ANNEXURE A KPI TREES

d By: André Joubert	Prepare					
out	LoopSco	lert Manager	AMS AI	<u>ISC</u>	<u>PlantScape</u>	Plant Historian
			<u>KPI</u>	<u>Global</u> KPI His		
		ents, SMG)	Sasol Solve	anol & AAA (SCU, But	
			-02	Nov		
		KPI's)	Indicators (erformance	Key P	
	BSOL Ing new frontiers	N				

Figure A1: KPI Tree index



Figure A2: Global KPI tree

		Back to Ind	ex Sheet				KPI His	story				N	JSO		.
	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07
PHD	87.45	87.45	87.45	89.85	89.85	89.85	89.85	92.5	92.5	92.5	92.34	92.34	92.08	92.08	92.34
Plantscape: SCU	91.5	91.42	91.42	94.50	94.50	94.50	94.50	95.50	95.50	95.50	95.00	95.00	95.00	95.00	95.00
BUT	91.5	91.5	91.5	94.50	94.50	94.50	94.50	95.50	95.50	95.50	95.00	95.00	95.00	95.00	95.00
AAA Sys 1	91.5	91.5	91.5	94.50	94.50	94.50	94.50	95.50	95.50	95.50	95.00	95.00	95.00	95.00	95.00
AAA Sys 2	91.5	91.5	91.5	94.50	94.50	94.50	94.50	95.50	95.50	95.50	95.00	95.00	95.00	95.00	95.00
ESC: SCI	98.98	98.98	98.98	00.00	00.00	60,00	00.00	00,00	00 00	00.00	99,94	99,94	00,00	00.00	99,99
NBA	98.98	98.98	98.98	66.66	66.66	66.66	66.66	66.66	66.66	66.66	99.99	66.66	66.66	66.66	66.66
Ŧ	98.98	98.98	98.98	99.99	99.99	66.66	66.66	66.66	66.66	66.66	99.99	99.99	66.66	66.66	66.66
AAA Sys 1	98.98	98.98	98.98	66.66	99.99	99.99	66.66	66.66	66.66	66.66	99.99	99.99	66.66	66.66	66.66
AAA Sys 2	98.98	98.98	98.98	66.66	66.66	66.66	66'66	66.66	66.66	66.66	99.99	99.99	66.66	97.96	66.66
AAA Sys 3	98.98	98.98	98.98	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
EBI: Access Control	97.5	97.5	97.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	96	96	96	96	96
HVAC	97.5	97.5	97.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	96	96	96	96	96
Fire	97.5	97.5	97.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	96	96	96	96	96
Global KPI (Honeywell)	94.20%	94.18%	94.18%	96.40%	96.40%	96.40%	96.40%	97.20%	97.20%	97.09%	96.70%	96.70%	96.66%	96.56%	96.70%
					-	oneywell (3lobal KPI								
	1000 001														
	%00.201				1000		5 C. M. K.		6-14 V S		10.00				
	100.00%						1000		10000						
	98.00%		- Stores				ļ	ł	ļ	ł		+			
	94 00 M						1111								
	84.00%			10 mm				1000	New York						
	%00.28			1020		12.00		100		0.100					
	%00.08		1000	1000		10000									
	00.00.00 86 00.00					1		14		100					
	~~~~~	Aug-06 Se	p-06 Oct-0	5 Nov-06 D	ec-06 Jan-(	07 Feb-07 I	Mar-07 Apr-	07 May-07	Jun-07 Jul	07 Aug-07	Sep-07 O	ct-07			
		,								,					

Figure A3: KPI history



Figure A4: PHD KPI tree



Figure A5: PlantScape KPI tree



Figure A6: FSC KPI tree



Figure A7: AMS KPI tree



Figure A8: AlertManager KPI tree



Figure A9: LoopScout KPI tree

# ANNEXURE B DVC6000 VALVE SIGNATURE

ValveLink QuickReport June 14, 2005 14:36:37		admin ValveLink SNAP-ON ValveLink SNAP-ON ValveLink SNAP-ON
593-FV-30026	HART Tag N Valve S Actuator S Instrument Valve	ame FV.30026 Style SLIDING STEM Style Spring and Diaphragm S/N 0016407145 S/N IA.17500.
