SYNCHRO Pro/Scheduler/OpenViewer

Readme

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SYNCHRO Pro Readme

Introduction

This document contains information about setup issues, known product anomalies that are still under investigation, and other pertinent issues for this release.

> **Note:**
>
> Serious problems may occur if you modify your system incorrectly by using Registry Editor or other method. These problems might require that you reinstall the operating system. Bentley Systems, Inc. cannot guarantee that these problems can be solved.
>
> **In no event shall Bentley Systems, Inc. and/or its respective suppliers be liable for any special, indirect or consequential damages or any damages whatsoever resulting from loss of use, data or profits, whether in an action of contract, negligence or other tortious action, arising out of or in connection with the use or performance of information available from us.**
>
> Modify the registry at your own risk.
>
> Some of the instructions contained in this document require Administrator privileges.

What Is SYNCHRO Pro?

SYNCHRO Pro is an advanced software tool to plan, schedule, and manage construction projects in a 4D environment.

- Leverage SYNCHRO Pro 4D's unique ability to automatch your BIM model to your schedule, updating your construction plan in 4D in a matter of minutes.
- Reduce cost variance by using comprehensive resource management and see planned versus installed quantity tracking, project and contractor earned value, or critical paths.
- Lead progress review meetings using the 4D model as the central hub of information for clear, collaborative, and productive planning and decision-making with all stakeholders.
- Deliver a safe project by reviewing the virtual jobsite as it changes over time, identifying risks, and resolving them.
- Reduce your schedule variance with visual look-ahead reports that identify activities, work areas, and equipment, allowing you to view your task list by contractor or work package.
- Plan for safety hazards and risks before you start work at the jobsite using dynamic spatial coordination analysis that identifies work area overlap, overhead crane risks, and potential for obstruction delays.
- Improve schedules and deliver a well-managed project by creating schedules that everyone can understand. The visual medium of computer animated graphics drives visibility and transparency.

- Create real-time digital feedback loops between the field and the office for improved productivity tracking, helping you understand where everyone is at any given time.

The Latest Version

Details of the latest version can be found on the SYNCHRO Pro website.

Licensing

See the license file located in the EULA folder of the installation directory for additional information.

Use the Contact Form (https://www.bentley.com/en/about-us/contact-us) if you want to purchase a license.

Feedback and Questions

If you have comments or questions, contact us at one of the locations below:

Support Page (https://www.bentley.com/en/support)

Bentley Communities (https://communities.bentley.com/products/construction/w/construction_wiki/40371/products)

Technical support e-mail (synchrosupport@bentley.com)

Homepage (https://www.bentley.com/en/products/product-line/construction-software/synchro-4d)

Submit an Idea for improvement (https://communities.bentley.com/products/construction/i/synchro-construction-solution-ideas)

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Known Issues and Limitations

Following are the known issues and limitations of this release.

Upgrade from a Previous Version

If you experience problems upgrading from a previous version of SYNCHRO Pro/Scheduler/OpenViewer, do the following:

1. Uninstall the previous SYNCHRO Pro product using the Control Panel **Add/Remove Programs** applet.
2. Manually delete any files remaining in the installation directory (the default directory is C:\Program Files \Bentley\SYNCHRO but this may have been changed during the initial installation).
3. Manually delete the **HKCU\Software\Synchro** registry key, and any sub-keys.
4. Install the new version of SYNCHRO Pro.

3D File Interoperability

Bentley Systems, Inc. is committed to providing support to a wide variety of file formats both for import into, and export from, the application.

However, due to technical or licensing limitations the following sections detail current restrictions in 3D file import and export.

Supported Import File Formats

The following 3D file formats can be imported into this version of SYNCHRO Pro:

