

ESARDA
European Safeguards Research and Development Association

THIRI ESARDA Annual Meeting
Congress Centrum Guld'ns, Jan
Brugem, Belgium

Information Management I
27-30 May 2013

Mobile Information Technologies and Managed Access

Karl Henk
Saskia Nieuwland-Lubbers
Albuquerque, NM

ESARDA is a non-profit association of research and development organizations in the field of nuclear safeguards. It was established in 1992 and is now a member of the European Association of Nuclear Energy (EANES). ESARDA is a non-profit association of research and development organizations in the field of nuclear safeguards. It was established in 1992 and is now a member of the European Association of Nuclear Energy (EANES).

Mobile Technologies



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

Synchronization with
off-site databases
Lost signals
Dead zones

Intrusiveness
Jamming
Spoofing
Hacking

- Cell phone
- Wi-Fi
- Bluetooth

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

Scenarios

Complementary Access

This is the best use case of mobile technology. It involves the use of mobile technology to enhance the inspection process, including the use of mobile technology to enhance the inspection process.

CTBT

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Challenge Inspection

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Karl Horak
Sandia National Laboratories
Albuquerque, NM



**Sandia
National
Laboratories**

Sandia National Laboratories is a multi program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000. SAND2011-pending

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Mobile Technologies

Augmented Reality



Inspection Team Tracking



Real-time Database Access

Enhanced Communication Channels

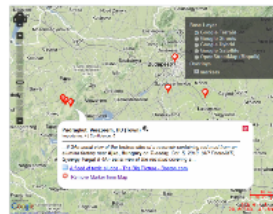
- Text messaging
- Microblogging
- Social media
- Image sharing



