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Emergency and Crisis Management (ECM) Domain Special Interest Group (DSIG)

# **Organizing Chairs:**

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Recent reports and surveys have underlined the need for all levels of government, civil agencies and supporting military units to share information more efficiently when working together during emergency and crisis response operations.

The ECM will undertake an overarching initiative to develop a framework and new approaches to facilitate such critical information exchange across separate and distinct domains. Current thinking in this area encourages the use of standards-based interfaces and common models (e.g., NEIM, CAP and JC3IEDM) to enable successful information exchange —and ultimately provide decision makers with quality (ACCURATE, RELEVANT, TIMELY, USABLE, COMPLETE, BRIEF, SECURE) information tailored to the varying stages and severity of an incident. Given that crisis situations are inherently unpredictable and dynamic, any proposed solution must also demonstrate the ability to adapt to changing conditions and the impact they will have on policy and regulations for information protection across the many organizations that interact with emergency management functions.

The SIG will seek to exploit emerging community, consortium and international standards and their ability to deliver controlled and adaptive information sharing as required to support the diversity of emergency management operations at varying stages of an incident. Where necessary, the SIG will prepare RFIs and RFPs for specifications that augment current and evolving capability.

The primary mission of the EM PTF is to create framework through which Emergency and Crisis Management community leverage evolving open specifications and standards from multiple organizations and consortium such as: OMG, Open Group, OASIS, IETF, NENA, ISO, W3C, ORCHESTRA, SANY, GMES, GEOSS, GOOB, and ITCM. The SIG will provide guidance on the use and integration of these specifications to provide interoperability to the broader community. The framework will be used to identify where additional standards efforts will be required to enhance ECM system interoperability.

The ECM DSIG will work closely with other OMG DTFs, PTF,s and SIGs; the EM and CM communities, Government Agencies and other entities and groups external to the OMG, coordinating establishment of a ECM common framework. To that end, the goal of the ECM DSIG will leverage existing OMG specifications, develop new specifications and achieve their alignment within ECM framework, and support other interoperability initiatives.

In this activity, the ECM DSIG will:

- Leverage other related OMG initiatives and specifications.
- Promote the use of OMG specifications in the development of ECM interoperability.
- Leverage the various community specifications (e.g., NEIM and CAP) with OMG specifications.
- Identify scenarios where ECM Framework may be leveraged or applied to enhance software trustworthiness.
- To provide consistent modeling technology to other ECM standardization organizations, to maximize the effectiveness of standardization.
- To develop and prioritize requirements statements for key ECM services for all levels of government, to promote reusability, portability and interoperability of ECM systems and applications;
- To leverage existing specifications for interoperability wherever possible to accomplish the above; and
- To publish service specifications (including references to existing standards wherever possible, and adding sequencing, interfaces, constraints, etc. as necessary to maximize the goals stated above) as required by OMG's government, end-user and vendor members.

# Sources of Information and supporting specifications:

OASIS (http://www.oasis-open.org/committees/tc home.php?wg abbrev=emergency)

- The Common Alerting Protocol (CAP), a data interchange standard for alerting and event notification applications, currently in version 1.1. CAP functions both as a standalone protocol and as a payload for EDXL messages.
- The Emergency Data Exchange Language (EDXL) is a broad initiative to create an integrated framework for a wide range of emergency data exchange standards to support operations, logistics, planning and finance:
  - o EDXL Distribution Element (EDXL-DE)
  - EDXL Hospital AVailability Exchange (EDXL-HAVE)
  - EDXL Resource Message (EDXL-RM)
  - o EDXL Reference Information Model (EDXL-RIM)

Members of the OASIS Emergency Management TC have voted to adopt the "RF on RAND" Intellectual Property Rights (IPR) mode for their work. As defined in the OASIS IPR Policy, "RF on RAND" operates in the same manner as RAND, however, it does not permit the patent holder to charge fees or royalties for the license (http://www.oasis-open.org/who/intellectualproperty.php).

