SAP2000® Version 20.0.0

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SAP2000 v20.0.0 is a major upgrade from SAP2000 v19.2.2, and is distributed electronically by download from the internet using the CSI Installation Wizard.

PLEASE READ THIS FILE!

It contains important information that may be more current than what is in the Manuals.

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1. Installation Instructions for SAP2000 v20.0.0

SAP2000 v20.0.0 is available electronically as a full installation by download from the internet using the CSI Installation Wizard, or on DVD by request. Installing SAP2000 v20 will not uninstall older versions of SAP2000.

SAP2000 v20.0.0 is available as a 32-bit or 64-bit application. On a 32-bit operating system you can only install the 32-bit application. On a 64-bit operating system you can install either the 32-bit or the 64-bit application, but not both. Normally the 64-bit application would be recommended unless you need connectivity to a 32-bit version of Microsoft Excel or Access.

Whether you are using a standalone license or a network license, the full application must be installed on each workstation where SAP2000 will be used.

Use the Installation Wizard to guide you step-by-step through the process of installation and licensing. If you choose instead to use the DVD, follow the instructions provided in the installation browser that automatically starts up when the DVD is inserted into the drive on your computer.

Before installation, be sure you have your Activation Key available if you will be using a Standalone license. You should have received this by email from CSI or your local CSI Partner. If

you will be using a Network license, it is necessary to have the licenses already activated on the license server that is accessible to the workstation.

To begin the CSI Installation Wizard, click this link:

http://www.csiamerica.com/go/installation-wizard

The Wizard will start and guide you through the process. The actual files needed for installation will be downloaded as necessary. An active internet connection is required throughout the installation and licensing process.

The license activation server ports are 80 and 443. If either of these ports is blocked, they need to be opened. Otherwise license activation will not be possible.

Windows User Account Control (UAC)

For recent versions of the Windows operating system (Windows 10, 8, 7, and Vista), User Account Control (UAC) is enabled by default. When UAC is turned on, you must explicitly give permission to any program that wants to use "Administrative" privileges. Any program that tries to use Administrative privileges without your permission will be denied access.

The installation of SAP2000 and the activation of the license require "Administrative" privileges to run. When installing SAP2000 with UAC enabled, you should expect to be prompted to allow the installer access to system folders and Windows registry. Please allow it to continue so that the installation can complete.

2. Installation Instructions for License Manager 8.6

The information in this section does not apply if you are using Standalone licenses.

Important: If you are using a network license and you have already installed the Sentinel RMS License Manager 8.6 Utilities described below, please re-install them now as these Utilities have been updated.

If you will be using a network license to run SAP2000, the License Manager and Utilities should be installed on a license server, which is usually not one of the client workstations. The Installation Wizard (and DVD) provide the following installations:

Sentinel RMS License Manager 8.6

- If you have a version of Sentinel RMS License Manager v8.x.x older than 8.6 running, follow these steps:
    o Make a backup of the license file "lservrc", if present
    o To minimize possibility of interruption on the client, it is recommended no licenses are in use. However, this is not mandatory and most users will be unaffected.

- o Uninstall Sentinel RMS License Manager v8.x.x
- o Proceed with the installation of Sentinel RMS License Manager 8.6
- o Add the backed up "lservrc" file to the new installation if necessary
- o Follow the instructions below to install "Sentinel Utilities for License Manager 8.6" and activate your CSI network licenses

- If you are already running the Sentinel RMS License Manager 8.6 or a newer version, you can skip the above installation.

- If you have an older version of Sentinel RMS License v7.x.x running, you will need to leave this installed as v8.6 does not recognize v7.x.x licenses. Install the Sentinel RMS License Manager 8.6 on a different server.

