

Information Exchange Package Master Documentation Theft Report Version 1.0

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1 Introduction

The purpose of this document is to provide documentation for version 1.0 of the Theft Report Information Exchange Package. The Theft Report is a simple sample IEPD written for educational purposes to support a series of articles on developerWorks entitled *Creating a NIEM IEPD*. The article series can be found at:

<http://www.ibm.com/developerworks/xml/library/x-NIEM1/index.html>

The structure and some of the text of this document were inspired by the master documentation for the *Law Enforcement National Data Exchange (N-DEx) Data Submission IEP, Incarceration/Booking/Probation/Parole*, version 2.1.

2 Purpose and Scope

The purpose of the Theft Report IEPD is to provide participating agencies documentation that lists exchange specifications to be used for the exchange of criminal justice information that is complete, accurate, and timely. This release of the Theft Report IEPD is based on the NIEM IEPD Template Requirements document and contains written documentation, schemas, instance documents, style sheet, a mapping spreadsheet, and additional documentation.

3 List of Artifacts

The following artifacts are included in the IEPD:

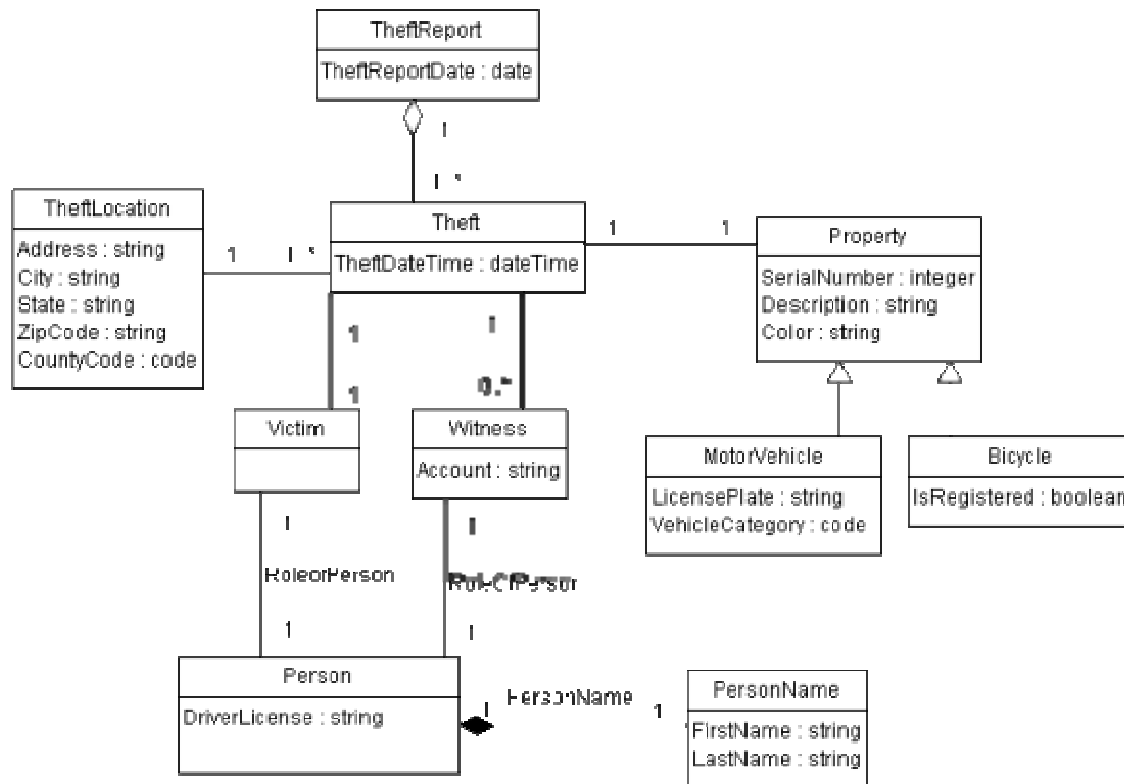
Artifact File Name	Purpose
catalog.html	Hyperlinked catalog file for IEPD.
documentation/changelog.txt	Change log.
documentation/master/Master Documentation.pdf	This document.
metadata.xml	IEPD metadata instance.
documentation/model_final.png	Domain model diagram, as a PNG image.
documentation/niem3mapping.xlsx	Component Mapping Template (CMT) spreadsheet containing mapping of domain model entities to NIEM, plus extensions.
exchange_files/schema/exchange/1.0/theftreport-exchange.xsd	NIEM-conformant exchange schema.
exchange_files/schema/extension/1.0/theftreport-extension.xsd	NIEM-conformant extension schema.
exchange_files/schema/subset	Directory containing NIEM subset schemas.
exchange_files/wantlist/wantlist.xml	Wantlist for NIEM subset used by Theft Report schemas.
exchange_files/sample/sample_instance.xml	A sample Theft Report instance.
exchange_files/sample/theftreport.xsl	An XSLT stylesheet that can be used to display an XML instance.

