ESARDA
European SAfeguards Research and Development Association

35th ESARDA Annual Meeting
Congrescentrum Oud St. Jan
Brugge, Belgium

Information Management I
27-30 May 2013

Mobile Information Technologies and Managed Access

Karl Horak
Sandia National Laboratories
Albuquerque, NM

Mobile Technologies

Augmented Reality

Enhanced Communication Channels
- Text messaging
- Microblogging
- Social media
- Image sharing

Inspection Team Tracking

Real-time Database Access

Situationally-aware Information Feeds

GIS Applications

Novel Sensor Packages

Managed Access Techniques

Shrouding

Partial access

Denial of access

Sampling

Random access to a subset of locations

Constrained viewing

Alternative information

Hurdles to Implementation

Controlling data flow

Device approval

Battery life

"Crippled" devices

GPS inside structures

Lost signals
Dead zones

Synchronization with off-site databases

Jamming
Spoofing
Hacking

Intrusiveness
- Cell phone
- Wi-Fi
- Bluetooth

Scenarios

Complementary Access

Challenge Inspection

CTBT

FMCT

Conclusions

OSI & Mobile
- Play different roles for each party
- Can speed up the inspection process
- Enhance transparency without compromising security
- Offer improvements over current radio communications

Requirements
- Policies & Procedures
- Guidance
- Training
- Controls

What next?
- Widespread use during training
- Acceptance by inspected state parties for host/escort use only
- Designed in to future agreements

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Sandia National Laboratories

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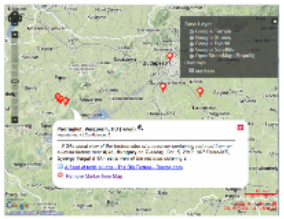

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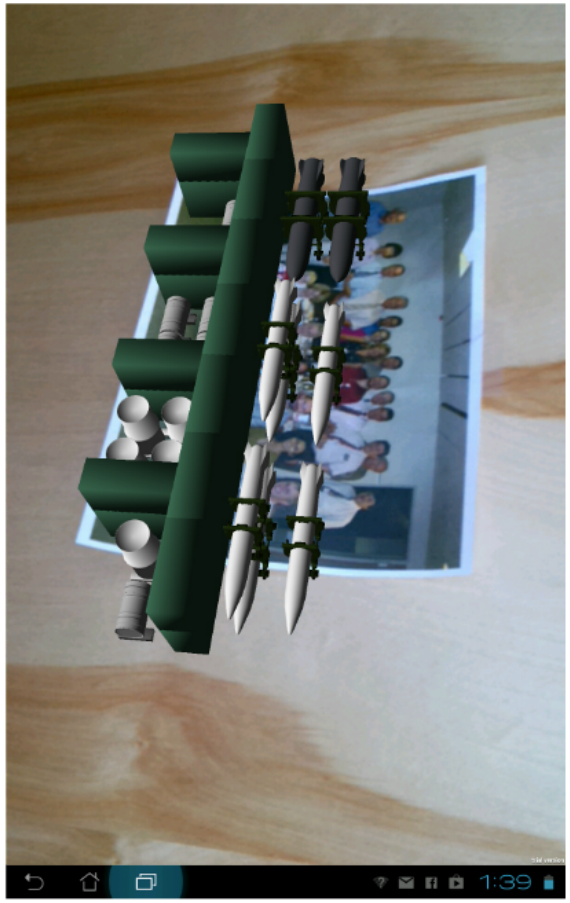

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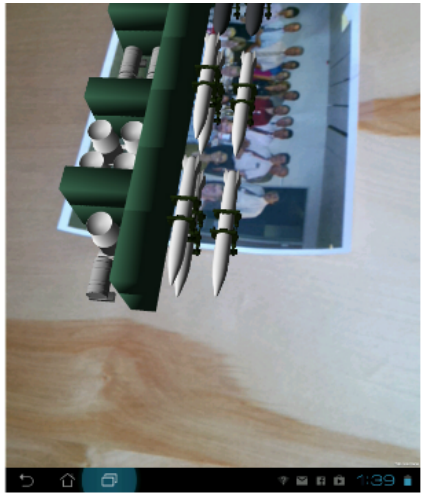