1. HOOPS Stream File HSF
2. Autodesk DWF, DWFX (up to 2012)
3. Autodesk FBX (6.0 - 7.5)
4. Collada DAE (up to 1.5)
5. Alias Wavefront OBJ (all versions)
6. AutoCAD DWG, DXF (R14 - 2018)
7. SketchUp SKP (v7, v8, 2013, 2014, 2015, 2016, 2017 , 2018, 2019)
8. Bentley MicroStation DGN (V7, V8, V8 XM, V8I, V8i (SELECTseries 2, 3), V10 (CONNECT))
9. Bentley I-Model I.DGN (1.0)
10. IFC (2x, 2x2, 2x3, 4)
11. UGS JT (up to v10.2)
12. 3D PDF, PRC (All versions)
13. ACIS SAT, SAB (up to 2019)
14. Parasolid XMT_TXT, XMT_BIN, X_T, X_B (up to v31.1)
15. Autodesk Inventor IPT, IAM (up to 2020)
16. Autodesk 3DS (Any version)
17. Catia V4 EXP, DLV, MODEL, SESSION (up to 4.2.5)
18. Catia V5/V6 CATPRODUCT, CATPART, CATDRAWING, CATSHAPE, CGR (Up to V5-6 R2019 (R29))
19. Dassault Interchange Format 3DXML (2011 - 2013)
20. GL Transmission Format GLTF, GLB (2.0 only)
21. IGES part files IGES, IGS (5.1 - 5.3)
22. STEP part files STEP, STP (AP203, AP214, AP242 - Geometry ONLY)
23. ProE/Creo ASM, PRT, NEU, XAS, XPR (Pro/Engineer 19.0 to Creo 6.0)
24. I-deas MF1, ARC, UNV, PKG (up to 13.x (NX 5), NX I-deas 6)
25. Rhino 3DM (4, 5, 6)
26. Solid Edge ASM, PAR, PWD, PSM (V19 - 20, ST - ST10, 2019)
27. SolidWorks SLDASM, SLDPRT (up to 2019)
28. Unigraphics NX PRT (V11.0 to NX 12.0, and 1847)
29. Universal 3D U3D (ECMA-363, 1st, 2nd and 3rd editions)
30. Stereo Lithography STL (All versions)
31. VDA-FS VDA (1.0 - 2.0)
32. VRML files VRML, WRL (V1.0 and V2.0(VRML'97))
33. Revit RVT (2017, 2018, 2019, 2020 - via plug-in module for Revit)
34. NavisWorks NWD, NWF, NWC (2017, 2018, 2019, 2020 - via plug-in module for NavisWorks)

Supported Export File Formats

The following 3D file formats can be exported from this version of SYNCHRO Pro:

1. Autodesk DWF, DWFX
2. Autodesk FBX

3. Collada DAE
4. HOOPS Stream File HSF
5. IFC (2x, 2x2, 2x3)
6. 3D PDF, PRC
7. Universal 3D Files (U3D)
8. SYNCHRO SPM (SYNCHRO Project Mobile – 3D and animation)

Known Issue on DXF Import

There have been reports of a crash in the SYNCHRO Pro application during the import of some DXF files. **Workaround:** Convert DXF to another format before import.

Known Issue on DWG Import

On import of DWG file(s), you receive the message "Unable to locate resource string. Resource manager is not correctly installed." **Workaround:**

1. Uninstall SYNCHRO Pro.
2. Open Regedit.exe on your computer.
3. Go to \HKEY_CURRENT_USER\Software\Synchro and delete the folder **5.4**.
4. Delete the folder **5.4** in \HKEY_LOCAL_MACHINE\SOFTWARE\Synchro directory.
5. Reinstall SYNCHRO Pro.

Project Planning Interoperability

Bentley Systems, Inc. is committed to providing support to a wide variety of third-party Project Planning systems both for import into, and export from, the application.

Support Project File Formats

Product	File Extension(s)	Version	Notes
Asta Powerproject	PP	9, 10, 11, 12, 13, 14, 15	
Microsoft Project	XML	2003, 2007, 2010, 2013	Export to MS-Project 2003 ONLY (Can be opened in 2007, 2010 & 2013)
Microsoft Excel	XLS, XLSM	2003, 2007, 2010, 2013	Requires MS-Excel ODBC drivers
PMA NetPoint	XML	up to 4.1	

Product	File Extension(s)	Version	Notes
Primavera P6	XER	6.1, 6.2, 7.0, 8.0, 8.1, 8.2, 8.3, 8.4, 15.1, 15.2, 16.1, 16.2 , 17.7	Requires Primavera Integration API to connect directly P6 DB. P6 XML files can also be used without the API installation. XER files can be imported into P6 DB, then read by SYNCHRO Pro.
IFC	IFC	2x, 2x2, 2x3, 4	
Safran		7.1	Requires Safran Web Services SDK to be installed separately.
SYNCHRO Pro Project	SP	Any Version up to your installed version (see Help > About)	

Due to technical or licensing limitations, the following sections detail current restrictions in Project Planning integration.

Microsoft Project: Import of Microsoft Project XML file generated by a third-party application failed

SYNCHRO Pro supports import of XML files generated by Microsoft Project 2003, 2007, 2010, 2013. Some third-party applications can generate XML files in these formats incorrectly. Import of such files into SYNCHRO Pro may fail (error messages are raised in such case) or lead to incorrect results. Customers reported these kinds of issues when using XML files generated by ASTA PowerProject, CCS Candy, and FastTrack Schedule.

Possible Workaround: Load the XML file into Microsoft Project 2003, 2007, 2010 or 2013 and resave it, then try to import into SYNCHRO Pro. It may avoid import errors in some cases.

Primavera: Primavera Integration API

It is highly recommended to user Primavera P6 XML files for integration with Primavera P6. If you intend to use SYNCHRO Pro synchronization features with Primavera, then you need to install the Primavera Integration API and ensure you have the correct version for use with SYNCHRO Pro.

