



# TACTICAL TRANSMISSION MANAGER

## DYNAMIC TRANSPONDER AND CARRIER MANAGEMENT FOR TACTICAL NETWORKS

You will benefit from our years-long experience as a system integrator in tactical communication, complete with anchor station infrastructure and integrated logistic support during the entire “real time” usage period. Thus it is possible to transmit live video footage from the first second the tactical stations are on air.

### KEY FEATURES:

- Schedule and control DVB and IP transmission paths for SOTM, deployable or fixed stations
- Booking of transmissions in less than 10 clicks
- Multiple transponder support
- SKYWAN IP and DVB-S2 transmissions in parallel
- Automatic DVB transmission route calculation (uplink chain – transponder/slot – downlink chain)



**BENEFITS**

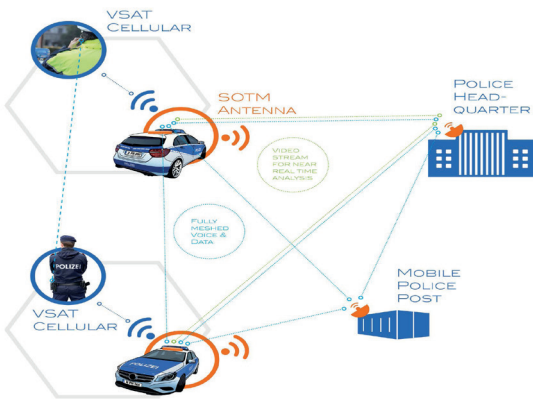
- No skilled operator required
- **Click & activate** recurring bookings of transmission series
- Overview of available resources (devices, bandwidth)
- Provision of real-time status with regard to SOTM vehicles, fixed stations and transmission
- Access Control with User Management and Sub-Net-work Views
- **Drag&drop transmissions acc. to your priorities**
- User configurable layout
- Powerful report engine to generate any kind of reports



**TTM IS DESIGNED FOR EASY SCHEDULING OF TRANSMISSIONS USING ANY STATION TYPES IN TACTICAL NETWORKS WITH DYNAMIC POPULATION**

Secured information distribution and surveillance data reporting from anywhere in the world at any time would be inconceivable without satellite based tactical networks. In order to maintain around-the-clock coverage and smooth information flow rely on a comprehensive and reliable scheduling system to optimize and remotely manage the transmission resources among vehicles for Satellite Comms-on-the-pause and Satellite Comms-on-the-Move (SOTM) and fixed or rapid deployable stations.

The TACTICAL TRANSMISSION MANAGER (TTM) from ND SATCOM is an easy-to-use management tool to plan, schedule and book DVB and IP connectivity via fixed and mobile stations. Bookings can be made faster and can be activated now! Tactical network operators can respond immediately to distribution, contribution or remote-to-remotes communication requests – TTM prevents overbooking of available satcap resources. A central database stores all events and bookings and the resource management screen displays the status of available transponders and stations.



Support of DVB and IP transmissions enables governmental operators to optimize their network use. With IP transmissions, the operator benefits from two-way communication. All kind of bi-directional data com, video applications, low-data rate sensor data or high-resolution surveillance video streams benefit from TTM. Videos are streamed to the cloud and in parallel; the task force runs audio/video and other internet communication.





**Our Technology**

**Overview Scheduling Activities**

The Chart View provides a comprehensive colour-coded timeline of transmission events and activities. It presents an attractive preview of actual events and free resources in the form of a calendar.

New transmissions can be easily introduced online using familiar drag & drop functionality. Resources are checked to ascertain whether they are really free and available, thus avoiding overbooking or double bookings.

**NETWORK OVERVIEW: MAP**

The Tactical Transmission Manager provides a graphical illustration of the network layout including SOTM vehicles and fixed stations. The location of tactical vehicle(s) is shown on a map.

Headquarters (HQ) can thus direct the closest one to the critical mission site. If more than one tactical vehicle is in the field, all traffic can be governed within a bandwidth pool. Headquarters can view online all relevant status indicators of the tactical vehicles plus sensor and video data.

The available zoom levels depend on the map data used. Various map data is available on public or dedicated Geo-Servers.

**NETWORK OVERVIEW: STATIONS**

The network overview presents stations; status and stations; transmission list. The layout of each screen is customizable. Stations can be grouped and the detail level is selectable.

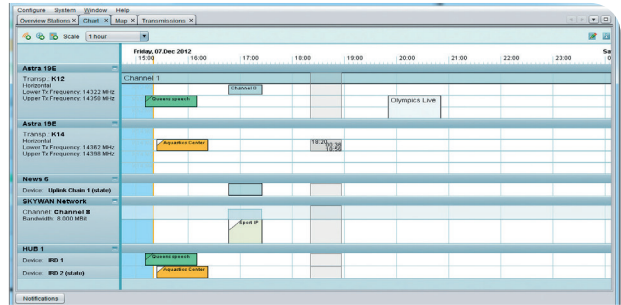


Chart View



Map



Stations





### EXTERNAL INTERFACES

The external interface to existing NMS systems opens up new options to monitor resources and satellite capacity.

ND SATCOM offers advanced server platforms with the same familiar look and feel as the ND SATCOM Monitoring & Control (M&C) System. Minimal training is required to operate this management tool for clients already using ND SATCOM SOTM solutions as well as uplink and downlink M&C software.

### MULTI-SATELLITE FUNCTIONALITY

The Tactical Transmission Manager is able to allocate resources on different satellites. With ND SATCOM's Automatic Pointing System (APS), each SOTM vehicle points its satellite antenna to the requested satellite. Pointing can be performed on DVB or SKYWAN TDMA carriers.

### REMOTE CONTROL ALTERNATIVES

Optionally, each SOTM vehicle can be equipped with a mobile network router (e.g. LTE). This kind of network connectivity upgrades the SOTM vehicle with additional remote control functionality, as an alternative to the TDMA network connection.

### TYPICAL WORKFLOW

1. Booking of transmissions using TTM clients
2. Activate SOTM vehicle or terminal in the networks
3. Receive bookings at any time
4. Automatic feed activation and deactivation with parallel communication capabilities

Connectivity between the Tactical Transmission Manager Server in the Network Operation Centre (NOC) and the M&C System in the stations (e.g. SOTM vehicle) is provided via an IP connection. The SKYWAN 5G network with AES-256 encryption or any other secure IP network is used to transfer booking information.

### ADVANTAGE FOR REMOTE TASK FORCE

- Access to vehicle's M&C System to prepare next mission before satellite antenna is pointed
- Remote control of system equipment and antenna pointing
- Troubleshooting from NOC / HQ

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