Information Exchange Package Master Documentation
Law Enforcement National Data Exchange (N-DEx) Data Submission IEP
Incident/Arrest Version 2.1

Updated 1/27/2009

Introduction

The purpose of this document is to provide documentation for version 2.1 of the Law Enforcement National Data Exchange (N-DEx) Incident/Arrest Data Submission Information Exchange Package. N-DEx will provide law enforcement agencies (LEAs) with a powerful new investigative tool to search, link, analyze and share criminal justice information (e.g., incident and case reports, etc.) on a national basis to a degree never before possible.

The structure of this document is intended to be compliant with version 1.1 of "GJXDM Information Exchange Package Documentation Guidelines" as published by the Global XML Structure Task Force (XSTF), and includes contents based on recommendations detailed in version 2.1 of "Requirements for a National Information Exchange Model (NIEM) Information Exchange Package Documentation (IEPD) Specification".

This IEPD leverages the Logical Entity eXchange Specification (LEXS), specifically the LEXS 3.1.4 Publish and Discovery (PD) specification.

1. Purpose and Scope

The purpose of the N-DEx 2.1 Incident/Arrest IEPD is to provide law enforcement agencies documentation that lists exchange specifications to be used for the exchange of complete, accurate, and timely criminal justice information, which is classified as Law Enforcement Sensitive, Sensitive But Unclassified, or Controlled Unclassified Information. This release of the N-DEx 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.

2. List of Artifacts

The following artifacts are included in the IEPD:

Artifact File Name	Purpose
Catalog.html	Hyperlinked catalog file for IEPD.
Changelog.txt	Change log.
docs/Master Documentation.doc	This document.
metadata.xml	IEPD metadata instance.
docs/High Level Model.vsd	High level domain model diagrams, in Microsoft Visio format.
docs/High Level Model.pdf	High level domain model diagrams, in PDF format.
docs/Associations Diagram.vsd	Diagrams representing how high-level objects in the domain model can be linked via Associations, in Microsoft Visio format.
docs/Associations Diagram.pdf	Diagrams representing how high-level objects in the domain model can be linked via Associations, in PDF format.
docs/N-DEx LEXS NIEM mapping.xls	Component Mapping Workbook (CMW) spreadsheet containing mapping of domain model entities to NIEM and LEXS, plus extensions.
docs/N-DEx LEXS NIEM code tables.xls	Spreadsheet containing all code lists available for N-DEx submissions.
docs/N-DEx ConOps.pdf	Concept of Operations for the N-DEx program.
docs/N-DEx Data Submission Connectivity-v1.0 Final.pdf	Provides Law Enforcement Agencies (LEAs) with an informational overview for connecting to the N-DEx system and submitting data.
docs/LEXS 3.1 User Guide-rev9.pdf	LEXS 3.1 User Guide. Includes background information on LEXS 3.1.
docs/NDEx-NIEM-2.0-Migrated-Items-Report.pdf	N-DEx summary of elements migrated from NIEM 1.0 to NIEM 2.0.
docs/LEXS-3.0-to-3.1-Digest-and-Subset-Changes.pdf	LEXS summary of NIEM 1.0 to 2.0 subset changes plus extensions impacted by NIEM 2.0.
docs/LEXS-NIEM-2.0-Migrated-Items-Report.pdf	LEXS summary of elements migrated from NIEM 1.0 to NIEM 2.0.
xsd/ndexia/ndexia/2.1/ndexia.xsd	NIEM-conformant N-DEx extension schema.
xsd/ndexia/niem-constrained/	Directory containing N-DEx constrained NIEM subset schemas.
xsd/ndexia/wantlist.xml	NIEM wantlist for N-DEx subset schemas.
xsd/ndexia/ndexia-codes/2.1/ndexia-codes.xsd	NIEM-conformant N-DEx extension schema for code lists.
xsd/ndexia/lexs/digest/3.1/digest.xsd	Subset NIEM-conformant LEXS extension schema that defines data content used directly by ndexia.xsd.
xsd/ndexia/lexs/library/3.1/library.xsd	Subset LEXS library schema used directly by ndexia.xsd.
xsd/ndexia/lexs/lexs/3.1/lexs.xsd	Subset LEXS extension schema that defines LEXS structures and metadata used directly by ndexia.xsd.
xsd/lexs/digest/3.1/digest.xsd	NIEM-conformant LEXS extension schema that defines data content.
xsd/lexs/codes/3.1/codes.xsd	NIEM-conformant LEXS extension schema that defines code lists.

xsd/lexs/library/3.1/library.xsd	LEXS library schema.
xsd/lexs/lexs/3.1/lexs.xsd	LEXS extension schema that defines high level structures and metadata.
xsd/lexs/publish-discover/3.1/publish-discover.xsd	LEXS exchange schema.
xsd/lexs/niem-constrained	Directory containing LEXS constrained NIEM subset schemas.
xsd/lexs/wantlist.xml	NIEM wantlist for LEXS subset schemas.
xml/	Directory containing sample instances and spreadsheet describing contents of samples.
xml/Scenario Spreadsheet.xls	Spreadsheet documenting sample instances.
xml/xsl/	Directory containing a stylesheet and associated icons that can be used to display an XML instance.

3. N-DEx, LEXS, and NIEM Interaction

This section provides a high level overview of how N-DEx, LEXS and NIEM interact in order to represent N-DEx submissions, and what objects are available for representation of data.

3.1.Background

N-DEx utilizes the LEXS 3.1.4 Publish/Discover (PD) specification to represent a submission. LEXS 3.1.4 in turn utilizes NIEM 2.0.

LEXS provides a layered model, where the LEXS Digest provides a well-defined representation of people, places, activities, and things as well as associations among various objects. Programs that need additional data not provided in the Digest supply that data in one or more Structured Payloads. Therefore, when reviewing the LEXS 3.1 documentation, it should be kept in mind that N-DEx-specific information is incorporated in the N-DEx Structured Payload.

Structured Payloads are based on schemas created by communities outside of LEXS. In the case of N-DEx IEPDs, the N-DEx program has defined schemas that include data elements beyond what is in the LEXS Digest. The LEXS Structured Payload provides a container for instances based upon these community-created schemas. This means that the N-DEx schemas define the data in the Structured Payload, and the LEXS schemas define all other content (including the Structured Payload metadata). The N-DEx schemas includes data elements from NIEM, N-DEx data elements to represent data not included in NIEM, plus a few LEXS elements that are used to tie the content of the Structured Payload to the Digest. In essence, an N-DEx submission can be viewed as a LEXS instance and an N-DEx instance "glued together" into a single instance that includes all content.

