

40 Years
1974 - 2013

InfoQueue

Strong Concepts Newsletter

Volume 21, Number 1

July, 2013

Introducing
TEAPAC Complete 2010
Version 8.6

Fully Integrated 2010 HCM

Now using predicted average phase times!

**HCM Capacity Analysis and Optimization
for Signalized Intersections**

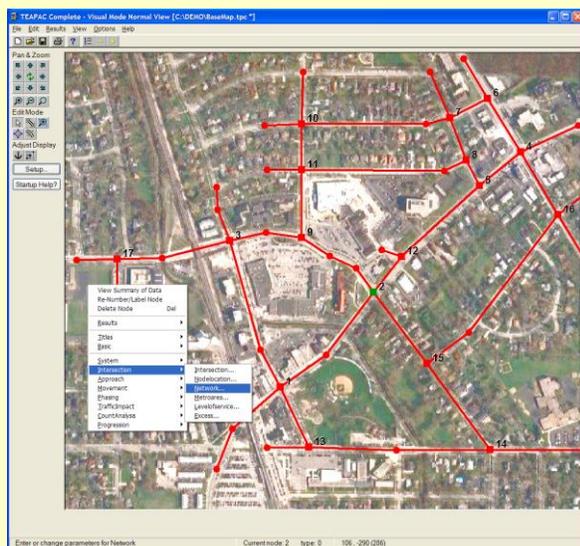
**Actuated or Pretimed,
Coordinated or Isolated**

**Average Actuated Phase Times Used for
Time-Space Diagrams and Export**

(see article on next page)

**15 Fully Integrated
TEAPAC Functions
Together in One Program**

**Low Pricing for
Single User/Computer Licenses,
Maintenance Eliminates
Update/Upgrade Fees Forever**



Visit the main page at StrongConcepts.com for more detailed color screen-shots of TEAPAC Complete 2010

TEAPAC Complete 2010, Version 8.6

TEAPAC Complete 2010 (Version 8.6) has been released, with a powerful & unique new application of the 2010 Highway Capacity Manual (HCM) actuated model, as follows:

- **More realistic time-space diagrams and export for simulation and optimization.** A major new enhancement uses the average phase times predicted by the 2010 HCM methodology throughout TEAPAC and all of its exports. Read more about this on page 2.
- **HCS 2010 file export is now supported.** TEAPAC now exports directly to the new file format of HCS 2010 (ver 6.41) for signalized and unsignalized locations.
- **New HCM 2010 modeling and refinements.** The ability to control the influence of right turns on permitted left turns, among other recent HCM refinements, has been added.
- **Direct support for CORSIM-for-HCS,** as well as the latest versions of TRANSYT, VISSIM and TruTraffic has been added.

Low Single User Pricing – \$\$\$\$

The base TEAPAC Complete license is a single user or single computer license, not a site license, so the **base price for TEAPAC Complete Ver 8 is very affordable, starting as low as \$995** for total TEAPAC Complete functionality. Discounts are available for multi-copy licenses, including site and agency licenses, and upgrade pricing is available for older TEAPAC licenses. Inexpensive annual maintenance provides for free updates for all versions during the term of the maintenance. For details, visit www.StrongConcepts.com and click **Price List** on the left side navigation.

Leap Forward for Actuated Signal Analysis

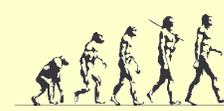
TEAPAC Complete 2010 (Version 8.6) now makes use of an important new feature of the 2010 *Highway Capacity Manual* (HCM) – the prediction of average phase durations for actuated signal operation. Historically, lacking good information about average phase times, HCM analysts would most often use maximum timings for actuated signals in their analyses. This included representations of main street phase timings in time-space diagrams and platoon progression diagrams, and of phase split timings when optimizing coordinated offsets in programs such as TRANSYT-7F, PASSER, etc.

This practice only held substantial validity if signals could be correctly assumed to be extending to max for most phases of the time period under analysis. Although this can be true under the worst of congested operation, it is often far from correct for many signal phases in an actuated-coordinated system due to gap-out of minor movements and subsequent early release of coordinated movements. Lacking a valid tool to do otherwise, this was often the best practice, resulting in less-than-realistic modeling of coordinated movements in much of the HCM-based signal capacity and coordination analysis work that has been done in prior years.

