WinFrog Device Group:	CABLE MACHINERY			
Device Name/Model:	Plantscape System			
Device Manufacturer:	Honeywell Australia			
	Network OPC Inter	face		
	Data	Units	Point Name	Comments
	Time	sec	PSc Time.PV	
	Telephone Cable Count	m	Tel Cable Count.PV	
	Tow Cable Count	m	Tow_Cable_Count.PV	
	Observed Telephone	m/s	Tel Cable Speed.PV	
	Cable Speed		1	
	Observed Tow Cable	m/s	Tow Cable Speed.PV	
	Speed		1	
	Observed Telephone	kN	Tel_Cable_Ten.PV	
	Cable Tension			
	Observed Tow Cable	kN	Tow_Cable_Ten.PV	
	Tension			
	Emergency Stop		Emergency_Stop.PV	0 = Normal 1 = Emergency
	LCE Cable Tension	Ν	LCE Dyn Tension.PV	<u> </u>
	CDE1 Cable Tension	Ν	CDE1 Dyn Tension.PV	
	CDE2 Cable Tension	N	CDE2 Dyn Tension.PV	
	Stonker State		Stonker.PV	0 = Open
				1 = Closed
	Plough Mode		Plough_Mode.PV	0 = Stopped
Device Data String(s)	_		-	1 = Ready
Output to WinFrog:				2 = Stop in Progress
				3 = LTM Mode
				4 = LR Mode
				5 = RM Mode
				6 = Error
	Repeater Detected		Repeater.PV	0 = None Detected
				1 = Repeater
				Detected
				2 = Splice Box
	Desired Made of		Cable Erre Made DV	Detected
	Desired Mode of		Cable_Eng_Mode.PV	0 = Stopped 1 - MSM
	Operation			1 - MISMI $2 - \Lambda SM$
				2 - RSM 3 - RTM
				J = BIM A = BSM
				4 = BSW 5 = Error
	LCE Cable Count	m	I CE. Dyn. Count PV	J - LIIOI
	LCE Cable Speed	m/s	LCE Dyn Speed PV	
	CDE1 Cable Count	m	CDE1 Dyn Count PV	
	CDE1 Cable Speed	m/s	CDE1 Dyn Sneed PV	
	CDE2 Cable Count	m	CDE2 Dvn Count PV	
	CDE2 Cable Speed	m/s	CDE2_Dyn_Country	
WinFrog Data Type(s)		111/3	402	1
and their DAM recent		- ^ .	400	
and their RAW record:	PLANI SCAPEDA I	A:	499	

DEVICE DESCRIPTION:

A Cable machinery device used to read data from the *PLANTSCAPE* cable machinery control system developed by Honeywell.

Data transfer via this interface utilizes the *OPC* network protocol, which is based on a client server relationship. In this case the Plantscape cable machinery control system software acts as the server while the WinFrog Plantscape System driver acts as the client. This interface requires that the computers acting as the OPC server (Plantscape) and the OPC client (WinFrog) are connected via a Local Area Network (LAN) and are members of the same workgroup. Additionally, to initiate this connection the WinFrog operator (on the client computer) must be logged on using a user account that is duplicated on the Plantscape server computer.

All the information received is logged in the raw record 499-001. The counter related data (count, tension, etc.) is also logged in the 492-001 raw record.

DEVICE CONFIGURATION INSTRUCTIONS:

WINFROG I/O DEVICES > EDIT I/O:

Initiating this device (via the I/O Device window > Edit I/O dialog) will launch the HWHSC.OPCServer application on the desired computer. The Plantscape cable control system will then write data to the HWHSC.OPCServer, which will then be read by the Plantscape System device in WinFrog. The Device I/O Setup dialog shown below allows you to select the computer on the network on which to launch the HWHSC.OPCServer.

C	OPC 2.0 Connection		
	_ Status		
	Connection: Not Connected		
	Disconnect		
Enter Machine Name or IP Address:			
	tyco1a		
	OK Cancel		

Enter the computer name or IP address of the Plantscape host computer and click OK. This will cause WinFrog to look for all the OPC servers available on the computer indicated.

The OPC ServerList dialog box will open automatically after the OPCWFServer application has been launched. The drop-down list in this next dialog will list all the OPC servers available on the desired computer.

OPC ServerList (from OPCEN	IUM)	
OPC Server		
For	ce OPC 1.0a connection	
Machine Name: 127.0.0	.1	
Server Name: HWHS0	C.OPCServer	
OK Cancel		

Select the HWHSC.OPCServer from the drop-down list and click OK.

Note: For the dedicated network connection with the Plantscape cable control software to initiate, duplicate user accounts must be set up on both the client and the server computers that have identical user names and passwords and the WinFrog user must be logged on using this account

WINFROG I/O DEVICES > CONFIGURE DEVICE:

This device must be configured at the I/O Device window level. In the I/O Devices window, click the device name to select it, then right-click and select Configure Device. The Configure Plantscape dialog will appear.