LEXS requires that each Structured Payload include metadata, and that the Structured Payload data be contained in a single root element. The contents of the Structured Payload are a separate XML instance contained inside the Structured Payload element.

The *LEXS 3.1 User Guide-rev8.pdf* file in the *docs/* directory provides background on the LEXS program, and also describes how LEXS works, how instances are structured, how LEXS works with NIEM, etc.

3.2.N-DEx Data Objects

LEXS defines a set of high level objects to represent data. N-DEx utilizes these objects, in some cases adding additional content to the LEXS-defined objects; for example to define an N-DEx Person that adds content to a LEXS Person. In other cases, N-DEx defines more specific objects that utilize LEXS objects as their basis; for example to define an N-DEx Precious Metal object that builds upon a LEXS Substance object. N-DEx objects and the LEXS object upon which they are based are specified in the NIEM and LEXS Business Rules that are part of section 5.4.

N-DEx also defines two high level objects which are not based on any LEXS object: Evidence and Tool.

Since LEXS requires that each Structured Payload contain a single root element, N-DEx has defined four reports, each of which can be the root element in a Structured Payload.

- Service Call Report is for submissions where there is a Service Call activity without Incident, Arrest, Warrant or Missing Person Occurrence activities.
- Missing Person Report is for submissions when there is a Missing Person Occurrence activity, but not Incident, Arrest, Warrant or Offense activities; a Service Call activity may be included.
- Arrest Report is for submissions that include an Arrest activity and at least one Offense activity, without Incident, Service Call, or Missing Person Occurrence activities; a Warrant activity may be included.
- Incident Report is for submissions that include an Incident activity, and may include Arrest, Offense, Warrant and Service Call activities.

There are some N-DEx business rules that state that if a code element is populated, then a corresponding text element must also be populated. At first glance, this seems redundant. However, since all LEXS implementations are required to "understand" the LEXS Digest, applications that do not understand N-DEx (meaning they do not understand the N-DEx Structured Payload) may still be able to provide data to N-DEx since N-DEx consumers understand the LEXS Digest. So in cases where a code value is part of the N-DEx Structured Payload while the corresponding text representation is in the Digest, there are business rules that state both should be populated. This helps to ensure maximum interoperability between LEXS applications that may or may not understand the N-DEx Structured Payload.

In a similar fashion, there are some N-DEx business rules that state that a text field should be populated in cases where the Digest object is "generic", such as Activity, while the N-DEx Structured Payload object is more specific, such as Incident. By populating the text elements specified in the business rules, LEXS implementations that do not understand the N-DEx Structured Payload still have information that says the activity is an Incident.

4. Structured Payload XML Schemas

This section references the XML Schemas used to define the Structured Payload. Note that all references in this section are to N-DEx schemas; LEXS has its own schemas which are covered in the LEXS User Guide, which is in the *docs/LEXS 3.1 User Guide-rev8.pdf* file.

4.1.NIEM Constrained Subset Schemas

This group of schemas is included in the *xsd/ndexia/niem-constrained* directory of the IEPD directory structure.

4.2.Extension XML Schemas

These schemas include *ndexia.xsd and ndexia-codes.xsd* which are in the *xsd/ndexia/ndexia/2.1* and *xsd/ndexia/ndexia-codes/2.1* directories, respectively, of the IEPD directory structure.

4.3.Document XML Schema

N-DEx does not include an N-DEx specific document schema since N-DEx utilizes LEXS. The *publish-discover.xsd* schema, which is in the *xsd/lexs/publish-discover/3.1* directory of the IEPD directory structure, is the document schema used by N-DEx.

5. Additional IEPD Provisions

This section provides additional definitions, business rules, and other information required to implement the IEPD over and above that specified in the XML Schemas.

5.1.Additional Property Definitions

The IEPD includes properties, i.e. elements and attributes, which are not in NIEM 2.0. Some of these properties were added as part of LEXS 3.1, while some are specific to N-DEx. These additional properties are shown in the *docs/N-DEx LEXS NIEM mapping.xls* file with the namespace alias “lexsdigest” for LEXS additions, and “ndexia” for N-DEx additions.

LEXS and N-DEx both require additional code tables that are not in NIEM. These code tables are also shown in the *docs/N-DEx LEXS NIEM mapping.xls* file with the namespace alias “lexscodes” for LEXS and “ndexiacodes” for N-DEx.

5.2.Cardinality

Since the N-DEx IEPD utilizes LEXS, N-DEx “inherits” LEXS cardinality. However, LEXS was defined for a broad audience and sometimes provides more leeway than desired by N-DEx. Therefore, N-DEx restricts the cardinality of some elements in the LEXS schemas in order to better align with N-DEx requirements. Since the LEXS schemas must not be modified (in order to maintain compatibility with other LEXS implementations), these restrictions may only be defined through business rules. Rather than attempt to capture all cardinality differences as individual business rules in this document, the Component Mapping Workbook (CMW) should be used to determine the desired cardinality for individual elements and attributes. Therefore, where the cardinality in the LEXS schemas is greater than the cardinality documented in the CMW, the cardinality shown in the CMW takes precedence.

5.3.Minimal Property Set

N-DEx defines a minimal set of properties that must be included in a submission. An N-DEx Structured Payload must include an Incident Report, an Arrest Report, a Missing Person

Report, or a Service Call Report. All reports must contain the primary activity of documentation, i.e. Incident, Arrest, Missing Person Occurrence, or Service Call. Submissions may contain a combination of other objects, e.g., activities, people, places, things, etc., as there are a number of different representations that are valid.

5.4.Additional Business Rules

This section identifies business rules associated with the IEPD. These rules were identified by the N-DEx IEPD workgroup in the course of developing the domain model and NIEM mappings, or were defined to enhance compatibility among LEXS-compatible programs, or were defined by NIEM. As such, the rules below are split into two categories: N-DEx Business Rules and NIEM and LEXS Business Rules.

N-DEx Business Rules

NDEXIA-2.1-1. LEXS version value must be 3.1.4.

NDEXIA-2.1-2. Data Sensitivity classification level for each message must be SBU (Sensitive But Unclassified), LES (Law Enforcement Sensitive), or CUI (Controlled Unclassified Information).

