

# TransSuite® INSIDER

A FAMILY OF PRODUCTS – A WORLD OF SOLUTIONS

## In The News

### TransSuite® Alarm System

**TransSuite's latest feature is the TransSuite Alarm System.**

The TransSuite Alarm System addresses the problem of overwhelming users with status data by enabling TransSuite servers to declare particular events associated with intelligent transportation system (ITS) devices or the TransSuite servers themselves as alarms to the alarm system. The alarm system then distributes these alarms to users for display by an alarm viewer as shown below.

Alarm State	Date Created	Elapsed Time	Alarm ID	Alarm Text
Active	11/18/2010 18:38:24 EST	1:00:11:27	10344	local plan change, from UNKNOWN to 255.
Active	11/18/2010 18:38:24 EST	1:00:11:27	10343	Controller entering FLASH.
Active	11/17/2010 17:59:57 EST	2:00:49:55	10342	The TransSuite TCS server is shutting down
Active	11/08/2010 11:35:54 EST	11:07:13:57	10341	Time upload succeeded. Observed delta: 0 seconds, Max Allowed: 6 seconds.
Active	11/08/2010 11:23:17 EST	11:07:20:34	10340	Controller has completed transition.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10339	local plan change, from UNKNOWN to 1.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10338	Controller has begun transition.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10337	Invalid Plan. Current plan is 3, commanded to plan 140.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10336	Time upload succeeded. Observed delta: 0 seconds, Max Allowed: 6 seconds.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10335	Controller has completed transition.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10334	Controller has begun transition.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10333	local plan change, from UNKNOWN to 0.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10332	Desired communication state changed by System, From None, to OFF_LINE.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10331	Special function 2 commanded active.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10330	Controller entering FLASH.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10329	Invalid Plan. Current plan is 2, commanded to plan 1.
Active	11/08/2010 11:23:16 EST	11:07:23:16	10328	Alarm Server encountered a database error: error occurred during batching: IO Error: Software co
Active	11/08/2010 11:23:16 EST	11:07:23:16	10327	Alarm Server encountered a database error: error occurred during batching: IO Error: Software co
Active	11/08/2010 11:23:16 EST	11:07:23:16	10326	Alarm Server encountered a database error: error occurred during batching: IO Error: Software co
Active	11/03/2010 14:06:32 EST	16:05:43:20	10325	Invalid Plan. Current plan is 2, commanded to plan 101.

Users can open individual copies of the alarm viewer program on their workstations or terminal services sessions, with individual options for selecting alarms to display and notification when new alarms are created such as the pop-up alert shown below. With the alarm viewer, users will be able to view devices associated with alarms, classify alarms, track when and how they or other users have responded to alarms, and to clear alarms when the conditions that caused the alarms have been corrected. *(continued on page 2)*



### TransSuite® Newest Release

TransSuite TCS version 7.2 has been released. A summary of some of the newer features that are available in the latest version include:

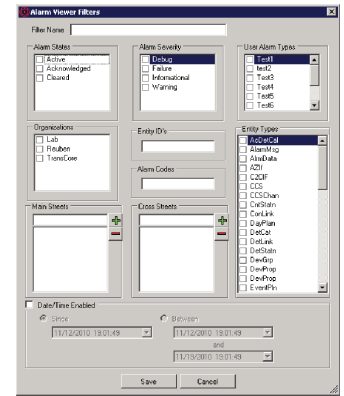
- ▶ Support of 64-bit TCS server process for very large systems (more than 6,000 intersections)
- ▶ Added support for SQL Server 2008
- ▶ Allow use of CIC or adaptive control for US Traffic ASTC and ATC-1000 controllers when not in local TOD control mode
- ▶ Enhanced Standalone UCM synchronization with central database
- ▶ Actuation detectors are now displayed on the intersection timing page of the Management UI
- ▶ Report system alarms to users via alarm viewer, e-mail, and text messages
- ▶ Added the UCM version to the UCM printed report header.
- ▶ The user can now enable the TCS Management User Interface to remain as the top window
- ▶ Track device and communication failures separately
- ▶ Added ability for user to enable/disable paging for a specific device  
*(continued in sidebar, page 2)*

