



# Pennsylvania's Global XML 3.0 Document Creation Process (DCP)

# The Pennsylvania Justice Network (JNET<sup>tm</sup>)

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## The Justice Network

- **Pennsylvania's Justice Network (JNET) is a secure virtual system for the sharing of justice information by authorized users.**
- **JNET is a collaborative effort of municipal, county, state, bordering states and federal justice agencies to build a secure integrated justice system.**
- **JNET provides a common on-line environment whereby authorized users can access offender records and other justice information from participating agencies.**
- **The JNET approach to information sharing has been cited by the National Governor's Association (NGA) Center for Best Practices as a national model.**
- **JNET is governed by a Steering Committee, each Steering Committee Member has an opportunity to vote on how the JNET budget is allocated, how and what data is shared, and all policy issues and technical issues affecting their organization and integrated justice as a whole.**

# Introduction to the Business Problem

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- JNET was implemented in 1997 to provide a “virtual single system” for criminal justice and public safety information sharing.
- JNET data management is characterized by:
  - A single point of entry for shared data items
  - Incremental updating of records as an individual progresses through the justice process
  - Timely entry of information
  - Timely availability of information to authorized users

# Introduction to the Business Problem

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- By 1999:
  - JNET began message based support of “case file transfers” between agencies.
  - Established XML as internal messaging standard.
  - Avoided “turf issues” by leveraging existing data systems & ensuring agency independence, autonomy, & control.
  - Agencies published case information to JNET & other justice agencies subscribed to desired information.
  - As a result, cases were compiled as offenders moved through the justice system.

*However, at the time we knew...*

# Introduction to the Business Problem

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- Agencies/counties have data independence.
  - Agency has its own legacy data & their own unique business data model.
  - Data elements in JNET are based on each agency's data model.
- Lack of JNET data management standards.
  - No JNET data dictionary
  - No metadata repository
  - No mapping tools

*Therefore...*

# Introduction to the Business Problem

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- 2000 - 2003:
  - JNET established **Data Conflict Subcommittee** & began reconciling disparate data between agencies.
  - A “data dictionary” for the justice community was identified as a critical tool needed to help address Data Conflict & inter-agency data/information sharing.
  - To minimize data conflict & to standardize message development, JNET adopted the Global Justice XML Data Model (GJXDM) 3.0.
  - To improve information exchange efficiencies, JNET embraced the SEARCH Consortium's Justice Information Exchange Model (JIEM).
  - JNET & PennDOT deployed an enhanced Certified Driver History query application based on GJXDM.

# The Business Problem Statement

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- The JNET Steering Committee recognized a need for a repeatable Global XML compliant message exchange process.
  - This process must define artifacts, documents, & procedures describing the exchange.
  - Technical guidelines must assist ALL Commonwealth agencies in developing Global XML schemas & other required artifacts from the message development procedures.

# Data Sharing – Pre-GJXDM

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- Data schema defined by data owner.
- Rules & privileges defined by owner, not data subscriber/recipient/consumer.
- Required unique/individual schema changes for multi-agency consumption.
- Required strict message monitoring & maintenance.
- New message development & deployment took average of 9 months.

# GJXDM

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- What is GJXDM?
  - The Global Justice XML Data Model (GJXDM) is intended to be a data reference model for the exchange of information within the justice and public safety communities.
  - The GJXDM is sponsored by the U.S. Department of Justice (DOJ) Office of Justice Programs (OJP), with development supported by the Global Justice Information Sharing Initiative's (Global) XML Structure Task Force (GXSTF).

