

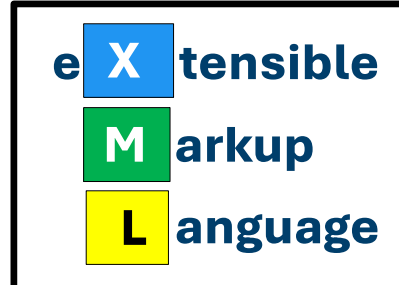


XML Standards and their use in PERA

Micro Learning Module

MLM-022-A

- Industry – All
- Principal Role – All
- Professional Role – All
- Enterprise Phase – All



Turn on your audio and
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This module describes how and why XML is used in the PERA website including the yEd graphic application, that may be used to produce many different XML documents.

Click the NEXT button when you are ready to advance to the next slide.

What is XML and Why Use it?



- 1) XML is a foundational information technology with numerous associated standards that extend its capabilities and define specific uses.

- 2) These standards can be broadly categorized into several areas:
 - 1) CORE XML Standards Used in PERA
 - 2) XML Query and Transformation
 - 3) XML Linking and Referencing
 - 4) XML Security
 - 5) Special Purpose XML-based Standards



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- CORE XML Standards Used in PERA
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- XML Linking and Referencing
- XML Security
- Special Purpose XML-based Standards

Core XML Standards Used in PERA



- 1) **SOAP (Simple Object Access Protocol):** An XML-based messaging protocol for exchanging structured information in web services.
- 2) **SVG (Scalable Vector Graphics):** An XML-based vector image format.
- 3) **XForms:** An XML application for creating web forms.
- 4) **UBL (Universal Business Language):** A library of standard XML business documents.
- 5) **GraphML:** A Graphic Standard for vector diagrams
- 6) **B2MML:** Business to Manufacturing Markup Language (see also ISA95 data transfer standard).



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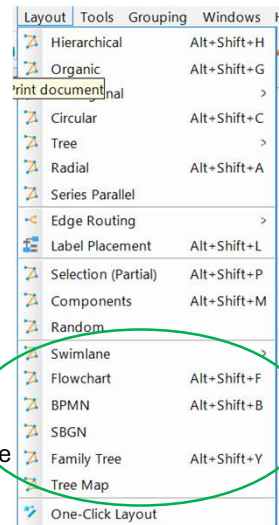
The following are core XML Standards used in the PERA website.

- SOAP (Simple Object Access Protocol): An XML-based messaging protocol for exchanging structured information in web services.
- SVG (Scalable Vector Graphics): An XML-based vector image format.
- XForms: An XML application for creating web forms.
- UBL (Universal Business Language): A library of standard XML business documents.
- GraphML: A Graphic Standard for vector diagrams
- B2MML: Business to Manufacturing Markup Language (see also ISA95 data transfer standard).

Many Standard XML Templates in yEd GraphML



- Logic Flowchart Diagrams
- Swim Lane Diagrams
- BPMN Workflow Diagrams
- UML Class Diagrams
- Fishbone Diagrams
- Entity Relationship Diagrams
- Network Topology Diagrams
- Failure Mode and Effects Analysis
- Mind Mapping
- Custom Diagrams can also be saved
- A Library of more than 50 User-defined Diagrams is available



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PRINT VERSION OF NARRATIVE

Many custom templates are available in yEd that can be useful for ACS including:

- Logic Flowcharts
- Swim Lane Diagrams
- BPMN Workflow Diagrams
- UML Class Diagrams
- Fishbone Diagrams
- Entity Relationship Diagrams
- Network Topology Diagrams
- Failure Mode and Effects Analysis
- Mind Maps and a library of custom and user-defined diagrams.

Key “Take-away” Messages



Why Use XML Standards ?

- XML saves time and improves the quality and consistency of data transfers and reports
- Imports and exports information in many formats
- Many generic and application-specific packages are available
- Human-readable documents may be easily read by AI applications.



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- It allows Import and export of information in many formats
- Many generic and application-specific packages are available
- Human-readable XML documents may be easily read by AI applications.

More Reading



Related MLMs

- MLM-022-B Use of Swimlane Interfaces between Principal Roles
- MLM-022-C Use of Workflows between Professional Roles
- [MLM-021-A](#) What is yEd Graphics
- [MLM-021-B](#) How yEd is used in PERA
- MLM-021-E Advanced yEd Tutorial

References:

- See [Basic XML Tutorial](#) on YouTube



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Author



Bill Bosler, P.E., is an Oil & Gas Business Development leader and enterprise -integration SME with 40+ years across upstream, pipelines, refining, petrochemicals, and major capital projects. He combines PERA master planning with ISA-95/IEC-62264 data models to help operators and EPCs turn strategy into measurable value and resilient supply chains.



Bill founded and led Texas Consultants, delivering programs in 30+ countries and partnering with national/international oil companies, pipeline consortia, and global integrators. His work includes the CPC pipeline Customer Management System, refinery and petrochemical optimization programs, and upstream collaboration centers. He has also negotiated greenfield/expansion projects and contributed to standards at API and ISA.

Notable outcomes include reducing an Arctic LNG concept's capital needs by ~\$5B with a 12% ROI lift; accelerating a client's automation benefits by \$4M/year; and saving ~\$0.20/bbl on gasoline blending through multi-vendor integration.

He has published widely and presented at AIChE, API, ISA, NPRA and others.