SYNCHRO Pro currently supports the following versions of the Primavera Integration API:

Product	Integration API	Notes
Primavera P6.1	P6.1 IAPI version 6.1 Service Pack 2	
Primavera P6.2	P6.2 IAPI version 6.2	
Primavera P6 v7.0 Primavera P6 v7.0 SP3	P6 v7.0 IAPI version 7.0 P6 v7.0 IAPI version 7.0 SP3	

Product	Integration API	Notes
Primavera P6 v8.0	P6 v8.0 IAPI version 8.0	
Primavera P6 v8.1	P6 v8.1 IAPI version 8.1	
Primavera P6 v8.2	P6 v8.2 IAPI version 8.2	
Primavera P6 v8.3	P6 v8.3 IAPI version 8.3	
Primavera P6 v8.4	P6 v8.4 IAPI version 8.4	
Primavera P6 v15.1	P6 v15.1 IAPI version 15.1	
Primavera P6 v15.2	P6 v15. 2 IAPI version 15.2	
Primavera P6 v16.1	P6 v16.1 IAPI version 16.1	
Primavera P6 v16.2	P6 v16.2 IAPI version 16.2	
Primavera P6 v17.7	P6 v17.7 IAPI version 17.7	

Contact your local Primavera Administrator for further details.

Primavera: Performance degradation when connecting to the remote PMDB via WAN

Performance of Primavera IAPI in local mode is too slow when connecting to the remote Primavera DB via WAN.

Workaround: Use P6 IAPI in remote mode in such environment.

Primavera: Unable to import P6 XML from SYNCHRO Pro into P6 15.1 or higher with SQLite DB

The P6 XML importer log usually contain the following messages:

Microsoft.Practices.Prism.Modularity.ModuleInitializeException: An exception occurred while initializing module 'CommandLineModule'.

This problem may relate to bugs in P6 XML importer for SQLite or limitations of P6 with SQLite version (see details in P6 documentation).

Workaround: Upgrade to P6 using MS SQL server or Oracle DB.

Graphic Card Compatibility

SYNCHRO Pro is a graphics intense application, and its 3D engine (HOOPS from Tech Soft 3D) has been tested on a wide variety of systems and graphics cards.

If you have specific issues related to the graphics on your system, contact SYNCHRO Support.

Addition information on graphics card compatibility can be found at http://developer.techsoft3d.com/hoops/hoops-visualize/graphics-cards/

The HOOPS version currently being used by SYNCHRO Pro is detailed in the application About dialog (select Help > About from the main menu bar).

DirectX

To find out what DirectX version you have, click the Start button, select Run, type **dxdiag** and click OK.

The DirectX Diagnostic Tool launches.

Your DirectX version is listed at the bottom of the System Information, under the System tab.

If your DirectX version is older, or if the utility is not found in your system, download the latest version of DirectX from the Microsoft website (http://www.microsoft.com/windows/directx/downloads/default.asp).

Legacy SYNCHRO Pro Project File Support

The automatic data conversion for SYNCHRO Pro v2.x, v3.x as well as for SYNCHRO Pro up to v4.6 project files is no longer supported with this release.

Contact SYNCHRO Pro Technical support is you need to upgrade from a version of SYNCHRO Pro prior to release version 4.7.

Version Compatibility

SYNCHRO Pro retains backward compatibility with previous versions of the sp file. When an old sp file is opened in SYNCHRO Pro, it is upgraded automatically to the latest version when it is saved (this means the application and file versions are always identical).

SYNCHRO Pro does not support forward compatibility, for example, you cannot open a sp file from a later version of SYNCHRO Pro in an older version of the application.

Using the Command Line

The SYNCHRO Pro application supports a number of command-line options.

To open a command line window:

1. Click Start and then click Run.
2. In the dialog that displays, type **cmd**; a new command line window displays.
3. In this window, change the directory to the SYNCHRO Pro installation directory (the default is C:\Program Files\Synchro Ltd\Synchro\Client, but this may have been changed during the installation).

To do this:	Type this:
Open a file in SYNCHRO Pro	synchro <path to your project file>

Out of Memory Error

If SYNCHRO Pro displays a "Not enough memory" or "There is not enough memory to run SYNCHRO Pro. Quit one or more programs, and then try again" error message, or crashes following such a message; then the virtual memory available to SYNCHRO Pro is exhausted.

In this case, do the following:

1. Compare the Total Physical Memory, with the Total Virtual Memory, both are displayed in the Help > About-System dialog). You should see something similar to:

   OS Total Virtual Memory Size: 2047 MB

   Physical Memory Bank 0 Size: 2048 MB

   Physical Memory Bank 1 Size: 2048 MB

   In this case, consider increasing the amount of Virtual Memory available.

2. Unload a part of 3D data.

   Go to the 3D list window and unset the check mark left from the names of appropriate objects.

3. Unset the option Tools > Options > Synchronisation > 3D > Import Settings > General > Load 3D Objects into memory to prevent memory exceeding on import of large 3D data.