WITS communication setup for Rapidlogger system WITS Capable System

This tech note describes the process to send receive WITS data between Rapidlogger hardware/software to a client computer. There are two ways to do this. The first method is to use the RapidVu program to send data. This second method is to use th Rapidlogger hardware to send WITS information to a WITS compliant computer.

First Method: Setting up RapidVu Computer for Data Output to a WITS Capable System

This section describes the process to connect RapidVu Software to a WITS compliant computer to transmit data. The WITS output module in RapidVu is not operational until the software starts acquiring data from the Rapidlogger System.

Make sure that RapidVu version 4.27.0 (or newer) is installed. This can be verified by looking at the "about" dialog box in RapidVu.



WITS Output Setup

In order to setup WITS Output in to RapidVu program

Select the Data->Output WITSO on Network menu option.



Now the following dialog box will appear.

WITS0 Netwo	ork Output					×
Network Port	5002					
Enabled	Field Name		WITS Table	е	WITS Data ID	^
	Date	•	17	•	5 - Date	•
	Time	-	17	•	б - Time	-
	Pressure	•	17	-	12 - Cem Pump Pressure (avg)	-
 Image: A set of the set of the	TotalRate	-	17	•	17 - Cem Flow Rate Out (avg)	-
 Image: A set of the set of the	Density	-	17	•	20 - Cem Fluid Dens Out (avg)	-
	TotalVolume	•	17	•	30 - Cem Total Vol Pumped	-
		•		•		-
		•		•		-
		•		•		-
Image: A start of the start		•		•		-
		•		-		-
		•		-		▼ ∥ ∨
Load Map	ning Save Mapping Cle	ear Ma	apping		Stop Server C	ancel

- 1. In the Dialog dialog box, specify the Ethernet Socket Port number. 5002 is the default port but the port number can be any other number that matches the clients port number.
- 2. If you have a WITS mapping saved, click Load Mapping. In the Open dialog box, locate and select the mapping file (*.csv file). Then click Open.
- 3. If you don't have a mapping saved, adjust the values in the dialog box for the data input. (To change settings, doubleclick any cell in the white area except for the Var No column and edit the information.) You may need to click on Clear Mapping the first time you generate a new WITS mapping table.
- 4. Note that the Variable Name entered in the column "Field Name" must match exactly with one of the variables in RapidVu. If the variable name that is entered here does not match one of the RapidVu variable names or if there is a typing error then that variable will not be transmitted as part of the WITS data stream.
- 5. The WITS table number and WITS DATA ID need to match the settings expected by the device receiving the WITS data stream.
- 6. Click Save Mapping
- 7. Click Start server
- 8. Now the server has been started and WITS output has begun.
- 9. You can verify this by using Hyperterminal or PUTTY OR Telnet programs
- 10. If using Hyperterminal, log in to a different computer.
- 11. This computer must be on the same subnet as the computer running RapidVu. Start the hyper terminal program. Use the dialog box to setup the IP address and Port number for hyperterminal



- 12. Click on connect icon and the WITS data acquisition will start.
- 13. Note that WITS output from RapidVu over SERIAL PORT works almost the same way.

Second Method: Setting up Rapidlogger Device Computer for Data Output to a WITS Capable System

This section describes the process to connect Rapidlogger Hardware to a WITS compliant computer to transmit data. The WITS output in Rapidlogger starts a few seconds after the Rapidlogger has powered up

- The first step is to generate a WITS mapping file. The name of the file needs to be _wits0.csv
- 2. Once completely edited this file will be placed in the Rapidlogger using ftp
- 3. You can start with a sample WITS file available on the Rapidlogger Website at the following link

