Strong Concepts™

InfoQueue

Strong Concepts Newsletter Volume 18, Number 1 December, 2006

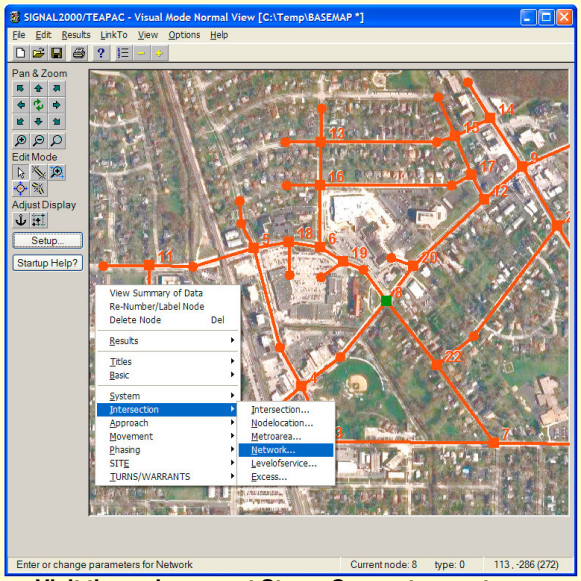
Visual TEAPAC Now with SCENARIO!

Visual TEAPAC Gets Addition of SCENARIO

***Visual* TEAPAC** (released November, 2005) is now available with **SCENARIO**, a powerful program to create and manage the multi-scenario analyses often conducted with any of the 13 other TEAPAC programs.

Read the articles below for details about how this flexible and easy-to-use program can be used to create standard or customized multi-scenario data files for Visual TEAPAC programs, as well as the major enhancements offered by the Visual TEAPAC programs themselves.

Example of Graphical Network Editing in SCENARIO and All *Visual* TEAPAC Programs



Visit the main page at StrongConcepts.com to see more detailed color screen-shots of *Visual* TEAPAC

What Is SCENARIO?

SCENARIO is a new Visual TEAPAC program that can create multi-scenario data files either from scratch or from data files of earlier versions of TEAPAC. Users can:

- select from pre-defined typical scenario structures like multiple volume conditions or multiple timing plans,
- create completely unique scenario conditions for their analyses, or
- customize a pre-defined scenario structure to meet their specific needs.

The SCENARIO program also functions as an **automatic plugin** for all other Visual TEAPAC programs so that every other Visual TEAPAC program automatically understands the SCENARIO file structure which has been created, and at no additional cost. The primary advantage of using SCENARIO is that all the scenario data is saved without dangers of duplicated data which often occur when scenarios are managed by the typical use of File-SaveAs (see following article).

SCENARIO can easily define both single-issue and multi-issue conditions, and any data dialog can be assigned or re-assigned to any defined issue for as many as five independent, mutually-exclusive *Issues*. For example, a very common and simple single-issue scenario would be having multiple volume conditions for one or more intersections for which capacity analysis, intersection design and/or signal timing optimization would be needed. Initially, the VOLUME dialog could be assigned to the *Issue* named "Volume Conditions" and as many as 25 different *Conditions* could be named and saved with unique volumes.

Free demos for all TEAPAC programs at www.StrongConcepts.com

Later, upon further consideration, additional data like PEAKHOURFACTORS and PEDLEVELS could be added to the defined *Issue* for each condition, and/or additional *Conditions* could be added. Other examples of a single-issue analysis could be multiple years of traffic count data for TURNS or WARRANTS, or multiple years or zones of land use for SITE's projected traffic estimation.

Multi-issue scenarios could be combinations of any of these, where the variation of one variable is independent of the others. Another example of a multi-issue scenario could be where one *Issue* is changing volumes based on the time-of-day and/or day-of-week while the other *Issue* is independently changing intersection geometrics which depend on differing funding possibilities.

Why Is SCENARIO So Important?

Multi-scenario analyses are endemic to our profession in traffic and transportation engineering. Everyone does these types of analyses all the time. So why is SCENARIO such a **significant breakthrough**? The answer lies in the way that most multi-scenario analyses are currently conducted versus how it is handled with SCENARIO, and the ramifications these differences have on the analyst. See if the following circumstances don't ring true for you.

The most common way to create a multi-scenario analysis with ANY program is to open the data file from the first analysis, change the data that defines the second scenario, and use the File-SaveAs menu to save the conditions under a different file name. This is easily done for any number of conditions which are analyzed, and is often extended as the project proceeds to consider scenarios not originally anticipated.

The problem with this approach is that typically 90% or more of the data saved in each file is exactly the same, and if any of that data changes during the course of the analysis, it must be changed in every file. This is a time-consuming and tedious effort that is frequently omitted due to lack of time, budget or motivation. This is where the SaveAs approach breaks down and is often the root cause of interminable problems later on in the project, sometimes even in a debilitating way.

