



# APPENDIX A: Q302 Trial Software Description Report

*Sonar test Bed Support for DRDC Atlantic Sea Trail Q302*

Chris Wheeler

General Dynamics Canada Ltd  
3785 Richmond Road  
Ottawa, Ontario  
K2H 5B7

PWGSC Contract Number: W7707-063585/A  
CSA: Jim Theriault: 902-426-3100 ext 376

**Defence R&D Canada - Atlantic**

Contract Report

DRDC Atlantic CR 2007-064

August 2007

**Canada**



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**Defence Research and Development Canada – Atlantic**

Contract Report  
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## **IMPORTANT INFORMATIVE STATEMENTS**

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# 1. Introduction

## 1.1 Overview

This report summarizes the hardware configuration and describes the software functionality, the software components, the shell scripts, the configuration files, and the procedures used to provide the dry-end active and passive sonar system functionality for the DASM array, the MANTArray, and sonobuoys during the trial Q302 onboard CFAV Quest conducted in the Bahamas, during the period 20 January 2007 to 4 February 2007.

## 1.2 Hardware Configuration

The hardware configuration for Q302 consisted of the following subsystems:

- a. Wet-end;
- b. Moist-end; and
- c. Dry-end.

## 1.3 Wet-End Configuration

The wet-end configuration consisted of the following components;

- a. DASM array:
  - i. 96 CORDS module; and
  - ii. 2 NAS modules.
- b. MANTArray:
  - i. 2x48 HF channel modules;
  - ii. 6x24 MF channel modules; and
  - iii. 2 NAS modules.
- c. Vertical Projector (VP2) – with only one free flood ring projector;
- d. Neutrally Buoyant Tow cable (NBC);
- e. Fiber Optic Transmitter modules (FOTX);
- f. Array winch;
- g. VP2 winch;
- h. DASM power supply;
- i. MANTA power supply; and
- j. GPS and omni sonobuoys.

## **1.4 Moist-End Configuration**

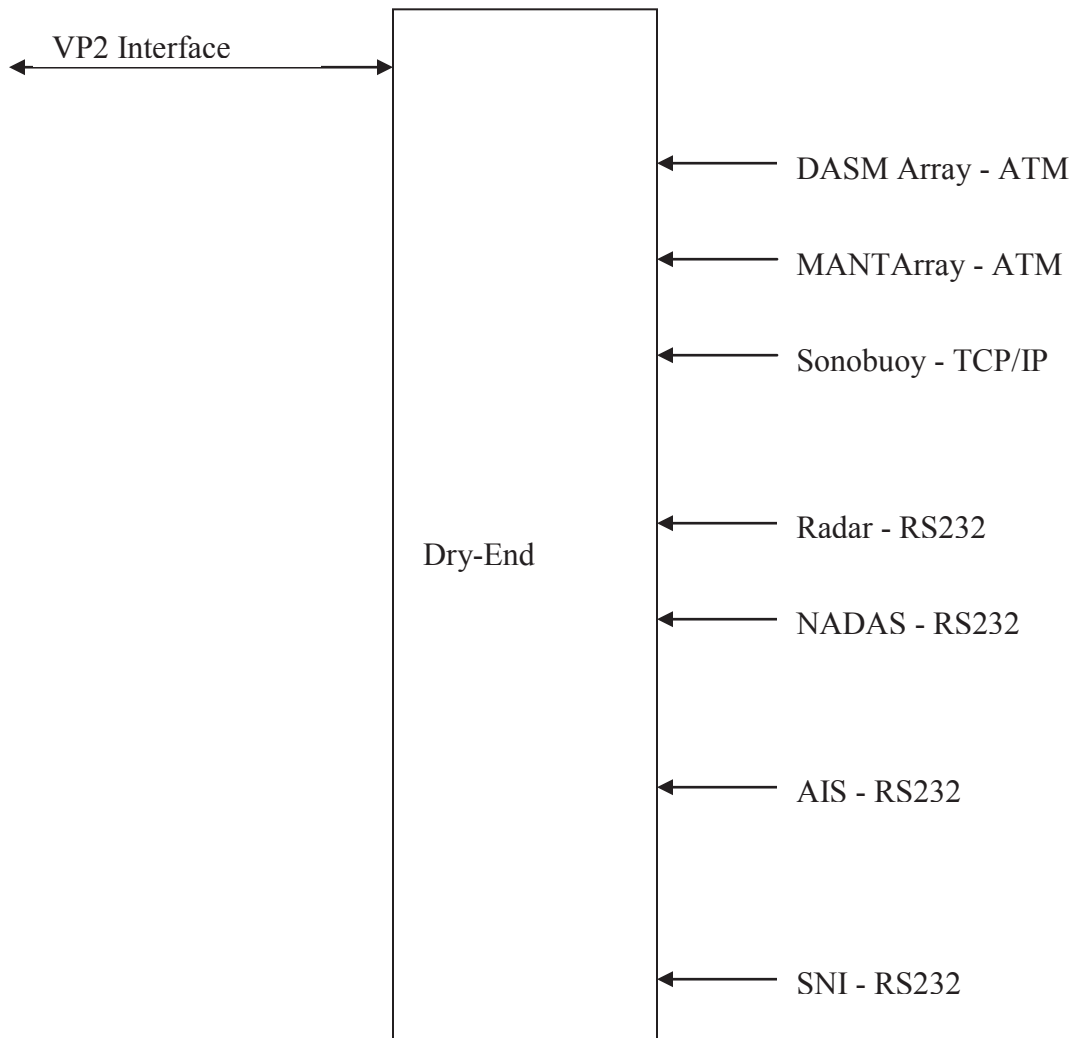
The moist-end configuration consisted of the following components:

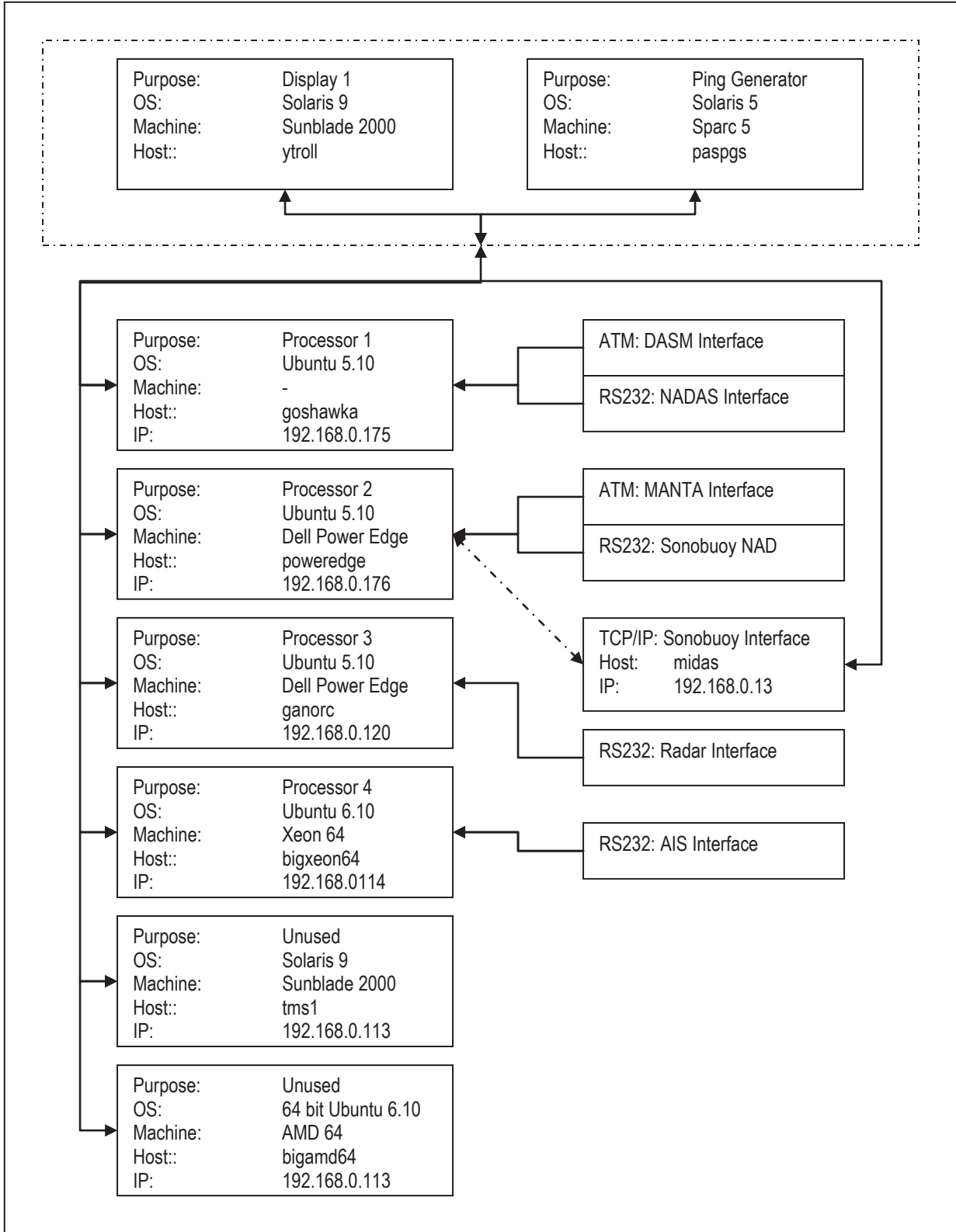
- a. MIDAS – miscellaneous data acquisition system;
- b. DASM ATM array receiver;
- c. MANTA ATM array receiver;
- d. VP2 amplifiers; and
- e. Sonobuoy receiver.

## 1.5 Dry-End Configuration

Figure 1 presents the external interfaces for the dry end. Figure 2 presents the hardware configuration for the dry-end.

**Figure 1. Dry End External Interfaces**





**Figure 2. Dry End Processors**

## **2. Dry-End Software Configuration**

The dry-end software consists of components of the Sonar Test Bed and segments of the USA DOD Defense Information Infrastructure Common Operating Environment (DII/COE) configured to provide the active and passive sonar system functionality identified in section 2.1.

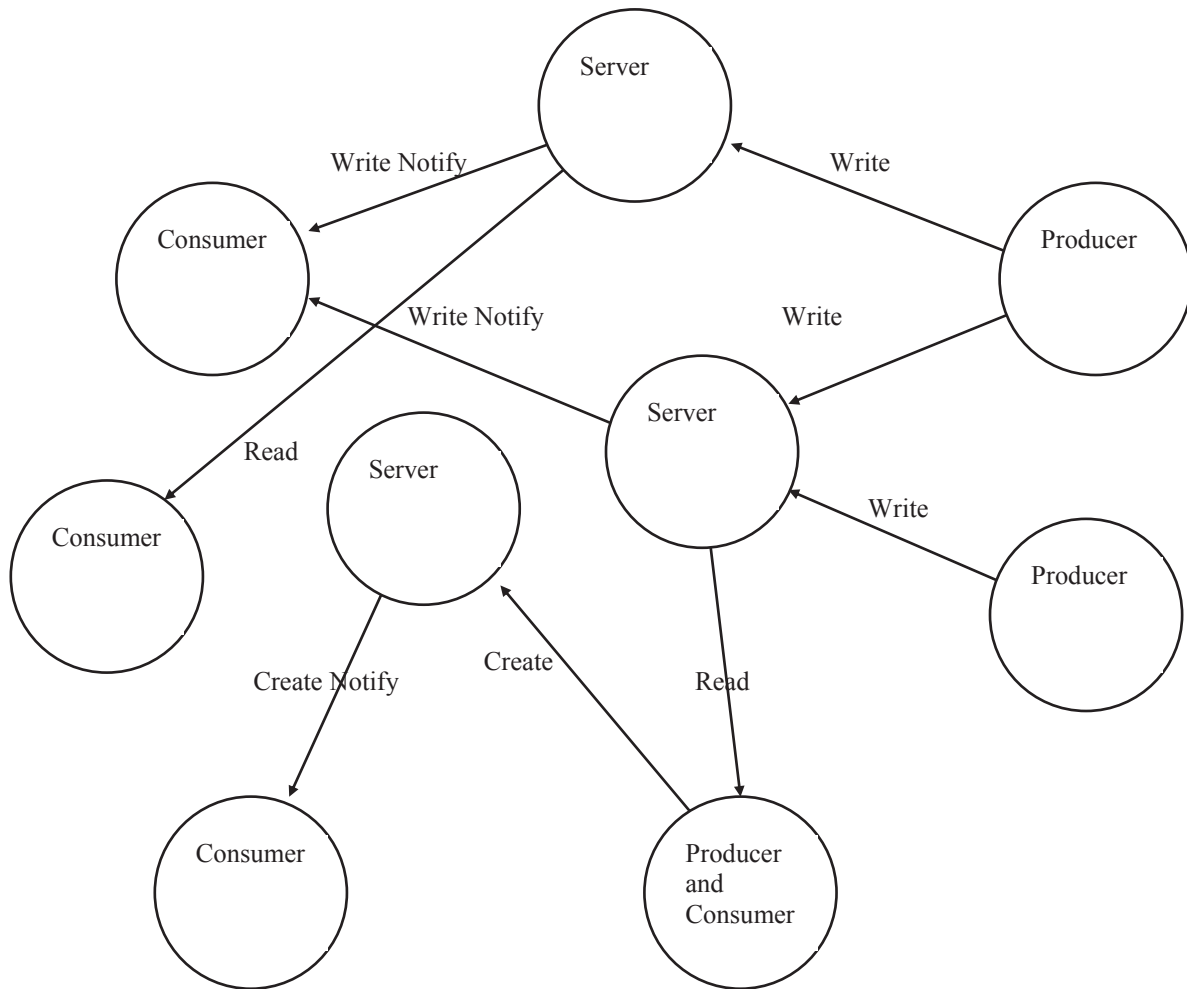
### **2.1 Software Functionality**

The dry-end software provides the following functionality:

- a. Data management and distribution;
- b. Data definition;
- c. External interfaces;
- d. Signal processing;
- e. Feature processing;
- f. Contact processing;
- g. Ping processing;
- h. Track processing; and
- i. Operator interface.

#### **2.1.1 Data Management and Distribution**

The data distribution and management functionality supports data producers, data consumers and data servers on a network of distributed processing resources. Software components are either data producers and/or data consumers, or data servers, but not both. The data producers and data consumers do not provide an intercomponent interface. The data servers provide distributed common services to data producers and data consumers to create and delete data items, discover and describe data items, read and write data item updates, subscribe for notification of data item creation and destruction, and subscribe for data item updates. Figure 3 presents a diagram that shows some of the interactions between generic data producer, data consumer, and data server components.



**Figure 3. Producer, Consumer and Server Component Interaction**



## 2.1.2 Data

The dry-end software components exchange data item updates to provide distributed functionality. The data server components support a general data model that is content independent and uses a set of metadata to describe data item attributes. Components that need to exchange data item updates use common data types. Where possible, specialized data types that have broad distribution between components have been generalized into common data types. The common data types are:

- a. Acoustic Data Type;
- b. Feature Data Type;
- c. Contact Data Type;
- d. Sensor Data Type;
- e. Time Data Type;
- f. Track Data Type;
- g. Waveform Data Type; and
- h. Wavetrain Data Type.

### 2.1.2.1 Acoustic Data Type

```
struct STB_acoustic_data_header_type {
    double time;
    char time_string[STB_TIME_LENGTH];

    long checkword;
    long checksum;

    // ping values
    long ping_flag;
    long ping_offset;
    long ping_to_ping_offset;

    double ping_time;
    double ping_latitude;
    double ping_longitude;
    double ping_speed;
    double ping_heading;

    // own values
    double latitude;
    double longitude;
    double speed;
    double heading;
```

```

// sensor values
double sensor_latitude;
double sensor_longitude;
double sensor_speed;
double sensor_heading;
double sensor_depth;
double sensor_gain;
double sensor_sensitivity;

double sound_speed;
double array_scope;
double temperature;
};

```

### **2.1.2.2 Feature Data Type**

```

struct STB_feature_data_v2_type {
    int check_word;
    int check_sum;
    double time;
    char time_string[STB_TIME_LENGTH];

    int command;
    int status;

    char name[STB_NAME_LENGTH];
    char associated_name[STB_NAME_LENGTH];
    double bearing;
    double bearing_variance;
    double bearing_rate;
    double bearing_rate_variance;
    double frequency;
    double frequency_variance;
    double frequency_rate;
    double frequency_rate_variance;
    double amplitude;
    double amplitude_variance;
    double range; // nautical miles
    double range_variance;
    double range_rate;
    double range_rate_variance;
    double doppler_speed; // knots
    double heading;
    double depth; // metres
    double speed; // knots
    double longitude;
    double latitude;
// uncertainty
    double major_axis_bearing;
    double major_axis_range;
    double minor_axis_range;

// sensor
    double sensor_heading;
    double sensor_depth;
    double sensor_speed;
    double sensor_longitude;

```

```

    double sensor_latitude;

//source
    double source_heading;
    double source_depth;
    double source_speed;
    double source_longitude;
    double source_latitude;
};

```

### 2.1.2.3 Contact Data Type

```

class STB_contact_data_class
{
    public:
    char name[40];
    char feature_name[40];
    char master_name[40];
    char classification[40];
    char time_string[32];
    long threat;
    long command;
    long status;
    long check_word;
    double time;

// contact
    double heading;
    double speed;
    double longitude;
    double latitude;
    double sound_speed;

// uncertainty
    double major_axis_bearing; // degree true
    double major_axis_range; // nautical miles
    double minor_axis_range; // nautical miles

// platform
    double ship_heading;
    double ship_speed;
    double ship_longitude;
    double ship_latitude;

// sensor
    double sensor_heading;
    double sensor_depth;
    double sensor_longitude;
    double sensor_latitude;

// measurement
    double amplitude;
    double amplitude_rate;
    double amplitude_variance;
    double bearing; // true bearing
    double bearing_rate;
    double bearing_variance;
    double bearing_rate_variance;
    double frequency;
    double frequency_rate;

```

```

double frequency_jitter;
double frequency_wander;
double frequency_variance;
double frequency_rate_variance;
double range;           // nautical miles
double range_rate;     // knots - + closing and - opening
};

```

#### **2.1.2.4 Sensor Data Type**

```

struct STB_sensor_data_type {
    int check_word;
    int check_sum;
    double time;
    char time_string[STB_TIME_LENGTH];
    int command;
    int status;
    double latitude;
    double longitude;
    double true_heading;
    double magnetic_heading;
    double speed;
    double depth;
    double pitch;
    double roll;
    double sound_speed;
    double magnetic_declination;
    double gain;
    double scope;
    double temperature;
    double voltage;
    double current;
    double tension;
};

```

#### **2.1.2.5 Time Data Type**

```

struct STB_time_data_type {
    double time;           // second count
    double difference;    // second difference from last record
    long cycle;           // cycle count
    long check_word;
    char time_string[STB_TIME_LENGTH]; // JJJ:HHMM:SS.TTT DD MMM YYYY
};

```

#### **2.1.2.6 Track Data Type**

```

struct STB_track_data_type {
    long status;
    long command;
    long check_word;
    long threat;
    double time;
    double speed;         // knots
    double heading;
    double longitude;
    double latitude;
};

```

```

// double depth;           // metres
// double range;          // metres
// double bearing;
// double cpa_time;
// double cpa_range;      // metres
// double cpa_bearing;
// double uncertainty;    // metres

char name[STB_NAME_LENGTH];
char time_string[STB_TIME_LENGTH]; // JJJ:HHMM:SS.TTT DD MMM YYYY
};

```

### **2.1.2.7 Waveform Data Type**

```

struct STB_waveform_v3_type {
    long check_word;
    long status;
    double time;
    double delay;
    double amplitude;
    double frequency; // center frequency
    double modulation_frequency; // SFM
    double modulation_index; // SFM
    double bandwidth;
    double duration;
    double weight;
    long waveform;
    long shading;
    char time_string[32];
    char name[32];
    char source_name[32];
};

```

### **2.1.2.8 Wavetrain Data Type**

```

struct STB_wavetrain_v2_type {
    waveform_v3_type waveform_table[WAVETRRAIN_V2_WAVEFORMS];
    double time;
    double ping_time;
    double latitude;
    double longitude;
    double heading;
    double speed;
    double depth;
    double power; // attenuation dB
    double bearing; // true, -1 omni
    double sound_speed;

    long waveforms;
    long check_word;
    char time_string[STB_TIME_LENGTH];
    char ping_time_string[STB_TIME_LENGTH];
    char name[STB_NAME_LENGTH];
    char source_name[STB_NAME_LENGTH];
    long command;
    long status;
};

```

### **2.1.3 External Interfaces**

The external interface functionality supports the input and/or output of data from the external interfaces identified in Figure 1. Each interface function is a standalone component that supports the protocol of the interface to input or output data across the interface and provide functionality to process data, and send and/or receive data item updates to/from one or more data servers.

