KENWOOD

KAS-20 Dispatch and AVL software

KDM: Istanbul – June 2019

JKUK: Slawomir WARAKOMSKI

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KAS – 20 Agenda

1. KAS-20 Product Overview
2. Typical configuration
3. Voice Dispatcher
4. AVL mapping
5. Summary

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1. KAS-20 Product Overview

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KAS – 20 Product Overview

- Windows-based software with **AVL** and **Dispatch** features for **Entry to Mid Size** networks
- **Client-Server design** with KAS-20 Server and KAS-20 Client packages;
- **Cost effective** initial package with optional license upgrades;
- **Two basic configurations** for enhanced scalability:
  - **Standalone PC** with AVL & Dispatch system;
  - **Multi-client** operation with remote server; accepts up to 8 RF systems and 10 clients;
- Supports diverse digital radio systems: **NXDN IP, DMR IP, NXDN Trunk, NXDN Gen2**
- **Software implemented vocoder** for a fast and reliable operation;

- **IP and Serial** Connection to the communications system; FleetSync, etc.
- AES/DES and ARC4 encryption*

* *Future development*

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Modular Dispatch Terminal - BeFREE 22

- **Tipro BeFREE – 15,6” Touchcomputer with InterCom and Line Keys**
- Ergonomic integration of a fanless touchcomputer and an intercom
- Extensive connectivity (LAN, USB, COM, external display, digital inputs, stereo sockets)
- Cable management - hidden and secured, but accessible
- 16 additional mechanical keys (“line keys”) with integrated LED indicators
- Wide-screen variant of BeFREE20
- Low-profile horizontal design
- Silent and reliable

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Modular Dispatch Terminal - BeFREE 20

- **Tipro BeFREE – 15,6” Touchcomputer with Integrated Intercom**
- Ergonomic integration of a fanless touchcomputer and an intercom
- Modular - combinable with other FREE modules into multifunctional terminals
- Low-profile horizontal design
- Cable management - hidden and secured
- Silent and reliable - no moving parts, industrial grade components,
- Built-in Tipro Controller

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Modular Dispatch Terminal - BeFREE 10

- **Tipro BeFREE – 10.4’’ Touchcomputer with Integrated Intercom**
- Space-saving integration of a fanless touchcomputer and an intercom
- Modular - combinable with other FREE modules into multifunctional terminals
- Silent and reliable - no moving parts, industrial grade components,
- Low-profile horizontal design
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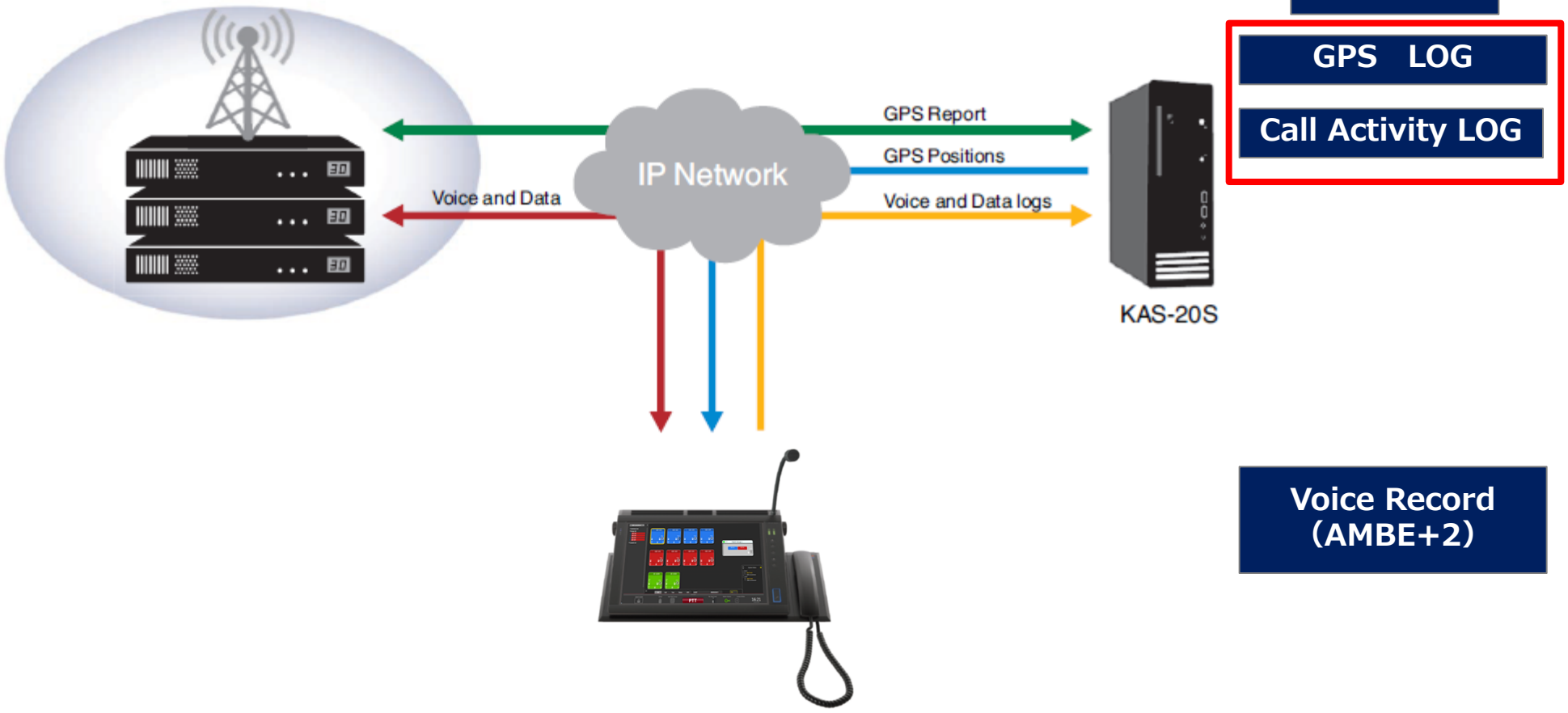
KAS – 20 Product Overview



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2. KAS-20 Typical configuration