Enter SCENARIO, to the rescue: For data which does not change from case to case, SCENARIO only saves one copy of that data in one *Base* place, so if it changes, it only needs to be changed in one place. It is changed quickly, easily and without hesitation, keeping the entire database for all the project analyses internally consistent for any subsequent analyses later on. At a later time, additional data can be removed from the *Base* data and added to any of the independent *Issues* with unique values for each given *Condition*, or data can be removed from any *Issues* and assigned back to the *Base* data, or even subsequently to another *Issue*.

Any data dialog can be assigned to any *Issue*, as detailed by the needs of the project, resulting in a customized multi-issue, multi-scenario analysis free of any problematic occurrences of duplicated data. As a multi-scenario analysis inevitably becomes more complex and involved as a project progresses, the clean management of your data offered by SCENARIO becomes more & more valuable - dare we say **invaluable!**

Why TEAPAC?

TEAPAC is a suite of 13 programs that perform a variety of traffic and transportation engineering analysis & design tasks. In addition to their unprecedented breadth of coverage, the amazing thing about *Visual* TEAPAC is that all of its functions are integrated via a common visual graphics user interface and a common data file structure -- one data file can be used by ANY of these programs for an analysis that covers as many as 500 intersections of an area-wide study. The common data file means that you **enter your data once only**, then use that data with whatever programs need it.

Further, results of one program which become inputs to another are all saved in the same data file for use by all the other programs. Check out the detailed flowchart on page 4 for examples, or the **animated PowerPoint slide show** at www.StrongConcepts.com. *Visual* TEAPAC offers unprecedented efficiencies for conducting a wide variety of analyses with a minimum amount of hassle and maximum reliability.

Our internet distribution can deliver licenses & upgrades **to your desktop the same day** an order is received. Call and start using *Visual* TEAPAC today!

Summary of *Visual* TEAPAC Enhancements

»» **Graphical front-end** allows network creation and editing directly on-screen!
- Drag-and-drop manipulation of network!
- Bitmap background for ease of creating network and visualizing results (aerial photo, map, plan drawings, etc.)
- Right-click access to all data entry dialogs, as well as analysis results dialogs.

»» **Enhanced graphical reports** make results easier to read and nicer to look at.
- Full use of color and graphics drawing for arrows, phasing diagrams, permitted movements, time-space diagrams, intersection diagrams, cycle optimization graphs, daily count variation graphics, etc.
- Printable on any color or black-and-white printer supported by Windows; pastable as .bmp bitmap into any other application.

»» **SIGNAL2000** and all **PRE-processors** feature new ring-based timing display option and new permitted left turn features.

»» **SITE** performs on-screen assignments on the new graphical network display.

»» ***Visual* TEAPAC** has all the amazing seamless data exchange features first offered by TEAPAC2004 for the 13 TEAPAC programs and 14 third-party programs.
- One data file carries all data for all programs, with up to 500 intersections per file/analysis!
- One-click, split-second transfer of control and input data from one program to another.
- Seamless, one-click exchange of results to each other, like Peak Period Volumes, PHF, Projected Volumes, Optimized Timings, etc.
- Upwards/downwards compatible with prior TEAPAC data files.

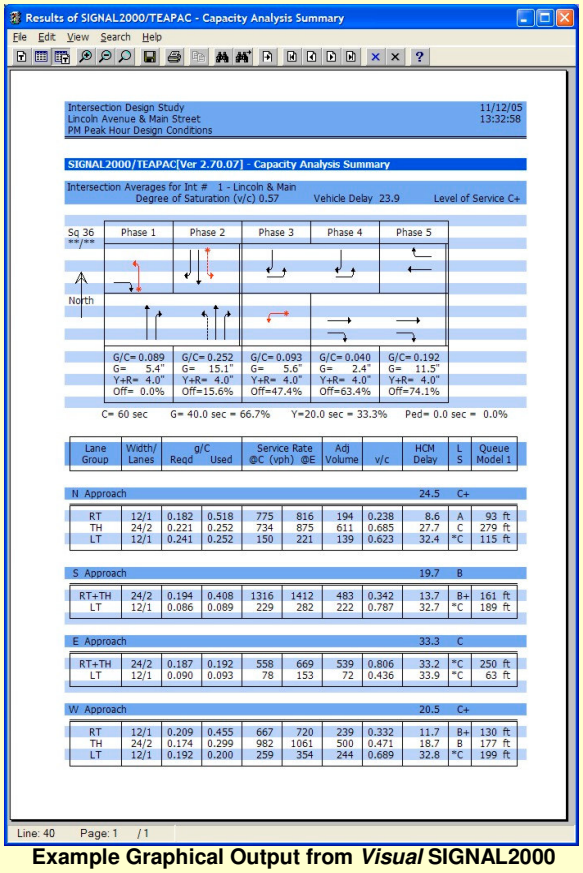
»» **PDF manuals** are printable, searchable, and free.

Exploit The Power of SCENARIO for Third-Party Software

While SCENARIO is easily seen as indispensable for most any Visual TEAPAC analysis, due to the connection of TEAPAC to many other 3rd-party programs, use of these other programs can also gain a huge advantage from the multi-scenario data management offered by SCENARIO.

