

## ***Information Technology for Crisis Management: A Crisis in Itself***

Richard Mark Soley, Ph.D.  
Object Management Group, Inc.

### **The Problem**

Recognition, management and alleviation of national and international crises has become, more than ever before, an international activity. Whether through multinational organizations such as the United Nations, ECOMOG, European Union or the North Atlantic Treaty Organization, or via bespoke partnerships between non-governmental organizations and national administrations in support of solutions for specific “hot spots,” mobilization of national emergency management and military organizations to work together to address local emergencies has become the order of the day.

Trailing behind the leading edge of military, NGO and other emergency-response personnel and matériel is, as always, a logistics “tail” in support of operations. And overseeing it all, providing management function as mundane as payroll and as critical as supply-chain management, as varied as parts replacement and real-time intelligence information, are the information technology assets of crisis management organizations. In general, such assets have been hand-tailored to the requirements, functions and concepts of operations of those organizations, with scant focus on an important reality: rarely will such organizations act alone. Even if, as is true in many cases, the governmental organization or NGO has opted for off-the-shelf (“COTS”) solutions, interoperability between those assets has usually not been the primary focus of the commercial providers of those solutions and the crisis-response organization may not be in a position to ensure that interoperability.

In nearly every international emergency, information assets must be shared between partners in crisis response. Examples of failed cooperation caused not by national or personal will, but by IT systems failure, are rife in crisis response settings, from lack of supply-chain integration for parts replacement between KFOR forces to failed intelligence communications between allied forces going back decades.

As the United States Department of Defense states in its “Joint Vision: 2020” statement,

- “Decision superiority does not automatically result from information superiority. Organizational and doctrinal adaptation, relevant training and experience, and the proper command and control mechanisms and tools are equally necessary.”
- “Information systems and equipment that enable a common relevant operational picture must work from shared networks that can be accessed by any appropriately cleared participant.”
- “Interoperability is the foundation of effective joint, multinational, and inter-agency operations.”
- “The overall effectiveness of multinational operations is, therefore, dependent on interoperability between organizations, processes, and technologies.”

These points obviously are not specific to U.S. emergency response or military organizations, but clearly relevant to all international crisis response situations.

### **The Solution**

The obvious solution, obviously, is to rely on the same integration technologies used by commercial organizations worldwide. Surely commercial integration technologies are likewise applicable to intra- and inter-national IT integration problems for joint crisis response!

Unfortunately, the rapid evolutionary pace of software and the youth of the field in general has led to more splintering of information systems assets than integration. As was the case in the new technologies of a century ago (especially telephony, electrical power generation and the railroads), systems integration is scarce on the ground in the information technology field. While many working integration technologies exist, that is precisely the problem: there are many different solutions for similar (or even identical) problems, with very different technology tradeoffs made.

Further, the uncoordinated attempts to solve IT integration problems for crisis management systems and the lack of an organization specifically focused on this set of problems has resulted in the continuation of a general lack of systems integration across coalition partners around the world.

### **Information Technology for Crisis Management: Vision**

The solution for this problem must come from an international partnership, driven from national and international needs, to focus on

- a requirements process to scope and define needs and priorities for IT integration for coalition partners in international crisis management situations;
- an international organization to support rapid prototyping and trial systems to provide IT integration techniques for coalition partner IT support organizations; and
- an international standards process to define norms for IT interoperability in crisis management situations, driven by both users (NGO, national- and international-body IT organizations) and vendors to those users.

Such a partnership would result in standardization around technology specifications that are available in commercial solutions and have been proven in the field, resulting in much higher interoperability between coalition partners.

The outcome of this seminar is critical to fulfilling that vision. The ITCM organization and OMG's C<sup>4</sup>I Task Force will provide this solution; however, an International Executive Advisory Board, dedicated to the fostering of both the ITCM organization and OMG's C<sup>4</sup>I Task Force, is necessary to ensure that needs and priorities are set correctly for both organizations. The presentations and workshops of these two days should focus on setting clear, easy-to-communicate direction to such an Advisory Board so that both ITCM and OMG C<sup>4</sup>I can rapidly deliver interoperability solutions & standards to coalition partners.