DVC6000 PD	Firmware Revi Hardware Revi	ision - ision -
Master Spec Sheet [593-FV-3	30026]	Ashushar
Manufacturer: Fisher Type: EZ Size: 1 in Class: 300 Rated Travel: 75.0 in Actual Travel: 0.75 in Stem Diameter: 0.375 in Packing Type: TFE / Single Inlet Pressure:	Seat Type: Metal Leakage Class: IV Port Diameter: Port Type: Unbalanced Flow Direction: Up Push Down To: Close Flow Tends To: Open Unbalanced Area:	Actuator Manufacturer: Fisher Type: 667 Size: 34 Effective Area: 69.0 in2 Air: Opens Lower Bench Set: 117.0 kPa Upper Bench Set: 207.0 kPa Nominal Supply Pressure: 215.0 kPa Spring Rate:
Outlet Pressure: Step Response [593-FV-3002	6]	
23 Jun 2005 11:2	8:26 Batch	Analyzed Data
		Deadband 0.25 Tuning Set: F Standard Gain: 6.20 Standard Travel Rate: 3.10 High Perf. Gain: High Perf. TVI Rate: High Perf. Press Rate: Notes
line (s	Analyzed Data (all times in sec	onds)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
23         50         0           24         40         0           25         50         0	5         0.17         0.45         0.45           5         0.14         0.45         0.45           5         0.14         0.45         0.45           5         0.1         0.35         0.35	1.01         15.29         0.16         1.02           1.08         15.87         0.31         1.02           0.85         0.0         0.02         1.03



# ValveLink QuickReport

14:36:37



admin ValveLink SNAP-ON ValveLink SNAP-ON ValveLink SNAP-ON



Figure B1: DVC6000 valve signature

# ANNEXURE C ASSET MAINTENANCE BLUEPRINT

			_		_	_		_		_	_		_	_		_	_		_		_			_	_	_		_		_		_		_	_		_	_		_	_
	Total Man Hours per year	1.1	1.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.3	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	7.6	10.3	1.2	4.7	4.7	4.2	7.2	10.6	1.2	1.2	3.2	3.2	3.2	4.6	4.6	4.6	4.6	4.6
	Overhaul	•	•	ŀ	ŀ	•	•	÷		F	•	• •	÷	•	ŀ	÷	·	•	÷	• •	ŀ	• •	H		Ħ	•	•	·		ŀ	• •	ŀ	•	•	•		ŀ	•	ŀ	·	
	UT, AT, VT, metal Density	П		T	Π	T	Γ	Π	T	Π		Τ	Π	T	t	Π	T	Τ	Π	T	Π	T	Π		Π	T	П	Τ		Π	T	Π	T	Π		T	Π	T	Π	T	
.qs	Borescope or Videoprobe Ins	П	T	T	Π	T	T	Π	T	Π		Γ	Π	T	T	Π	T	Γ	Τ	T	Π	T	Π		Π	T	Γ	T	T	Π	T	Π	T	Π		T	Π	T	Π	T	
	Functional Test	SD	S	SD	SD	S	SD	SD	2 S	SD	S	SD	SD	SD ,	SD	SD	S C	SD	SD	2 G	SO	n n	SD	n n	$\geq$	n n	SD	SD	S	S	2 S C	S	S	SD	SD	SO	SD	n n	S	SD	SD
	test qint		•		•			•	• •	ŀ	•		÷	• •			•		÷	• •	•	• •	•	•		, C	SD	SD		•	SD	•	•	SD	SD	SD	•			4	•
	Calibration Verification		•	SD	SD	DS C	SD	SD	2 S	SD	SD	SD	SD	SD ,	48	•	•	•	•	• •	ŀ	• •	ŀ	• •	$\left  \cdot \right $	, C	SD	SD	• •	·	2D SD	•	•	•	•		•	•	ŀ	•	•