Configure Plantscape		
Configure Channel Assignments TEL Cable		
Select the channel to assign data to: Channel 1		
TowTEL Cable		
Select the channel to assign data to: Channel 2 💌		
LCE Cable		
Select the channel to assign data to: Channel 3 💌		
CDE1 (Port) Cable		
Select the channel to assign data to: Channel 4 🗨		
CDE2 (Starboard) Cable		
Select the channel to assign data to: Channel 5 💌		
Reset all channel assiignments to Reset		
Configure TAGS		
Click to configure the OPC TAG Selection		
Note: Once the OPC TAG Selection dialog is exited with OK, the TAG selections are assigned and clicking Cancel in this dialog does not result the TAG selection reverting to the previous settings.		
OK Cancel		

Configure Channel Assignments

The specific TEL, TOW, LCE, CDE1 and CDE2 data retrieved from the Plantscape/Experion system can be assigned to any of the five channels supported by WinFrog. Note that generally channel one is for the telephone or product cable data, channel two is for the tow cable data, channel three is for the LCE data, channel four is for the CDE1 data, and channel five is for the CDE3 data. If the data is not to be assigned, it can be set to **Not Assigned** from the drop down list.

For the respective Plantscape data, select the channel to assign it to in WinFrog from the associated drop down list. Note that different data cannot be assigned to the same channel and therefore the available channels in any dropdown list are only the channel that is already assigned to that data and any that are not already assigned to any other data.

To simplify re-configuring of the channel assignments, clicking the **Reset** button will set all data to **Not Assigned** thus making all channels available for selection in all drop down lists.

Configure TAGS

To configure where WinFrog is to look for the data on the HWHSC.OPCServer, click the **OPC TAG Selection** button. Note that this button is only accessible if the OPC connection has been made. The OPC Tag Selection dialog will appear.

Note: The Plantscape device supports what Honeywell refers to as the 64 bit values. This requires the TAGs to use ".PV".

OPC Tag Selection 🛛 🛛 🔀			
Tag Selection] []	
Time	psc_time.pv		
Tel. Cable Count	tel_cable_count.pv	Cancel	
Tel. Cable Speed	tel_cable_speed.pv		
Tel. Cable Tension	tel_cable_ten.pv		
Tow Cable Count	tow_cable_count.pv		
Tow Cable Speed	tow_cable_speed.pv		
Tow Cable Tension	tow_cable_ten.pv		
LCE Count	lcecbldist_m.pv		
LCE Speed	lcecblspd_ms.pv		
LCE Tension	lce_dyn_tension.pv		
CDE1 (Port) Count	cdepcbldist_m.pv		
CDE1 (Port) Speed	cdepcblspd_ms.pv		
CDE1 (Port) Tension	cde1_dyn_tension.pv		
CDE2 (Stbd) Count	cdescbldist_m.pv		
CDE2 (Stbd) Speed	cdescblspd_ms.pv		
CDE2 (Stbd) Tension	cde2_dyn_tension.pv		
Emergency Stop	Emergency_Stop.PV		
Stonker State	stonker.pv		
Plough Mode	plough_mode.pv		
Repeater Detected	repeater.pv		
Desired Op. Mode	cable_eng_mode.pv		
S <u>a</u> ve Tags	estore Tags		

The data item tags can be entered individually or restored from a file all at once. Click a data item button to open the following dialog in which to enter the data item tag id.

Dialog	×
	<u>A</u> dd Item
Server Tag List:	Done
Root	

To enter the tag values individually, click each data item button, then in the tag entry dialog:

- 1. enter the point name (refer to the "Device Data String(s) Output to WinFrog" section above)
- 2. click Add Item
- 3. click Done

To restore a previously saved set of tags from a file, click the Restore Tags button and select the appropriate tag file (ex. Plantscape_Data.tag).

WINFROG VEHICLE > CONFIGURE VEHICLE DEVICES > DEVICE DATA ITEM > EDIT:

Add the CABLE MACHINERY, Plantscape System, COUNT data item to the cablelaying vessel. Once it has been added, it must be edited to suit the application.

?		
Reference Counters Real-Time Navigation Updates		
Direction		
Up / Down		
SET		
SET		
SET		
SET		
]		
OK Cancel		

Data item: CABLE MACHINERY, Plantscape System, COUNT

This data item configuration dialog has two pages, the Reference Counters page and the Real-Time Navigation Updates page.

Reference Counters Page

This page is used in conjunction with the Calculations window to maintain up to five reference counts based on the Channel One (cable) count. These reference counts are not used for any real-time calculations and are not logged to any file; they are intended for reference purposes only.

View and configure the Calculations window (shown below) by completing the following steps.

Note: To view the reference counts the COUNT data item must be attached to the vehicle.

