Overcoming Information Sharing Barriers via Information Flow Modeling: Applications in Homeland Security

ABSTRACT------------------------------

The global community today lacks a shared framework for developing security information sharing plans and communication procedures. The information needed to prevent or respond appropriately to a security incident will not spontaneously flow in an optimal fashion. Unless organizations develop information sharing plans and communication procedures and exercise them in advance of an incident, they will not be able to execute their security plans rapidly and effectively, which could adversely impact global security.

This paper will describe an analytical tool and strategic management framework that government and business networks can adopt overcome information sharing barriers and to help ensure that security information flows in a rapid, reliable and policy-compliant manner, during routine operations and particularly in a crisis. Information Flow Modeling (IFM) is a systematic process, implemented with the help of software called Channels, for mapping and analyzing the movement of information. The IFM framework enables security stakeholders to utilize a consistent approach to developing security information sharing plans and communication procedures and harmonizing around standards.

This presentation will also discuss the challenges of achieving high-performance information sharing and communication, and overcoming barriers and impediments. It will present lessons learned from the application of Information Flow Modeling in homeland security in government-funded projects.

BIOGRAPHY------------------------------

David G. Kamien
Chief Executive Officer
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David G. Kamien is the CEO and founder of Mind-Alliance Systems, LLC. Mr. Kamien has 20 years of experience at the intersection of strategy and information and communication technology, working for a diverse set of clients and employers, including the U.S. Department of Homeland Security, the State of Israel, Raytheon, Northrop Grumman, and Marsh & McLennan. He is editor of The McGraw-Hill Handbook of Homeland Security (www.homelandsecuritybook.com), a major resource with more than 60 industry experts as contributors.

Prior to Mind-Alliance, Mr. Kamien founded DGK, LLC, which provided strategy and business development consulting for homeland security IT to Northrop Grumman, Raytheon, Siemens, Motorola, and TIBCO Software. He has also served as sales professional for Marsh USA, a subsidiary of Marsh & McLennan, where he focused on selling risk assessment software. Mr. Kamien has managed consulting projects at British Telecom for International Venture Associates, a Silicon Valley consulting firm. Previously, he consulted Israeli regulatory authorities on

technology policy. Born in New York, Kamien moved to Israel with his family as a teenager and later served for in the Israel Defense Forces (four years active duty, 10 years in the reserves), with the rank of Captain. Mr. Kamien holds several technology patents. He received his B.A. from Hebrew University of Jerusalem, and a law degree from Academic College of Law in Ramat Gan, Israel. He holds dual citizenship in the U.S. and Israel.

Jean-Francois ("JF") Cloutier
Chief Technology Officer
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Jean-Francois ("JF") Cloutier is co-founder and CTO of Mind-Alliance Systems where he leada the development of a software solution for information flow modeling. Mr. Cloutier has twenty years of experience in software as a manager, architect, developer, educator and consultant, both in North America and in Europe for Citigroup, Euroclear, HydroQuebec, and AIG.

Cloutier is a contributor to The McGraw-Hill Handbook of Homeland Security. From 1996 to 2003, as co-founder and managing director of a New York startup, Mr. Cloutier directed the development of InfoObject, the first commercial ontology-driven information integrator. Born in Canada, Mr. Cloutier is now resides in the United States. Mr. Cloutier holds a M.Sc. in Computer Sciences from McGill University.
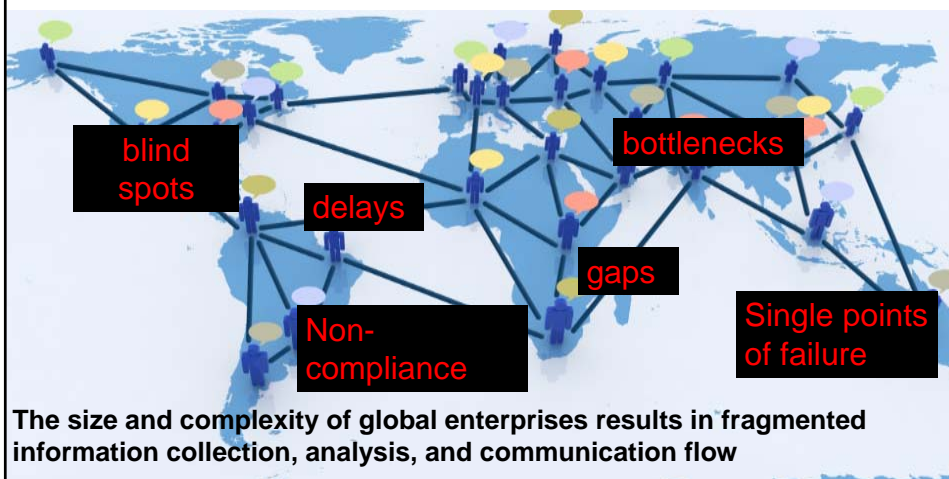
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Information Flow Modeling for Security & Emergency Preparedness
A Framework for Achieving High-Performance Information Sharing & Communication