http://www.rapidlogger.com/customers/_wits0.csv

4. Every line in this file that start with a `#' character is a comment. Every line that starts with a number is a configuration line.

```
_wits0 - Notepad
                                                                                    П
                                                                                        Х
<u>File Edit Format View H</u>elp
# WITS Configuration file,,,,,
# Column 1 is DAQ Var Number 0 - 99,,,,,
# Column 2 is 4 digit(WITS Table and Record Number),,,,,
# Column 3 Decimal precision Value[-1] means ignore this variable - 1..6 -
float with num of digits after the decimal,,,,,
# Column 4 Read Write Direction Value[R] or[r] means Incoming WITS0 data
variable Value[W] or anything else means output data stream,,,,,
# Column 5 is a Comment,,,,,
                                 comment character
# Default WITS setup file,,,,
#,,,,,
#,,,,,
0,1705,2,W,Date
                       '3' is the Rapidlogger Variable Number
0,1706,2,W,Time
1,1712,2,W,Pressure
2,1729,2,W,Density
3,1730,2,W,TotalVolume
4,111,2,W Total ate
5,0,2,1,
6,0,2,W
7,1980,2 W,Pressure
8,0,2,1,
9,0,2,1
                           This variable name is simply for your reference, Rapidlogger ignores it
                    W' means that Rapidlogger will Write or Ouput this variable to external WITS device
                     '2' is the number of digits after decimal point, that you want to see in WITS data
                 '30' is the WITS Item number
               '17' is the WITS record number
```

- 5. Once you have edited the _wits0.csv you can upload it to the Rapidlogger Unit by using FTP or by copying it to the Rapidlogger SD card.
- 6. Now we need to enable WITS on the Rapidlogger System.
- 7. Start the Rapidlogger Utility make sure you are using version 4.9.0 or newer

/ariable Data /ariable Number 1	Toggles ☑ Enable	Rapidlogger Unit Rapidlogger Unit Network				
1 Move /ariable Name Pressure	✓ Enable		Address	Variables Defined:		
Pressure		192.168.0.5	Find Rapidlogger	1, Pressure E,D,T		
	ECD <u>D</u> isplay Becord/Transmit	Read One from Unit	Write One to Unit	3, TotalVolume E,D,T		
/ariable Units	CAN Bus Transmit	Read All from Unit	Write All to Unit	5. Pump1Rate E,D,T		
psi	Noise Filter	System Satur	Sunc Time	7, Pressure 2 E,T		
	Special A	Copy Variable	Raste Variable	9, Pump Trotal E,D,T 9, Pump Ztotal E,D,T 10, Rowmeter-R E,T		
		Local Computer Dist		11, ShutdownPre E, I		
O Type	Multiplier		Read Vars File			
nalog Input Number	Offset		Read CSV	Click on Road All from Unit		
÷.	-3750.00000000		Write Vars File	1. CICK OIL REAU AIL ITOILI OILIT		
Easy Analog Entry	Diag 243		Write SSV			
Кеер	Undo	Rapidlogger Unit Filesyste	m			
ariable Apply OK Variable	Load Ok					
		Copy File to	Rapidlogger Unit	2. Click on System Setup		
		About	Close	~		

- 8. Click on Read All from Unit to download the system variable from the Rapidlogger
- 9. Next click on System Setup

Variable Data Variable Number		Rapidlogger Unit Rapidlogger Unit Network	Address	Variables Defined:		
÷	Move Enable	192.168.0.5	Find Rapidlogger	1, Pressure 2 Density	E.D.T	^
ariable Vr si ecimal Pla	ystem Setup Hardware Setup ▷ ♥ Number of LCD Display Variable Cement Pump ∨ Operating Mode	1. Click Rapidogger Utility View s 1	on Read from y - Dial Setup Tes Dial Variable . Enable WITS ^Q Dial ower Limit 20	Unit t / Debug Test Comment oud IP Address 06.189.61.28 Set Default IP		×
Analog alog Inpu Easy An Ke	Recording being Recording being Quadrature Inputs Setup Quadrature Normal Mode Quadrature As frequency Mode	Calibrate Analog Inputs Calibrati 1.00000	Dial Upper Lipit III IIII IIII IIIII IIIIIIIIIIIIIII	odbus / WITS WITS Modbus Idress: 0 \$	CAN Address Master = 0 Slave = 1 to 126	
Table Ar	Read From Unit	Apply About	Cance 3. Click Close	Apply		~

- 10. Enable WITS by clicking on the WITS button
- 11. Press Apply
- 12. Restart Rapidlogger by power cycling the unit.

- 13. Start Hyperterminal on a computer
- 14. This computer must be on the same subnet as the computer running RapidVu. Use the dialog box to setup the IP address and Port number for hyperterminal



- 15. Click on connect icon
- 16. Data will start flowing