Using the Asset Tracking Tool to Create an Enhanced Logbook

Introduction

In 2015, USEPA provided additional guidelines for site logbooks, promoting electronic logbooks over paper logbooks and including the need for electronic logbooks to be:

- Indelible (cannot be edited or removed)
- Secure (backed up and retrievable in the case of file loss)
- Traceable (clearly and accurately identify who made the entries)

All of these functions had already been incorporated in the Site Logbook function in AirVision / AVTrend, but we took the opportunity to re-promote the use of the Site Logbook and to add additional capabilities through our Asset Tracking / Work Item module. This document covers the traditional use of the Standard Site Logbook, as well as the expanded capabilities with the Asset Tracking / Work Item module.

Typical Architecture

Typically, users of the Site Logbook have a site PC running AVTrend or a Model 8872 Site Node Logger at the site which is used as the initial logbook entry point. It's also possible to simply use a Client connection to the AirVision server to make entries as well, but we will cover the former, more common use case.

In this case, the Logbook entries are made on the site PC / 8872:

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Home	View Favorites	Logbook Entry Editor								
Retrieve New L Data Entry Log	og Addendum Expor y to Exc Ibook Options									
门 Logbook Entry E	iditor									×
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Logbook Entry Det	ails									
Log Entry Time:	08/12/2016 09:51		User:	Admin						
Event Time:	08/12/2016 09:51	-	Site:	BLOUNT						
Category:	Repair	-								
Entry Text I replaced the sa	mple pump (torn diaphrag	m)							~	•
					Profile: localhost	Version: 3.1.90	Build: 2016.07.22.2	8/12/20*	16 09:	52 .

The Logbook entry tracks both the time the entry was made, as well as allowing the user to enter an 'event time' different from the time the entry was made. A Category selection helps characterize the entry for later reporting, and the User name is logged.

To meet EPA goals, it is necessary to ensure the Site PC has individual user accounts instead of a common login. The list of usernames can be synchronized with the server using the Sync system, or the administrator can simply ensure the usernames match between the site PCs and the server.

Once the entry is made, it cannot be deleted or edited. A system UtilitySetting can allow 'addendums' to logbook entries (or not) using the "Addendum" button on the ribbon. The default AirVision system behavior is 'no addendums' (e.g., only new entries) - contact support@agilaire.com to enable the addendum function.

(Note that if you don't have a Site PC or 8872, you can use the 8816/8832 Central Message capabilities to create basic logbook entries, but you will not capture the username, categories, or event time).

Transferring Entries

Logbook entries can be moved from the Site PC / 8872 to the central server either through the Sync function, or through regular polling.

Transfer via Sync

To transfer via Sync, create a contract using the "Logbook Scope" and the "Download Only" direction, using either the Sync Contract Editor or the Sync Wizard:

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Dra	ag a column header h	nere to group by	y that column.								
	Contract Nar	me	Sync Direct	on	Sync Scope	Remote Sync Connection	Reading Look Back Days Limit	Most Recent Contract Modification	Contract Needs Provisioning		•
1							-	-			=
	1.2.3.4 Logical Conf	figuration Contr	Upload and then Do	wnload	Logical Configuration Scope	1.2.3.4 Connection2		07/25/2016 11:18	V		=
	172.16.1.169 Config	uration Contra	Upload and then Do	wnload	Logical Configuration Scope	172.16.1.169 Connection		01/17/2013 17:07			
	192.168.13.3 Config	uration Contra	Upload		Logical Configuration Scope	192.168.13.3 Connection		01/16/2013 11:14			
• •	9 0		0		0	θ					_
Site Incl	e Restriction Filter luded Sites 1 (요)			Average Ir Included	Asset Tracking Scope Data Scope Leak Check Scope Logbook Scope Logical Configuration Scope PARS Scope Users and Groups Scope						T
						Pr	ofile: localhost	Version: 3.1.90 Build: 20	016.07.22.2 8/12	/2016	09:57

The sync can then be scheduled in the Task Scheduler as a Sync task to run every night, every X hours, etc.

