

NavLink®

A Marine Aids to Navigation Remote Monitor and Control System



TIDELAND SIGNAL CORPORATION

One Seamless Integrated Network

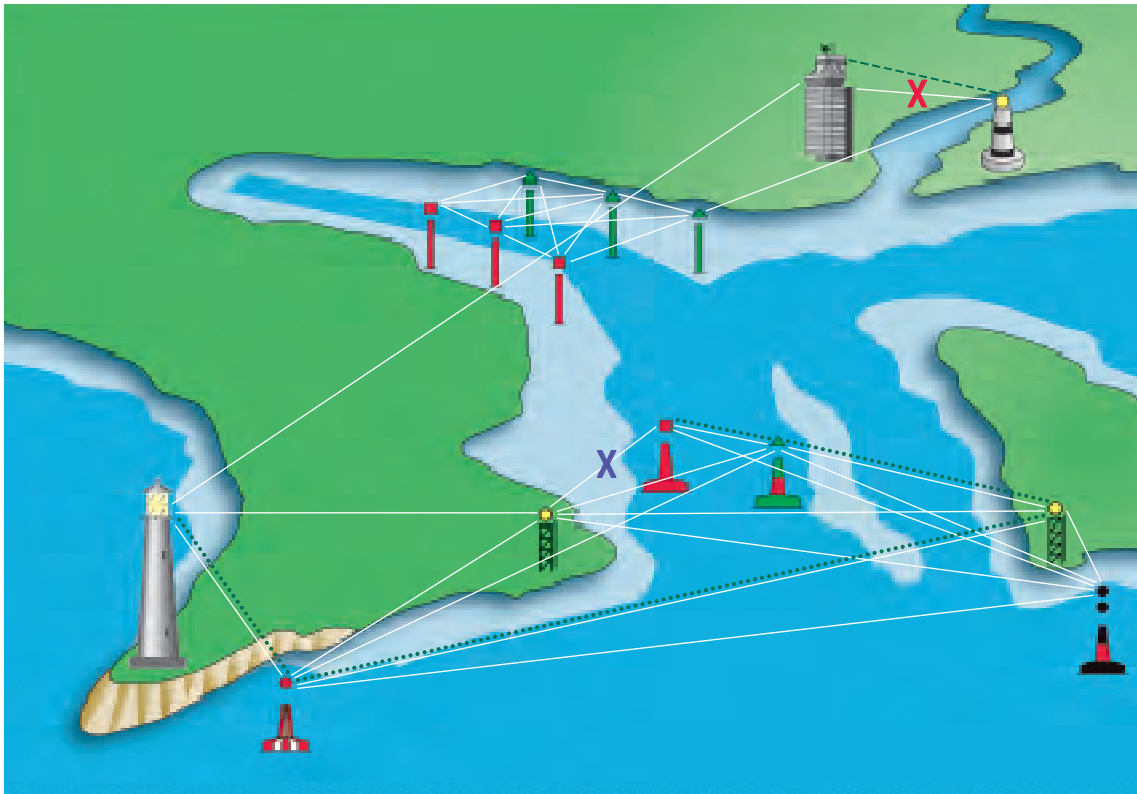
Since its introduction in the early 1990s, NavLink® has consistently proved to be a reliable navaid management system, with the capacity to handle many aids to navigation (AtoN) data point connections and means to remotely monitor and control the functionality of AtoNs. As related technology developed, Tideland Signal has incorporated these advancements into NavLink. The one challenge to Tideland was the dependability of an Authority's communication medium. Recognising this, Tideland aggressively improved upon NavLink's operating software to develop advanced functions which would recognise a disruption in the system's communication routing path and automatically re-route the data information signal from one AtoN to another, keeping the monitoring location continually informed as to operational status. NavLink can interface with Tideland's V-Track™ Informer™, an AIS information system for the transmission of monitoring data, as well as AIS AtoN IALA-compliant units of other manufacturers. These advancements have Tideland years ahead of its competitors.

