

Network Knowledge Call #4

February 17, 2004

www.exchangenetwork.net



IMPORTANT CHANGE TO LOGISTICS

- Call Information Has Changed To:

Teleconference: 800.416.8128

Passcode: 102481#

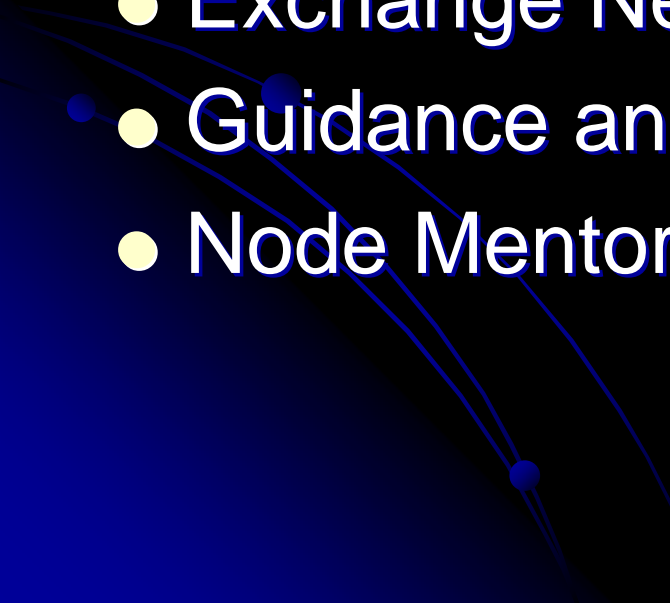
URL: [https://ross-assoc.webex.com/ross-
assoc/](https://ross-assoc.webex.com/ross-assoc/)



Agenda

- Welcome
 - Presentations posted at:
 - www.exchangenetwork.net Resources tab
 - Please mute your phones
 - Use WebEx chat for questions
- Node and Flow Configuration Group update
- Technical Resource Group Overview
- Questions/Discussion

Resources for Node Builders

- Network Help Desk
 - Testing Tools
 - <https://test.epacdxnode.net/test/>
 - Exchange Network Tool Box
 - Exchange Network Discussion Board
 - Guidance and Technical Documents
 - Node Mentoring Group
- 

Network Help Desk

The CDX/Network Help Desk is available for any Network or Node building question.

By Telephone:

Call our toll-free line between the hours of 8:00 am and 6:00 pm (Eastern) at 888-890-1995 (Select Option 2).

By E-Mail:

Send support requests to nodehelpdesk@csc.com



Establishing Network Authentication and Authorization Service (NAAS) Accounts

- Three types of NAAS Accounts
 - Test Accounts
 - Node Administrator Accounts
 - User Accounts
- Test and Node Administrator accounts established by contacting the Network Help Desk
- User accounts established by the appropriate Node Administrator

Testing Tools

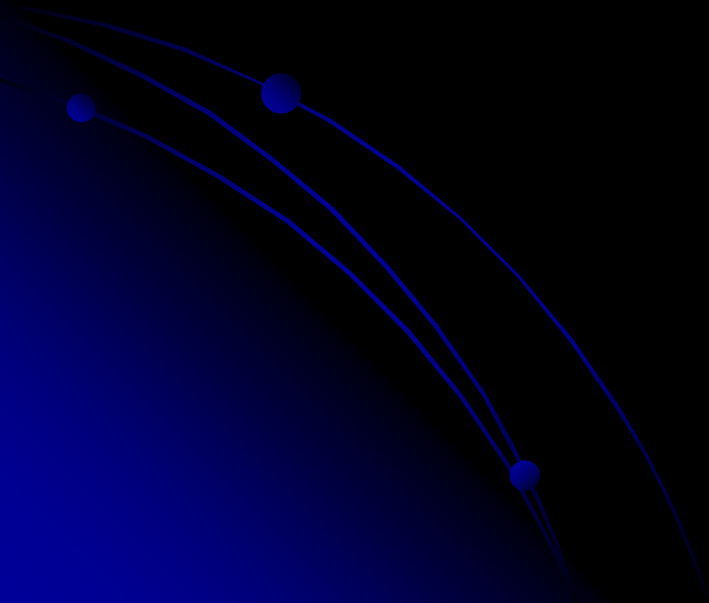
<https://test.epacdxnode.net/test/>

- The ability to test any Node in the Exchange Network, by triggering Network WSDL-compliant requests on that Node.
- Intended to verify general compliance with the Functional Specification, focuses on interoperability among Nodes. :
 - interactive tests
 - automatic tests.

