



**kolibri  
systems**

whitepaper

# OVERVIEW

## Purpose and typical users of Kolibri

The Kolibri product suite is a control room solution for organisations where mission critical operations are performed by a mobile field force and where these operations are centrally guided and supported.

## Radio communication

In order to guide and support the operations of the mobile field force it is necessary to communicate with this mobile field force. This often concerns both voice communications and data communication. Due to the mobility of the field force the communication involves wireless radio networks, where a mobile worker uses a mobile radio built into a vehicle and/or a portable radio.

The radio networks can be of diverse types, but for mission critical operations the currently most widely used radio technology is TETRA digital radio.

Besides TETRA radio technology other digital radio technologies are also encountered in this field, for example DMR based systems like Motorola MOTOTRBO or NXDN based systems like Kenwood Nexedge.

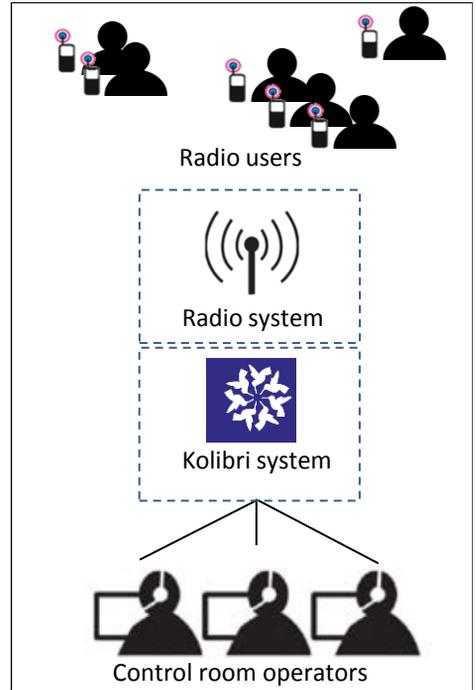
Kolibri offers two different options to connect to radio systems, either by using a pool of radios in the control room or by using a wired ethernet connection to the radio system using VoIP.

Although the above mentioned state-of-the-art radio technologies are currently being widely introduced, there are currently also a lot of legacy radio technology systems in use, for example analog radio systems and MPT1327 based radio systems. This often necessitates a smooth migration from these legacy radio environments to the state-of-the-art digital radio environment. Kolibri supports these migration scenarios by allowing to connect to multiple different radio systems simultaneously.

Read more about Kolibri radio communication support in the **Kolibri Radio communication** white paper.

## Mapping, track & trace

Besides the Kolibri core functionality of supporting radio communication with the field force the Kolibri system also provides mapping capabilities in the control room, enabling location tracking and tracing of mobile workers on a map. The map is integrated into Kolibri to provide communication features and capabilities directly from the map, for example by selecting a mobile user on the map to start a voice call with this user. Outdoor location tracking is mostly done using GPS receivers integrated into the mobile radio, indoor location tracking requires the use of dedicated systems, for example based on Bluetooth technology.





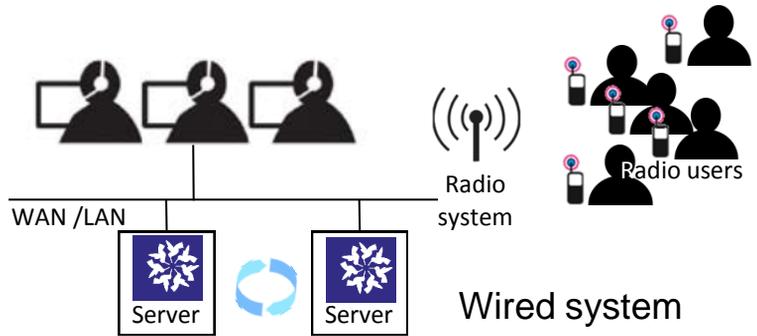
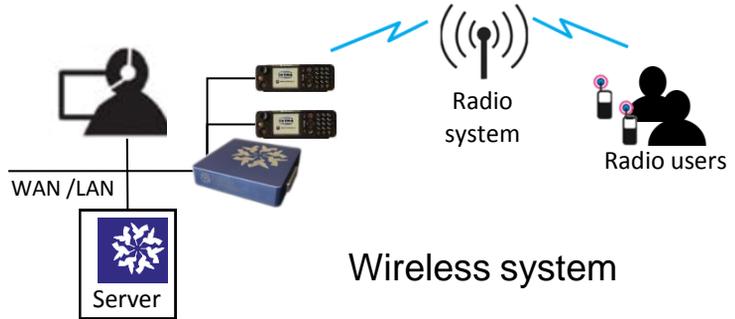
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## Configurability and scalability

Although a common denominator of organisations using Kolibri is the centrally guided mobile field force, these organisations often have widely different workflow processes, size of the mobile field forces, size of the central control rooms, geographical topology differences, etc. In order to support these different environments without having to resort to specific developments for a specific end-user the Kolibri system is from the ground up designed to be very configurable and scalable. The configurability applies to both the layout and capabilities of the graphical user interface as to the implementation of automated support for specific workflows. The scalability of Kolibri enables support of a single workstation solution to a solution supporting multiple, geographically dispersed control rooms with redundant servers for high availability.



## Integration with telephony systems

In addition to the radio communication with the mobile field force, the control room often also needs to communicate with telephone subscribers. Typically this kind of communication is done using dedicated telephony systems, for example dedicated hot-lines, private branch exchanges (PBX's), call center solutions (e.g. from Avaya), or dealer board systems (e.g. from IPC Systems), etc. Kolibri supports integration with telephony based voice communication by providing SIP gateways, enabling the handling of telephony calls thru the Kolibri user interface as well as patching telephony calls with radio calls.

## Integration with workflow support systems

Kolibri can also be integrated with workflow management or incident management systems by offering the capability to connect to these systems using XML gateways. The specific information exchange between these systems and Kolibri depends on the specific workflow support system involved, and will thus require specific configuration.