#### **2.1.3.1 DASM Array Interface**

The DASM array interface function supports an ATM interface that receives DASM array data. The DASM array data consists of 256 channels of 24-bit data at a sample frequency of 4096 Hz. There are 96 channels of omni time series data and 96 channels of dipole time series data . This function subscribes to updates of the 0.125 second time data item. This function concatenates the channel time series from the array data into 0.25 second blocks of data and generates acoustic data updates for the DASM channel time series data item. This function averages the non-acoustic sensor values from the array data over a 0.25 second period and generates sensor data updates for the forward DASM sensor data item and the after DASM sensor data item. The forward DASM sensor values are heading, depth, roll and temperature. The after DASM sensor values are heading, depth and roll. The time value from the latest time data update is used to provide a time value for the acoustic data item updates and sensor data item updates.

#### **2.1.3.2 MANTArray Interface**

The MANTArray interface function supports an ATM interface that receives MANTA array data. The MANTA array data consists of 288 channels of 24-bit data at a sample frequency of 4096 Hz. There are 192 MF channels and 48 HF channels of time series data. This function subscribes to updates of the 0.125 second time data item. This function concatenates the channel time series from the array data into 0.25 second blocks of data and generates acoustic data updates for the MANTA channel time series data item. This function averages the non-acoustic sensor values from the array data over a 0.25 second period and generates sensor data updates for the forward MANTA sensor data item and the after MANTA sensor data item. The forward MANTA sensor values are heading, depth and temperature. The after MANTA sensor values are heading, depth and temperature. The time value from the latest time data update is used to provide a time value for the acoustic data item updates and sensor data item updates.

#### **2.1.3.3 Sonobuoy Interface**

The sonobuoy interface supports a TCP/IP socket interface that receives sonobuoy time series data. This function subscribes to updates of the 0.125 second time data item. This function concatenates the time series into 0.25 second blocks of data and generates acoustic data updates for the sonobuoy time series data item. The time value from the latest time data update is used to provide a time value for the acoustic data item updates.

#### **2.1.3.4 Sonobuoy NAD Interface (Not Available)**

A new interface will need to be developed for the GPS sonobuoy. However, there are no additional RS232 ports available.

The sonobuoy NAD interface function supports a RS232 serial interface that receives position reports at a periodic rate for one or more sonobuoys. Each position report includes a buoy identifier, a time, a latitude and a longitude. The time, latitude and longitude data from each position report is used to generate a track update for the associated sonobuoy track data item.

#### **2.1.3.5 Radar Interface**

The radar interface function supports a RS232 serial interface that receives radar contact reports at a periodic rate for one or more radar contact. Each contact report includes a contact identifier, a range, a bearing, a course and a speed. This function subscribes for updates of the own track data item. This functions uses the time, the latitude and the longitude from the latest update of the own track data item and the range and bearing from the radar contact reports to generate a latitude and longitude for the radar contract. For each radar contact report, this function generates an update for the associated radar track data item. This function creates a new radar track data item in the appropriate data server if the radar contact is new.

#### **2.1.3.6 NADAS Interface**

The NADAS interface function supports a RS232 serial interface that receives ship and environmental data updates at a periodic rate from the CFAV Quest Non-Acoustic Data Acquisition System. The ship and environmental data updates include time, ship speed, ship heading, ship latitude, ship longitude, bottom depth, wind speed, and wind direction.

#### **2.1.3.7 VP2 Interface**

The VP2 interface function supports two analogue 10 VPP output wavetrain channels, four digital TTL input fault channels and two digital TTL output enable channels. This function subscribes for updates of the ping notification data item for ping notifications. When a ping notification is received for the VP2, this function generates a 16-bit 2's complement wavetrain time series as specified in the ping notification update at a sample frequency of 20 kHz and outputs the time series on the enabled wavetrain output channels at the ping time specified in the ping notification update. Prior to the specified ping time, this function sets the specified output enable channels to the enabled state. When any output enable channels are enabled, this function periodically monitors the corresponding input fault channel for a fault state. When this function detects a fault on an input fault channel, this function terminates the generation of the wavetrain time series on the enabled wavetrain output channels. This function may be configured to ignore detected faults and continue generating the wavetrain time series.

## 2.1.4 Signal Processing

The signal processing functionality is divided into DASM, MANTA and sonobuoy signal processing functionality as described in the following paragraphs. There is no beamforming on this trail. There will however be ascans and lofargrams to determine array health.

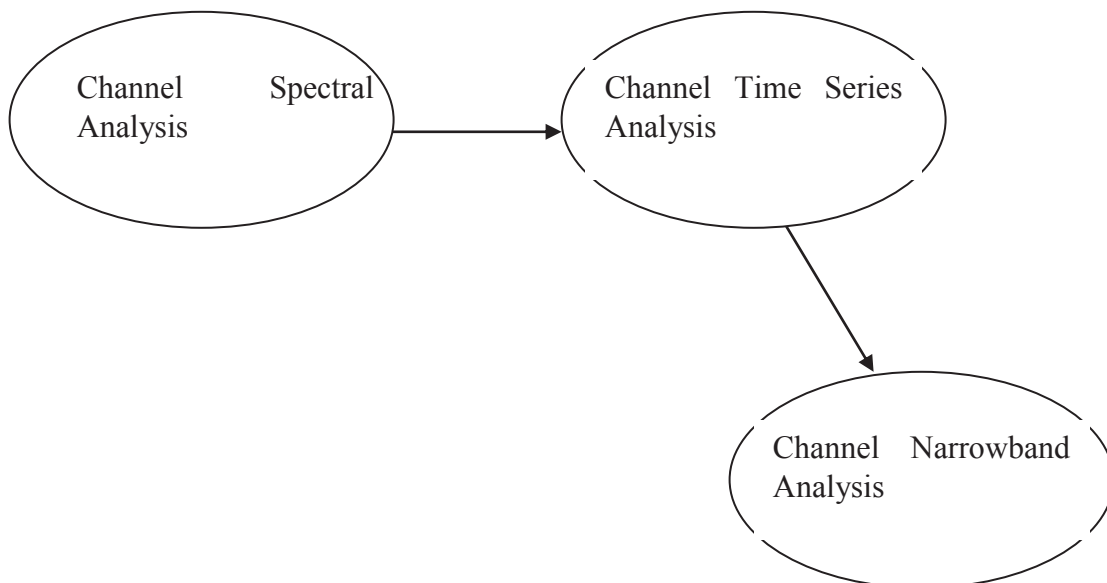
### 2.1.4.1 DASM Signal Processing

Figure 4 presents the DASM signal processing functionality.

The channel spectral analysis performs a 2048 point real FFT every 0.75 seconds on 192 channels (96 omni and 96 dipole ) of real time series with a 25 percent time series overlap to generate a 1 Hz complex spectra from 0 – 2047 Hz.

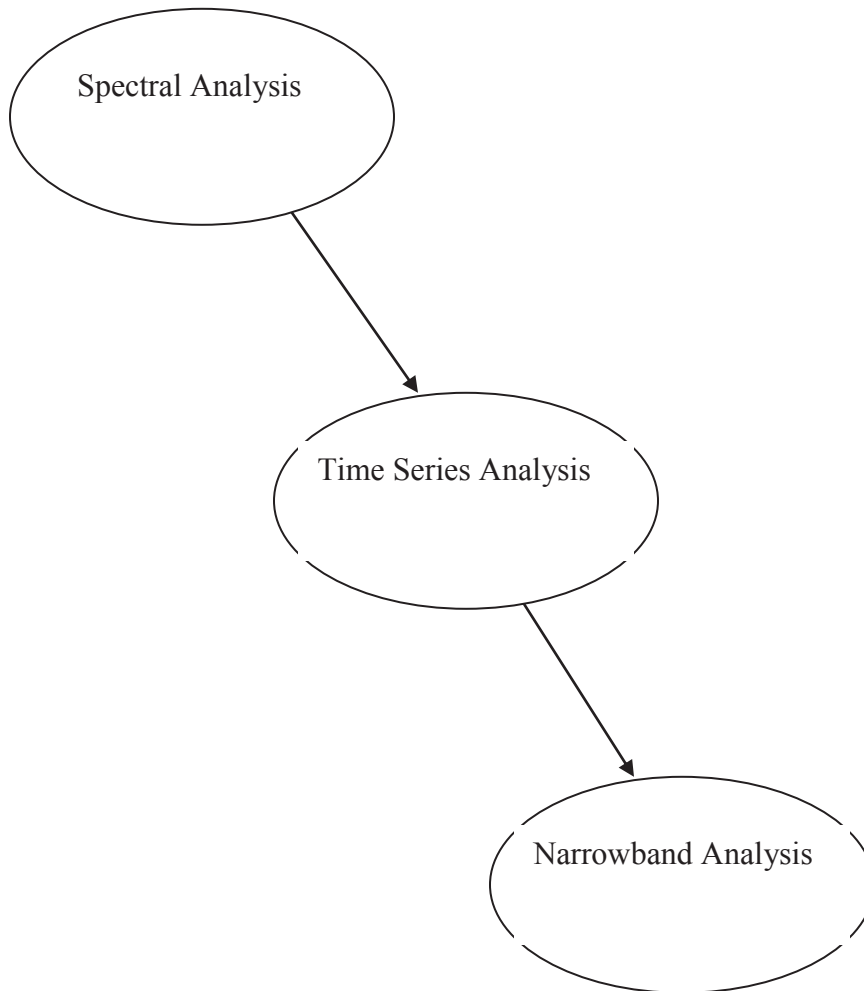
The channel time series analysis performs a 2048 point complex IFFT on 192 channels of complex spectra to generate a complex time series with a sample frequency and bandwidth of 2048 Hz and a heterodyne frequency of 1024 Hz. The first 25 percent of the complex time series points are discarded.

The channel narrowband analysis performs 1024 and 2048 point complex FFTs on 192 channels of 2048 Hz complex time series with a 50 percent overlap to generate normalized and quantized 3-bit pixel data at 1 Hz and 2 Hz resolution



**Figure 4. DASM and MANTA Signal Processing Functionality**





**Figure 5. Sonobuoy Signal Processing Functionality**

The beam narrowband analysis performs complex FFTs on complex beam time series to generate complex beam spectra at various resolutions with a 50 percent overlap of the time series. The complex beam spectra is converted to beam power spectra and integrated over a several time periods. The integrated beam power spectra is normalized and quantized to 3-bit pixel data.

#### **2.1.4.2 MANTA Signal Processing**

Figure 4 presents the MANTA signal processing functionality.

The channel spectral analysis performs a 4096 point real FFT every 0.75 seconds on 192 channels (144 MF and 48 HF) of real time series with a 25 percent time series overlap to generate a 1 Hz complex spectra from 0 – 2047 Hz.

The channel time series analysis performs a 2048 point complex IFFT on 192 channels of complex spectra to generate a complex time series with a sample frequency and bandwidth of 2048 Hz and a heterodyne frequency of 1024 Hz. The first 25 percent of the complex time series points are discarded.

The channel narrowband analysis performs 1024 and 2048 point complex FFTs on 192 channels of 2048 Hz complex time series with a 50 percent overlap to generate normalized and quantized 3-bit pixel data at 1 Hz and 2 Hz resolution.

#### **2.1.4.3 Sonobuoy Signal Processing**

Figure 5 presents the sonobuoy signal processing functional interaction.

The spectral analysis performs a 4096 point real FFT every 0.75 seconds on 16 channels of real time series with a 25 percent time series overlap to generate a 1 Hz complex spectra from 0-2047 Hz.

The time series analysis performs a 2048 point complex IFFT on 16 channels of complex spectra to generate a complex time series with a sample frequency and bandwidth of 2048 Hz and a heterodyne frequency of 1024 Hz. The first 25 percent of the complex time series points are discarded.

The narrowband analysis performs 1024 and 2048 point complex FFTs on 16 channels of 2048 Hz complex time series with a 50 percent overlap to generate normalized and quantized 3-bit pixel data at 1 Hz and 2 Hz resolution.

### 2.1.5 Ping Processing

The ping processing functionality provides ping management functions to create waveform, wavetrain and ping sequence data items, and to schedule ping sequences. A ping sequence consists of a series of wavetrains transmitted at a periodic rate. A wavetrain consists of 1 or more waveforms. A waveform is a basic signal including continuous wave (CW), linear frequency modulated (LFM), hyperbolic frequency modulated (HFM) and sinusoidal frequency modulated (SFM). Complex signals such as a Costas signal are specified as a wavetrain of CW waveforms.

This function creates waveform, wavetrain and ping sequence data items in specified waveform, wavetrain and ping sequence groups on specified data servers. This function subscribes for updates of a specified ping control data item. A ping control update contains a command attribute, a ping sequence name, a source name, a gain level and a time. The ping control commands include start, stop and pause.

When a ping control update is received, this function executes the specified command. If the start command is specified this function schedules the specified ping sequence for the specified source starting at the specified time with the specified gain applied to the gain already specified in the ping sequence. This function generates a pre-ping notification update for a specified pre-ping notification data item a specified number of seconds prior to the scheduled ping time. This function generates a ping notification update for a specified ping notification data item at the scheduled ping time. The pre-ping notification and ping notification updates specify the source name, source latitude, source longitude, source course, source speed, wavetrain name, and the name, type, delay, gain, frequency, bandwidth, modulation index, modulation frequency for each waveform in the wavetrain.

## **2.1.6 Track Processing**

The track processing functionality provides track management, track extrapolation and track interpolation functions as described in the following paragraphs.

### **2.1.6.1 Track Management**

The track management functions supports the creation, destruction and update of track data items in specified track groups on specified data servers

### **2.1.6.2 Track Extrapolation**

The track extrapolation function generates track position updates for track data items in specified track groups on specified data servers that have an extrapolate status.

This function subscribes for track data item creation and destruction notifications. When a track data item creation notification is received this function subscribes for updates of the track data item. When a track update is received, this function checks the status value to determine if the track is an extrapolated track.

This function subscribes for updates of a specified time data item. When time updates are received, this function generates a new position for each extroplated track using the previous position, course, speed and the time difference. This function generates a track update for the track data item.

### **2.1.6.3 Track Interpolation**

The track interpolation function generates track position updates for track data items in specified track groups on specified data servers that have an interpolated status.

This function subscribes for track data item creation and destruction notifications. When a track data item creation notification is received this function subscribes for updates of the track data item. When a track update is received, this function checks the status value to determine if the track is an interpolated track. If the track is an interpolated track, this function reads the track records of the specified reference track data item that are before and after the time in the time update.

This function subscribes for updates of a specified time data item. When time updates are received, this function generates a new position for each interpolated track using the current and next specified reference track positions and the time difference. This function generates a track update for the track data item.

### 2.1.7 Operator Interface

The operator interface functionality provides input and output functions to control and monitor other functionality, and display and analyse the data generated by the other functionality. The input functionality is provided by keyboard, trackball, button and touch screen hardware. The output functionality is provided by graphics displayed on video monitors and audio streamed through headphones.

This function provides a set of displays with associated tools to display and analyse data.

a. Displays:

- i. lscan – lofargram (manta, dasm, sonobuoy );
- ii. ascan – (manta, dasm, sonobuoy );
- iii. Ping control;
- iv. Track manager; and
- v. Button manager.

## 2.2 Component Identification

The sonar test bed consists of a set of software components that provide data independent, data dependent and application specific functionality. Each component is a standalone executable and is configured using a configuration file. An application can run multiple instances of a component to distribute processing across multiple processors.

The list of STB components includes:

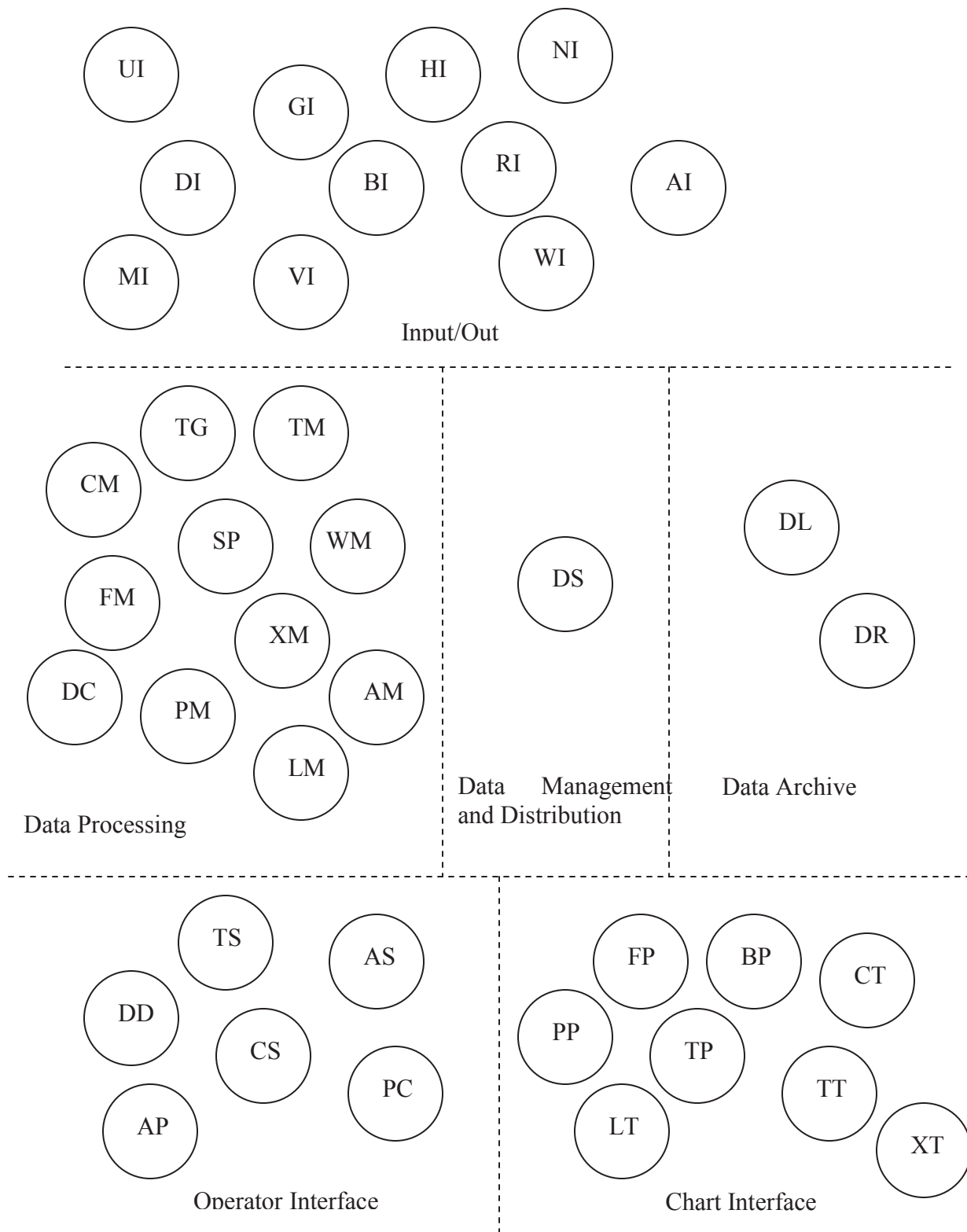
- a. Acoustic Display (AD) – JAVA GUI component that provides ASCAN(ALI), BSCAN(BTI) and LSCAN(LOFAR) displays with associated tools.
- b. Alert Summary (AS) – JAVA GUI component generates a tabular display of alert reports.
- c. Amplifier Interface (AI) – generates analogue wavetrain signal on trigger from IRIG time signal and monitors input fault lines.
- d. Audio manager (AM) – generates a time series stream from historical spectra at specified direction and time.
- e. Audio Player (AP) – JAVA GUI component that provides functionality to control and play time series through local audio device.
- f. Sonobuoy interface (BI) – TCP/IP socket interface application supporting the MIDAS protocol.
- g. Bearing Plotter (BP) – Chart GUI component that provides functionality to plot feature bearing lines, ambiguous bearing lines and range ellipses.
- h. CANTASS array interface (CI) – RS422 16-bit parallel interface application that receives data from CANTASS Gould array receiver and generate acoustic time series updates and non-acoustic sensor updates.
- i. Contact manager (CM) – generates and correlates contact data reports from passive feature data reports.
- j. Contact Plotter (CP) – JAVA Chart GUI component plots contact reports on concentric rings on the chart display centered on a track.
- k. Contact Summary (CS) – JAVA GUI component that provides tabular display of contact reports.
- l. Contact Tool (CT) – JAVA chart GUI component that provides functionality to create contacts.
- m. Cluster Tool (XT) – generates a weighted average position for a group of features bounded by an ellipse.
- n. Data display (DD) – X application that provides ASCAN(ALI), BSCAN(BTI) and LSCAN(LOFAR) displays with associated tools, tactical displays, and sensor displays.
- o. Polar Display (PD) – JAVA GUI component that provides a polar display for active data with associated tools.