4 Theft Report Overview

The purpose of the Theft Report is to report thefts of motor vehicles and bicycles in the state on a daily basis. The Theft Report contains information about a theft of a motor vehicle or bicycle, including the theft date, location, description and identifiers of the stolen property, and victim and witness information.

4.1 Domain Model

The UML class diagram that represents the domain model is as follows:



4.2 Data Objects

The Theft Report defines several data objects that are based on NIEM objects:

- **Theft** is the actual theft incident.
- **TheftLocation** is the location where the theft took place.
- **Property** is the property that was stolen, which has either a Bicycle or MotorVehicle specialization.
- **Bicycle** is a bicycle.
- **Motor Vehicle** is a motorized vehicle, e.g. a car or truck.
- **Victim** is the victim of the theft, i.e. the owner of the stolen property.
- **Witness** is a witness of a crime.
- **Person** is a person who has a role of either Victim or Witness.
- **TheftReport** represents the entire report itself.

5 XML Schemas

This section references the XML Schemas used to define the Theft Report message. The schemas use and are conformant to NIEM version 2.1.

5.1 NIEM Subset Schemas

This group of schemas is included in the `exchange_files/schema/subset/niem` directory of the IEPD directory structure.

5.2 Extension XML Schema

The extension schema is `theftreport-extension.xsd` in the `exchange_files/schema/extension/1.0` directory. It uses the namespace `http://datypic.com/theftreport/extension/1.0` and contains extensions to the NIEM model.

5.3 Exchange XML Schema

The exchange schema is `theftreport-exchange.xsd` in the `exchange_files/schema/exchange/1.0` directory. It uses the namespace `http://datypic.com/theftreport/exchange/1.0` and contains the declaration of the root element, `tr:TheftReport`, and its type.

6 Additional Business Rules

This section identifies business rules associated with the IEPD. These rules were identified in the course of developing the domain model and NIEM mappings, and are in addition to what can be enforced by the XML schemas.

TR-1.0-1. A Theft must be associated with at least one Vehicle or Bicycle.

TR-1.0-2. Each Person must be involved as a role of either Victim or Witness or both.

TR-1.0-3. Each Location must be associated with at least one Theft.

TR-1.0-4. Each Witness must be associated with at least one Theft.

TR-1.0-5. Each Victim must be associated with at least one Theft.

TR-1.0-6. Each Vehicle must be associated with at least one Theft.

TR-1.0-7. Each Bicycle must be associated with at least one Theft.

7 Participants

Datypic, Inc. (<http://www.datypic.com>) coordinated the development of this IEPD.

The following individuals participated in the development:

Participant	Organization	Workgroup Role
Priscilla Walmsley	Datypic	Modeling, XML Development
John Doe	Datypic	SME

8 Testing and Conformance

This section provides information on any testing or conformance activities.

8.1 Testing

Datypic, Inc. tested the integrity of the IEPD schemas by validating the schemas and sample instances with Xerces Java XML Parser version 2.9.1.

8.2 Conformance

The IEPD has been reviewed for conformance by the participants against:

- *NIEM Naming and Design Rules (NDR)*, version 1.3
- *Requirements for a National Information Exchange Model (NIEM) Information Exchange Package Documentation (IEPD) Specification*, version 2.1
- *NIEM Conformance*, version 1.0