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| What is this? |

This Help Guide offers guidance on using the File Duplication function in the FilesThruTheAir™ WiFi Sensor Software.

How do I use the File Duplication?

WARNING : Do not use this function unless you are sure it is right for your application. This document does not apply when storing your data On the Cloud.

What is the purpose of the File Duplication Function?

To provide duplicate data for each FilesThrTheAir™ WiFi sensor connected to a PC-based system that can be opened, manipulated and subsequently deleted by a 3rd party Application which may be running on the same or a different PC. The duplicate data files will be updated when ever new sensor data is received, and copied to a user definable folder. The system does not preclude the use of network drives.

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How do I use the File Duplication function? (Advanced Users)
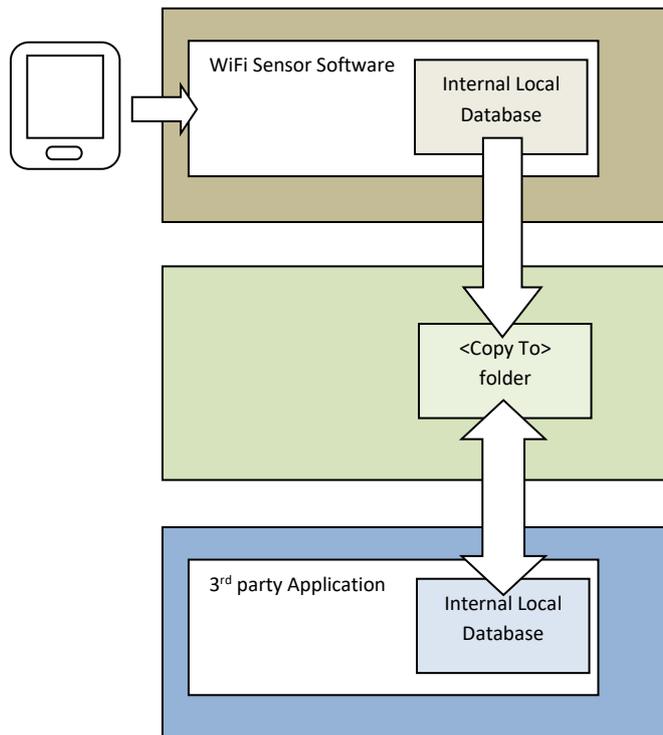
How do I Enable the File Duplication Function?

At the WiFi Sensor Software Home screen the user or system admin can access the File Copy Settings, by pressing <Alt Ctrl F> (i.e. Holding down Alt and Ctrl keys and pressing the F key).
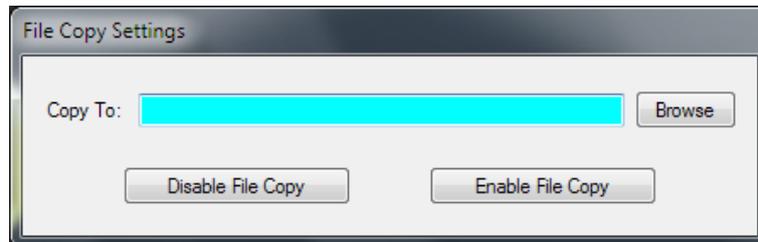
This allows the user to set the path where duplicate data files are to be copied (<Copy To> folder), and Enable or Disable the File Copy function.

What is the structure of the Duplicated File?

Each time a sensor data packet arrives at the WiFi Sensor Software, whether as a result of a normal (timed) transmission, or a single packet transmission during sensor syncing, the software will generate a file in the <Copy To> folder, containing the data received, prefixed by the sensor configuration data. The format is shown below..

```
    <Sensor Name>xxxxxxxxxxxx
    <Sensor Type>XX
    <Firmware Version>XX.XX
    <Sensor MAC>98:8B:AD:XX:XX:XX
    <SSID>xxxxxxxxxx
    <Sample Rate>XXXX
    <Transmit Frequency>XXXX
    <Temp Scale>F/C
    <Temp High Alarm>XX.Xs
    <Temp Low Alarm>XX.Xs
    <Temp Alarm Hold>ON/OFF
    <Humidity High Alarm>XX
    <Humidity Low Alarm>XX
    <Humidity Alarm Hold>ON/OFF
    <Temperature High Alarm Triggered>YES/NO
    <Temperature Low Alarm Triggered>YES/NO
    <Humidity High Alarm Triggered>YES/NO
    <Humidity Low Alarm Triggered>YES/NO
    <Battery Status>XX
    <Signal Strength>XX
time,temperature,humidity,samplestart,recdate
2012-11-21 12:24:59,20.5,0,12,2012-11-21 12:25:57
2012-11-21 12:25:09,20.5,0,12,2012-11-21 12:25:57
2012-11-21 12:25:19,20.5,0,12,2012-11-21 12:25:57
2012-11-21 12:25:29,20.5,0,12,2012-11-21 12:25:57
2012-11-21 12:25:39,20.5,0,12,2012-11-21 12:25:57
2012-11-21 12:25:49,20.5,0,12,2012-11-21 12:25:57
```

In the above example, the sensor is configured to take readings every 10seconds, and transmit them when it has accumulated 6 readings.

Notes about the configuration data:

- If configuration fields are not relevant to the sensor type, they are not included in the list. If an Alarm is not enabled, no fields relating to that Alarm will be present.
- All configuration fields contain the field description e.g. <Sensor Name> followed by the parameter in plain text.
- Temp Scale is a single character 'F' or 'C'
- <Sensor Type> is TH, TP, T etc..
- Temp Alarm levels are listed in <Temp Scale>
- Humidity Alarm Levels are assumed to be in %RH
- <Battery Status> is 0-10 (battery health) or 11=Power Connected & Charging or 12= Power Connected & Fully Charged.
- <Signal Strength> is 0-10 (10 is the best signal).
- <Sample Rate> and <Transmit Frequency> are assumed to be in seconds.

File Names:

The name of the copy file is unique, and in the following format..

<computer name>_instrumentN_x.wdf

where ..

<computer name> is name of the source computer. This allows multiple systems to use a central <Destination> repository.

N = a unique sensor number (allocated during first attachment to the PC) and

x = samplestart - this is the data sequence start number (from the data within the file). This is unique to each received data packet. In the above example the samplestart=12. If the wdf files normally contain 6 data readings the next samplestart sequence will be 18, 24, 30 etc... If the sensor is syncing, the wdf file will contain considerably more data readings. The samplestart number is reset to zero when the sensor starts a new recording session, the 3rd party application must accommodate this when chaining copy files together.

File Locking:

The **\<Copy To>\<computer name>_instrumentN_x.wdf** file will be written with Exclusive Write attribute, attempts to read the file during this time will result in an error, which needs to be trapped and handled by the reading process. When the EL-WiFi software has completed writing, the file will become accessible for reading.
After processing the data in the copy file, the 3rd party Application must delete the file.

Issue 1

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