

Advanced Credentialing for Trusted Networks

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Technology Summary

During and following disasters, rapid, valid systems are needed to exchange information—among emergency responders, with others in the community, and with the outside world. ORNL researchers have developed a Web 2.0 credentialing system that offers greater assurance of the validity of information on social networks and media and the potential to thus improve and enhance the unimpeded flow of vetted information and resources during and following a disaster to assist impacted areas and populations in restoration and recovery.

Traditional communication media are often overwhelmed during disasters. Of equal concern, recent disasters have demonstrated that people are turning more to social media as opposed to traditional communication media for their information. Government use of social media can save time and money, provide greater transparency, provide easier access to information and services, and ensure essential information reaches all citizens. However, use of social media for communication raises serious issues of security, authenticity, trust, and privacy. Credentialing programs to overcome some of these concerns exist, but they tend to be hardware- or software-based and use time-consuming and expensive methods to identify and certify individuals and groups. ORNL's credentialing system and services are hardware agnostic; use all existing credentials; and require no new or additional equipment, networks, materials, or infrastructure.

Based on proven credentialing systems such as those used in the travel industry, the ORNL system includes four main components: (1) a recruitment program using social media websites to enlist (validate) individuals and enterprises before disasters; (2) a managed portal with a set of services to permit users and enterprises to register profiles, build networks, and establish levels of trustworthiness based on both self-signed and externally authenticated recommendations and certifications from public and private sources; (3) a quick response code generation facility to allow users and enterprises to create, print, and scan barcodes that link back to their trust network profiles; and (4) an Internet accessible application that links member profiles to mobile applications.

Advantages

- Hardware agnostic
- Uses existing technology
- Leverages existing credentials
- Doesn't require investment in new or additional equipment or infrastructure
- Flexible; allows on-the-fly changes
- Accommodates a broad array of participants, both public and private
- Provides immediate and ubiquitous access control
- Complies with Department of Homeland Security National Incident Management Systems requirements
- Low cost

Potential Applications

- Credentialing and authenticating personnel for event or facility access control
- Credentialing and authenticating business and enterprise customers and mass market consumers for appointments, meetings, activities, and events
- Credentialing and authenticating personnel participating in neighborhood watch and similar functions

Patents

Bryan L. Gorman, David R. Resseguie, and Bob G. Schlicher. *Social Media and Social Networks for Disaster Credentialing*, U.S. Patent Application 61/653,024, filed May 30, 2012.

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