XML and Emergency Management

http://xml.coverpages.org/emergencyManagement.html

#### Contents

- Initiatives and Protocols
  - o ComCARE Vehicular Emergency Data Set (VEDS) and ACN Initiative
  - Common Alerting Protocol (CAP)
  - Common Intrusion Detection Signatures Standard (CIDSS)
  - o Critical Infrastructure Protection Initiative (CIPI)
  - o EAS-CAP Industry Group
  - o Emergency Data Exchange Language (EDXL)
  - Emergency XML (EM-XML) Consortium
  - o IEEE Incident Management Working Group (IMWG)
  - IETF Emergency Context Resolution with Internet Technologies (ECRIT)
  - IETF Incident Object Description and Exchange Format (IODEF)
  - <u>IETF Intrusion Detection Exchange Format (IDMEF)</u>

- o NIEM (National Information Exchange Model) Emergency Management
- o OASIS Emergency Interoperability (EI) Member Section
- o OASIS Emergency Management TC: CAP, EDXL-DE, EDXL-RM, HAVE
- OpenSec Advisory and Notification Markup Language (ANML)
- SAFE: Tsunami Warning Markup Language (TWML) and Cyclone Warning Markup Language (CWML)
- W3C Emergency Information Interoperability Framework (EIIF) Incubator
   Group
- General References: Emergency Management Organizations and Agencies
- News, Articles, Papers, Reports

IETF (<a href="http://www.ietf.org/">http://www.ietf.org/</a>) The Internet Engineering Task Force Lots of stuff here

NENA (<u>www.nena.org</u>) National Emergency Number Association

ISO

W3C (<a href="http://www.w3.org/2005/Incubator/eiif/">http://www.w3.org/2005/Incubator/eiif/</a>) W3C Emergency Infromation Interoperability Framework Incubator Group

The **mission** of the Emergency Information Interoperability Framework Incubator Group, part of the Incubator Activity, is to review and analyse the current state-of-the-art in vocabularies used in emergency management functions and to investigate the path forward via an emergency management systems information interoperability framework. These activities will lay the groundwork for a more comprehensive approach to ontology management and semantic information interoperability leading to a proposal for future longer-term W3C Working Group activity.

ORCHESTRA (http://www.eu-orchestra.org/)

Latest News. More dissemination activities... » ORCHESTRA - One of the European Union's major research and innovation projects for risk management [Atos Origin

Press Release]NEW!

» ORCHESTRA Pilot presentations available at the Links area NEW!
» ORCHESTRA Final Event took place at Atos Origin headquarters in Madrid on 27/02/2008

» Great success of the ORCHESTRA Day in Stresa (Italy). Presentations available!
» RM-OA Rev2.1 (OGC 07-097) gets the status of an OGC Best-practice document[IITB Press Release]

SANY (http://www.sany-ip.org/)

Sensors Anywhere

GMES (http://www.esa.int/esaLP/LPgmes.html)

Global Monitoring for Environment and Security

GEOSS (http://www.epa.gov/geoss/)

Global Earth Observation System of Systems (GEOSS)

### GOOB (http://www.fit.fraunhofer.de/projects/kooperationssysteme/goob\_en.html)

For the Crisis Management Initiative (CMI), an international Non-Government Organization (NGO) headed by Martti Athisaari, the former President of Finland, we investigated the feasibility of the "Government out of a Box" idea.

We evaluated, from a socio-technical perspective, the idea to provide quick support to the civil government and administration of states in crisis by using modules from a basic E-Government framework.

In the project we started from two related concepts proposed by Herr von der Schulenburg, the Deputy Special Representative of the Secretary General for Iraq, and a consortium of Oracle, TeliaSonera, Ericsson, Accenture and Unysis, respectively. We combined and extended the two concepts and discussed them in detail with experts from the World Bank, UN Organizations, NGOs, the US Administration and ministries in Germany and additional European countries. In addition we visited Palestine and Afghanistan, two states in crisis, to discuss the concept and to assess potential cultural, organizational and technical obstacles.

We presented our findings to the leadership of CMI in Brussels. They concluded that the "Government out of a Box" ideas, i. e. to take a stable E-Government framework that implements international rules and regulations, to help a state in

crisis build and run a civil government and administration, may appear revolutionary, but that it could be done.

Before it can be done, before an appropriate E-Government toolkit is in fact available, the next step will be to assemble a prototype system and to conduct a field experiment in a state in crisis.

ITCM (<a href="http://www.itcm.org/">http://www.itcm.org/</a>)

Information Technology for Crisis Management