# GJXDM

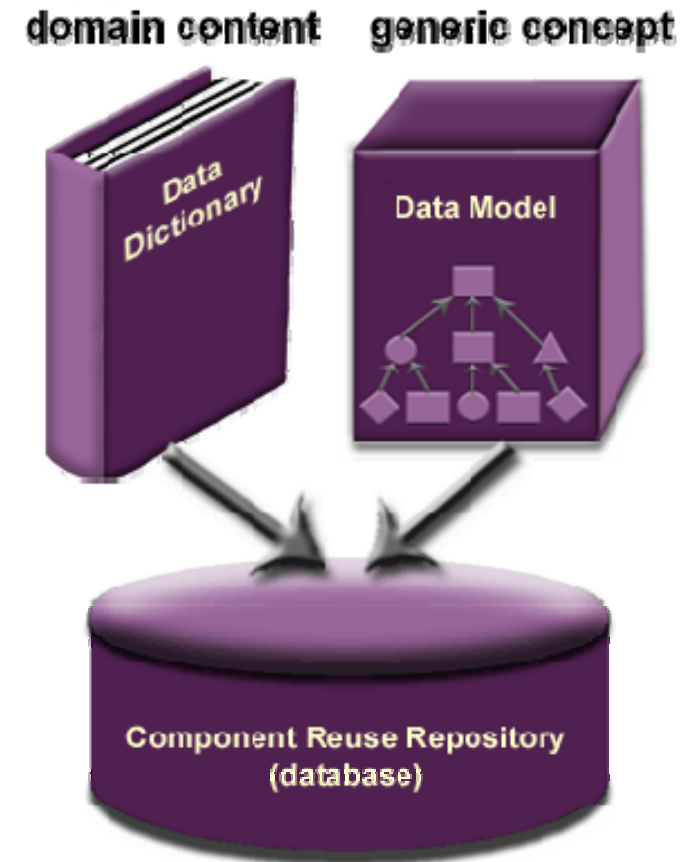
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- What is GJXDM?
  - The Global Justice Extensible Markup Language (XML) Data Model (GJXDM) is an XML standard designed specifically for criminal justice information exchanges.
  - It provides law enforcement, public safety agencies, prosecutors, public defenders, and the judicial branch with a tool to effectively share data and information in a timely manner.
  - GJXDM removes the burden from agencies to independently create exchange standards, and provides flexibility to deal with unique agency requirements and changes.

# GJXDM

## • Components of GJXDM?

- GJXDM is a comprehensive product that includes:
  - Data Model
    - defines structure and organization
  - Data Dictionary
    - identifies content and meaning
  - Component Reuse Repository
    - a registry/database



# The Technical Problem Statement

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- *A message repository must be developed to store Global XML message development artifacts (reusable components) and to help “drive” the development process.*
  - The repository would be used by state agencies to create applications to produce and/or consume XML messages defined by existing schemas & artifacts.
  - The message repository would be used to provide *starting points* for new message exchanges & *promote consistent usage of the Global XML*.

# Project Introduction

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- 2004: Began development of the Global XML Document Creation Process (DCP)
- 2006: Successfully completed, as proposed, National Governors Association (NGA) grant funded pilot project activity:
  - Developed Project Charter & Business Requirements
  - Assessed Resource Allocation
  - Developed Communication Plan
  - Developed Message Development Process Documentation
  - Evaluated, Selected & Implemented Tools
  - Validated the defined Process

# Documents Created

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- Created a *repeatable process* for Global XML compliant message exchanges in the JNET infrastructure.
- A process was documented that identified a clear set of artifacts, documents, & procedures describing each Global XML message exchange.
- The resulting artifacts were grouped into two major sets of documents & *serve as a starting point for agencies*:
  1. JNET GJXDM Message Development Document
  2. JNET GJXDM Message Technical Guidelines Document

# Documentation Validation

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- A live process was executed for a new Court of Common Pleas, Domestic Relations, Pennsylvania Child Support Enforcement Bench Warrant Message.
  - SME's from the PA-DPW performed the following roles:
    - Message Producer, Data Lead, Data Owner, & Business Process Owner.
  - SME's from JNET performed:
    - 1st Message Consumer, Project Manager, Data Architect, Message Developer, Message Project Lead, Message Requirements Lead, Data Mapping Lead, & Schema Development Lead.
  - SME's from the AOPC, DOC, PSP & PCCD performed:
    - JNET Agency Advisory Subcommittee Lead, Data Conflict Lead, Event Messaging Lead, JNET Steering Committee Conflict Authority, Legal Authority, & Issues Coordinator.