- p. Data Browser(DB) – JAVA GUI component.
- q. Data Editor(DE) – command line GUI component.
- r. Data logger (DL) – writes to text formatted disk files specified data updates.
- s. Data Recorder (DR) – writes data updates to disk or tape files.
- t. Data Player (DP) – replays data updates from disk or tape files.
- u. DAT32 Data Recorder (DR.DAT32) – writes single data item updates to disk or tape files in DRDC Atlantic DAT32 format.
- v. DAT32 Data Player (DP.DAT32) – replays single data item updates from disk or tape files in DRDC Atlantic DAT32 format.
- w. Data Server (DS) – provides data management and distribution services to all non-data server STB components.
- x. DASM Array interface (DI) – ATM interface application that receives DASM array data and generates acoustic time series updates and non-acoustic sensor updates.
- y. Feature Manager (FM) – provides broadband and narrowband passive signal detection, signal estimation and signal following functionality.
- z. Feature Plotter (FP) – Chart GUI component plots active feature reports on chart.
- aa. GPS interface (GI) – RS232 serial line interface application that receives latitude, longitude, course and speed reports and generates track updates.
- bb. HPA NAD interface (HI) - RS232 serial line application that receives HPA heading, depth, temperature and pressure reports and generates sensor updates.
- cc. Localization Manager (LM) – generates a localization estimate from a series of contact reports using DRDC Atlantic grid search algorithm.
- dd. Localization Plotter (LP) – plots the localization results on the chart.
- ee. Localization Tool (LT) -
- ff. MANTArray interface (MI) – ATM interface application that receives MANTArray data and generates acoustic time series updates and non-acoustic sensor updates.
- gg. NADAS interface (NI) - RS232 serial line application that receives own ship latitude, own ship longitude, own ship course, own ship speed, wind heading and wind speed, and water depth reports and generates own ship track updates.
- hh. Menu Display (MD) – JAVA GUI application that provides menu display and selection, and message areas.
- ii. Ping Controller (PC) – JAVA GUI application that controls ping selection, ping source and ping sequence.
- jj. Ping Manager (PM) – manages synchronous and asynchronous ping scheduling.
- kk. Ping Plotter (PP) – Chart GUI component that generates enlarging ellipses on chart indicating outgoing ping, received sound and processing latency.

- ll. Rader Interface (RI) – RS232 serial line application that receives radar contact reports, creates tracks and generates track updates.
- mm. System Manager (SM)
- nn. Sensor manager (XM) – generates extended sensor data including position estimates for towed sensors, sound speed estimates, true heading of sensor and water depth under sensor.
- oo. Signal Processor (SP) – provides macro level sonar signal processing functionality.
- pp. Time Generator (TG) – generates periodic time updates.
- qq. Track Manager (TM) – provides track management functionality including waypoint interpolation and extrapolation.
- rr. Track Plotter (TP) – Chart GUI component that plots track reports on the chart display.
- ss. Track Summary (TS) – JAVA GUI component that provides tabular display of track reports.
- tt. Track Tool (TT) – JAVA chart GUI component that provides functionality to create tracks.
- uu. UAT interface (UI) – TCP/IP socket interface application that receives UAT latitude and longitude reports and generates UAT track reports.
- vv. VP2 NAD interface (VI) – RS232 serial interface application that receives VP2 depth and acceleration reports and generates VP2 sensor reports.
- ww. Winch interface (WI) - RS232 serial interface application that receives winch scope reports and generates winch sensor reports.
- xx. Waveform manager (WM) – manages waveform, wavetrain and ping sequence definitions.

Figure 6 graphically groups the above software components in to one of six functional groups.





**Figure 6. Software Component Groupings**

## 2.3 Component Allocation

The STB components and configuration files that were allocated to the processors to support the dry-end applications were:

Note that all script source stb.cfg. There are two stb.cfg configuration used. One is stb.cfg.q302, which is the live configuration. Another configuration is stb.cfg.sim, which is used for offline testing.

- a. Any host:
  - i. DE.Q302; and
  - ii. JDE.
- b. goshawka – processor 1: 192.168.0.175:
  - i. DI.Q302 di.cfg, <atm interface>;
  - ii. NI.Q302 ni.cfg, <serial interface>; and
  - iii. DS.Q302.DA.IN ds.cfg.dasm.in.
- c. poweredge – processor 2: 192.168.0.176:
  - i. MI.Q302 mi.cfg, <atm interface>;
  - ii. DS.Q302.MA.IN ds.cfg.manta.in;
  - iii. BI.Q302 bi.cfg <over existing ethernet>;
  - iv. DS.Q302.SB.IN ds.cfg.sb.in; and
  - v. SNI.Q302 sni.cfg, <serial interface>.
- d. ganorc – processor 3: 192.168.0.120:
  - i. NS.Q302;
  - ii. DS.Q302.DA.CH ds.cfg.dasm.ch;
  - iii. DS.Q302.MA.CH ds.cfg.manta.ch;
  - iv. DS.Q302.SB.CH ds.cfg.sb.ch;
  - v. DS.Q302.NAD ds.cfg.nad;
  - vi. SP.Q302.DA.TS sp.cfg.dasm.ts;
  - vii. SP.Q302.DA.CH sp.cfg.dasm.ch;
  - viii. SP.Q302.MA.TS sp.cfg.manta.ts;
  - ix. SP.Q302.MA.CH sp.cfg.manta.ch;
  - x. SP.Q302.SB.CH sp.cfg.sb.ch;
  - xi. SP.Q302.SB.TS sp.cfg.sb.ch;
  - xii. XM.Q302.MANTA xm.cfg.manta;
  - xiii. XM.Q302.DASM xm.cfg.dasm;
  - xiv. XM.Q302.VP2 xm.cfg.vp2;

- xv. TM.Q302 tm.cfg;
  - xvi. GM.Q302 gm.cfg;
  - xvii. PM.Q302 pm.cfg;
  - xviii. WM.Q302 wm.cfg;
  - xix. TG.Q302 tm.cfg; and
  - xx. RI.Q302 ri.cfg, <serial interface>.
- e. bigzeon64 – processor 4: 192.168.0.114:
- i. AI.Q302 ai.cfg <serial interface>;
  - ii. DP.Q302 dp.cfg;
  - iii. DAT.Q302.SB dat.cfg.sb;
  - iv. DAT.Q302.MANTA dat.cfg.manta;
  - v. DAT.Q302.DASM dat.cfg.dasm; and
  - vi. DR.Q302 dr.cfg.
- f. tms – processor 5.
- g. y troll - processor 6:
- i. TP tp.cfg.
- h. paspgs – processor 7:
- i. PG.Q302 pg.cfg.
- i. Display – processor 9:
- i. DD.Q302.DA.AS dd.cfg.da.ascan;
  - ii. DD.Q302.DA.LS dd.cfg.da.lscan;
  - iii. DD.Q302.MA.AS dd.cfg.ma.ascan;
  - iv. DD.Q302.MA.LS dd.cfg.ma.lscan;
  - v. DD.Q302.SB.LS dd.cfg.sb.ascan;
  - vi. DD.Q302.SB.AS dd.cfg.sb.lscan;
  - vii. DD.Q302.KP dd.cfg.kp;
  - viii. DD.Q302.TS dd.cfg.ts; and
  - ix. DD.Q302.CHAT dd.cfg.chat.

## 3. Shell Script Identification

The dry-end software applications were started and stopped through a sequence of nested UNIX tcsh scripts that were either locally executed in a terminal session or remotely executed through the ssh utility. Data server scripts were separated from application scripts because most data items were statically defined in data server configuration files and all the data servers had to be running prior to the applications running.

### 3.1 Processor Start Scripts

#### 3.1.1 All Processors: start\_stb.q302

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_stb.local,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:59 $
# $Author: inglis $
#
source ./stb.cfg.q302
start_mode.q302
#
# master host
# ganorc
# runs name service, majority of data servers, signal processing, data processing
echo "spinning up ganorc"
ssh $PROC3 "cd ./"${DIR}";start_stb.proc.3; exit" & # RI_IF, BI_IF
#
sleep 60
#
# child hosts
# note: these host have dependencies to the master host

echo "spinning up bigxeon64 processes"
ssh $PROC4 "cd ./"${DIR}";start_stb.proc.4; exit" &# AIS_IF

# y troll
#ssh $PROC7 "cd ./"${DIR}";start_stb.proc.7; exit" &# VP2
#
# paspgs
# sleep 10
# echo "spinning up paspgs processes"
# ssh "pascam@paspgs" "cd /export/home/pascam/src/atass/IF/pgs_interface.061016/bin; start_pg; exit" &
#
sleep 10
echo "spinning up stbdisplay processes"
#start_stb.proc.9 &
ssh -X $PROC9 "cd ./"${DIR}";start_stb.proc.9" & # DD

# remote chart
```

```

sleep 10
start_chart.remote &
startJDE &
#
sleep 60
#
echo "spinning up goshawka processes"
ssh $PROC1 "cd ./${DIR}";start_stb.proc.1; exit" &# DI_IF, NI_IF

echo "spinning up poweredge processes"
ssh $PROC2 "cd ./${DIR}";start_stb.proc.2; exit" &# MI_IF

# end

```

### 3.1.2 Processor 1 (goshawka): start\_stb.proc.1

```

#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_stb.local,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:59 $
# $Author: inglis $
#
source ./stb.cfg
#
# start_ns
#
# start_ds.da.in "-t"
#
sleep 5
#
# interface components
#
start_di
start_ni
#
# end

```

### 3.1.3 Processor 2 (poweredge): start\_stb.proc.2

```

#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_stb.local,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:59 $
# $Author: inglis $
#
source ./stb.cfg
#
#start_ns
#
# data server component
#

```

```

#start_ds.ma.in
#
sleep 5
#
# interface components
#
start_mi # manta interface
start_sni # sonobuoy nad interface
start_bi # sonobuoy interface
# start_wi
#
# end

```

### 3.1.4 Processor 3 (ganorc): start\_stb.proc.3

```

#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_stb.local,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:59 $
# $Author: inglis $
#
source ./stb.cfg
#
echo "starting name service"
start_ns
#
sleep 5
#
# data server components
#
echo "starting data server dasm input"
ssh ${PROC1} "cd ./"${DIR}"; ./start_ds.da.in; exit" &

echo "starting data server dasm channel"
start_ds.da.ch # "-t"

echo "starting data server manata input"
ssh ${PROC2} "cd ./"${DIR}"; ./start_ds.ma.in; exit" &

echo "starting data server manta channel"
start_ds.ma.ch # "-t"

echo "starting data server NAD"
start_ds.nad # "-t"

echo "starting data server sonobuoy input"
#start_ds.sb.in # "-t"
ssh ${PROC2} "cd ./"${DIR}"; ./start_ds.sb.in; exit" &

echo "starting data server sonobuoy channel"
start_ds.sb.ch # "-t"
#

```

```

echo "waiting for data servers to spin up"
sleep 30
echo "data servers running"
#
echo "copying ior file to paspgs"
#
scp ./nad.ior pascam@paspgs:/export/home/pascam/src/atass/IF/pgs_interface.061016/bin
#
echo "starting the time generator"
start_tg "-x"

# recording components
#
# start_dr
# start_dl
#
# interface components
#
echo "starting sonobuoy interface"
#start_bi

echo "starting radar interface"
start_ri
#
# data processing components
#
echo "starting waveform manager"
start_wm

# echo "starting ping manager"
# start_pm

echo "starting track manager"
start_tm

echo "starting geomagnetic manager"
start_gm

echo "starting sensor manager dasm"
start_xm.dasm

echo "starting sensor manager manta"
start_xm.manta

echo "starting sensor manager vp2"
start_xm.vp2

#
# signal processing components
#
echo "starting signal processor dasm time series"
start_sp.da.ts

```

```
echo "starting signal processor dasm channel"
start_sp.da.ch
echo "starting signal processor manta time series"
start_sp.ma.ts
echo "starting signal processor manta channel"
start_sp.ma.ch
echo "starting signal processor sonobuoy time series"
start_sp.sb.ts
echo "starting signal processor sonobuoy channel"
start_sp.sb.ch
exit
# end
```

### **3.1.5 Processor 4 (bigxeon64): start\_stb.proc.4**

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_stb.local,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:59 $
# $Author: inglis $
#
source ./stb.cfg
#
# start_ns
#
start_ai
start_dl
#
# end
```

### **3.1.6 Processor 5 (bigamd64)**

NOT USED

### **3.1.7 Processor 6 (tms1)**

NOT USED



### 3.1.8 Processor 7 (ytroll)

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_stb.local,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:59 $
# $Author: inglis $
#
source ./stb.cfg
#
start_dd.chat
start_dd.ps
#
# end
```

### 3.1.9 Processor 8 (paspgs)

See section 3.1.1.

### 3.1.10 Processor 9 (stbdisplay)

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_stb.local,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:59 $
# $Author: inglis $
#
source ./stb.cfg
#
# display components
#
start_dd.kp
start_dd.ps
start_dd.ts
start_dd.chat

start_dd.da.lscan
start_dd.ma.lscan
start_dd.sb.lscan

start_dd.da.ascan
start_dd.ma.ascan
start_dd.sb.ascan
#
#####
# utility components
#####
#start_chart.remote
#startJDE
# end
```

## 3.2 Processor Stop Scripts

### 3.2.1 All Processors

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_stb.local,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:59 $
# $Author: inglis $
#
source ./stb.cfg
#
# master host
# runs name service, majority of data servers, signal processing, data processing
ssh $PROC1 "cd ./"${DIR}";stop_stb &" & # DI_IF, NI_IF
ssh $PROC2 "cd ./"${DIR}";stop_stb &" & # MI_IF, WI_IF
ssh $PROC4 "cd ./"${DIR}";stop_stb &" & # AIS_IF
ssh ytroll "cd ./"${DIR}";stop_chart &" &
ssh $PROC7 "cd ./"${DIR}";stop_stb &" & # AIS_IF
ssh $PROC9 "cd ./"${DIR}";stop_stb &" & # AIS_IF
ssh pascam@paspgs "pkill PG" & # Ping Generator
ssh $PROC3 "cd ./"${DIR}";stop_stb &" & # RI_IF, BI_IF
#
#
# end
```

### 3.2.2 Local Processor

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/stop_stb,v $
# $Revision: 1.8 $
# $Date: 2005/06/22 15:46:01 $
# $Author: inglis $
#
source ./stb.cfg
#
ps -ae | grep $APP
#
pkill -9 $APP
pkill -9 java
pkill -9 JDE
#
sleep 2
#
# end
```

## 3.3 Data Server Start Scripts

### 3.3.1 Name Service: start\_ns

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_ns,v $
# $Revision: 1.5 $
# $Date: 2005/02/22 17:26:25 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill NS."$APP"
#
sleep 2
#
./NS."$APP" $1 $NS_FLAG &
#
# end
```

### 3.3.2 DASM Channel: start\_ds.da.ch

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_ds.proc.7,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:51 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DS."$APP".DA.CH
#
sleep 2
#
cp ./data_server DS."$APP".DA.CH
./DS."$APP".DA.CH -c ds.cfg.dasm.ch -n DS_DASM_CH $DS_FLAG $1 &
#
# end
```

### 3.3.3 DASM Input: start\_ds.da.in

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_ds.proc.2,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:50 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DS."$APP".DA.IN
#
sleep 2
#
./DS."$APP".DA.IN -c ds.cfg.dasm.in -n DS_DASM_IN $DS_FLAG $1 &
#
# end
```

### 3.3.4 MANTA Channel: start\_ds.ma.ch

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_ds.proc.7,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:51 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DS."$APP".MA.CH
#
sleep 2
#
./DS."$APP".MA.CH -c ds.cfg.manta.ch -n DS_MANTA_CH $DS_FLAG $1 &
#
# end
```

### 3.3.5 MANTA Input: start\_ds.ma.in

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_ds.proc.1,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:50 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DS."$APP".MA.IN
#
sleep 2
#
./DS."$APP".MA.IN -c ds.cfg.manta.in -n DS_MANTA_IN $DS_FLAG $1 &
#
# end
```

### 3.3.6 Sonobuoy Channel: start\_ds.sb.in

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_ds.proc.11,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:50 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DS."$APP".SB.IN
#
sleep 2
#
./DS."$APP".SB.IN -c ds.cfg.sb.in -n DS_SB_IN $DS_FLAG $1 &
#
# end
```

### 3.3.7 Sonobuoy Input: start\_ds.sb.ch

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_ds.proc.11,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:50 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DS."$APP".SB.IN
#
sleep 2
#
./DS."$APP".SB.IN -c ds.cfg.sb.in -n DS_SB_IN $DS_FLAG $1 &
#
# end
```

### 3.3.8 Non Acoustic Data (NAD): start\_ds.nad

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_ds.proc.1,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:50 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DS."$APP".NAD
#
sleep 2
#
./DS."$APP".NAD -c ds.cfg.nad -i nad.ior -n $DS $DS_FLAG $1 &
#
# end
```

## 3.4 Signal Processing Start Scripts

### 3.4.1 DASM Channel: start\_sp.dasm.ch

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_sp.proc.3,v $
# $Revision: 1.7 $
# $Date: 2005/06/22 15:47:46 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill SP."$APP".DA.CH
#
sleep 2
#
./SP."$APP".DA.CH -c sp.cfg.dasm.ch -n DS_DASM_CH $STB_FLAG $1 &
#
# end
```

### 3.4.2 DASM Input: start\_sp.dasm.ts

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_sp.proc.3,v $
# $Revision: 1.7 $
# $Date: 2005/06/22 15:47:46 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill SP."$APP".DA.TS
#
sleep 2
#
./SP."$APP".DA.TS -c sp.cfg.dasm.ts -n DS_DASM_CH $STB_FLAG $1 &
#
# end
```

### 3.4.3 MANTA Channel: start\_sp.manta.ch

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_sp.proc.3,v $
# $Revision: 1.7 $
# $Date: 2005/06/22 15:47:46 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill SP."$APP".MA.CH
#
sleep 2
#
./SP."$APP".MA.CH -c sp.cfg.manta.ch -n DS_MANTA_CH $STB_FLAG $1 &
#
# end
```

### 3.4.4 MANTA Input: start\_sp.manta.ts

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_sp.proc.3,v $
# $Revision: 1.7 $
# $Date: 2005/06/22 15:47:46 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill SP."$APP".MA.TS
#
sleep 2
#
./SP."$APP".MA.TS -c sp.cfg.manta.ts -n DS_MANTA_CH $STB_FLAG $1 &
#
# end
```