Transfer via Polling an 8872

To poll the records (more common case), you must set the Logger Properties on the server to "Send Central Messages to Logbook" via checkbox in the upper right:

		AirVision	↔.	- 🔍	×
Home View Favorites	Data Source Details				
Close active tab	Add Change Calculate Parse Channel Type Memory Usage Config File Add Tools				
Logbook Entry Editor					×
AltSystem	Source Communication IO Labels Math Constants Analog	g Outputs			^
G→System G→S 01_KNOX G→A ASME_Test G→A BLOUNT	Source Information Site: BLOUNT Source Name: CC NV Enabled:	Logger Details Logger Identifier: CC Logger Type: Model 8816	T		
	Description:	Debounce Digital Inputs: Send Central Messages to Logbook Send Chart Memos to	-		
BLOUNT3 Bentwood_NCore B→	Retry Delay: 1 CMinute(s)	Annotations			
Hamilton County MANCHESTER Manual Data					
ROANE SIP					
					~
		Profile: localhost Version: 3.1.90	Build: 2016.07.22.2	8/12/2016	09:58 .:

Then, simply add to your existing polling task a sub-task to poll for "JL-Poll Log Book Entries":

Task Name: Logger Poll Task Task Enabled Task Description: Data Logger Polling Task	Basic Task Informatio	n	
Task Description: Data Logger Polling Task Logger Poll Options	Task Name:	Logger Poll Task Enabled 🔽	
Logger Poll Options	Task Description:	Data Logger Polling Task	
	Logger Poll Options		
Logger: Near Road Site 👻 Logger Command: JL - Poll Log Book Entries 👻	Logger: Near	toad Site Logger Command: JL - Poll Log Book Entries	4

AirVision will poll the 8872 for those logbook entries using the "JL" poll type, and get the user name, dates, category, and use that to create Logbook entries on the server.

Transfer via Polling a Site PC in parallel with an 8816 or 8832

If your AirVision server is going to poll logbook entries from a Site PC while polling data from an 8816 or 8832 at the same site, you must enable the Controller Interface Service in AVTrend on the Site PC as a "Service Component" in "PC Settings", and set a port value other than 9881 (9882 is recommended).

		🕵 Executive:PYANKEY-PC 🛛 🗃 Controller Interface Service:PYAN	IKEY-PC 🗙
		Controller Interface Service Details	
		✓ TCP Listener Enabled	
		TCP Details	
🌉 E	xecutive:PYANKEY-PC 🗙	All Available IP Addresses	
Gene	eral Service Components	IP Address:	
Servi	ce component configuration allows you to have	m Port: \$8:	82 🌲
Plugi	in	Serial Listener Enabled	
	Communication Router	Sarial Datails	
	Logger Driver	Comp Port:	_
	Response String Processor		_
	Email Service	Baud Rate: 9600	-
	Task Service	Parity: None	-
	Schedule Service	Stop Bits: 1	-
'₩	Controller Interface Service	Data Bits:	8 🗘
*			

If any kind of routing or port forwarding is in place at the site via a modem/router, update those settings to route a new polling port (e.g., 9882) to reach the Site PC.

On the server, create a communication route to that PC using the port that was designated on the Site PC separate from the 8816 or 8832 you are polling.

🛷 TCP: 🗙	
General Devices	
TCP Connection Deta	ills
Route Name:	Site PC 1 Site PC 1
Network Address:	12.3.4
Polling Port:	9882 🗘
Emulation Port:	÷
Advanced	
Read Timeout:	1 🗘 Minute(s) 👻 🔀
Write Timeout:	÷ - 8
Disconnect After:	20 🗘 Second(s) 👻 🔀
Inter-byte Delay (n	ns):

Then create a second 'pseudo' logger for the site in question on the server and assign it the new comm route.

🖙 Logger:PPDAM (2) 🗙	
Source Communication IO Labels Math Constants Analo	og Outputs
Source Information	Logger Details
Site: PPDAM	Logger Identifier: 05
Source Name: PPDAM Site PC Enabled:	Logger Type: Model 8832
Description: PPDAM	Debounce Digital Inputs:
	Send Central Messages
Retry Attempts: 1	Send Chart Memos to
Retry Delay: 10 🗘 Second(s) 👻 🔀	Annotations

Go to the Task Scheduler and locate any polling tasks for the logger. Delete or disable any tasks for 'Central Messages'.

Poll (PPDAM) Long Central Messages	7	Logger Poll Task	Edit Task
Poll [PPDAM] Chart Memos	8	Logger Poll Task	Edit Task

Create a new scheduled tasks (or task groups or use the Schedule Wizard) for logger poll task type 'JL-Poll Logbook Entries'. When doing so, select the Site PC 'logger' in the task configuration.