With the new actuated signal model which is intrinsic to the 2010 HCM, both for coordinated and uncoordinated signals, average signal phase durations are part and parcel of the 2010 calculations, and are now available in TEAPAC *Complete 2010* for use whenever and wherever their use is appropriate. This means that after a 2010 capacity analysis in TEAPAC, average phase times will be used instead of maximums for representing timings in items such as time-space diagrams and exports to third party programs such as TRANSYT and PASSER-II for offset optimization, or to programs like TruTraffic for producing platoon-progression diagrams, or even simulating and animating traffic conditions in programs like CORSIM.

This new technology offered by the 2010 HCM, and its unprecedented utilization in TEAPAC *Complete 2010*, provides a huge leap forward in realistic traffic modeling for the 21st century traffic engineer – **Reality** – a hallmark of TEAPAC analyses for 40 years!

Strong Concepts Celebrates TEAPAC's 40th Anniversary



2013 marks the 40th year of TEAPAC's evolution in the traffic industry. Starting first with the SIGNAL program on interactive mainframe computers in 1974, through the early years of personal computers using CP/M (1979) and DOS (1983), to the first versions of Windows in the 1990's, and now the unbelievable power of 32-bit and 64-bit Windows, TEAPAC has been there all the way. Always following the tenet that quality engineering analysis and support for the programs users comes first, TEAPAC maintains its reputation of quality and usefulness.

Software Maintenance Plan Eliminates Update/Upgrade Fees Forever

New licenses (and upgrades from prior versions) include maintenance for the next 12 months, which **includes free downloads of any and all updates and upgrades** posted during the maintenance period. After that, only low and predictable pricing for future maintenance periods – no more guesswork to budget for future updates or upgrades.



TEAPAC Complete 2010, Version 8.5

TEAPAC Complete 2010 (Version 8.5) was the first commercial software available for the 2010 *Highway Capacity Manual* (HCM), released concurrently with the HCM, and incorporated the new actuated methodology of the 2010 HCM, as follows -

- **Fully functional, HCM-compliant capacity analysis for both HCM 2000 and HCM 2010.** HCM actuated, HCM LOS, HCM delay, HCM queue, HCM satflow, HCM capacity, HCM v/c.
- **The only program that can optimize the HCM delay of individual movements.** Optimize green splits, cycle length and phasing to achieve a target amount of delay for critical movements.
- **Uses the HCM's new IQA delay method developed by TEAPAC's author.** Dennis Strong, PE, PTOE, TRB Committee Member & former chair of HCM Signals Subcommittee.

- **Full modeling of actuated signal behavior with a published Federal method.** Export to TRB's HCM computational engine to verify HCM compliance.
- **TEAPAC Complete 2010 connects all your traffic studies to both HCM versions.** Site Traffic TIA, Traffic Counts, MUTCD Warrants, Progression, HCM 2000, HCM 2010, TRANSYT, CORSIM, Synchro, SimTraffic, VISSIM, PASSER, TruTraffic.
- **Upwards and backwards compatible with all your prior TEAPAC data files.** Inexpensive annual maintenance (included) has free updates and technical support.

All 15 TEAPAC Programs Together in One

TEAPAC Complete (Version 8) was released in 2008, merging all 15 prior TEAPAC programs into a single program and license, with new, **low pricing** for single user/computer licenses.

TEAPAC *Complete* represented an unprecedented leap forward in the seamless execution of the wide variety of traffic and transportation functions supported through the years by TEAPAC. Imagine, have just one program and one data file to manage all TEAPAC functions and all external programs, for as many as 500 intersections per file, and as many as 25 scenario conditions each for up to 5 independent scenario issues – wow, that's a mouthful!

Life couldn't be easier when you're using TEAPAC *Complete* 2010 for all of your multi-scenario traffic and transportation analyses. Read on to see examples of how Strong Concepts' **40 years of PE/PTOE experience** in traffic and transportation engineering and professional software development are hard at work for you as the **TEAPAC Complete** user.

All of the functionality of 15 TEAPAC programs is available in a single program, delivered for one low price with a single program license, as follows:

- **HCM-compliant** signalized **capacity analysis** and full **HCM optimization** of splits, cycle, and phasing.
- Estimation of projected volumes for **traffic impact studies**, including user-adjustable, automated **on-screen assignment** of traffic.