NDEXIA-2.1-3. Data Submitter Organization ORI and Data Owner Organization ORI must be completed with the nine-character identifier (ORI) assigned by the FBI CJIS staff to the organization. Such organization must have met the established qualifying criteria for ORI assignment to identify the agency in transactions on CJIS Systems.

NDEXIA-2.1-4. Message Sequence Number must be a unique sequential number assigned to the message to differentiate a message from previous message submissions and order message processing.

NDEXIA-2.1-5. Data Submitter Contact, Data Owner Contact, and Data Item Contact must each be provided, and each must at least include Telephone Number, plus First Name and Last Name OR Last Name and Organization Name. If included, Organization Name must be spelled out, rather than abbreviated. Multiple Data Item Contacts are allowed.

NDEXIA-2.1-6. Data Item Date must be provided and must not be more recent than the date component of the Message Timestamp value.

NDEXIA-2.1-7. Data Item Status must be populated. If the submission is for an Incident Report, Service Call Report, or Missing Person Report, the field must be populated using a value found on the ndexiacodes:IncidentStatusCodeType code table. If the submission is for an Arrest Report, the field must be populated with the value “Completed” (without the quotes).

NDEXIA-2.1-8. Activity report dates must not predate activity begin dates.

NDEXIA-2.1-9. Expiration dates must not predate effective dates.

NDEXIA-2.1-10. End dates/times must not predate start dates/times.

NDEXIA-2.1-11. No more than one Incident activity may be provided per Incident Report.

NDEXIA-2.1-12. An Incident Number can be no more than 50 characters in length, must be unique to the incident, and must be provided, if Incident activity is provided.

NDEXIA-2.1-13. An Exceptional Clearance Date must not predate Incident Date or Incident Date - Start.

NDEXIA-2.1-14. The Offense and Warrant activities are considered ancillary information to other Activities, e.g., Arrest and/or Incident; therefore, Offense and/or Warrant cannot be the sole Activity(ies) within a submission.

NDEXIA-2.1-15. If Offense activity is supplied, an Offense Code must be provided.

NDEXIA-2.1-16. At least one person with an Officer role must be provided if Arrest activity is provided. The person with the Officer role is linked to the Arrest activity through use of the ArrestOfficerAssociation.

NDEXIA-2.1-17. No more than one Location may be associated to an Arrest activity. The Location is linked to the Arrest activity through use of the ActivityLocationAssociation.

NDEXIA-2.1-18. One Arrestee must be provided per Arrest activity. The Arrestee (the Person, not the role) is linked to the Arrest activity through use of the ArrestSubjectAssociation.

NDEXIA-2.1-19. An Arrest Transaction Number can be no more than 50 characters in length, must be unique to the arrest, and must be provided, if Arrest activity is provided.

NDEXIA-2.1-20. An Arrest Date must not predate Incident Date, Incident Date - Start or (Incident) Reported Date.

NDEXIA-2.1-21. A (Arrest) Narrative Account Description Date cannot predate the Incident Date, Incident Date - Start, Reported Date, (Incident) Reported Date, or Arrest Date.

NDEXIA-2.1-22. No more than one Arrest activity may be provided per Arrest Report.

NDEXIA-2.1-23. The Declaration Date for a Missing Person must not predate the Found date.

NDEXIA-2.1-24. No more than one Missing Person Occurrence activity may be provided per Missing Person Report.

NDEXIA-2.1-25. One Missing Person must be provided per Missing Person Occurrence activity. The Missing Person (the Person, not the role) is linked to the Missing Person Occurrence activity through use of the ActivityInvolvedPersonAssociation.

NDEXIA-2.1-26. A Missing Person Occurrence Number can be no more than 50 characters in length, must be unique to the occurrence, and must be provided, if Missing Person Occurrence activity is provided.

NDEXIA-2.1-27. At least one Missing Person Declaration Person must be provided for a Missing Person. The Declaration Person is linked to the Missing Person (the Person, not the role) through use of the DeclarationPersonAssociation.

NDEXIA-2.1-28. No more than one Service Call activity may be provided per Service Call Report.

NDEXIA-2.1-29. A Service Call Date must be the same as or predate Arrest Date, (Incident) Reported Date, and (Missing Person) Declaration or Found Dates.

NDEXIA-2.1-30. A Service Call Number can be no more than 50 characters in length, must be unique to the Service Call activity, and must be provided, if a Service Call activity is provided.

NDEXIA-2.1-31. Person and Organization objects must be given a “role”, either through use of a NIEM or LEXS or N-DEx role such as Subject, or through an association such as ServiceCallOperatorAssociation.

NDEXIA-2.1-32. Identification – SSN can be either 9 digits absent any dashes, spaces, or special characters of the form NNNNNNNNN, or 11 characters of the form NNN-NN-NNNN where ‘N’ is one of the digits 0 through 9. No partials or other formats are accepted.

NDEXIA-2.1-33. Identification - FBI Number, Identification – Alien Number, Identification - Driver License Number, Identification - State ID, Identification - Passport ID, Identification - US Marshal Service Fugitive ID, Registered Offender Number, Identification - Person Identification Number, and Identification - DEA Agency ID may not include any dashes, spaces, or special characters. No partials or other formats are accepted.

NDEXIA-2.1-34. If an Identification - Driver License Number, Identification - State ID, Registered Offender Number, or Identification - Person Identification Number is supplied, then either the Issuing Authority Code or Issuing Authority Text field must be provided for each number.

NDEXIA-2.1-35. If an Identification - Passport ID is supplied, then Identification - Passport Issuing Country Code must be provided if the appropriate code is available. If a code is not available, then Identification - Passport ID Issuing Country Text must be supplied.

NDEXIA-2.1-36. The unit of measurement must be provided for any measurement values, whether range or exact value.

NDEXIA-2.1-37. (Witness) Narrative Account Description Date must not predate the associated activity date.

NDEXIA-2.1-38. Model Year must be of YYYY format.

NDEXIA-2.1-39. A VIN cannot be identical to the Owner Applied ID.

NDEXIA-2.1-40. A Hull Serial Number cannot be identical to the Owner Applied ID for a Boat.

NDEXIA-2.1-41. Date or Series Year for Securities must be of YYYY-MM-DD or YYYY format.

NDEXIA-2.1-42. There are many cases where both a code list and a text field are available, for example Identification – Person Identification (PID) Type Code and Identification - Person Identification (PID) Type Text. If a text field is used, the value must be spelled out, rather than provided as a code value or abbreviation.

