

	User Guide	
Title: Net F/T Synchronization Demo User Guide	Revision Level: 2	
Written by: David Fleissner	Original Issue Date: 3/13/13	Effective Date: 3/15/13

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1. Overview-

The Net F/T Synchronization Demo is a Java application that records data from up to six Net F/T sensors and records each data sample into ".csv" file(s). The recorded samples have an accurate time stamp that is common between all of the Net F/T sensors. Functionality in the demo includes the ability to:

- Choose data output location.
- Choose whether to save sensor data into one or separate files.
- Connect to sensors and view live stream data before data collection.
- Bias all sensors before or during data collection.

2. Main Window- Running the ATI Multi Net F/T Synchronization Demo will open the main window as seen in **Figure 1**.

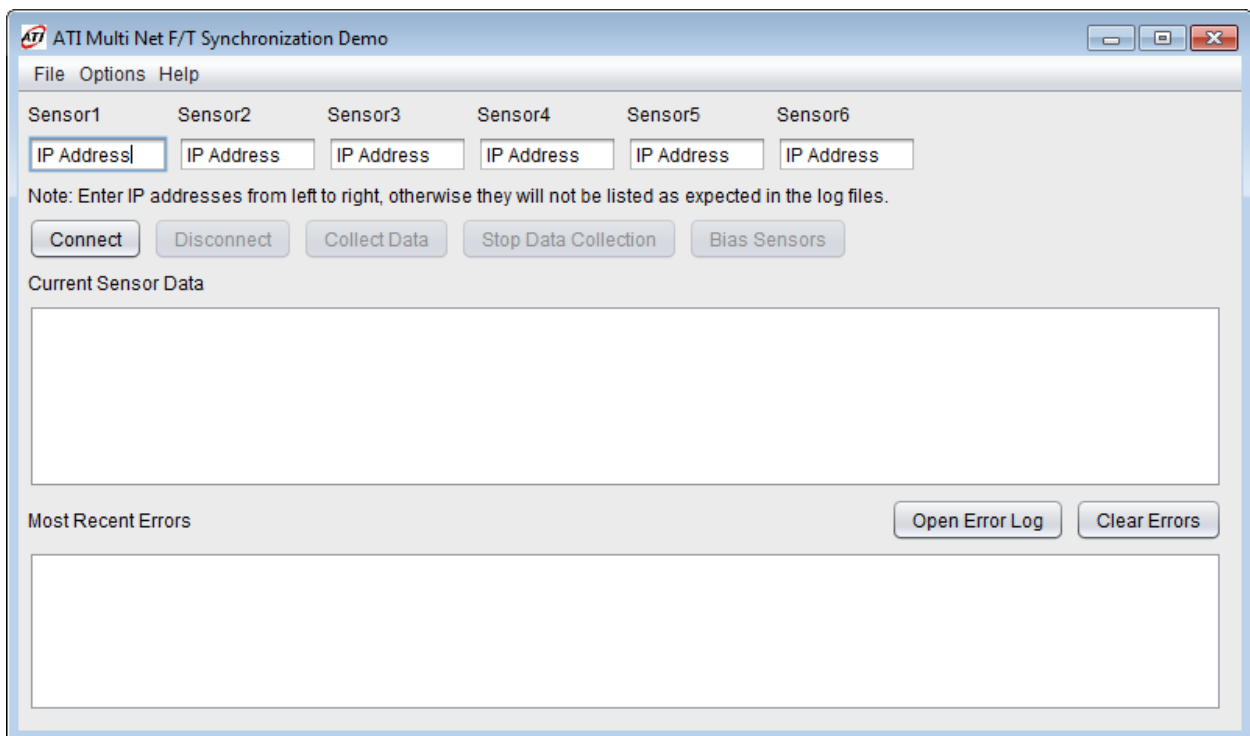


Figure 1

- Connect-** Connects to all sensors at IP addresses entered in the IP address fields. IP addresses should be entered from left to right without skipping any text fields. Once "Connect" is clicked, the sensor will start streaming data and the live data will be displayed in the "Current Sensor Data" text area.
- Disconnect-** Disconnects from all sensors and stops them from streaming data.

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- c. **Collect Data-** Starts collecting data and writing it to ".csv" file(s). The data is time stamped accurately using the synchronization algorithm detailed in the synchronization whitepaper.
 - d. **Stop Data Collection-** Stops data collection and closes the ".csv" files. The application continues to receive data from all sensors and displays the live values. The ".csv" data files can be opened at this point.
 - e. **Bias Sensors-** Biases all sensors when clicked. This can be performed both before data collection and during data collection if desired.
3. **File Menu-** Set data file save location and exit application.

