Investigate and develop a process that could measure policing hours by area

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Introduction

Crime mapping has become an increasingly important aspect of policing and crime reduction. GIS can directly map and locate crimes. It can also be used to promote the efficient management of resources, such as police officers and fleet vehicles. One aspect of resource management is reporting policing hours to the public to improve relations. An ideal method for reporting policing hours is to present the public with a figure representing how many hours a police officer spent in an area. ESRI's *GeoEvent Processor* enables temporal data to be merged with GIS to create a visual map of real-time events. This project was commissioned to investigate how *GeoEvent Processor* could be used to provide a method of reporting policing hours and consider how this information could be presented.

Aim

To develop a process to represent policing hours by area.

Objectives

1. Investigate how *GeoEvent Processor* can be used in real time.
2. Develop a demo to establish whether the software works and whether it delivers valuable intelligence to the police force.
3. Determine the best method for presenting the location information in a useful and meaningful way.
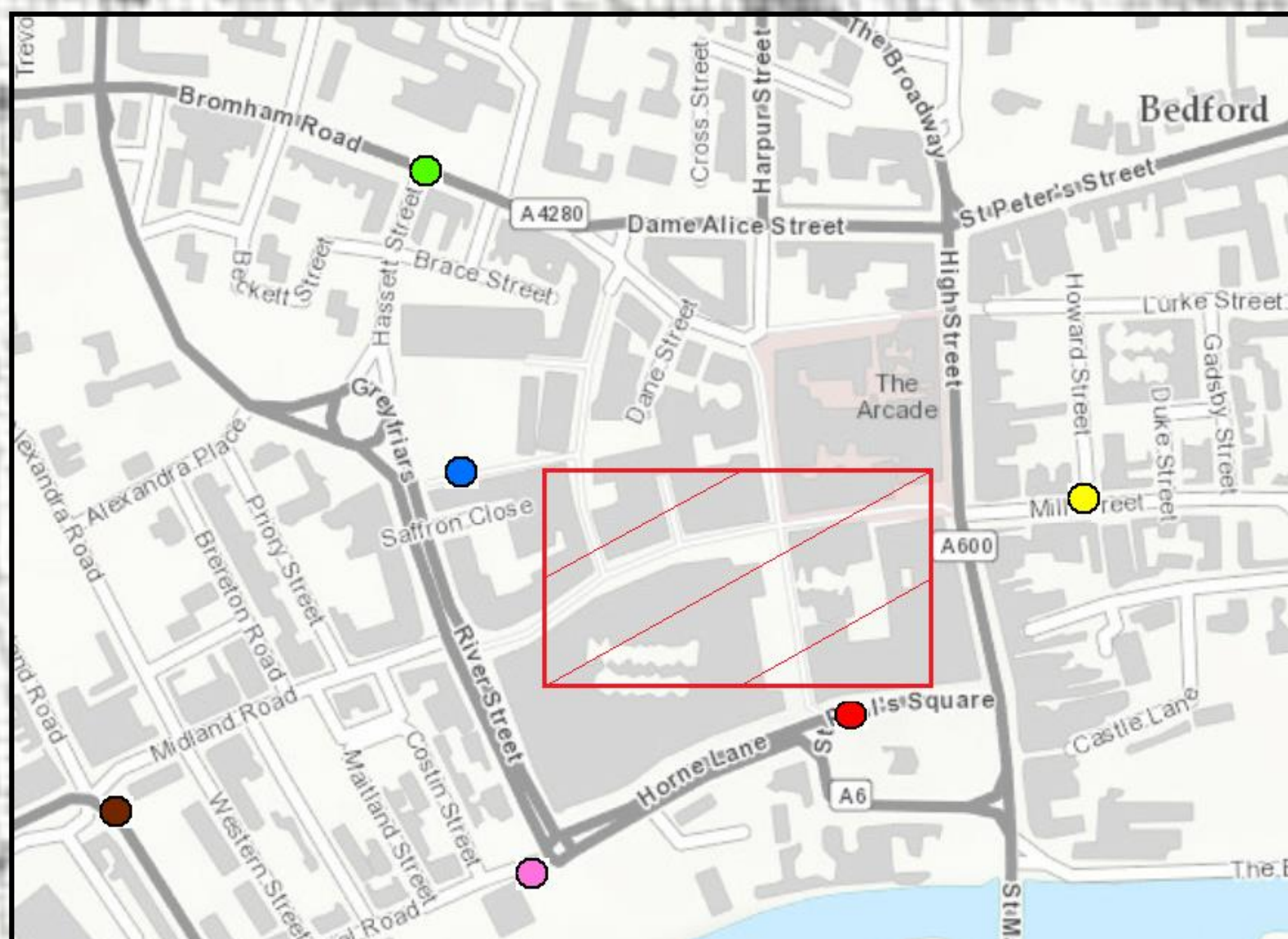
Methodology

- Run a simulation of the location data from a spreadsheet through *GeoEvent Processor*.
- Create a feature service with appropriate symbology in ArcMap to publish to the Server.
- Use the published feature service to produce mapping in ArcGIS Online.
- Construct an operational view in Operations Dashboard to display mapping.
- Connect map on the Server to the *GeoEvent Processor* and run simulation to show 'live' data on the map output in Operations Dashboard.

Results

- Demo shows police officer locations as dynamic points displayed on a basemap.
- Able to determine when a specific police officer enters a given area and displays how much time was spent in that area by all officers.
- Notifications within Operations Dashboard inform the user when an officer enters and exits the area, with a comparison of time spent in the area against a target time for a specified day.

Conclusions

- *GeoEvent Processor* can be used as a tool for reporting policing hours to the public whilst Operations Dashboard offers a valuable method of presenting results.
- Could be adopted as a tool to report policing hours but may offer more value in being incorporated into a automated dispatch system.
- Further study into other ways that *GeoEvent Processor* can be integrated into police forces is recommended.

Limitations

- Lack of real GPS police location data meant that the demo only showcased what could theoretically be done.
- Infrequency of real police location data means map output would not be as dynamic.

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