NDEXIA-2.1-43. If County is provided as part of a Location, then State Code must also be provided.

NDEXIA-2.1-44. If Other Contact Information is provided, both Contact Address and Contact Address Type must be provided.

NDEXIA-2.1-45. The LEXS SameAsDigestReference element in the N-DEx Structured Payload must tie N-DEx Structured Payload objects to the appropriate LEXS Digest objects as defined below:

- ndexia:Aircraft -> nc:Aircraft
- ndexia:Arrest -> nc:Activity
- ndexia:ArrestSubject -> j:ArrestSubject
- ndexia:Attachment -> lexs:Attachment

- ndexia:ConveyancePart -> nc:TangibleItem
- ndexia:Computer -> nc:TangibleItem
- ndexia:Drug -> nc:Drug
- Elements of ndexia:EnforcementOfficialType -> elements of j:EnforcementOfficialType
- ndexia:EnforcementUnit -> nc:Organization
- ndexia:Explosive -> nc:Explosive
- ndexia:Firearm -> nc:Firearm
- ndexia:ForensicSpecimen -> nc:Substance
- ndexia:HazardousMaterial -> nc:Substance
- ndexia:Incident -> nc:Activity
- ndexia:IntangibleItem -> nc:IntangibleItem
- ndexia:IntellectualProperty -> nc:IntangibleItem
- ndexia:Jewelry -> nc:TangibleItem
- ndexia:JewelryStone -> nc:TangibleItem
- ndexia:Location -> nc:Location
- ndexia:Metal -> nc:Substance
- ndexia:MissingPersonOccurrence -> nc:Activity
- ndexia:Offense -> nc:Activity
- ndexia:Organization -> nc:Organization
- ndexia:Person -> lexsdigest:Person
- ndexia:PreciousMetal -> nc:Substance
- ndexia:Publication -> nc:TangibleItem
- Elements of ndexia:RegisteredOffenderType -> elements of j:RegisteredOffenderType
- ndexia:TangibleItem -> nc:TangibleItem
- ndexia:Securities -> nc:TangibleItem
- ndexia:ServiceCall -> nc:Activity
- ndexia:Structure -> nc:TangibleItem
- Elements of ndexia:SubjectType -> elements of j:SubjectType
- ndexia:TelecommunicationDevice -> nc:TangibleItem
- ndexia:Vehicle -> nc:Vehicle
- ndexia:Vessel -> nc:Vessel
- ndexia:Warrant -> nc:Activity
- Elements of ndexia:VictimType -> elements of j:VictimType
- Elements of ndexia:WitnessType -> elements of j:WitnessType

NDEXIA-2.1-46. If the State Code is supplied in the Structured Payload as a part of Location, then State Text must be provided in the LEXS Digest and a text representation of the code value spelled out.

NDEXIA-2.1-47. If the Country Code is supplied in the Structured Payload as a part of Location, then Country Text must be provided in the LEXS Digest and a text representation of the code value spelled out.

NDEXIA-2.1-48. The Activity Category element must be populated for each Activity in the LEXS Digest. If the Digest Activity forms the basis for an N-DEx Incident, the element should be populated with “Incident”, for an Offense then “Offense”, for Arrest then “Arrest”, for Missing Person Occurrence then “Missing Person Occurrence”, for a warrant then “Warrant”, and for a Service Call then “Service Call”.

NDEXIA-2.1-49. If Enforcement Unit is provided, Type Text must be populated with the value “Criminal Justice” (without the quotes).

NDEXIA-2.1-50. If a Warrant activity is supplied, then the ORI of the Warrant Agency must be provided and it must match the Data Owner Organization ORI.

NDEXIA-2.1-51. If an Incident, Missing Person Occurrence, or Service Call activity is provided, either Status Code or Status Text must be provided. If a Warrant activity is supplied, then Status Text must be provided.

NDEXIA-2.1-52. At least one Offense must be provided for a Warrant. The Offense is linked to the Warrant through use of the RelatedActivityAssociation.

NDEXIA-2.1-53. The DataItemReferenceID must be the Incident Report Number (Incident Number in Incident Activity), the Service Call Report Number (Service Call Number in Service Call Activity), the Arrest Report Number (Arrest Transaction Number in Arrest Activity) or the Missing Person Report Number (Missing Person Occurrence Number in Missing Person Occurrence Activity).

NDEXIA-2.1-54. A (Incident) Narrative Account Description Date cannot predate the Incident Date, Incident Date – Start, or Reported Date.

NDEXIA-2.1-55. A (Service Call) Narrative Account Description Date cannot predate the Service Call Date or Reported Date.

NDEXIA-2.1-56. For NIBRS extract, both the NIBRS ORI and NIBRS Report Type elements must be populated and at least one NIBRS entity must include the Distribution Text element populated with the value "NIBRS" (without the quotes).

NDEXIA-2.1-57. If Identification - Person Identification (PID) Number is provided, then either Identification - Person Identification (PID) Type Code or Text must be provided.

NDEXIA-2.1-58. At least one Offense activity must be provided for each Arrest activity provided.

NDEXIA-2.1-59. No more than one date value may be provided per date field.

NDEXIA-2.1-60. Incident Date may be provided as a single value (Incident Date) or range (Incident Date – Start/Incident Date – End), but not as all three values.

NDEXIA-2.1-61. A (Missing Person Occurrence) Narrative Account Description Date cannot predate the Declaration Date or Last Seen Date for the Missing Person.

NDEXIA-2.1-62. A (Missing Person Occurrence) Reporting Officer Narrative Account Description Reported Date cannot predate the Declaration Date or Last Seen Date for the Missing Person.

NDEXIA-2.1-63. Age may be provided as a single value (Age) or range (Age Maximum/Age Minimum), but not as all three values.

NDEXIA-2.1-64. Height, Width, Length, and Weight may be provided as a single value or range (Age Maximum/Age Minimum), but not as all three values. Open ended ranges can use just minimum or maximum.

NDEXIA-2.1-65. Name – Alternate Type Code must be provided when an alternate person name or alternate name component is supplied.

NDEXIA-2.1-66. If AttachmentLinkReference is used to associate an image with a specific physical feature of a person then that image must also be associated with the same person using EntityPersonSMTImageAssociation.

NDEXIA-2.1-67. The Last Seen Date for a Missing Person must be the same as or predate the Declaration and Found dates.

NDEXIA-2.1-68. If either Livestock/Pet Code or Text is supplied, then Livestock Indicator must be provided.

