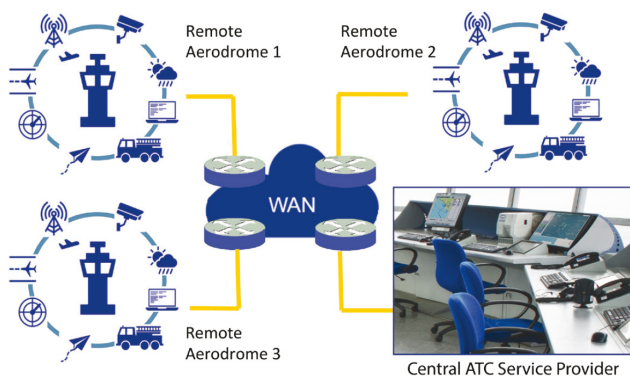


MULTIFONO® Remote Tower

// Remote Tower service

Remote Tower Service (RTS) is the provision of Air Traffic Control (ATC) from a location other than the local aerodrome tower. Both air and ground movements are overseen, whilst maintaining a level of operational safety and awareness equivalent to a manned solution from the aerodrome tower itself.

Situational awareness is provided to controllers and service operators by a series of environmental sensors, optical and digital cameras, microphones and light beams. This allows capturing all relevant aerodrome information (movements, sounds, meteorological data, operational information, etc.) and streaming them in real time to a remote location, where it is presented on suitable screens and displays. Enhanced and augmented views are possible, e.g. by use of infrared and PTZ (pan, tilt, zoom) cameras.



Radio/Telephone Communication

The concentration of tower services at a remote location implies the need of making all aerodrome local information remotely available for use by a remote operator. Among these, radio and telephone communications are of fundamental importance for the correct and effective interaction with pilots and other operators or ground service providers.



Multiple Airports

The introduction of remote tower services allows a single operator to supervise activities at several aerodromes, either one at a time or simultaneously. The benefit for ANSPs is significant, because it is no longer needed to build or maintain expensive towers, especially at remote low-traffic aerodromes. The workload of operators can be more efficiently distributed, without moving from one location to another.

The objective is to give operators the same Out of The Window (OTW) view as if they were sitting in the monitored aerodrome towers. The overall result can be even better because of the enhanced view obtainable by high resolution cameras and video processing features. Furthermore, the digital video stream can be recorded for later analysis.

Remote Tower solutions are also suitable for contingency, i.e. to provide remote ATC services in case of tower unavailability.

// Operational Awareness Sources

Radio Communications

Telephone Connections

PTZ Cameras (Pan/Tilt/Zoom)

Infrared Cameras

Weather Sensors

Radar Information

Flight Information Services

Runway Lighting

MULTIFONO® Remote Tower

The MULTIFONO® family of VCS systems manufactured by SITTI can be integrated into a remote tower solution, even in case of simultaneous multiple aerodrome supervision by one or more operators. Thanks to the intrinsic capability of sharing communication resources, in fact, MULTIFONO® systems can make multiple remote installations accessible from the same controller working position, thus giving operators access to all remote communication facilities.

SITTI controller working positions can be easily configured to cope with the need of interfacing multiple remote systems, by ensuring the operator reliable, secure, standard and configurable communication links, thus resulting in safer remote aerodrome operations handling.



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CWP Layouts

Several predefined Controller Working Position layout options are available, but the Customer can add new ones by his own, through the MULTIFONO® supervision and configuration system (MMS).

As an example, the pictures in this page show two possible arrangements of communication access keys on a Controller Working Position:



- The 1:1 solution gives access to one remote aerodrome at a time: the operator can switch from one layout to the other by loading the correspondent aerodrome configuration.
- The 1:3 solution allows accessing communication facilities at three different remote towers at the same time.

24/7 Operational Service, 365 days a year

Non - Blocking, Highest Level of Modularity, Open Architecture Design

Duplicated, Independent and Parallel Operating with "star configured" VoIP linked Controller Working Positions (CWP)

Fault Tolerant Operation, No Single Point of Failure. Reliability Ratio 99.9999%

CWP access to Telephone Lines and Radio Frequencies through analogue, digital or VoIP interfaces, both legacy and standard

Fully VoIP ED137 standard compliant

Touch Screen Terminals (MTS) with user-friendly graphic interface and ancillary ATC applications

Gateway devices for Legacy non-IP links