

XML Developments

The Web's Universal Data Language

FTA Annual Meeting

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AGENDA

- What is XML?
- Where is it being used today?
- How will it impact the tax industry?
- What can XML do?
- What won't XML do?

WHAT IS XML?

- Provisional definition:
- Extensible Markup Language (XML) is a way of marking up a document to indicate data content.

HTML EXAMPLE

```
Blah, blah, blah  
<Red> This sentence is red.</Red>  
Blah, blah, blah
```

...displays as:

```
Blah, blah, blah  
This sentence is red.  
Blah, blah, blah
```

HYPertext MARKUP LANGUAGE

- Selected text is bracketed between a "start tag" < > and an "end tag" </ >.
- Tags indicate how the selected text is to be displayed by the browser
- Tags are predefined and standardized.

XML EXAMPLE

```
<Taxpayer>
  <TaxpayerName> John Smith </TaxpayerName>
  <TaxpayerSSN> 987654321 </TaxpayerSSN>
</Taxpayer>
<Dependent>
  <DependentName> Johnny Smith </DependentName>
  <DependentSSN> 123456789 </DependentSSN>
</Dependent>
<Dependent>
  <DependentName> Susie Smith </DependentName>
  <DependentSSN> 246813579 </DependentSSN>
</Dependent>
```

XML SAMPLE, cont.

- English-like Tags indicate data contents
- Computer program can interpret data and reformat it for additional processing
- Data can be stored in a database
- "Extensible" means you make up the tags!

WHAT ABOUT ADDING BUSINESS RULES?

- Each name is made up of a first name and a last name.
- Each taxpayer must have exactly one name and one Social Security Number.
- Each taxpayer may have any number of dependents, but doesn't have to have any.
- Each dependent must have exactly one name and one Social Security Number.

REFINED DEFINITION

- Extensible Markup Language (XML) is a method of formatting data content according to defined business rules and structures.

ADVANTAGES OF XML

- Human readable using current browser (Internet Explorer 5.0 / Netscape 6.0)
- Tools are less expensive
- Business rules can travel with the document and be shared and validated via a common website
- Only need to agree on data tags for specific applications

HOW DO I MAKE IT LOOK LIKE A TAX FORM?

- XSL - Extensible Stylesheet Language
- All the power of HTML
- Can “attach” a stylesheet to an XML document
- Browser can interpret XSL to display the XML document

APPLICATION OF XML

- Where web used to communicate
- Especially browser only (no tax software/processing application)
- Agency implementing a web-based computing architecture - i.e. browser-based access to taxpayer data by employees
- Data used in both machine-to-machine, and human-to-machine interactions - i.e. for e-filing or customer service folks accessing taxpayer accounts, as well as for master database updates.

WHY USE XML?

- Broadens enterprise search capabilities
- Shortens application development time
- Ties together multiple internal applications across agency
- More easily enables real-time secure processes: Registration, Filing, Acknowledgment

EXPECTED GROWTH

- E-Commerce transactions using XML: 0.5% in 2000; 40% in 2004
- 50% of 200 recently surveyed larger companies plan to convert by close of 2003

-- Zona Research

WHERE IS XML BEING USED

- Web applications that transfer data between displays and databases (e.g. Travelocity)
- Online catalogs, and Web purchasing applications
- Transferring data from new integrated applications (e.g. CRM) to back-end legacy systems
- Major Enterprise resource Planning (ERP) systems
 - PeopleSoft, SAP, Oracle

XML USE IN REVENUE

- TaXML - Microsoft sponsored Personal Income Tax electronic filing in the UK
- Louisiana internal storage specifications for data interchange
- Florida electronic filing to SAP system
- California Sales Tax filing program and planned business uses
- IRS 1120 XML pilot
- STAWRS COTS SPEF Payroll Tax Filing

HOW WILL XML IMPACT THE TAX INDUSTRY?

- Interfaces to Federal and State legacy back-end systems will be XML-enabled
- Vendors (Integrators) will build in
- New Web applications for tax filing by individuals and preparers will be XML - enabled
- Government agencies will begin to accept XML-enabled electronic filings of various tax types

WHAT CAN XML DO?

- Provide cost-effective tools for building Web-enabled applications
- Provide simple application-to-application interfaces between front-end Web applications and legacy systems
- Provide a common format for data interchange between two parties
- Be platform independent

WHAT WON'T XML DO?

- Be totally free
- Be transmission efficient
- Translate into and out of XML syntax
- Define business rules
- Define universal data tags

STANDARDS INITIATIVES

- Industry recognizes the need for standardized tags and document structures
- Multiple competing and overlapping efforts
 - "name an industry"
- Commercial initiatives
 - OASIS - over 100 participating companies
 - BizTalk - Microsoft participation
 - RosettaNet - supply chain initiative

NON-PROFIT INITIATIVES

- UN/CEFACT - ANSI X12
 - Build on the business knowledge developed through EDI
 - Overcome the weaknesses of EDI
- ebXML initiative
 - "electronic business" XML
 - joint venture of UN/CEFACT - X12 - OASIS
 - Develop syntax neutral XML "core components" based on business modeling

INDUSTRY INITIATIVES

- XBRL - Extensible Business Reporting Language
 - Sponsored by AICPA
 - Concentrating on financial documents
 - Building "taxonomies" of standard tags and data relationships
- TIGERS - Federation of Tax Administrators
 - Under ebXML framework
 - Structure and tags for tax and revenue reporting
 - Base schema and tax type specific schemas
 - Sbcmtes: Sales, Income, Payroll, and Motor Fuel
 - Public intranet site: www.tigrs.intranets.com/

WHAT SHOULD YOU DO?

- If you develop tax filing software, be aware:
 - Interfacing systems may soon be demanding XML
 - XML may be the simplest and best way to Web-enable your application
- If you are a tax agency, be aware:
 - New Web filing applications will want to send XML
 - XML may be the simplest and best way to link Web filing applications to your legacy systems
- Participate in industry standards organizations to ensure that the needs of the Tax industry are being met

QUESTIONS?

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