Exchange Network Toolbox

www.exchangenetwork.net

- Node Developer Tools
- DNCs -Demonstrated Node Configurations
- Building Schema Tools
- Trading Partner Agreement Tools



Exchange Network Discussion Board

www.exchangenetwork.net

- Topics include:
 - General – Exchange Network
 - XML Registry
 - Node Development
 - Node Configuration
 - Node Security
 - XML Schema
 - Trading Partner Agreements

Technical Guidance Oversight and Outreach Products

Product	Status
Network Exchange Protocol v1.1	Completed 9/17/03
Network Node Functional Specification v1.1	Completed 9/17/03
Network Knowledge Call #1 and Supporting Materials	Completed 10/31/03
Network Knowledge Call #2 and Supporting Materials	Completed 12/2/03
Network Knowledge Call #3 and Supporting Materials	Completed 1/13/04

Security Products

Product	Status
Network Security Guidelines and Recommendations	Complete 4/2003
Network Security Specification Version 1.0 (Combined authentication and authorization documents)	Final Draft 2/2004
Administrator's Guide to Network Security Version 1.0	Draft 2/2004
Network Security Policy Document Version 1.0	Draft 2/2004

Flow Management Products

Product	Status
Flow Configuration Document (FCD) Template	Completed 12/2003
FCD NEI	Draft – reviewing – early 2004
FCD Beach	Draft – reviewing – early 2004
FCD Facility	IPT reviewing – early 2004
FCD Northwest Water Quality (NWWQ)	Draft completed by NWWQ
FCD eDMR	Draft completed 1/2004
Meta data header – aka Payload header	Facility IPT working on – 2/2004

Network Operations Products and Activities

Product/Activity	Status
Coordination with Network Help Desk	Ongoing
Coordination with Network Mentoring Group	Ongoing
Coordination with Technical Resource Group (TRG)	Ongoing
Clearinghouse for Operations issues, e.g., Schema Header, Data Request Naming	Ongoing
Node Test Tools	Completed

Status of Current Schema and Flow Development

XML Schema	Status	Type	EPA Can Receive into Systems	Flow Through CDX Web Interface
Beach (3 flows)	Complete	State/EPA	Yes	
FRS	Complete	State/EPA Voluntary	Yes	√
NEI	Complete	State/EPA Regulatory	Yes	
eDMR	Complete	Industry to State		√
PCS/IDEF	Complete	State/EPA Regulatory	Yes - not simple	
Drinking Water	Complete	Industry to State	N/A	
SDWIS	Close	State(SDWIS) to EPA regulatory	No	
RCRAInfo - EPA 3 modules	In Progress	State/EPA Regulatory	No	
RCRAInfo - Pilot Project All modules	In Progress	State/EPA Regulatory	No	
Manifest	In Progress	State to State	N/A	
Surface Water (piece of STORET)	In Progress	State to State	N/A	
Institutional Controls	In Progress	State/EPA Voluntary	No	
AQS	In Progress	State/EPA Regulatory	No	
Laboratory Drinking Water	Coordinating	Labs to State	N/A	
STORET	Not Started	State/EPA Regulatory	No	
TRI	Not Started	EPA to State	N/A	
AFS	Not Started	State/EPA Regulatory	No	

Node Mentoring Group

- Goals

- Assist new States in successfully implementing their Nodes
- Assist the Network Steering Board in achieving their goal of 35 Exchange Network flows in FY2004; and
- Facilitate and organize platform specific technology transfer activities to reduce the cost burden on states using similar technology platforms