### 3.4.5 Sonobuoy Channel: start\_sp.sb.ch

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_sp.proc.3,v $
# $Revision: 1.7 $
# $Date: 2005/06/22 15:47:46 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill SP."$APP".SB.CH
#
sleep 2
#
./SP."$APP".SB.CH -c sp.cfg.sb.ch -n DS_SB_CH $STB_FLAG $1 &
#
# end
```

### 3.4.6 Sonobuoy Input: start\_sp.sb.in

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_sp.proc.3,v $
# $Revision: 1.7 $
# $Date: 2005/06/22 15:47:46 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill SP."$APP".SB.TS
#
sleep 2
#
./SP."$APP".SB.TS -c sp.cfg.sb.ts -n DS_SB_CH $STB_FLAG $1 &
#
# end
```

## 3.5 Interface Start Scripts

### 3.5.1 DASM: start\_di

```
#!/bin/tcsh -f
#
# File: start_sys.q302
#
# Author: Chris Wheeler
# Company: General Dynamics Canada
# Created on: December 14, 2006
#
# Revision Id:      %A%
# Last Delta (YY-MM-DD): %E% %U%
# Delta Key:       %K%
#
#
# note
#
# may need to install atm driver
# "modprobe he"
# use "lsmod | grep he" to check if driver is loaded
source ./stb.cfg
#
pkill DI."$APP"
#
sleep 2
#
# menu options
#./DI.Q302 -c di.cfg -n DS_DASM_IN $STB_FLAG -e 4 -m
# no menu options
./DI."$APP" -c di.cfg -n DS_DASM_IN $STB_FLAG $1 &
#
# end
```

### 3.5.2 MANTA: start\_mi

```
#!/bin/tcsh -f
#
# File: start_mi
#
# Author: Chris Wheeler
# Company: General Dynamics Canada
# Created on: December 14, 2006
#
# Revision Id:      %A%
# Last Delta (YY-MM-DD): %E% %U%
# Delta Key:       %K%
#
#
# note
#
# may need to install atm driver
# "modprobe he"
# use "lsmod | grep he" to check if driver is loaded
source ./stb.cfg
#
pkill MI."$APP"
#
sleep 2
#
# menu options
#./MI.Q302 -c mi.cfg -n DS_MANTA_IN $STB_FLAG $1 -m
# no menu options
./MI."$APP" -c mi.cfg -n DS_MANTA_IN $STB_FLAG $1 &
#
# end
```

### 3.5.3 Sonobuoy Time Series: start\_bi

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_bi,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:49 $
# $Author: inglis $
#
source ./stb.cfg
#
#cp ./sonobuoy_interface Bl."$APP"
pkill Bl."$APP"
#
sleep 2
#
./Bl."$APP" -c bi.cfg -n DS_SB_IN $STB_FLAG $1 &
#
# end
```

### 3.5.4 NADAS: start\_ni

```
#!/bin/tcsh -f
#
# File: start_ni
#
# Author: Chris Wheeler
# Company: General Dynamics Canada
# Created on: December 14, 2006
#
# Revision Id:      %A%
# Last Delta (YY-MM-DD): %E% %U%
# Delta Key:       %K%
#
#
source ./stb.cfg
#
pkill NI."$APP"
#
sleep 2
#
./NI."$APP" -c ni.cfg -n $DS $STB_FLAG $1 &
#
# end
```

### 3.5.5 Winch: start\_wi

```
#!/bin/tcsh -f
#
# File: start_wi
#
# Author: Chris Wheeler
# Company: General Dynamics Canada
# Created on: December 14, 2006
#
# Revision Id:      %A%
# Last Delta (YY-MM-DD): %E% %U%
# Delta Key:       %K%
#
#
source ./stb.cfg
#
pkill WI."$APP"
#
sleep 2
#
./WI."$APP" -c wi.cfg -n $DS $STB_FLAG $1 &
#
# end
```

### 3.5.6 VP2

See 3.1.1.

### 3.5.7 AIS: start\_ai

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_ri,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:56 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill AI."$APP"
#
sleep 2
#
cp ./ais_interface AI."$APP"
./AI."$APP" -c ai.cfg -n $DS $STB_FLAG $1 &
#
# end
```

### 3.5.8 Radar: start\_ri

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_ri,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:56 $
# $Author: inglis $
#
source ./stb.cfg
#
#
pkill RI."$APP"
#
sleep 2
#
cp ./radar_interface RI."$APP"
./RI."$APP" -c ri.cfg -n $DS $STB_FLAG $1 &
#
# end
```

### 3.5.9 Sonobuoy NAD: start\_sni

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_ri,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:56 $
# $Author: inglis $
#
source ./stb.cfg
#
#
pkill SNI."$APP"
#
sleep 2
#
cp ./sonobuoy_nad_interface SNI."$APP"
./SNI."$APP" -c sni.cfg -n $DS $STB_FLAG $1 &
#
# end
```

## 3.6 Data Processing Start Scripts

### 3.6.1 DASM Sensor Manager: start\_xm.dasm

```
#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_xm.sqr19,v $
# $Author: inglis $
# $Date: 2005/02/22 17:25:17 $
#
source ./stb.cfg
#
pkill XM."$APP".DASM
#
sleep 2
#
./XM."$APP".DASM -c xm.cfg.dasm -n $DS $STB_FLAG $1 &
#
# end
```

### 3.6.2 MANTA Sensor Manager: start\_xm.manta

```
#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_xm.sqr19,v $
# $Author: inglis $
# $Date: 2005/02/22 17:25:17 $
#
source ./stb.cfg
#
pkill XM."$APP".MANTA
#
sleep 2
#
./XM."$APP".MANTA -c xm.cfg.manta -n $DS $STB_FLAG $1 &
#
# end
```

### 3.6.3 VP2 Sensor Manager: start\_xm.vp2

```
#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_xm.sqr19,v $
# $Author: inglis $
# $Date: 2005/02/22 17:25:17 $
#
source ./stb.cfg
#
pkill XM."$APP".VP2
#
sleep 2
#
./XM."$APP".VP2 -c xm.cfg.vp2 -n $DS $STB_FLAG $1 &
#
# end
```

### 3.6.4 Geomagnetic Manager: start\_gm

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_gm,v $
# $Revision: 1.4 $
# $Date: 2005/02/22 17:26:34 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill GM."$APP"
#
sleep 2
#
cp ./geomagnetic_manager GM."$APP"
./GM."$APP" -c gm.cfg -n $DS $STB_FLAG $1 &
#
# end
```



## 3.6.5 Ping Manager

### 3.6.5.1 Default

```
#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/impact/start_pm.nuw,v $
# $Author: inglis $
# $Date: 2005/08/11 15:47:29 $
#
source ./stb.cfg
#
pkill PM."$APP"
#
sleep 2
#
cp ./ping_manager PM."$APP"
./PM."$APP" -c pm.cfg -n $DS $STB_FLAG -e 1 -x $1
#
# end
```

### 3.6.5.2 Whale Warning

```
#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/impact/start_pm.nuw,v $
# $Author: inglis $
# $Date: 2005/08/11 15:47:29 $
#
source ./stb.cfg
#
pkill PM."$APP"
#
sleep 2
#
cp ./ping_manager PM."$APP"
./PM."$APP" -c pm.cfg.ww -n $DS $STB_FLAG -e 1 -x $1
#
# end
```

### 3.6.5.3 Run 1

```
#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/impact/start_pm.nuw,v $
# $Author: inglis $
# $Date: 2005/08/11 15:47:29 $
#
source ./stb.cfg
#
pkill PM."$APP"
```

```
#
sleep 2
#
cp ./ping_manager PM."$APP"
./PM."$APP" -c pm.cfg.run1 -n $DS $STB_FLAG -e 1 -x $1
#
# end
```

### **3.6.5.4 Run 2**

```
#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/impact/start_pm.nuw,v $
# $Author: inglis $
# $Date: 2005/08/11 15:47:29 $
#
source ./stb.cfg
#
pkill PM."$APP"
#
sleep 2
#
cp ./ping_manager PM."$APP"
./PM."$APP" -c pm.cfg.run2 -n $DS $STB_FLAG -e 1 -x $1
#
# end
```

### **3.6.5.5 Run 3**

```
#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/impact/start_pm.nuw,v $
# $Author: inglis $
# $Date: 2005/08/11 15:47:29 $
#
source ./stb.cfg
#
pkill PM."$APP"
#
sleep 2
#
cp ./ping_manager PM."$APP"
./PM."$APP" -c pm.cfg.run3 -n $DS $STB_FLAG -e 1 -x $1
#
# end
```

### **3.6.5.6 System Integration Test**

```
#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/impact/start_pm.nuw,v $
# $Author: inglis $
# $Date: 2005/08/11 15:47:29 $
```

```

#
source ./stb.cfg
#
pkill PM."$APP"
#
sleep 2
#
cp ./ping_manager PM."$APP"
./PM."$APP" -c pm.cfg.sit -n $DS $STB_FLAG -e 1 -x $1
#
# end

```

### **3.6.5.7 Don's Personal Pinger**

```

#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/impact/start_pm.nuw,v $
# $Author: inglis $
# $Date: 2005/08/11 15:47:29 $
#
source ./stb.cfg
#
pkill PM."$APP"
#
sleep 2
#
cp ./ping_manager PM."$APP"
./PM."$APP" -c pm.cfg.don -n $DS $STB_FLAG -e 1 -x $1
#
# end

```

### **3.6.5.8 Standby**

```

#!/bin/tcsh -f
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/impact/start_pm.nuw,v $
# $Author: inglis $
# $Date: 2005/08/11 15:47:29 $
#
source ./stb.cfg
#
pkill PM."$APP"
#
sleep 2
#
cp ./ping_manager PM."$APP"
./PM."$APP" -c pm.cfg.don -n $DS $STB_FLAG -e 1 -x $1
#
# end

```

### 3.6.6 Ping Generator

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/start_stb.local,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:59 $
# $Author: inglis $
#
source ./stb.cfg.q302

# paspgs
ssh "pascam@paspgs" "cd /export/home/pascam/src/atass/IF/pgs_interface.061016/bin; start_pg "-e 2"&" &
# end
```

## 3.7 Operator Interface Scripts

### 3.7.1 Button Display: start\_dd.kp

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/demo.1/start_ds,v $
# $Revision: 1.3 $
# $Date: 2003/01/21 14:42:32 $
# $Author: inglis $
#
# source ./stb.cfg
source ./stb.cfg.tao
#
pkill DD."$APP".KP
#
sleep 2
#
cp ./data_display DD."$APP".KP
./DD."$APP".KP -c dd.cfg.kp -n $DS $STB_FLAG $1 &
#
# end
```

### 3.7.2 Track Display: start\_dd.ts

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/demo.1/start_ds,v $
# $Revision: 1.3 $
# $Date: 2003/01/21 14:42:32 $
# $Author: inglis $
#
# source ./stb.cfg
source ./stb.cfg.tao
#
pkill DD."$APP".TS
#
sleep 2
#
cp ./data_display DD."$APP".TS
./DD."$APP".TS -c dd.cfg.ts -n $DS $STB_FLAG $1 &
#
# end
```

### 3.7.3 Ping Display: start\_dd.ps

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/demo.1/start_ds,v $
# $Revision: 1.3 $
# $Date: 2003/01/21 14:42:32 $
# $Author: inglis $
#
# source ./stb.cfg
source ./stb.cfg.tao
#
pkill DD."$APP".PS
#
sleep 2
#
cp ./data_display DD."$APP".PS
./DD."$APP".PS -c dd.cfg.ps -n $DS $STB_FLAG $1 &
#
# end
```

### 3.7.4 DASM Lofargram: start\_dd.da.lscan

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/demo.1/start_ds,v $
# $Revision: 1.3 $
# $Date: 2003/01/21 14:42:32 $
# $Author: inglis $
#
# source ./stb.cfg
source ./stb.cfg.tao
#
pkill DD."$APP".DA.LS
#
sleep 2
#
cp ./data_display DD."$APP".DA.LS
./DD."$APP".DA.LS -c dd.cfg.da.lscan -n $DS $STB_FLAG $1 &
#
# end
```

### 3.7.5 MANTA Lofargram: start\_dd.ma.lscan

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/demo.1/start_ds,v $
# $Revision: 1.3 $
# $Date: 2003/01/21 14:42:32 $
# $Author: inglis $
#
# source ./stb.cfg
source ./stb.cfg.tao
#
pkill DD."$APP".MA.LS
#
sleep 2
#
cp ./data_display DD."$APP".MA.LS
./DD."$APP".MA.LS -c dd.cfg.ma.lscan -n $DS $STB_FLAG $1 &
#
# end
```

### 3.7.6 Sonobuoy Lofargram: start\_dd.sb.lscan

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/demo.1/start_ds,v $
# $Revision: 1.3 $
# $Date: 2003/01/21 14:42:32 $
# $Author: inglis $
#
# source ./stb.cfg
source ./stb.cfg.tao
#
pkill DD."$APP".SB.LS
#
sleep 2
#
cp ./data_display DD."$APP".SB.LS
./DD."$APP".SB.LS -c dd.cfg.sb.lscan -n $DS $STB_FLAG $1 &
#
# end
```

### 3.7.7 DASM Ascan: start\_dd.da.ascan

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/demo.1/start_ds,v $
# $Revision: 1.3 $
# $Date: 2003/01/21 14:42:32 $
# $Author: inglis $
#
# source ./stb.cfg
source ./stb.cfg.tao
#
pkill DD."$APP".DA.AS
#
sleep 2
#
cp ./data_display DD."$APP".DA.AS
./DD."$APP".DA.AS -c dd.cfg.da.ascan -n $DS $STB_FLAG $1 &
#
# end
```

### 3.7.8 MANTA Ascan: start\_dd.ma.ascan

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/demo.1/start_ds,v $
# $Revision: 1.3 $
# $Date: 2003/01/21 14:42:32 $
# $Author: inglis $
#
# source ./stb.cfg
source ./stb.cfg.tao
#
pkill DD."$APP".MA.AS
#
sleep 2
#
cp ./data_display DD."$APP".MA.AS
./DD."$APP".MA.AS -c dd.cfg.ma.ascan -n $DS $STB_FLAG $1 &
#
# end
```



### 3.7.9 Sonobuoy Ascan: start\_dd.sb.ascan

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/demo.1/start_ds,v $
# $Revision: 1.3 $
# $Date: 2003/01/21 14:42:32 $
# $Author: inglis $
#
# source ./stb.cfg
source ./stb.cfg.tao
#
pkill DD."$APP".SB.AS
#
sleep 2
#
cp ./data_display DD."$APP".SB.AS
./DD."$APP".SB.AS -c dd.cfg.sb.ascan -n $DS $STB_FLAG $1 &
#
# end
```

## 3.8 Data Recording Start Scripts

### 3.8.1 Data Player: start\_dp

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/demo.1/start_ds,v $
# $Revision: 1.3 $
# $Date: 2003/01/21 14:42:32 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DP."$APP"
#
sleep 2
#
cp ./data_player DP."$APP"
./DP."$APP" -c dp.cfg -n $DS $STB_FLAG $1
#
# end
```

### 3.8.2 Data Logger: start\_dl

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_dl,v $
# $Revision: 1.1 $
# $Date: 2003/11/26 17:35:09 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DL."$APP"
#
sleep 2
#
./DL."$APP" -c dl.cfg -n $DS $STB_FLAG $1 &
#
# end
```

### 3.8.3 Data Recorder: start\_dr

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_dl,v $
# $Revision: 1.1 $
# $Date: 2003/11/26 17:35:09 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DR."$APP"
#
sleep 2
#
./DR."$APP" -c dr.cfg -n $DS $STB_FLAG $1 -x &
#
# end
```

### 3.8.4 DASM DAT Recording: start\_dat.dasm

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_tr,v $
# $Revision: 1.1 $
# $Date: 2004/11/12 14:24:23 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DAT."$APP".DASM
#
sleep 2
#
cp ./dat16_recorder DAT."$APP".DASM
#
sleep 2
#
./DAT."$APP".DASM -c dat.cfg.dasm -n DS_DASM_IN $STB_FLAG $1 -x &
#
# end
```

### 3.8.5 MANTA DAT Recording: start\_dat.manta

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_tr,v $
# $Revision: 1.1 $
# $Date: 2004/11/12 14:24:23 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DAT."$APP".MANTA
#
sleep 2
#
cp ./dat16_recorder DAT."$APP".MANTA
#
sleep 2
#
./DAT."$APP".MANTA -c dat.cfg.manta -n DS_MANTA_IN $STB_FLAG $1 -x &
#
# end
```

### 3.8.6 Sonobuoy DAT Recording: start\_dat.sb

```
#!/bin/tcsh -f
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/start_tr,v $
# $Revision: 1.1 $
# $Date: 2004/11/12 14:24:23 $
# $Author: inglis $
#
source ./stb.cfg
#
pkill DAT."$APP".SB
#
sleep 2
#
cp ./dat16_recorder DAT."$APP".SB
#
sleep 2
#
./DAT."$APP".SB -c dat.cfg.sb -n DS_SB_IN $STB_FLAG $1 -x
#
# end
```

## 3.9 Utility Start Scripts

### 3.9.1 Data Editor

```
#!/bin/tcsh -f
#
# $Revision: 1.3 $
# $Source: /usr/local/cvsroot/src/atass/system/impact/start_sp.nuw,v $
# $Author: inglis $
# $Date: 2005/08/11 15:47:12 $
#
source ./stb.cfg
#
pkill DE."$APP"
#
sleep 2
#
./DE."$APP" -n $1 $STB_FLAG $2
# end
```

### 3.9.2 Java Data Editor

```
#!/bin/tcsh
#
source ./stb.cfg
#
java -cp javastbNoCoe.jar:stbSupport.jar -DORBInitRef.NameService=corbaloc:iiop:${NS}:${PORT}/NameService
com.gdc.javadataeditor.JDEConfiguration Files
```

## 4. Processor Configuration Files

### 4.1 Data Server Configuration Files

#### 4.1.1 Nonacoustic Data Server Configuration Files

##### 4.1.1.1 Nonacoustic Data Definition Configuration File: *ds.cfg.nad.def*

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.nad,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:39 $
# $Author: inglis $
#
$INCLUDE ds.cfg.nad.def
#
$GROUP
#      suggested
# group records
#
PN_FD  1000  1000  $NBF
TD      2000  1000
ATD     2000  1000  # ais tracks
BTD     2000  1000  # sonobuoy tracks
STD     2000  1000  # sensor tracks
LTD     2000  1000  # localization tracks
RTD     2000  1000  # radar tracks
WF      10    10    # waveform data group
WT      10    10    # wavetrain data group
WP      10    10    # wavetrain data group
MV      10    10    # wavetrain data group
PG      10    10    # ping data group
SM      10    10    # system monitor
PS      10    10    # ping sequence
#
PF              100    100
# end group list
#
$DATA
#
# name          group          rate    records  general axis  bits  size  value  res
WS              PG           -1.0    500      1000         232   0
PD              PG           -1.0    500      1000         232   0
PN              PG           -1.0    500      1000         7960  0
PPN            PG           -1.0    500      1000         7960  0
PS              PS           -1.0    5000     1000         232   0
PT              PS           -1.0    5000     1000         232   0
ARRAY          SD              1.0     2000     1000         120   0
#
QUEST          TD              1.0   10000   10000         $TD   0
DAP            TD              1.0   10000   10000         $TD   0
```

```

#
SB      STD      1.0  5000    0      $TD  0
VP2     STD      1.0  5000  0      $TD  0
DASM    STD      1.0  5000  0      $TD  0
MANTA   STD      1.0  5000  0      $TD  0
#
# OS_10S          DTD    10.0  2000  0    128  0
#
DASM_NAD  SD      1.0  5000  0    184  0
MANTA_NAD SD      1.0  5000  0    184  0
#
NADAS_DATA SD      1.0  100  500  184  0
VP2_NAD     SD      1.0  100  500  184  0
RAW_VP2_NAD SD     1.0  100  500  184  0
VP2NAD_DATA SD     1.0  100  500  184  0
# WINCH_DATA  SD     1.0  100  500  72  0
WINCH_NAD    SD     1.0  100  0    184  0
TIME_TG_DATA SD          0.25  100  0    56  0
TIME_MA_DATA SD          0.25  100  0    56  0
TIME_DA_DATA SD          0.25  100  0    56  0
TIME_TM_DATA SD          0.25  100  0    56  0
TIME_DATA    SD          0.25  100  0    56  0
TIME_1S_DATA SD         1.0    100  0    56  0
TIME_5S_DATA SD         5.0    100  0    56  0
TIME_10S_DATA SD        10.0   100  0    56  0
TIME_60S_DATA SD        60.0   100  0    56  0
TIME_300S_DATA SD       300.0  100  0    56  0
PING_DATA    SD          -1.0  100  0    8    0
ARRAY_DATA   SD          -1.0  100  10   136  0
#
PS      SD      -1.0  500  1000  208  0
PC      SD      -1.0  500  1000  64   0
#
VP2_STATUS SD     -1.0  5    0    80   0
#
GM      SD      -1.0  500  0    96   0
GP      SD      -1.0  500  0    $TD  0
#
CHAT    CHAT    -1    100  100  8192  0
MESSAGE SC     -1    100  100  8192  0
#
# end data list
#
# end file

```

#### 4.1.1.2 Nonacoustic Data Configuration File: ds.cfg.nad

