WHERE DUNNIT?

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Narrowing areas of search by overlaying multiple attribute, geo-referenced soils and land use data with additional spatial intelligence

THE AIMS

We aim to develop a Geographic Information System (GIS) user-interface to identify, or eliminate, geographical areas of forensic interest based on characteristics of soil from an unknown source

View of interface, queries and outputs

THE OUTPUTS

1. DATABASE
   • Any soil or land-use database can be used
   • Multiple attributes in the database can be selected (e.g. soil C, clay, Ca, Mg, Na, K, H, pH, LOI etc.)
   • Sites falling within attribute boundary limits are identified

2. LOCATION INTELLIGENCE
   • Scene of crime
   • Suspect’s area of activity
   • Site of physical evidence (e.g. clothing)

3. COMBINE SOIL & LOCATION SEARCHES
   • Identify links between soil characteristics and other investigative intelligence

4. DISTANCE SEARCHES
   • Calculate likely location accessibility by estimated journey time
   • Vary ‘rate of travel’ depending on mode of travel (car, bicycle, foot), terrain characteristics (slope, vegetation) and obstructions

FURTHER DEVELOPMENT

• Implement degrees of uncertainty
• Web-enable

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