ATTACHED BINARY OBJECT DATA STANDARD

Standard No.: EX000006.1

January 6, 2006

Approved on January 6, 2006
by the Exchange Network Leadership
Council for use on the Environmental
Information Exchange Network

Approved on January 6, 2006
by the Chief Information Officer of the
U. S. Environmental Protection Agency
for use within U.S. EPA

This consensus standard was developed in collaboration by State, Tribal, and U. S. EPA representatives under the guidance of the Exchange Network Leadership Council and its predecessor organization, the Environmental Data Standards Council.

Foreword

The Environmental Data Standards Council identifies, prioritizes and pursues the creation of data standards for those areas where information exchange standards will provide the most value in achieving environmental results. The Council involves Tribes and Tribal Nations, state and federal agencies in the development of the standards and then provides the draft materials for general review. Business groups, non-governmental organizations, and other interested parties may then provide input and comment for Council consideration and standard finalization. Standards are available at http://www.epa.gov/datastandards.

1.0 INTRODUCTION

This Attached Binary Object Data Standard provides the elements to identify the characteristics and/or catalog an attached digital data item/object. The standard can be used to reference documents, images, photos, GIS data layers, laboratory materials and other electronic objects attached within the data exchange, as well as information used to describe those objects.

1.1 Scope

This standard provides and describes data groupings that are used to exchange documents, images, photos, GIS data layers, laboratory materials and other electronic objects attached within the data exchange, as well as information used to describe those objects.

1.2 Revision History

1.3 References to Other Data Standards

Date	Version	Description
January 6, 2006	EX000006.1	Initial Environmental Data Standards Council Adoption

This standard relies on other standards to make it complete and provide the necessary support. As such users should consider the references to other data standards noted below as integral to the Attached Binary Object [EX000006.1] Data Standard. These include:

- Bibliographic Reference [EX000007.1] Data Standard **1.4**

Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

Term	Definition

Attached Binary Object   Reference documents, images, photos, GIS data layers, laboratory materials and other electronic objects attached within the data exchange, as well as information used to describe those objects.

1.5   Implementation

Users are encouraged to use the XML registry housed on the Exchange Network Web site to download schema components for the construction of XML schema flows (http://www.exchangenetwork.net).