Information overload and global interdependencies between organizations make it impossible to manage risk independently.

blind spots

bottlenecks

delays

gaps

Non-compliance

Single points of failure

The size and complexity of global enterprises results in fragmented information collection, analysis, and communication flow
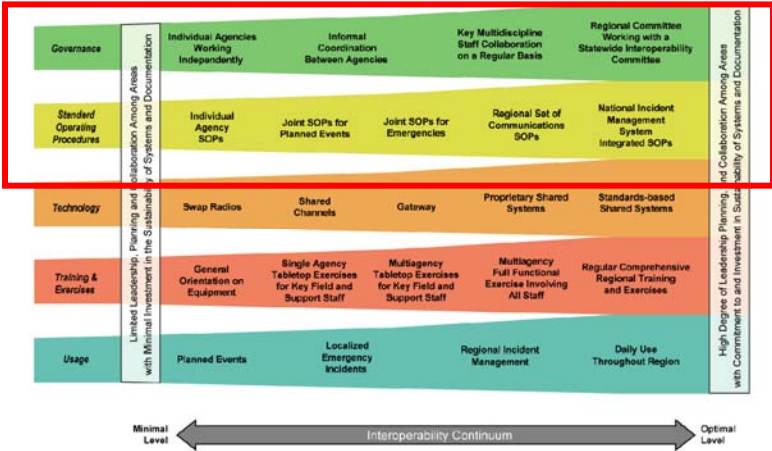
Current State of Security & Emergency Preparedness Information Flow

- Information flow and information quality
- Key information flow modeling concepts
- Key homeland security concepts
- Governmental structures
- Major challenges
- Types of barriers, impediments, and issues that impact the flow of information

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Governance & SOPs key to emergency information sharing and communication

Source: Dept. of Homeland Security

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Mind-Alliance specializes in information sharing and communication planning for homeland security and business continuity

IFM was piloted in a DHS-funded project in 2006

DHS PS-Prep Standards Recommendations

FEMA grant project in Philadelphia region

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Towards a "results-management" approach

Strategic & Scenario Planning

Capabilities-based Planning

Risk Management

Performance Measurement & Assessment

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Lessons Learned – 1

- **Work out procedures before a crisis starts:**

– Identify important internal & external partners

– Craft procedures that detail what information needs to be sent and received in order to effectively execute critical tasks

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Lessons Learned - 2

- **Periodically assess the flow of information to identify and mitigate the risk of:**

  – gaps

  – bottlenecks

  – single points of failure

  – non-compliance with regulation and policy

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Lessons Learned - 3

- **Fix communication problems identified for any given critical event-type**
  - Through better plans and training
  - Through the deployment of information and communication technology systems

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Developing emergency information sharing SOPs with CHANNELS Software

- Specify information that each person needs to send and receive

- Define protocols for information exchanges

- Analyze information flow and spot issues

- Prepare for and review exercises and events

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IFM and Enterprise Risk Management

- IFM models the movement of information and analyzes how it impacts risk exposure.
- Risks are mitigated by
  - Optimizing the flow of information
  - Identifying and removing barriers
  - Improving the capabilities of actors

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