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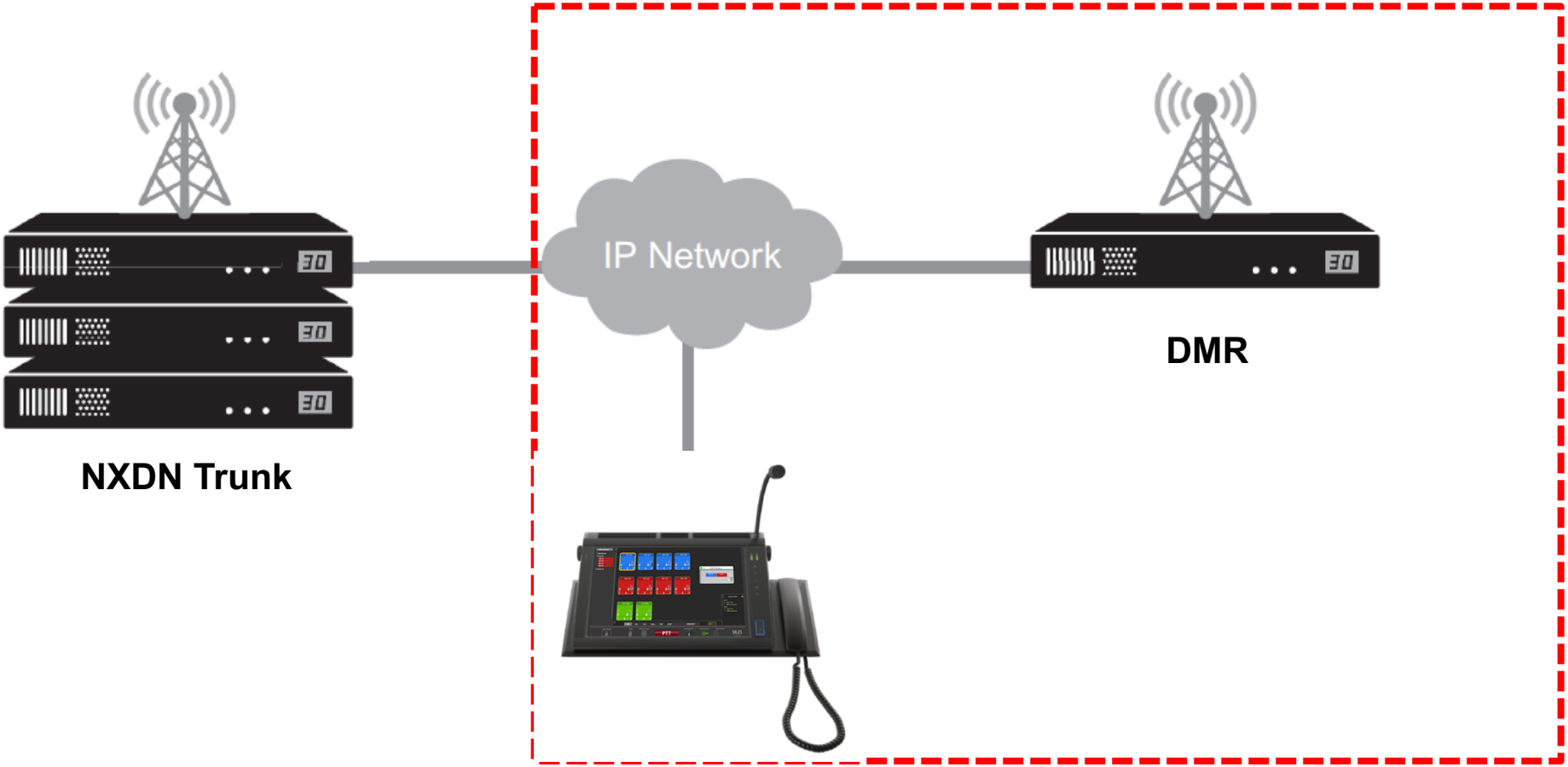
KAS – 20 Cconfiguration

- **Standalone Dispatch and AVL configuration**
- In standalone configuration the KAS-20C (client) and KAS-20S (server) are installed on the same PC.



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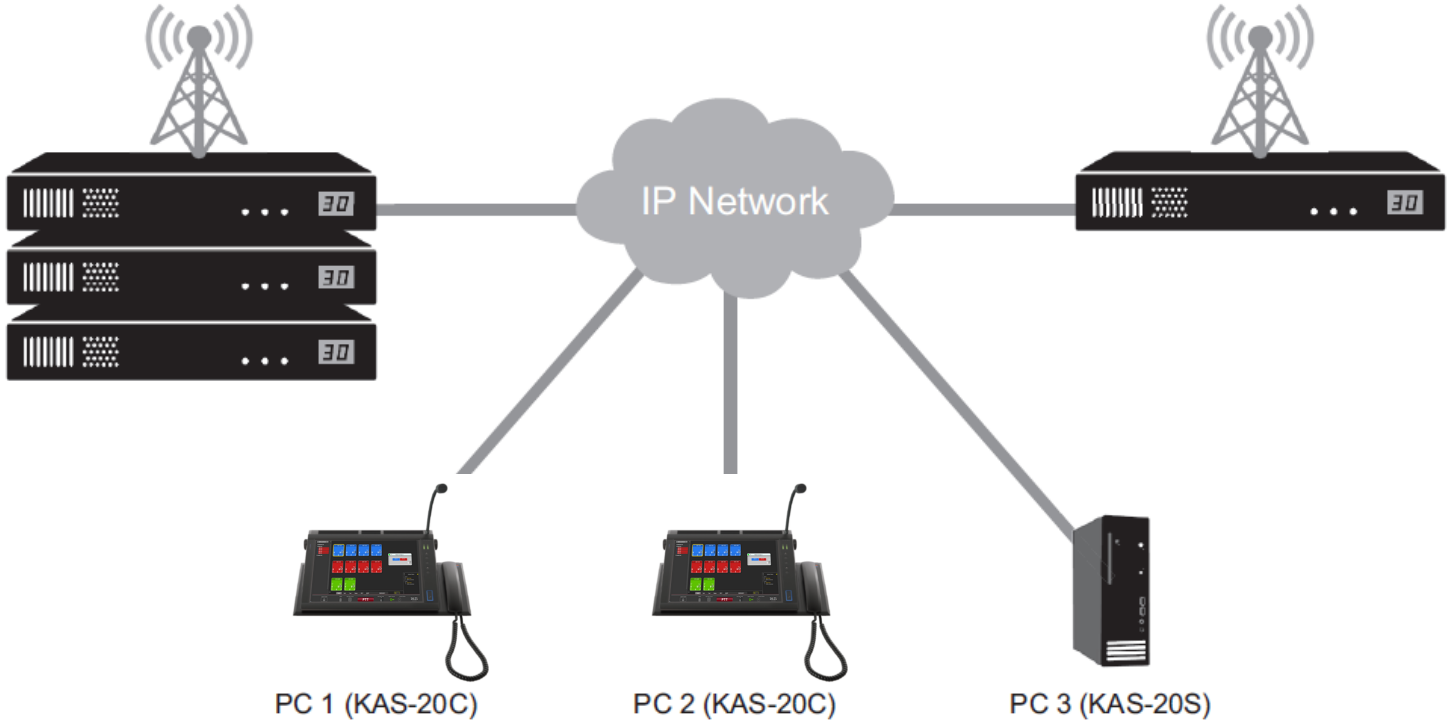
KAS – 20 Configuration

- **Client-Server Dispatch and AVL configuration**
- When the KAS-20S and KAS-20C are installed on two separate PCs, the KAS-20 AVL/ Dispatch system can be used as a server-client configuration.
- The KAS-20S can be accessed from multiple PCs that are installed with the KAS-20C (up to 10 clients at any one time).