## TransSuite® TCS Version 7.2 Additional Features:

- ▶ Upload speed and vehicle length data from NYC trap detectors
  - ▶ Made issuing commands to a large range of devices (such as 1-10,000) more efficient in the Mgmt UI
  - ▶ Added system-level Intersection Filter Overrides report to show intersections with non-default filter settings
  - ▶ Added pedestrian displays to intersection tracer
  - ▶ Enable users to ignore data items that are dynamic, such as unit alarm status and unit flash status for NTCIP controllers, when comparing controller database versions
  - ▶ Added the following reporting capabilities:
    - ▷ "Quick Report" feature to the Split Log tab
    - ▷ Intersection Summary report to system-level reports
    - ▷ IP Intersections report to system-level reports
    - ▷ Communications Failed Intersections report to system-level reports
    - ▷ System Device Failures report to system-level reports
  - ▶ Added the following controller specific enhancements:
    - ▷ Display all 16 overlaps for Econolite ASC/3 controllers
    - ▷ Eagle EPAC 300 Timing Plan report to UCM
    - ▷ Created Jasper report for timing sheets in the UCM for ASC/2-2070 v1B controllers
    - ▷ Detector description column to the NW Signal Voyage Local Detector configuration screen in UCM
- (continued in sidebar, page 3)*

## TransSuite® Alarm System continued...

The alarm server will maintain a list of active and cleared alarms that it will provide to instances of the alarm viewer program on request. This list will be stored in a relational database so that alarms will exist across a stop and restart of the alarm server process, but the server will continue to function even if the database server is inaccessible. The alarm server will implement user actions on alarms when alarm viewer applications request them. It will also implement archiving of cleared alarms to text files in CSV format separate from the list of active and cleared alarms that users may query for alarm management statistics.



An alarm archiving application will remove closed alarms from the alarm server's alarm list when they have reached a configurable maximum age. It will be designed to be invoked from the Windows scheduler on a daily or weekly basis.

## SCATS Integrated with Radar Detection in Bellevue, WA



TransCore recently deployed and integrated 31 intersections onto the SCATS

Traffic Adaptive System in the City of Bellevue, WA. As part of the overall installation, several detection methods were implemented including inductive loops, video detection, wireless magnetic sensors and radar detection. While inductive loops, video detection and wireless magnetic sensors had previously been integrated with SCATS, it was the first time that radar detection had been fully integrated with SCATS Adaptive Operations.

Radar detection has previously been utilized mostly in freeway applications for many years now. Recently however, several of the vendors have developed intersection applications. The successful integration of this type of technology, the Wavetronix SmartSensor Matrix in this case, opens up new and more flexible detection options for SCATS customers. This includes both first time SCATS customers, as well as existing SCATS customers implementing expansion projects.



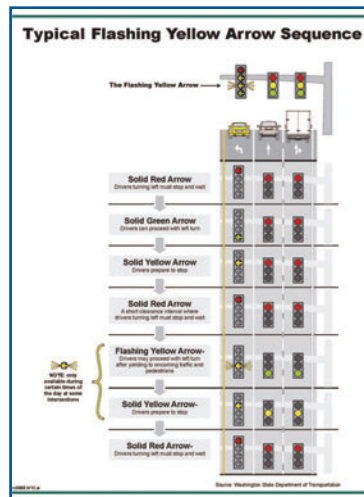
The ability for SCATS to successfully operate with multiple detection options, including multiple options at one intersection, provides full flexibility to the client. In addition, it does not lock the agency into the adaptive vendor's own inherent detection technology like other adaptive systems do.

## SCATS Flashing Yellow Arrow Operations in Bellevue, WA

TransCore recently deployed and integrated 31 intersections onto the SCATS Traffic Adaptive System in the City of Bellevue, WA. This deployment was coordinated with the City to coincide with their first deployment of flashing yellow arrow operations. The City developed and implemented an information program specifically for introducing the flashing yellow arrow operation to the public.

While flashing yellow arrow operations have been around for a long time, this deployment included developing the SCATS controller personalities with the ability to remotely turn the flashing yellow arrows on and off throughout the day. This allows the City to revert to a protected only operation during congested times for added safety while still providing protected / permissive operations during lighter times.

In addition, the controller personalities were also developed to provide lead / lag operations during both flashing yellow arrow operations as well as protected only operations. This provides optimal flexibility for optimizing signal operations for both progression and left turn movement considerations.



