

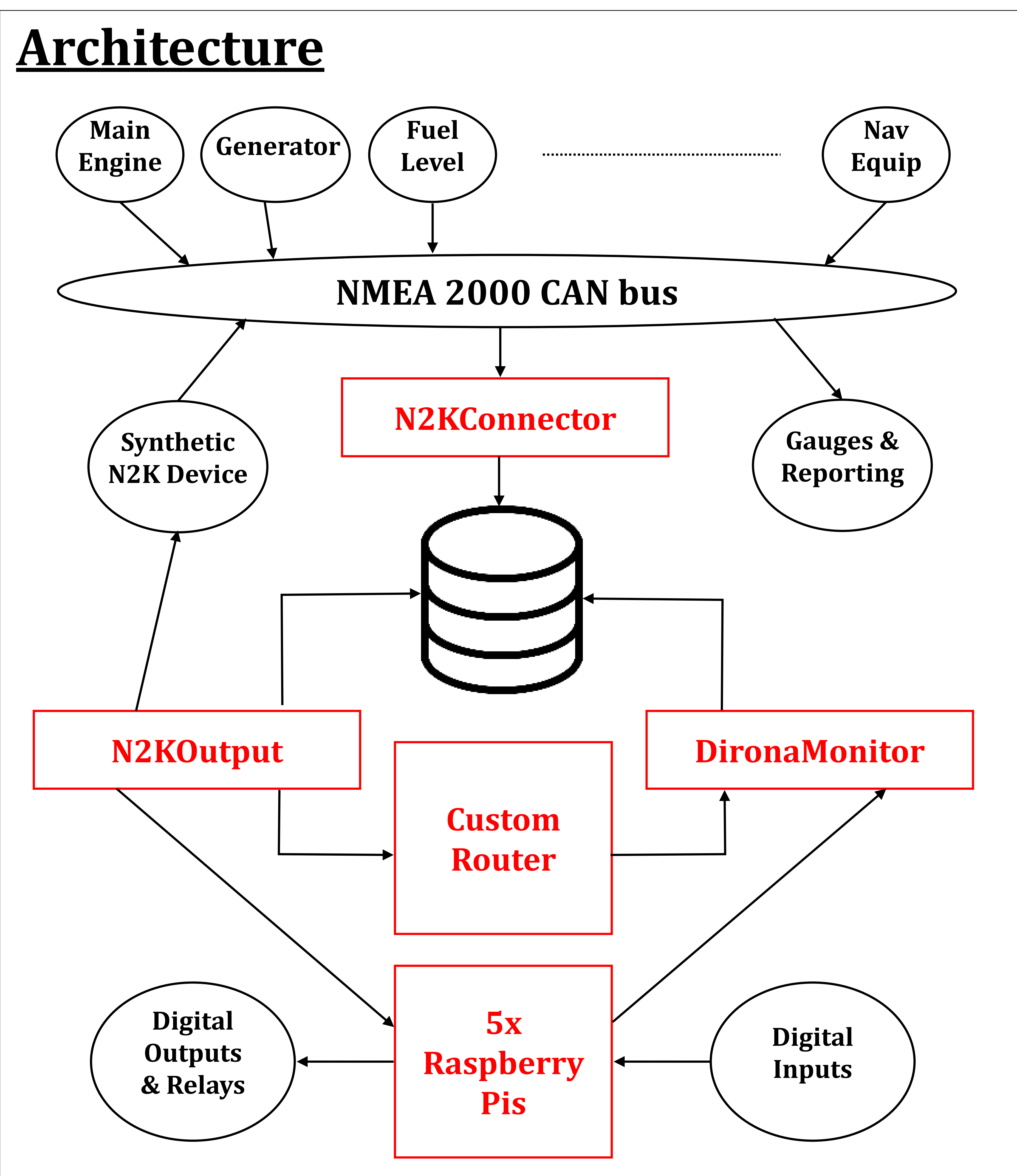
System Objectives

- **Simple for only 2 aboard at sea**
 - **Easy/no checklist**
 - **Auto operation & alerts**
- **Remote monitoring & control**

Use Cases

Alarms & Action	Remote Ctrl & Reporting	Real-Time Location to Web Site	Watch Alarm
Load Shedding	Generator Autostart	Auto Recovery	Router Control

Architecture



N2KConnector

- N2K data to DB
- < 1-sec cycle: fast update
- 4.5-sec cycle: full update
- 15-min cycle: location to web

N2KOutput

- Alerts & alarms
- Triggers
- Synthetic N2K devices
- 5-sec cycle
- Pluggable modules

DironaMonitor

- All non-N2K data to DB
- 5-sec cycle
- Pluggable modules

5 Raspberry Pis

- Digital input
- Digital output

Custom Router

- Auto WAN: WiFi, cell, satellite
- Remote access

Gauges & Reporting



Alarms & Actions

Wed 1/24/2018 4:51 PM
 jrh@mvdirona.com
 2018-01-24 16:50:21 ShorePower

To: JamesRobertHamilton@gmail.com; jennifer@mvdirona.com

Shore power outage just detected – 9.9 hours to alarm (voltage = 0).

Remote Control

- ER Covers On
- Set Verbose Mode
- Clear Chk Lite
- Flush Water Maker
- Allow 240V without Power
- Allow HVAC on Battery
- Allow H/W on Batt Discharge or Main Eng
- Disable Matrix4x4 Keyboard
- Block Full House Alarm
- Block Bilge Cycle Warn
- Force Start Bat Parallel
- Force Out Of Water Mode
- Enable ER Setpoint Fan W/O Engine
- ER Fan Setpoint
- 191 Low Shore Voltage
- Set Charger Lockout
- Set Gen Bat Equalize
- Set Shore Equalize
- 0.3 Set Trim Offset
- 0 Set Fuel Rate Bias
- 1.3 Charger 1 Max Amps
- 0 Charger 2 Max Amps
- 0 Min Charge Amps
- 0 Shore 1 Limit
- a Shore 2 limit

Watch Alarm & Fuel Mgmt

The interface shows a vertical scale for WWC with values 655, 491, 328, 164, and 0. A green button labeled 'VWC' is positioned next to the scale. Below the scale, a yellow button shows '122' and another yellow button shows '0'. At the bottom, there are 'Slower' and 'Faster' buttons, and numerical values '6.7' and '7.3' are displayed.