Situationally-aware Information Feeds



GIS Applications



Novel Sensor Packages

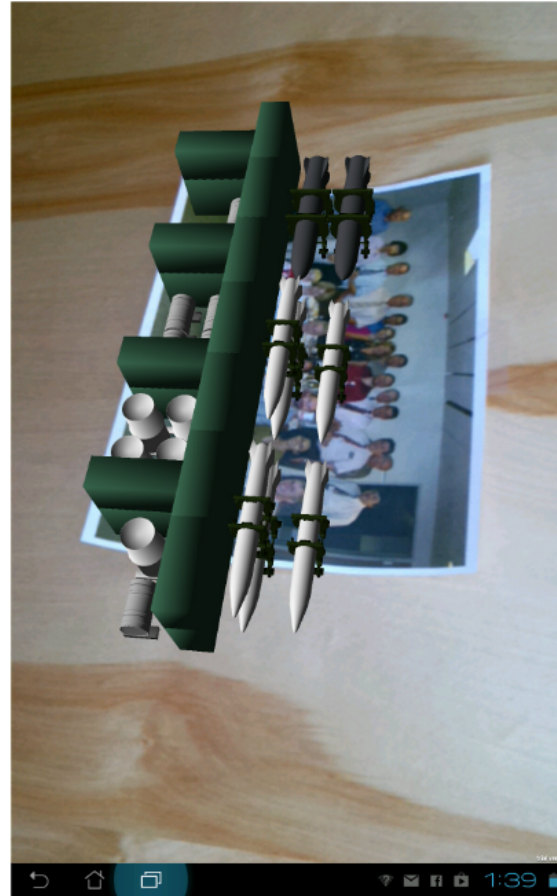


Inspection Team Tracking



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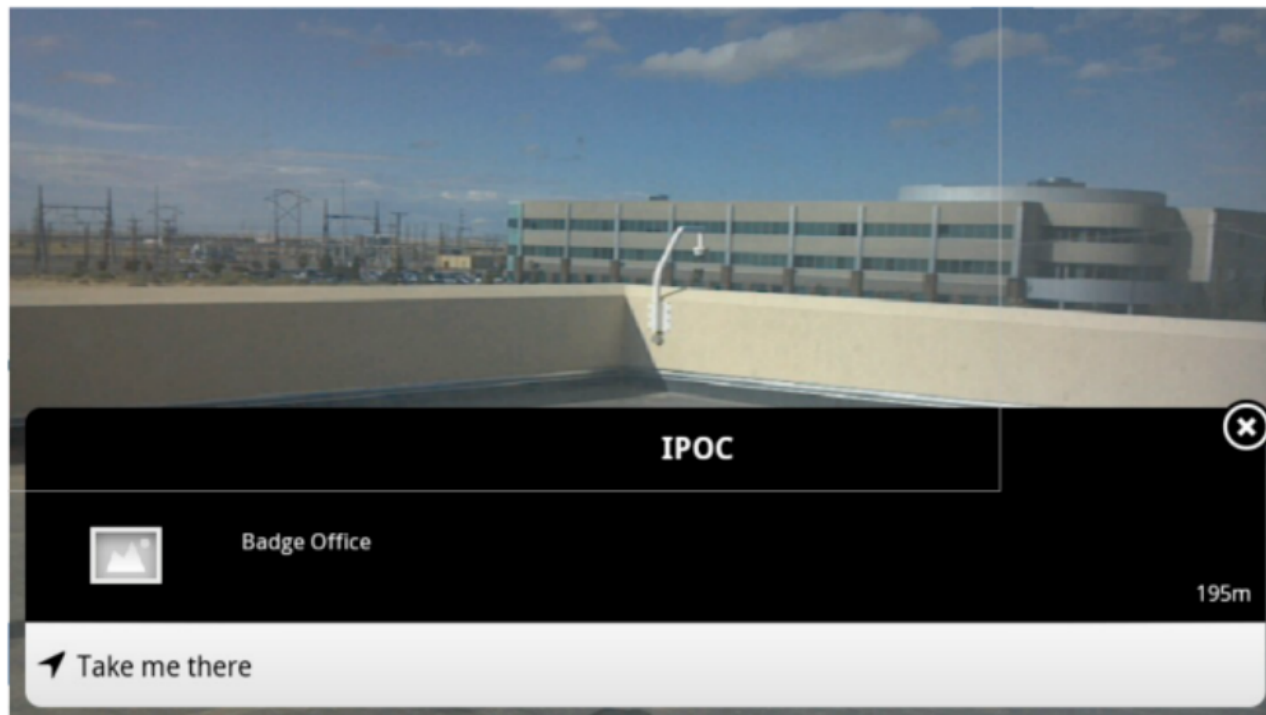
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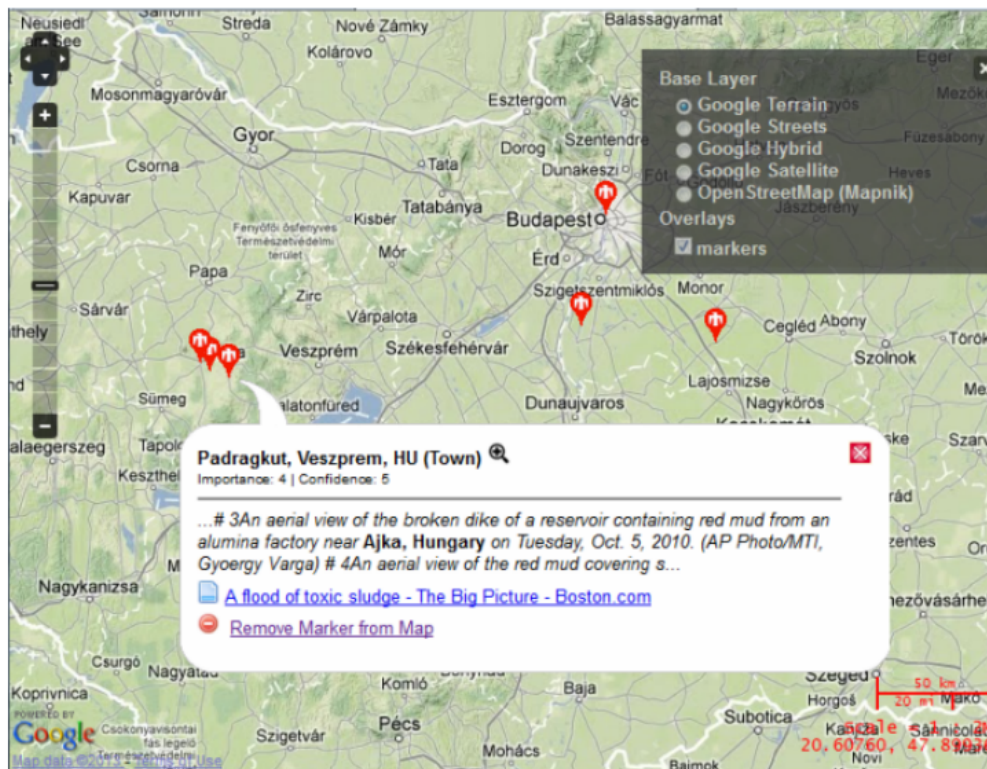
GIS Application



