# RCMP in B.C.

British Columbia, Canada

## Key Facts:

**Industry:** Government

**Problem:** Data remodeling tasks required time-consuming manual interaction and introduced human error risks.

**Solutions:** FME®

**Results:** Automated, streamlined data remodeling workflows save time and increase accuracy of results.

## Summary

The Royal Canadian Mounted Police in British Columbia (RCMP in B.C.) has core functions that require the timely production of maps for the display of important information. It is the responsibility of the Geomatics team to create these maps; however, they were spending hours, sometimes days, remodeling data to create the final product, plus frequent manual interaction introduced a risk for human error. Using FME® they were able to streamline their data remodeling processes into automated and repeatable workflows. This saved significant amounts of time and eliminated almost all of the manual interaction, ultimately improving productivity and accuracy.

## The Organization

The RCMP in B.C., also referred to as "E" Division, is the largest Division of the RCMP with approximately one-third of Canada's entire force. They work in conjunction with the various municipal police departments throughout B.C. to preserve the peace and uphold the law with the ultimate goal of keeping Canadian communities safe.

## The Situation

The RCMP in B.C.'s Geomatics team is responsible for providing geospatial data support for a wide range of functions, including the maintenance of an up-to-date, province-wide base map for the Police Records Information Management Environment (PRIME), and production of maps of GPS logs in Esri® ArcGIS®. As core tasks to the RCMP in B.C. their timely completion is vital to effective police operations.

PRIME is the centralized police information system for the RCMP in B.C. and each municipal police department in British Columbia. It provides police information to anyone with access including dispatchers and officers in police cars. To enable both groups to make effective decisions the PRIME data is displayed geographically. The Geomatics team supplies updates to PRIME's underlying base map of B.C.

Police cars are equipped with GPS receivers that log locations at intervals creating a history for the vehicle. Occasionally it is useful to know the route of a police car for investigational purposes. In these instances, the Geomatics team will use the GPS log data to create a map of the route using ArcGIS.

## The Challenge

In both the PRIME and GPS log mapping tasks, the source data requires remodeling in order to be used in the respective target mapping applications. The data transformation methods that had been employed were time-consuming and required a significant amount of manual interaction, which decreased productivity and increased error risks.

When the PRIME base map is updated, the source map's shapefiles are remodeled to display properly in simpler map-viewing applications employed by dispatchers and in the police cars. To partially automate the transformation, several scripts were developed for different portions of the process; however, the scripts couldn't be run simultaneously and the entire process could take approximately a day and a half to complete. Plus manual interaction was still necessary at certain stages.

In cases where a map of a GPS log for a police car is required, the raw GPS log data is remodeled to fit into feature classes that can be used in ArcGIS. Accomplished with spreadsheets using formulas, this was a time-intensive, manual process that took hours to days to complete. The process was further complicated in cases of larger GPS logs with volumes of data that were outside the limitations of the maximum records of a spreadsheet (a single day's worth of logs can have over 400,000 records).

# The Solution

FME provided the RCMP in B.C.'s Geomatics team with the tools to reduce the number of steps and amount of manual interaction required to transform source data for use in mapping PRIME information and in the creation of maps of GPS logs. Using FME's intuitive graphical interface, and with the assistance of Safe Software's Professional Services team, they were able to build workflows that automated their data remodeling processes.

When updating the PRIME base map, FME's capabilities allow for source data to be used as an input to several different transformations being run simultaneously in one repeatable workflow, as opposed to one after the other. This workflow is set up only once and is saved as a template for future base map updates, further automating the task.

In the case of remodeling the raw GPS log data for use in ArcGIS, FME's built-in transformers replaced the rather involved use of spreadsheets and formulas. Additionally, FME's ability to handle sizeable volumes of data allowed the Geomatics team to streamline the process of transforming the data into a single workflow, regardless of the number of records in the source dataset. As in the case of updating the PRIME base map, this workspace is set up once then saved as a template to be used for future GPS log map requests.
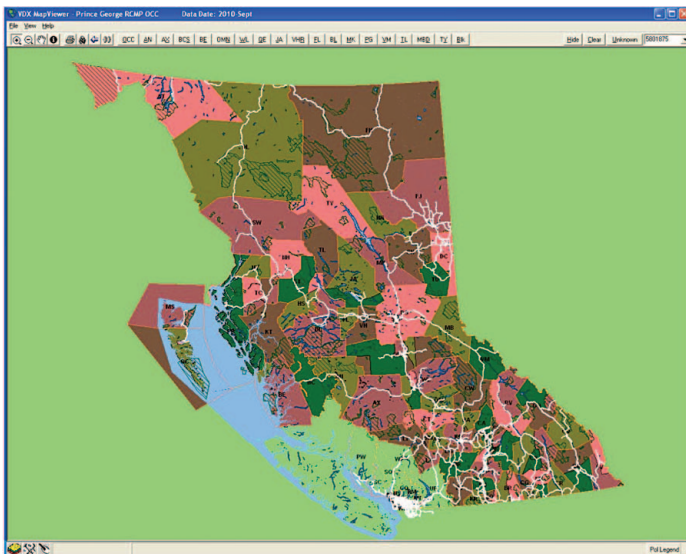


**PRIME base map as displayed in the dispatch mapviewer.**

# The Benefits

For the RCMP in B.C.'s Geomatics team, FME's advanced transformation and automation capabilities simplified their data remodeling tasks allowing them to be accomplished significantly faster and with more accuracy.

Using FME's intuitive graphical user interface, data transformation was streamlined into one workflow, which sped up the process significantly when updating the PRIME base map and preparing raw GPS log data for use in ArcGIS. What previously took approximately a day to complete now takes a maximum of two hours.

FME's automation improved productivity and the accuracy of the resulting maps in both transformation tasks. Once workflows were set up the entire transformation progressed in the background without manual interaction. This not only freed up the team's time for other important tasks, but also ensured optimal accuracy with less opportunity for human error.

# What They're Saying

*"In a government organization, achieving the most with the resources allocated to you is always a goal,"* **says Robert Schultz, Geomatics Coordinator, RCMP E Division, Informatics Branch.** *"FME has simplified our data preparation processes so that what once took a day to complete is accomplished in an hour."*

*"FME has greatly improved both the efficiency and the accuracy of our data remodeling. Being able to complete several transformations simultaneously in one workflow saves time and eliminates virtually all of the manual interaction,"* **says Heidi Lee, Geomatics Technologist, RCMP E Division.** *"Plus the control over the parameters that FME provides allows us to get the data exactly how we need it so it can be used most effectively."*

# Learn More

For more information on FME technology, please visit **www.safe.com/fme**

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