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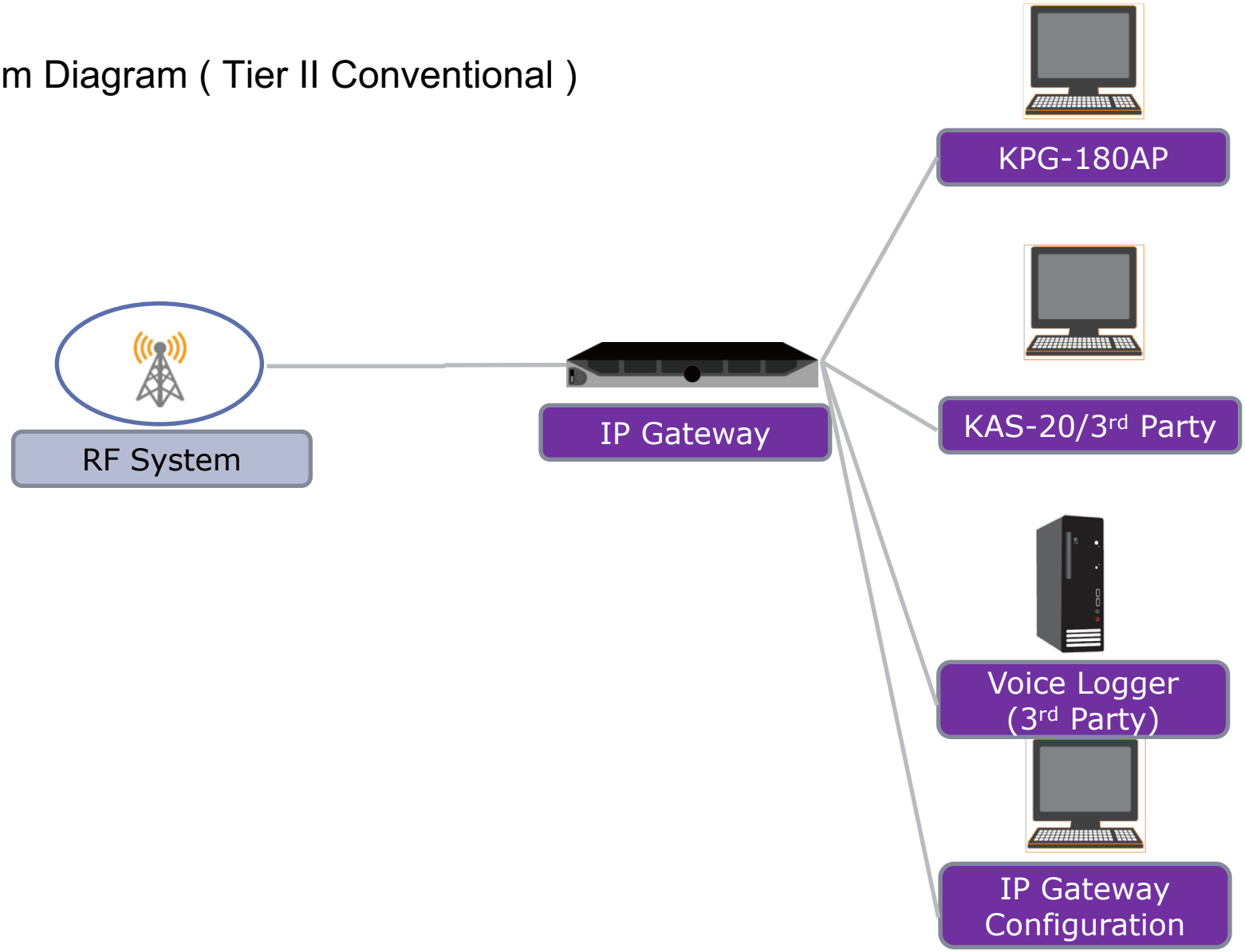
Kairos Gateway

- System Diagram (Tier II Conventional)



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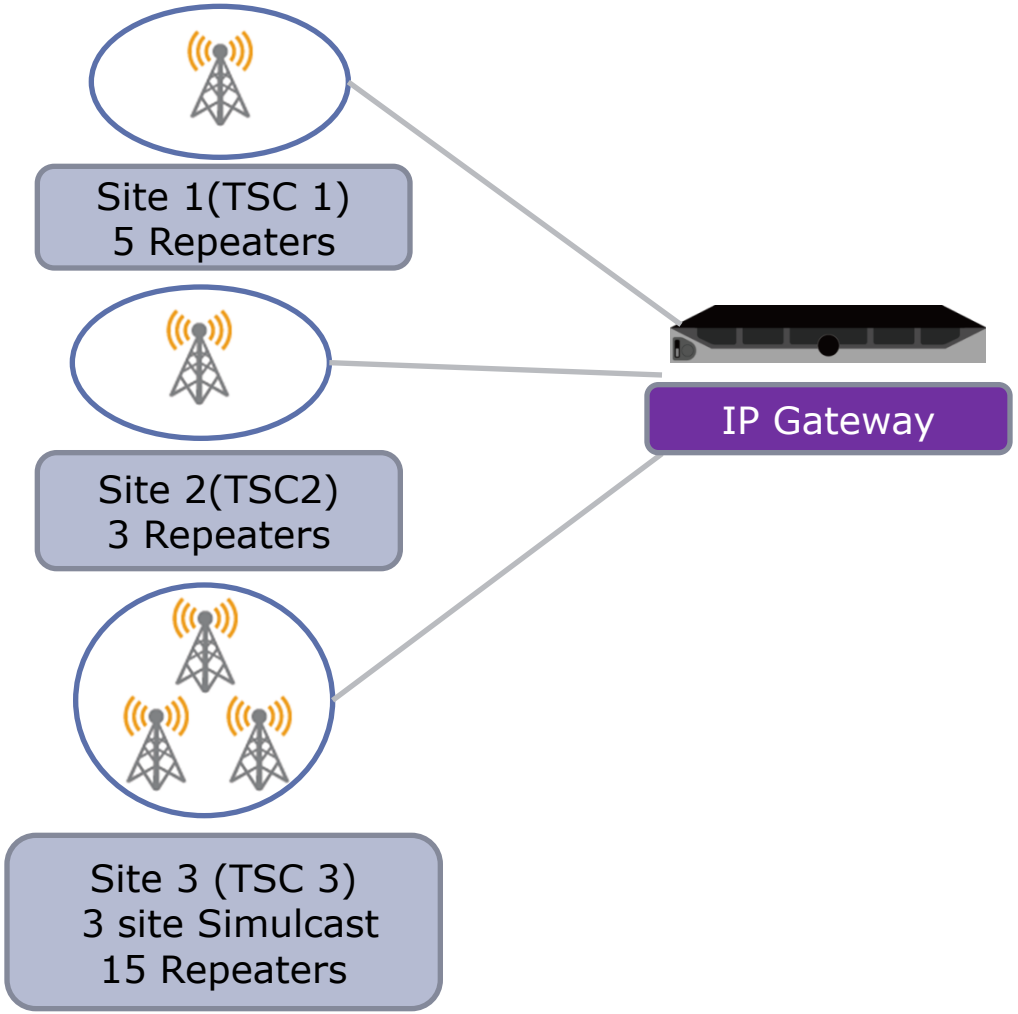
Block Diagram with KAIROS (Tier III)

- Support Up to 48 KAIROS TSC (Tier III)



Program Repeaters

Site 1 (5 Repeaters)
Site 2 (3 Repeaters)
Site 3 (15 Repeaters)

Up to 5000 repeaters

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3. KAS-20 Voice Dispatcher

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KAS – 20 Voice Dispatcher – Basic features

- Flexible and scalable operator positions
- Multi-role dispatching functions
- IP Voice dispatch console
- Call log and Event sharing
- Voice recording/playback
- Supports multiple KENWOOD IP interfaces: DMR Conv, NXDN Conv, Type-C Trunking, and Gen2
- Highly optimized GUI
  - User configurable call windows and patch windows
  - Shortcut keys and configurable key bindings
- Server managed user levels, configurations, and permissions;
- Import/export asset lists (e.g. unit, group, fleet) via TSV format
- Manual/auto asset list creation

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KAS – 20 Voice Dispatcher

- **NXDN and DMR configuration**

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KAS – 20 Voice Dispatcher – typical features

- Voice calls: Group, Individual, Console;
- Text messages: Group, Individual, Console;
- Status messages: Group, Individual,
- Emergency;
- Activity detection: Man-down, stationary, motion, lone-worker;
- Special commands: Radio check, Stun, Kill, Revive, Remote Monitoring;