Node Mentoring Group Two-Tiered Approach

- General Assistance
 - General implementation issues
 - Workshops
 - Offering advice and providing reviews
- Focused Assistance
 - Serve as a consultant to specific platforms
 - Cooperative partnerships (share changes)
 - Education and assistance

Node Mentoring Group

For more information go to
www.exchangenetwork.net

select

Multi State Projects

select

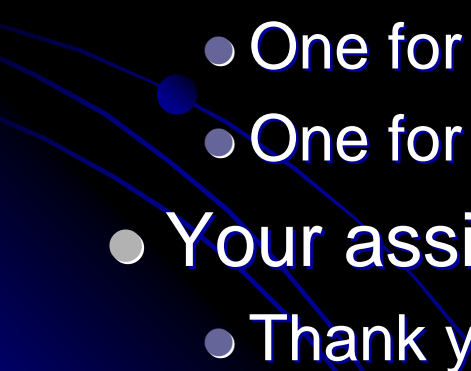
Node Mentoring Group



Node Mentoring Group – Contacts and Middleware Solution

State Contact	Middleware Solution
Dave Ellis, David.H.Ellis@maine.gov Maine Department of Environmental Protection (Lead State)	Oracle 9iAS
Dennis Murphy dennis.murphy@state.de.us Delaware Department of Natural Resources and Environmental Control	.NET
Melanie Morris melanie_morris@deq.state.ms.us Mississippi Department of Environmental Quality	.NET
Mark Wensel mwensel@utah.gov Utah Department of Environmental Quality	Sybase
Frank Catanese fcatanese@des.state.nh.us State of NH Department of Environmental Services	Biztalk
Tom McMichael tom_mcmichael@nmenv.state.nm.us New Mexico Environment Department	Websphere
Dennis Burling Dennis.Burling@NDEQ.state.ne.us Nebraska Department of Environmental Quality	Xaware

Node Mentoring Group

- Learning more about you.
 - A questionnaire is being developed to help us determine how to better assist you in your efforts and obtain a better understanding of your progress and ability to flow information.
 - One for those who did attend the workshop
 - One for those who were unable to attend.
 - Your assistance is appreciated
 - Thank you...
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Network Knowledge Call #4

Technical Resource Group



Technical Resource Group Overview

TRG Mission

- Support partners with guidelines, standards and tools for XML:
 - For their own individual flows
 - For the Network as a whole

How this fits with the rest of the Network....

- Node Groups: transport of XML payloads
- TRG: format and structure of XML payloads
- EDSC: underlying data standards for XML payloads