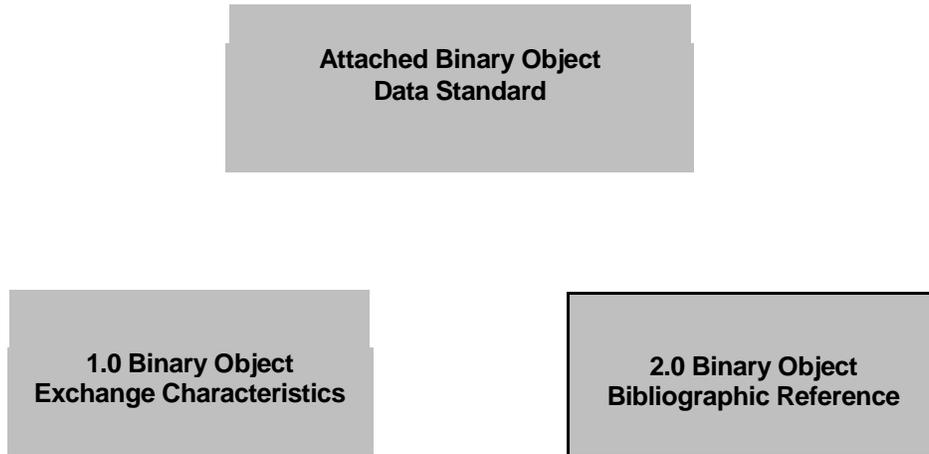## 1.6   Document Structure

The structure of this document is briefly described below:
   a. Section 2.0 Attached Binary Object Data Standards Diagram illustrates the principal data groupings contained within this standard.
   b. Section 3.0 Attached Binary Object Data Standard Table provides information on the high level, intermediate and elemental Attached Binary Object data groupings. Where applicable, for each level of this data standard a definition, XML tag, note(s), example list of values and format are provided. The format column may include the number of characters for the associated data element, where "A" specifies alphanumeric and "N" designates numeric, and "G" and "D" are used for grouping and date/time respectively.
   c. Data Element Numbering: For purposes of clarity and to enhance understanding of data standard hierarchy and relationships, each data group is numerically classified from the primary to the elemental level.
   d. Code and Identifier Metadata: Metadata, defined here as data about data or data elements, includes their descriptions and/or any needed context setting information required to identify the origin, conditions of use, interpretation, or understanding the information being exchanged or transferred. (Adapted from ISO/IEC 2382-17:1999 Information Technology Vocabulary—Part 17: Databases 17.06.05 metadata). Based on the business need, additional metadata may be required to sufficiently describe an identifier or a code. A note regarding this additional metadata is included in the notes column for identifier and code elements. Additional metadata for identifiers may include:
      - Code List Identifier, which is a standardized reference to the context or source of the set of codes

   Additional metadata for codes may include:
      - Code List Identifier, which is a standardized reference to the context or source of the set of codes
      - Code List Version Identifier, which identifies the particular version of the set of codes
      - Code List Version Agency Identifier, which identifies the agency responsible for maintaining the set of codes
      - Code List Name, which describes the corresponding name for which the code represents
   e. Appendix A, Attached Binary Object Data Standard Structure Diagram illustrates the hierarchical classification of the Attached Binary Object Data Standard. This diagram enables business and technical users of this standard to quickly understand its general content and complexity. Appendix B, lists the references for the Bibliographic Reference Data Standard.

2.0 ATTACHED BINARY OBJECT DATA STANDARD DIAGRAM

This diagram specifies the major data groups that may be used to identify the characteristics and/or to catalog an attached binary object.

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            ┌──────────────────────────────┐
            │   Attached Binary Object      │
            │      Data Standard            │
            └──────────────────────────────┘


  ┌──────────────────────┐      ┌──────────────────────┐
  │   1.0 Binary Object   │      │   2.0 Binary Object   │
  │ Exchange Characteristics│    │ Bibliographic Reference│
  └──────────────────────┘      └──────────────────────┘
```

3.0 ATTACHED BINARY OBJECT DATA STANDARDS TABLE 1.0

Binary Object Exchange Characteristics

Definition: The object and its exchange characteristics.
Relationships: None.
Notes: None.
XML Tag: BinaryObject

Name	Definition	Notes	Format	XML Tag
1.1 Binary Object	The actual binary object.	Example List of Values: • Reference document • Image Photo • GIS data layer • Audio recording • Laboratory material	A	BinaryObject
1.2 Binary Object File Name	The text describing the descriptive name used to represent the file, including file extension.	Example List of Values: • "Chain of Custody.doc"	A	BinaryObjectFileName
1.3 Binary Object Document File Type Code	The text or acronym describing the binary content type of a file.	Example List of Values: • XML an XML document • Flat a flat text file • Bin a binary object • ZIP a compressed file in ZIP • Other an unspecified file format	A	BinaryObjectFileTypeCode
1.4 Binary Object Size Value	Indicates the binary object size in bytes.	May be useful for sender or receiver to determine how best to handle file.	N	BinaryObjectSizeValue

2.0   Binary Object Bibliographic Reference
Definition: The descriptors used to identify and catalog an object.
Relationships: None.
Notes: Reference the Bibliographic Reference Information [EX000007.1] Data Standard
XML Tag: BinaryObjectBibliographicReference

Appendix A
Attached Binary Object Data Standard Structure Diagram

Attached Binary Object
Data Standard

1.0 Binary Object Exchange
      Characteristics
1.1 Binary Object
1.2 Binary Object File Name
1.3 Binary Object Document
      File Type Code
1.4 Binary Object Size Value

2.0 Binary Object
      Bibliographic Reference

Appendix B
References

i. ISO/IEC 2382-17:1999 Information Technology Vocabulary—Part 17: Databases 17.06. ii. ISO 15836:2003 Information and documentation – Dublin Core Metadata Element Set.