

Transport over the water



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Description

The main scenario of communication within the water transport system is the following (see Figure 1):

- One or several BS sectors are installed in the seaport area. If the ship will cruise along a given water area, then BS sectors are installed along the coastal strip.
- BS sectors are joined into a single MINT via the InfiMUX installed on the aggregation node.
- One or more CPEs are installed on the ship. The antennas used depend on the project features.
- The aggregation node and the control center are connected via the main and backup backbone links.

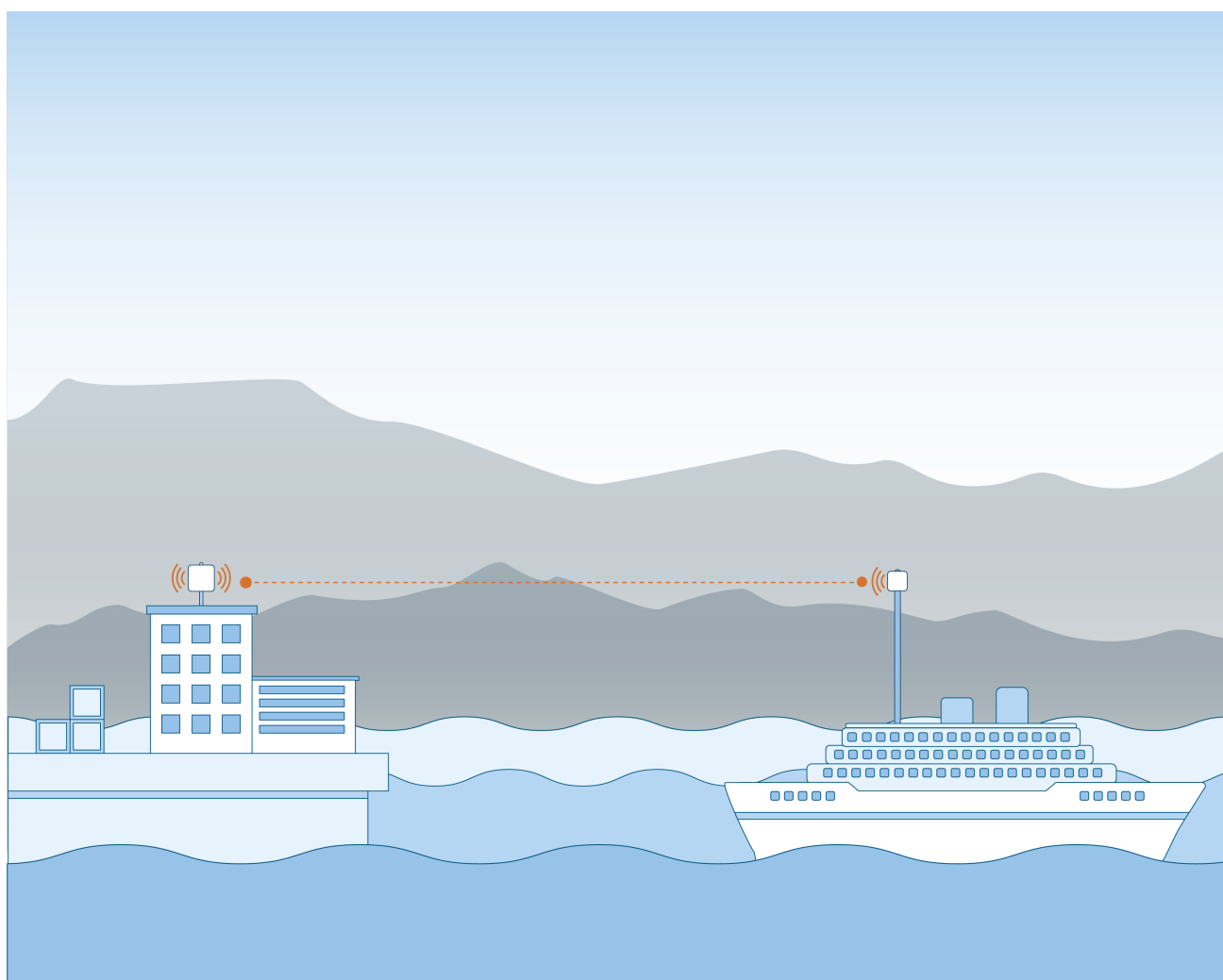


Figure 1 - Water transport

The specific of such scenarios is the signal propagation path, since a part of the route is located above the water surface. The radio signal is reflected from the water surface, as a result an inter-symbol interference (ISI) appears at the receiver side. In order to overcome the ISI effects, the guard interval between the air frames should be increased. Depending on the equipment type, the following configuration options for increasing the guard interval are available:

- InfiLINK 2x2 and InfiMAN 2x2 with TDMA technology support, InfiLINK Evolution and InfiMAN Evolution - disable the "[short guard interval mode](#)" parameter using the "-shortgi" command for the 40 and 80 MHz channels (if other channel sizes are used, the long guard interval is already in use and cannot be modified);

- InfiLINK XG / InfiLINK XG 1000 - make sure that the "Short Cyclic Prefix" option is disabled in the "Radio Settings" section.

On devices of the Quanta 5, Quanta 6 and Quanta 70 families, the guard interval size is set automatically.

Rolling should also be taken into account in such projects. In order to maintain the position of the CPE relative to the BS, a roll compensation device with a gyroscopic function can be used.

Configuration

The following configuration is recommended for projects within the water transport system:

- join all the BS sectors into a single MINT area via the InfiMUX installed on the aggregation node;
- nomadic mode;
- MultiBS function enabled;
- Global function enabled.

Completed projects

The following projects were implemented by InfiNet in accordance with the above scenario:

1. [Infinet Wireless and Trellisworks Provide High-Speed Ethernet Network Connectivity for Red Funnel Ferries.](#)