TSUNAMI EARLY WARNING SYSTEM
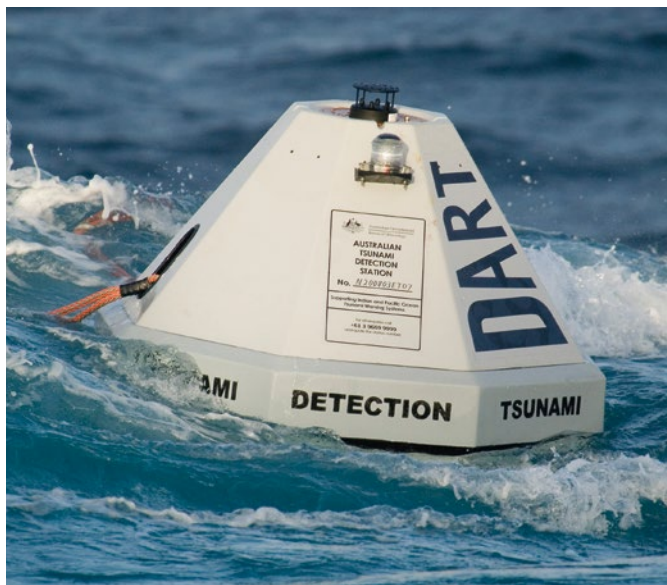

APPLICATION BACKGROUND

Natural disasters such as tsunamis often occur without warning to people living on or close to the coastline. In such circumstances, personal injury and death may occur. Any early warning of an approaching tsunami is very important.

Depending on the coastline, a tsunami may arrive at one location before arriving at another location; hence observation points along the coastline can be equipped with a system to allow an observer to activate notice of an impending tsunami.

Often there will be a central authority which maintains contact with ocean based tsunami monitors and the staff at that central authority may also have knowledge of an approaching tsunami.

DART® real-time tsunami monitoring systems, developed by PMEL, are positioned at strategic locations throughout the ocean and play a critical role in tsunami forecasting.

APPLICATION DETAIL

Unidata equipment, primarily Neon Remote Loggers can be set up with cell phone or satellite internet connections to provide two specific early warning functions, local activation of an alarm and central activation of an alarm.

For local activation of an alarm on sighting of an approaching tsunami, a person can go to the Tsunami Early Warning Equipment (TEWE) located on or near the shore and operate a button which activates the local alarm siren, strobe light and communicates that alarm to the central Neon Server by cell phone or satellite.
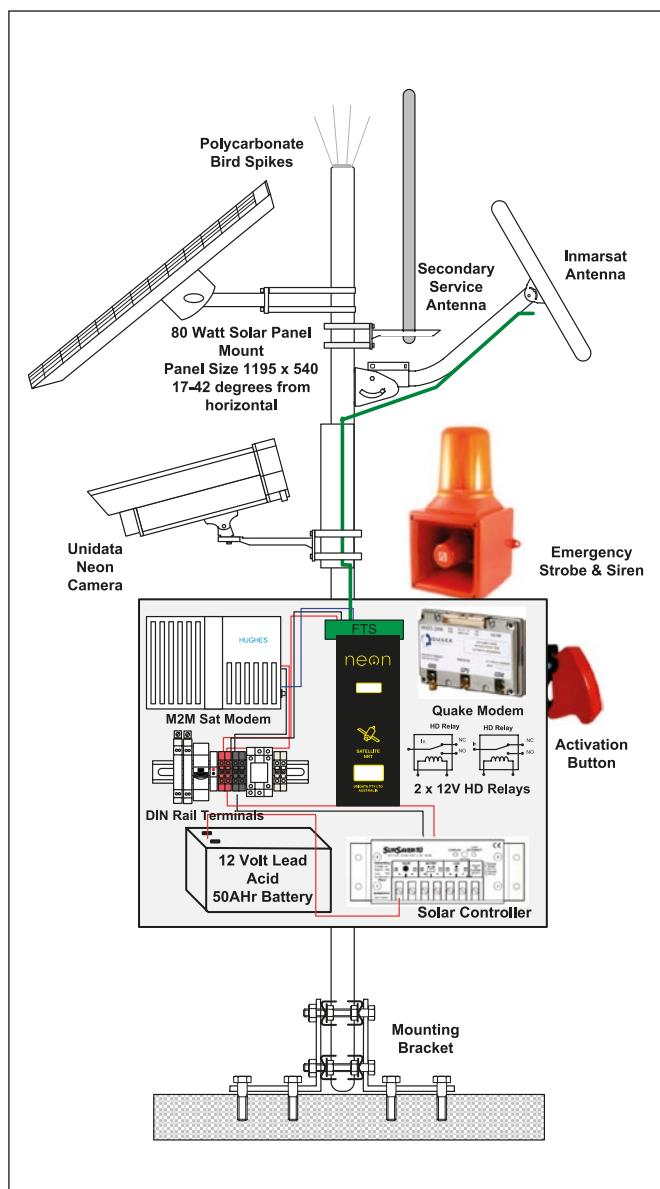
Upon receipt of the alarm at the central location, authorities can then choose to manually activate other TEWE at different locations, perhaps in the same region, to alert the people in the area of the approaching tsunami.