SIGNIFICANT FEATURES:

- **AN ENHANCED MESH NETWORK** – NavLink provides a sustainable network infrastructure to enable data communications to a Remote Telemetry Unit (RTU) and its user-defined AtoNs including security sensors. The network's full mesh topology provides that every RTU is connected to each of the others, offering greater stability in the face of changing conditions and/or disruption of an AtoN in the network. As the NavLink mesh network's RTU population increases so also does the Authority's ability to communicate and control its AtoNs.
- **COMMUNICATION MEDIA** – NavLink communications support any number of mediums: VHF/UHF, dial-up modem, IP, direct, cellular phone, satellite or AIS information systems. An Authority may select whichever combinations of mediums best suited for NavLink's primary network and standby communication systems. In case of disruption of the primary network, NavLink will re-route RTU signals to the monitoring location. If complete shutdown to the primary network occurs, operating software will automatically manage the complex routing of the AtoN data signal to the monitoring location via a standby communication medium.
- **STANDBY COMMUNICATION MEDIUM** – Provides for a failsafe path from a RTU(s) to the monitoring location in the event the primary network medium becomes non-operational.
- **COMMUNICATIONS HEALTH MONITORING** – NavLink continuously monitors the primary network communication medium for disruptions of RTU data signal routing between RTUs. If a disruption occurs, automatic re-routing between RTUs and monitoring location is implemented.
- **ATON MONITORING** – NavLink interfaces with any combination of AtoNs: lanterns, fog signals, racons, solar chargers, buoy positioning monitors, meteorological monitoring devices and custom-designed aids to navigation, including AIS information systems. Preset parameters of all AtoN activities can be established at each RTU. When a parameter is exceeded, a real-time exception report is generated and transmitted to the monitor and control location. Individual AtoNs can be automatically polled for information or the operator can manually request information.

SIGNIFICANT FEATURES (cont):

- **AUTOMATED USER NOTIFICATION** – Provides operators with real-time messaging, to alert that an AtoN has fallen into warning and/or alarm status. Operators have the option to forward network reporting from unmanned monitoring sites via cell phone, pager or e-mail.
- **AUTOMATIC NETWORK CONFIGURATION** – Operating software will dynamically update and optimise the routing of RTU communication in the case of AtoN relocation.
- **REPORTING** – One of the most important benefits of NavLink is its network reporting capability. Over 25 detailed reports can be displayed upon request in the system's report window. An Authority's headquarters can filter and generate documents of the total network or individual AtoN locations including existing history file, entries and exceptions, without interruption to network operation.
- **IDEAL FOR LOW POWER PREREQUISITES** – NavLink is a field-proven modular system that is compact and lightweight, and built with extremely low power requirements making it excellent for isolated AtoNs supported by solar power.
- **MODULAR DESIGN** – Allows an Authority to select any combination of options to meet system requirements. NavLink consists of RTU modules for monitor and control functions, communications modules and NavTerm® [a Windows based software].



The above illustration is a simplified configuration of a NavLink® AtoN geographic and communication layout, divided into regions. The drawing illustrates NavLink's mesh network and how operating software compensates for a disruption of the Authority's primary network communication medium. White lines indicate that all RTU data points are connected to each other, providing a mesh network. Violet X indicates a disruption to the primary network communication medium. Green dots show NavLink re-routing of the primary network communication path between RTU data points. Red X indicates a total disruption of primary communication medium. Green dashes show NavLink employing standby communication medium. The standby medium provides a failsafe path from the monitoring location to all RTU data points. No matter what event occurs, NavLink's operating software will automatically manage the complex routing between RTU data points and the monitoring/control location.

V-Track and Informer are trademarks and NavLink and NavTerm are registered trademarks of Tideland Signal Corporation.

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Tideland Signal Corporation maintains ISO 9001:2000 accreditation. It is company policy to provide products and services that meet the highest standards of quality in the industry.

Membership Organisations



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