NETWORK INNOVATIONS
Communicate. Anywhere.

SATRAD Mobile Integration

Specifications

The SATRAD-NB is a vehicle deployable enclosure, specifications as follows:

Communications Modes
- Trunked, Simplex and Satellite with automatic routing

Form Factor
- Height 44.5 mm (1.75 inches)
- Width 146 mm (5.75 inches)
- Length 300 mm (11 inches)

Handset
- Monitoring Mode (Option)
- Transparent Mode (Option)

Satellite Communications
- Hughes 2100 (G-2) Digitally Integrated

Trunked Radio Compatibility
- Motorola Astro Spectra
- Motorola XTL-2500
- Motorola XTL-5000
- Other systems may require custom interfacing

Simplex Radio Compatibility
- Motorola
- Kenwood
- Icom
- Other radios may require custom interfacing

Power
- Input 12 Volt Nominal, 5 Ampere capacity
- Output 12 Volts conditioned for Hughes G-2

Ports
- 2 X DB-9 Serial
- Relay Port
- Hughes Control Port
- Handset Port
- Trunked Radio Port
- Simplex Radio Port

Network Innovations' SATRAD Network Bridge provides auto-failover for trunked radio networks to the SATRAD satellite network to ensure uninterrupted remote communications.

Ensuring Radio Connectivity

The SATRAD Network Bridge (SATRAD-NB) enables push to talk radio traffic to be routed via satellite in the event the trunked radio network becomes inoperative or if the mobile radio is not within range of a terrestrial repeater. Upon service restoration of the trunked radio network or when the mobile radio moves back into range of a repeater tower, the SATRAD-NB will automatically re-route voice traffic back to the trunked radio network.

To prevent unnecessary switching between networks, when the mobile radio is on the edge of coverage or the trunked radio network has become unstable, the SATRAD-NB monitors the terrestrial connection for a configurable time interval to ensure it is stable, prior to switching traffic to the terrestrial network.

Simplicity of Operations

The SATRAD-NB eliminates the need for user intervention or mode selection and there is no requirement to train users to operate the SATRAD-NB. Eliminating the need for user intervention ensures critical communications are maintained without the risk that a user forgot to select the appropriate operating mode when the terrestrial system is not available.