The centrally located system personnel may choose to activate all or a selected regional subset of the remotely located TEWE on advice from other local authorities or a central ocean Tsunami Warning Centre.

The TEWE includes a Neon Remote Logger, a small redundant solar charging system, a redundant battery system, a high power siren, capable of sending an audible warning signal more than 1km away and a high intensity strobe warning light capable of being seen up to 2km away.

The TEWE is a complete package, capable of being installed on or close to the coast.

The TEWE systems routinely communicate with the central Neon Server to confirm operational status on an hourly basis.

Polycarbonate Bird Spikes

Secondary Service Antenna

Inmarsat Antenna

80 Watt Solar Panel Mount
Panel Size 1195 x 540
17-42 degrees from horizontal

Unidata Neon Camera

Emergency Strobe & Siren

M2M Sat Modem

HUGHES

FTS

neon

SATELLITE SAT

Quake Modem

HD Relay   HD Relay

NC   NC
NO   NO

Activation Button

2 x 12V HD Relays

DIN Rail Terminals

12 Volt Lead Acid 50AHr Battery

Solar Controller

Mounting Bracket

TYPICAL CONFIGURATION

APPLICATION SPECIFIC INSTRUMENTS/INPUTS

Options	Unidata Part Number	Description
Strobes	Custom Part	As per customer requirements
Sirens	Custom Part	As per customer requirements

NEON TELEMETRY - NRL / RTU / FIELD UNITS

Options	Unidata Part Number	Description
Ethernet	3016A-000 / 3008A-000	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Ethernet & 3G/4G	3016A-C00 / 3008A-C00	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Ethernet & 3G/4G and LoRa	3016A-CL0 / 3008A-CL0	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Equatorial Orbit Satellite-Inmarsat	3016A-00I / 3008A-00I	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Equatorial Orbit Satellite-Inmarsat & 3G/4G	3016A-C0I / 3008A-C0I	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Low Earth Orbit Satellite - Globalstar	3016A-00G / 3008A-00G	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Satellite - Iridium Short Burst Data	3016A-00R / 3008A-00R	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Standalone RTU/NRL - Industrial	3004A-00 / 3004A-0L	Neon Remote Logger-4 Analog Ch with or without Touch Screen Display
Cellular RTU/NRL 3G/4G - Industrial	3004AC0 / 3004A-CL	Neon Remote Logger-4 Analog Ch with or without Touch Screen Display
M – Series Standalone RTU/NRL	3004A-M000 / 3004A-M0B0	Neon Remote Logger-4 Analog Ch with or without Li Battery
M – Series Cellular RTU/NRL 3G/4G	3004A-MC00 / 3004A-MCB0	Neon Remote Logger-4 Analog Ch with or without Li Battery
M – Series LoRa RTU/NRL	3004A-ML00 / 3004A-MLB0	Neon Remote Logger-4 Analog Ch with or without Li Battery
M – Series Ethernet RTU/NRL	3004A-MEBL	Neon Remote Logger-4 Analog Ch, Li Battery & LCD are optional
M – Series Microsatellite RTU/NRL	3004A-MHBL	Neon Remote Logger-4 Analog Ch, Li Battery & LCD are optional
M – Series Iridium Short Burst Data RTU/NRL	3004A-MIBL	Neon Remote Logger-4 Analog Ch, Li Battery & LCD are optional

NEON APPLICATION SOFTWARE - CUSTOMER SERVER

Options	Unidata Part Number	Description
Neon Applications Software	2302A	Neon Server Software Licence Incl 5 NAL
Neon Applications Software	2302A-10	Additional 10 NRT Access Licence
Neon Applications Software	2302A-20	Additional 20 NRT Access Licence
Neon Applications Software	2302A-50	Additional 50 NRT Access Licence

NEON HOSTING SERVICE - UNIDATA SERVER

Options	Unidata Part Number	Description
Neon Hosting Service	2301A	Neon Data Initial Subscription Setup Fee
Neon Hosting Service	2301A-01	Neon Data Service Fee for 1-50 NRT
Neon Hosting Service	2301A-02	Neon Data Service Fee for 51-100 NRT
Neon Hosting Service	2301A-10	Neon Data Service Fee Metering

DATALOGGER MANAGEMENT SOFTWARE

Options	Unidata Part Number	Description
Starlog V4 Management Software	6308A-AUE	STARLOG V4 Full Licence Key

AVAILABLE FROM: **Unidata Pty Ltd** I 40 Ladner Street, O'Connor, 6163 Western Australia I Tel: +61 8 9331 8600 I info@unidata.com.au

Tsunami Early Warning System 3318