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Important News for Law Enforcement Technology Managers: National Information Exchange Model (NIEM) Release 2.0

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Law enforcement executives are increasingly asked to share information with other agencies both in law enforcement and in other domains. As local crime rates increase, police chiefs are eager to obtain appropriately analyzed intelligence from federal agencies, fusion centers, and other communities such as schools to prepare not only for potential terrorist acts but also for more and more acts of violence playing out in schools and in the streets. An increasing amount of information is already available for such purposes, but the sheer bulk of information and its timely delivery require the automated exchange of information. Without standards for such information exchange, connecting computer systems can be extremely costly—often beyond the reach of agency budgets. When the U.S. Departments of Justice and Homeland Security formed a partnership to develop a National Information Exchange Model (NIEM), police executives saw a means to lower the costs of information sharing and to implement a level of cross-domain information sharing that far exceeds those of previous systems.

The initial release (1.0) of the NIEM allowed agencies to explore the world of cross-domain automated information sharing, but the experience gained using release 1.0 to design exchanges led the user community to seek to incorporate additional requirements into the model.

Release 2.0 of the NIEM is now finished and ready for production use as a model for facilitating the implementation of information exchanges among the multiple communities participating in the NIEM. This latest release has been code-named “Harmony,” as the primary work of the governance committees and the software engineers has been to create harmony across the communities of interest represented in the NIEM regarding the definitions and common usage of data components embedded in the NIEM core namespace.

The final release goes far beyond the harmonization effort and encompasses thousands of changes to improve and extend the usefulness of the model in multiple communities. The release incorporates new data components to support the National Data Exchange (N-DEx) program of the Federal Bureau of Investigation (FBI), as reflected in the latest version of the N-DEx information exchange package documentation (IEPD). Release 2.0 also includes new data components to support suspicious activity reporting and the National Institute of Standards and Technology (NIST) biometric standards.

Several data objects were remodeled in order to remove duplication, reduce complexity,

facilitate reuse, and establish consistency. One example involves the revision of three similar components: Facility, Structure, and Building. IEPD work indicated that some degree of duplication existed among these objects and that users often confused them. Stakeholders identified the similarities and differences among these objects and developed and presented alternative models for group review. After discussion and further revisions, the NIEM Business Architecture Committee (NBAC) adopted a single component for the generic object Facility, which consolidates the characteristics and structure of all variations as needed and which is specialized in the Justice domain to represent its requirement for a correctional facility.

During the development of this new release, subject matter experts found that there were common objects used in multiple different exchanges that covered essentially the same subject. An example was the data associated with a passport. The various communities of interest who wanted to exchange passport information came together and reconciled their slight differences to create a single object defining a passport. Now this common definition and structure can be used in any exchange without having to check them against several different definitions and structures.

In addition, the governance structure was refined and extended. Of interest to law enforcement executives, the NIEM now supports the ability of individual domains to issue new releases for a domain without requiring a total revision of the entire model. So the Justice domain (including law enforcement), governed by the Global Information Sharing Advisory Committee to the Attorney General, will be responsible for itself, strengthening its ability to make changes as needed without requiring collaboration across all participating domains.

Release 2.0 will be accompanied by new tools to help develop the IEPD. In addition to the subschema generator tool, there is a migration assistance tool, which helps exchanges built using the Global Justice XML Data Model (GJXDM) transition to the NIEM and those built using NIEM release 1.0 transition to 2.0.

The NIEM is on a fast track to fulfill its promise as a national basis for information exchange across multiple communities of interest. The Program Manager for the Information Sharing Environment (PMISE) has declared that the NIEM will be the standard for information exchanges related to counterterrorism information between federal agencies and the state and local law enforcement community. The FBI has chosen the NIEM as the foundation for submitting information to the FBI's N-DEX system. Projects are under way to use the NIEM as the basis for defining information exchanges in New York, Florida, Texas, and Missouri, and preliminary efforts are under way in other states. The Departments of Homeland Security and Justice have both elected to use the NIEM for all future system development.

For updated information, to download the NIEM 2.0 release candidate, and to subscribe to the NIEM News e-mail list, visit www.niem.gov. The author may be reached via e-mail at Paul.wormeli@ijis.org. ■

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