Technical Advisory Board

JSON Initiative
Quotes that I live by

- “I would never die for my beliefs because I might be wrong.”
- “To die for an idea: it is unquestionably noble. But how much nobler it would be if men died for ideas that were true.”
- “It's tough to make predictions, especially about the future.”
- “The older I grow the more I distrust the familiar doctrine that age brings wisdom.”
- “There are no solutions, only trade-offs”
JavaScript Object Notation (JSON)

- In use by most RESTful web services
- Can be marshaled and unmarshaled directly with JavaScript
- All major programming languages provide JSON APIs.
- JSON Schema standard supported by third party tools (XML Spy)
Issues

- Mapping difficulties: Multiple solutions
  - `<e attr="value"/>`
  - `<e>text</e>`
  - `<e attr="value">text</e>`
  - `<e><b>text</b></e>`
  - `<e><b>text</b><b>text</b></e>`

- JSON Schema is not a W3C standard
- Security Standards are not defined (https only)
TAB Activities

- Open Source (BSD license) XSLT modified to translate XML instance documents into JSON. Set of flags for different formats.
- XSLT to translate XML Schema to JSON Schema.
  - Missing Features: choice mapping, documentation (description), code definition.
PESC will recognize that a JSON message exchange conforms to PESC standards:

- If the JSON instance was derived from a PESC schema validated XML instance document, and the transformation uses PESC specified transformation rules

- When JSON has a recognized schema approach, PESC can then provide direct standards for JSON
Questions for Task Force

- Is there a need to exchange education information in JSON format?
- Should PESC provide a translation standard between JSON and XML?
- Should we add the additional linking support of JSON-LD?
- Should exchange definitions include RESTful web service definitions as part of the standard or use EdExchange?
Possible approaches (trade-offs)

- XSLT from valid XML instance to JSON instance
- XSLT to transform XML Schema to JSON Schema
- JSON Schema from scratch using PESC specification
- JSON-LD implementation
- Swagger or other web service specification for web service definition
- AI “interlingua” for future dialects
# Goessner Notation (A4L)

<table>
<thead>
<tr>
<th>Pattern</th>
<th>XML</th>
<th>JSON</th>
<th>Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>&quot;e&quot;: null</td>
<td>o.e</td>
</tr>
<tr>
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<td><code>&lt;e&gt;text&lt;/e&gt;</code></td>
<td>&quot;e&quot;: &quot;text&quot;</td>
<td>o.e</td>
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<td>o.e[&quot;@name&quot;]</td>
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<td>4</td>
<td><code>&lt;e name=&quot;value&quot;&gt;text&lt;/e&gt;</code></td>
<td>&quot;e&quot;: {&quot;@name&quot;: &quot;value&quot;, #text&quot;: &quot;text&quot;}</td>
<td>o.e[&quot;@name&quot;] o.e[#text&quot;]</td>
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<td>o.e.a o.e.b</td>
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<td>7</td>
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<td>o.e[#text] o.e.a</td>
</tr>
</tbody>
</table>

Example PESC JSON

```json
{
  "TransmissionData": {
    "DocumentID": "12345CV",
    "CreatedDateTime": "2016-02-29",
    "TransmissionType": "Resubmission",
    "DocumentTypeCode": "Application",
    "Source": {},
    "Destination": {},
    "NoteMessage": [
      "First Message", "Second Message"
    ]
  }
}
```
Task Force Activities

- Set up meeting time with Doodle
- Review each possible approach and determine viability
- If multiple or phase solutions, lay out an implementation plan
Questions