VERSION 1.4.17

LABWORKS

INSTRUMENT INTERFACING

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INSTRUMENT INTERFACING PROCESS

OVERVIEW

Labworks, LLC offers LABWORKS instrument interfaces for instruments that can produce a human readable file and store it on a drive connected to the network. For devices that send data to a printer, that data can be captured, saved to a file on the network where that data can be imported into LABWORKS.

The process of developing the interface requires some coordination between the LABWORKS team and the customer to develop the interface requirements, assistance with the customer's infrastructure and testing of the interface.

Once installed and delivered, the interface becomes a supported component of the LABWORKS system.

INSTRUMENT INTERFACE CHARACTERISTICS

The LABWORKS interfaces developed by Labworks, LLC have the following features:

✦ **IT Support**

Minimal IT support required, typically assistance during the installation on the network to apply correct security and permissions.

✦ **Connection to the instrument**

None

✦ **Unidirectional**

Extracts data from a file produced by the instrument software

✦ **Typical data objects but not limited to this list that can be extracted from the data file**
– Sample ID
– Operator
– Analysis Date / Time
– Analysis code
– Analysis result

✦ **File formats typically produced by the instrument software**
– Character delimited text files
– Space or Tab delimited text files
– Excel worksheet files
– Tables in databases

✦ **Typical steps of the interfacing process**

   − Upon authorization to develop the interface, the following is a typical sequence of events, interactions and activities that will occur between the customer and the LABWORKS team.

   − Developer contacts the customer for basic information about the interface and the file format to be used in the interface development.

      ✦ Instrument brand, model and controlling software name and version

      ✦ Type of file format to be submitted

         • The file must have the required data objects identified correctly by the customer.

         • The LABWORKS developer will work closely with the customer to assist in this effort.

      ✦ A copy of the un-edited file must be submitted for testing. Optimally, several copies of the files generated can be submitted for testing to ensure that the format is stable and covers the range of data produced by the instrument.

   − The developer will, with the customer's assistance, produce a document that gives the instructions for creating the file format used by the interface.

   − Developer creates and tests the interface application locally on his system.

   − Developer submits the interface and documentation to the customer for user acceptance testing.

      • The developer will assist in the installation or perform the installation of the interface on the customer's system.

   − The developer will, after installation of the interface, train the customer on how to use the interface.

   − The developer will assist in the initial user acceptance testing.

      • If issues are detected during user acceptance testing, the error fixing process will be repeated until the interface is performing correctly.

   − Once the interface is accepted, the customer will sign off on the User Acceptance Document.

Advisory notes

Once installed, the file generated by the instrument cannot have its structure altered. This will break the interface and require that the original file format be restored or, if the altered format is desired, re-development of the interface.

For the interface to extract the data from the file and insert it into the correct sample, it is required that the user of the instrument enter the correct Sample ID into the instrument software sample list.