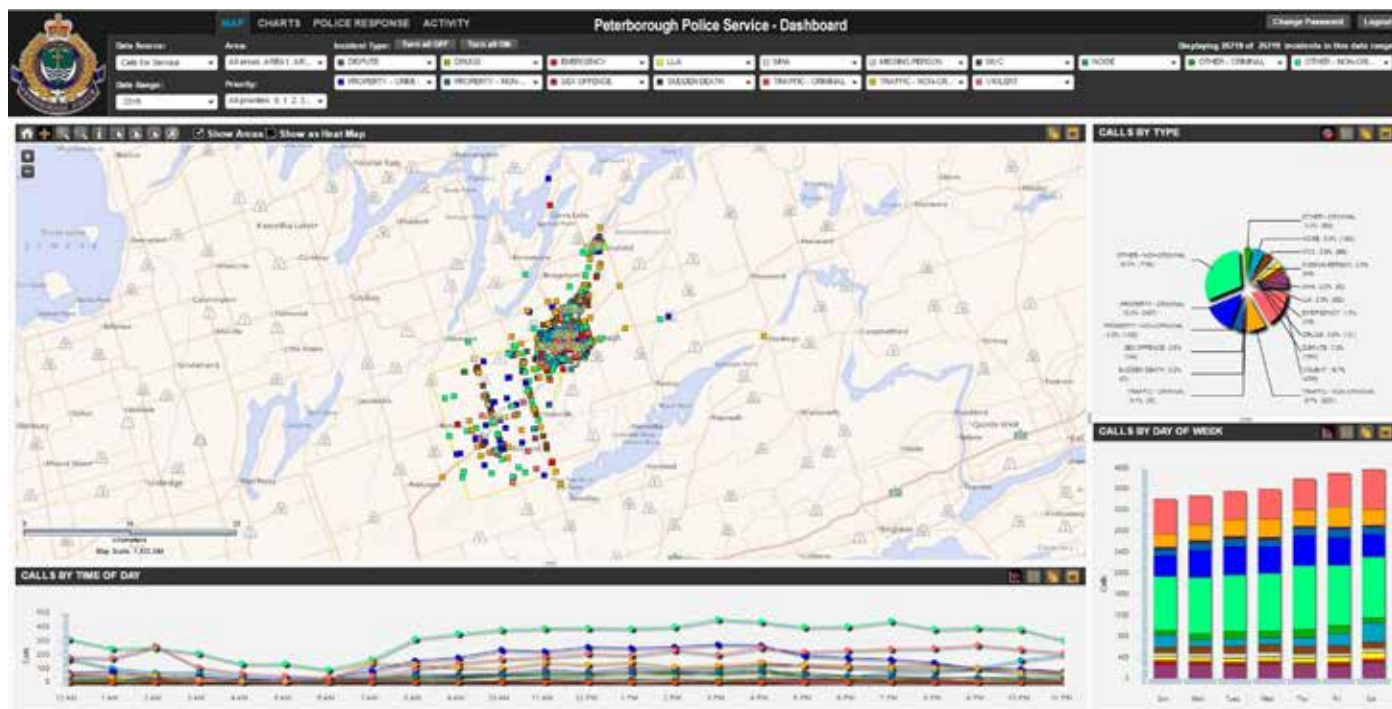




by Tom Rataj



Live operational data anyone can access

Policing has become increasingly intensive in terms of data collection, analysis and exploitation over the past decade or two. Police services, especially larger ones, spend substantial amounts of time, effort and ultimately money, collecting, storing and analyzing data on many facets of their operations.

Unfortunately, much of that data often remains trapped within large databases. Finding the information people need is often a time-consuming and complex process. Unlocking the value is also often an after-the-fact undertaking. Critical information becomes stale by the time it's available, reducing its value.

One of my monthly tasks working in the Toronto Police District Planning office in the early 90s was to prepare a budget analysis report for the superintendent.

Because the data was stored in an old mainframe computer, the only way to access it was to request a report. All 50 to 60 double-sided pages had to be output on the mainframe designated printer in another office across the hall, even though I only needed a few pages covering a small number of budgets, such as overtime and court costs.

After waiting up to 30 minutes for the report to arrive and be printed, I then had to search for the pages I needed and manually transpose the required information into an Excel spreadsheet template that I had created.