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Voice Dispatcher

- **GUI customisable**

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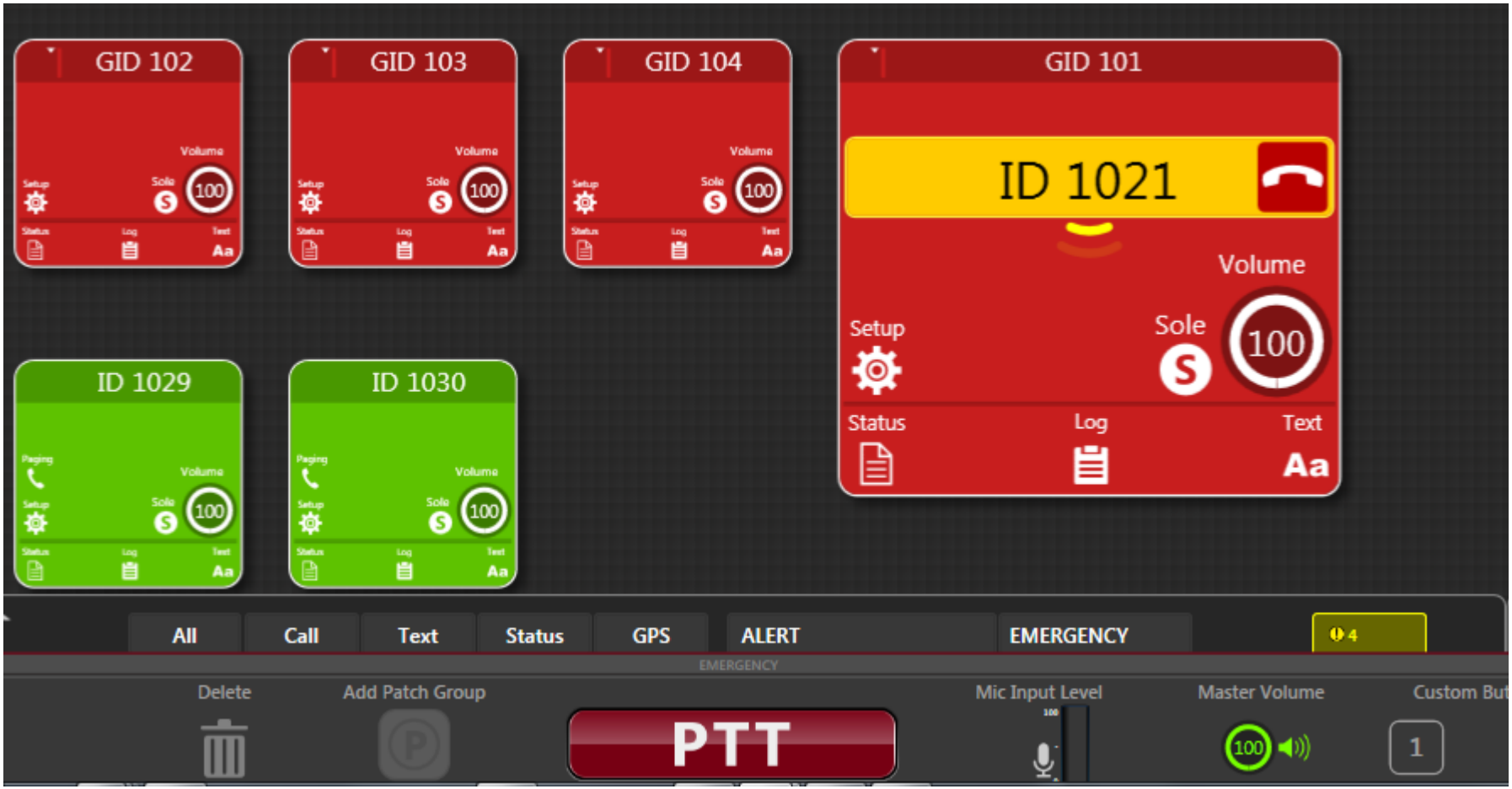
Voice Dispatcher

- **Console voice call to: Unit ID, Talkgroup/Channel, Console ID**



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KAS – 20 Voice Dispatcher

- Enhanced patch grouping function between different RF systems (DMR - NXDN, NXDN trunk – NXDN conventional).

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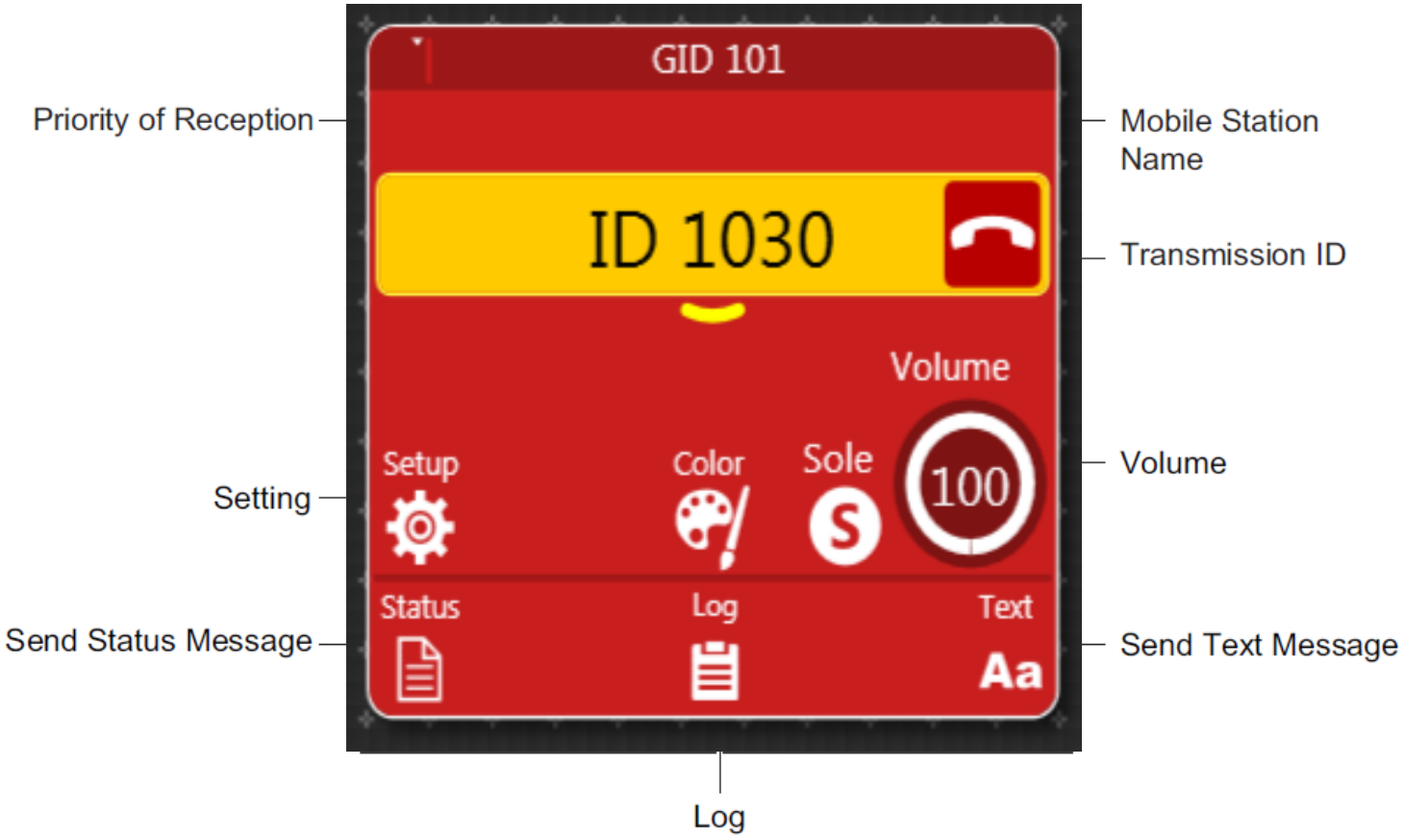
Layout of Dispatch BOX