Situationally-aware Information Feeds

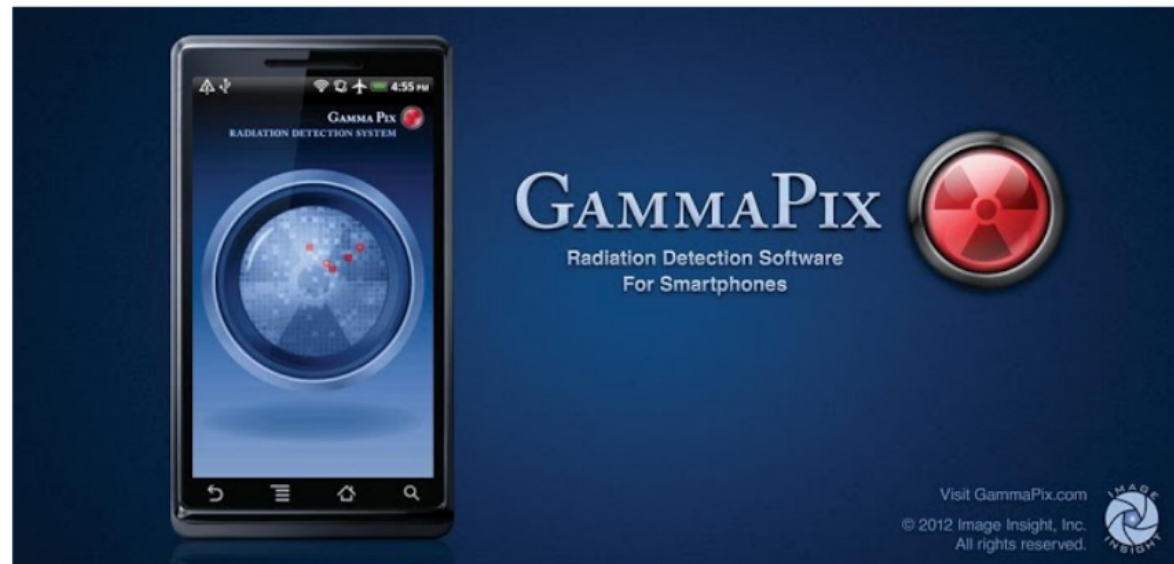


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The IAEA has the right to make use of internationally established communications systems, including satellite systems and other forms of telecommunication.

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 navigation and comprehension

CTBT

2000 sq km inspectable area

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

Digital input to inspection report done on the spot

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

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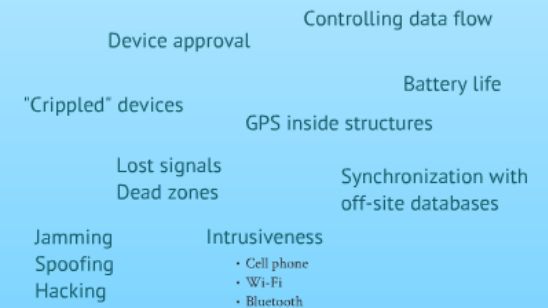
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