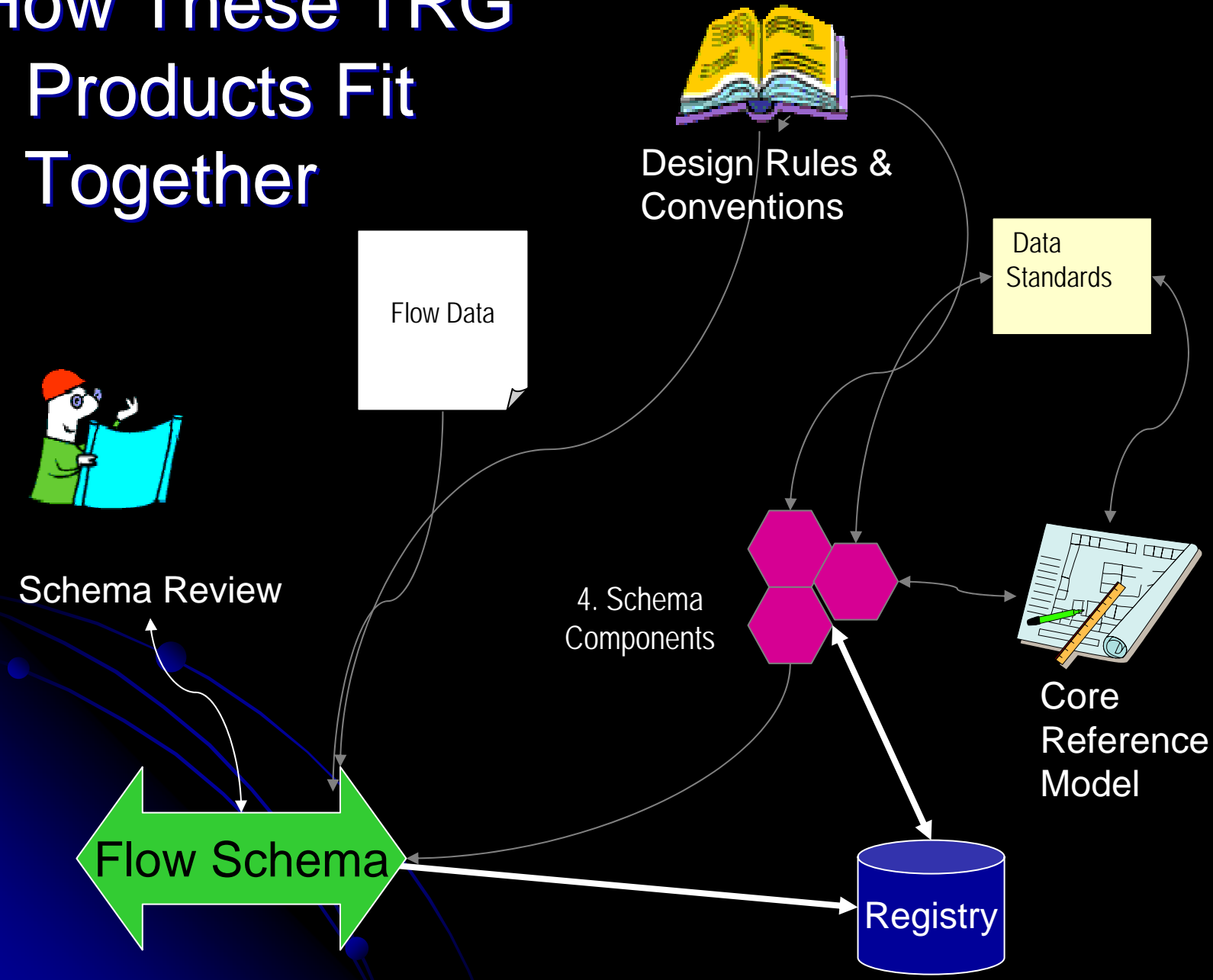
TRG Goals and Objectives

- To educate and inform others on how XML can benefit them
- To educate EN participants about XML policies, procedures, and guidelines
- To provide information and tools that others can use to accelerate implementation
- To optimize the use of XML throughout the EN using common solutions
- To expand the utilization of XML within the EN
- To expand EN participation in voluntary standards committees and intra-interagency coordination efforts
- To assist in the establishment of communities of interest, practice, and experience
- To identify and utilize best practices within the EN, Federal agencies, and industry

Who makes up the TRG, including workgroups?

- The TRG consists State and EPA:
 - Voting Members
 - Technical Advisors
- TRG workgroups are:
 - Core Reference Model
 - Design Rules and Conventions
 - RCRA
 - Registry
 - Schema Review and Approval
 - XML Architecture

How These TRG Products Fit Together



Registry Overview

Registry Requirements Document

- The Registry workgroup developed technical and functional requirements for the EN XML Registry, including a COTS products research and evaluation

XML Interim Registry

- the interim Registry is a managed clearinghouse on the Internet for posting, retrieving, and sharing information on XML schema and other XML documents
- Registry workgroup/SAIC built the interim Registry by using existing resources like the Environmental Data Registry, for search capabilities, and the EN website for storing documents

Schema in the Registry Now!