- **MUTCD-compliant** signal warrant and multi-way stop **warrant analyses**.
- Complete traffic count analysis, including **peak period determination** and import of count data from a multitude of **electronic traffic counters**.
- Simplified **bandwidth arterial progression** optimization with **full-color time-space diagrams**.
- Full Export Capabilities for well-established third-party programs, such as **HCS, TRANSYT-7F, PASSER-II, CORSIM, VISSIM, TruTraffic, TS/PP-Draft** and **Synchro/SimTraffic**.
- Full **Import** Capabilities for a complete network created in **Synchro** Ver 5, 6, 7 or 8.
- Revolutionary TEAPAC **multi-variable, multi-scenario data management** for all applications and programs above.
- **Seamless exchange of inputs and results** between all combined applications functions, such as peak period counts, projected traffic volumes, optimized signal timings, computed saturation flow rates. etc.
- **One downloadable manual** (and one on-screen help system) covers the entire breadth of TEAPAC, with full index and improved graphics & output examples.

Check out the flowchart on the last page for more details, or the **animated PowerPoint slide shows** at www.StrongConcepts.com. TEAPAC *Complete* 2010 offers unprecedented efficiencies for conducting a wide variety of analyses with a minimum amount of hassle and maximum reliability.

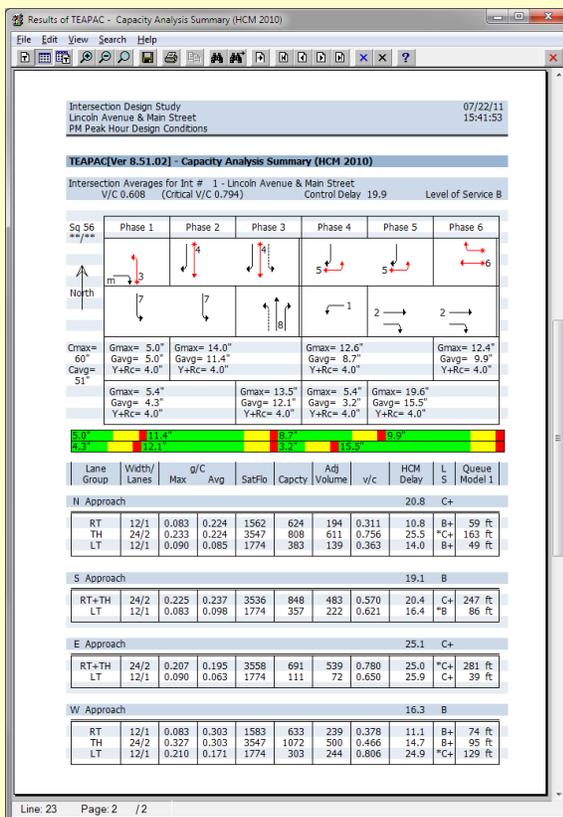
Our Internet distribution can deliver licenses and upgrades **to your desktop the same day** an order is received. Call and start using TEAPAC *Complete* 2010 **today!**

Familiar *Visual* TEAPAC Interface and Upwards Compatibility

- »» **Graphical front-end** allows network creation and editing directly on-screen (see example screen shot on page 1).
 - 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.
- »» **On-screen TIA Assignments** on the graphical network display.
- »» **Upwards and downwards compatible** with prior TEAPAC data files.



Example Graphical Output from TEAPAC Complete 2010

What Is TEAPAC's Scenario Management?

TEAPAC Complete 2010 has a built-in function 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 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.

Reality is the Theme for TEAPAC



On our web page and in our webinars, you will recognize a number of familiar-looking logos from recent popular reality TV shows of the last decade. With these catchy logos, modified in obvious ways for our purposes, our objective is to emphasize the importance of using a sense of reality when evaluating and using traffic engineering software in this day and age. Reality has always been a hallmark of TEAPAC for 40 years with a huge level of importance given to the solid analytical footing of the software and the ability to deliver results which are believable and defensible. HCM compliance has always been the number one objective, since the first version of TEAPAC in 1974 using the 1965 HCM!