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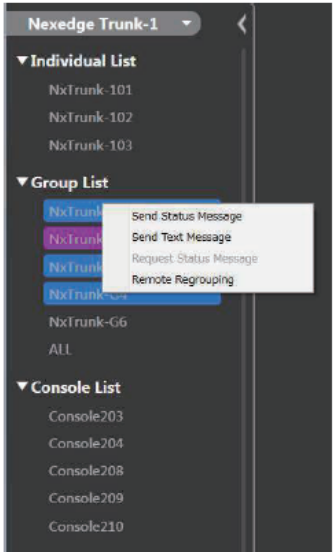
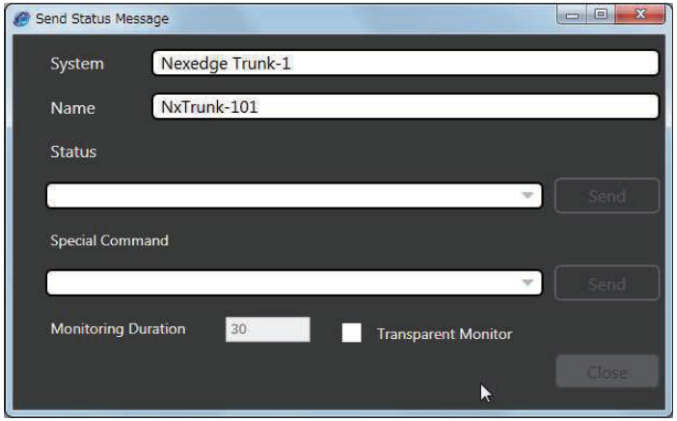
- **Send Status , Text Data, Special Command;**





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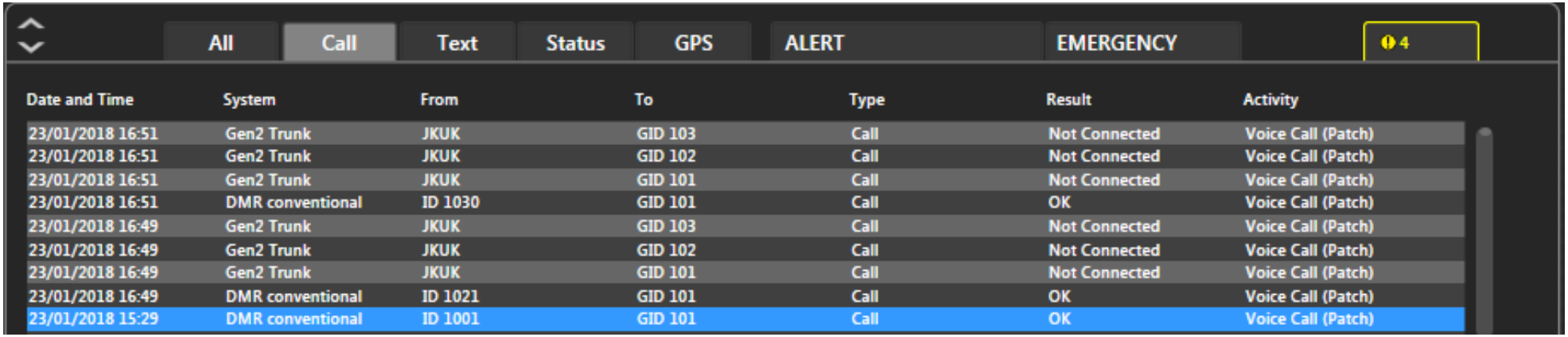
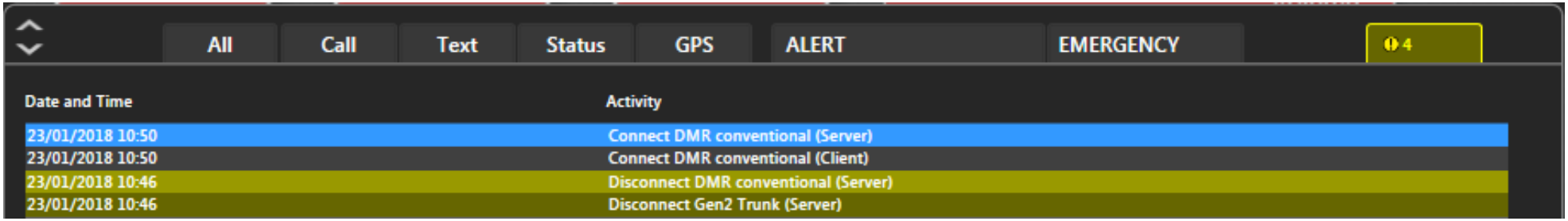
- **Call Logs;**



Date and Time	System	From	To	Type	Result	Activity
23/01/2018 16:51	Gen2 Trunk	JKUK	GID 103	Call	Not Connected	Voice Call (Patch)
23/01/2018 16:51	Gen2 Trunk	JKUK	GID 102	Call	Not Connected	Voice Call (Patch)
23/01/2018 16:51	Gen2 Trunk	JKUK	GID 101	Call	Not Connected	Voice Call (Patch)
23/01/2018 16:51	DMR conventional	ID 1030	GID 101	Call	OK	Voice Call (Patch)
23/01/2018 16:49	Gen2 Trunk	JKUK	GID 103	Call	Not Connected	Voice Call (Patch)
23/01/2018 16:49	Gen2 Trunk	JKUK	GID 102	Call	Not Connected	Voice Call (Patch)
23/01/2018 16:49	Gen2 Trunk	JKUK	GID 101	Call	Not Connected	Voice Call (Patch)
23/01/2018 16:49	DMR conventional	ID 1021	GID 101	Call	OK	Voice Call (Patch)
23/01/2018 15:29	DMR conventional	ID 1001	GID 101	Call	OK	Voice Call (Patch)

- **System status**



Date and Time	Activity
23/01/2018 10:50	Connect DMR conventional (Server)
23/01/2018 10:50	Connect DMR conventional (Client)
23/01/2018 10:46	Disconnect DMR conventional (Server)
23/01/2018 10:46	Disconnect Gen2 Trunk (Server)

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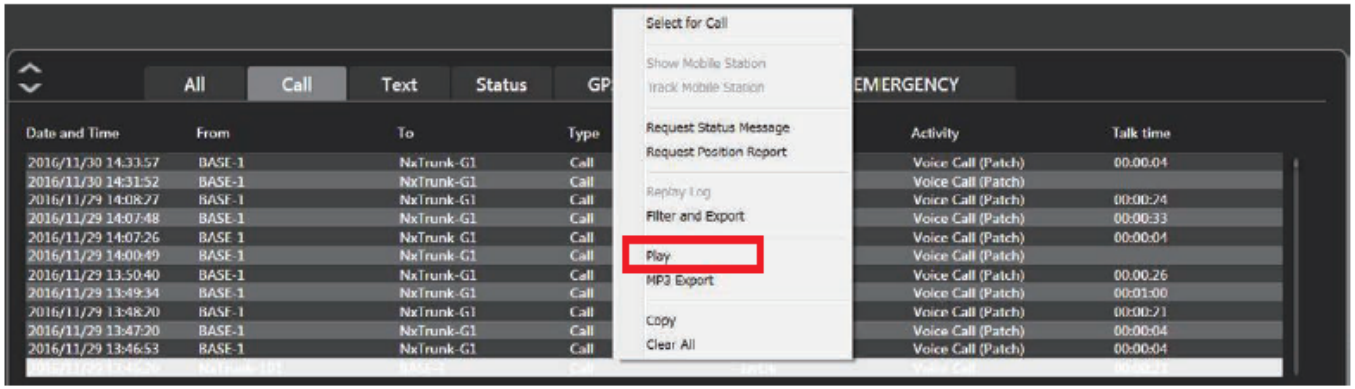
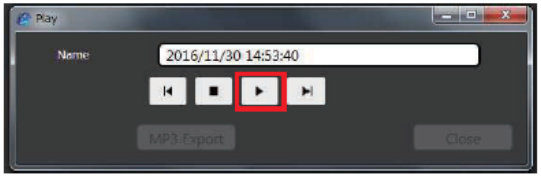
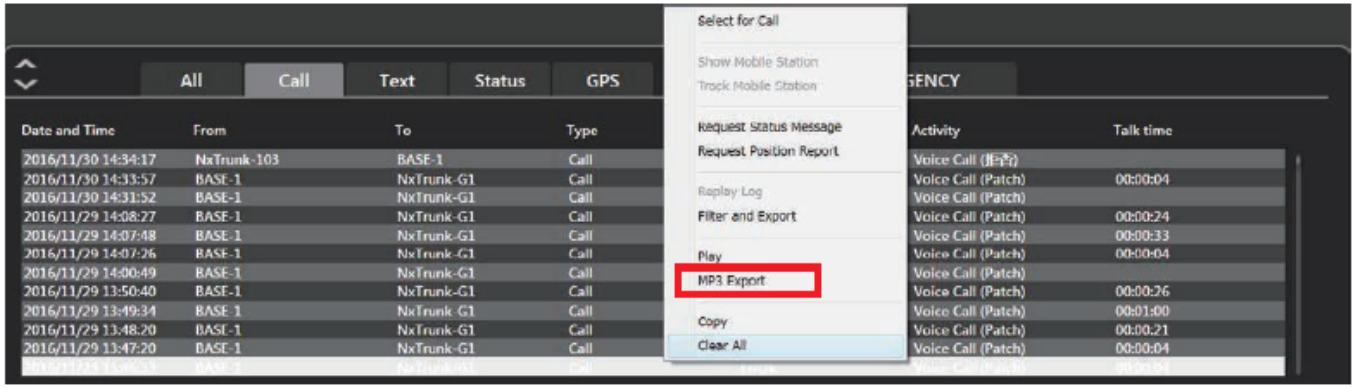
KAS – 20 Voice Dispatcher

