



Product Type: DCMS.2

Econolite DCMS.2 – Data Collection and Management Service

Executive Summary

The Econolite DCMS.2 system is a comprehensive traffic data management solution that has been developed to work with the Autoscope® video vehicle detection system. DCMS.2 utilizes the latest in Rich Internet Application (RIA) technology, allowing the user to access their traffic-monitoring network from any Internet location.

An RIA, by definition, is an application, which operates in a World Wide Web environment. An RIA uses the main processing resources of a web client (the user's computer and Internet connection), while accessing data from a remote application server. This approach to data management provides the user with an open system, which runs on most personal computers with an Internet connection, and is not dependant on a computer's operating system to operate effectively.

Using the DCMS.2 approach to access traffic information has many benefits to the typical Department of Transportation and its staff. When agency personnel are located at different sites such as, multiple Traffic Management Centers (TMC's), traffic signal maintenance facilities, or working in the field, RIA technology allows everyone the ability to access the traffic data system and monitor its performance without the burden of managing software licenses and updating software installations. DCMS.2 users enjoy the benefits of limited training needs, automatic system upgrades, and easy access through familiar web browsers.

Enhanced User Experience

With DCMS.2, the user's experience is now focused online, and access to traffic data is now through an interface to a website, which becomes one of their main entrance points to the traffic network. DCMS.2 eliminates the need to move data files from one application to another, as in the past. Previously, files were copied from a raw data file to an independent software application, which created a spreadsheet or file format, which eventually generated a formatted report. On the web, the user experience is more interactive and instantly gratifying because all aspects of data monitoring and system configuration are readily available through the same interface framework – the web browser.

DCMS.2 provides the use of a suite of Web browser windows, called Widgets, which are accessed through a web browser. Logging on to a DCMS.2 web site will open a DCMS.2 browser desktop or "dashboard," which is used to organize a series of Widgets, used for viewing and managing traffic data.

These Widgets are linked to dedicated computer servers and a Microsoft® SQL database, which aggregates traffic data collected from the roadway. The DCMS.2 system logs the data collected from a network of remote roadway vehicle detectors.

The screenshot displays the Econolite DCMS.2 web interface. At the top, there is a blue header with the Econolite logo and navigation tabs for 'Home Tab', 'Tab Toolbar', 'Browser Banner', and 'Traffic Data Collection and Management'. Below the header is a map showing a street layout with labels like 'CAPITOL CT', 'DODGE ST', and 'DOUGLAS ST'. A 'Tab Title Bar' is visible above the map. To the right of the map is a 'Browser Desktop' area. Below the map is a data table with columns for 'Detector', 'Total Volume', 'Class A Count', 'Class B Count', and 'Class C Count'. A 'Widget Title Bar' is above the table. To the right of the table is a video feed window labeled 'Autoscope' showing a street view with a 'Widget Control Bar' below it.

Detector	Total Volume	Class A Count	Class B Count	Class C Count
070209PFD756E15 NB NBLT 3.8 72nd & Dodge DCHS phases 3.8 149	8	7	0	0
070209PFD756E15 NB NBLT 3.8 72nd & Dodge DCHS phases 3.8 149	10	9	0	0
070209PFD756E15 NB NBLT 3.8 72nd & Dodge DCHS phases 3.8 147	14	14	0	0
070209PFD756E15 NB NBLT 3.8 72nd & Dodge DCHS phases 3.8 148	14	13	1	0
070209PFD756E15 NB NBLT 3.8 72nd & Dodge DCHS phases 3.8 149	10	9	1	0
070209PFD756E15 NB NBLT 3.8 72nd & Dodge DCHS phases 3.8 150	3	2	0	0
Total	59	54	2	0



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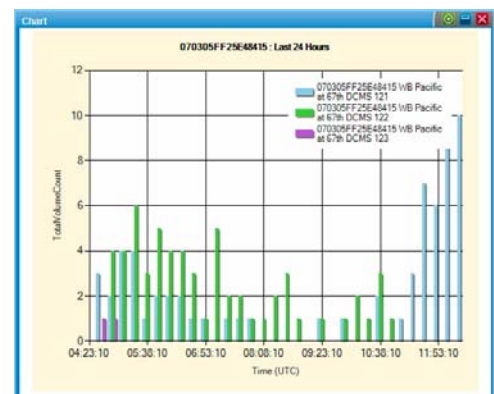
Widgets are used to check traffic volumes, monitor intersection use, view detector images and associated traffic data and set account preferences, retrieve traffic data reports, streaming video, charts, and data history. The DCMS.2 interface provides a map-centric view of the locations of the vehicle sensors. These map-centric controls allow the user the ability to highlight map elements and instantly view traffic data. DCMS.2 uses very accurate NAVTEQ® map data and a highly responsive map rendering application to display, find, and select sensor locations.