SATRAD Mobile Integration

Application Scenario

A Police Officer is outside of his vehicle when he notices a vehicle speeding. The Officer uses his handheld UHF radio to communicate to dispatch his intent to pursue the vehicle.
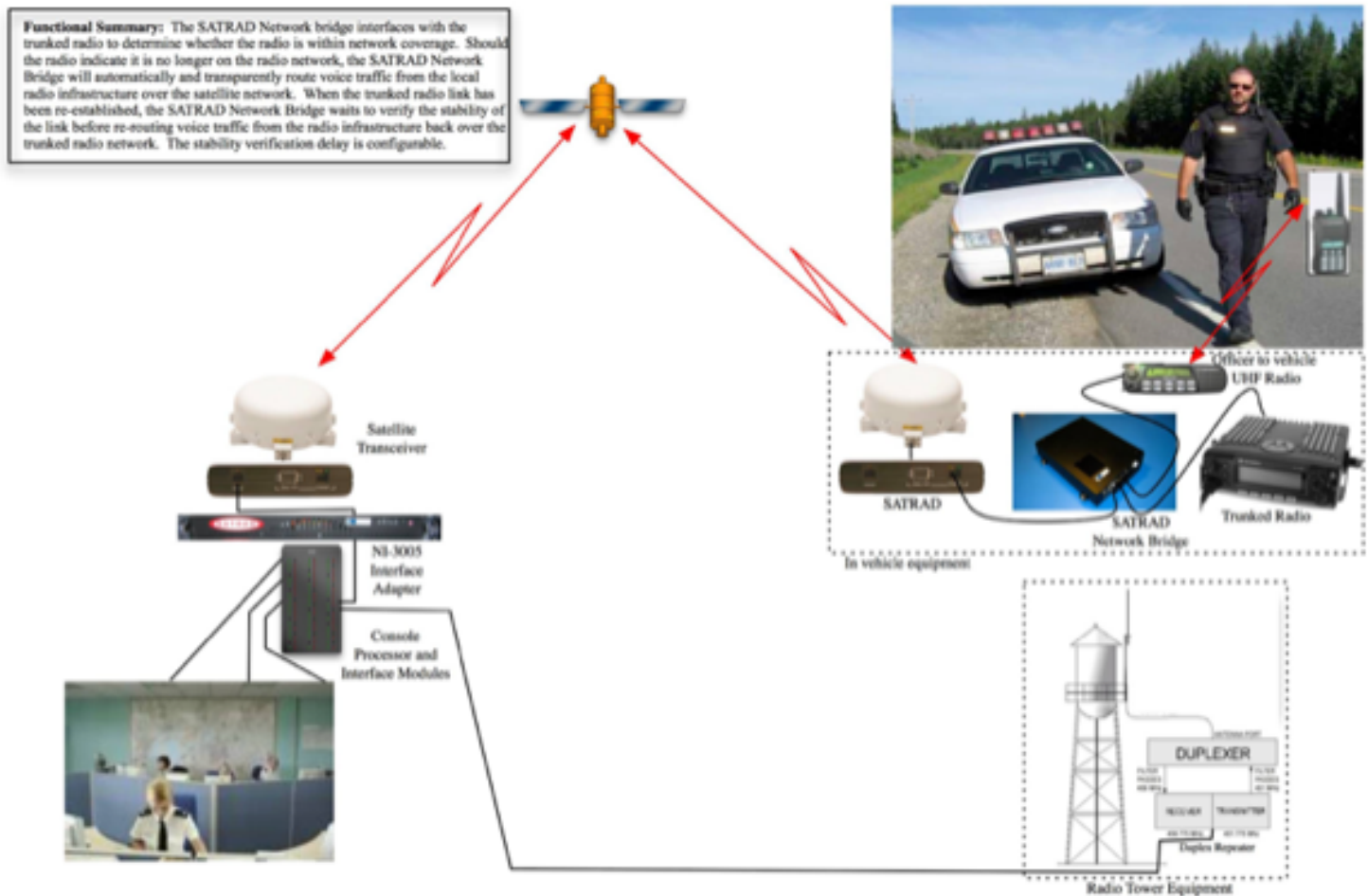
The Police vehicle is within coverage of the trunked radio network and the UHF radio in the Officer's vehicle is integrated with the SATRAD-NB. The SATRAD-NB is also connected to a trunked radio and a SATRAD satellite communicator. In this instance the SATRAD-NB detects that the trunked radio network is available and routes the Officers message to dispatch via trunked radio.

Dispatchers at the communications and control centre have access to both the terrestrial trunked radio system as well as satellite communications.

The Officer pursues and catches the vehicle in an area where there is no trunked radio coverage. The Officer leaves his vehicle to identify the driver and communicates with dispatch via his handheld UHF radio. In this instance the SATRAD-NB detects that trunked radio is not available and routes the message over satellite.

About Network Innovations

Network Innovations specializes in the service and distribution of satellite communications solutions, equipment and airtime to our clients, wherever their business may take them on the planet. Contact Network Innovations Head Office at (403) 287-5000 or visit us on the Internet at www. networkinv.com.

Functional Summary: The SATRAD Network bridge interfaces with the trunked radio to determine whether the radio is within network coverage. Should the radio indicate it is no longer on the radio network, the SATRAD Network Bridge will automatically and transparently route voice traffic from the local radio infrastructure over the satellite network. When the trunked radio link has been re-established, the SATRAD Network Bridge waits to verify the stability of the link before re-routing voice traffic from the radio infrastructure back over the trunked radio network. The stability verification delay is configurable.

Satellite Transceiver

NI-3005 Interface Adapter

Console Processor and Interface Modules

Officer to vehicle UHF Radio

SATRAD

SATRAD
Network Bridge

Trunked Radio

In vehicle equipment

DUPLEXER

Duplex Repeater

Radio Tower Equipment

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