Federal Emergency Management Agency (FEMA)

FEMA

DM-PMO Initial Operating Capability (IOC) Requirements

DM-Framework and DM-OPEN Enterprise Information Sharing Environment

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0.1	1/23/09	Initial version	Gary Ham, DM PMO
0.2	2/3/09	Added IOC Requirement Document References Grammatical and Format Corrections	Kirby Rice, DM PMO
0.3	2/9/09	Updated Introduction and DM Component sections General Content Corrections	Kirby Rice, DM PMO

Approvals

This document requires the approval of the following persons:

Role	Name	Review Date	Approved Date

Client Distribution (If applicable)

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Table of Contents

1 Introduction

This document is a cover document that references three separate documents defining the Initial Operating Capability (IOC) requirements for replacement/upgrade of the two components of the Disaster Management program that constitute the Federally provided emergency information sharing infrastructure available to local, state, regional, tribal and Federal agencies.

The e-Gov Disaster Management initiative encourages federal, state, and local agencies to increase the use of Internet-based technology in order to improve citizen-to-government and inter-agency communications and interaction. FEMA's Disaster Management program proposes a sensible approach utilizing the DM-Framework web interface, the OPEN Interoperability framework, and development of emergency data standards. The Disaster Management program supports ongoing activities within FEMA to consolidate portals and improve enterprise–notifications and alerts overcoming communication and interoperability barriers. The strategy leverages cross–FEMA program awareness with technological improvements which in turn drive cost efficiencies.

This document and those that it references represent a first step in determining and implementing the best functionality for continued operation of the standards-based emergency information exchange infrastructure operated through FEMA's Disaster Management program.

2 The Disaster Management Components

One component, the DM-Framework, will provide a web interface, where end-users interact via a browser in a composite web page comprised of configurable portlets. These portlets can provide access to a wide range of applications benefitting Disaster Management stakeholders. These portlets may provide access to any combination of COTS, GOTS, or custom capability. As a configurable framework, end-user organizations will be able to choose their own set of portlets within the framework. Some will be government provided. Others may be purchased or developed by the end-user organizations themselves.

The second component, the Disaster Management – Open Platform for Emergency Networks (DM-OPEN), is composed of a set of web service interfaces for sharing data between disparate emergency systems. The DM-OPEN provides an entry point for interoperable system interactions using web service application programming interfaces (API's). These API's are based on standards defined through the Organization for the Advancement of Structured Information Standards (OASIS) Emergency Management Technical Committee (EM-TC). They are specifically designed to transport Emergency Data Exchange Language (EDXL) messages, National Information Exchange Model (NIEM) Information Exchange Packages (IEP), and standardized data structures that can be named using universal resource names (URN). These services are designed to allow loosely coupled exchange of standards-based information between systems of differing design, architecture, mission, and/or function on Federal infrastructure that provides a consistent, level-playing field in an otherwise ever-changing competitive environment.

3 The Contained Documents

There are three documents referenced within this cover document. Each of them covers one of the main disaster management components described above. Although, these documents together comprise the IOC requirements for the DM system, each document is independent of the others.

The first referenced document is a DMI-Services Concept of Operations Document that covers Statement of Need, Functional Scope and Objectives. This document also describes the general system architecture and promised capabilities for each of the components. Finally, it provides one example of how the components might be use together to provide results.

The second document, DM-Framework IOC Requirements, describes each major functional capability identified in the Concept of Operations for the DM-Framework and associates a set of requirements in the form of traditional "shall statements." These requirements will be used as a requirements baseline to evaluate products (COTS, GOTS, and open source) for inclusion as portlet capability in the DM-Framework at IOC.

The third document, DM-OPEN IOC Requirements, describes each major functional capability identified in the Concept of Operations for DM-OPEN and associates a set of requirements in the form of traditional "shall statements." These requirements will be used as a requirements baseline to be implemented in DM-OPEN at IOC.

4 Programmatic Considerations

4.1 Functional

The upgrades to the two component platforms (DM incident management toolset platform (DM-Framework) and DM-OPEN service) will be loosely coupled separate systems so that the toolset and the interoperability service can independently evolve to meet the changing mission requirements and technology changes. Components developed/acquired for these platforms will evaluate and/or be designed to support National Incident Management Systems (NIMS) concepts and principles.

The complete functionality needed to fully implement all capabilities described in the CONOPS involves a rather large set of overall requirements that is beyond what can be accomplished at IOC. Accordingly, this document establishes a set of IOC target capabilities linked to specific capability modules. Added capability in subsequent releases is planned, based on more detailed analysis of requirements and alternatives by the DM program office.

4.2 Schedule

The IOC capabilities described within the scope of this Requirements Document are earmarked for release in Fall of 2009.

5 Resources

5.1 Stakeholder Advocate

Advocacy for this functionality is from the Disaster Management Program Management Office.

5.2 References

The capabilities described in the Concept of Operations are extrapolations from documented, current, DMIS Tools capabilities and from acknowledged requirements associated with the implementation of OASIS EM-TC Standards.

6 Future Considerations

This document represents only a first step in the evaluation and assessment of DM support of standards based emergency management information requirements support to the nation. As such it is a baseline for IOC requirements, but also an architecture that can be a foundation on which to evaluate and acquire added capabilities in a cooperative, loosely coupled, service architecture.

Appendix A: Acronyms

6.1 Acronyms

Acronym	Explanation
API	Application Programming Interfaces
CONOPS	Concept of Operations
COTS	Commercial Off The Shelf
DHS	Department of Homeland Security
DM	Disaster Management
DMIS	Disaster Management Interoperability Services
EDXL	Emergency Data eXchange Language
EM-TC	Emergency Management Technical Committee
FEMA	Federal Emergency Management Agency
GOTS	Government Off The Shelf
IEP	Information Exchange Package (NIEM)
IOC	Initial Operating Capability
NIEM	National Information Exchange Model
NIMS	National Incident Management Systems
OASIS	Organization for the Advancement of Structured Information Standards
OPEN / DM-OPEN	Open Platform for Emergency Networks
URN	Uniform Resource Name

7 Referenced Documents

7.1 DMI-Services Concept of Operations

DMI-Services Concept of Operations
DM-Framework and DM-OPEN Enterprise Information Sharing Environment / Initial Operating Capability (IOC)

7.2 DM-Framework IOC Requirements

DM-Framework Initial Operating Capability (IOC) Requirements

7.3 DM-OPEN IOC Requirements

DM-OPEN Initial Operating Capability (IOC) Requirements