ORNL package tracking system takes social media to new heights

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What has made the Internet such a success could help change the way high-dollar and hazardous packages are tracked, according to Randy Walker of the Department of Energy's Oak Ridge National Laboratory.

Tracking 2.0, an ORNL system being developed by a team led by Walker, provides a clear start to finish view as an item moves to its destination, thereby eliminating the problem of proprietary and often incompatible databases used by various shippers. The system is the culmination of many years of research.

"Tracking 2.0 leverages eight years of ORNL research into supply chain infrastructure and test bed collaborations with state and local first responders, multi-modal freight service providers, private sector shippers and federal and international government partners," Walker said.

With Tracking 2.0, users will be able to share tracking data using existing tracking systems and leverage legacy and emerging technologies without having to retool the enterprise systems. In addition, users can deploy low-cost quick-to-market custom tools that combine proven security practices with emerging social computing technologies to network otherwise incompatible systems.

All codes translate to Uniform Resource Locators that point to tracking information. This address takes on the role of a permanent and unique "Virtual Resource Identifier," but does not require a priori agreement on

a universal standard by all the stakeholders, which Walker described as "a difficult and open-ended process."

The system offers the ability to dynamically incorporate and associate searchable user-defined tags to the Virtual Resource Identifier. These tags are contributed incrementally by the various partners involved in the progress of the shipment, but they do not interfere with the seamless operation of the whole system.

Walker sees Tracking 2.0 as being a game changer that has been tested worldwide.

"The Internet with its seemingly endless stream of data has dramatically changed our ability to search and find information," Walker said. "We believe the same underlying social media and social networking methods that permit users to share photos and keep in touch with their friends and family can be repurposed to help supply chain stakeholders."

The system was developed in large part to help ensure the safe shipment of isotopes, which ORNL produces for industry, medicine and research. While the system has passed several tests, next up is a demonstration using a commercial isotope supply chain and next-generation sensor technologies, said Walker, a member of the Computational Sciences and Engineering Division.

Provided by Oak Ridge National Laboratory

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