	Internal Inspection IS/Ex	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48		48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
X3/	External Visual Inspection IS	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	•	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
	Relief Valve Testing				Ц			Ц		Ц											Ш		Ш		Ц					Ц		Ц							Ш		
	Stroke Test		•	8	ଟ୍ଡ	ଟ୍ୟ	38	8	ନ୍ନ	8	8	88	ß	S,	•	÷	•	• •	÷	• •	ŀ	• •	ŀ	• •	ŀ	•	•	•	• •	ŀ	• •	·	• •				ŀ	• •	ŀ	•	•
	Lubrication	Ц			Ц			Ц		Ц			Ц						Ц		Ц		Ц		Ц					Ц		Ц							Ш		
	Clean & Inspect		•	ŀ	ŀ	•	•	·	• •	ŀ	•	• •	÷	۰ C	<u>,</u>	·	•	• •	·	• •	ŀ	۰ GS	ŀ	• G	S	۰ C	98	<del>8</del>	20	ß	• •	ŀ	•	•	•	• •	ŀ	•	S	SD	•
ອເ	Mechanical Inspection off li	Ш			Ц			Ц		Ц			Ц		L				Ц		Ц		Ц		Ц					Ц		Ц					Ц		Ш		
ection	Production Operator's Daily Insp	Ц		L	Ц	$\downarrow$		Ц		Ц			Ц		L	Ц	$\downarrow$		Ц		Ц	1	Ц		Ц	$\downarrow$		Ц		Ц		Ц	$\downarrow$				Ц	1	Ц		
uw	System Engineering Walkdo	≥	22	≥≥	≥:	≥≥	Z	≥:	≥≥	≥	22	≥≥	≥	2	Z	≥	22	2 N	≥:	≥≥	≥:	≥≥	≥	≥≥	≥	≥≩	Z	≥:	≥≥	≥:	≥≥	≥:	≥≥	2	22	≥≥	$\geq$	3	: >	3	2
NDE)	Non Destructive Examination (					1		Ц						1								1								Ц			1					1			
ອເ	Mechanical Inspection on li	Ц		L	Ц	$\downarrow$		Ц		Ц			Ц	$\perp$	L	$\square$	$\downarrow$		Ц	$\perp$	Ц	$\downarrow$	Ц		Ц	$\downarrow$		Ц		Ц	$\perp$	Ц	$\downarrow$				Ц	$\downarrow$	Ц		
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ßuip	Performance Monitoring/Trene	1	•	•	ŀ	•		•	• •		•	• •	•	•	•	•	•	•	1	• •	$ \cdot $	• •	ŀ	• •	ŀ	•		•	• •	ľ	• •	•	•	1	•	• •	1	•	Ľ		4
f	Health Monitoring/Trending	0	00	0	0	00	0	0		0	00	0	0	0	0	0	00	0	0	00	0	00	0	00		00	0	0	00	0	00	0	00	0	00		0	00	0	0	С
	Ultrasonics/Sonics	Н		╞	Ц	╀	╞	Ц	╀	μ		+	Ц	+	╞	$\square$	$\downarrow$	$\bot$	Ц	+	Ц	+	Ц		Ц	$\downarrow$	Ц	Ц	+	Ц	╀	Ц	$\downarrow$			$\downarrow$	$\square$	$\downarrow$	Н		
LG)	Spot Radiometer (Temperatu	Н	_	╞	Ц	╀	╞	Ц	╀	Ц		+	Ц	+	╞	$\square$	+	+	Ц	+	Н	╀	Н	+	Н	+	$\square$	Ц	+	Ц	╀	Ц	+			╀	$\square$	+	Н	+	
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	IdW	9 10	5 95. 8 95.	6 15	9 13.	9 13.	5 12(	8 10	90	9 10	9 10	6 10 10	5 10;	10,10	2 10	8 12	010	6 10;	6 10; 20;	6 10 10	8 10;	0 1 96	88.	88.88	5 12	172	2 16	2 13.	99	10	7 86.	5 14	7 86.	8 12	8 12	5 10 10	111	2 10	3 93.	7 85.	8
	ACR	65.	63.0	63.0	65.	65.0	52.	8	65.	65.	65.	63.0	63.(	8	67.	63.	63.0	63.0	63.(	8	50.	60	8	82	51.	88	67.	. 19	8 8	38	21.	73.(	21.	63.0	63.0	63.0	38.	29.	23.	26.	35
	Department	E&I			E81	18 18 18	E81	E81		E&I	E81		E&I			E&I		E81	E&I		Ш В I		E&I	E SI	E&I	ц П П П П	E8I	Т В Ш		E81		E8I		E&I	E81		E&I	E R	E&I	E81	E&I
