from major and minor disasters in the last century, predict 21st century multi-agency and international scenarios, and account for the players' (managers and field teams) perspective and experience.
Results: On-Site Instant Report and Information System (OSIRIS C3) is a C4I platform that provides real-time command, control, and communications through instant, horizontal and vertical data flows, greatly reducing voice communications, and by doing so, preventing information decay. OSIRIS C3 provides goal-oriented strategic and tactical planning, and multi-agency command and control in almost any available communication channel including TETRA. By using state-of-the-art technologies inspired in video games, and friendly and interactive touch screen user interfaces, OSIRIS C3 requires a short learning curve.
Conclusions: The OSIRIS C3 is an all-in-one solution for disaster management and emergency response that is able to provide support for all levels of the command chain.
Keywords: command; communications; control; information system; On-Site Instant Report and Information System
Prehosp Disaster Med

International Survey of Information and Communication Systems for Early Detection of Public Health Threats

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Background: There is a growing need for global information and communication (ICT) systems that continuously monitor and analyze data and generate alerts for public health threats. Barriers to building a reliable and efficient global surveillance and early detection system include the use of significantly different systems in different countries or even in the same country, data are collected in different languages, and with the availability of data as well as the ability to use and analyze the data. A critical problem is the lack of quick access to the relevant information. Despite recent technological developments, implementation has been fragmented and consequently, there still is a gap between the existing functional systems and desired global systems that integrate all relevant data regarding the early detection of threats to public health.
Objective: The objective of the study was to map the current state-of-the-art in the area of surveillance and early warning ICT systems for threats to public health and to identify major gaps, problems, and challenges. The study focused on three major types of surveillance and early warning systems:

1. Disease surveillance through healthcare systems;
2. Monitoring environmental factors with a potential impact on health; and
3. Monitoring events through the electronic media.

Systems included in the study were those operating in Spain, France, Italy, and Israel, as well as at the European level and in the US.
Methods: This study was financed by the European Commission as a part of the Seventh European Research Framework Program (FP7). Organizations from Spain, France, Italy, Denmark, and Israel were project partners. Each partner performed a detailed survey of the systems currently operating or under development in their own country. Additional research was done to identify systems at the European level and in the US. All of these systems were surveyed and analyzed according to a predetermined set of criteria that focused predominantly on the information and communication technology aspect of the systems.
Results: Fifty systems were identified and analyzed. There is a great disparity among existing systems in terms of definitions, standards, methodology, and levels of technological sophistication, particularly in the area of information and communication technology. Disease surveillance systems through the healthcare system are the most numerous, while at the same time, they are the least sophisticated in terms of ICT technology. There is a lack of knowledge and coordination among different types of monitoring systems, even at the local and national levels, and a lack of integration among all relevant systems at all levels—local, national, and international. Most systems are "expert-team" dependent and do not have the capacity for generating automated inferences based on rules or algorithms.
Discussion: Much of the information and communication technology required to build and operate global surveillance and early detection systems exists and is being used in some places. The issues of semantic interoperability and standardized technical and professional protocols must be addressed. What is required are political decisions at the national and international levels that acknowledge the need for global systems in this area and for collaboration and allocation of resources to construct them as well as enabling legislation for data sharing.
Keywords: communication; detection; information technology; public health; survey; threat
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ESi® Builds a Global Information Network in Response to the H1N1 Virus

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On 26 April 2009, reports of a new and deadly influenza strain (H1N1) hit the international wire services, and the news spread quickly around the world. Reuters reported: "A deadly swine flu never seen before has broken out in Mexico, killing at least 16 people and raising fears of a possible pandemic."

In May 2009, as cases of H1N1 began to spread, ESi, the creators of WebEOC®, the world's first Web-enabled crisis information management software, considered how to best support the WebEOC user community. Hundreds of emergency operations centers (EOCs) around the world use WebEOC, and ESi decided to apply its technology to allow EOCs to share information and work together as a unit.

ESi created a Global Fusion Network based on ESiWebFUSION™, which allows WebEOC server-to-server communication by acting as the central communications hub to route messages across the network. The system was proven during the 2009 inauguration of US President Barack Obama and the 2008 hurricane season in the US.

The critical information needed for an effective response to an event like H1N1 is varied. For governmental agencies,