



Synchro Studio 12

Release Notes

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Introduction

This document provides a brief description of the enhancements included within each new release of the software.

Release 12.2.3: June 6, 2024

The following bug fixes and enhancements are also included with release 12.2.3.

- a. SimTraffic with multiple scenarios is fully functional without any inconsistencies.
- b. User can enter up to four – 2-digit phases under PED & HOLD column in Timing Settings grid.
- c. When merging networks geometry using Merge File or Scenario Copy Data some nodes were merging incorrectly. That is fixed.
- d. Now Scenario Copy transfers only volumes between scenarios when Volumes is selected.
- e. Background image is now saved after Synchro file is closed.
- f. Right click + M moves the node now.
- g. User can now Read UTDF Volumes - "By Date" without any issue.
- h. Simtraffic>Calibration>Drivers, the driver parameters for Mandatory Dist Adj and Positioning Dist Adj is editable now.
- i. Merge file imports import lane data properly when geometries differ.
- j. Network Optimization - Write Timings and Analyze MOE are being saved in the same folder as the Synchro file, unless otherwise directed by the user.
- k. Synchro version 11 file is editable in version 12 without any issue.
- l. An inconsistency related to difference in SimTraffic simulation results with same file is fixed now.
- m. SimTraffic user selected Report options are saved now.
- n. For unsignalized intersection, SimTraffic now displays pedestrians crossing if applicable.
- o. Phases are editable under Phase Template Editor without any issue.
- p. Synchro and SimTraffic - order of scenarios in top right dropdown matches with Scenario Manager window.
- q. Synchro opens on the scenario that was active when the file was closed.
- r. Synchro doesn't throw exception when RDP session is closed and reopened with a open Synchro file on that session.

Release 12.2.2: April 04, 2024

The following bug fixes and enhancements are also included with release 12.2.2.

- s. Phasing & Splitting Diagram now appears at the bottom of the Phasing Settings Grid.
- t. Users can configure a left and right without a through on a 4-way intersection.
- u. Detector Template doesn't throw any exception now.
- v. Check for Updates screen now directs to Download Page for software installation.

- w. Now SimTraffic displays the correct phase calls for controller actuation.
- x. Print Window function now print the entire network as landscape and tabloid in adobe preferences.
- y. Link OD>Volume Balance Weight row under Volume Setting is editable now.
- z. Print Reports>Selecting Multiple Reports to Print works as expected.
- aa. Timing Settings output inconsistencies between Grid & Report are fixed.
- bb. Some inconsistencies related to decimal number entries are fixed.
- cc. User can change the simulation speed as required.
- dd. Save Part retains the map coordinates, same as the original file.
- ee. An issue in printing HCM 2010 Report is fixed now.
- ff. UTDF Read volumes import works for each individual scenario when the Database access window is displayed.
- gg. Simulation Settings>Headway Factor modification stays as entered.
- hh. Minimum split calculation works as expected.
- ii. Lanes Report printing issue due to invalid lane alignment is fixed now.
- jj. Optimize Cycle>Cancel button works as expected.
- kk. An issue with Ring and Barrier phasing change is fixed.
- ll. User can now enter zero as Walk Time or Flash Don't Walk Time under Phase Settings.
- mm. An issue with displaying HCM 7th methodology outputs after optimization for a specific network is fixed.
- nn. A User Message is added, if minimum requirement doesn't meet during optimizing a network with "Never Allow Uncoordinated" selection.

Release 12.2.1: December 20, 2023

The following bug fixes and enhancements are also included with release 12.2.1.

- oo. Synchro Suite install now automatically installs for all users.
- pp. Synchro Suite version is now displayed on the lower right of Status Bar.
- qq. Scenario Switcher is now on the right edge of the Ribbon Bar.
- rr. UTDF Read/Write Volumes can use any date format.
- ss. Report Preview opens in the last used zoom percent and screen size.
- tt. TIA Import Times for large TIA files have been improved.
- uu. 3DViewer Files Menu includes quick access to the Sample File.

Release 12.2.0: November 14, 2023

This release introduces a modern look & feel to 3D Viewer software. The updated 3D viewer provides enhanced visual elements, refined layout & seamless workflow. Refer to the User Guide for additional details.

