PPDM Association

Work Group Charter

Taxonomies and Meta Data

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Developed for the PPDM Association by

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PPDM™

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Executive Summary

Objectives and Vision

To create modules in the PPDM relational database that will manage taxonomies and meta data, to generate methodologies to map these taxonomies and meta data into PPDM and to generate mechanisms for sharing and exchanging the information.

Project Description

A work group will be formed in collaboration with the E&P Industry, other standards bodies and professional associations to enhance the data model to support taxonomies and Meta data. Special consideration will be given to ensure the deliverables will support work done by the W3C and various organizations that specialize in taxonomies and Meta data for the E&P Industry. As needed, data exchange specifications will be created to support this scheme.

Benefits

The PPDM data model has realized widespread acceptance in the E&P Industry. Substantial portions of the model are devoted to providing connections between structured (data base information) and unstructured or semi-structured data (often stored outside a data base). The recommended revisions will position PPDM users to take advantage of the body of work completed by the W3C, Shell, and other organizations to promote better Information and knowledge management.

Collaborative projects allow industry experts to contribute their knowledge and expertise in a neutral, non-competitive environment. Many of the core technologies required to make Taxonomies and Meta data in PPDM work have been developed or are in the process of development. The time is ripe to take advantage of these technologies in the E&P sector.

Introduction

Background

Independent computing resources, such as desk top personal computers, allow individuals to generate information at an unprecedented rate. Each year, a person working at normal capacity can easily generate hundreds or even thousands of documents with content ranging from administrative to technical or interpretive.

Many of these documents are unstructured (as word files, acrobat files, web pages etc) or semi-structured (spreadsheets, XML documents). Making structured or semi-structured documents usable in the long terms means that each document

must be identified, classified, stored and managed correctly.

Legislation and regulations promulgated by various governments set out requirements for availability and accessibility of information, particularly for publicly traded companies. Other legislation sets forth requirements for ensuring the privacy of personal information. Balancing these requirements can be complex and difficult. Fortunately, the prevalence of these issues has inspired the formation of many committees and work groups.

The World Wide Web Consortium (W3C) recognized the importance of integrating and searching structured data (databases), unstructured data and semi-structured data early. The Dublin Core initiative (dublincore.org) in their own words *"is an open forum engaged in the development of interoperable online metadata standards that support a broad range of purposes and business models"*.

The Web Ontology Language (OWL) initiative "*is designed for use by applications that need to process the content of information instead of just presenting information to humans*". These functions are intended to maximize user success in identifying and retrieving important information using the World Wide Web.

Further initiatives by Shell Expro, Flare Consulting, PPDM, ESRI and POSC are working to tailor these capabilities in forms suitable for the E&P Industry. Successful implementations can substantially increase the value of information while reducing the cost of managing it.

Proposed Scope

The work group will develop methods and schema that allow taxonomies and Meta data to be handled in PPDM or data exchanges. Some work in this area has been completed and made publicly available; the work done by Shell and later adopted by POSC and vendors is a good example of a catalogue system that specializes in well related information. Other schema will be identified and considered.

A methodology to map the contents of taxonomies and Meta data schemes and PPDM will be developed. A mapping between the contents of one or more existing catalogues (a combination of taxonomy and Meta data) and PPDM will considered as a test case.

New taxonomies and Meta data catalogues will not be developed through this work group in the foreseeable future. This work will most likely be undertaken by other standards bodies, vendors and implementers.

Work Plan

Strategy

Short term

- Identify existing taxonomies, Meta data and catalogues that are suitable for use in the E&P sector.
- Enhance the PPDM data model to support storage of taxonomies and meta data
- Create schema that support exchange of this information
- Provide a sample data set that demonstrated how the model and schema are to be used.
- Create methodology for mapping between PPDM and a catalogue of Meta data and taxonomies; include a sample mapping as a test case.

PPDM Methodology

The PPDM Association has developed a collaborative work group based approach to standards design, development, testing and publication. This process has been applied to PPDM work groups and projects since 1996.

Work Group participants and industry representatives are responsible for establishing business priorities for development and may also request the inclusion of specific types of products in the deliverables. Technical design and development is conducted collaboratively, with participation from the project team, sponsors and other industry players.

The PPDM Association attempts to use work created successfully by other reputable standards organizations. The project will take advantage of work already done by incorporating technically sound solutions wherever it is possible.

PPDM Modeling Process

For a complete description of the standardized PPDM Modeling Process, refer to Appendix C.