NDEXIA-2.1-69. Data Items submitted to N-DEx are to contain only NCIC Numbers belonging to the records submitted to the NCIC by the Data Owner.

NDEXIA-2.1-70. Data Item Category must correspond to primary activity of report and Data Item Category must match value provided for ndexia:ReportType, if Structured Payload provided.

NDEXIA-2.1-71. (Attachment) Capture Date must predate the Data Item Date.

NDEXIA-2.1-72. Case Linkage Agency ORI must be a valid ORI and cannot be identical to the Data Owner Organization ORI of the submitted Data Item.

NDEXIA-2.1-73. Case Linkage Number must not contain a single zero only, a run of zeros only, a single alphabetic only, or the word NONE. The first seven characters of the IncidentCase Linkage Number cannot equal the first seven characters of the IncidentCase Linkage Agency ORI. The IncidentCase Linkage Number must be valid and meaningful to the Incident Case Linkage Agency ORI.

NDEXIA-2.1-74. For (Telephone Number) Type, “Other” must not be used to describe Home, work, etc. EntityTelephoneNumberAssociation must be used to convey whether it is Home, Work, etc. based on the supplied indicators.

NDEXIA-2.1-75. (Securities) Serial Number for entry of a consecutively serialized group of securities must contain the beginning and ending serial numbers of the sequence with a hyphen separating the two numbers.

NDEXIA-2.1-76. LEXS Structured Payload Community must be populated with the string "http://fbi.gov/cjis/N-DEx/IncidentArrest/2.1" (without the quotes).

NDEXIA-2.1-77. LEXS Structured Payload Description must be populated with the string "N-DEx" (without the quotes).

NDEXIA-2.1-78. LEXS Structured Payload Version must be populated with the string "2.1" (without the quotes).

NDEXIA-2.1-79. Data Item Contact Role must contain AttributeName populated with the string "Contact Role" (without the quotes) and Domain populated with the string "N-DEx" (without the quotes). If Data Item Contact Role is provided, AttributeValue must be provided to specify the role of the contact person, for example that they were the arresting officer or the booking agent.

NDEXIA-2.1-80. Data Item Dissemination Criteria must contain DisseminationCriteriaDomainText populated with the string "N-DEx" (without the quotes). DisseminationCriteriaText must be populated with the string "Red", or "Green", or "Yellow" (without the quotes). Red indicates that access to the data is restricted to certain users or user groups specified by the contributing agency, which will get an indication that the data exists; all other users receive no information and no indication that the data exists when performing searches. Green indicates that access to the data is unrestricted to all N-DEx users with “search” privileges. Yellow indicates that access to the data is pointer-based to users not specified as members of a contributor specified sharing group; non sharing group members are provided pointer (i.e. who to contact and how) information only when performing searches.

NDEXIA-2.1-81. If Violated Statute is supplied, then both Violated Statute Number and Jurisdiction must also be provided.

NDEXIA-2.1-82. XML IDs (s:id attributes) must be unique across the entire submission.

NIEM and LEXS Business Rules

LEXS-3.1-1. All elements and attributes must be qualified with a namespace, and the namespace must be the one defined in the schemas supplied as part of the IEPD. For example, NIEM defines a PersonName element as part of the niem-core namespace and uses the namespace alias “nc”, which means that all PersonName elements in submissions must use the fully qualified name “nc:PersonName”. Instances must not substitute different namespace aliases, or omit the namespace alias.

LEXS-3.1-2. NIEM Reference elements must reference an element of the indicated type, or an element of a type derived from that type. For example, RoleOfPersonReference is defined as a reference to an element of PersonType, which means that all RoleOfPersonReference elements must reference elements of PersonType or elements of types that are derived from PersonType.

LEXS-3.1-3. Mandatory elements must not be provided as empty elements.

LEXS-3.1-4. If Organization or Enforcement Unit is provided, both Name and Type Text must be provided.

5.5.Other Information

Data Submission Mechanisms
Details of N-DEx submission mechanisms are discussed in a separate document, the *docs/N-DEx Data Submission Connectivity-v1.0 Final.pdf* file.

National Incident Based Reporting System (NIBRS) Extract Reports
N-DEx Data Item Owners certified to report incident based data in the NIBRS format by the NIBRS Program Office may indicate within an N-DEx submission that they wish the N-DEx system to configure and provide an extract of a data item to the NIBRS for the purpose of satisfying reporting requirements. If a data item owner wants a NIBRS extract to be created from their submission, the Incident Report or Arrest Report must include the NIBRS ORI element, which indicates the identity of the NIBRS certified agency, that the agency wishes the N-DEx system to configure and provide an extract of the data item to the NIBRS for the purpose of satisfying reporting requirements, and that the data item owner believes the supplied data objects, elements, and data values represent those which are required to satisfy the NIBRS reporting requirements. A data item owner must also include the NIBRS Report Type element with corresponding value indicating what type of submission should be extracted to NIBRS. Finally, a data item owner must indicate which objects to include in the NIBRS extract by including the Distribution Text element as part of the desired objects, with the value of “NIBRS” (without the quotes).

NIBRS participating agencies that either do not wish to utilize the N-DEx extract services for NIBRS reporting or do not believe the contents of a data item represents those which are required to satisfy the NIBRS reporting requirements, **should not** provide NIBRS ORI, NIBRS Report Type, or Distribution Text elements. Additional details for creation of a NIBRS extract will be provided upon completion of NIBRS extract documentation.

Data Updates

Data that has already been submitted may be updated in subsequent submissions through two different mechanisms available in LEXS. One mechanism updates an entire Data Item, such as an Incident Report, while the other updates a single object, such as a Person. Both utilize the LEXS Data Owner element, which includes both an organization (identified via an ORI) and an identifier for a system in that organization, in order to uniquely identify the "source" of the data so that one source does not impact data from another source.

Updating a Data Item

Data Items are uniquely identified through a combination of a Data Item ID plus the Data Owner. The LEXS Data Item Publish Instruction element must be provided as either "Insert" or "Delete". If a submission specifies that this is an "Insert" and includes a Data Item where the Data Owner and Data Item ID are the same as provided in a previous submission, the Data Item from the original submission will be replaced with the Data Item in the current submission.

Submitters that wish to do an update, for example to correct a SSN or add an Offense, must supply a complete Data Item including all unchanged information as well as new or updated information, using the same Data Item ID as provided previously.