tenance Blueprint	Inst D = Deliy D = Deliy D = Deliy W = Weekly W = Wonthy Number = X Months Number = X Months Number = X Months Sci = Standard Operating Procedures (Production Task) Sci = Standard Operating Procedures (Production Task) Sci = Standard Operating Procedures (Production Task) RTF = Run to Falue RTF = Run to Falue	MP15S MAIN Control Valve (Elec)	KC-1002 PAIR INLET On/Off Value (Elec)	RE-1041 FG OUT Control Valve (Elec)	HHBF TO HP40S MAIN Control Valve (Elec)	LLP2S MAIN Control Valve (Elec) kr0-4002 TO MX-4004 Control Valve (Elec)	ES-3061 LLP2S Control Valve (Elec)	593DM-2021 Control Valve (Elec)	LPM-1004 TIBF CONTROL VAIVE (Elec)	LP5S MAIN Control Valve (Elec)	BF TO LP5S MAIN Control Valve (Elec)	RE-1041 FG IN Control Valve (Elec)	RE-1041 FG IN Control Valve (Elec)	RE-1041 FG IN Control Valve (Elec) HT-1040 LIV FLAME SCANNER	CAUSTIC INCIN. WWA Coriolis Flow Sensor	MX-1001 PAIR DP Flow Tx (SIS)	593KC-1002 DISCHARGE DP Flow TX	KC-1002 TO MX-1001 DF Flow Tx (313)	KC-1002 TO MX-1001 DP Flow TX	KC-1002 TO MX-1001 DP Flow 1x (SIS) 593MX-1001 PAIR DP Flow Tx	593PC-1010 TO 593VL-2010 VA FLOW TRANS	B93PK-1013 TO 593DM-2036 DP FLOW TRANS PC-2003 TO VL-2010 VA Flow Tx	PC-4013ABTO EX-4015 VA Flow Tx	PC-4040ABTO VL-4050 VA Flow TX BLICH TO 593VI -4010 VA FLOW TRANS	593VL-4050 Level Gauge	DM-2011 INTERFACE Disp Level TX 592DM-1004 DD1 evel TX (SIS)	TK-6003 DP Level TX (Bubbler) (SIS)	TK-6004 DP Level Tx (Bubbler) (SIS)	DM-2007 DP Level TX (Bubbler)	593DM-1004 DP Level Tx	EA product tank - LT	593TK-4009 Radar Level Tx	LIQUID RECEIVER LEVEL TRANSMITTER	PX-1001A DP Level TX (Bubbler) (SIS)	PX-1001B DP Level Tx (Bubbler) (SIS)	PX-1002 DP Level 1X (Bubbler) (SIS) PX-1004 LEVEL DP Level TX (Bubbler)	RE-4060 DP Level Tx (Dia Seal) + Displacement Type	593RE-3020 DP LEVEL TRANS (DIA SEAL) NI -4040 DP I avai Tv (Dia Saal)	EX-3014 DP Level Tx (Dia Seal)	VL-2020 DP Level TX (Dia Seal)	DM-3015 UPPEK DP Level 1X (DIa Seal)
Asset Mair	Frequency Leas	80-593-0700-00-UTIL-STEAM-TV-70015	0-593-0100-KC-1002-XV-10089	0-593-0100-RE-1041-TV-10080	30-593-0700-00-UTIL-STEAM-TV-70012	30-593-0700-00-UTIL-STEAM-TV-70017 10-593-0100-KC-1002-EV-10022	10-593-0300-ES-3061-FV-30049	30-593-0200-DM-2021-PV-20010	0-593-0100-UM-1004-LV-10007	90-593-0700-00-UTIL-STEAM-PV-70018	0-593-0700-00-UTIL-STEAM-TV-70019	0-593-0100-ES-1002-FV-10007 0-593-0100-RE-1041-TV-10078A1	30-593-0100-RE-1041-TV-10078B	30-593-0100-RE-1041-TV-10078C 10-593-0100-HT-1040-RE-100078	0-593-0600-TK-6001-FE-60073	30-593-0100-MX-1001-FT-10004	30-593-0100-KC-1002-FT-10020	0-593-0100-KC-1002-FT-10021	0-593-0100-KC-1002-FT-10023	80-593-0100-KC-1002-F1-10024 00-593-0100-MX-1001-FT-10003	30-593-0100-PC-1010A-FT-10018	