Introduction

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Pacific Regional Integrated Data Enterprise
(PRIDE)
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XML Schema Design for Global Water Level Stations
For Integration of Databases that Describe Water Level Station Specifications

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Presentation Outline

- Motivations
- Design Considerations
- Web Service Prototype Demo
- Project Status
- What's Next?
Motivations

- Upgrade Data *Sources* to Data *Services*
- Loosely Coupled Data Environments
- Dynamic (Real Time) Interactions
- Heterogeneous Platforms
- No “Centralized” Control / Data Node
Architecture

Data Sources

- Push
- Pull
- ETL
- Web Svc

Tide Gauge Service API

Web Service

Client
Projects Objectives

- Expose Tide Gauge Data
  - Data schema
    -- Semantic (Plain English)
    -- XML Schema Description (XSD)
- Harvest Tide Gauge Data
  - Remote Procedures Specification
  - Web Services Description Language (WSDL)
  - Prototype Implementation
Data and Interface Specifications

- XML Schema
  - [http://www.pdc.org/pride/xmlschema/wls.xsd](http://www.pdc.org/pride/xmlschema/wls.xsd)

- WSDL
  - [http://www.pdc.org/pride/xmlschema/wls.wsdl](http://www.pdc.org/pride/xmlschema/wls.wsdl)
HIGH LEVEL XML SCHEMA

- **wls**
  - **station** (required)
  - **system** (optional)
  - **data** (optional)
ELEMENT data

- product
  - params
  - mode
  - format
  - server
- archive
  - start
  - end
  - qa
  - doc

required
optional
Remote Procedures

- Get Station(s) given
  - Coordinate
  - Rectangle
  - Circle
- Get Station Status
- Get Station Archive
- List Tsunami Detectors
- Get NTHMP Qualifying Stations
What Next?

- Data, Data, Data 😊
- Standardize the semantics, units, services (rpcs)
- Expose Data Well Formed
- Looking for Enthusiastic Volunteers
- PDC HI RISC Client Viewer (Sample Client)
- AVOID specific hardware/software/data formats. Keep it (XML) standards based…