Case Study: Optimizing the Placement of Sensors on the Frontier® Grid Platform

Watchman™ Uses 3D Line-of-Sight Analysis

The optimal placement of line-of-sight sensors becomes extremely difficult when the complexity of an environment moves beyond the simplest of buildings and the flattest of terrain. Sensor placement strategies must avoid blind spots and minimize the cost and number of sensors required for optimal coverage. Watchman meticulously searches for optimal line-of-sight sensor placement, taking into consideration user-defined parameters for the specific environment, whether it’s urban or rural, and available sensor profiles. It does this by applying genetic algorithms available with Parabon’s Origin™ Evolutionary SDK (see other side). Thanks to the power of the Frontier Grid Platform, Watchman is able to determine optimal sensor placement parameters in minutes or hours versus the decades it could take on a single computer.

Frontier Enables Grid-Powered “Mashups”

Watchman is a “mashup” application that combines the computational power of the Frontier Grid Platform and several Frontier technologies with Google™ Maps, and 3D models provided by PLW Modelworks, LLC.

Access Watchman from the Frontier Dashboard

The Frontier Dashboard is a browser-based portal that allows authorized users to select and use a variety of Frontier-powered apps, including Watchman. From this intuitive interface, users can easily launch, manage and monitor jobs, and track computational usage.

Domain Applicability

Watchman uses the power of Frontier to solve otherwise intractable 3D optimization problems. Because it is built on flexible technology, it can be customized to satisfy different needs in different domains, including the following:

- Border Control
- Physical Security
- Counter-Terrorism
- Crime Prevention
- Asset Protection
- Sensor Network Design

Learn more: http://parabon.com/frontier-powered-apps/watchman.html

Open a Frontier account and demo Watchman online at: http://frontier.parabon.com