Electronic and Digital Signatures

XML Workgroup

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What do you think?

- What is your definition:
  - Electronic Signature
  - Digital Signature

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Electronic/Digital Difference

- Electronic (10-characters)
- Digital (7-characters)

- 10 – 7 = 3 characters

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Electronic/Digital Difference

- Use a basic letter/number cipher (a=1, b=2, etc)
- Electronic (5+12+5+3+20+18+15+14+9+3) = 104
- Digital (4+9+7+9+20+1+12) = 62
- 104 – 62 = 42 which is of course the answer to life, the universe, and everything.

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UETA Summary

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Electronic Signatures

- Commonly used types
  - digitized signatures
    - scanned images of hand-written signatures
    - font-based simulations of hand-written signatures
  - software-based signatures (process)
    - Click an "Agree", "OK", "Submit", "Accept" button or checkbox
    - Certificate-based authentication that you are "who" you are and are authorizing a transaction

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Digital Signatures - Defined

- A digital signature or digital signature scheme is a mathematical scheme for demonstrating the authenticity of a digital message or document. A valid digital signature gives a recipient reason to believe that the message was created by a known sender such that they cannot deny sending it (authentication and non-repudiation) and that the message was not altered in transit (integrity). Digital signatures are commonly used for software distribution, financial transactions, and in other cases where it is important to detect forgery or tampering.
- http://en.wikipedia.org/wiki/Digital_signatures

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Digital Signatures - Parts

- key generation algorithm (usually public/private key pair)
- signing algorithm (usually RSA or DSA)
- signature verifying algorithm (usually RSA or DSA)

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Message Transmission Security

- Types of security measures used when transmitting data from system to system
  - HTTPS
    - data is encrypted and decrypted over the HTTP internet transmission protocol
  - username/password
    - basic authentication schema within the HTTP internet transmission protocol
  - digital certificate
    - hostname has an associated certificate to verify authenticity of entity transmitting data
    - message data can be signed in whole or partially using a digital signature process

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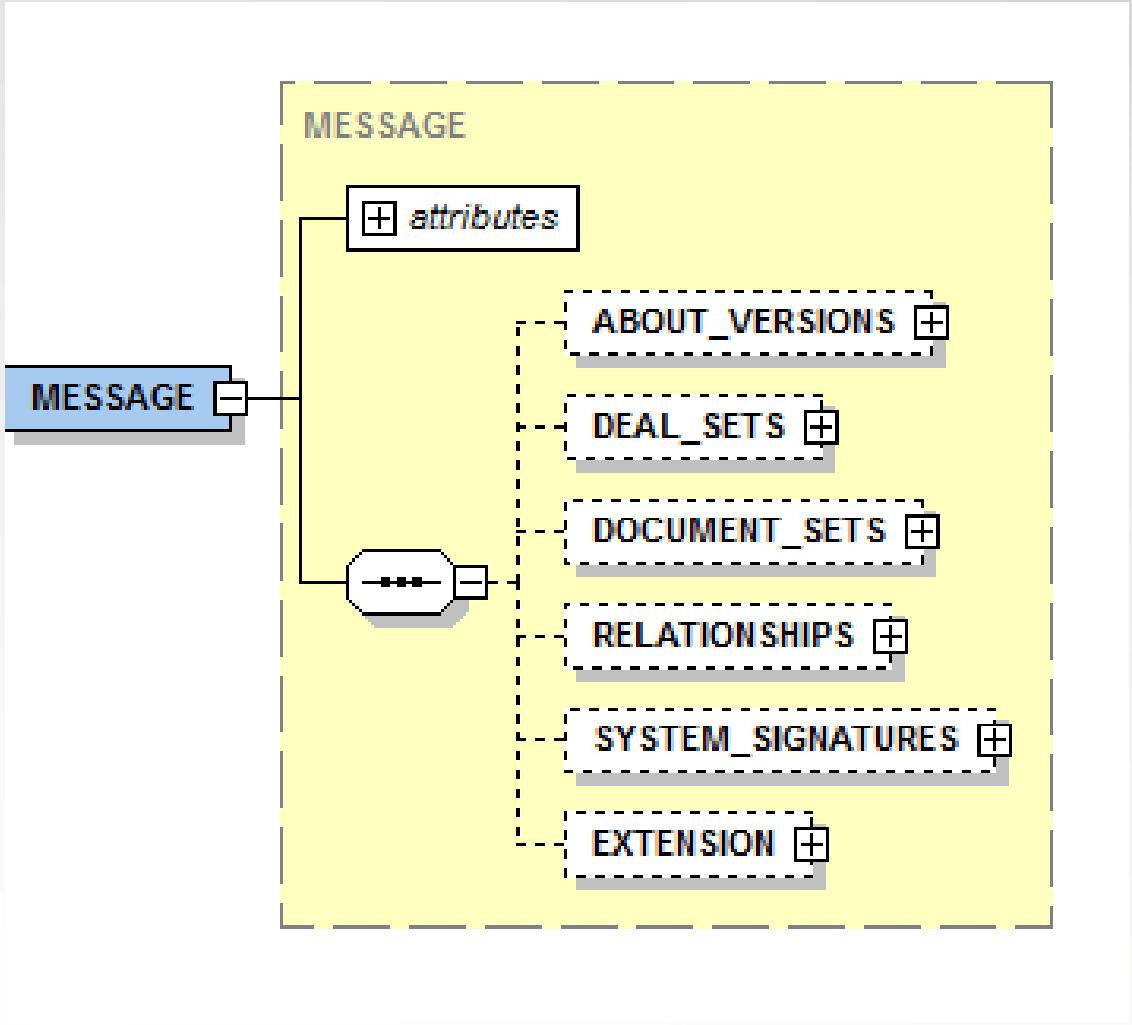
Version 3.x XML Structure - Overview



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Version 3.x XML Structure - Overview

- DEAL_SETS
  - Use DEAL_SETS under MESSAGE for message/service data only
  - Use DEAL_SETS under DOCUMENT for all data relevant to DOCUMENT and DOCUMENT_SETS

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Version 3.x XML Structure - Overview

- DOCUMENT_SETS
- DOCUMENT_CLASSIFICATION
  - where document type is specified

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Version 3.x - Signatory

- DOCUMENT/SIGNATORIES/SIGNATORY/ELECTRONIC_SIGNATURE
  - Enumerated types of electronic signatures
- FOREIGN_OBJECT

- Example XML
  - (by Abdias Lira – Wolters Kluwer / MISMO eMortgage)

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Version 3.x - System Signature

- DOCUMENT/SYSTEM_SIGNATURES/SYSTEM_SIGNATURE
  - W3C XML Signature Syntax and Processing Recommendation

- Example XML
  - (by Abdias Lira – Wolters Kluwer / MISMO eMortgage)

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Join the XML Workgroup calls!

- Every 2nd and 4th Wednesdays
- 12:00 pm Eastern

- Contact Valerie Sprague for meeting invite
- valerie@imiae.com

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Thank you

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