```

#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.nad,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:39 $
# $Author: inglis $
#

```

```

$INCLUDE ds.cfg.nad.def
#
$GROUP
#      suggested
# group records
#
PN_FD  1000  1000  $NBF
TD      2000  1000
ATD     2000  1000 # ais tracks
BTD     2000  1000 # sonobuoy tracks
STD     2000  1000 # sensor tracks
LTD     2000  1000 # localization tracks
RTD     2000  1000 # radar tracks
WF      10   10   # waveform data group
WT      10   10   # wavetrain data group
WP      10   10   # wavetrain data group
MV      10   10   # wavetrain data group
PG      10   10   # ping data group
SM      10   10   # system monitor
PS      10   10   # ping sequence
#
PF              100   100
# end group list
#
$DATA
#
# name          group          rate    records  general axis  bits  size  value res
WS              PG           -1.0    500     1000     232   0
PD              PG           -1.0    500     1000     232   0
PN              PG           -1.0    500     1000     7960  0
PPN             PG           -1.0    500     1000     7960  0
PS              PS           -1.0    5000    1000     232   0
PT              PS           -1.0    5000    1000     232   0
ARRAY           SD              1.0     2000    1000     120   0
#
QUEST          TD              1.0  10000  10000     $TD  0
DAP            TD              1.0  10000  10000     $TD  0
#
SB             STD              1.0   5000    0         $TD  0
VP2            STD              1.0   5000    0         $TD  0
DASM           STD              1.0   5000    0         $TD  0
MANTA          STD              1.0   5000    0         $TD  0
#
# OS_10S              DTD    10.0  2000  0    128  0
#
DASM_NAD        SD              1.0   5000    0    184  0
MANTA_NAD       SD              1.0   5000    0    184  0
#
NADAS_DATA      SD              1.0   100   500  184  0
VP2_NAD         SD              1.0   100   500  184  0
RAW_VP2_NAD     SD              1.0   100   500  184  0
VP2NAD_DATA     SD              1.0   100   500  184  0

```



```

# WINCH_DATA SD 1.0 100 500 72 0
WINCH_NAD SD 1.0 100 0 184 0
TIME_TG_DATA SD 0.25 100 0 56 0
TIME_MA_DATA SD 0.25 100 0 56 0
TIME_DA_DATA SD 0.25 100 0 56 0
TIME_TM_DATA SD 0.25 100 0 56 0
TIME_DATA SD 0.25 100 0 56 0
TIME_1S_DATA SD 1.0 100 0 56 0
TIME_5S_DATA SD 5.0 100 0 56 0
TIME_10S_DATA SD 10.0 100 0 56 0
TIME_60S_DATA SD 60.0 100 0 56 0
TIME_300S_DATA SD 300.0 100 0 56 0
PING_DATA SD -1.0 100 0 8 0
ARRAY_DATA SD -1.0 100 10 136 0
#
PS SD -1.0 500 1000 208 0
PC SD -1.0 500 1000 64 0
#
VP2_STATUS SD -1.0 5 0 80 0
#
GM SD -1.0 500 0 96 0
GP SD -1.0 500 0 $TD 0
#
CHAT CHAT -1 100 100 8192 0
MESSAGE SC -1 100 100 8192 0
#
# end data list
#
# end file

```

## 4.1.2 DASM Data Server Configuration Files

### 4.1.2.1 DASM Definition Configuration File: *ds.cfg.dasm.def*

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.nad.def,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:39 $
# $Author: inglis $
#
$DEFINE
MD      224      # message data
AD      216      # acoustic data header bytes
SD      136      # sensor data bytes
TD      256      # track data v2 bytes
BFR     10       # beamform spectra ram records – needed for audio
RR      20       # ram records
DR      0        # disk records
CHR     10       # ch ram records
CHD     10       # ch disk record
BBR     200      # bb ram records
BBD     100      # bb disk record
CWR     100      # cw ram records
CWD     100      # cw disk record
FMRA    10       # fm ram records
FMRB    10       # fm ram records
FMR     10       # fm ram records
FMD     10       # fm disk record
NBR     100      # nb ram records
NBRA    100      # nb ram records
NBD     100      # nb disk record
TNR     100      # nb ram records
TND     100      # nb disk record
#
BBF     100      # max bb features
CWF     10000
FMF     10000
NBF     100
#
BBR     2000
#
IR      0.75
IP02    0.125    # integration period 01
IP01    0.25     # integration period 01
IP0     0.5      # integration period 0
IP1     1.0      # integration period 1
IP2     2.0      # integration period 2
IP3     4.0      # integration period 3
IP4     8.0      # integration period 4

# end file
```

#### 4.1.2.2 DASM Channel Data Server Configuration File: ds.cfg.dasm.ch

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.dasm.ch,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:37 $
# $Author: inglis $
#
$INCLUDE ds.cfg.dasm.def
#
$DATA
# name          group  rate    records  general axis  bits  size  value  res
#
CHANNEL_SPECTRA  SP     0.75  $RR  $DR  $AD  2   64   2048  0.0  1.0  $CH  0.0  0.0
#
CH_TIME_SERIES  SP     0.75  $RR  $DR  $AD  2   64   1536  1024.0  1.0  $CH  0.0  0.0
#
CH_1_0_AD       CH_AD          $P0  $CHR  0  $AD  2   4   2048  0.0  1.0  $CH  0.0  0.0
CH_2_0_AD       CH_AD          $P4  $CHR  0  $AD  2   4   2048  0.0  1.0  $CH  0.0  0.0
#
CH_1_0_FLOAT    CH_FLOAT       $P0  $CHR1  0    $AD  2   32   2048  0.0  1.0  $CH  0.0
0.0
CH_2_0_FLOAT    CH_FLOAT       $P4  $CHR1  0    $AD  2   32   2048  0.0  1.0  $CH  0.0
0.0
#
# end data list
#
# end file
```

### 4.1.2.3 DASM Input Data Server Configuration File: ds.cfg.dasm.in

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.dasm.in,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:38 $
# $Author: inglis $
#
$INCLUDE ds.cfg.dasm.def
#
$DATA
# name          group  rate  records  general axis  bits  size  value  res
#
CHANNEL_TIME_SERIES  SP    $BR   $RR   $DR   $AD   2    32    $CH   0.0   0.0
    $FR   0.0  $TR
DAT32_CHANNEL_TIME_SERIES  SP    $BR   $RR   $DR   $AD   2    32    262   0.0
    0.0  $FR   0.0  $TR
#
DASM_NAD           SD    $BR   $RR   $DR   $SD   0
FWD_DASM_NAD      SD    $BR   $RR   $DR   $SD   0
AFT_DASM_NAD      SD    $BR   $RR   $DR   $SD   0
#
DASM_CFG           SD   -1.0  5    0    32   1    32   $CH   0.0   0.0
DASM_CFG_V2       SD   -1.0  5    0    32   1    96   $CH   0.0   0.0
#
READY             SD    $BR   $RR   $DR   56   0
#
# end data list
#
# end file
```

## 4.1.3 MANTA Data Server Configuration Files

### 4.1.3.1 MANTA Definition Configuration File: ds.cfg.manta.def

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.manta.def,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:39 $
# $Author: inglis $
#
$DEFINE
CH      240          # array channels
FR      1024         # frames
TR      0.000244140625 # time resolution
IR      0.75         # front end processing
# IR    0.5          # front end processing
BR      0.25         # block resolution
AD      216          # acoustic data header bytes
SD      184          # sensor data bytes
#
RR      20           # ram records
DR      0            # disk records
CHR     20           # ch ram records
CHR1    100          # ch ram records
CHR2    400          # ch ram records
#
P04     0.03125
P03     0.0625
P02     0.125
P01     0.25
P0      0.5
P1      1.0
P2      2.0
P3      4.0
P4      8.0
P5      16.0
P6      32.0
P7      64.0
#
B5      128
B6      256
B7      512
#
R03     8.0
R02     4.0
R01     2.0
R0      1.0
R1      0.5
R2      0.25
R3      0.125
R4      0.0625
#
# end file
```

### 4.1.3.2 MANTA Channel Data Server Configuration File: ds.cfg.manta.ch

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.manta.ch,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:38 $
# $Author: inglis $
#
$INCLUDE ds.cfg.manta.def
#
$DATA
# name                group  rate    records  general axis  bits  size  value  res
#
CHANNEL_SPECTRA      SP      $IR $RR  $DR  $AD  2   64   2048  0.0  1.0  $CH  0.0  0.0
#
CH_TIME_SERIES      SP      $IR $RR  $DR  $AD  2   64   1536  1024.0  1.0  $CH  0.0  0.0
#
CH_1_0_AD           CH_AD  0.5    $CHR2  0  $AD  2   4    2048  0.0  1.0  $CH  0.0  0.0
CH_2_0_AD           CH_AD  8.0    $CHR2  0  $AD  2   4    2048  0.0  1.0  $CH  0.0  0.0
#
CH_1_0_FLOAT        CH_FLOAT      0.5    $CHR1  0  $AD  2   32    2048  0.0  1.0  $CH  0.0  0.0
CH_2_0_FLOAT        CH_FLOAT      8.0    $CHR1  0  $AD  2   32    2048  0.0  1.0  $CH  0.0  0.0
#
# CH_1_0_NORM        CH_NORM      0.5    $CHR1  0  $AD  2   32    2048  0.0  1.0  $CH
0.0  0.0
# CH_2_0_NORM        CH_NORM      8.0    $CHR1  0  $AD  2   32    2048  0.0  1.0  $CH
0.0  0.0
#
# end data list
#
# end file
```

### 4.1.3.3 MANTA Input Data Server Configuration File: ds.cfg.manta.in

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.manta.in,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:39 $
# $Author: inglis $
#
$INCLUDE ds.cfg.manta.def
#
$DATA
# name          group  rate  records  general axis  bits  size  value  res
#
CHANNEL_TIME_SERIES  SP    $BR   $RR   $DR   $AD   2    32    $CH   0.0   0.0   $FR
0.0  $TR
#
MANTA_NAD           SD    $BR   $RR   $DR   $SD   0
FWD_MANTA_NAD      SD    $BR   $RR   $DR   $SD   0
AFT_MANTA_NAD      SD    $BR   $RR   $DR   $SD   0
MANTA_CFG           SD    -1.0  5     0     32    1    32    $CH   0.0   0.0
MANTA_CFG_V2       SD    -1.0  5     0     32    1    96    $CH   0.0   0.0
#
READY              SD    $BR   $RR   $DR   56    0
#
# end data list
#
# end file
```

## 4.1.4 Sonobuoy Data Server Configuration Files

### 4.1.4.1 Sonobuoy Data Definition Configuration File

#### **Sonobuoy Data Definition Configuration File, 16 Channels, 40100: ds.cfg.sb.def.40100**

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.sb.def,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:40 $
# $Author: inglis $
#
$DEFINE
AD 216      # acoustic data header bytes
CH 16      # channels
#
RR 20      # ram records
DR 0       # disk records
CHR 100    # ch ram records
CHR1 500   # ch ram records
#
BR 0.102144638404 # block rate - 4096/40100
SR 0.00002493765586035 # sample rate 1/40100
IR 0.612867830424 # input rate - 0.75*32768/40100
#
R0 1.22375488281 # resolution - 40100/32768
#
HF 1253.125 # heterodyne frequency - 1024*40100/32768
#
P0 0.408578554 # 0.5*32768/40100
P4 6.537256858 # 8.0*32768/40100
#
# end file
```



## **Sonobuoy Data Definition Configuration File, 16 Channels, 44100: ds.cfg.sb.def.44100**

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.sb.def,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:40 $
# $Author: inglis $
#
$DEFINE
AD 216      # acoustic data header bytes
CH 16      # channels
#
RR 20      # ram records
DR 0       # disk records
CHR 100    # ch ram records
CHR1 500   # ch ram records
#
BR 0.092879818594104308390022675736961 # block rate - 4096/44100
SR 0.000022675736961451247165532879818594 # sample rate 1/44100
IR 0.55727891156462585034013605442177 # input rate - 0.75*32768/44100
#
R0 1.3458251953125 # resolution - 44100/32768
#
HF 1378.125 # heterodyne frequency - 1024*44100/32768
#
PO 0.37151927437641723356009070294785 # 0.5*32768/44100
P4 5.9443083900226757369614512471655 # 8.0*32768/44100
#
# end file
```

## **Sonobuoy Data Definition Configuration File, 16 Channels, 88200: ds.cfg.sb.88200**

```

#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.sb.def,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:40 $
# $Author: inglis $
#
$DEFINE
AD 216      # acoustic data header bytes
CH 16       # channels
#
RR 20       # ram records
DR 0        # disk records
CHR 100     # ch ram records
CHR1 500    # ch ram records
#
BR 0.0464399092970521542      # block rate - 4096/88200
SR 0.00001133786848072562     # sample rate 1/40100
IR 0.27863945578231292517     # input rate - 0.75*32768/88200
#
RO 2.691650390625 # resolution - 88200/32768
#
HF 2756.25 # heterodyne frequency - 1024*88200/32768
#
PO 0.18575963718820861678     # 0.5*32768/88200
PA 2.97215419501133786848     # 8.0*32768/88200
#
# end file

```

### **4.1.4.2 Sonobuoy Input Configuration File: ds.cfg.sb.in**

```

#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.sb.in,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:40 $
# $Author: inglis $
#
$INCLUDE ds.cfg.sb.def
#
$DATA
# name          group          rate      records  general axis  bits  size  value  res
#
SB_TIME_SERIES TS          $BR      $RR      $DR      $AD      2     32   $CH    0.0   0.0   4096 0.0   $SR
#
# end data list
#
# end file

```

### 4.1.4.3 Sonobuoy Channel Configuration File: ds.cfg.sb.ch

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ds.cfg.sb.ch,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:40 $
# $Author: inglis $
#
$INCLUDE ds.cfg.sb.def
#
$DATA
# name          group          rate    records  general axis  bits  size  value  res
#
CH_SPECTRA     SP                $IR     $RR    $DR    $AD    2    64    16384  0.0    $R0    $CH    0.0
0.0

CH_TIME_SERIES SP                $IR     $RR    $DR    $AD    2    64    1536   $HF $R0    $CH    0.0  0.0
#
CH_1_0_AD      CH_AD             $P0    $CHR1  $DR    $AD    2    4     2048  0.0    $R0    $CH    0.0  0.0
CH_2_0_AD      CH_AD             $P4    $CHR1  $DR    $AD    2    4     2048  0.0    $R0    $CH    0.0  0.0
#
CH_1_0_FLOAT   CH_FLOAT          $P0    $CHR   $DR           $AD    2    32    2048  0.0    $R0    $CH    0.0
0.0
CH_2_0_FLOAT   CH_FLOAT          $P4    $CHR   $DR           $AD    2    32    2048  0.0    $R0    $CH    0.0
0.0
#
# end data list
#
# end file
```

## 4.2 Signal Processing Configuration Files

### 4.2.1 DASM Signal Processing Configuration Files

#### 4.2.1.1 DASM Channel Signal Processing Configuration File: *sp.cfg.dasm.ch*

```
#
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/sp.cfg.dasm.ch,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:45 $
# $Author: inglis $
#
$MESSAGE$ MESSAGE..DS_NAD
#
$BAND$ CH_BD $INPUT$ CHANNEL_SPECTRA $OUTPUT$ CH_TIME_SERIES
#
$NARROWBAND$ CH_1_0_FLOAT $INPUT$ CH_TIME_SERIES $LSCAN$ CH_1_0_AD $OUTPUT$ CH_1_0_FLOAT $MODE$ 1
$NARROWBAND$ CH_2_0_FLOAT $INPUT$ CH_TIME_SERIES $LSCAN$ CH_2_0_AD $OUTPUT$ CH_2_0_FLOAT $MODE$ 1
#
#
# end
#
```

#### 4.2.1.2 DASM Time Series Signal Processing Configuration File: *sp.cfg.dasm.ts*

```
#
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/sp.cfg.dasm.ts,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:47 $
# $Author: inglis $
#
$MESSAGE$ MESSAGE..DS_NAD
#
$TIME_SERIES$ INPUT $INPUT$ CHANNEL_TIME_SERIES..DS_DASM_IN $OUTPUT$ CHANNEL_SPECTRA $TRACK$
QUEST..DS_NAD $SENSOR_TRACK$ DASM..DS_NAD $SENSOR$ DASM_NAD..DS_NAD $CHANNEL$ 0 $CHANNELS$ 192
$GAIN$ -70.0 $MODE$ 1
# $TIME_SERIES$ INPUT $INPUT$ CHANNEL_TIME_SERIES..DS_DASM_IN $OUTPUT$ CHANNEL_SPECTRA $CHANNEL$ 0
$CHANNELS$ 192 $GAIN$ 60.0 $MODE$ 1
#
#
# end
#
```

## 4.2.2 MANTA Signal Processing Configuration Files

### 4.2.2.1 MANTA Time Series Signal Processing Configuration File: *sp.cfg.manta.ts*

```
#
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/sp.cfg.manta.ts,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:48 $
# $Author: inglis $
#
$MESSAGE$ MESSAGE..DS_NAD
#
$TIME_SERIES$ INPUT $INPUT$ CHANNEL_TIME_SERIES..DS_MANTA_IN $OUTPUT$ CHANNEL_SPECTRA $TRACK$
QUEST..DS_NAD $SENSOR_TRACK$ MANTA..DS_NAD $SENSOR$ MANTA_NAD..DS_NAD $CHANNEL$ 0 $CHANNELS$ 240
$GAIN$ -70.0 $MODE$ 1
#$TIME_SERIES$ INPUT $INPUT$ CHANNEL_TIME_SERIES..DS_MANTA_IN $OUTPUT$ CHANNEL_SPECTRA $CHANNELS 0
$CHANNELS$ 240 $GAIN$ 60.0 $MODE$ 1
#
# end
#
```

### 4.2.2.2 MANTA Channel Signal Processing Configuration File: *sp.cfg.manta.ch*

```
#
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/sp.cfg.manta.ch.nb.1,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:47 $
# $Author: inglis $
#
$MESSAGE$ MESSAGE..DS_NAD
#
$BAND$ CH_BD $INPUT$ CHANNEL_SPECTRA $OUTPUT$ CH_TIME_SERIES
#
$NARROWBAND$ CH_1_0_FLOAT $INPUT$ CH_TIME_SERIES $LSCAN$ CH_1_0_AD $OUTPUT$ CH_1_0_FLOAT $MODE$ 1
$NARROWBAND$ CH_2_0_FLOAT $INPUT$ CH_TIME_SERIES $LSCAN$ CH_2_0_AD $OUTPUT$ CH_2_0_FLOAT $MODE$ 1
#
# end
#
```

## 4.2.3 Sonobuoy Signal Processing Configuration Files

### 4.2.3.1 Sonobuoy Channel Signal Processing Configuration File: *sp.cfg.sb.ch*

```
#
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/sp.cfg.manta.ch.nb.1,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:47 $
# $Author: inglis $
#
$MESSAGE$ MESSAGE..DS_NAD
#
$BAND$ BAND $INPUT$ CH_SPECTRA $OUTPUT$ CH_TIME_SERIES
#
$NARROWBAND$ CH_1_0_FLOAT $INPUT$ CH_TIME_SERIES $LSCAN$ CH_1_0_AD $OUTPUT$ CH_1_0_FLOAT $MODE$ 1
$NARROWBAND$ CH_2_0_FLOAT $INPUT$ CH_TIME_SERIES $LSCAN$ CH_2_0_AD $OUTPUT$ CH_2_0_FLOAT $MODE$ 1
#
# end
#
```

