

NATIONAL INFORMATION EXCHANGE MODEL (NIEM)

PENNSYLVANIA'S COURT CASE EVENT GJXDM TO NIEM (G2N) PILOT PROJECT

Synopsis

The purpose of this case study is to highlight the successful development of a NIEM 2.0-conformant Information Exchange Package Document (IEPD) for Pennsylvania's Court Case Event Messages through Pennsylvania's Justice Network (JNET) and to draw attention to resulting documentation—NIEM Adoption Whitepaper, Performance Measurement Plan, and Lessons-Learned Report—that can guide future NIEM implementation efforts.

Agency Overview

The Pennsylvania Justice Network (JNET) is the Commonwealth's primary public safety and criminal justice information broker. JNET's secured justice site provides users with a common online environment for users to access public safety and criminal justice information. This critical information comes from various contributing municipal, county, state, and federal agencies. JNET's secure site provides access to more than 33,000 practitioners located throughout the Commonwealth's 67 counties, as well as federal and state agencies. JNET provides these practitioners with the ability to conduct secure investigations, research, and inquiry in a Web- and message-based environment.

JNET provides a messaging and service bus infrastructure to facilitate XML-based secure data exchanges to improve public safety. Agencies currently contributing exchange information to JNET include the state police, Department of Corrections, Board of Probation and Parole, Administrative Office of Pennsylvania Courts (AOPC), Juvenile Court Judges Commission, Department of Transportation, Department of Public Welfare, Department of Health, Pennsylvania Sentencing Commission, Pennsylvania Commission on Crime and Delinquency, and various counties. JNET has reached a key milestone with its governance, processes, and documentation to provide a comprehensive approach to adopting NIEM for both JNET and, eventually, the Commonwealth Enterprise.

Challenge

In early 2002, the JNET Data Conflict Subcommittee spent considerable effort reviewing the amount of data conflict

Executive Summary

Challenge

Recently, JNET merged its existing message management and approval document with its previous GJXDM development methodology to create a single comprehensive NIEM message development process. The Administrative Office of Pennsylvania Courts (AOPC), Court Case Event Message (CCE) is the largest data exchange currently available in JNET, with more than 300 components. The CCE is currently GJXDM-conformant, and JNET selected the CCE transactions to develop the first NIEM-conformant message using the JNET NIEM repeatable procedures.

Solution

The funds appropriated to JNET through the National Governors Association (NGA) and the Bureau of Justice Assistance (BJA) were used to create a pilot conversion of the AOPC Court Case Event Message (CCE) from GJXDM to NIEM 2.0 using the newly drafted JNET NIEM message development process. The CCE GJXDM to NIEM IEPD development process was used to better understand the effort required to convert GJXDM messages to NIEM, the best practices for converting existing GJXDM messages to NIEM, and the advantages of NIEM over GJXDM.

Results

Results of this project include the creation of a NIEM 2.0 Court Case Event (CCE)-conformant IEPD, completion of all required IEPD artifacts, and publication to the Pennsylvania Enterprise Asset Repository (PEAR) and the U.S. Department of Justice (DOJ) IEPD Clearinghouse for use by other states. Results also include the development of a NIEM Adoption Whitepaper that outlines the best practice for moving GJXDM messages to NIEM, a Performance Measurement Plan including performance measures that benchmark conversion of existing exchanges, and a Lessons-Learned Report that summarizes the progress and various lessons learned throughout the GJXDM to NIEM project.

with the existing JNET messages. The JNET office provided general guidance and oversight in the construction of initial messages with JNET Message Guidelines Volumes 1 and 2. While these documents did a fair job of limiting the amount of data conflict in a collaborative data-sharing mode, they failed to provide a reusable, more widely accepted, and

standardized development process that would eliminate data conflict. In 2003, DOJ began work on the Global Justice XML Data Dictionary (JXDD), which quickly moved through four prerelease versions to an official release. During this rapid technical release schedule, Pennsylvania provided technical input to what would eventually become a national model. In 2004, DOJ produced an operational release of the GJXDM. Soon thereafter, the JNET Steering Committee officially adopted the GJXDM as the basis for all new message development within JNET. The GJXDM currently remains the approved standard for JNET message design and development.

During 2004, JNET recognized the need to create a standardized development process that would promote consistency, efficiency, and reuse. A small group was formed in 2005 to develop a codified methodology for developing GJXDM message exchanges in JNET. By late 2005, JNET had created a repeatable process for developing GJXDM exchanges. Recently, JNET merged its existing message management and approval document with its previous GJXDM development methodology to create a single, comprehensive NIEM message development process. This procedure now creates a repeatable NIEM message development process that also provides project and development methodology guidance on JNET message development projects. The Court Case Event Message (CCE) was developed by the Administrative Office of Pennsylvania Courts (AOPC) as a standard GJXDM container for event-driven transactions from Pennsylvania-based Court Case Management Systems. Currently, the CCE is published from the following events: case initiation, bindover, sentencing, warrant issued, warrant cancelled, presentence investigation ordered, presentence investigation completed, mental health evaluation ordered, mental health evaluation completed, and disposition. The CCE is the largest data exchange currently available in JNET, with more than 300 components. JNET selected the CCE transactions to develop the first NIEM-conformant message using the JNET NIEM repeatable procedures.

Solution

The funds appropriated to JNET through the National Governors Association (NGA) and the Bureau of Justice Assistance (BJA) were used to create a pilot conversion of the AOPC Court Case Event Message (CCE) from GJXDM to NIEM 2.0 using the newly drafted JNET NIEM message development

process. This was the first NIEM 2.0 message created using the JNET NIEM repeatable procedures. The CCE GJXDM to NIEM IEPD development process was used to better understand:

- The effort required to convert GJXDM messages to NIEM.
- The best practices for converting existing GJXDM messages to NIEM.
- The advantages of NIEM over GJXDM.

The reference CCE IEPD package was developed to store the message development artifacts required nationally and by Pennsylvania; the IEPD was developed and incorporated into the Pennsylvania Enterprise Asset Repository (PEAR) system and the federal NIEM repository. The PEAR was updated to provide starting points for new message exchanges and to promote consistent usage of NIEM 2.0 throughout the Pennsylvania Public Safety Community of Practice. The PEAR will be used by all authorized state agencies to discover and reuse Pennsylvania-based exchanges and other assets.

The IEPD was developed with input from a project team made up of an extended team (executive management group), a core team (responsible for project delivery), and two technical teams—a “raw conversion group” that used the migration tools provided on the NIEM Web site and a “native conversion group” that took a “start-from-the-beginning approach” using the domain model. These conversion efforts were combined to finalize a merged schema.

Results

Results of this project include the creation of a NIEM 2.0 Court Case Event (CCE)-conformant IEPD, completion of all required IEPD artifacts, and publication to the Pennsylvania Enterprise Asset Repository (PEAR) and the U.S. Department of Justice IEPD Clearinghouse for use by other states. The message repository has also been updated to provide starting points for new message exchanges and to promote consistent usage of NIEM 2.0 throughout the Pennsylvania Public Safety Community of Practice. Other deliverables from this project include:

- The development of a NIEM Adoption Whitepaper that outlines the best practice for moving GJXDM messages to NIEM.
- A Performance Measurement Plan including performance measures that benchmark conversion of existing exchanges.
- A Lessons-Learned Report that summarizes the progress and various lessons learned throughout the GJXDM to NIEM project.