

Geo spatial Data Structure for Explosive Detection

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Abstract: The promise of GIS has always been that it would allow us to obtain better answers to our Questions. But this is only possible if we have tools that allow us to perform rigorous quantitative analyses designed for spatial data. GIS provides us with a suite of analysis and modeling tools, ranging from small building blocks that you can use to construct a sophisticated work-flow, to completely self-contained analysis programs. It has a greater range of analysis and modeling tools, supports batch processing, offers new graphing functionality, automatically records work-flows for future reference, supports geodatabases, and can be called programmatically. It consists of algorithms that detect movement or changes in live and recorded video to see whether the movement or changes mean a possible threat is about to occur, occurring, or has occurred. One can also monitor video footage for missing or unwanted objects. Objects that have been left behind (bag containing a bomb) can be detected when the video from a CCTV camera displays an object not part of the normal video scene. This causes it to trigger an alarm within your CCTV system. Video analytics can also do the reverse. When a camera within your CCTV system has a change in the video scene that shows that an object is missing an alarm can be triggered. A command and control user interface which leverages GIS technology can be used in emergency/crime responses to locate intruders and response vehicles and personnel on the geographic map as well. This enables security personnel to orchestrate a coordinated response.