### 4.2.3.2 Sonobuoy Channel Signal Processing Configuration File: *sp.cfg.sb.ts*

```
#
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/sp.cfg.sb.1,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:48 $
# $Author: inglis $
#
$MESSAGE$ MESSAGE..DS_NAD
#
$TIME_SERIES$ INPUT $INPUT$ SB_TIME_SERIES..DS_SB_IN $OUTPUT$ CH_SPECTRA $GAIN$ 15.0
#
# end
#
```

## 4.3 Interface Configuration Files

### 4.3.1 Dasm: di.cfg

```
#
# dasm array interface configuration file
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/di.cfg,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:37 $
# $Author: inglis $
#
$ENDIAN$      1
$OUTPUT$      CHANNEL_TIME_SERIES 32 192 191 -1
$FWD_SENSOR_DATA$  FWD_DASM_NAD 249
$AFT_SENSOR_DATA$  AFT_DASM_NAD 5
$VCI$ 102 0
$VCI$ 103 64
$VCI$ 104 128
$VCI$ 105 192
# $MESSAGE_DATA$ MESSAGE..DS_NAD

# $MESSAGE_DATA$ DI_MESSAGE..DS_SC
# $OWN_TRACK_DATA$ OS..DS_NAD
# $SENSOR_TRACK_DATA$ DASM..ds_nad
#
# end
#
```

### 4.3.2 Manta: mi.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/mi.cfg,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:42 $
# $Author: inglis $
#
$ENDIAN$      1
# $MESSAGE_DATA$      MI_MESSAGE..DS_SC
#
# before 9 june 04
# $OUTPUT$            CHANNEL_TIME_SERIES 46 50 0
# $OUTPUT$            CHANNEL_TIME_SERIES 97 95 50
# $OUTPUT$            CHANN
EL_TIME_SERIES 193 47 145
# $VCI$ 301      0
# $VCI$ 302      96
# $VCI$ 303      192
# $FWD_SENSOR_DATA$ FWD_MANTA_NAD24
#
# on and after 9 june 04
#$OUTPUT$            CHANNEL_TIME_SERIES 1 95 0
#$OUTPUT$            CHANNEL_TIME_SERIES 97 47 95
#$VCI$ 302      0
#$VCI$ 303      96
#
#
# full manta
$OUTPUT$            CHANNEL_TIME_SERIES 46 50 0
$OUTPUT$            CHANNEL_TIME_SERIES 97 95 50
$OUTPUT$            CHANNEL_TIME_SERIES 193 95 145
$FWD_SENSOR_DATA$  FWD_MANTA_NAD 24
$AFT_SENSOR_DATA$  AFT_MANTA_NAD 35
$VCI$ 301      0
$VCI$ 302      96
$VCI$ 303      192
# $MESSAGE_DATA$ MESSAGE..DS_NAD
#
# end
#
```



### 4.3.3 Sonobuoy: bi.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/bi.cfg,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:33 $
# $Author: inglis $
#
# $REMOTE$ 192.168.0.143 50000
$REMOTE$ 192.168.0.13 50000

$OUTPUT$ SB_TIME_SERIES
# $MESSAGE_DATA$ MESSAGE..DS_NAD

# $OWN_TRACK$ RV2..DS_NAD
# $SENSOR_TRACK$ SB..DS_NAD
# $MESSAGE_DATA$ BI_MESSAGE..DS_SC $PERIOD$ 10.0
# $SENSOR_TRACK$ UAT..DS_NAD
#
# end
#
```

### 4.3.4 Sonobuoy NAD: sni.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ri.cfg,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:44 $
# $Author: inglis $
#
# keyword name
$TIME_DATA$ TIME_1S_DATA
$TRACK_GROUP$ BTD
$PORT$ /dev/ttyS0
$BAUD$ 9600
#
# end
```

### 4.3.5 NADAS: ni.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ni.cfg,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:42 $
# $Author: inglis $
#
# keyword      name
$NADAS_DATA$  NADAS_DATA
# $MESSAGE_DATA$ MESSAGE..DS_NAD
# $PERIOD$ 30
$PORT$      /dev/ttyS0
$BAUD$      4800
$TRACK_DATA$ QUEST..DS_NAD
#
# end
```

### 4.3.6 Radar: ri.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/ri.cfg,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:44 $
# $Author: inglis $
#
# keyword      name
$OWN_SHIP_TRACK$  QUEST
$TRACK_GROUP$    TD
$PORT$          /dev/ttyS0
$BAUD$          4800
#
# $MESSAGE_DATA$ RI_MESSAGE..DS_SC $PERIOD$ 5.0
# $MESSAGE_DATA$ MESSAGE
# end
```

### 4.3.7 AIS: ai.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/IF/gps_interface/gi.cfg,v $
# $Revision: 1.1 $
# $Date: 2003/10/22 18:41:24 $
# $Author: inglis $
#
# keyword          name
# $TRACK_DATA$ SB      R2
# $MESSAGE_DATA$ MESSAGE..DS_NAD
$TIME_DATA$      TIME_1S_DATA
$PERIOD$         10.0
$PORT$           /dev/ttyS0
$BAUD$           38400
$TRACK_GROUP$    ATD.DS_NAD
# $STB_SERVER$    DS_FD
$USE_SERIAL_PORT$ 1
#
# end
```

## 4.4 Data Processing Configuration Files

### 4.4.1 Geomagnetic Manager Configuration File

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/gm.cfg,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:00:41 $
# $Author: inglis $
#
$GEOMAGNETIC_DATA$  GM      QUEST  0.1 60.0
$MESSAGE_DATA$ MESSAGE..DS_NAD
#
# end
```

### 4.4.2 Ping Manager Configuration Files

#### 4.4.2.1 *Default: pm.cfg*

```
#
# ping manager configuration file
#
# $Revision: 1.1 $
# $Source: /usr/local/cvsroot/src/atass/system/demo.3/pm.cfg,v $
# $Author: inglis $
# $Date: 2005/03/28 12:08:13 $
#
# force endian swap on all output if necessary – default 0
# $ENDIAN$      1
#
$TIME_DATA$      TIME_1S_DATA
$MESSAGES$      MESSAGE
#
$TRACK_GROUP$          STD
# $WAVEFORM_GROUPS$    WF
$WAVETRAN_GROUP$      WT
#
$PING_SCHEDULE_DATA$  WS
$PING_NOTIFICATION_DATA$  PN
$PING_PRENOTIFICATION_DATA$  PPN
#
# $PING_SEQUENCE_DATA$  PS
# $PING_CONTROL_DATA$   PC
#
# start up delay, period, number of times
$TIME$      5.0 20.0 90
# start gain dB, increase rate, number per step (before dB increase), stop level dB
# $GAIN$      -30.0 1.0 3 0.0
#
$WAVETRAN$  LFM_1150_100_2_WT  VP2  200.0
# $WAVETRAN$  CW_1200_1_WT  VP2  200.0
# $WAVETRAN$  HFM_1200_400_4_WT  VP2  210.0
#
# end
#
```

#### 4.4.2.2 Whale Warning: pm.cfg.ww

```
#
# $Revision: 1.1 $
# $Source: /usr/local/cvsroot/src/atass/system/demo.3/pm.cfg,v $
# $Author: inglis $
# $Date: 2005/03/28 12:08:13 $
#
$TIME_DATAS      TIME_1S_DATA
$MESSAGES        MESSAGE
#
$TRACK_GROUPS$      STD
$WAVETRAN_GROUPS$  WT
#
$PING_SCHEDULE_DATAS  WS
$PING_NOTIFICATION_DATAS  PN
$PING_PRENOTIFICATION_DATAS  PPN
#
#      delay  period  pings
$TIMES$      10.020.0  93
#      start  step  repeat  end
$GAINS$      -30.0    1.0    3      0.0
#
$WAVETRAN$    LFM_1150_100_2_WT    VP2    216.0
#
# end
#
```

### 4.4.2.3 Run 1: pm.cfg.run1

```
#
# ping manager configuration file
#
# $Revision: 1.1 $
# $Source: /usr/local/cvsroot/src/atass/system/demo.3/pm.cfg,v $
# $Author: inglis $
# $Date: 2005/03/28 12:08:13 $
#
# force endian swap on all output if necessary - default 0
# $ENDIAN$      1
#
$TIME_DATA$      TIME_DATA
$MESSAGES$       MESSAGE
#
$TRACK_GROUP$    STD
# $WAVEFORM_GROUP$    WF
$WAVETRAIN_GROUP$    WT
#
$PING_SCHEDULE_DATA$    WS
$PING_NOTIFICATION_DATA$    PN
$PING_PRENOTIFICATION_DATA$    PPN
#
# $PING_SEQUENCE_DATA$    PS
# $PING_CONTROL_DATA$    PC
#
# start up delay, period, number of times
$TIMES$    10.090.0    4
# start gain dB, increase rate, number per step (before dB increase), stop level dB
# $GAIN$    -30.0    1.0    3    0.0
#
$WAVETRAIN$    HFM_1050_200_0D500_WT    VP2    210.0
$WAVETRAIN$    HFM_1050_200_1_WT    VP2    210.0
$WAVETRAIN$    HFM_1050_200_2_WT    VP2    210.0
$WAVETRAIN$    HFM_1050_200_4_WT    VP2    210.0
#
# end
#
```

#### 4.4.2.4 Run 2: pm.cfg.run2

```
#
# ping manager configuration file
#
# $Revision: 1.1 $
# $Source: /usr/local/cvsroot/src/atass/system/demo.3/pm.cfg,v $
# $Author: inglis $
# $Date: 2005/03/28 12:08:13 $
#
# force endian swap on all output if necessary - default 0
# $ENDIAN$      1
#
$TIME_DATA$      TIME_DATA
$MESSAGES$       MESSAGE
#
$TRACK_GROUP$    STD
# $WAVEFORM_GROUP$    WF
$WAVETRAN_GROUP$    WT
#
$PING_SCHEDULE_DATA$    WS
$PING_NOTIFICATION_DATA$    PN
$PING_PRENOTIFICATION_DATA$    PPN
#
# $PING_SEQUENCE_DATA$    PS
# $PING_CONTROL_DATA$    PC
#
# start up delay, period, number of times
$TIMES$    10.090.0    4
# start gain dB, increase rate, number per step (before dB increase), stop level dB
# $GAIN$    -30.0    1.0    3    0.0
#
$WAVETRAN$    HFM_1100_300_0D500_WT    VP2    210.0
$WAVETRAN$    HFM_1100_300_1_WT    VP2    210.0
$WAVETRAN$    HFM_1100_300_2_WT    VP2    210.0
$WAVETRAN$    HFM_1100_300_4_WT    VP2    210.0
#
# end
#
```

#### 4.4.2.5 Run 3: pm.cfg.run3

```
#
# ping manager configuration file
#
# $Revision: 1.1 $
# $Source: /usr/local/cvsroot/src/atass/system/demo.3/pm.cfg,v $
# $Author: inglis $
# $Date: 2005/03/28 12:08:13 $
#
# force endian swap on all output if necessary - default 0
# $ENDIAN$      1
#
$TIME_DATA$      TIME_DATA
$MESSAGES$       MESSAGE
#
$TRACK_GROUP$    STD
# $WAVEFORM_GROUP$    WF
$WAVETRAIN_GROUP$    WT
#
$PING_SCHEDULE_DATA$    WS
$PING_NOTIFICATION_DATA$    PN
$PING_PRENOTIFICATION_DATA$    PPN
#
# $PING_SEQUENCE_DATA$    PS
# $PING_CONTROL_DATA$    PC
#
# start up delay, period, number of times
$TIMES$      10.090.0  4
# start gain dB, increase rate, number per step (before dB increase), stop level dB
# $GAIN$      -30.0  1.0  3  0.0
#
$WAVETRAIN$  HFM_1050_100_0D500_WT  VP2  210.0
$WAVETRAIN$  HFM_1050_100_1_WT  VP2  210.0
$WAVETRAIN$  HFM_1050_100_2_WT  VP2  210.0
$WAVETRAIN$  HFM_1050_100_4_WT  VP2  210.0
#
# end
#
```



#### 4.4.2.6 System Integration Test: pm.cfg.sit

```
#
# ping manager configuration file
#
# $Revision: 1.1 $
# $Source: /usr/local/cvsroot/src/atass/system/demo.3/pm.cfg,v $
# $Author: inglis $
# $Date: 2005/03/28 12:08:13 $
#
# force endian swap on all output if necessary - default 0
# $ENDIAN$      1
#
$TIME_DATA$      TIME_DATA
$MESSAGES$       MESSAGE
#
$TRACK_GROUP$    STD
# $WAVEFORM_GROUP$    WF
$WAVETRAN_GROUP$    WT
#
$PING_SCHEDULE_DATA$    WS
$PING_NOTIFICATION_DATA$    PN
$PING_PRENOTIFICATION_DATA$    PPN
#
# $PING_SEQUENCE_DATA$    PS
# $PING_CONTROL_DATA$    PC
#
# start up delay, period, number of times
$TIMES$    10.090.0    4
# start gain dB, increase rate, number per step (before dB increase), stop level dB
# $GAIN$    -30.0    1.0    3    0.0
#
$WAVETRAN$    HFM_1450_125_1_WT    VP2    217.0
$WAVETRAN$    HFM_1450_250_1_WT    VP2    217.0
$WAVETRAN$    HFM_1450_500_1_WT    VP2    217.0
# $WAVETRAN$    HFM_1450_1000_1_WT    VP2    217.0
#
# end
#
```

#### 4.4.2.7 Standby: pm.cfg.standby

```
#
# ping manager configuration file
#
# $Revision: 1.1 $
# $Source: /usr/local/cvsroot/src/atass/system/demo.3/pm.cfg,v $
# $Author: inglis $
# $Date: 2005/03/28 12:08:13 $
#
# force endian swap on all output if necessary - default 0
# $ENDIAN$      1
#
$TIME_DATA$      TIME_1S_DATA
$MESSAGES$       MESSAGE
#
$TRACK_GROUP$    STD
# $WAVEFORM_GROUP$    WF
$WAVETRAN_GROUP$    WT
#
$PING_SCHEDULE_DATA$    WS
$PING_NOTIFICATION_DATA$    PN
$PING_PRENOTIFICATION_DATA$    PPN
#
# $PING_SEQUENCE_DATA$    PS
# $PING_CONTROL_DATA$    PC
#
# start up delay, period, number of times
$TIMES$    10.0300.0  100
# start gain dB, increase rate, number per step (before dB increase), stop level dB
# $GAIN$    -30.0    1.0    3    0.0
#
$WAVETRAN$    LFM_1150_100_2_WT    VP2    190.0
# $WAVETRAN$    CW_1200_1_WT    VP2    200.0
# $WAVETRAN$    HFM_1200_400_4_WT    VP2    210.0
#
# end
#
```

#### 4.4.2.8 Don's Personal Pinger: pm.cfg.don

```
#
# ping manager configuration file
#
# $Revision: 1.1 $
# $Source: /usr/local/cvsroot/src/atass/system/demo.3/pm.cfg,v $
# $Author: inglis $
# $Date: 2005/03/28 12:08:13 $
#
# force endian swap on all output if necessary - default 0
# $ENDIAN$      1
#
$TIME_DATA$      TIME_DATA
$MESSAGES$       MESSAGE
#
$TRACK_GROUP$    STD
# $WAVEFORM_GROUP$    WF
$WAVETRAN_GROUP$    WT
#
$PING_SCHEDULE_DATA$    WS
$PING_NOTIFICATION_DATA$    PN
$PING_PRENOTIFICATION_DATA$    PPN
#
# $PING_SEQUENCE_DATA$    PS
# $PING_CONTROL_DATA$    PC
#
# start up delay, period, number of times
$TIME$    10.030.0    4
# start gain dB, increase rate, number per step (before dB increase), stop level dB
# $GAIN$    -30.0    1.0    3    0.0
#
$WAVETRAN$    CW_1800_1_WT    VP2    200.0
$WAVETRAN$    LFM_1800_400_1_WT    VP2    200.0
$WAVETRAN$    LFM_1800_N400_1_WT    VP2    200.0
$WAVETRAN$    CW_1800_2_WT    VP2    200.0
#
# end
#
```

### 4.4.3 Waveform Manager Configuration File: wm.cfg

```
#
# STB waveform manager configuration file
#
# $Revision: 1.2 $
# $Source: /usr/local/cvsroot/src/atass/system/demo.3/wm.cfg,v $
# $Author: inglis $
# $Date: 2005/06/06 14:15:49 $
#
# keyword          name
$WAVEFORM_GROUP$  WF
$WAVETRAIN_GROUP$ WT
$PING_SEQUENCE_GROUP$ PS
#
# passive waveform definitions
#
# keyword          name                type    freq    bw    duration,s
$WAVEFORM$        LFM_1150_100_2_WF    LFM     1100.0 100.0  2.0
$WAVEFORM$        LFM_1800_400_1_WF    LFM     1800.0 400.0  1.0
$WAVEFORM$        LFM_1800_N400_1_WF   LFM     1800.0 -400.0 1.0
#
$WAVEFORM$        HFM_1050_100_0D500_WF HFM     1050.0 200.0  0.5
$WAVEFORM$        HFM_1050_100_1_WF    HFM     1050.0 200.0  1.0
$WAVEFORM$        HFM_1050_100_2_WF    HFM     1050.0 200.0  2.0
$WAVEFORM$        HFM_1050_100_4_WF    HFM     1050.0 200.0  4.0
#
$WAVEFORM$        HFM_1050_200_0D500_WF HFM     1050.0 200.0  0.5
$WAVEFORM$        HFM_1050_200_1_WF    HFM     1050.0 200.0  1.0
$WAVEFORM$        HFM_1050_200_2_WF    HFM     1050.0 200.0  2.0
$WAVEFORM$        HFM_1050_200_4_WF    HFM     1050.0 200.0  4.0
#
$WAVEFORM$        HFM_1100_300_0D500_WF HFM     1100.0 300.0  0.5
$WAVEFORM$        HFM_1100_300_1_WF    HFM     1100.0 300.0  1.0
$WAVEFORM$        HFM_1100_300_2_WF    HFM     1100.0 300.0  2.0
$WAVEFORM$        HFM_1100_300_4_WF    HFM     1100.0 300.0  4.0
#
$WAVEFORM$        HFM_1200_N100_1D5_WF HFM     1200.0 -100.0 1.5
$WAVEFORM$        HFM_1200_100_1_WF    HFM     1200.0 100.0  1.0
$WAVEFORM$        HFM_1200_200_1_WF    HFM     1200.0 200.0  1.0
$WAVEFORM$        HFM_1200_400_1_WF    HFM     1200.0 400.0  1.0
#
$WAVEFORM$        HFM_1200_100_4_WF    HFM     1200.0 100.0  4.0
$WAVEFORM$        HFM_1200_200_4_WF    HFM     1200.0 200.0  4.0
$WAVEFORM$        HFM_1200_400_4_WF    HFM     1200.0 400.0  4.0
#
$WAVEFORM$        HFM_1450_125_1_WF    HFM     1450.0 125.0  1.0
$WAVEFORM$        HFM_1450_250_1_WF    HFM     1450.0 250.0  1.0
$WAVEFORM$        HFM_1450_500_1_WF    HFM     1450.0 500.0  1.0
$WAVEFORM$        HFM_1450_1000_1_WF   HFM     1450.0 1000.0 1.0
#
$WAVEFORM$        CW_1200_1_WF         CW      1200.0 0.0   1.0
```