Note that submissions may include logs, such as telephone call logs or email logs, which may require more frequent updates than other data. When a Data Item represents an update, such as when there are new log entries that can be provided, the submitter must still include ALL data in the submission, rather than just the new information. Consumers that keep the "old" data along with the current data must be aware that very little may have really changed in the Data Item.

Updating Individual Objects

All objects in the N-DEx IEPD include a unique identifier, such as a Person ID, Subject ID, Activity ID, etc. These IDs are represented in schemas using different mechanisms such as an ActivityIdentification element or a Metadata SourceIDText element.

When a submission from a Data Owner includes an object with the same unique identifier as a previous submission from the same Data Owner, the source system is indicating that it stores a single record for the object referenced in multiple data items and wants the object data shown identically across multiple data items.

This mechanism for updating information is appropriate when additional information for an object, such as a Person, is available in subsequent submissions. For example, there may be an Incident Report from Data Owner "A" where the subject person's SSN is unknown, and where the Person ID was provided as "1234". However, there may be a subsequent Arrest Report from Data Owner "A" involving the same person where the SSN is now known. By providing the complete information in the new submission with the SSN populated and Person ID provided as "1234", Data Owner "A" is indicating that it has a single record for the Person which includes the SSN, and therefore the receiver should show that person as having that SSN, not just in the current Arrest Report, but also in the previous Incident Report.

Note that the submitter must include ALL information for the object, rather than just new information. So in the example above, if the Arrest Report from Data Owner "A" just includes the SSN and nothing else, the receiving system would interpret that to mean that there is no information about the Person except for the SSN.

Substitution Elements
The N-DEx schemas incorporate a number of N-DEx elements that are substitutions for NIEM elements. As such, both the original NIEM elements and the new N-DEx elements, which augment the NIEM elements, are available in schema. Whenever there is a choice between an N-DEx element and a NIEM element, submitters should use the N-DEx element. Where such substitutions exist, the Component Mapping Workbook (CMW) spreadsheet documents the N-DEx elements.

6. Samples

This section provides samples that would be useful to an implementer to facilitate understanding of the IEPD.

6.1. Sample XML Instances

Sample instances are provided in the *xml/* directory of the IEPD directory structure. Note that the sample instances do not follow the naming conventions provided in the N-DEx Data Submission Connectivity document, but are named based on the contents. There is a spreadsheet called *Scenario Spreadsheet.xls* in this directory that shows the data contained in each sample, with separate tabs for each sample.

As discussed previously, the contents of the LEXS Structured Payload are based on N-DEx schemas. An N-DEx submission can be viewed as a LEXS instance and an N-DEx instance "glued together" into a single instance that includes all content. Therefore, three files are provided for each sample.

The files that end in "-lexs.xml" only include content from the LEXS schemas; the Structured Payload only includes metadata and a Report element that is empty except for an xml-import statement used to automate the creation of the combined sample. These instances can be validated against the LEXS *publish-discover.xsd* schema.

The files that end in "-ndex.xml" only include content from the N-DEx schemas; each only includes a single N-DEx report element. These instances can be validated against the N-DEx *ndexia.xsd* schema.

The remaining files illustrate a complete N-DEx submission that includes both "layers" combined into a single instance. These instances can be validated against the LEXS *publish-discover.xsd* schema, but such validation will ignore everything in the Structured Payload except for the metadata; validation will check that the Structured Payload data is well-formed XML, but nothing more.

The sample instances are described below.

Burglary Incident with Arrest – Basic
The *burglary-incident-w-arrest-basic.xml* sample file represents a possible N-DEx Incident Report submission. This somewhat simplistic scenario illustrates what a basic Incident Report that includes an Arrest might look like. The scenario demonstrates the interaction of activities within an Incident Report. The scenario involves the primary activity of Incident interacting with ancillary activities of Offense, Service Call, and Arrest. The scenario illustrates the interaction of entities with roles and the concept of entities being able to have multiple roles within the context of a data item.

Burglary Incident with Arrest - Expanded
The *burglary-incident-w-arrest-expanded.xml* sample file expands the "Burglary Incident With Arrest – Basic" scenario by broadening the overall scope of the incident as well as including more entity detail and reinforcing use of XML IDs and references by calling them out in the scenario spreadsheet. The use of entity metadata to manage data submitted to N-DEx is demonstrated through the use of Source ID Text, Logical ID Text, Reported Date and Last Update Date. Sameness of entities as determined by the data item owner is also communicated using Source ID Text and Logical ID Text metadata. Metadata is further used to clarify associations through the use of Comment Text. In addition, this scenario expands on the "basic" version by including additional offenses, a warrant activity, society as victim, collected evidence, depiction of a registered offender person, property owned by arrestee, and property stolen by arrestee. Also demonstrated are the concepts of entities having multiple roles; status, quantity, and value of property; and the difference between a physical piece of property (ID card, license) used for identification and property identification identifiers (ID card number, license number) used as identifiers of a person.

Group B Arrest DUI
The *groupB-arrest-DUI.xml* sample file represents a possible N-DEx Arrest Report submission. This scenario demonstrates a basic Arrest Report with the primary activity of Arrest and the required ancillary activity of Offense. The scenario applies the NIBRS Group "B" offense logic which is founded on the idea that arrests involving certain offenses are not required to have incident data collected, which serves as the primary basis for the N-DEx Arrest Report.

Missing Person
The *missing-person.xml* sample file represents a possible N-DEx Missing Person Report submission. This scenario demonstrates the consolidation of report data as might be submitted by a RMS. Submitted from the RMS, the scenario focuses on the primary activity of Missing Person Occurrence, but includes the ancillary activity of Service Call as related back to the CAD entry. The scenario illustrates the possibility that ancillary activities may have concluded/been closed despite the primary activity being current/active. This scenario demonstrates inclusion of property that is descriptive of a person in that they were wearing it at the time of activity. The scenario further demonstrates attachment inclusion within a record.

Rape with Sketch Incident
The *rape-with-sketch-incident.xml* sample file represents a possible N-DEx Incident Report submission. The scenario demonstrates the interaction of activities within an Incident Report. The scenario involves the primary activity of Incident interacting with the ancillary activity of Offense. This scenario illustrates the capture of descriptors/MO traits of an unknown subject and demonstrates inclusion of multiple attachments which are linked directly back to physical features (attributes) of the subject person, rather than to the subject person entity itself.