00-593-0100-PK-1013-1-FI-10033 10-593-0200-PC-2003-FT-20063	30-593-0400-PC-4013B-FT-40020	30-593-0400-PC-4040A-FT-40044 10-593-0400-VL-4010-FT-40010	30-593-0400-VL-4050-LG-40039	30-593-0200-DM-2011-LT-20002 10-593-0100-DM-1004-LT-10008	10-593-0600-TK-6003-LT-60007	30-593-0600-TK-6004-LT-60010	0-593-0200-DM-2007-LT-20012 10-593-0200-DM-2007-LT-20070	30-593-0100-DM-1004-LT-10007	30-593-0700-DM-7051-LI-70010 30-597-0BL2-TK-9302-LT-9301A	30-593-0400-TK-4009-LT-40079	30-593-0700-DM-7033-LT-70017 0-593-0700-KC-2034-DM-7032I T70012	0-593-0100-PX-1001A-LT-10031	30-593-0100-PX-1001B-LT-10035	0-593-0100-PX-1002-L1-10041 0-593-0100-PX-1004-LT-10030	30-593-0400-RE-4060-LT-40035	30-593-0300-RE-3020-LT-30008 10-593-0400-VI -4040-LT-40025	0-593-0300-EX-3014-LT-30006	30-593-0200-VL-2020-LT-20004	30-593-0300-DM-3015-L1-30045

Figure C1: Asset maintenance blueprint

# ANNEXURE D MAINTENANCE PROCEDURE

# **PHD Maintenance Procedure**

## Introduction

This document provides the system administrator with a standard work procedure to determine whether PHD is functioning correctly on the local machine where PHD is installed.

## Purpose

This document is to be used as a quick reference. It defines the various maintenance tasks that need to be performed on a Historian PHD system. This procedure will set a standard on the tasks to be executed for preventative maintenance on all Historian PHD systems.

## Scope

This document is intended for the use of the Honeywell support personnel, both locally at the SASOL site as well as where offsite work is to be performed, it can also be distributed to offsite customers where Honeywell support personnel delivered services as part of ongoing support.

## System maintenance Procedure

#### PHDMAN command window

- Log on to the PHD server locally or with a remote access tool.
- Open a command window and type "phdman" to open the PHD Management console.
- To change from the current window back to the phdman prompt you need to press 'ctrl c' on the keyboard or open a new window and type in "phdman".
- Type in "*mon sys*". A window will open with all the RDI's that are configured on PHD for that specified server.
- The RDI's must be in an active, active state for the *state* and *interface* heading. The rdistate must change between scan and idle mode, an indication that the interface is working correctly. In the same window in the top left corner the system state must be active. In the top right hand corner is the store process. Process state must be active and data store must be enabled if history needs to be stored in the archives.