```

$WAVEFORM$ CW_1200_2_WF CW 1200.0 0.0 2.0
$WAVEFORM$ CW_1200_4_WF CW 1200.0 0.0 4.0
$WAVEFORM$ CW_1200_8_WF CW 1200.0 0.0 8.0
#
$WAVEFORM$ CW_1800_1_WF CW 1800.0 0.0 1.0
$WAVEFORM$ CW_1800_2_WF CW 1800.0 0.0 2.0
#
# keyword name of wave train name of waveform delay between waveforms
$WAVETRAIN$ LFM_1150_100_2_WT LFM_1150_100_2_WF 0.0
#
$WAVETRAIN$ LFM_1800_400_1_WT LFM_1800_400_1_WF 0.0
$WAVETRAIN$ LFM_1800_N400_1_WT LFM_1800_N400_1_WF 0.0
#
$WAVETRAIN$ HFM_1050_100_0D500_WT HFM_1050_100_0D500_WF 0.0
$WAVETRAIN$ HFM_1050_100_1_WT HFM_1050_100_1_WF 0.0
$WAVETRAIN$ HFM_1050_100_2_WT HFM_1050_100_2_WF 0.0
$WAVETRAIN$ HFM_1050_100_4_WT HFM_1050_100_4_WF 0.0
#
$WAVETRAIN$ HFM_1050_200_0D500_WT HFM_1050_200_0D500_WF 0.0
$WAVETRAIN$ HFM_1050_200_1_WT HFM_1050_200_1_WF 0.0
$WAVETRAIN$ HFM_1050_200_2_WT HFM_1050_200_2_WF 0.0
$WAVETRAIN$ HFM_1050_200_4_WT HFM_1050_200_4_WF 0.0
#
$WAVETRAIN$ HFM_1100_300_0D500_WT HFM_1100_300_0D500_WF 0.0
$WAVETRAIN$ HFM_1100_300_1_WT HFM_1100_300_1_WF 0.0
$WAVETRAIN$ HFM_1100_300_2_WT HFM_1100_300_2_WF 0.0
$WAVETRAIN$ HFM_1100_300_4_WT HFM_1100_300_4_WF 0.0
#
$WAVETRAIN$ HFM_1200_N100_1D5_WT HFM_1200_N100_1D5_WF 0.0
$WAVETRAIN$ HFM_1200_100_1_WT HFM_1200_100_1_WF 0.0
$WAVETRAIN$ HFM_1200_200_1_WT HFM_1200_200_1_WF 0.0
$WAVETRAIN$ HFM_1200_400_1_WT HFM_1200_400_1_WF 0.0
#
$WAVETRAIN$ HFM_1200_100_4_WT HFM_1200_100_4_WF 0.0
$WAVETRAIN$ HFM_1200_200_4_WT HFM_1200_200_4_WF 0.0
$WAVETRAIN$ HFM_1200_400_4_WT HFM_1200_400_4_WF 0.0
#
$WAVETRAIN$ HFM_1450_125_1_WT HFM_1450_125_1_WF 0.0
$WAVETRAIN$ HFM_1450_250_1_WT HFM_1450_250_1_WF 0.0
$WAVETRAIN$ HFM_1450_500_1_WT HFM_1450_500_1_WF 0.0
$WAVETRAIN$ HFM_1450_1000_1_WT HFM_1450_1000_1_WF 0.0
#
$WAVETRAIN$ CW_1200_1_WT CW_1200_1_WF 0.0
$WAVETRAIN$ CW_1200_2_WT CW_1200_2_WF 0.0
$WAVETRAIN$ CW_1200_4_WT CW_1200_4_WF 0.0
$WAVETRAIN$ CW_1200_8_WT CW_1200_8_WF 0.0
#
$WAVETRAIN$ CW_1800_1_WT CW_1800_1_WF 0.0
$WAVETRAIN$ CW_1800_2_WT CW_1800_2_WF 0.0
#
# end

```

#### 4.4.4 Time Generator Configuration File: tg.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/tg.cfg,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:01:05 $
# $Author: inglis $
#
# $MESSAGE$ MESSAGE
#
# for live
$TIME_DATA$ TIME_DATA
# for sim
# $TIME_DATA$ TIME_DATA $PERIOD$ 1.0
# for both
$TIME_DATA$ TIME_1S_DATA $INPUT$ TIME_DATA
$TIME_DATA$ TIME_10S_DATA $INPUT$ TIME_1S_DATA
$TIME_DATA$ TIME_60S_DATA $INPUT$ TIME_10S_DATA
$TIME_DATA$ TIME_300S_DATA $INPUT$ TIME_60S_DATA
#
# end
```

#### 4.4.5 Track Manager Configuration File: tm.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/tm.cfg,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:01:05 $
# $Author: inglis $
#
# $MESSAGE$ MESSAGE
#
# $TRACK_GROUP$ LTD
#
# $EXTRAPOLATE_FLAG$ 1
#
# $INPUT_TIME_DATA$ TIME_10S_DATA
#
# end
```

## 4.4.6 Sensor Manager Configuration Files

### 4.4.6.1 DASM Sensor Manager Configuration File: xm.cfg.dasm

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/xm.cfg.dasm,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:01:07 $
# $Author: inglis $
#
# $MESSAGE$          MESSAGE
#
$INPUT_TIMES$        TIME_1S_DATA
$GEOMAGNETIC$        GM
# $WINCH$            WINCH_NAD
$INPUT_TRACK$        QUEST
$OUTPUT_TRACK$        DASM
$INPUT_SENSOR$        FWD_DASM_NAD..DS_DASM_IN    HDTV
$INPUT_SENSOR$        AFT_DASM_NAD..DS_DASM_IN    HDV
$OUTPUT_SENSOR$        DASM_NAD
$HEADING_AVERAGES$    1
#
# overrides
# $SOUND_SPEED$      1505.0
$SALINITY$           32.0
$OFFSET$             59.0
$SCOPE$              263.0
#
# end
```

#### 4.4.6.2 MANTA Sensor Manager Configuration File: xm.cfg.manta

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/xm.cfg.manta,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:01:07 $
# $Author: inglis $
#
# $MESSAGE$          MESSAGE
#
$INPUT_TIMES$        TIME_1S_DATA
$GEOMAGNETIC$        GM
# $WINCH$            WINCH_NAD
$INPUT_TRACK$        QUEST
$OUTPUT_TRACK$        MANTA
#$INPUT_SENSOR$      FWD_MANTA_NAD..DS_MANTA_IN  HDV
$INPUT_SENSOR$       FWD_MANTA_NAD..DS_MANTA_IN  HTV
$INPUT_SENSOR$       AFT_MANTA_NAD..DS_MANTA_IN  HTD
$OUTPUT_SENSOR$      MANTA_NAD
$HEADING_AVERAGES$   1
#
# overrides
$SOUND_SPEED$        1505.0
$SALINITY$           32.0
$OFFSET$             186.0
$SCOPE$              263.0
#
# end
```

#### 4.4.6.3 VP2 Sensor Manager Configuration File: xm.cfg.vp2

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q283/xm.cfg.vp2,v $
# $Revision: 1.1 $
# $Date: 2004/09/22 14:01:07 $
# $Author: inglis $
#
# $MESSAGE$          MESSAGE
#
$INPUT_TIMES$        TIME_1S_DATA
$INPUT_TRACK$        QUEST
$OUTPUT_TRACK$        VP2
# $INPUT_SENSOR$      RAW_VP2_NAD
$OUTPUT_SENSOR$      VP2_NAD
#
# overrides
$SOUND_SPEED$        1505.0 # m/s
$DEPTH$              92.0 # metres
$SALINITY$           38.0 # ppt
$SCOPE$              0.0
$OFFSET$             0.0
#
# end
```



## 4.5 Operator Interface Configuration Files

### 4.5.1 Chat Configuration File: dd.cfg.chat

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dd.cfg.nuw,v $
# $Revision: 1.2 $
# $Date: 2005/06/13 19:50:14 $
# $Author: inglis $
#
# $MESSAGE$ MESSAGE
#
# $COLOUR$ 000 000 000 background
# $COLOUR$ 120 120 120 text
# $COLOUR$ 220 220 220 select
# $COLOUR$ 080 080 080 highlight
# $COLOUR$ 160 160 160 highlight_on
# $COLOUR$ 120 120 120 on
# $COLOUR$ 040 040 040 active
# $COLOUR$ 030 030 030 inactive
#
$TIME$ TIME_1S_DATA
#
$CHAT_DATA$ CHAT
#
$NAME$ lab
$FRAME$ 2 1
$POSITION$ 1 1
$SIZE$ 680 150
$TITLE$ "CHAT LAB"
$CHAT$ CHAT
#
# end
```

## 4.5.2 Ping Summary Configuration File: dd.cfg.ps

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dd.cfg.nuw,v $
# $Revision: 1.2 $
# $Date: 2005/06/13 19:50:14 $
# $Author: inglis $
#
$COLOUR$ 40 40 40 text
$COLOUR$ 220 220 220 select
$COLOUR$ 200 200 200 highlight_on
$COLOUR$ 160 160 200 on
$COLOUR$ 140 140 140 highlight
$COLOUR$ 120 120 140 active
$COLOUR$ 100 100 120 inactive
$COLOUR$ 080 080 100 background
#
$MESSAGES$ MESSAGE
#
$KEY$ $TOGGLES$ "QUEST TRACK"  EDIT 0 1 ""
"<component>track_plotter<event>show<group>TD<property>symbol"
"<component>track_plotter<event>hide<group>TD<property>symbol"
"<component>track_plotter<group>TD<property>symbol<state>on"
"<component>track_plotter<group>TD<property>symbol<state>off"
$KEY$ $TOGGLES$ "SENSOR TRACKS" EDIT 1 1 ""
"<component>track_plotter<event>show<group>STD<property>symbol"
"<component>track_plotter<event>hide<group>STD<property>symbol"
"<component>track_plotter<group>STD<property>symbol<state>on"
"<component>track_plotter<group>STD<property>symbol<state>off"
$KEY$ $TOGGLES$ "AIS TRACKS" EDIT 2 0 ""
"<component>track_plotter<event>show<group>ATD<property>symbol"
"<component>track_plotter<event>hide<group>ATD<property>symbol"
"<component>track_plotter<group>ATD<property>symbol<state>on"
"<component>track_plotter<group>ATD<property>symbol<state>off"
$KEY$ $TOGGLES$ "RADAR TRACKS" EDIT 3 0 ""
"<component>track_plotter<event>show<group>RTD<property>symbol"
"<component>track_plotter<event>hide<group>RTD<property>symbol"
"<component>track_plotter<group>RTD<property>symbol<state>on"
"<component>track_plotter<group>RTD<property>symbol<state>off"
$KEY$ $TOGGLES$ "BUOY TRACKS" EDIT 4 0 ""
"<component>track_plotter<event>show<group>BTD<property>symbol"
"<component>track_plotter<event>hide<group>BTD<property>symbol"
"<component>track_plotter<group>BTD<property>symbol<state>on"
"<component>track_plotter<group>BTD<property>symbol<state>off"
#
# $KEY$ $TOGGLES$ "TIME" EDIT 6 0 "" "TIME EVENT START" "TIME EVENT STOP" "TIME STATE ON"
"TIME STATE OFF"
# $KEY$ $PULSES$ "TIME STEP" EDIT 7 0 "" "TIME EVENT STEP" "" "" ""
#
$KEY$ $TOGGLES$ "QUEST PATH" EDIT 9 1 "" "<component>track_plotter<event>show<group>TD<property>path"
"<component>track_plotter<event>hide<group>TD<property>path"
```

```

"<component>track_plotter<group>TD<property>path<state>on"
"<component>track_plotter<group>TD<property>path<state>off"
$KEY$ $TOGGLES$ "SENSOR PATHS" EDIT 10 1 ""
"<component>track_plotter<event>show<group>STD<property>path"
"<component>track_plotter<event>hide<group>STD<property>path"
"<component>track_plotter<group>STD<property>path<state>on"
"<component>track_plotter<group>STD<property>path<state>off"
$KEY$ $TOGGLES$ "AIS PATHS" EDIT 11 1 ""
"<component>track_plotter<event>show<group>ATD<property>path"
"<component>track_plotter<event>hide<group>ATD<property>path"
"<component>track_plotter<group>ATD<property>path<state>on"
"<component>track_plotter<group>ATD<property>path<state>off"
$KEY$ $TOGGLES$ "RADAR PATHS" EDIT 12 1 ""
"<component>track_plotter<event>show<group>RTD<property>path"
"<component>track_plotter<event>hide<group>RTD<property>path"
"<component>track_plotter<group>RTD<property>path<state>on"
"<component>track_plotter<group>RTD<property>path<state>off"
$KEY$ $TOGGLES$ "BUOY PATHS" EDIT 13 1 ""
"<component>track_plotter<event>show<group>BTD<property>path"
"<component>track_plotter<event>hide<group>BTD<property>path"
"<component>track_plotter<group>BTD<property>path<state>on"
"<component>track_plotter<group>BTD<property>path<state>off"
#
# $KEY$ $PULSES$ "CW 1200 1" EDIT 9 0 "" "" "" "" ""
# $KEY$ $PULSES$ "HF 1200 400 1" EDIT 10 0 "" "" "" "" ""
# $KEY$ $PULSES$ "HF 1200 400 2" EDIT 11 0 "" "" "" "" ""
#
$KEY$ $PULSES$ "PING PULSE" EDIT 15 0 "" "PING PULSE ON" "PING PULSE OFF" "" ""
$KEY$ $TOGGLES$ "PING" EDIT 16 0 "" "PING ON" "PING OFF" "PING ON" "PING OFF"
#
# $KEY$ $PULSES$ "EXIT ALL" EDIT 16 0 "" "<event>exit"
# $KEY$ $PULSES$ "EXIT DD" EDIT 17 0 "" "<component>data_display<event>exit"
#
# $FRAME$ 7 5
$FRAME$ 2 9
$POSITION$ 0 840
# $POSITION$ 0 512
# $SIZE$ 384 512
$SIZE$ 640 150
#
$TIME$ TIME_1S_DATA
$TITLE$ "BUTTON"
$BUTTON$ MESSAGE
#
# end

```

### 4.5.3 Track Manager Configuration File: dd.cfg.ts

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dd.cfg.nuw,v $
# $Revision: 1.2 $
# $Date: 2005/06/13 19:50:14 $
# $Author: inglis $
#
#####
#
# $SIZES$ 400 512
#
# $MENUS$
#
#####
#
# $COLOUR$ 000 000 000 background
# $COLOUR$ 120 120 120 text
# $COLOUR$ 220 220 220 select
# $COLOUR$ 080 080 080 highlight
# $COLOUR$ 160 160 160 highlight_on
# $COLOUR$ 120 120 120 on
# $COLOUR$ 040 040 040 active
# $COLOUR$ 030 030 030 inactive
#
# $FRAMES$ 5 1
$POSITION$ 1 300
$SIZES$ 680 240
$WAVETRAIN$ PPN..DS_NAD
$title$ "PING SUMMARY"
$PING_SUMMARY$
#
$TIME$ TIME_1S_DATA
#
# $MESSAGE$ MESSAGE
#
# end
```

#### 4.5.4 Button Manager Configuration File: dd.cfg.kp

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dd.cfg.nuw,v $
# $Revision: 1.2 $
# $Date: 2005/06/13 19:50:14 $
# $Author: inglis $
#
#####
#
$SIZE$ 400 512
#
$MENU$
#
#####
#
# $FRAMES$ 1 1
$POSITION$ 1 600
$SIZE$ 680 240
$TITLE$ "TRACK SUMMARY"
$TRACK_SUMMARY$
#
$TIMES$ TIME_1S_DATA
#
$TRACK_GROUP$ TD.DS_NAD
$TRACK_GROUP$ ATD.DS_NAD
$TRACK_GROUP$ BTD.DS_NAD
$TRACK_GROUP$ STD.DS_NAD
$TRACK_GROUP$ RTD.DS_NAD
#
#$TRACK_GROUP$ TD.DS_SIM
#$TRACK_GROUP$ ATD.DS_SIM
#$TRACK_GROUP$ STD.DS_SIM
#$TRACK_GROUP$ RTD.DS_SIM
#
# $MESSAGE$ MESSAGE
#
# end
```

## 4.5.5 Dasm Lofargram Configuration File: dd.cfg.da.lscan

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dd.cfg.nuw,v $
# $Revision: 1.2 $
# $Date: 2005/06/13 19:50:14 $
# $Author: inglis $
#
#####
#
$SIZE$ 400 512
#
$MENU$
#
#####
#
$COLOUR$ 000 000 000 background
$COLOUR$ 120 120 120 text
# $COLOUR$ 220 220 220 select
# $COLOUR$ 080 080 080 highlight
# $COLOUR$ 160 160 160 highlight_on
# $COLOUR$ 120 120 120 on
# $COLOUR$ 040 040 040 active
# $COLOUR$ 030 030 030 inactive
$COLOUR$ 150 150 150 cursor
$COLOUR$ 220 220 220 cursor_text
$COLOUR$ 220 220 220 symbol
#
# $COLOUR$ 000 040 000 acoustic_colour_0
# $COLOUR$ 000 060 000 acoustic_colour_1
# $COLOUR$ 000 100 000 acoustic_colour_2
# $COLOUR$ 080 140 000 acoustic_colour_3
# $COLOUR$ 120 180 000 acoustic_colour_4
# $COLOUR$ 160 200 000 acoustic_colour_5
# $COLOUR$ 180 220 000 acoustic_colour_6
# $COLOUR$ 200 240 000 acoustic_colour_7
#
# $BUTTON_GROUP$ FTI.DS_KP
# $FEATURE$ BEARING_FD..DS_OP
#
# $FEATURE_GROUP$ BB_HF_FD.DS_FD
# $FEATURE_GROUP$ NB_HF_FD.DS_FD $CREATE$ 1 $ROOT$ NH
#
# $FRAME$ 7 1
# $POSITION$ 1 1030
# $SIZE$ 1200 700
$FRAME$ 1 1
$POSITION$ 1 1
$SIZE$ 600 300
# $LSCAN$ HF_NB_0_AD..DS_NB_HF
$title$ DASM_LOFARGRAM
$LSCAN$ CH_1_0_AD..DS_DASM_CH $LINE_CURSOR$ 1
```

```
#  
# $MESSAGE$ MESSAGE  
#  
# end
```

#### 4.5.6 Dasm Ascan Configuration File: dd.cfg.da.ascan

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dd.cfg.nuw,v $
# $Revision: 1.2 $
# $Date: 2005/06/13 19:50:14 $
# $Author: inglis $
#
#####
#
$SIZE$ 250 512
#
$MENU$
#
# $MESSAGE$ MESSAGE
#
#####
#
$COLOUR$ 000 000 000 background
$COLOUR$ 120 120 120 text
# $COLOUR$ 220 220 220 select
# $COLOUR$ 080 080 080 highlight
# $COLOUR$ 160 160 160 highlight_on
# $COLOUR$ 120 120 120 on
# $COLOUR$ 040 040 040 active
# $COLOUR$ 030 030 030 inactive
$COLOUR$ 150 150 150 cursor
$COLOUR$ 220 220 220 cursor_text
$COLOUR$ 220 220 220 symbol
#
# $COLOUR$ 000 040 000 acoustic_colour_0
# $COLOUR$ 000 060 000 acoustic_colour_1
# $COLOUR$ 000 100 000 acoustic_colour_2
# $COLOUR$ 080 140 000 acoustic_colour_3
# $COLOUR$ 120 180 000 acoustic_colour_4
# $COLOUR$ 160 200 000 acoustic_colour_5
# $COLOUR$ 180 220 000 acoustic_colour_6
# $COLOUR$ 200 240 000 acoustic_colour_7
#
# $BUTTON_GROUP$ FTI.DS_KP
# $FEATURE$ BEARING_FD..DS_OP
#
# $FEATURE_GROUP$ BB_HF_FD.DS_FD
# $FEATURE_GROUP$ NB_HF_FD.DS_FD $CREATES 1 $ROOT$ NH
#
# $FRAMES$ 7 1
# $POSITION$ 1 1030
# $SIZE$ 1200 700
$title$ DASM_ASCAN
$FRAMES$ 3 1
$POSITION$ 1 1
$SIZE$ 600 500
```



```
# $LSCAN$ HF_NB_0_AD..DS_NB_HF
$ASCAN$ CH_1_0_FLOAT..DS_DASM_CH $DB$ 1 $YMINIMUM$ 0.0 $YMAXIMUM$ 180.0 $AUTO$ 0
#
# $MESSAGE$ MESSAGE
#
# end
```

