offer seamless interconnectivity to available broadband data systems. At best, the system should not use critical system resources by connecting via the air interface only.

On the technical side, TETRA 1 data support would be indispensable for critical infrastructures. Terrestrial Trunked Radio (TETRA) sets up a safe, secure, and streamlined communication network in even the most extreme locations and consists of a variety of powerful applications for voice and data communications as well as workflow and workforce management. TETRA allows for professional mobile communications even inside metal constructions such as wind towers, and enables operators to communicate with single users or specific user groups and to track their movements, so as to have full control over all activities.

"The ideal system would be easily customized to perfectly meet the individual requirements of each operator, supporting user roles, a client-server architecture, and allowing for data sharing between operators."



The answer : Atos' C3 the comprehensive solution

Atos' new command, control, communications solutions is a unique, cost-efficient, and centralized solution, that is aimed at a wide range of user segments and can be adapted to any network size. It offers all vital functions for efficient C3 operations and provides a significantly positive impact on both safety and productivity.

Atos sets a new standard for C3 solutions. The extremely versatile system provides a broad spectrum of unique features that have a significant and positive impact on both safety and productivity. Designed as a single cost-effective and centralized C3 solution and deployed by an expert-level, field-proven company, the new system delivers all of the necessary functionalities for efficient C3 operations across a wide range of user segments and all sizes of operations.

A versatile suite like this opens up a lot of new business opportunities for its customers and allows them. It makes processes easier, enhances service opportunities and increases revenue. Communications at airports are vital not only for passenger services and security, but also for operations. This is where Atos' C3 solution comes in, giving airport operators a major boost to ensure that aircraft turnaround times are minimized.

The result: better use of existing equipment, increased capacity, and consequently, higher revenue.

As an intelligent standard, the new C3 solution from Atos is also important where public safety is at risk. It enables system integrators to approach TETRA operators with a broadband offering and, at the same time, addresses the Greenfield Public Safety broadband market.



The system features a single seamless interface to all communication systems with a solution from one experienced system developer. Thus, all information can be obtained from a single contact and problems can be solved quickly and cost-efficiently.

This means swiftly providing the optimum answer in critical situations.

This feature-rich and highly cost-effective solution delivers greater operational safety as well as increased productivity:

Integrated Fixed Dispatching System (IFDS):

provides each console full access to all communication systems within the network. IFDS is scalable and can be adapted to suit any control environment of all sizes. It offers a simple yet powerful interface that focuses on delivering maximum functionality in minimum time.

IFDS AVL/PLS:

is a fully integrated part of the C3 solution delivering a clutter-free situational overview to increase the overall awareness level. Calls to any of the resources displayed on the map screen can be initiated by simply touching it.

TETRA Voice Recorder (TVR):

is a voice and data logging system that enhances the IFDS by recording the voice information and all associated positioning data of all TETRA system users/resources and as well as the voice communication of all other systems integrated with the system, such as VHF, GSM, or PSTN (public switched telephone network).



Synergies driven by communications

The new C3 solution from Atos was designed to answer the most important demands of customers from many businesses and a wide range of applications. Therefore, among the system's major features, interoperability between diverse communications networks and management of teams using bidirectional data and not just voice, rank highest.

Other capabilities include encryption for optimized security and seamless integration of higher bandwidth systems (such as LTE), as well as full and centralized voice and data playback capability for post-event analysis.

One (system) for all - advantages at a glance

Atos new C3 solution combines optimum function and safety of investment. It not only interfaces to multiple communication systems (TETRA, GSMR, PSTN/PBX (E1, SIP based)), but also to older analog legacy networks as well as ancillary systems (E&M) still in use.

"Atos' C3 unleashes the full power of professional mobile radio (PMR) through a simple, user-friendly interface, and greatly increases efficiency across the industry via the integration into resource management and tracking systems."

Regardless of the communication system in the background, all operations can be controlled through a unified graphical user interface.

The built-in AVLS function enhances situational awareness by integrating geofencing and alarming and the ability to import additional layered data from other sources, while IFDS supports secured recording of all IFDS voice and data communications, allowing direct replay by authorized operators.

Integrated Fixed Dispatching System (IFDS)

enables all interfaced communication systems to be tied into a central call environment to ensure that all staff members are fully informed and engaged at all times.

Situational awareness is a major requirement for mission-critical communications. To act correctly, the dispatcher needs to know instantly what is happening where and when. The built-in IFDS takes care of that in normal day-to-day business by delivering maximum functionality in minimum time through its intelligently configured user interface. In critical emergency situations, this feature may even help saving lives by making better and faster decisions.

IFDS can also be seamlessly integrated with other higher-bandwidth systems such as LTE. This opens new possibilities for the operator to transmit and receive information that could enhance the management of a critical scenario and provide decision makers with more real-time data.

Finally, the IFDS platform can be further enriched with workflow management functions designed to enable automated task allocation and monitoring to a mobile workforce. IFDS greatly simplifies the operator's workload by assigning required work resources to specific roles.

IFDS Automatic Vehicle / Person Location Service

increases the overall awareness level by delivering a clutter-free situation overview of all personnel and assets within the network.

This enables the operator to instantly initiate calls to any of the resources displayed on the map by simply touching its graphic representation.

The role management advantages available with the IFDS voice client are fully present in the IFDS AVLS/APLS client as well. This ensures a seamless operation at every operator's console, allowing them to use any terminal within the system and each specific type of operator role to work with the relevant system elements (personnel, POIs, geofences, etc.).

Operators can also call up historical data for where these resources have been previously, including their speed and direction of travel.

The system can be enhanced with a unique "lone worker" function that displays the location of resources or staff even in remote or shielded steel structures such as offshore wind towers.

The overview also incorporates alarms from other systems (such as NMS) to create a unique synergy: seeing the location of a developing problem as well as the resources located closest to it.

TETRA Voice Recorder

greatly enhances the security of the overall system.

Recorded voice information and data logging from the TETRA voice recorder may serve as evidence to clarify a situation for operators or personnel in the case of an accident.

Thanks to its capacity, all voice information from all users in the network can be recorded together with all related positioning information. For better usability, TVR can record and play unencrypted as well as encrypted (E2EE) information. Since the TPC's (TETRA Playback Clients) have the unique capability to decrypt E2EE and play it back to an authorized user, the system doesn't require an additional TETRA radio for decryption.

Every C3 solution from Atos is individual

Every application places individual demands on a radio communication system.

Our C3 solutions need to reflect the specific needs of our customers. That's why every project starts with a thorough analysis of the customer's market and the required functions. After defining the exact specifications and knowing which standard product features or customer-specific adaptations are needed to cover the requirements ideally, an experienced development team is set up to work in close cooperation with the customer to ensure operational satisfaction in the field.

"The Atos C3 solution with its unique level of integration and the intuitive user interface helps operators to increase their productivity, while minimizing response and reaction times"



About Atos

Atos is a global leader in digital transformation with approximately 100,000 employees in 72 countries and annual revenue of around € 13 billion. European number one in Big Data, Cybersecurity, High Performance Computing and Digital Workplace, the Group provides Cloud services, Infrastructure & Data Management, Business & Platform solutions, as well as transactional services through Worldline, the European leader in the payment industry. With its cutting-edge technologies, digital expertise and industry knowledge, Atos supports the digital transformation of its clients across various business sectors: Defense, Financial Services, Health, Manufacturing, Media, Energy & Utilities, Public sector, Retail, Telecommunications and Transportation. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, Unify and Worldline. Atos SE (Societas Europaea) is listed on the CAC40 Paris stock index.

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