

FLOOD CONTROL

The challenge

Rijkswaterstaat (the Dutch Ministry of Public Works and Water Management) is responsible for amongst other things, the overall management of waterways in the Netherlands. In a country where a large proportion of the landmass is actually below sea level, water management is of utmost importance. This being the case, the Rijkswaterstaat must ensure all dams and sea

barriers are up to spec and of extremely high reliability. This was the challenge for the new surge barriers in question that were built and completed in 1996. The Rijkswaterstaat was in need of an ultra-high reliable communication system to control the opening and closing of their very large flood control surge barriers (each arm is as big as the Eiffel Tower lying down on its side) along the coast of the Netherlands.

The solution

A TSAT Hub was set up in Hoek van Holland to monitor water levels and wind velocities from two RTs found in other locations along the waterway. In an alarm situation, the RTs will transmit to the Hub instructing the surge barriers to close.

Rijkswaterstaat's reasons for choosing TSAT for this application were a function of the low cost of a private network but also due to TSAT's extremely high reliability, transmission line security and continuous accessibility to an open line.

Early in January 1998, torrential rains and extreme wind conditions devastated the whole of Europe's Atlantic coast. As a result of these extreme conditions most telephone lines went dead in coastal areas. Rijkswaterstaat's TSAT system proved itself most reliable during this period and was found to be one of the few communication systems unaffected by the storms.



Facts Summary:

Interface: Async RS232
Data Rate: 2400 bps
Network Size: 1 hub + 2 RT's
Application Protocol: ASCII

OVERVIEW OF THE SURGE BARRIER



Control Centre

Remote Terminal location #