

BIM EXPERT Plugin Specification

The goal of this summary is to give some scratch about the API's assemblies that are involved in the BIM Expert Plugin system.

Provided assemblies belong to our INTERNAL API SDK, therefore, they could be changed in the final version. The main structure and functionality will not change.

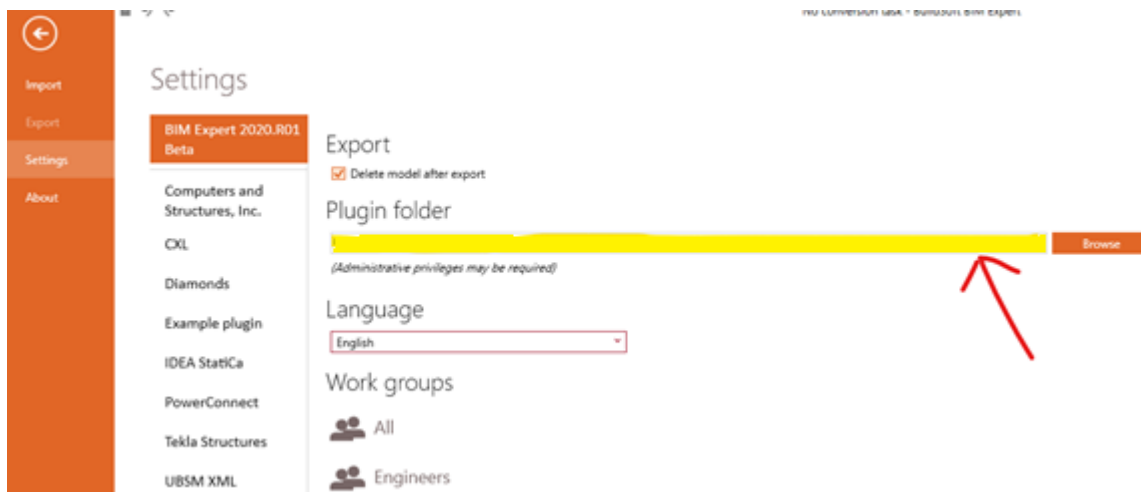
The system is built on .NET Framework and version 4.5.2. or higher is required.

New Plugin

The class that will be considered as a BIM Expert plugin, needs to implement the following interface:

BuildSoft.BIMExpert.Plugin.IUBSMConverter

Besides, the corresponding and referenced assemblies must be located at a new subfolder of BIM Expert plugin's folder:



As you can see in *IUBSMConverter*, plugin's UI are WPF (Windows Presentation Foundation) UserControl types.

The icon/image (the localization dlls from .resx files as well) for the new plugin, should also be located at that new subfolder.

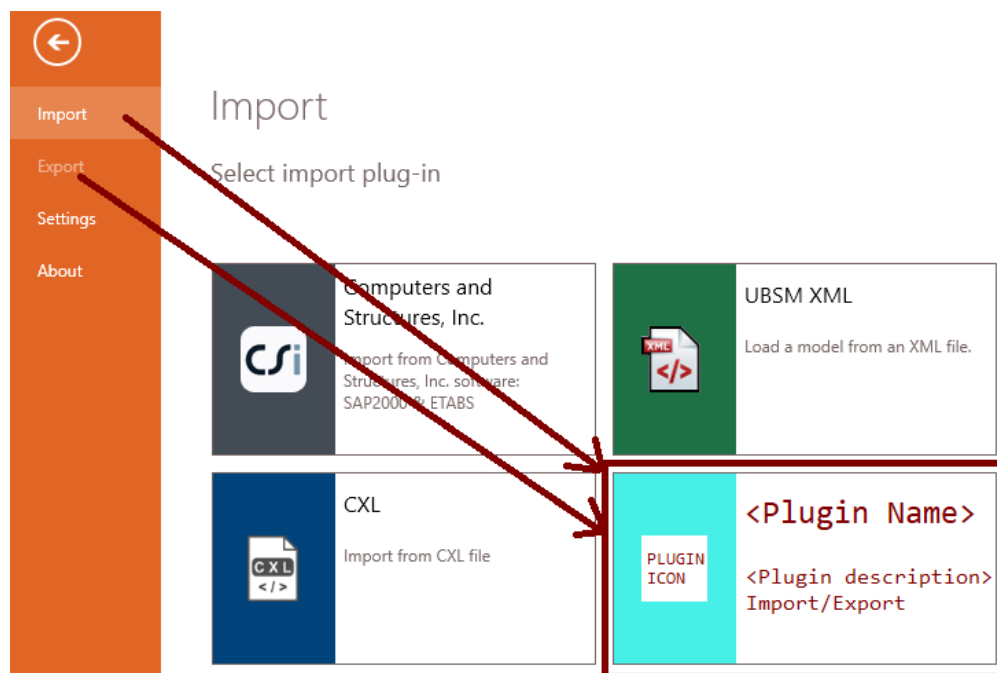
In case user wants to create some Add-in /plugin in another third-party software (e.g. FEM-Design, Revit, etc.), it is possible to request the conversion or conversion-back by using the following static class:

BuildSoft.BIMExpert.RemotePlugin.BIMExpertRequest

By calling any method (Sync/Async) from that class, a WCF communication is sent to BIM Expert to queue a new conversion. The system allows to provide some options to the request to address the new conversion.

Once BIM Expert starts the new request, the plugin's running starts through the *IUBSMPlugin.Convert* or *IUBSMPlugin.ConvertBack* method.

A new conversion from/to BIM Expert can be invoked from BIM Expert application by clicking the new button/s that BIM Expert will add in the Import and/or Export tab:



Database

In case the plugin requires to query the Gateway (Server) DB to fetch Materials, Sections and Bolt Assemblies, the following static class can be used:

BuildSoft.BIMExpert.Plugin.Database

It is not mandatory to use only items from the DB to create a UBSM.

Items in DB are also used to create the typical mapping files.

Assemblies

Just to provide a big picture about what each dll is intended for:

BuildSoft.BIMExpert.Plugin.dll	Contains the contracts for a plugin implementation. Database queries. BIM Expert version
BuildSoft.BIMExpert.RemotePlugin.dll	To call the conversion from other application
BuildSoft.UBSM.dll	Contains the definition of UBSM data.
BuildSoft.HashAlgorithms.dll	Referenced dll.
BuildSoft.Instrumentation.Contracts.dll	Referenced dlls.
BuildSoft.Instrumentation.dll	Some logging classes are there.
BuildSoft.Utilities.dll	Referenced dll. Basic utilities. Should not be used.