The following bug fixes and enhancements are also included with release 12.2.

- a. The performance of TIA is improved ensuring fast and smooth workflow.
- b. Moving street names and volumes on map is not laggy now.
- c. Home>Display Results>Link now displays all relevant data for unsignalized intersections.
- d. Users can now run a SimTraffic simulation from a Box drive.
- e. Switching scenarios work as expected under Time Space Diagram.
- f. Home>Display Results>Link now displays link speed for both directions.
- g. Number keypad is working as expected while changing the Lanes and Sharing field in the data grid.
- h. Bing Map is available with valid SMA regardless of date/time format.
- i. If the network is anchored, toggling the box to show road and landmark names under “select background” doesn’t relocate map background.
- j. Users can now update the coordinates of the background images in Synchro.
- k. Some inconsistencies in the SimTraffic simulation related to “Entering blocked intersection” have been corrected.
- l. Users are now given option to acknowledge ignoring U-Turning movements for HCM signalized intersection.
- m. There were some inconsistencies in SimTraffic for right-turning vehicles. This has been fixed.
- n. Print window function now prints images and offline Bing background.
- o. Map Settings are now transferred when a scenario is duplicated.
- p. Freezing issues have been corrected in the HCM 6th AWSC grid and when printing the HCM 6th AWSC reports.
- q. UTDF Volume Import now works without Date/Time entry.
- r. Under report section, pressing the tab button causes the focus to shift from one place to another randomly. This has been fixed.
- s. Now saving report sets a default name for the report.
- t. Geometry code now displays the correct HCM representation on the grid and report for 7th, 6th and 2010.
- u. Synchro doesn’t crash when copy geometry to another scenario and then activate that scenario.
- v. Synchro prints HCM Signalized reports for all Intersections without crashing.
- w. TWLTL checkbox is now editable under signing settings grid.
- x. SimTraffic report scope selection now displays the correct label.
- y. Cluster background doesn’t remain intersection is being removed from cluster.
- z. An issue with entering a second permitted phase under Timing Settings has been fixed.

Release 12.1.0: July 26, 2023

This release introduces integration with Institute of Transportation Engineers’ (ITE) TripGen11. A wizard style interface allows users to import the calculated number of trips generated by user selected land uses and then utilize the data within the Traffic Impact Analysis (TIA) module within

Synchro. Users must have TripGen11 license based on ITE user agreements. The username and password must be entered within the TIA Module to access trip generation data. Calculated trip data can then be imported for use within the TIA Module. Refer to the User Guide for additional details.

The following bug fixes and enhancements are also included with release 12.1.

1. *HCM 7th Edition*

- a. TWSC intersections, the new equation was introduced to consider Shared Major-Street Lane Effects.
- b. A new parameter Pedestrian Satisfaction Probabilities was introduced to determine Level of Service (LOS) for pedestrian at TWSC intersections.
- c. Adjustments were made to the calculation of Groups of Pedestrians, Pedestrian special distribution, Average Pedestrian Delay, Pedestrian Average Headway, Pedestrian - One Lane Crossing at TWSC intersections.

2. *User Interface Update*

- a. Home Tab – Lanes & Volumes Templates and Zoom groups were updated with new set of icons.
- b. Time Space Diagram (TSD) window was updated to exhibit a modern look & feel.

3. *Miscellaneous*

- a. In the Create Reports window in Synchro and SimTraffic, the button text has been changed from OK to Apply for clarity.
- b. Copying Network data from one scenario to another now includes all network settings, such as "Travel Speed" and "Cycle Length" defaults.
- c. Default map settings are now applied to new scenarios created before the Synchro file is saved.
- d. New scenarios now default to today's date.
- e. Controller Delay in Timing window no longer shows "Error" for U-Turns.
- f. When saving a scenario, Save file as dialog box no longer adds a "-" to the filename.
- g. Scenario Name in title bar drop down no longer stretches over dropdown arrow.
- h. Ctrl + R now opens Create Reports window when Synchro first loads.
- i. Spacebar shortcut now clears intersection text. Ctrl+Space Bar clears movement text.
- j. Left-Turn and Right-Turn Equivalency Factors are now overridable fields with default value.
- k. Exclusive Ped Phases or Hold Phases in Timing Grid now persist as expected.
- l. Average Ped Delay no longer changes with Pedestrian Volume unless the Ped Platooning is selected.
- m. The "#" shortcut now toggles node number as expected.
- n. Blank report header and footer are allowed for defaults.
- o. Offline Bing Maps endpoint has been updated to correct connection issues.