The suite of DCMS.2 Widgets includes Administrator Widgets and User Widgets, which give Users and Administrators the capability to set up their own custom Widget configurations to view the data specific to their needs. By creating organized Tabs, which can hold groups of Widget specific traffic data can be monitored continuously. Having the ability to create "groups" of detection Monitoring a large number of vehicle detection

can be organized in groups, which will help the user remotely manage their vehicle detection network. For example, the user can create a group of detectors, which collect data from only the westbound traffic along a major arterial corridor. Data can be collected from a group of all four approaches on a single intersection, or from a group of turn-lane detectors only. Econolite's DCMS.2 provides the capability to monitor in real-time, the traffic and travel conditions of intersections, mid-blocks, or freeways via Autoscope® video detection devices. These valuable detection systems become automated virtual count stations that gather and distribute traffic data without interruption. Part of the DCMS.2 Widget suite provides a "Web Services" Widget, which allows the user the ability to send volume, occupancy, and speed (VOS) data to other servers via the Internet. DCMS.2 follows the Institute of Traffic Engineers (ITE) Traffic Management Data Dictionary (TMDD) standard for sharing Extensible Markup Language (XML) traffic data.

The screenshot displays two main components of the DCMS.2 interface. The top component is the 'Map Widget', which shows a street map of Douglas, Nebraska, with several red vehicle icons indicating sensor locations at intersections like Dodge St and Pacific St. The bottom component is the 'Device Video' widget, which shows a live video feed from a camera at an intersection. The video feed includes a green bounding box around a vehicle and a green circular icon with the number '3'. The video title is 'SB Countyline Rd @ I-55 Ramps - Phase 3' and the timestamp is '2008/04/18 17:00'. Below the video, it says 'WB Dodge @ 90th'.

a series of windows, Imagine devices. devices





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A DCMS.2 traffic data network can link the traffic management center with each IP-addressable Terra Technology™ device in the field. The USDOT verifies that enhanced center-to-center communication is the key to faster incident response. Automated data collection provides the means for key transportation managers to make informed decisions that will keep traffic flowing or effect changes to traffic signal timing to improve current or anticipated traffic conditions.

Another objective of DCMS.2 is to establish traffic counting and vehicle classification as an integral part of the whole traffic management system. With DCMS.2, remote connections are as simple as a phone line or as convenient as Ethernet wireless systems. DCMS.2 can continuously bring compressed video and data back to a personalized and securely hosted website, and then instantly share this data with emergency service providers, neighboring transportation agencies, and the driving public.

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Traffic Data Collection and Management
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Browser Banner
Tab Toolbar
Browser Desktop
Tab Title Bar
Widget Title Bar
Widget Control Bar

Detector	Total Volume	Class A Count
07030SFF937D8615 WB WBLT 6,1 72nd & Pacific DCMS phases 6,1 140	19	17
07030SFF937D8615 WB WBLT 6,1 72nd & Pacific DCMS phases 6,1 141	13	13
07030SFF937D8615 WB WBLT 6,1 72nd & Pacific DCMS phases 6,1 142	14	14
07030SFF937D8615 WB WBLT 6,1 72nd & Pacific DCMS phases 6,1 143	9	8
07030SFF937D8615 WB WBLT 6,1 72nd & Pacific DCMS phases 6,1 144	5	4
07030SFF25E48415 WB Pacific at 67th DCMS 121	24	23
07030SFF25E48415 WB Pacific at 67th DCMS 122	4	4
07030SFF25E48415 WB Pacific at 67th DCMS 123	2	2
Total	90	85

Pacific Street Corridor - Last Record Update

Westbound Traffic
WB Pacific at 67th

Westbound Traffic
WB 72nd & Pacific

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