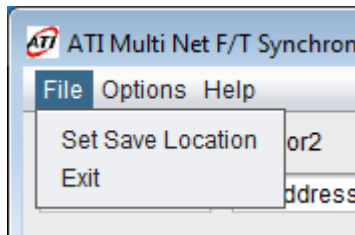


Figure 2

- a. **Set Save Location-** Selects the location and name of the ".csv" data file(s). A ".csv" extension is automatically added if not present. If saving to a single file, the file name selected is the one that will be used when creating the ".csv" file. If saving to multiple files, the suffix "_sensorX" is appended to each file name where X is the sensor number.

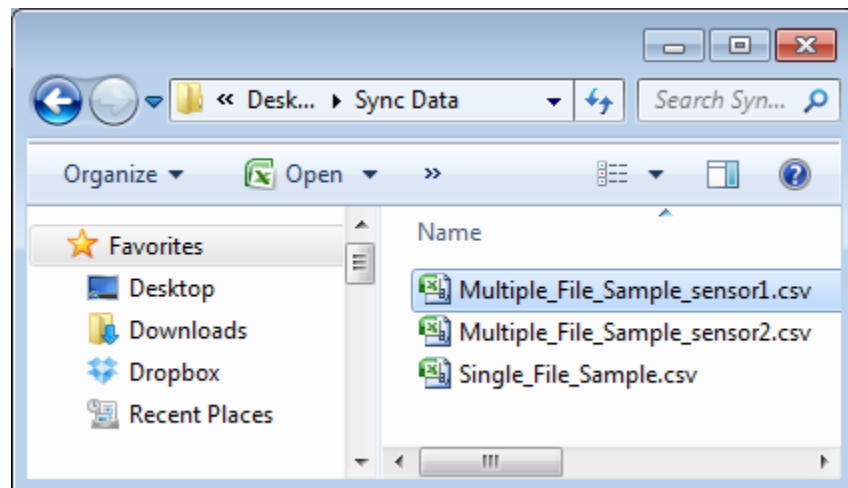


Figure 3

b. **Exit-** Closes Application

4. **Options Menu-** Select whether data from all sensors should go in one file or whether data from each sensor should go in separate files.

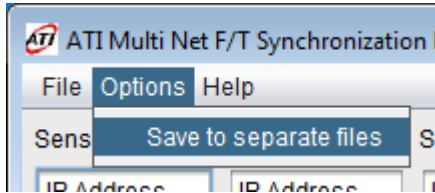


Figure 4

- a. **Save to separate files-** Select whether to save collected data to a single ".csv" file for all sensors or separate ".csv" files for each sensor.

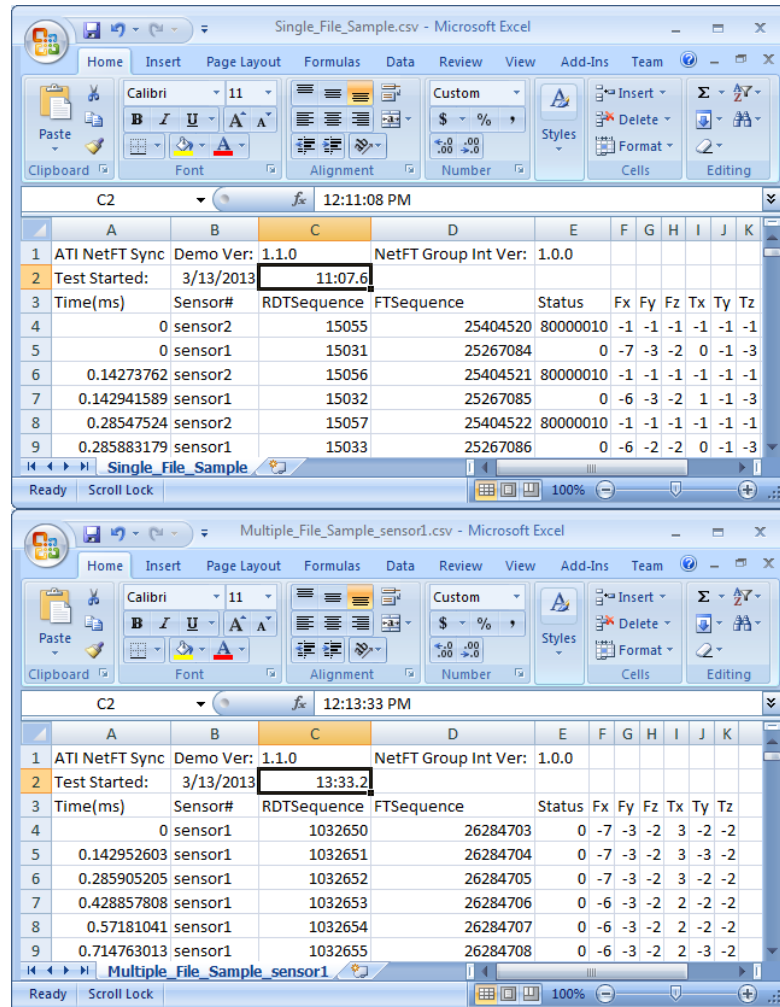


Figure 5

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5. **Help Menu-** Open this User Guide from within the Synchronization Demo or view version information.