Deliverables

- Charter document
- Business requirements document
- Model design
- Sample data
- References to organizations providing useful data content definitions

- Reference guide

Publication

All PPDM Data Model and work group products will be available on the PPDM Web site. Detailed information is available to members of the PPDM Association, while high level summaries and diagrams are available to the general public.

Risk and Impact Analysis

1. Technical difficulties.
   - There is a risk that some problems may be more difficult and time consuming to resolve than expected. The consequence may be increased time and cost to achieve deliverables.
   - Other problems may be impossible to resolve because of technical limitations. The consequence will be a reduced set of deliverables; time and cost may also be increased.
2. Reduced industry participation. Reduced involvement from key technical and skilled resources will have a negative impact on the quality and usability of the final results.
3. Dependence on external resources. Some work may require validation or approval by external resources. Delays in obtaining these approvals may increase time and cost to achieve deliverables.

Project Infrastructure

Roles

PPDM Board of Directors	Elected
PPDM CIO	Trudy Curtis
Work Group Chair	Nominated by the work group, should be from a member company
Work group business participants	Industry participants.

Responsibilities

For a complete description of the responsibilities associated with each role, refer to Appendix A.

Authority Levels

For a complete description of the authority level associated with each role, refer to Appendix B.

Communication and Marketing

Associations and Conferences:

Association Name	Abbreviation	Conference Dates	Conference Locations
PPDM Fall Conference	PPDM AGM	November 2003	Calgary
PPDM Spring conference	PPDM SC	Mar/Apr 2004	Houston
PESGB Conference	PESGB	Dec 2003	London
SMI Conference	SMI	Feb 2004	London

Appendix A: Responsibilities

PPDM Board of Directors

Approve charter and budget for project activities

Final approval for release of products to membership or industry.

Option to provide representatives into any work group if deemed necessary by Board of Directors. This representative shall have no special authority on the work group, but will represent the objectives of the Board to the work group.

PPDM CEO

Develop business plan, and integrate project plans into overall objectives of the PPDM Association

Overall PPDM Association budget, including project budget administration. Assist with project budget planning.

Recruit funds for project funding.

Project Sponsors

Provide funding to conduct project

Approve project charter

Set business priorities and technical direction

Provide technical resources as required

PPDM CIO

Coordinate all technical work groups and projects. Assist with staffing, logistics and facilitation as needed.

Project planning and project management.

Ensure integration of products and results among all PPDM activities.

Data modeling and technical advice.

Approve final product submissions.

PPDM Technical Specialist(s)

Ensure adherence to Architectural Principles

Technical recommendations and advice

Technical product development

Coordinate and / or conduct testing and product release

Guide works groups through modeling process and ensures that deliverables are generated.

Technical Work Group

Provide knowledge of business and technical requirements.

Assist with technical development and testing

Provide sample data

Provide additional testing environments as needed

Appendix B: Authority Levels

Board of Directors

Approve charter and budget.

Final approval of products for production release.

CEO

Overall PPDM Budget, including project budget administration.

Recruit project funding

Budget accountability and reporting to project sponsors

Project sponsors

Provide project funding

Provide business priorities and technical direction

PPDM CIO

Recommend expenditures for project funds.

Approve technical submissions.

Ensure compliance with PPDM requirements

Appendix C. PPDM Modeling Process Summary

The following are the steps being followed to develop the Model in PPDM.

Define a project charter

- ❑ Ensure minimum requirements for participation are met
- ❑ Complete Project Charter document
- ❑ Obtain approval by Modeling Committee
- ❑ Obtain approval by Board of Directors

Specify Business Requirements

- ❑ Business area prioritization - PPDM subject areas are often more complex than can be efficiently modeled in a single modeling cycle. Division into manageable, prioritized sub-sections has proven an effective tool for ensuring effective use of the work group's time and effort.
- ❑ Scope definition - Determine which subject areas are defined within the present scope of the PPDM modeling process.
- ❑ Define Business Requirements of all types of users through physical and electronic requirements workshops.
- ❑ Develop final Business Requirements document

Data Modeling

- ❑ Create preliminary logical / physical model (Straw model)
- ❑ Model testing and validation against Business Requirements
- ❑ Model design in CASE tools
- ❑ Release of DDL and documentation for work groups

Testing and Release

- ❑ Alpha testing by work groups and PPDM association and preparation of deliverables
- ❑ Beta testing by membership at large
- ❑ Pre-production release for final membership review
- ❑ Production release in next PPDM point release