Service Call
The *service-call.xml* sample file represents a possible N-DEx Service Call Report submission. This scenario involves a variation on the Missing Person Scenario as might be submitted by a CAD System. This scenario focuses on the primary activity of Service Call. The scenario demonstrates a basic report involving a possible missing person, gathered information, interaction of dispatch personnel and law enforcement, and resultant actions taken to close the service call.

All Fields
The *all-fields.xml* sample file includes complete sequences for **almost** all elements listed in the CMW, even in cases where some elements don't make real-world sense. The purpose of this large sample is two-fold. One it provides a test mechanism to make sure elements, attributes, and code lists are available where they are supposed to be. Secondly, it provides a way for N-DEx implementers to see the element sequences without having to review schemas. The *Scenario Spreadsheet.xls* file does not include the values for this large sample.

6.2.Sample XSL Stylesheets

The sample XSL stylesheet *XMLviewer-gif.xsl* is contained in the *xsl/* directory, and can be used to pretty-print an XML instance.

7. Development

This section describes the people, process, and artifacts used in the development of the IEP Documentation.

7.1.Participants

The FBI N-DEx program office coordinated the development of this IEPD, and contracted with the Georgia Tech Research Institute (GTRI) to do the formal mapping and modeling. The FBI N-DEx program supplied subject matter experts (SMEs) to work closely with GTRI to ensure that the mapping and modeling met N-DEx needs and represented the information in accordance with the way that law enforcement personnel use such information.

This IEPD is an update to the N-DEx 2.0 IEPD, which is in turn an update to the N-DEx 1.0 IEPD. The N-DEx 2.0 IEPD included updates to reflect the use of NIEM 2.0 and LEXS 3.1, as well as updated code tables, updated element definitions, and additional data elements that were not included in the original N-DEx 1.0 IEPD. The 2.1 IEPD includes bug fixes, updated code tables, updated element definitions, correction of typos in documentation, additional data elements, and some refactoring of existing data elements. Details of changes are contained in the change log file.

A number of meetings were held at GTRI, involving various subsets of the N-DEx IEPD workgroup, in order to develop the mapping and modeling artifacts and to determine the correct definitions and structure for new elements.

The following individuals participated in the workgroup:

Participant	Organization	Workgroup Role
Edward Waigand	FBI	SME
Misty L. Rice	FBI	SME
Benjamin T. Stout	FBI	SME
Cherie Hayes	FBI	SME
Rick Brown	FBI	SME
Linda Baroni	FBI	SME
Jack C. Wallace	GTRI	Technical (mapping, modeling and samples)
Benjamin Shrom	GTRI	Technical (mapping and modeling and samples)
Debby Park	GTRI	Technical (modeling)
Brad Lee	GTRI	Technical (samples)
Eric Soto	GTRI	Technical (modeling)

7.2.Process

The normal process for developing an IEPD is to first model the domain, then map the model to NIEM, and finally to build schemas. Since this IEPD is based on an earlier version, most of the modeling had already been done. However, there was additional content that was desired for version 2.1 of the IEPD, so some modeling work was still necessary.

GTRI took the N-DEx 2.0 IEPD and added all the new data elements and N-DEx-specific code tables to the CMW spreadsheet. GTRI performed some initial mapping, after which the workgroup had its first face-to-face mapping meeting. The initial mapping was reviewed, and based on the discussion; changes were made to the mapping. Further work followed the same paradigm; mapping and modeling work performed at GTRI, followed by face-to-face meetings to review and refine the mapping and model.

GTRI then created the schemas; the N-DEx subset schemas were updated for N-DEx 2.1 using the NIEM Subset Schema Generation Tool (SSGT). A new version of the SSGT was utilized that allows cardinality to be defined directly in the subset schemas rather than through the manual creation of separate constraint schemas as was done in previous N-DEx IEPD releases. The code list schema was developed using the NIEM code list generation tool.

GTRI updated sample instances created for the N-DEx 2.0 IEPD, which were in turn updates to the N-DEx 1.0 IEPD samples. All samples are based on data provided by the FBI N-DEx program to illustrate the IEP as well as to test the integrity of the schemas. Since NIBRS allows a submission to be an incident (possibly including an arrest), or just an arrest, the N-DEx 2.1 IEPD was designed to allow the same. Likewise, the N-DEx 2.0 IEPD also included missing person reports and service call reports and the N-DEx 2.1 IEPD was designed to allow the same. The large all-fields sample instance was created by GTRI to illustrate the complete element sequences for developers, as well as to provide a more complete test case; the data for this sample was generated by GTRI.

7.3.Development Artifacts

This section describes non-schema artifacts created during the development process. These artifacts are intended to help an implementer better understand the IEPD, and could be re-used if the IEP Documentation is later modified, extended, or re-purposed. These artifacts include:

- An object-oriented domain model, described with high level structure diagrams
- Association diagrams showing how objects in the model can be linked to each other using NIEM, LEXS, or N-DEx Associations
- CMW spreadsheet mapping the domain model to NIEM structures
- A "wantlist" document that describes the inputs into the NIEM SSGT (this is included with the subset schema files)
- NIEM 1.0 to 2.0 migration artifacts

Domain model

The domain model includes a number of diagrams. The top level model diagram shows the basic LEXS 3.1 PD structure and how N-DEx fits in. Four other diagrams show high-level models of an incident, arrest, service call, and missing person report, respectively. The relationships shown in the model are "inclusion" relationships, such as that an incident has an offense, or an incident has a victim. This diagram also includes roles, such as a Person acting in the role of a Victim, and specializations, such as Drug being a specialization of Property.

These model diagrams do not include associations between objects. The available associations are included in the association diagrams which are in a separate file. Each of these association diagrams is focused on a particular object, such as a person, and shows the different objects that the central object can be associated with and the specific associations that are available.

Component Mapping Workbook (CMW) spreadsheet

The Component Mapping Workbook (CMW) spreadsheet provides a definitive guide to the data that is desired in N-DEx submissions. The CMW documents the data and metadata elements as well as associations that are part of the information exchange. The CMW contains comments that are intended to provide guidance for data mapping and/or submission builders, as well as examples for many data elements. The CMW also documents the cardinality of all data elements and attributes. Since the cardinality defined by LEXS in the LEXS schemas sometimes provides more leeway than desired by N-DEx, the N-DEx program restricts the cardinality of some elements in the LEXS schemas in order to better align with N-DEx requirements. Since the LEXS schemas must not be modified (in order to maintain compatibility with other LEXS implementations), these restrictions may only be defined through business rules. As a result, the cardinality shown in the CMW may be more restrictive than the cardinality in the schemas. Where the cardinality in schema is greater than the cardinality documented in the CMW, the cardinality shown in the CMW takes precedence.