## 4.5.7 Manta Lofargram Configuration File: dd.cfg.ma.lscan

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dd.cfg.nuw,v $
# $Revision: 1.2 $
# $Date: 2005/06/13 19:50:14 $
# $Author: inglis $
#
#####
#
$SIZE$ 250 512
#
$MENU$
#
#####
#
#
$COLOUR$ 000 000 000 background
$COLOUR$ 120 120 120 text
# $COLOUR$ 220 220 220 select
# $COLOUR$ 080 080 080 highlight
# $COLOUR$ 160 160 160 highlight_on
# $COLOUR$ 120 120 120 on
# $COLOUR$ 040 040 040 active
# $COLOUR$ 030 030 030 inactive
$COLOUR$ 150 150 150 cursor
$COLOUR$ 220 220 220 cursor_text
$COLOUR$ 220 220 220 symbol
#
# $COLOUR$ 000 040 000 acoustic_colour_0
# $COLOUR$ 000 060 000 acoustic_colour_1
# $COLOUR$ 000 100 000 acoustic_colour_2
# $COLOUR$ 080 140 000 acoustic_colour_3
# $COLOUR$ 120 180 000 acoustic_colour_4
# $COLOUR$ 160 200 000 acoustic_colour_5
# $COLOUR$ 180 220 000 acoustic_colour_6
# $COLOUR$ 200 240 000 acoustic_colour_7
#
# $FRAMES$ 7 1
# $POSITION$ 1 1030
# $SIZE$ 1200 700
$FRAMES$ 1 1
$POSITION$ 1 1
$SIZE$ 600 300
$title$ MANTA_LOFARGRAM
$LSCAN$ CH_1_0_AD..DS_MANTA_CH
#
# $MESSAGE$ MESSAGE
#
# end
```

#### 4.5.8 Manta Ascan Configuration File: dd.cfg.ma.ascan

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dd.cfg.nuw,v $
# $Revision: 1.2 $
# $Date: 2005/06/13 19:50:14 $
# $Author: inglis $
#
#####
#
$SIZE$ 250 512
#
$MENU$
#
# $MESSAGE$ MESSAGE
#
#####
#
$COLOUR$ 000 000 000 background
$COLOUR$ 120 120 120 text
# $COLOUR$ 220 220 220 select
# $COLOUR$ 080 080 080 highlight
# $COLOUR$ 160 160 160 highlight_on
# $COLOUR$ 120 120 120 on
# $COLOUR$ 040 040 040 active
# $COLOUR$ 030 030 030 inactive
$COLOUR$ 150 150 150 cursor
$COLOUR$ 220 220 220 cursor_text
$COLOUR$ 220 220 220 symbol
#
# $COLOUR$ 000 040 000 acoustic_colour_0
# $COLOUR$ 000 060 000 acoustic_colour_1
# $COLOUR$ 000 100 000 acoustic_colour_2
# $COLOUR$ 080 140 000 acoustic_colour_3
# $COLOUR$ 120 180 000 acoustic_colour_4
# $COLOUR$ 160 200 000 acoustic_colour_5
# $COLOUR$ 180 220 000 acoustic_colour_6
# $COLOUR$ 200 240 000 acoustic_colour_7
#
# $BUTTON_GROUP$ FTI.DS_KP
# $FEATURE$ BEARING_FD..DS_OP
#
# $FEATURE_GROUP$ BB_HF_FD.DS_FD
# $FEATURE_GROUP$ NB_HF_FD.DS_FD $CREATES 1 $ROOT$ NH
#
# $FRAMES$ 7 1
# $POSITION$ 1 1030
# $SIZE$ 1200 700
$title$ MANTA_ASCAN
$FRAMES$ 3 1
$POSITION$ 1 1
$SIZE$ 600 500
# $LSCAN$ HF_NB_0_AD..DS_NB_HF
```

```
$ASCAN$ CH_1_0_FLOAT..DS_MANTA_CH $DB$ 1 $YMINIMUM$ 0.0 $YMAXIMUM$ 180.0 $AUTO$ 0  
#  
# $MESSAGE$ MESSAGE  
#  
# end
```

#### 4.5.9 Sonobuoy Lofargram Configuration File: dd.cfg.sb.lscan

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dd.cfg.nuw,v $
# $Revision: 1.2 $
# $Date: 2005/06/13 19:50:14 $
# $Author: inglis $
#
#####
#
$SIZE$ 250 512
#
$MENU$
#
#####
#
$COLOUR$ 000 000 000 background
$COLOUR$ 120 120 120 text
# $COLOUR$ 220 220 220 select
# $COLOUR$ 080 080 080 highlight
# $COLOUR$ 160 160 160 highlight_on
# $COLOUR$ 120 120 120 on
# $COLOUR$ 040 040 040 active
# $COLOUR$ 030 030 030 inactive
$COLOUR$ 150 150 150 cursor
$COLOUR$ 220 220 220 cursor_text
$COLOUR$ 220 220 220 symbol
#
# $COLOUR$ 000 040 000 acoustic_colour_0
# $COLOUR$ 000 060 000 acoustic_colour_1
# $COLOUR$ 000 100 000 acoustic_colour_2
# $COLOUR$ 080 140 000 acoustic_colour_3
# $COLOUR$ 120 180 000 acoustic_colour_4
# $COLOUR$ 160 200 000 acoustic_colour_5
# $COLOUR$ 180 220 000 acoustic_colour_6
# $COLOUR$ 200 240 000 acoustic_colour_7
#
# $BUTTON_GROUP$ FTI.DS_KP
# $FEATURE$ BEARING_FD..DS_OP
#
# $FEATURE_GROUP$ BB_HF_FD.DS_FD
# $FEATURE_GROUP$ NB_HF_FD.DS_FD $CREATE$ 1 $ROOT$ NH
#
# $FRAME$ 7 1
# $POSITION$ 1 1030
# $SIZE$ 1200 700
$FRAME$ 1 1
$POSITION$ 1 1
$SIZE$ 1200 300
# $LSCAN$ HF_NB_0_AD..DS_NB_HF
$TITLE$ "SONOBUOY LOFARGRAM"
$LSCAN$ CH_1_0_AD..DS_SB_CH $LINE_CURSOR$ 1
```

```
#  
# $MESSAGE$ MESSAGE  
#  
# end
```

#### 4.5.10 Sonobuoy Ascan Configuration File: dd.cfg.sb.ascan

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dd.cfg.nuw,v $
# $Revision: 1.2 $
# $Date: 2005/06/13 19:50:14 $
# $Author: inglis $
#
#####
#
$SIZE$ 250 512
#
$MENU$
#
# $MESSAGE$ MESSAGE
#
#####
#
$COLOUR$ 000 000 000 background
$COLOUR$ 120 120 120 text
$COLOUR$ 150 150 150 cursor
$COLOUR$ 220 220 220 cursor_text
$COLOUR$ 220 220 220 symbol
#
# $COLOUR$ 000 040 000 acoustic_colour_0
# $COLOUR$ 000 060 000 acoustic_colour_1
# $COLOUR$ 000 100 000 acoustic_colour_2
# $COLOUR$ 080 140 000 acoustic_colour_3
# $COLOUR$ 120 180 000 acoustic_colour_4
# $COLOUR$ 160 200 000 acoustic_colour_5
# $COLOUR$ 180 220 000 acoustic_colour_6
# $COLOUR$ 200 240 000 acoustic_colour_7
#
# $BUTTON_GROUP$ FTI.DS_KP
# $FEATURE$ BEARING_FD..DS_OP
#
# $FEATURE_GROUP$ BB_HF_FD.DS_FD
# $FEATURE_GROUP$ NB_HF_FD.DS_FD $CREATE$ 1 $ROOT$ NH
#
# $FRAMES$ 4 1
$FRAMES$ 1 1
# $POSITION$ 1 1030
# $SIZE$ 1200 700
$SIZE$ 1200 200
$TITLE$ "SONOBUOY ASCAN"
# $FRAMES$ 1 1
$POSITION$ 1 1
#$SIZE$ 600 500
$ASCAN$ CH_1_0_FLOAT..DS_SB_CH $DB$ 1 $YMINIMUM$ 0.0 $YMAXIMUM$ 180.0 $AUTO$ 0
#
# $MESSAGE$ MESSAGE
#
# end
```

## 4.6 Data Storage Configuration Files

### 4.6.1 Data Player (STBIO): dp.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/system/impact/dp.cfg.impact,v $
# $Revision: 1.1 $
# $Date: 2005/06/08 15:49:20 $
# $Author: inglis $
#
$TIME_STEPS$ 0.25
# $TIME_LIMIT$ 30.00
$TIME_FACTOR$ 0.5
# $TIME_FACTOR$ 2.0
$REPEATS$ 1
#
# $SERVER$ DS_NAD
#
$FILE$ /media/data1/dr/q302_01JAN70_010353.dl

#
$MESSAGE$ MESSAGE
$REFERENCE$ TIME_DATA
#
# end
```



## 4.6.2 Data Recorder (STBIO): dr.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/dl.cfg,v $
# $Revision: 1.4 $
# $Date: 2004/03/04 13:52:19 $
# $Author: inglis $
#
# keyword          name
#$DIRECTORY$ ../../data.q302/dr
$DIRECTORY$ /media/data1/dr
$PREFIX$ q302

$MESSAGES$ MESSAGE..DS_NAD
$TIMES$ TIME_1S_DATA..DS_NAD
$DURATION$ 120.0

$GROUP$ TD.DS_NAD
$GROUP$ ATD.DS_NAD
$GROUP$ BTD.DS_NAD
$GROUP$ LTD.DS_NAD
$GROUP$ STD.DS_NAD
$GROUP$ RTD.DS_NAD

$GROUP$ SD.DS_NAD
#
# $DATA$ TIME_DATA..DS_NAD
# $DATA$ TIME_1S_DATA..DS_NAD
# $DATA$ NADAS_DATA..DS_NAD
# $DATA$ DASM_NAD..DS_NAD
# $DATA$ MANTA_NAD..DS_NAD
# $DATA$ WINCH_NAD..DS_NAD
#
$DATA$          PN..DS_NAD
$DATA$          PPN..DS_NAD
#
$DATA$          CHANNEL_TIME_SERIES..DS_DASM_IN
$DATA$          AFT_DASM_NAD..DS_DASM_IN
$DATA$          FWD_DASM_NAD..DS_DASM_IN
#
$DATA$          CHANNEL_TIME_SERIES..DS_MANTA_IN
$DATA$          AFT_MANTA_NAD..DS_MANTA_IN
$DATA$          FWD_MANTA_NAD..DS_MANTA_IN
#
$DATA$          SB_TIME_SERIES..DS_SB_IN
#
# end
```

### 4.6.3 Data Logger (Text): dl.cfg

```
#
# $Source: /usr/local/cvsroot/src/atass/system/q268.v2/dl.cfg,v $
# $Revision: 1.4 $
# $Date: 2004/03/04 13:52:19 $
# $Author: inglis $
#
# $MESSAGE$ MESSAGE
#
#$DIRECTORY$ ../../data.q302/dl
$DIRECTORY$ /media/data1/dl
#
$TRACK_GROUP$          TD.DS_NAD
$TRACK_GROUP$          ATD.DS_NAD
$TRACK_GROUP$          BTD.DS_NAD
$TRACK_GROUP$          RTD.DS_NAD
$TRACK_GROUP$          STD.DS_NAD
#
$WAVETRAN_V4_DATA$    PN
$WAVETRAN_V4_DATA$    PPN
#
$SENSOR_DATA$ VP2_NAD
$SENSOR_DATA$ RAW_VP2_NAD
#
$SENSOR_DATA$ AFT_MANTA_NAD..DS_MANTA_IN
$SENSOR_DATA$ FWD_MANTA_NAD..DS_MANTA_IN
$SENSOR_DATA$ MANTA_NAD
#
$SENSOR_DATA$ AFT_DASM_NAD..DS_DASM_IN
$SENSOR_DATA$ FWD_DASM_NAD..DS_DASM_IN
$SENSOR_DATA$ DASM_NAD
#
$TEXT_DATA$ CHAT
#
# end
```

## 4.6.4 DAT Configuration Files

### 4.6.4.1 DASM DAT: *dat.cfg.dasm*

```
#
# $Source$
# $Revision$
# $Date$
# $Author$
#
$COMMENT$ Q302 dasm time series
$PREFIX$ Q302_DASM
$DATA$ CHANNEL_TIME_SERIES
$X_AXIS$ 1 # 1 - time series, 2 - frequency
$Y_AXIS$ 1 # 1 - linear, 2 - power, 3 - dB
$HEADER$ 2 # 1 - dat16, 2 - dat32
#
$TRANSPOSE$ 1
#$DIRECTORY$ ../../data.q302/dat
$DIRECTORY$ /media/data1/dat
$WRITES$
$DURATION$ 20
#
# end
```

### 4.6.4.2 MANTA DAT: *dat.cfg.manta*

```
#
# $Source$
# $Revision$
# $Date$
# $Author$
#
$COMMENT$ Q302 manta time series
$PREFIX$ Q302_MANTA
$DATA$ CHANNEL_TIME_SERIES
$X_AXIS$ 1 # 1 - time series, 2 - frequency
$Y_AXIS$ 1 # 1 - linear, 2 - power, 3 - dB
$HEADER$ 2 # 1 - dat16, 2 - dat32
#
$TRANSPOSE$ 1
#$DIRECTORY$ ../../data.q302/dat
$DIRECTORY$ /media/data1/dat
$WRITES$
$DURATION$ 20
#
# end
```

#### 4.6.4.3 Sonobuoy DAT: dat.sfg.sb

```
#
# $Source$
# $Revision$
# $Date$
# $Author$
#
$COMMENT$ Q302 sb time series
$PREFIX$ Q302_SB
$DATAS$ SB_TIME_SERIES
$X_AXIS$ 1 # 1 - time series, 2 - frequency
$Y_AXIS$ 1 # 1 - linear, 2 - power, 3 - dB
$HEADER$ 2 # 1 - dat16, 2 - dat32
#
$TRANSDUCER$ 1
#$DIRECTORY$ ../../data.q302/dat
$DIRECTORY$ /media/data1/dat
$WRITES$
$DURATION$ 20
#
# end
```

## 4.7 Utility Configuration Files

## 5. Software Procedures

### 5.1 Bootup Procedure

#### 5.1.1 Verify IP address

- a. Open a terminal and run: `ifconfig -a`; and
- b. Verify on each machine that the ip address matches those listed in `/etc/hosts` file on each machine.

#### 5.1.2 Verify SSH

Run `ssh -X <hostname>` to each machine from each machine. If this is the first time the machines are setup, you will be prompted to accept the public key from the remote machine to your local authorized host file located in `$HOME/.ssh/authorized_keys`.

As long as the public and private key pairs match along with the `authorized_keys` file, you can simply copy the `.ssh` fold and its content to each machine to grant access. Thus you do not need to generate unique key for each machine.

#### 5.1.3 Set Serial Ports

Depending on the user accounts access right, you will need to `chmod` the serial port on each machine for any device that requires its use.

Run: `chmod 0777 /dev/ttyS0`

Where `ttyS0` is serial port 0.

#### 5.1.4 Verify NTP

Make sure that each host has the following `ntp.conf` file in `/etc`. This file will allow the ntp clock to synchronize to paspgs.

As super user or root run:

```
/etc/init.d/ntp-server stop
/etc/init.d/ntpdate paspgs
/etc/init.d/ntp-server start
```

The `ntpdate` command will force an immediate sychonrization to the host machine provided. If this is not done and the local and host machine differ by more than an hour, ntp server will NOT keep sychonization.

```

# /etc/ntp.conf, configuration for ntpd

# ntpd will use syslog() if logfile is not defined
#logfile /var/log/ntpd

driftfile /var/lib/ntp/ntp.drift
statsdir /var/log/ntpstats/

statistics loopstats peerstats clockstats
filegen loopstats file loopstats type day enable
filegen peerstats file peerstats type day enable
filegen clockstats file clockstats type day enable

# You do need to talk to an NTP server or two (or three).
#server ntp.your-provider.example

# pool.ntp.org maps to more than 100 low-stratum NTP servers.
# Your server will pick a different set every time it starts up.
# *** Please consider joining the pool! ***
# *** <http://www.pool.ntp.org/#join> ***
#server pool.ntp.org

# ... and use the local system clock as a reference if all else fails
# NOTE: in a local network, set the local stratum of *one* stable server
# to 10; otherwise your clocks will drift apart if you lose connectivity.
server 127.127.1.0
fudge 127.127.1.0 stratum 13

# By default, exchange time with everybody, but don't allow configuration.
# See /usr/share/doc/ntp-doc/html/acconf.html for details.
restrict default kod notrap nomodify nopeer noquery

# Local users may interrogate the ntp server more closely.
restrict 127.0.0.1 nomodify

# Clients from this (example!) subnet have unlimited access,
# but only if cryptographically authenticated
#restrict 192.168.123.0 mask 255.255.255.0 notrust

# If you want to provide time to your local subnet, change the next line.
# (Again, the address is an example only.)
#broadcast 192.168.123.255

# If you want to listen to time broadcasts on your local subnet,
# de-comment the next lines. Please do this only if you trust everybody
# on the network!
#disable auth
#broadcastclient

server paspgs

```

### 5.1.5 Verify ATM driver

The ATM driver on Poweredge and Goshawka are automatically loaded after the module probe command has been run the first time as superuser or root.

To verify that the atm driver is loaded. Run

```
Lsmod | grep he
```

Where “he” is the name of the driver. On the older troll machines fore\_200e cards where used instead.

If the driver is not loaded, as root, type

```
Modprobe he
```

Type `uname -a` to get the <kernal version>.

Type `/lib/modules/<kernal version>/kernel/drivers/atm` and look for the driver name. In ubuntu atm is a part of the kernel.

Also, it may be necessary to set the node privileges for the atm device port.

Run `mknod /dev/<device name>`.

Then `chmod` the port such that the user may read and write to the device.

Another place to look if problem still persist is the `/etc/conf.modules` or `/etc/modules`. The device name should show up in this file if it is installed properly.



### **5.1.6 Startup Procedure**

To start up most of the Q302 processes, go to the host stbdisplay.

Open a terminal and type `cd stb.q302`.

Run `start_stb.q302`.

This will call a series of remote and local scripts to start up the processes on each machine.

Note that Ping Manager and Ping Generator on paspgs should be started manually, and only used when required.

All of the local processes on a specific proc may be run using `start_stb.proc.<N>` where N is the designated proc number found in `$HOME/stb.q302/stb.cfg.q302` file.

### **5.1.7 Verify the following**

Confirm that `ds.cfg.sb.def` file has the field CH set to the number of channels setup on EDAC. This is presently hardcoded for the EDAC at 16 channels.

Edit the sensor manager files `xm.cfg.dasm`, `xm.cfg.manta`, and `xm.cfg.vp2` for cable scope and depth settings. Also monitor the data logger file on bigxeon64 in `/media/data1/dl/` using the “`tail -f <filename>`” command. Verify that NAD is being reported correctly.

## **5.2 Recording Procedure**

By default, Data Logger is always running when the master script start\_stb.q302 is run. Data Logger will log files persently to bigxeon64 on the mount USB 2.0 IDE drive at /media/data1/dl/. All recording of any kind is done on bigxeon64.

### **5.2.1 STBIO Recording**

Run start\_dr will recorde stbio data to /media/data1/dr/. It is vitally important that the Time Generator is running, otherwise dates and file size will be incorrect.

### **5.2.2 STBIO Playback**

In general on the Data Service and Signal Processors, and possibly the data display apps need to be running when executing the STBIO player. The playback rate is specified in dp.cfg. Present playback rate is at 25%.

### **5.2.3 Generating DAT32**

Dat is generated any time data is being written to the data servers. Thus DAT can be generated on playback or in live mode.

Run start\_dat to start dat recording for MANTA, DASM, and Sonobuoy. Alternatively, you can start dat recording seperatly in start\_dat.mant, start\_data.dasm, and start\_dat.sb.

### **5.2.4 Generating DL Text NAD**

Run start\_dl.

### **5.3 Shutdown Procedure**

Run stop\_stb.q302 to stop processes on all of the procs listed in stb.cfg.q302.

Run stop\_stb to stop processes on the local machine only.



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