Currently, the Registry has the following XML schema posted:

- Asbestos Demolition and Removal Schema 0.5
- Beach Monitoring Data Schema 1.1
- Beach Notification Data Schema 1.0
- Discharge Monitoring Report (eDMR) Schema 1.0
- Discharge Monitoring Report (eDMR) Schema 1.1
- Drinking Water Report (eDWR) Schema 1.0
- EPA Asbestos Schema 1
- Facility Registry System (FRS) Schema 2.1
- Facility Registry System (FRS) Schema 2.2
- Interim Data Exchange Format (IDEF) DTDs and Schemas Resource Conservation and Recovery Act (RCRA) Schema
- Safe Drinking Water Information System (SDWIS)/FedRep Schema 2.0

Live Registry Demo

To access the interim Registry:

- Go to <http://www.exchangenetwork.net/>
- Click on “Registry” in the box to the upper left portion of the home page
- Search based on posted schema or key word

To submit a schema to the interim Registry:

- Under “Data Submission” download the draft Data Template; there are directions within this file to populate and submit this template and schema
 - In addition, there is an example data template for the Facility Registry System schema submission

Design Rules and Conventions Overview

- Design Rules and Conventions (DRC): guidance for XML schema developers on writing, implementing, and using XML schema.
- DRC version 1.0 provides guidance in the following areas:
 - XML File Naming Conventions (schema, instance and tag)
 - Datatypes
 - Elements and Attributes
 - Namespaces
 - Information Association and Uniqueness
 - Enumeration
 - Other Advanced Schema Concepts


Call the Help Desk with your questions!

- In coordination with CDX and NFC, the TRG has a Help Desk to assist schema developers in their interpretation and application of the DRCs for EN flows
- Help Desk access information:
 - Telephone access – 888-890-1995
 - Email access – epacdx@csc.com
- Exchange Network Schema Message board:
 - www.exchangenetwork.net click message board
 - <http://forums.weblandingzone.net/eien/default.asp?b=44>

DRC Next Steps

- Next steps for the DRC workgroup will be to revise DRC version 1.0 to 2.0, based on:
 - Lesson learned from the Schema Review Pilot Project
 - Decisions from the XML Architecture Agreements
 - Implementation experience from Help Desk, RCRA Pilot Project, and any schema development
- Some rules for consideration in Version 2.0 include:
 - Null and empty elements
 - XSLT
- Version 1.0 will likely not be revised until Fall 2004

Core Reference Model Overview

- The Core Reference Model (CRM) purpose:
 - Provide a high-level depiction of major groups of environmental data used during exchange and creates a framework for developing reusable building blocks for XML schema
 - Identify key target areas for data standards development
 - Promote interoperability among data flows
- 

SD - Spatial Data

SD.01 Area

SD.02 Geographical
Location Description

Area Type

Area Description

...

F.08 District

Longitude Measurement

Latitude Measurement

Data Source

Collection Method

Coordinate Reference

Verification Method

...

Major Data Group

Component Data Group

Data Block

Data Element

Legend

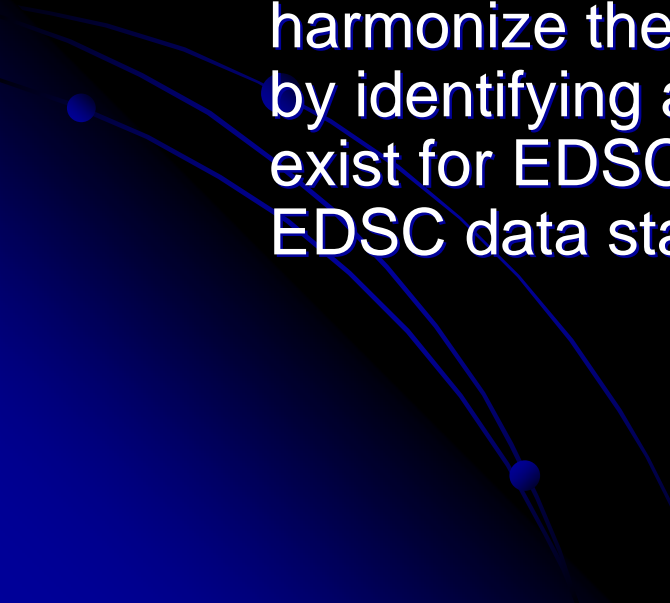
Major Data Group: Spatial Data (SD)

Revision Date: 03/31/2003

By: enfoTech & Consulting Inc.

Note: Exemplary "Data Elements" shown on this page are "Data Content" for illustration purpose only. They are not the ICS/C defined Data Element.