The other element of reality which is important to keep in mind when considering which software you will base your reputation on is how



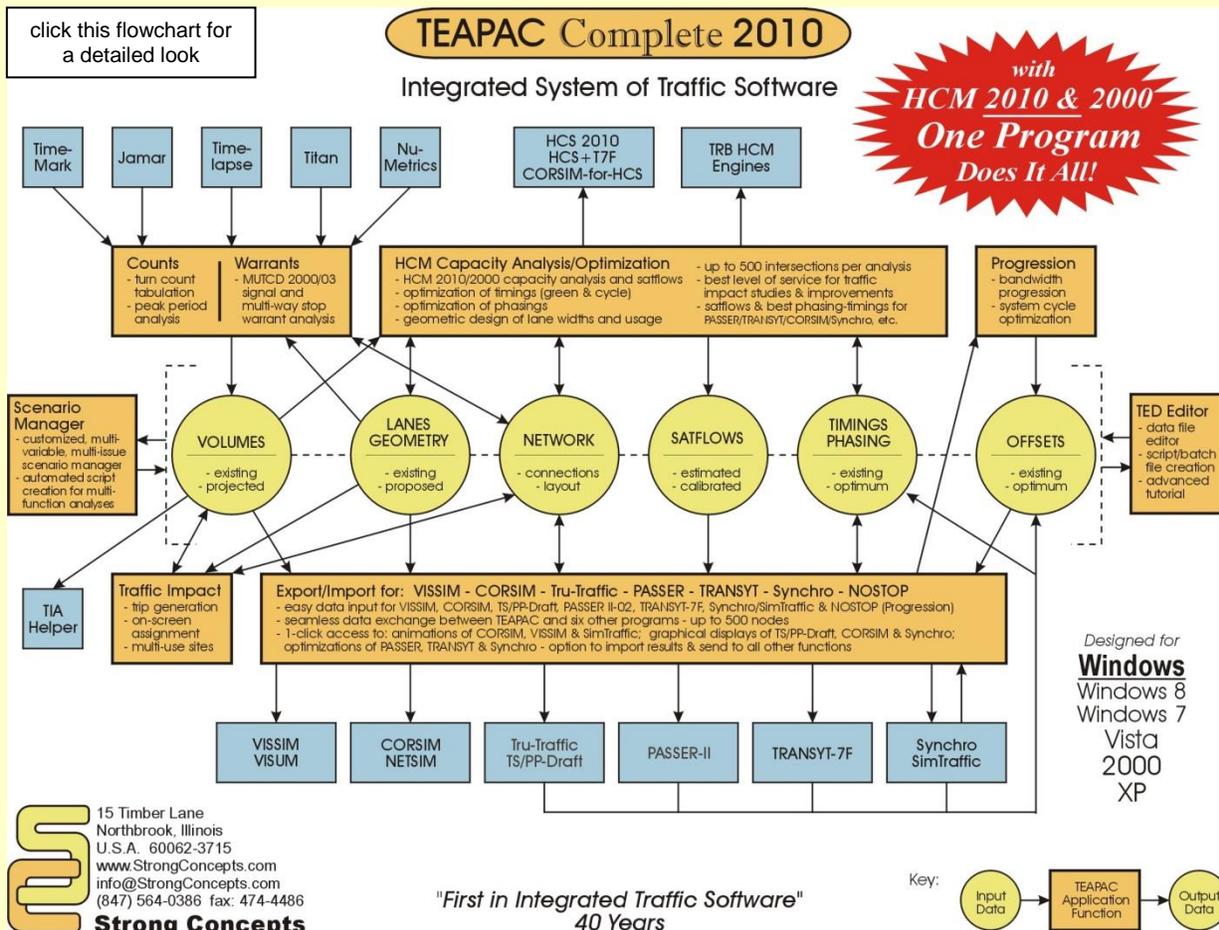
accurately the specifications are represented for the software, and knowing the facts about what certain software will do versus assumptions and ambiguities that are prevalent in the industry. With this in mind, you might be interested to sit in on one of our frequent webinars called **Reality Is TEAPAC Complete 2010** which is offered free of charge with some frequency. The next offering will be at the end of this month. Throughout the webinar and our web page you'll see these familiar logos scattered about freely.

In any case, we hope you get a kick out of our use of these logos, and that they help you keep in touch with the importance of reality in your traffic analyses. **Keep it Real, use TEAPAC!**

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