🍠 PHDManager - localhost/3	100					_ 🗆 🗡
+   System state: ACTIU   Current time: 02-F1 +	E EB-2005 14:14:	53 Ir	Process Data st Priority [I nterval/off Interval Store rate	ORE PR state: orage: o/Hi]: [rem]: used: nerr]: [avg]:	OCESS ACTIVE ENABLED 9 [7/9] 300/0 [7 1 (0%) 0 [3384] 3384.0/s	1 <b>k</b> 12268.4/
+ ¦ RDI Name STATE	REALT I INTERFACE	ME DATA IN RDISTATE	NTERFACES SH TU RC	RS OFS	HRM NSCAL	N NTAGS
I OTOKON ACTIVE SC.AB_U01 ACTIVE SC.AB_U01 ACTIVE SC.AD_FFS INACTIVI SC.AD_FFS INACTIVI SC.AD_FIRE INACTIVI SC.AD_GASN ACTIVE SC.CT_COAL ACTIVE SC_ENVIRO INACTIVI SC_FNUIRO INACTIVI SC_FNUIRO INACTIVI SC_FNUIRA ACTIVE SC_MO_U212 ACTIVE SC_MO_U219 ACTIVE SC_MO_U219 ACTIVE SC_PS_U265 ACTIVE SC_PS_U265 ACTIVE SC_PS_U81 INACTIVI SC_PS_U81 INACTIVI SC_SM_UAO ACTIVE SC_SM_UAO ACTIVE SC_SM_UAO ACTIVE SC_MUU03 INACTIVI SC_PS_U245 ACTIVE SC_FN_U244 INACTIVI SC_PS_U245 ACTIVE SC_FN_U245 ACTIVE SC_FN_U245 ACTIVE SC_PS_U245 ACTIVE SC_PS_U245 ACTIVE SC_PS_U245 ACTIVE SC_PS_U245 ACTIVE SC_PS_U245 ACTIVE SC_PS_U245 ACTIVE SC_PS_U245 ACTIVE	ACTIVE ACTIVE ACTIVE ACTIVE INACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE	IDLE SCAN SCAN SCAN SCAN SCAN SCAN IDLE IDLE IDLE IDLE IDLE IDLE IDLE IDLE		50550505555555555555555555555555555555	0 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	$\begin{array}{c} \\ 0 & 121 \\ 121 \\ 0 & 621 \\ 0 & 0 \\ 1 & 576 \\ 1 & 576 \\ 0 & 0 \\ 1 & 57 \\ 0 & 0 \\ 1 & 57 \\ 0 & 0 \\ 1 & 57 \\ 0 & 0 \\ 1 & 57 \\ 0 & 0 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 \\ 1 & 1071 $

Figure 1 Real-time Data Interface

In a PHD Management console window type in "*mon sec*" you can find information in this window:

- When PHD was last restarted.
- Tags currently defined in the system.
- Pool used.
- If the pool used is 100%, the tag no is all used and PHD will not work correctly No new tags will be built into the PHD.

🍠 PHDManager - localhost/3100	
<pre>     PHDManager - localhost/3100     Section size: 50864128     Creation time: 02-FEB-05 13:49:10     Max tagno: 150000     Tags defined: 8272     Max routing: 2     Pool size: 38252493     Pool used: 2861480 (7.5%)     Section size: 86577152     Creation time: 02-FEB-05 13:48:42     Max tagno: 150000     Tags defined: 8272     Max tagno: 150000     Tags defined: 8272     Max tagno: 150000     Tags defined: 8272     Hash slots: 12503     Hash slots: 12503 </pre>	<pre>\$\begin{bmatrix}     Section size: 1544192     Section time: 02-FEB-05 13:48:37     Creation time: 02-FEB-05 13:48:37     Section size: 2297856     Creation time: 02-FEB-05 13:49:10     Max modules: 10000     Max functions: 1000     Max functions: 1000     Max functions: 3     Functions: 3     Hash slots: 2753     Pool size: 2048000     Pool used: 254 (0.0%)     ++ </pre>
Press CONTROL/C to exit monitor	<b>▼</b>

Figure 2 Sections

# Reports

In a PHD Management console window type in: "*rep sum*". A system summary will be given of the system state.

- Number of collecting tags.
- Total range errors.
- Data confidence.

🍠 PHDManager - localhost/3100				
Uniformance PHD Manager. Version (C)Copyright 1991-2003 Honeywell	201.1.5.1 Internatio	onal Inc.		-
Connecting To Uniformance PHD Se PHDManager> rep sum PHD TA Collected from 02-FEE	erver: loca G STATISTI 3-05 13:49:	lhost/3100 CS REPORT 10.676 to 02-1	FEB-05 14:17:20	
	SYSTEM SUM	MARY		
Number of tags sam Total queue overwrite Total range error	npled: tags: tags:	7151 4 14		
	AVERAGE	MIN	MAX	
Analog data compression: Discrete data compression: Data confidence: Percentage gross errors:	2.908 3.934 89.180 0.000%	1 .000 1 .000 0 .000 0 .000 0 .000%	205.875 9.667 100.000 0.000%	
PHDManager> _				•

Figure 3 System Summary

In a PHD Management console window type in: "rep con xxx c:\Logs.txt"

- A window will open with the tags with the lowest confidence.
- The xxx specify the number of worst confidence tags to return.
- Export the data to text file using the optional last parameter to specify the path.