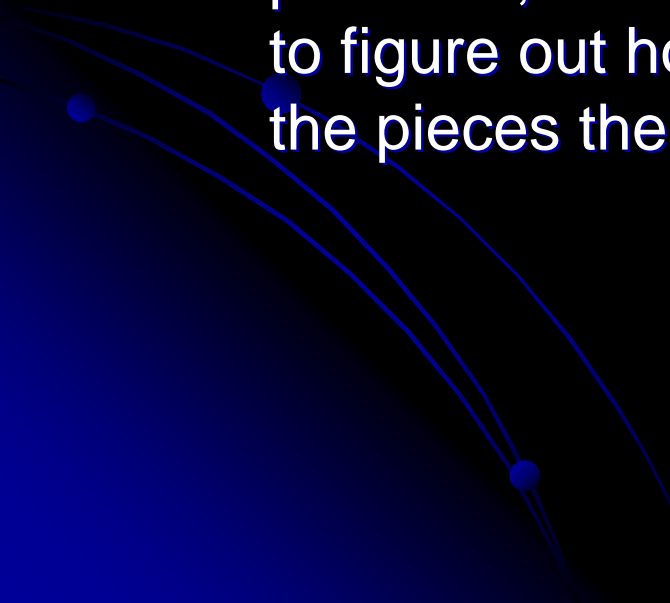
CRM Activities

- Completed CRM projects to date:
 - Phase I: produced CRM v.1.0, which established the inventory of major data groups, compound data blocks, and data blocks
 - EDSC/CRM Reconciliation Project: a joint effort to harmonize the CRM v.1.0 and EDSC data standards, by identifying areas where CRM data blocks did not exist for EDSC data elements and/or belong to an EDSC data standard
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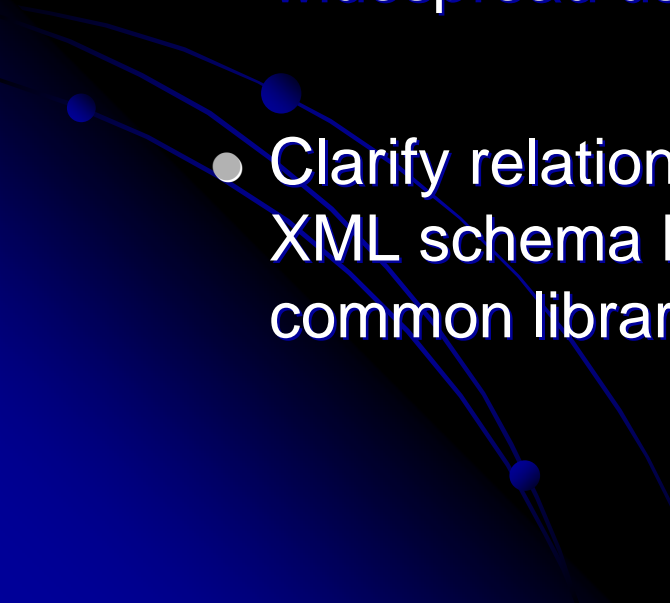
CRM Now

- Current CRM project – Phase II will:
 - Develop XML schema “chunks” for data blocks that have been harmonized to encourage reuse in future XML data flows
 - Reissue the CRM in a format that
 - better supports developers who want to use/extend CRM data blocks
 - Links data blocks to the Data Standards established by EDSC
 - Begin establishing a process for the next round of data “chunks” for XML schema development

XML Architecture Agreements Overview

- Impetus:
 - The TRG, working with the EDSC, identified and developed a set of individual tools, products, and processes.
 - And with a year of experience working with these products, it is now clear that agreements are needed to figure out how these pieces will fit together before the pieces themselves can progress
- 