## SCATS Proven Results

Several independent studies have shown that based on reduced emissions alone, **system payback has been obtained within 18 months from installation.**

Chula Vista, California	
▶ System payback in 11 months	▶ Travel time reduced by up to 20%
▶ Delay reduced by up to 45%	
Menlo Park, California	
▶ Delay reduced by up to 70%	▶ Travel time reduced by up to 25%
Santa Rosa, California	
▶ Average increase in speed of 49%	▶ Average reduction in travel time of 32%
Sunnyvale, California	
▶ Reduction in stops between 28% and 54% in all measured time periods	▶ Reduction in travel time between 16% and 21% in all measured time periods
Road Commission for Oakland County, Michigan	
▶ Off peak travel time reduced by up to 31%	▶ Peak period travel time reduced by up to 8%
Gresham, Oregon	
▶ Up to 19% reduction in peak-period peak direction travel time	▶ Up to 30% reduction in off peak travel times

### TransSuite® TCS Version 7.2 Additional Features:

- ▶ Added the following controller specific enhancements:
  - ▷ Ability to upload controller logs from NWS Voyage controller
  - ▷ Added additional C1 connector output codes 0-8 to the UCM for NWS Voyage controllers in Portland
  - ▷ Support for flashing yellow left turn arrow to ATMS Explorer and Mgmt UI for NWS Voyage controllers
  - ▷ Ability to obtain the controller version information from NW Signal Voyage controllers
- ▶ Added the following real-time time/space diagram enhancements:
  - ▷ Layout editor now populates the main and cross street fields after an intersection has been selected
  - ▷ Clear button to enable users to clear the display and start over
  - ▷ Users can save all data shown in the Time-Space Diagram program into a capture file, not just data shown after the "save to capture file" command is given
  - ▷ Users can now open the Time-Space diagram program by double-clicking on a layout file (\*.tsLayout) or capture file (\*.tsdata)
- ▶ Allow users to select multiple intersections in ATMS Explorer and issue the following command to all selected controllers:
  - ▷ Log Event
  - ▷ Change Mode
  - ▷ Put Online
  - ▷ Put Offline
  - ▷ Flash On
  - ▷ Flash Off
  - ▷ Put Standby
  - ▷ Repair Failure

## TransSuite / Sensys Travel Time

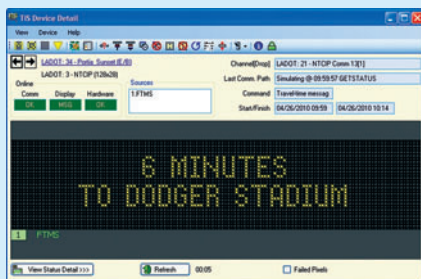
A new feature of the TransSuite system is the integration of Sensys field equipment to provide travel time information. The integration of the field elements into TransSuite's central software package provides real-time travel time and includes the following features:

- ▶ Tracking of unique vehicle magnetic signatures
- ▶ Re-identifies vehicles to provide accurate travel times and vehicle density
- ▶ Easily scalable from one intersection to an entire city providing active management of your detection system

Utilizing the unique magnetic signatures allows for providing the following performance measures:

- ▶ Complete distribution of travel times
- ▶ Median travel time
- ▶ 80th percentile travel time
- ▶ Level of service
- ▶ Vehicles in segment
- ▶ Volume and occupancy
- ▶ Speed

The system is currently used in Los Angeles around Dodger Stadium and is being deployed as part of a diversion route monitoring system in Utah.



For more information:

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## City of Irwindale Selects TransSuite TCS



TransCore has been notified by the City of Irwindale that they intend to install TransSuite TCS as their traffic signal control system. Irwindale, a suburb of Los Angeles, will bring approximately 25 signals onto the system with the initial deployment. The project will include the installation of 170 new controllers and the upgrade of the City's existing 170 controllers. All of the City's 170 controllers will run LACO-4E firmware. Since all of Irwindale's intersections will have IP-radios installed, TransCore will also furnish and install the IP-based central communications equipment. TransSuite's ability to provide all of the City's desired functionality and TransCore's proven track-record re: the provision of timely and responsive maintenance support services were the deciding factors in the City of Irwindale's selection.

The selection by the City of Irwindale marks the fifth TransSuite system to be installed in LA County. Other installations include the Cities of Arcadia and Diamond Bar, which went into operation in 2007 and 2009, and the cities of West Covina and Alhambra that are scheduled for deployment in 2011.

## TransSuite Installations