- **Playing back** a Recorded Voice Call;
- **MP3 Export** of Recorded Call.







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4. KAS-20 AVL mapping

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KAS – 20 AVL Basic Features

- Location management for up to 1,000 subscriber units;
- Compatible with both Open-Street Map and Scanned maps;
- KML and CSV export;
- Image layers can be individually switched on or off via Additional Layer Window;
- Auto & manual polling, Lone-worker, GPS time mark, Geo-Fencing, Track units, Go to home position, etc.
- Position Log & Play.
- Offline Maps Option using additional PC with Open Street Maps server

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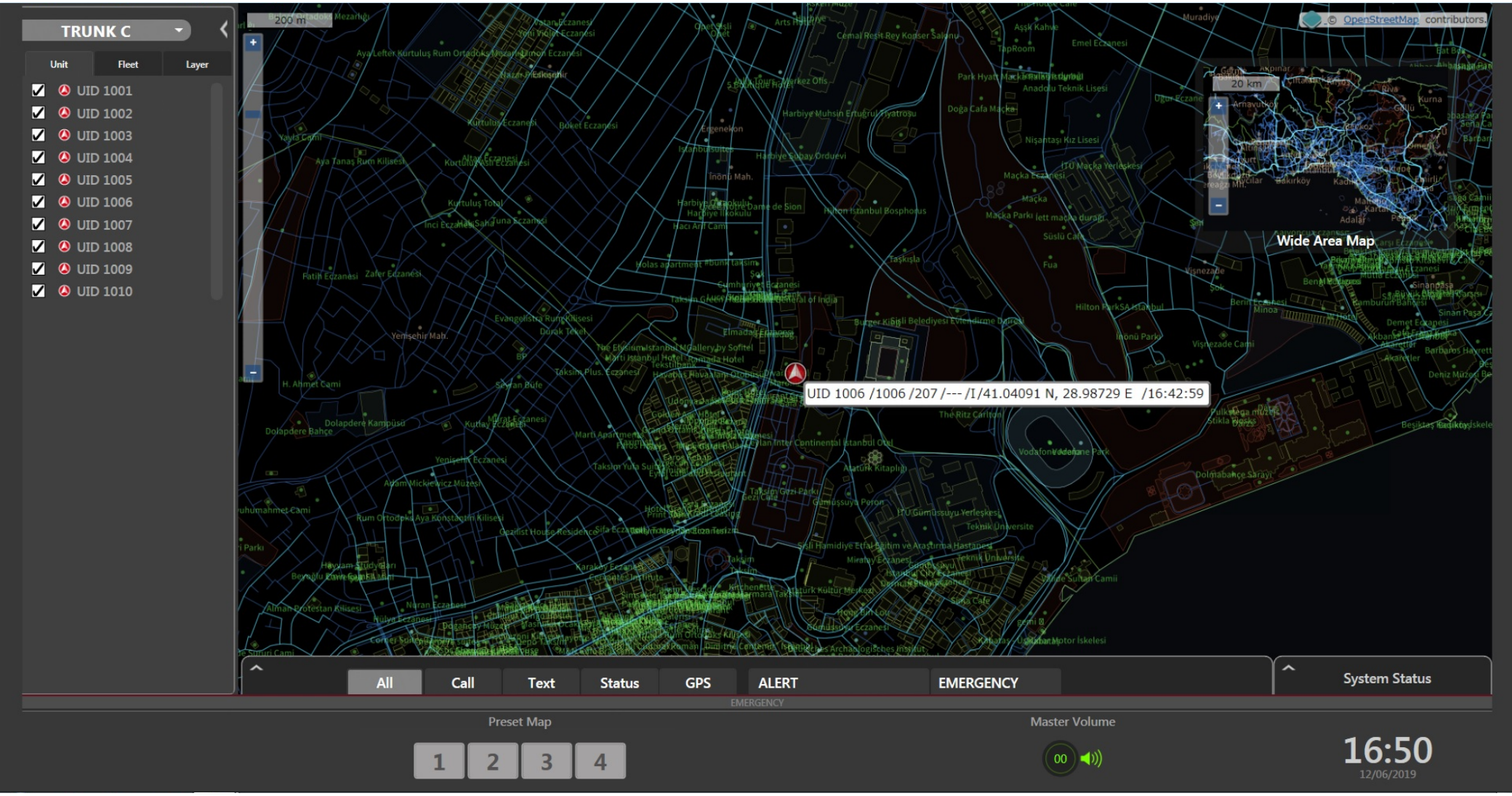
AVL Window – Offline Map