XML Architecture Agreements

- Action - Establish the XML Architecture Agreements workgroup to:
 - Identify, refine, and establish a set of pragmatic agreements which support the next phases of XML schema design and deployment toward the goal of widespread use of more compatible XML schema
 - Clarify relationships between the data standards, XML schema DRCs, CRM, and shared aspiration of a common library of reusable XML schema modules.
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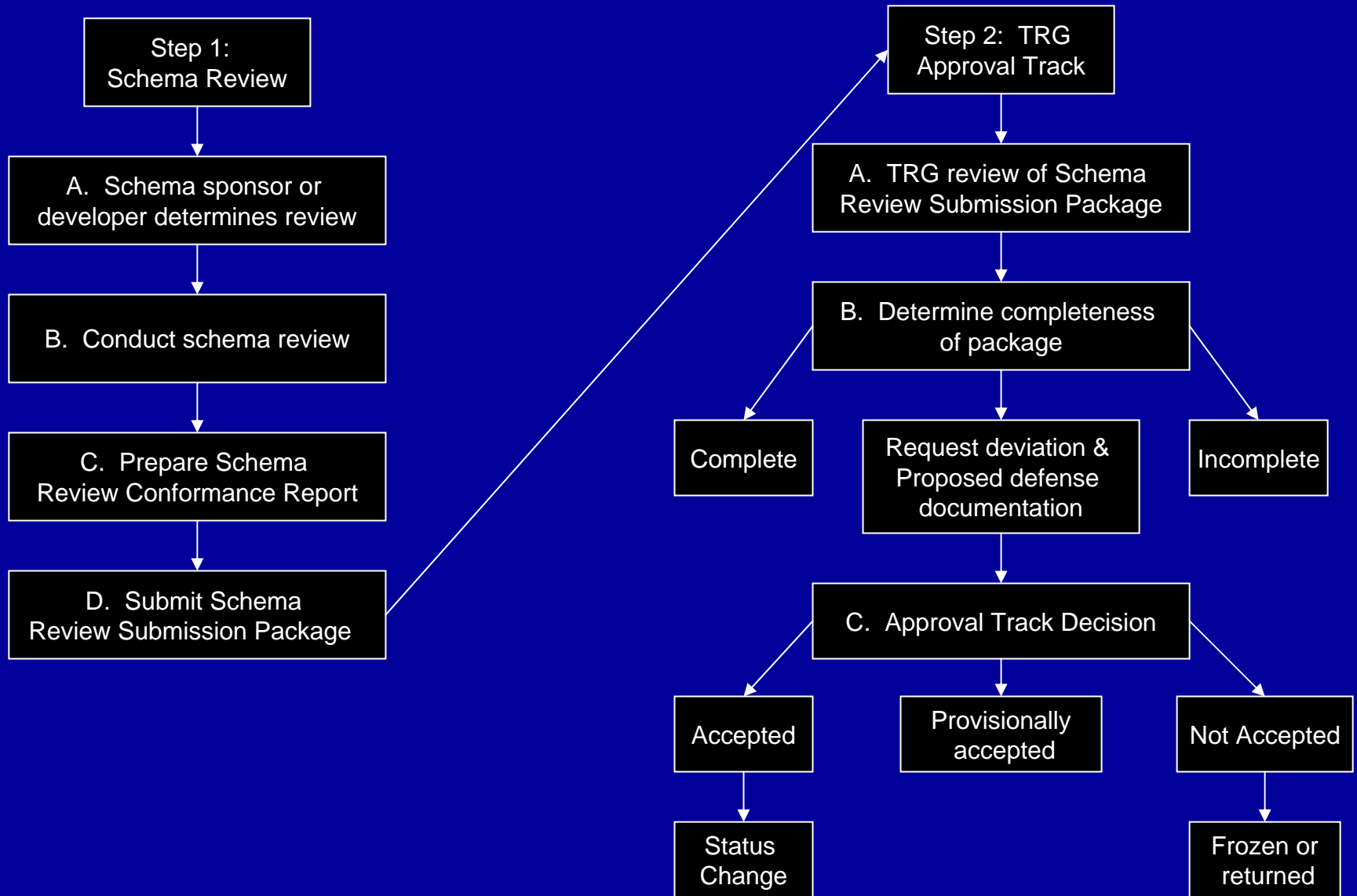
XML Architecture Agreements

