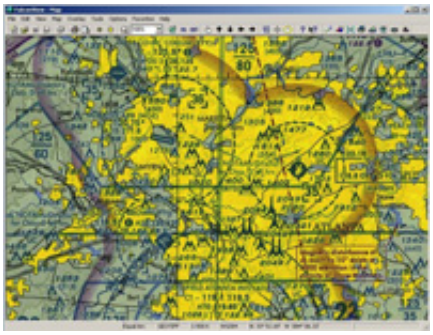
FalconView Mapping Software Goes Open Source

August 12 2009



The FalconView software package allows users to view many different imagery formats, including geographic information systems formats and KML, which is the code used by Google Earth and Google Maps. (Image courtesy of the Georgia Tech Research Institute)

(PhysOrg.com) -- The Georgia Tech Research Institute (GTRI) has released an open-source version of its popular FalconView software. The program displays topographical maps, aeronautical charts, satellite images and other maps, along with overlay tools that can be displayed on any map background.

The U.S. Department of Defense has used the FalconView software program since the 1990s to analyze and display geographical and other data crucial to mission planners. The program's ease of use, open architecture and interoperability all contribute to its popularity. There were an estimated 45,000 users before the open-source version was

released.

“We are excited to broaden our user base outside of the Department of Defense,” said Chris Bailey, GTRI principal research engineer and FalconView project director. “We expect that individual municipalities, including state, city and town governments; police forces; architects, environmental researchers and utility companies will be among those who will benefit from this new FalconView open-source software.”

Police forces can plot information on burglaries, robberies, sex crimes and other major incidents on maps in FalconView, according to Bailey. School districts can reformat school zones easily using a number of different data analyses and visualization techniques. FalconView can also be valuable for companies trying to determine the best location for their business to meet customer needs.

In the past, the U.S. Department of Defense typically funded companies to develop software and these companies rarely shared the source code, which led to “knowledge monopolies” because there were usually not mechanisms for secondary vendors to make improvements to the software, Bailey said. Open-source practices allow third parties to freely use source code and provide formal mechanisms to submit improvements or patches back to the main source code repository. With open source software, bugs are typically caught and repaired faster.

Since FalconView already had hundreds of registered developers creating “plug-in” tools for the software, and because third parties within the Department of Defense had developed programs that were integrated with FalconView, the software was a perfect candidate for becoming open source.

In July 2008, the U.S. Air Force Office of Advanced Systems and Concepts funded GTRI to create the open-source version of

FalconView, which involved removing components that were not applicable to non-defense users and code that depended on classified data. Since its release on June 22, 2009, more than 1,000 copies of open-source FalconView have been downloaded from the FalconView Web site [www.falconview.org].

The Windows-based FalconView software package allows users to view many different imagery formats, including popular geographic information systems formats and KML, which is the code used by Google Earth and Google Maps. Municipalities can upload archived maps of their localities into FalconView and users can also download topographical, nautical, aeronautical and satellite maps from the Internet for use in FalconView.

“FalconView has advantages over most of the free mapping software products because FalconView can be used without an active Internet connection,” said GTRI research scientist Joel Odom, a member of the 11-person FalconView development team. “Someone can take a file they’re viewing in another program and look at it in FalconView to get a top-down two-dimensional view that they can thoroughly analyze even if they’re in a boat in the middle of the ocean without a satellite uplink and downlink.”

The open-source version of FalconView also contains several analysis tools. The drawing utility allows users to create custom shapes in an overlay that can be saved and shared. Calculating distances between points on a map is easy with the analysis tool. The tool also allows users to calculate the visibility between areas on the map if elevation data is available.

In addition, a global positioning system and camera can be hooked up to the FalconView software to allow users to track their movements on a “moving” map and record the exact locations where they snapped

photographs.

Bailey and his team plan to continue creating new features for FalconView and accepting components developed by non-GTRI programmers. GTRI will also continue to serve as the systems integrator for the software.

“This new open-source version of FalconView allows us to share all of the interesting mapping capabilities of this once defense-only software with users around the world,” added Bailey.

More information: www.falconview.org/

Provided by Georgia Institute of Technology