

WILEY

KnowItAll®

Spectrum Transfer
Software Developer's Kit



Copyright

KnowItAll® Spectrum Transfer Software Developer's Kit (SDK)

Copyright © 2021

John Wiley & Sons, Inc.

All Rights Reserved.

KnowItAll is a registered trademark of John Wiley & Sons, Inc. in certain jurisdictions.

Introduction

The KnowItAll® Spectrum Transfer Software Development Kit (SDK) provides a means for third parties to transfer spectral data directly from their software or instrument into Wiley's KnowItAll software for additional analysis in our new KnowItAll® ID Expert™ application for unknown IR & Raman spectral identification.

Spectra can be transferred using either shared memory or with a shell function to execute a command line. **For shared memory transfer**, the transferring application installs and uses a BRPluginDataTransfer.dll to transfer spectral data to the desired KnowItAll application. **For command line transfer**, the transferring application creates a temporary file to hold the spectral data and calls a shell function to pass the file path to KnowItAll with the CLSID of the target application.

Please note that the command line transfer was recently updated to also allow transfer of more than one file for multi-technique searches. Documentation for this option is included at the end of this document.

If you are interested in implementing the SDK, email us at support@knowitall.com and someone will be in touch. *You will also need to request the SDK sample code and example projects that demonstrate this functionality.*

The Spectrum Transfer Software Development Kit Includes:

- The compiled BRPluginDataTransfer.dll that the transferring application can use to implement a shared memory transfer.
- Program source code for BRPluginDataTransfer.dll that can be used by those wanting to compile their own DLL for shared memory transfer.
- An example project demonstrating both the shared memory and the shell function call transfer methods. Note that Microsoft Visual Studio 2019 is required to compile and step through this project.
- A sample IR spectrum file in JCAMP-DX format is included in the SDK.

Transferring spectral data to a KnowItAll application requires sending the data in a file format supported by KnowItAll. KnowItAll supports most common file formats - here is a current list of supported formats at www.knowitall.com/formats

If an additional file format is needed, please email us at support@knowitall.com.

Using the SDK

The SDK is supplied in a zipped file. Unzip the file to an appropriate location. To test the spectrum transfer, KnowItAll needs to be installed and licensed on the same system.

Using the Example Project

Open SpectrumTransferExample.sln found in the SpectrumTransferExample folder in Visual Studio 2019.

- With the SpectrumTransferExample.sln open, you will see two projects, a BRPluginDataTransfer project and SpectralTransferExample.
- The example application consists of a simple document window with File and Help menu items. The File menu has commands for transferring a spectrum to the KnowItAll ID Expert application using either the shared memory approach or the command line method.
- The SpectrumTransferExample.cpp has a static CLSID define for the KnowItAll ID Expert application, which can accept spectral transfer. The example project allows you to step through the transfer process and see the proper approach to coding your application for each transfer method.
- The BRPluginDataTransfer project is provided for reference. This is the code compiled into the BRPluginDataTransfer.dll that must be included in your software installation for shared memory transfers to work properly. You can compile a debug version of this DLL if you wish to step through the code. A debug build of the SpectrumTransferExample project will interact appropriately with an installed version of the KnowItAll software.
- A release version of the BRPluginDataTransfer.DLL is provided in the main SDK folder. If you choose to use the shared memory method for transfer, this DLL must be included in your software installation.

For Multi-Technique Searches

Below are additional details if you wish to transfer more than one file simultaneously to KnowItAll for multi-technique searches.

Available command line parameters are:

- /PlugInGuid – the program ID for the KnowItAll application the spectral file is directed to. Note multiple spectra searches can only be performed in the SearchIt application at the current time, so this parameter should be defined as: /PlugInGuid={F74B4EAA-B03E-4925-958D-1F0105E0A257}
- /ImportFilePath – path to a spectral file to be transferred. Multiple instances of this parameter can be used for including multiple files in the search.
- /ProfileName (optional) – Name of a SearchIt profile to be used for the search.
- /StartSearch (optional, default is false) – Boolean value indicating to start the search in KnowItAll automatically(true) or wait for user input(false)

Additional Implementation Notes:

- If StartSearch is set to true, the search will start with the user's persistent search settings. On an initial installation of KnowItAll, SearchIt does not have a predefined database selection.
- The KnowItAll installation includes predefined Search Profiles; however, the existing SearchIt profiles are technique specific. Users can create profiles with any preferred selection of databases.
- Below is a command line example in which the Spectrum Transfer SDK sample project demonstrates how to locate the KnowItAll path from the registry and use a shell command:

```
"c:\Program Files\KnowItAll\Bin\KnowItAll" /PlugInGuid={F74B4EAA-B03E-4925-958D-1F0105E0A257}
/ImportFilePath="C:\Users\Public\Documents\Wiley\KnowItAll\Samples\Simultaneous
Multi-Technique Searching\Unknown D IR.jdx"
/ImportFilePath="C:\Users\Public\Documents\Wiley\KnowItAll\Samples\Simultaneous
Multi-Technique Searching\Unknown D Raman.jdx" /StartSearch=true
```