- Candidate issues to be addressed by the XML Architecture Agreement project:
 - High-level XML schema/namespace architecture
 - Management of the Network namespace
 - Expression of data standards in XML pieces
 - Relationship between CRM and Data Standards,
 - Use of standard named types and elements
 - Standard facet restriction
 - Understanding global vs. local element declarations in Network schema
 - Schema validation and its relationship to architecture

Schema Review Pilot Project

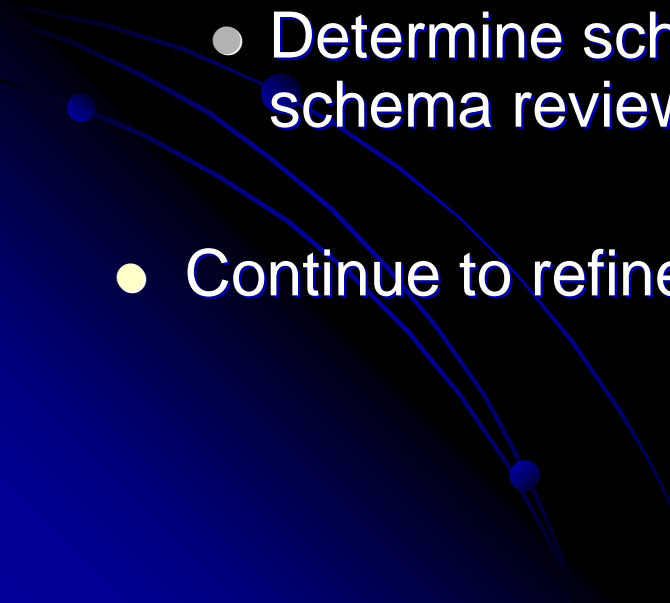
- The TRG created the Schema Review Process to:
 - Avoid delaying flows
 - Ensure harmonization early on
 - Reduce redundancy early on
- The Schema Review Process allows schema developers to evaluate their schema for:
 - Compliance with the World Wide Web schema requirements/standards
 - Conformance to the DRCs
 - Conformance with applicable data standards
 - Harmonization among the three schema
 - Comparison to the CRM
- The Schema Review Process document outlines a step by step process for schema review, including useful templates to document schema review results

TRG Schema Review and Approval Process



Schema Review and Approval Workgroup

Current activities and next steps:

- Finalize a Schema Review Process for Schema Developers document, as a Last Call Working Draft
 - Solicit schema developers to implement this process
 - Determine schema that should be fast tracked for schema review...and get them reviewed
 - Continue to refine the process as we learn
- 

RCRA Flow Development Pilot Project

- The goal of this project is to develop XML Schema and establish the Network flow configuration for RCRA hazardous waste data exchanges. Specific objectives include:
 - Identifying all possible data elements for the RCRA hazardous waste program
 - Developing XML Schema for all these data elements (reusing existing XML Schema that has been previously developed)
 - Assisting in developing the “Data Flow” using the programmatic XML schema over the Exchange Network by establishing the Node links and appropriate WSDL files, or methods, for exchanging this data flow
 - Documenting the effort needed to develop this XML Schema and Data Flow utilizing the new Exchange Network guidance documents

RCRA Flow Development Pilot Project

Will create schema for:

- RCRAInfo modules
- Uniform Hazardous Waste Manifest
- Institutional Controls

XML schema schedule:

- RCRA Info Modules: Late March
- UHWM and IC: Mid-April

Project follow-up

- Develop RCRAInfo Instance Document To RCRAInfo Translator
- Timing to be determined

Summary of TRG Resources

Exchange Network Website!!

- Click “Governance” to obtain background information on the TRG
- Click “Resources” to download:
 - CRM V.1.0 and presentations
 - DRC V.1.0
- Click “Registry” to view XML schema
- Click “Message Board” to write questions, issues, or concerns that deal with XML schema and/or the Registry

Help Desk!!!

- The help desk, much like the message board, is a resource to discuss questions, issues, and comments on XML schema, particularly interpretation of the DRCs
- Access the Help Desk by:
 - Calling: 888-890-1995, or
 - Emailing: nodehelpdesk@csc.com