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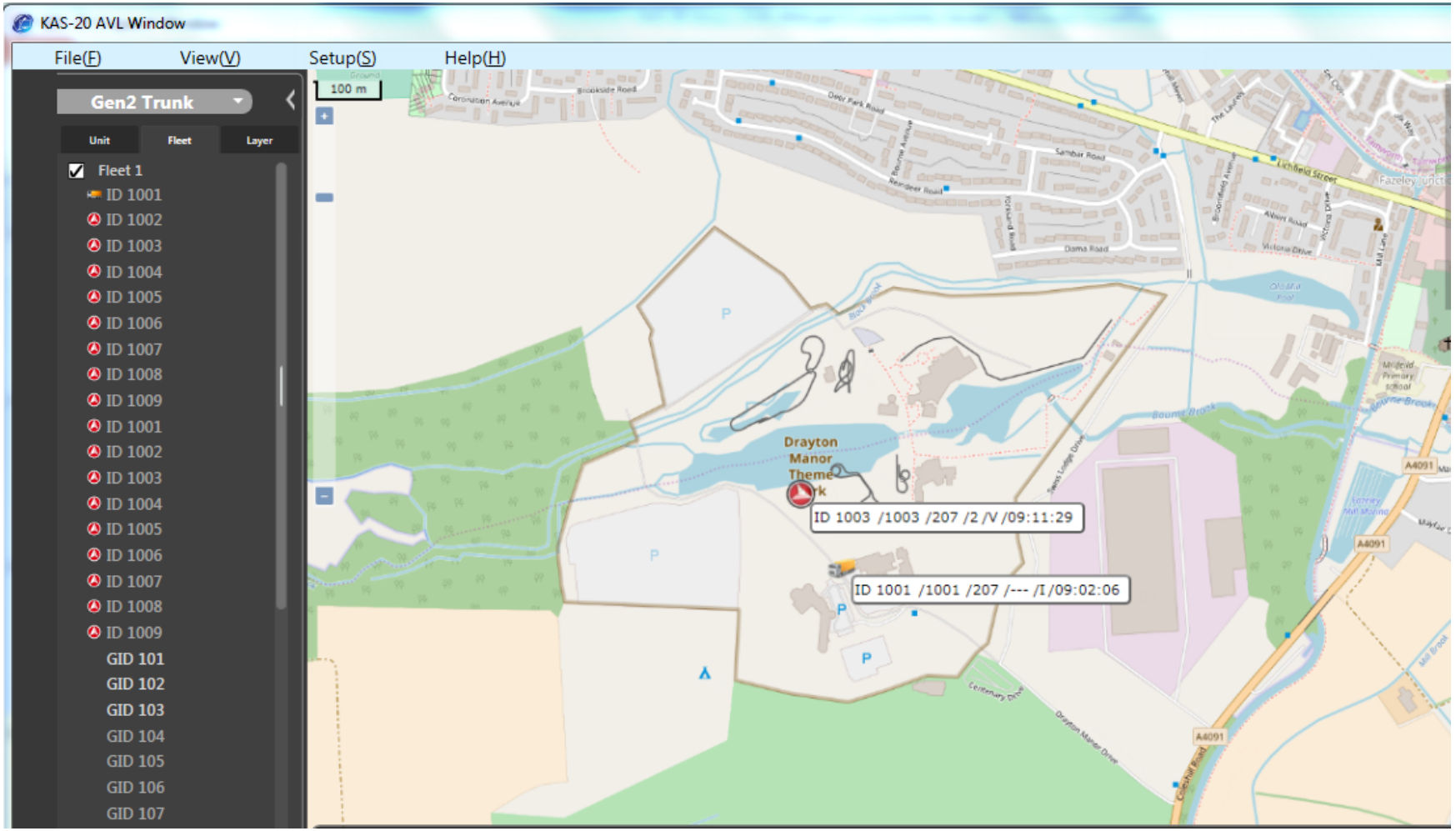
AVL Open-Street Map



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GPS position replay on Open-Street Map

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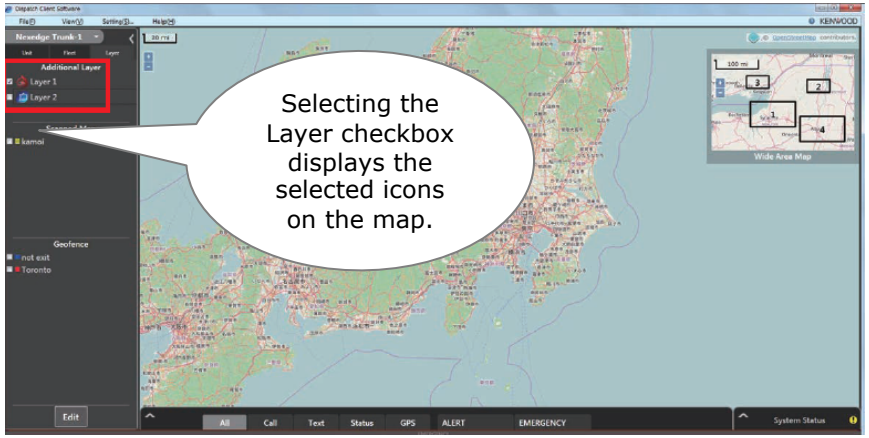
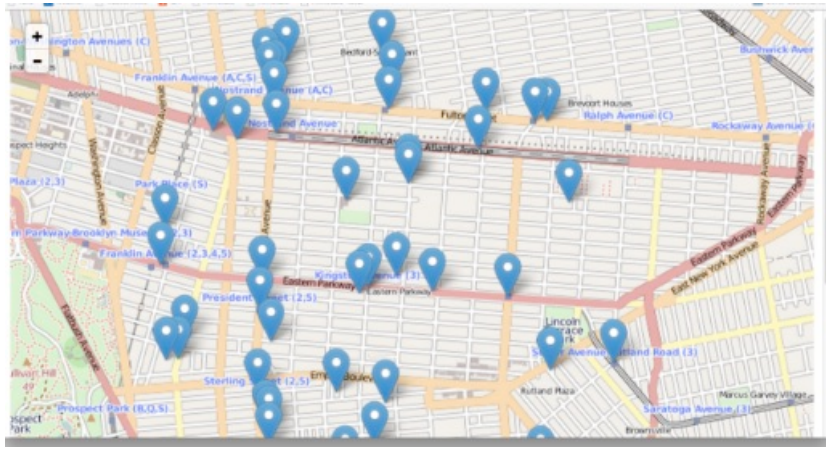
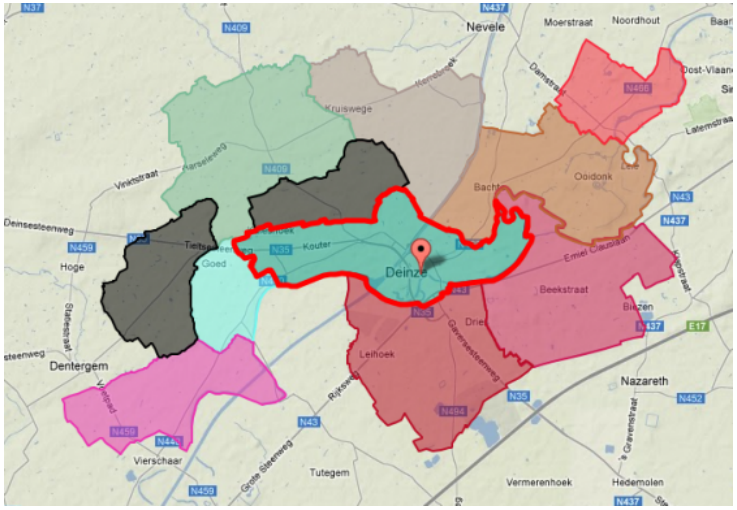
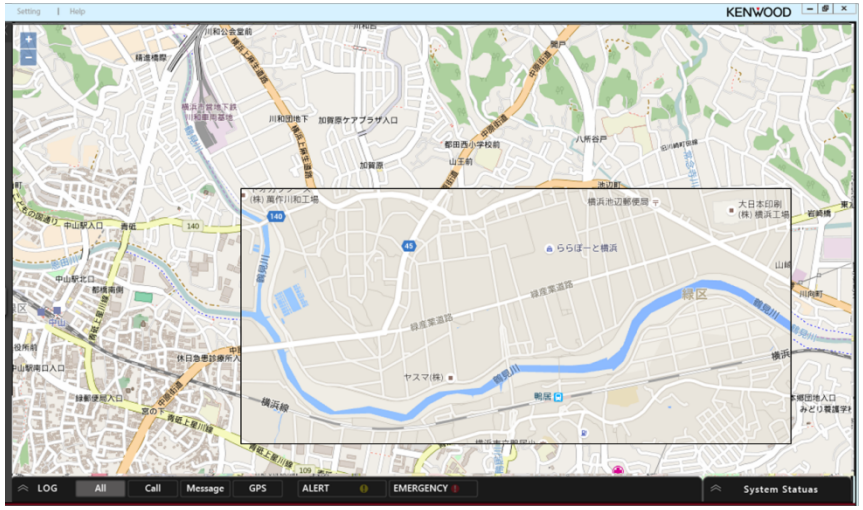
Layer display function

The icons created by the user can be selectively displayed on the map.