For example, while in TRANSYT or CORSIM SaveAs is the only tool to create multiple data files with different analysis volumes and thus huge amounts of duplicate data for all other data entries. Creating a duplicate-free dataset for PRETRANSYT or PRENETSIM is trivial with SCENARIO, and because of the seamless sharing of data files among all Visual TEAPAC programs, the same dataset is easily used by SIGNAL2000 for HCM-compliant capacity analyses and timing/phasing optimizations, as well as to compute saturation flow rates needed by TRANSYT and CORSIM. Any additional time-varying variables such as PHF, ped volumes, timing plans, etc. are easily added to each scenario condition as required by the project, and other 3rd-party programs like Synchro, TS/PP-Draft and PASSER-II are easily added to the multi-scenario analysis by the immediate seamless compatibility of PRE-SYNCHRO, PRETSPPD and PREPASSR.

With SCENARIO and Visual TEAPAC, it is easy to perform and manage multi-issue, multi-scenario analyses with the 3rd-party programs supported by TEAPAC that are not directly suited to efficient multi-scenario analyses.



Example Graphical Output from *Visual* SIGNAL2000

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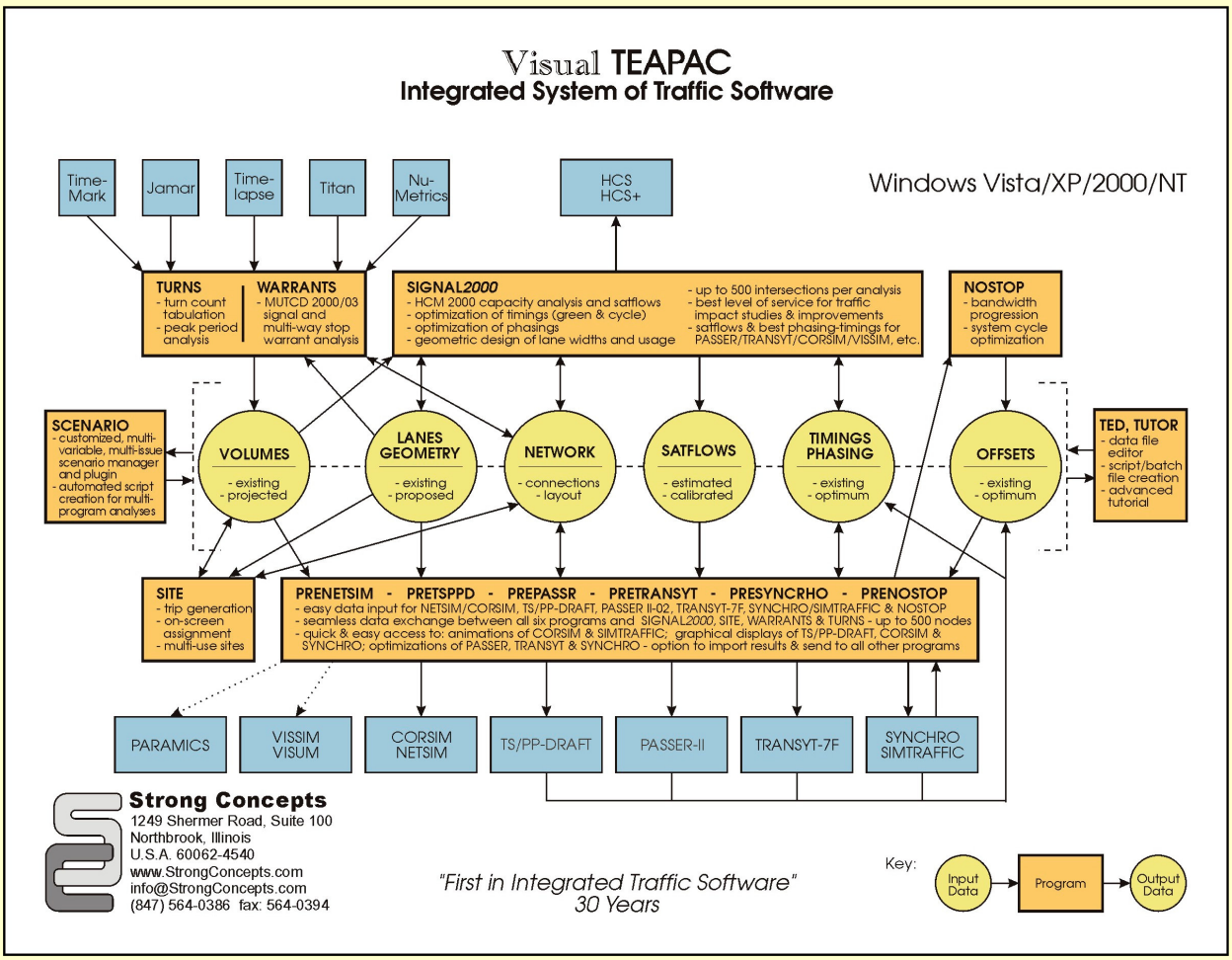

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