MultiSpeak Version 3.0 Interoperability Assertion

Statement of Interoperable Functionality Between:

<table>
<thead>
<tr>
<th>Vendor(s)</th>
<th>Product</th>
<th>Product Version</th>
<th>Role</th>
<th>Web Client Interfaces</th>
<th>Web Server Interfaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power System Engineering</td>
<td>PSE Utility Operations Dashboard</td>
<td>1.0</td>
<td>OA</td>
<td>OA</td>
<td>OA-&gt;SCADA</td>
</tr>
</tbody>
</table>

Summary:

SCADA software is capable of providing data to Power System Engineering’s Utility Operations Dashboard using MultiSpeak web services.

The Power System Engineering’s Utility Operations Dashboard will display SCADA data in Maps, charts, graphs, and tables in a web client.

Prerequisites:

The PSE Utility Operations Dashboard/MultiSpeak interface requires the following configuration:

- The Utility Operations Dashboard will need to be setup to allow the SCADA system to communicate with the outage management system using MultiSpeak web services.
- The URL used to connect to the SCADA Server.

Specific Vendor Assertions:

1. **PSE Utility Operations Dashboard requests SCADA status changes from SCADA software**

   **Importance to user:** This gives the user outage information that result from the SCADA breaker operation.
   **How Achieved:** When prompted by the user, the PSE Utility Operations Dashboard requests SCADA status changes by calling the GetAllSCADASstatus.

2. **PSE Utility Operations Dashboard requests SCADA analog changes from SCADA software**

   **Importance to user:** This gives the user voltage and current information changes.
   **How Achieved:** When prompted by the user, the PSE Utility Operations Dashboard requests SCADA status changes by calling the GetAllSCADAAnalogs.
<table>
<thead>
<tr>
<th>Method Name</th>
<th>Importance to User</th>
<th>Supported by Server&lt;sup&gt;1&lt;/sup&gt; (SCADA)</th>
<th>Supported by Client&lt;sup&gt;2&lt;/sup&gt; (OA)</th>
<th>Verified Interoperable&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetMethods</td>
<td>Requester requests list of methods supported by the server.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GetPublishMethods</td>
<td>Requests list of methods to which this server can publish information.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GetRegistrationInfoBylD</td>
<td>Requests the return of existing registration information (that is to say the details of what is subscribed on this subscription) for a specific registrationID.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PingURL</td>
<td>Verifies that the server is running and reachable.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RegisterForService</td>
<td>Establishes a subscription using a previously requested registrationID.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RequestRegistrationID</td>
<td>Requests of the publisher a unique registration ID that would subsequently be used to refer unambiguously to that specific subscription.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCADAPointChangedNotification</td>
<td>Publisher notifies OA of changes in SCADA point definitions by sending an array of changed scadaPoint objects.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GetAllSCADASStatus</td>
<td>Requests an array of changed scadaStatusobjects.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GetAllSCADAAnalogs</td>
<td>Requests an array of changed scadaAnalogue objects.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UnregisterForService</td>
<td>Deletes a previously established subscription (registration for service) that carries the registration identifier listed in the input parameter registrationID.</td>
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<td></td>
</tr>
</tbody>
</table>

<sup>1</sup> Supported by Server means the server has demonstrated in some interoperability test (not necessarily with this client) that it can support the method.

<sup>2</sup> Supported by Client means that the client has demonstrated in some interoperability testing (not necessarily with this server) that it can call the method.

<sup>3</sup> Verified Interoperable means that both the client and server have demonstrated in this interoperability test they can usefully transfer data using this method.
Certified For:

**Power System Engineering**

_________________________          Manager, Smart Grid Programs

Name:  Kevin Zamzow          Title:

11/21/2014

Date: _____________________

Assertions Verified by:

____________________________    MultiSpeak Testing Agent

Name:  Hannu Huhdanpaa    _________________________

Name: Hannu Huhdanpaa          MultiSpeak Testing Agent

Title

Testing Agent

11/21/2014

Date: _____________________

Disclaimer:

The assertions made in this document are statements of the vendors offering the two products listed above. The Testing Agent has observed the software performing the tasks described in these vendor assertions.

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