



Whitemarsh
Information Systems Corporation

Data Management Program
Data Standards Architectures
and
Implementation

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Acknowledgments

This material is an evolution of documents that were updated during the time frame: September 2003 through December 2004. The primary contributors were Bruce Haberkamp, James Blalock, and Michael Gorman of the Office of the CIO, United States Army. The foundational components of this work has been favorably reviewed by subject matter experts within the U.S. Department of Defense.



1.0 Introduction

This paper identifies the data standards that must be followed so that data assets have the highest degree of quality and understanding-based interoperability possible. Each data standard also contains a high level implementation process model.

Four data standards are necessary to achieve an understanding-based interoperability in an enterprise-wide net-centric database environment are:

- Authoritative Data Sources
- Information Exchange Standards Specifications
- Enterprise Identifiers
- XML

While the demand for interoperability is easy to declare, its achievement is difficult, time consuming, and laborious. The cost of not having understanding-based interoperability with minimum complexity and latency ranges from diminished information timeliness and value to fratricide.

There are actually no unsolved technical problems in achieving understanding-based interoperability. Understanding-based interoperability consists of two parts: shared value streams, and shared semantic understanding. Both of these are created from within the Communities of Interest and are expressed via the Information Exchange Standard Specifications. The role of Enterprise Identifiers (EIDs) within understanding-based data interoperability is to support technology independent mechanisms to identify and locate both metadata and values (both single value and value sets). The role of Authoritative Data Sources (ADS) is to minimize the versions of the truth. Additionally ADSs enable the coordinated migration of “truth” from an originating value state through a chain of value states until the data source is either quiesced or deleted. Finally, the role of XML within this environment is to take the value streams from an originating system and to transport them to an IESS or vice versa. Embedded within the XML stream are EIDs to enable users to both understand the authority of the value sets and the supporting metadata.

Proper configuration of understanding-based interoperability requires attention to:

- Authoritative Data Sources
- Information Exchange Specification Standards
- Enterprise Identifiers
- XML data environment

If any of these four parts is missing, data will not be understanding-based interoperable. These four data standards must be based on a rock-solid, smart-engineered data management environment that consists of:

