



## SATCOM SYSTEMS & SOLUTIONS

### Mobile Radio Communication Services over Satellite

The efficiency of military, border control and disaster relief & emergency organisations depends heavily on the ability to communicate within the organisation. Network centric operations of these organisations require a communication network supporting today's command, control and information services. Mobile communication is one of the most mission critical assets in this structure since it enables the exchange between command and field forces. This communication is vital, like the communication between the brain and the arms, legs of a human body. Most organisations rely on professional mobile radio systems (PMR). PMR works in principle like a GSM network. In difference to a legacy radio communication system where radio calls are established directly between two radio operators, PMR works in cells. Each radio is logged into a non-public local cell; calls are sent to the cell base station and forwarded from there via a controller to the cell base station of the recipient's radio. All cells within a PMR network are connected together with high speed data links, which could be terrestrial fibre

optic connections, where available, line of sight or satellite communication links. Many of the above mentioned organisations, like border control, search and rescue and defence organisations operate especially in areas out of the normal infrastructures. The challenge is to connect these cells, in areas with low infrastructure, where terrestrial connections are not available and line of sight communication is too inefficient due to the ground profile and the CAPEX for large communication towers.

SKYWAN offers the solution for this problem. Due to the full meshed topology of a SKYWAN system it enables a most efficient, dynamic and flexible communication between the cell controllers. SKYWAN allows to setup a PMR network in short time without the hassle of engineering LOS connections or digging in miles of cables. It even allows to setup mobile cells for temporary use. SKYWAN is the perfect solution for PMR Networks operating outside of the ordinary area.



SKYWAN is a multi frequency TDMA satellite system which allows flexible bandwidth allocations within milliseconds thus enabling quick response times of the network and the most efficient use of the space segment.

Rapid deployment expands easily the reach of systems where terrestrial connections are not present /economically. New stations could be included into the network in a breeze and the structure grows as you grow.

ND SatCom engineered and verified the solution of TETRA/TETRAPOL via SKYWAN together with Airbus Defence and Space and optimised the system for highest efficiency.

#### MEAN OPINION SCORE

Mean opinion score (MOS) is a test that has been used for decades in telephony networks to obtain the human user's view of the quality of the network. ND SatCom has proven together with Airbus that TETRA/TETRAPOL via SKYWAN offers one of the highest possible voice quality proven with the MOS method.

#### SKYWAN MULTI APPLICATION PLATFORM

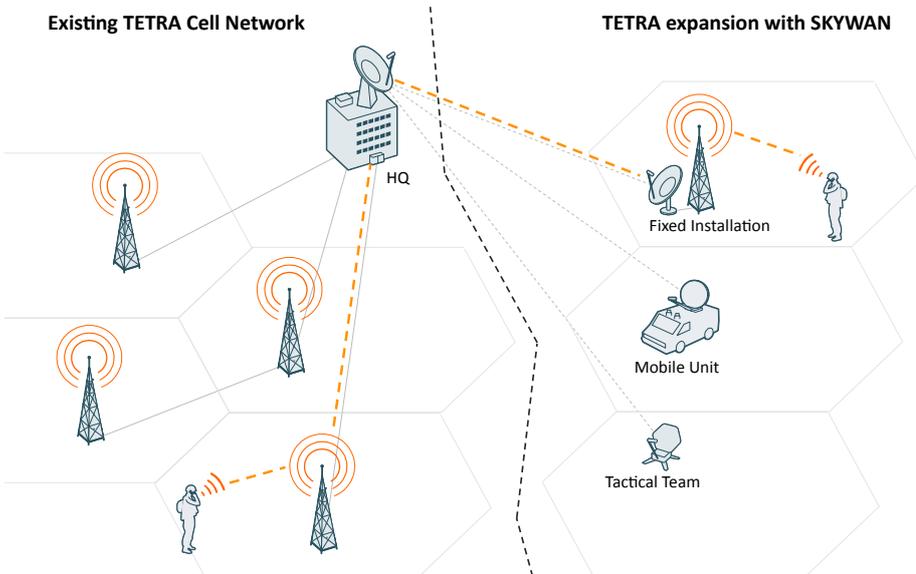
SKYWAN offers the additional advantage to be the perfect transport medium also for other IP applications and is thus the all-in-one solution to connect a remote site far outside. The advanced Quality of Service features of the SKYWAN system mission critical data or latency critical data to be treated with highest priority while other less important data is forwarded best effort when bandwidth is available.

Some Examples for possible Applications on a SKYWAN System:

- PMR trunking
- Voice
- Video conferencing
- HTTP/s
- CIFS
- FTP
- Virtualised Applications (CITRIX)

#### TURNKEY SYSTEM FROM A STRONG PARTNERSHIP

The TETRA/TETRAPOL solution is offered by Airbus Defence and Space together with ND SatCom.



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