# Documentation Validation

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- This team performed a step-by-step execution of three major workflows:
  1. Project Planning Workflow
  2. IEPD Development Workflow
  3. Message Review Workflow

Publish Message Workflow was executed after the “live” documentation validation was completed.

- All entities were not ready to “turn on” the message.
- The Child Support Enforcement Bench Warrant Message will be executed in conjunction with the project plan schedule (currently being finalized).

# Repository Requirements

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- A message repository stores message development artifacts.
- The repository is to be used by state agencies to facilitate creation of applications that produce and/or consume Global XML compliant messages defined by schemas & other artifacts stored therein.
- The message repository is to be used to provide a *starting point for new message exchanges* & to *promote Global XML consistency*.
  - Federal, State, County & Local/Municipal Exchanges

# Keys to Success

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- Agency commitment & participation.
- Get “Buy-in” throughout participation.
- Create a clear task plan.
- Create a Communications Plan & “market” it.
- Develop a project charter & set a mutually agreed upon scope.
- Gather business requirements.
  - Driven by “business need” not by the technology.
- Allocate resources & re-evaluate throughout the project.



# Keys to Success (cont.)

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- Schedule weekly meetings & insist on team member engagement, coordination & collaboration.
- Assign appropriate resources, driven by stakeholders:
  - SME's
  - GJXDM trained
  - XML Savvy
- Assign a Project Manager.
- Assign an architecture resource.
- Ensure strong executive leadership.
- Engage all stakeholders, provide regular status and feedback.



# Results

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- Message schema is no longer defined solely by the data owner.
- Federal standards dictate schema structure.
- Message Publish/Subscribe is truly a one-to-many relationship.
- Funding is tied to GJXDM compliance.

# Outcomes & Benefits

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- **For the user:**
  - Consistency across domains.
  - “Business Process” focus is absent technical detail.
  - Business users can and do become comfortable with a single, consistent dictionary (GJXDM, NIEM).
- **For the public:**
  - Consistency across justice entities compliments public safety initiatives.
  - More timely development of interagency exchanges.
  - Implementation of the piloted Child Support Enforcement Bench Warrant event message enabled more effective child support collection effort.
- **For the practitioner:**
  - Guidelines for development teams.
  - Documented deliverables for contract or project proposals.

# Outcomes & Benefits

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- The GJXDM Data Model can help to make criminal justice information sharing:
  - Easier
  - Quicker
  - Less expensive for agencies
- It does this by offering standard tools, techniques, and data structures for agencies.
- Using GJXDM, the opportunity for proactive justice information sharing is enhanced, arming everyone across the justice and public safety communities with the most accurate and up-to-date data to make the very best decisions possible.
- This helps to increase law enforcement and criminal justice agency efficiency, public safety, and national security.

# Real Benefits

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Using the new toolset, the Pennsylvania team targeted child support warrants and began a six week implementation of a *Pennsylvania Child Support Enforcement System (PACSES) Bench Warrant Message*. JNET was the first to offer this data statewide and for the first time, child support warrants were standardized to provide accessibility by authorized practitioners throughout Pennsylvania.

Two months following message release, over 12,000 outstanding warrant queries and 8,900 notification event messages for offenders with outstanding child support warrants were confirmed. In one case, a notification **message helped to locate a defendant with \$70,000 in child support arrears.**

## Real Benefits (cont.)

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- Criminal justice practitioners have access to an additional JNET provided service that supports the servicing and collection of over \$2 billion in fiduciary responsibilities,
- The citizens of Pennsylvania experience more effective and dynamic child support enforcement; directly benefiting the children of Pennsylvania,
- The Commonwealth has a new repeatable GJXDM process for all integrated technology solutions.

# Questions

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