- p. Offline background images are now transferred when duplicating scenarios.
- q. Select Intersection function now accepts keystrokes once window is displayed.
- r. Text reports now use windows style end of line characters.
- s. UTDF volume import no longer shows "Key not found in dictionary" error in some cases.
- t. Network Settings no longer pops up on double click in main data grids.
- u. Printed width of reports is now scaled when possible, preventing runoff onto extra pages.
- v. Control Type is no longer changeable in the HCM2010, HCM 6th, and HCM 7th grids.
- w. Print window function now shows all details available.
- x. SimTraffic video recording speed now matches playback speed during recording.
- y. Multi-selected intersections can now be assigned a node configuration template.

Release 12.0.0: May 15, 2023

This section outlines some of the major changes in the initial release of **Synchro Studio 12**. A comprehensive list of changes from Synchro Studio 11 to the initial release of Synchro Studio 12 can be found in the Getting Started and What's New in Version 12 document.

1. **Enhanced Scenario Manager** – Synchro 12 introduces an enhanced Scenario Manager that enables users to save multiple scenarios with varying geometries to a single Synchro file to efficiently track each alternative.
 - a. Enhanced Scenario Manager allows multiple scenarios to be saved in a single Synchro file with different geometry, volumes & timings, resulting in a reduced number of Synchro files needed for the same network/project.
 - b. Geometry can now be changed for each scenario individually.
 - c. SimTraffic has been updated to support multiple scenarios with different geometries.
 - d. Traffic Impact Analysis (TIA) also supports scenarios with different geometries.
 - e. The Scenario Manager window has been revamped to provide a fresh appearance and user-friendly controls.
2. **HCM 7th Edition** – Synchro 12 supports the signalized intersection, all-way stop control (AWSC), two-way stop control (TWSC), and the roundabout methods.
 - a. The HCM 7th Edition Settings pane includes three expandable sections: Signal Timing Details, Adjusted Flow Rate, and Ideal Saturated Flow. The most commonly used parameters are viewable with all sections collapsed, with additional details about the intersection available by expanding one or more of these section(s).
 - b. A new field is available for signalized intersections to input the proportion of Connected Automated Vehicles (CAVs) in the traffic stream.
 - c. New base saturation flow rates have been added to the signalized intersection analysis to account for CAVs for through movements.

- d. Modifications were made to the lane width adjustment factor to account for proportion of CAVs.
 - e. New saturation flow adjustment factors have been added to the signalized intersection analysis to account for CAVs for protected & permitted left turns.
 - f. A new field is included for the roundabouts to enter the proportion of CAVs in the traffic stream.
 - g. New fields are included for the roundabouts to introduce intercept parameters & slope parameters to account for the proportion of CAVs.
 - h. Modifications were made to the capacity adjustment factor to account for the proportion of CAVs for roundabouts.
 - i. Modifications were made to the equation for calculating Minor-Street Left-Turn Movements for TWSC intersections.
 - j. Control Delay & Rank 4 Capacity for One-Stage Movements equations have been modified for TWSC intersections.
 - k. For TWSC intersections, the new equation was introduced to model Compute Flared Minor-Street Lane Effects.
 - l. Corrections were made to the calculation of Effect of Major-Street Shared Through and Left-Turn Lane and Potential Capacity, accounting for the effect of platooning for TWSC intersections.
3. **Ribbon Bars** – The Synchro user interface has been updated, featuring new buttons with easy-to-use ribbon bar controls.
- a. Buttons under mapping groups were reorganized.
 - b. A new group was introduced to combine all HCM methodologies under one group and an HCM 7th Edition button was added as well.
 - c. All icons in Synchro, SimTraffic, and 3D Viewer have been modernized.
4. **Data Entry Grids** – The data entry grids in Synchro & SimTraffic were updated to exhibit a modern look & feel with easy-to-use controls.