🝠 PHDMana	ager - loca	alhost/3100		
Uniforman (C)Copyr:	nce PHD ight 19	Manager. Version 201 91-2003 Honeywell Inte	.1.5.1 ernational Inc.	<b>_</b>
Connectir PHDManage	ng To U er> rep Coll	niformance PHD Server con PHD TAG STI ected from 02-FEB-05 :	: localhost/3100 ATISTICS REPORT L3:49:10.676 to 02-FEB-05 14:27:29	
		WORST 10 DAT	A CONFIDENCE TAGS	
	TAGNO	TAGNAME	AVERAGE CONFIDENCE	
1) 2) 3) 4) 5) 6) 7) 8) 9) 10) 1	40970 40969 3418 42928 42922 976 3443 1163 1184 146005	B2HS2A065.DG B2HS2A004.DG 69FI3172.PU 18XU2701-OP-UER.DG 18HU2709-OP-UER.DG Ø1LMODA.PU 69FIC3121.PU B8FIC2028UL.PU B8FIC403.PU Ø1FMODTT.PU	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	
PHDManage	er>			-

Figure 4 Statistical Report

# Archives

In a PHD Management console window type in: "sho a"

• A list of the archives including the current archive will be listed.

🍠 РН	DManager - localhost/3	100			_ 🗆 🗙
Unif (C)C	ormance PHD Manag opyright 1991-200	er. Versio 3 Honeywel	n 201.1.5.1 l International Inc.		<b>_</b>
Conne PHDMa	ecting To Uniform anager> sho arc	ance PHD S	erver: localhost/3100		
Ver	Archive File	Logical	Data Start	Data End	
 1 1 1 1 1 1	SCANØØ157 SCANØØ156 SCANØØ155 SCANØØ154 SCANØØ153 MANVØØØØ1 CHARØØØØ1	*SCAN SCAN SCAN SCAN SCAN *MANU *CHAR	25-JAN-05 11:00:55 13-JAN-05 12:09:59 02-JAN-05 17:56:55 20-DEC-04 07:18:28 12-DEC-04 07:07:21 20-NOU-02 14:02:22 04-DEC-02 11:38:22	02-FEB-05 14:34:02 25-JAN-05 21:18:54 13-JAN-05 17:43:35 02-JAN-05 18:13:20 23-DEC-04 02:48:04 02-FEB-05 14:24:20 20-SEP-04 17:03:50	
PHDM	anager> _				
					•

Figure 5 Archive Report

## More Help

If more information is needed, the "*help*" command can be typed in the PHD window and a list of topics will be given.

# Server maintenance procedure

PHD is installed under the following tree:

```
<Install path> uniformance \ phdserver.
```

The log files and archive files may be on the same drive but most of the time it is on a separate drive.



Figure 6 Uniformance Dir

# Hard Drive

The hard drive must be checked for space availability. If the drive is full, PHD will not save the tags information and data can be corrupted.

Capacity: 5.98 GB
Used: 1.23 GB
🗌 Free: 4.75 GB

Figure 7 Hard Drive Availability

# Log Files

The log files must be checked for size. A good indication can be obtained from them e.g. what is wrong with a RDI that is not collecting data and tags that are not working. A new event log file can be created by typing in "**create logfile**" in the phdman window. If a log file of a RDI needs to be deleted, the RDI should be stopped before the log will be deleted.