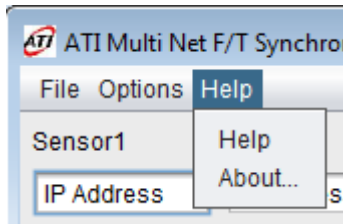


Figure 6

- a. **User Guide-** Opens this User Guide. The demo checks for this user guide in the directory where the demo is located. If the user guide is not there, it is copied into the current directory out of the demo ".jar" file. The demo then opens the user guide using the operating system's default ".pdf" reader.
- b. **About-** Contains version information for the demo.



Figure 7

6. **Most Recent Errors-** Text area that displays any non-zero status from sensors, sensor timeouts, and application errors. Non-zero status and sensor timeouts are both reported as "sensor errors" because they are reported individually for each sensor. "Application errors" are reported below "sensor errors" and include errors such as failure to write to a log file. This text area is updated every 100 ms with the most recently reported errors. A log file is generated called "errorLogFile.txt" located in the same directory as the demo. This log file reports every sensor status change that occurs after connecting to the sensors, as well as other error conditions experienced.
 - a. **Clear Errors-** Clears the "Most Recent Errors" text area. Does not delete the error log file.

- b. **Open Error Log**- Opens a log file containing the status history of the sensors and any timeouts or application errors that occurred. Status conditions are displayed for each sensor any time the status changes for that sensor. You may need to wait a few seconds before opening the error log file after disconnecting from the sensors.

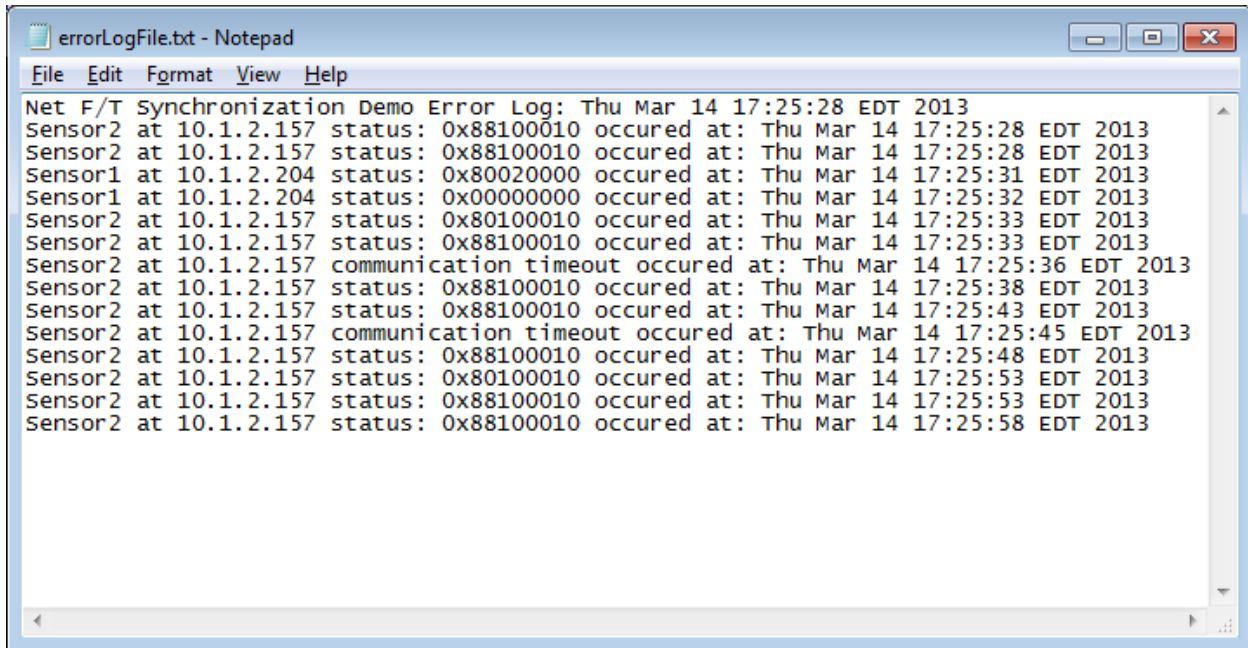


Figure 8

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7. Document Revisions-

Revision No.	Summary of Revision	Revised By	Date of Revision
Rev. 01	Initial Issue	David Fleissner	3/13/2013
Rev. 02	Updated "Most Recent Errors" section to reflect change in error logging method.	David Fleissner	3/15/2013