Logger Poll C	options	
Logger:	PPDAM Site PC	👻 🜔 Logger Command:

Backing Up

If you are backing up your production AirVision database, then you are backing up your Logbook. It's as simple as that. All Logbook entries are part of the standard AirVision database and are never purged.

Other Ways to Automatically Create Logbook Entries

If you are using E-mail alarms, you now have the option via a checkbox selection to automatically create logbook entries when an alarm condition is detected:

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Alarms			Alarm Criteria				-									
Name		Enabled	Alarm Name:	o3 sampleHow			Alarm on Fla	Igs	Description		State Chang	e Inhibi	ting Flags			
20	High CO		Average Interval:	001h 👻	Enabled		Selected	riag	Description		Selecteu	riag	B			
	High Ozone	v	Site:	01_KNOX		-		EU	Min Exceeded	=		E.	Min Exceeded			
	High SO2	V	Monitored Paramet	ters			E	?	Suspect			?	Suspect			
	HighWind		Selected Para	meter Template	Description	-		+	Max Exceeded	ш		+	Max Exceeded			
	New Alarm	V			A	=		<	Logger Invalid			<	Logger Invalid			
•	o3 sampleFlow		760	2_A_AvgExtTemp	?602_A_AvgExtTemp	ш		=	Shelter temp high/low			=	Shelter temp high/low			
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				2_A_FinalPresDrop	?602_A_FinalPresDrop			C	Ceiling Limit			c	Ceiling Limit			
				2_A_InIVolume	?602_A_InIVolume			c	Calibration			C	Calibration			
			?60	2_A_LeakResult	?602_A_LeakResult			D	Channel Disabled			D	Channel Disabled			
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			Subject: 03	Sample Flow				T T	ag Email as Urgent							
			Message: Ch	eck PM inlet filter a	nd tighten fittings.											
										Prof	ile: localhost	Version	x 3.1.105 Build: 2016.08.04	4.2 8/	12/2016	10:35

Under Discussion:

- Automatically create entries on Monitor Assessment entry?
- Automatically create entries when PREC cal is run?

Enhancing the Logbook with Asset Tracking / Work Item Module

This optional module includes two components:

- Asset Tracking- allows you to track analyzers, calibrators, standards, loggers, etc. as they move in and out of service and move from site to site.
- Work Items- allows you to create single or repeating tasks (e.g., repairs, routine maintenance, etc.), track completion of those items, send emails for overdue items, etc.

A Video Tutorial is available on the use of the module:

http://agilaire.com/asset-work-item-tracking-introduction-part-1

http://agilaire.com/asset-work-item-tracking-enhanced-logbook-part-2

Now, when an asset is transferred from one site to another, in this example, we transfer an analyzer from 01_KNOX to ROANE:

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AirVision will automatically create a logbook entry for both sites:

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End Date	08/12/2016	23:59 + *		Site Nar	ne 🔨		Site Description			-	.
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ROANE		Asset		Admin	08/12/2016 10:25	08/12/2016 10:25	Asset: Met One/BAM-1020 PM10/837593/FL29034 was transferred from Site: 01_KNO	X to: ROANE			
01_KNO	X	Asset		Admin	08/12/2016 10:25	08/12/2016 10:25	Asset: Met One/BAM-1020 PM10/837593/FL29034 was transferred from Site: 01_KNO	X to: ROANE			
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							Profile: localhost Version: 3.1.105	Build: 2016.08.04.2	8/12/20	016 10):26

For work items, when a work item is marked completed:

🔅 Work Item Completio	n	×
Work Item Definition		
Task Name:	Do Audit at Site Y	
Task Description:		
Assigned To:	Cliff	
Site:	BLOUNT	
Asset:	API T400 77342 WI-883AA3	
Priority:	High	
Category:	RoutineCheck	
Due Date:	08/12/2016 12:42 V Overdue	
Entry Details		ī
Completion Date:	08/12/2016 10:29 🔻	
Memo:	Done!	
	<u>C</u> ancel <u>O</u> K	

It will also automatically create a Logbook Entry, based on the user completing the task, the site, etc., logging the date and time it was marked complete.

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ad Date 08/12/201	16 23:59 🛟 👻	🚁 🗗 Site N	ame 🔨		Site Description	
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