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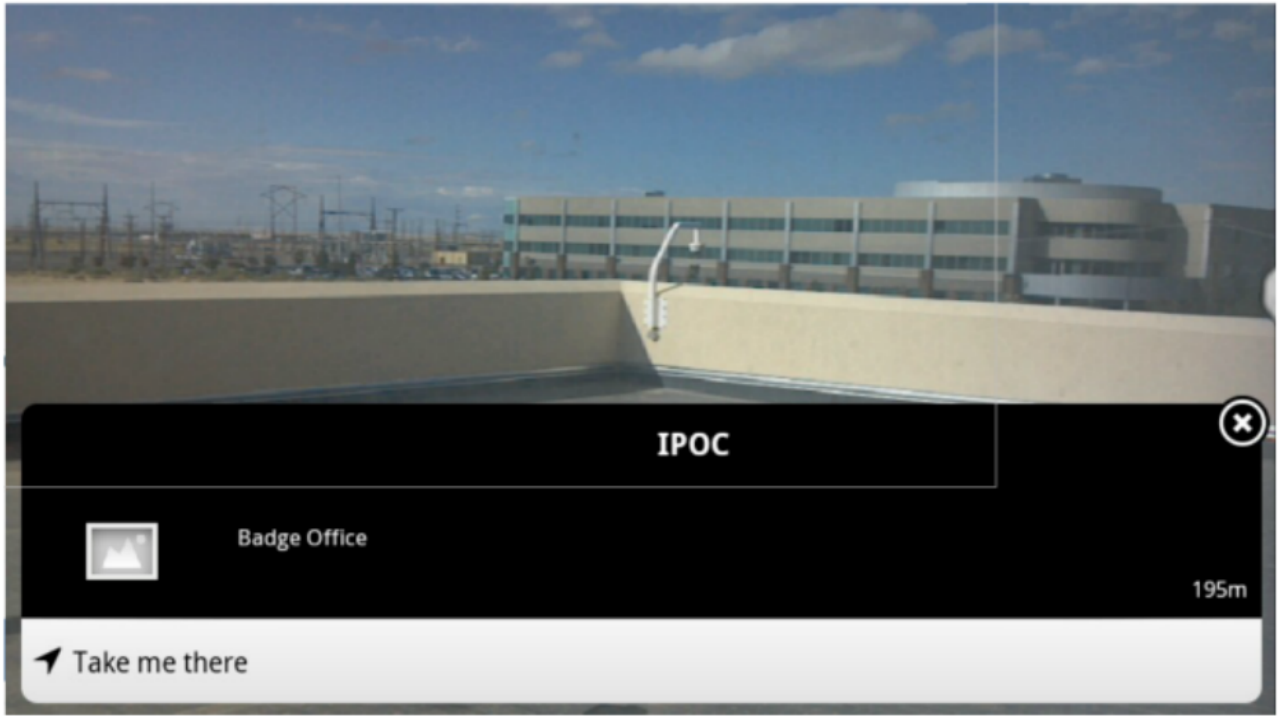

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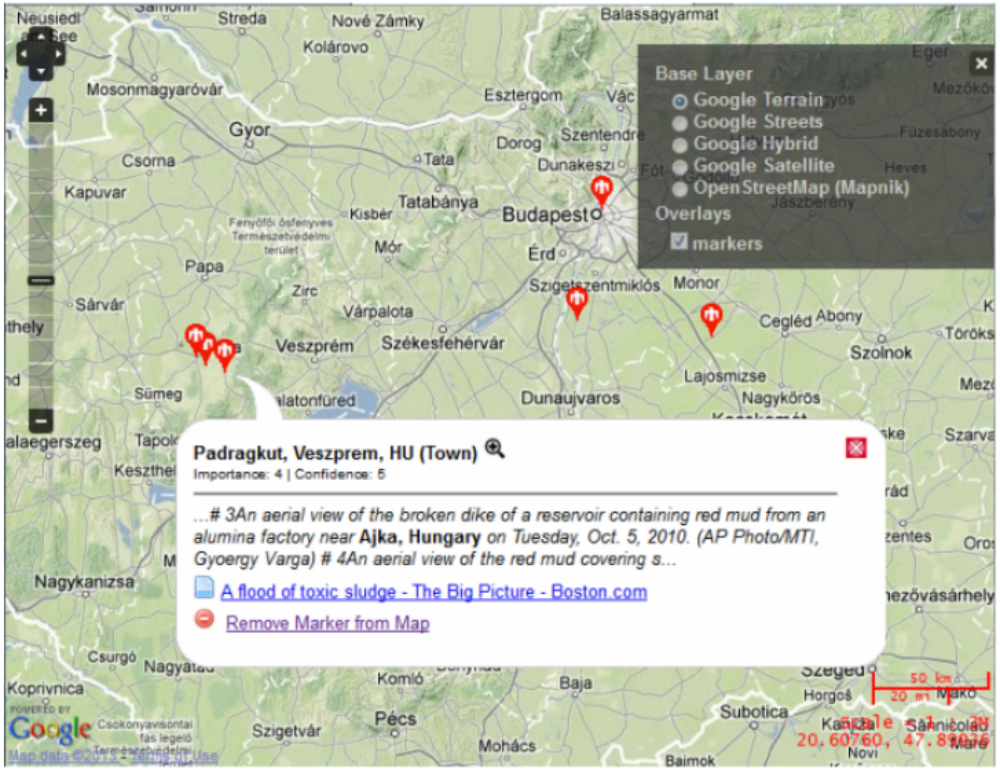

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The IAEA has the right to make use of internationally established communications systems, including satellite systems and other forms of telecommunication.

Challenge Inspection

Visual inspection enhanced by photographs being referred in real-time to off-site SME for image analysis

Augmented Reality to assist in site navig and comprehension

Digital input to inspection report done on the spot

CTBT

2000 sq km inspectable area

Mobile may be important both for safety as well as accomplishing mandate

FMCT

An opportunity to develop modalities that allow for the use of mobile technologies

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