The N-DEx CMW is a version of the NIEM CMW that has been modified to better document the associations being used as well as to handle the large number of code lists used by N-DEx. The CMW for N-DEx is named *N-DEx LEXS NIEM mapping.xls* and is in the *docs/* directory of the IEPD directory structure. The CMW is divided into seven tabs named and ordered as follows:

The “General” tab provides high-level information, such as contact information.

The CMW “Instructions_Definitions” tab remains from the original CMW and provides descriptions and definitions about what is in various columns and fields.

The NIEM CMW “Template” tab has been renamed “Data and Metadata”. This tab is the primary focus of the spreadsheet and contains the data elements of interest to N-DEx and their mapping to LEXS and NIEM XML elements as well as N-DEx extensions to LEXS and NIEM. Note that some data elements in the Data and Metadata tab are represented by associations. This does not mean that these are the only associations of interest to N-DEx, just that these particular concepts are represented by associations. In some cases, the association called out is very specific, and submitters should ensure that their XML instances utilize these specific associations so that the N-DEx program has a consistent representation in all submissions.

A new tab has been added called “Associations”. This tab includes all associations that are available for N-DEx in a format similar to the “Data and Metadata” tab. Associations are grouped at a high level by object to object association group, e.g., Activity to Person Association, Person to Person, Person to Property, etc.

Due to the large number of N-DEx code lists that are not in NIEM or LEXS, as well as the size of some of these new lists, the original CMW “Codes” tab has been replaced by a “Code Lists” tab. This tab contains a list of all code lists used by N-DEx, including those that are part of LEXS and NIEM as well as those specific to N-DEx. (Additional information about the codes lists is provided with the descriptions of the code tables spreadsheet below.)

The “Mapping” and “Recommended Actions” tabs remain from the original CMW and document the various values available in the “Mapping” and “Recommended Actions” columns in the “Data and Metadata” and “Associations” tabs.

Note that in the posted version of the CMW, the “Recommended Actions” and “Mapping” columns in the “Data and Metadata” and “Associations” tabs have been hidden to make the spreadsheet easier to read.

Code Tables Spreadsheet

The code tables spreadsheet contains all code lists used in the N-DEx schemas, regardless of whether they are from NIEM, LEXS or are specific to N-DEx. The code tables spreadsheet is named *N-DEx LEXS NIEM code tables.xls* and is in the *docs/* directory of the IEPD directory structure.

The ListOfWorksheets tab provides a complete list of all code tables used by N-DEx and contained in the spreadsheet (and is the same as the list in the Code Lists tab in the CMW spreadsheet). The name of the code list has either (LEXS), (NIEM), or (N-DEx) at the end to denote whether the code list is enumerated as part of LEXS, NIEM, or N-DEx schemas.

Each of the remaining tabs contains a single code list, where the name of the tab corresponds to the name of the code list. For example, if the CMW refers to a Target Type of ndexiacodes:BiasMotivationCodeType then the code values that make up that type can be found in this spreadsheet in the tab titled BiasMotivationCode (the "type" was left out to shorten tab names). Note that there are cases where tab name has a shortened version of

the XML type name in cases where the name exceeds Excel's character length limit for tab names.

In each code list tab, there is a column for Code and Description. The values in the Code column are the enumerated values that appear in the schema exactly as they must appear in XML instances. The Description column provides additional information about what the value means. Some code tables (i.e. OffenseCode) may contain a third column entitled N-DEx Definition in order to clarify or expand on those code values or descriptions. The N-DEx Definitions may not be complete, are open for input, and will be further updated with each version.

Some N-DEx code lists are expansions to NIBRS and/or NCIC code lists. In these cases, the code tables spreadsheet Description column provides the NIBRS and/or NCIC code to which the value corresponds.

Wantlist

The *xsd/ndexia/wantlist.xml* file is the NIEM wantlist for the N-DEx constrained subset schemas.

The *xsd/lexs/wantlist.xml* file is the NIEM wantlist for the LEXS constrained subset schemas.

NIEM 1.0 to 2.0 migration artifacts

As mentioned previously, N-DEx 2.1 is an update to N-DEx 2.0, both of which are based on LEXS 3.1 and NIEM 2.0. For those familiar with N-DEx 1.0, LEXS 3.0 and NIEM 1.0, migration artifacts have been provided to summarize element and type changes between versions. These artifacts may not be useful to those who are not already familiar with these older versions, or who are already familiar with NIEM 2.0 and/or LEXS 3.1.

The *docs/LEXS-3.0-to-3.1-Digest-and-Subset-Changes.pdf* file is part of the LEXS 3.1 distribution and provides a high level summary of changes between LEXS 3.0 and LEXS 3.1. This summary is focused on NIEM 1.0 to 2.0 subset changes, plus extensions impacted by NIEM 2.0.

The *docs/LEXS-NIEM-2.0-Migrated-Items-Report.pdf* file is also part of the LEXS 3.1 distribution and provides a more detailed list of element and type changes between LEXS 3.0 and LEXS 3.1. This list was generated by the NIEM Migration Assistance Tool when NIEM elements used in LEXS 3.0 were migrated to NIEM 2.0.

The *docs/NDEx-NIEM-2.0-Migrated-Items-Report.pdf* file was created as part of the N-DEx 1.0 to 2.0 update. This report was generated by the NIEM Migration Assistance Tool when NIEM elements used in N-DEx 1.0 were migrated to NIEM 2.0 for use in N-DEx 2.0. Elements added (or deleted) between N-DEx 2.0 and 2.1 are not included in this report.

8. Testing and Conformance

This section provides information on any testing or conformance activities.

8.1.Testing

GTRI tested the integrity of the IEPD schemas by parsing the sample instances (included in the *xml/* directory) with XMLSpy Professional 2008 (sp1). A release candidate version of the IEPD was posted to the Justice Standards Clearinghouse for Information Sharing found at http://it.ojp.gov for purposes of review, testing, and comment by entities outside the IEPD workgroup.

8.2.Conformance

The IEPD has been reviewed for conformance by the workgroup.

9. Feedback

The IEPD workgroup has already submitted feedback on NIEM through the normal NCCT channel, and will submit additional requests for new elements, schema corrections, and code lists.