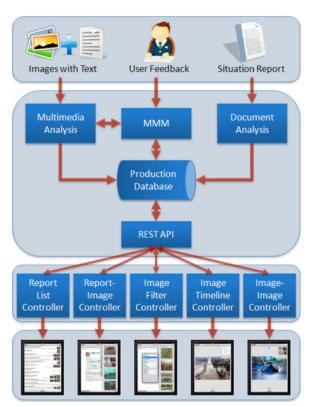


MADIS (Multimedia-Aided Disaster information Integration System)



MADIS, which stands for Multimedia-Aided Disaster Information Integration System, is an information integration framework designed and developed on an iOS platform for enhancing situation reports with photos and video and enabling quick emergency response.

Through a preprocessing component, the tool can catalog disaster-related images and identify relevant subject text in



posted situation reports, training modules that establish the systems cataloging and text-analysis capabilities, and a web-based database system with a RESTful application program interface (API) that provides support for web or mobile-device client applications. MADIS has been developed for primary use on an iPad by responders in need of an interactive solution for efficient disaster situation assessment.



Direct Search Engine (DSE)

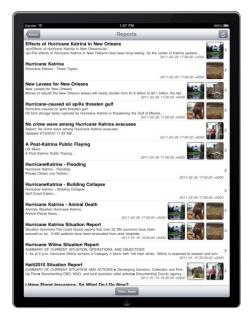
DSE is an extended function of MADIS that integrates multiple publicly sourced disaster information, providing versatile search functions such as keyword-based search and vertical search with mapping.

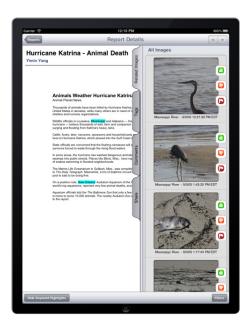


Through DSE, the user is able to quickly explore three different data sources: general web pages, latest news, and blogs and tweets. To access the data for users, one method relies on a keyword search while another method is based on data integration, with the results presented on maps.



Currently, responders are relying on solely textual reports to assess disaster damage. Enhancing these reports with photos and video provides more detail and allows for a more effective response.







Screen shots of 1) main report list with thumbnail-sized images and 2) an open situation report with highlighted keywords and related images identified by the system.

Additionally, the need for portability has made mobile devices a must-have in disaster response. MADIS provides emergency personnel with free, fast interaction in communicating between both the command centers and actual disaster sites.

An improved response time improves survival rates, but it also benefits businesses in the long term. Studies have shown that when a business is closed because of a disaster, even for a short time, it becomes highly likely that the business will fail. A quicker recovery improves the likelihood of higher survival rates of people and businesses success — a quicker recovery that MADIS enables.

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