	Name 🛆	Size	Туре	Modified	
	APIServer.LOG	1 KB	Text Document	2005/02/02 01:48	
	🗒 LegacyAPI.LOG	1 KB	Text Document	2005/02/02 01:49	
Log Files	PHD_EVENT.LOG	93 KB	Text Document	2005/02/02 02:32	
	PHD_EVENT.OLD	293 KB	OLD File	2005/02/02 01:48	
Select an item to view its description.	PHD_EVENT.OLD1	4 KB	OLD1 File	2005/02/02 08:53	
See also	PHDServer.LOG	62 KB	Text Document	2005/02/02 01:49	
Mu Decuments	PHDSRVC.LOG	24 KB	Text Document	2005/02/02 01:49	
My Documents	PHDSRVC2.LOG	1 KB	Text Document	2005/02/02 01:49	
My Network Places	RDIOTOKON.OUT	1 KB	n	2005/02/02 01:49	
My Computer	RDISC_AB_U01.OUT	1 KB	n	2005/02/02 01:49	
	RDISC_AB_U201.OUT	1 KB	n	2005/02/02 01:49	
	RDISC_AD_GASN.OUT	1 KB	n	2005/02/02 01:49	
	RDISC_AD_PPS.OUT	1 KB	n	2005/02/02 01:49	
	RDISC_CT_COAL.OUT	85 KB	n	2005/02/02 01:49	
	RDISC_CT_U52.OUT	2 KB	n	2005/02/02 01:49	
	🗿 RDISC_႔လူျပၤ8.OUT	2 KB	n	2005/02/02 01:49	
	RDISC_MO_U212.OUT	3 KB	n	2005/02/02 01:49	
	RDISC_MO_U218.OUT	2 KB	n	2005/02/02 01:49	
	RDISC_MO_U219.OUT	2 KB	n	2005/02/02 01:49	
	RDISC_PS_U245.OUT	1 KB	n	2005/02/02 01:49	
	RDISC_PS_U256.OUT	2 KB	n	2005/02/02 01:49	
	RDISC_PS_U265.OUT	1 KB	n	2005/02/02 01:49	
	RDISC_PS_U45.OUT	1 KB	n	2005/02/02 01:49	
	RDISC_PS_U67.OUT	1 KB	n	2005/02/02 01:49	
	RDISC_PS_U86.OUT	2 KB	n	2005/02/02 01:49	
	RDISC_SM_UAO.OUT	5 KB	n	2005/02/02 01:49	
	🗒 RDIServer.LOG	2 KB	Text Document	2005/02/02 01:48	

Figure 8 Log Files

## Archives

The archives also need to be checked. They are set to a specific size and if there are problems with them, they will grow in size.

#### Steps to create a new archive

- In a PHD Management console window type "**sho arc**" (this will show the archive that is currently active and the other archives available).
- Set store: enable 0.
- Disconnect scanxxx.
- Create arc scanxx.
- Connect scanxxx scan active.
- Set store: enable 1.

	Name 🛆	Size	Туре	Modified
	🖻 CHAR00001	35 KB	DAT File	2005/02/02 01:49
	🖻 CHAR00001.idx	3 KB	IDX File	2005/02/02 01:49
Archive	🖻 CHAR00001.lck	1 KB	LCK File	2005/02/02 01:50
	MANV00001	15,544 KB	DAT File	2005/02/02 02:20
Select an item to view its description.	MANV00001.idx	216 KB	IDX File	2005/02/02 01:50
See alco:	🗃 MANV00001.lck	1 KB	LCK File	2005/02/02 01:50
My Documents	SCAN00153	257,652 KB	DAT File	2005/01/07 10:50
My Network Places	🔊 SCAN00153.idx	3,459 KB	IDX File	2005/01/07 10:50
My Computer	🔊 SCAN00153.lck	1 KB	LCK File	2005/02/02 01:49
<u>My Computer</u>	🔊 SCAN00154	257,662 KB	DAT File	2005/01/07 09:11
	🔊 SCAN00154.idx	3,459 KB	IDX File	2005/01/07 09:11
	🔊 SCAN00154.lck	1 KB	LCK File	2005/02/02 01:49
13	🔊 SCAN00155	257,528 KB	DAT File	2005/01/13 05:35
-	🔊 SCAN00155.idx	3,490 KB	IDX File	2005/01/13 05:35
	🔊 SCAN00155.lck	1 KB	LCK File	2005/02/02 01:49
	🔊 SCAN00156	257,568 KB	DAT File	2005/01/26 08:58
	🔊 SCAN00156.idx	3,534 KB	IDX File	2005/01/26 08:58
	🔊 SCAN00156.lck	1 KB	LCK File	2005/02/02 01:49
	SCAN00157	154,628 KB	DAT File	2005/02/02 01:50
	🔊 SCAN00157.idx	2,189 KB	IDX File	2005/02/02 02:35
	🖻 SCAN00157.lck	1 KB	LCK File	2005/02/02 01:50

#### Figure 9 Archives

This maintenance must be done on a weekly basis using the procedure and if problems are detected that can not be resolved, please contact the Honeywell support group at the contact numbers that you have been given.