

XML Design Rules and Conventions for the Environmental Information Exchange Network Version 1.0, September 2003

Prologue

The XML Design Rules and Conventions (DRCs) provides rules and guidelines for the creation and use of XML schema and schema components for use in the Exchange Network. Schema design has important implications for the reusability of schema and schema components in data exchanges. It provides an opportunity to promote the Exchange Network's goals of improved data quality and efficient data exchanges. In developing the DRCs, the Technical Resource Group strived to ensure the rules would promote the development of reusable, interoperable Network schema that would build efficiencies for Network schema developers and data managers exchanging data.

The design rules govern the use of features and options available through the World Wide Web (W3C) Schema Technical Specification. For example, the W3C Specification allows the use of both global and local data element declarations, while the DRCs restricts a Network data exchange schema to global data elements declared in the Network namespace. Unlike local elements, global data elements are interchangeable and reusable in other Network Schema and carry with them unique data definitions when reused. In contrast, locally declared elements lose their uniqueness and may lose their meaning when used elsewhere.

This is one prominent example of a design rule used to promote interoperability. Other rules govern the use of attributes, namespaces, versioning and the many other schema design features that affect their reusability in the Exchange Network. Over time, adherence to the DRCs and other Exchange Network guidelines will create a robust repository of reusable schema built on data standards that developers can reuse to build Network schemas for new data flows and data managers can use to exchange data across that Network.

Complying with the DRCs places stringent demands on the current generation of Network schema developers. The Network is maturing and its infrastructure and administration is being developed. While a Network XML repository exists, but does not yet contain extensive Network schemas that the current generation of schema developers can easily borrow from to build new schema. Similarly, the Network namespace guidelines exist, though its administration is still under development making it difficult to retrieve or record global elements.

These are some of the issues the TRG is addressing. The TRG's Core Reference Model project is working with the ECOS-EPA Data Standards Council to refine data models as the basis for developing reusable schemas to support Network flows. The Network Architecture project is clarifying the processes developers would use in developing and registering Network schema. Yet this ongoing development puts Network schema developers in the difficult position of attempting to comply with the DRCs while the infrastructure to support Network data exchanges is being built.

While it is the intent of the TRG with the DRCs to set the standards and expectation for robust, reusable and interoperable Network schemas, it is not our intent to place unreasonable demands on schema developers. We expect developers to comply with the standards where possible, though they can expect the TRG will be flexible in reviewing Network schemas and that we will adjust the demands we place on schema developers as we build the Network.

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