Calculations
Setup Ocean Cruiser 🗾
COUNTER,SimCounter,COUNT,
To Event: 0m
DEFERENCE COUNTERS(m)
REFERENCE COUNTERS(m).
Counter #1: 3896
Counter #2: 5502
Counter# 3: 5502
Counter#4: 5502
Counter# 5: 5502

- 1. From the WinFrog main menu, select View > Calculations to open the Calculations window.
- 2. In the Calculations window click the Setup button to open the Setup Calculation Views dialog box.

Setup Calculation Views
Included Views
🗖 Position 🗖 Time Series
🔽 Data Item Text 🔲 LOP
🗖 Position Comparison 📃 Heading Comparison
🔲 Position Comp. Histogram 🗔 Pos. Comp. Time Series
COUNTER,SimCounter,COUNT,,On GPS,SimGps,POSITION,,Off GYRO,SimGyro,HEADING,,Off OUTPUT,SIMRAD SDP600,DP OUTPUT,,Off
On Off
OK Cancel Help

- 3. In the Setup Calculation Views dialog box, select the Data Item Text checkbox. Then turn on the COUNT data item by selecting the COUNT data item from the list and click the On button.
- 4. Click OK.

Once the Calculations window has been opened and configured the five reference counters can be modified using the Reference Counters page of the Configure Counter

dialog. (Note: the Configure Counter dialog can be directly accessed from the Calculations window by clicking the 🔜 icon in the Calculations window.)

The Reference Counter page allows the reference counters to be modified in a number of ways, as described below. Start by selecting the reference counter you want to modify from the drop-down list box at the top of the page.

Direction

When the *Up/Down* button is not depressed the reference count will increase if the input cable count increases, and decrease if the input cable count decreases. When the *Up/Down* button is depressed the reference count will decrease if the input cable count increases, and increase if the input cable count decreases.

Set Specific Cable Count

To set the reference counter to a specific cable count, enter the desired value in the field, then click the *Set* button. When the Configure Counter dialog OK button is then clicked, the desired reference counter value will be set to the entered value. This value will then continue to increment or decrement based on the input cable count and the current settings for the reference count.

Set Counter Scale

To change the scale at which the reference count will increment or decrement relative to the input cable count, enter the desired scale factor into the scale field. Leave the *New Counter Scale from Cable Count* value at its present value to apply the scale from the current point onward. Enter in a count value into the *New Counter Scale from Cable Count* field to apply the scale from a previous count value onward. Once the desired scale factor and count value is entered, click the *Set* button and the click the *OK* button.

Set Counter Offset

To set an offset from the input cable count to the reference count, enter the desired value into the Set Counter Offset field, click the *Set* button and then click the *OK* button. This value will be added to the input cable count.

Counter Name

To change the reference counter name, enter the desired name into the *Counter Name* field. Click the *Set* button and then the *OK* button to enter the change.

Real-Time Navigation Updates Page

Configure Counter		? 🗙
Reference Counters	Real-Time Navigation Updates	
Interval-		1
1.0 s	Enter Raw Data File Logging Interval in Seconds, 0=All Data	
Channel 1	(Telephone / Power Cable)	
V	Cable Count	
V	Payout Speed	
	Tension	
Channel 2	(Tow Cable)	
V	Cable Count	
V	Payout Speed	
V	Tension	
Channels 3	(LCE), 4 (CDE1), 5 (CDE2)	- I
V	LCE Tension , Count, Speed (Ch3)	
V	CDE1 Tension , Count, Speed (Ch4)	
	CDE2 Tension , Count, Speed (Ch5)	
General		
V	Distance to Event	
	Cable Angle	
	ОК	Cancel

This page enables/disables data from this device to be passed to the vehicle. This allows the vehicle to have more than one COUNT data item added to it which is required if it is necessary to log data from more than one counter (raw device data is only logged if the data item is associated with a vehicle). If a checkbox is selected, the data value will be passed to the vehicle. For example, if the *Cable Count* checkbox is selected in the *Channel 1* section, then the cable count from the input device will be passed to the vehicles channel 1 count.

The *Interval* section sets the data logging interval used when the "With Events" Logging Control option is selected (refer to the Eventing chapter of the WinFrog User's Guide for more information).

Data item: CABLE MACHINERY, Plantscape System, PLANTSCAPEDATA

The CABLE MACHINERY, Plantscape System, PLANTSCAPEDATA data item does not need to be added to the vehicle's device list. The Plantscape Device will read data from the Plantscape server as soon as it is added to WinFrog, at the I/O Device level, and is properly initialized. The data can be viewed in the I/O Devices/Decoded Data tab. However, this data item contains flags such as repeater and splice box detection, cable engine and tow winch modes. If this data item is not added to the ship then this information cannot be saved to the raw file nor passed to Makai Lay should Makai Lay be in use.