Beyond all the work and wasted paper, the biggest problem was that the budget numbers were already a few weeks old, reducing their value. Fortunately, this kind of archaic process is long gone for many such tasks.

Unfortunately, when it comes to accessing and analyzing crime data and other operational information, a certain degree of specialized training and software is often still required. There are few tools which allow the average officer or manager to access and analyze data.

An investigator typically has to work with the crime analyst to find information and linkages between information potentially relevant to an investigation. Since the analyst typically works only day shift, Monday through Friday, progress is often slowed.

Managers requiring staffing, operational and budget numbers also have to rely on an analyst of some kind to extract the data they need, again causing a delay. Many soft dollar person-hours are squandered while they search for and try to access data.

The Peterborough Police Service (PPS) recently began using a very effective live data-access product called Executive Dashboard, which solves some of these problems.

A collaboration between the PPS and MDSP Consulting, the product uses the CartoVista software from DBx GEOMATICS Inc. This multi-platform program uses HTML5 and

Flash so it works across all web-browsers on desktop, laptop/mobile and tablet computers as well as smartphones.

The PPS installation is available for all police personnel, from street officers up through D/Chief Tim Farquharson and Chief Murray Rodd.

Graphical user interface

The application is simple to use, providing graphic views of data and allowing individual users to interact with and customize it to their unique needs. The graphical elements provide linkages back to the actual data that they represent on maps and charts, so users can quickly get an idea of what is happening and where, and then drill-down to read the details.

It has a live connection to both the PPS Intergraph Computer Aided Dispatch (CAD) system and NICHE Records Management System (RMS), so the information is always fresh.

The simple interface makes it easy for users to access and interact with data by simply pointing and clicking in the areas of the application from which they want information.

The home page has four tabs that run horizontally across the top of the screen; maps, charts, police response and activity. The next section provides controls that allow users to filter the data by a wide variety of criteria.

Since CAD and RMS data will always



present different information about policing operations, the first available filter switches between these two unique sources. A call-for-service in the CAD system may start out as a noise complaint and end up being recorded in the RMS as a far more serious incident. The ability to view calls-for-service information in its different contexts is important in many ways.

Additional filters include control over date ranges such as month, quarter and year, patrol areas, call-priority classifications and a list of 17 types of events, including criminal, drug, provincial, municipal, traffic offences and other types of calls-for-service/events.

All filters can be controlled, allowing the user to see just the data they are looking for without having to wade through mountains of irrelevant information.

The remainder of the home screen is dominated by a large map window which plots the locations of calls-for-service or reports, depending on which filter has been applied. There are three additional smaller windows that use graphs to display calls by type, time of day and day of week.

The four windows are all interactive, allowing users to manipulate and customize how the data is presented to quickly see what's happening, where and when, and find the details they need.

In the map window, data points for calls-for-service/events are displayed. Users can zoom in or out on the map and also select an area of interest with a square, radius or free-form selection tool.

Individual data points on the map represent CAD or RMS data; clicking provides access to the event data. Depending on filters applied, customised data displays can be created for any requirement. Views can be exported as images and data can be exported for further manipulation in Excel and other programs.

Personal crime analysis tool

An officer on the road can, for example, quickly see all the B&E calls or just those in a particular area or neighbourhood, filtered by several additional criteria. This transforms the Executive Dashboard into a decent basic self-serve personal crime analysis tool.

By default the map window shows data points but can also display information in a heat-map, allowing data to be seen in a different dimension.

A long wide window across the bottom of the main screen displays calls-for-service by time of day so any user can quickly see the ebb and flow of service-demands.

Two smaller square windows are on the right side of the screen. The first displays calls-by-type in a labelled exploded pie chart, while the second display calls-by-day in a stacked bar-chart. Again, at a glance these two windows show an overview of what's going on.

The Executive Dashboard product does an excellent job of providing access to live operational data, allowing individual users to massage the information to meet their individual requirements.

Quick answers

At a presentation back in November 2015, Rodd explained how this product helps

his service by providing timely and accurate information to improve accountability to both the police services board and the community at large, "to justify and support why we need what we have..."

"Tools like this give us answers quickly in a timely fashion without having to go to internal subject matter experts for a report... this tool also gives our front line officers the ability to be their own crime analyst."

For more information, visit www.peterboroughpolice.com, www.mdspsconsulting.com and www.cartovista.com.

Tom Rataj is *Blue Line's* Technology columnist and can be reached at technews@blueline.ca.

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