

Original Developing on T.S. FUKAE MARU

<http://cs.maritime.kobe-u.ac.jp/e/>

# Navigation / Engine Data Acquisition & Transfer System using Ship's LAN

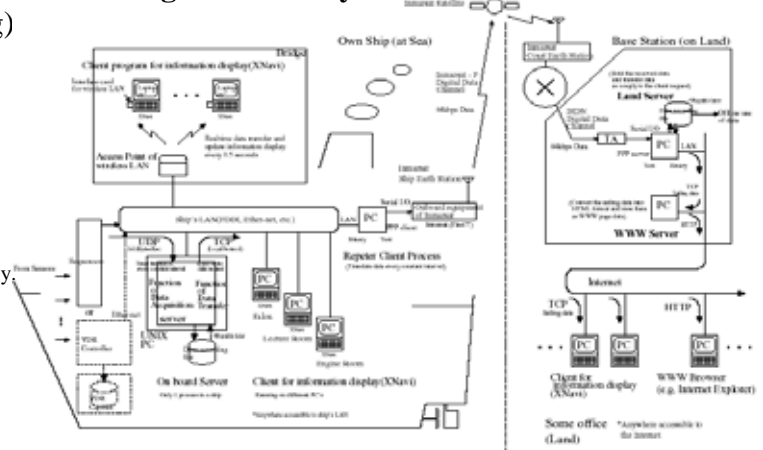
## Features

- Data Sensing (about 500 items)
- Data Recording (Every 0.5 sec for all items)
- Play back Data (on PC after voyage)
- Extract Data (specified items, desired interval)
- Output to Excel file format (for offline process)
- Navigation
  - ENC Display (IHO S-57 supported)
  - Scheduled "Course line" setting
  - ETA & "Distance remain" calculation
  - Simplified Ship Motion Estimation
  - Anchoring Monitor (Anchor Dragging warning)
- Engine Monitor
  - Display Warning Items in Data Logger
  - Display Load Curve
- Real-time Transfer of Acquired Data to Land using Inmar-Sat Data Channel

## Data Items

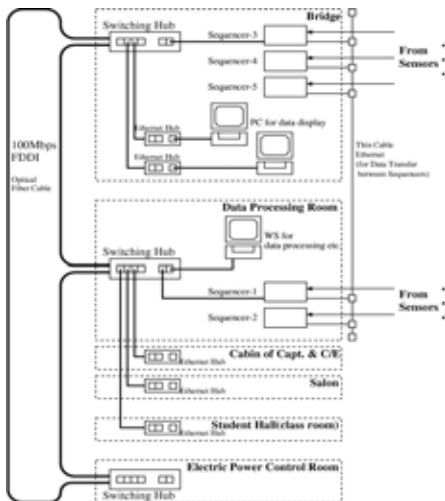
- Speed (EM log, Doppler log)
- Course (Gyro / Magnetic / GPS compass)
- Ship Position (D-GPS)
- ARPA targets (ARPA radar)
- AIS targets (AIS=Automatic Identification System)
- Weather/Sea Conditions (Temp., Wind, Current...)
- Main Engine, Generator, Electric System, etc.
- and the other Navi. & Eng. Data (about 500 items)

## Block diagram of the system

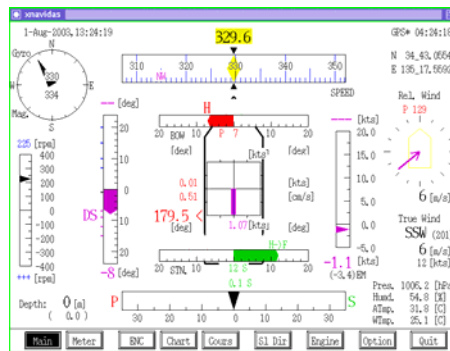


Entire program of the system are written by Wakabayashi-Lab., originally  
(System: UNIX FreeBSD + X Window / Language: C)

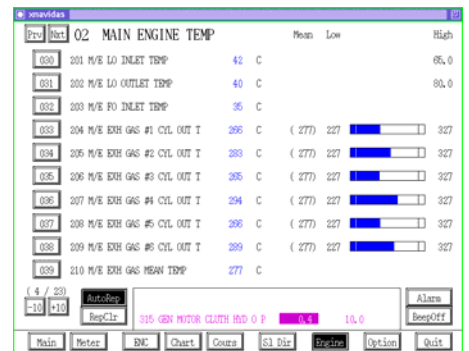
## Configuration of Ship's LAN on T.S. FUKAE MARU



## Examples of the display window



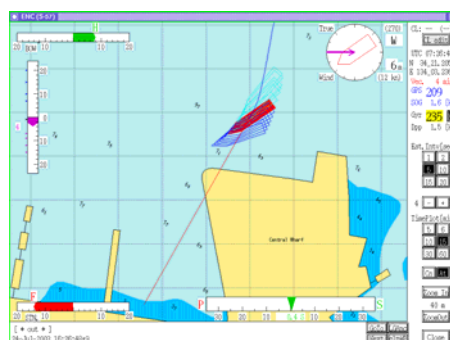
Main Window (Conning display)



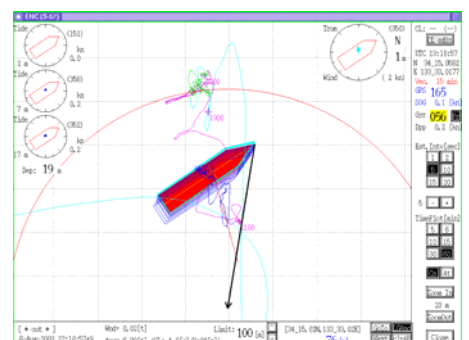
Main Window (Engine Monitor)



Navigation Window (in Sailing)



Navigation Window (Dep. from / Arr. to the berth)



Navigation Window (Anchoring Monitor)