Sentinel RMS 8.6 Utilities

- The Sentinel RMS 8.6 Utilities for License Manager 8.6 needs to be installed even if you are running a version of License Manager newer than 8.6. The Utilities are to be installed on the same license server as the License Manager. During the installation, you will be prompted for a Network Activation Key. You should have received this by email from CSI or your local CSI representative. Enter the key and click on Activate; a Network license will then be generated and copied to the server location or appended to an existing license at the server location. Note that the License Manager 8.6 needs to be running to activate the license.

On the client workstations

To speed up finding a network license when SAP2000 is launched, you can do either or both of the following:

- Create a text file, LEVEL.TXT, and enter the *ProgramLevel* in a single line. The *ProgramLevel* should be one of the following:

    BASIC / PLUS / ADVANCED / ULTIMATE / BASICC / PLUSC / ADVANCEDC
    ULTIMATEC / ADVANCEDI / ULTIMATEI

    Save this file to the folder where SAP2000 is installed. This file will cause the program to find the license faster.

- Create a text file, LMHOST.INI, and enter the network name or IP address of the machine that is running the License Manager. If you are serving licenses on more than one machine, enter each name or IP address on a separate line of text. Save this file to the folder where SAP2000 is installed.

- Either the LEVEL.TXT file or the LMHOST.INI file can also be placed in the user settings folder, which can be found by entering "%LocalAppData%\Computers and Structures\SAP2000 20" (without quotes) in Windows Explorer. Accessing this folder does

not require administrative permissions like the installation folder does. Files located in the user settings folder will take precedence over those in the installation folder.

As an alternative to using the LEVEL.TXT file, you can specify the program level as a command-line option. To do this, use the Windows Run command or create a shortcut pointing to SAP2000.exe in the installation folder. Add the following text to the command line after "…\SAP2000.exe"

/L *ProgramLevel*

where *ProgramLevel* is one of the values listed above for the LEVEL.TXT file. Specifying *ProgramLevel* on the command line will supersede the value in the LEVEL.TXT file.

3. New Features for SAP2000 v20

SAP2000 v20 is a major new release, and significant new features have been added or enhanced since v19.2.2.

For a full list of features and capabilities, please visit the SAP2000 releases page at
http://www.csiamerica.com/products/sap2000/releases

4. File Compatibility with Older Versions

SAP2000 v20.0.0 can open model files (*.SDB), as well as import SAP2000 database files (*.S2K,*.$2K, *.XLS, and *.MDB) from the same major version and the previous major version of SAP2000, unless specifically stated otherwise in this document. In most cases SAP2000 v20.0.0 can directly open model files from older versions as well, but if not, they can usually be opened by using the intermediate versions in sequence. CSI cannot be responsible for opening model files for older versions that cannot be run on recent machines or operating systems due to changes beyond CSI's control. Note that in certain cases results may differ for models run in newer versions compared to older versions due to enhancements and bug fixes as documented in the Release Notes for the intervening versions. Note that once you save or run older models in v20.0.0, they will not be usable by older versions of the program, so you should save them under a new name after opening or importing them in v20.0.0.

Models from SAP2000 version 14 and prior that contain Bridge Modeler data, lanes defined from bridge layout lines, or vehicles with code-dependent features should use product CSiBridge instead of SAP2000. These models can be opened in SAP2000 v20, but not all of the bridge-related data will be accessible or retained, as follows:
- If Bridge Modeler data is detected, it will be removed from the model. Any structural objects previously generated by the Bridge Modeler will be retained.
- Lanes defined from frames will be retained, but lane-width data will be removed. Lanes defined from bridge layout lines will be deleted. In SAP2000 v20, lanes are now called "paths".

- Code-based standard vehicles will be deleted. General vehicles will be retained, but code-based features, length effects, and width effects will be removed.

See the CSi Analysis Reference Manual, chapter "Moving Load Analysis", for more information on the features supported in SAP2000 and CSiBridge.

5. Changes from SAP2000 v19.2.2

For a complete list of all changes, please see the separate file ReleaseNotes.PDF in the Manuals subfolder of the SAP2000 installation and available by using the *Help > Documentation* command in SAP2000.