



Engineering Sciences Section - 2015

D57 Pathway for Integrating All Hazard Preparedness/Risk Management With Command and Control

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The goal of this presentation is for attendees to see a visual presentation of a systems engineering approach to providing security, safety, and quality of life as related to forensic enterprise.

This presentation will impact the forensic science community by encouraging them with examples for making better strategic and tactical decisions by the use of current and projected mapping capabilities along with their own common sense. It will expand the definition of mapping to include small-scale events, such as crime scenes, interiors and exteriors of buildings, and below-ground objects as well as those visible above ground.

Hazard and forensic preparedness is a fundamental aspect of individual, team, and community safety. Mapping is an integral part of this preparedness; however, no single individual, jurisdiction, or agency is expected or capable of performing every activity. This presentation will describe various types of forensic mapping (surface, above surface, and below surface), both static and dynamic, that deal with current and potential forensic activities.

Forensic maps should have several attributes in common. An earth-centered international coordinate system that allows a dynamic 3D analysis of potential and actual crime scenes is proposed. Also the maps should have an accurate time and date stamp.

While many maps are available, some were developed decades ago and need to be updated using government and commercial off-the-shelf tools; they need updating at least once a year. The maps should be easily prepared, easily analyzed by experts and the general public, and easily integrated with local needs. This presentation illustrates how, with urban and rural examples, 3D maps can be applied to planning scenarios and real-time forensics using the federal government's universal task list.

Technology for specific protection and prevention for those going into harm's way is not limited to the defense sector, which has extensive transferable technical expertise. Acknowledged engineering and scientific experts in geomapping and the forensic enterprise want to use their expertise and experience in a proactive role; by being multijurisdictional trusted agents and expert witnesses.

Results from working with architects, lawyers, judges, and developers, and examples of integrated local maps will be presented.

Maps, Security, Safety