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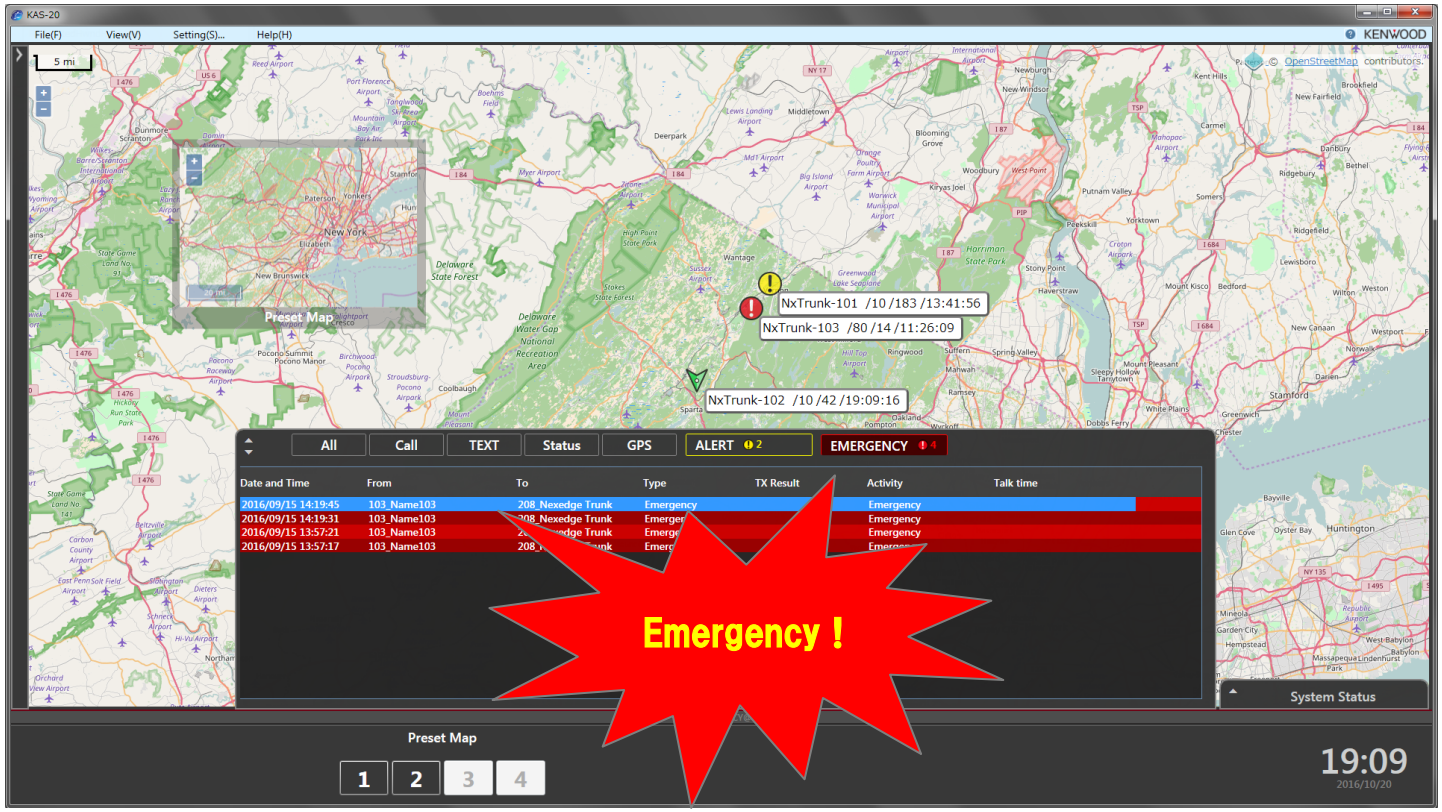
Display and Operation during Emergency mode;

When an emergency occurs at a mobile station, the icon of the mobile station changes to an “Emergency” icon, and an emergency tone is emitted.

The emergency bar at the bottom of the AVL Window lights up in red.



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KAS – 20 Dispatch Console

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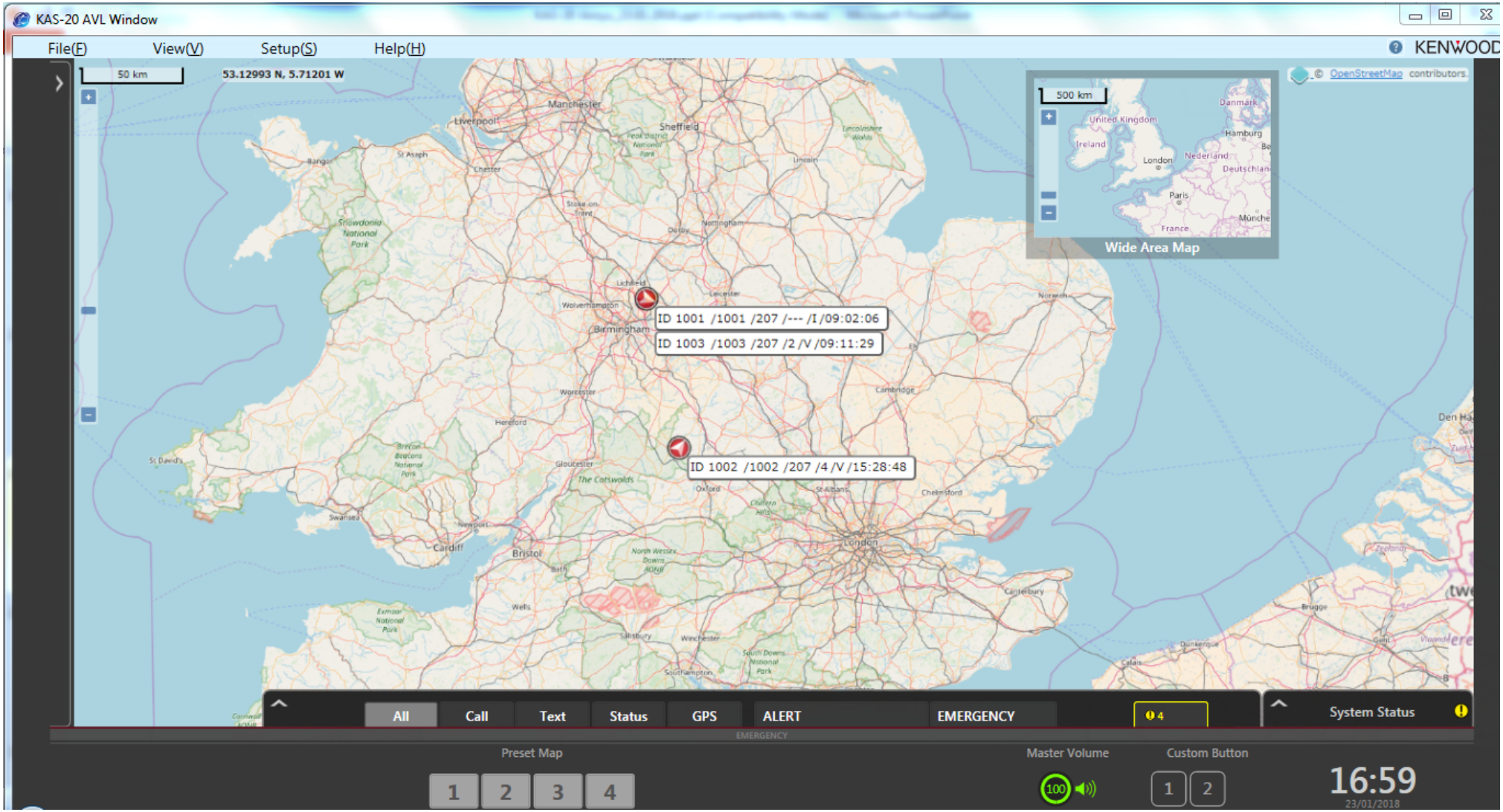
KAS – 20 Dispatch Console



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