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>Batch Interface</th>
<th>Web Client Interfaces</th>
<th>Web Server Interfaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survalent Technology Corporation</td>
<td>Survalent Windows SCADA</td>
<td>3.0</td>
<td>SCADA</td>
<td>-</td>
<td>-</td>
<td>SCADA → EA</td>
</tr>
<tr>
<td>Milsoft Utility Solutions</td>
<td>WindMil</td>
<td>7.1</td>
<td>EA</td>
<td>-</td>
<td>SCADA → EA</td>
<td>-</td>
</tr>
</tbody>
</table>

Summary:

Survalent SCADA is capable of providing analog and status point data to Milsoft’s WindMil using MultiSpeak web services. Points can be read on demand via the GetSCADAAnalogbySCADAPointID and GetSCADAStatusbySCADAPointID methods.

Prerequisites:

The SCADA points that are to be made available to WindMil are identified in the SCADA system’s Data Exchange tables. In these tables, SCADA points can be assigned:
- alternate names for presentation to the client (optional for both analog and status points)
- unit codes (required for analog points)
- deadbands (optional for analog points)
- scale factors (optional for analog points)

Specific Vendor Assertions:

1) **WindMil can request a list of SCADA points from the Survalent SCADA server.**

*Importance to user:* The SCADA points in the list can be mapped to WindMil circuit elements, allowing the user to specify which SCADA points should be associated with which devices in the WindMil model.

*How Achieved:* The WindMil user chooses “Get SCADA point list” from the Real-time menu. WindMil then calls the GetAllSCADAPoints method on the Survalent server. The resulting list of SCADA points is displayed to the WindMil user in a list. The SCADA point ids in this list can be dragged into the empty fields on the SCADA page of the circuit element editor for the appropriate WindMil circuit elements. This process creates the mapping between SCADA point IDs and WindMil circuit elements.

2) **WindMil can request SCADA analog values from the Survalent SCADA server.**

June 11, 2006
**Importance to user:** The SCADA analog values such as fault currents and feeder currents can be used by the engineer for such applications as fault location and load allocation.

**How Achieved:** After SCADA point IDs have been assigned to their appropriate WindMil elements, the WindMil user can click the “Read SCADA analogs” or the “Read SCADA fault currents” button on the SCADA page of the circuit element editor of the device he wishes to read. WindMil then calls the GetSCADAAnalogBySCADAPointId method on the Survalent SCADA server. The returned SCADA analog values are displayed in the circuit element editor.

3) **WindMil can request SCADA status values from the Survalent SCADA server.**

**Importance to user:** The status of a SCADA point tells the engineer whether some particular device is currently open or closed.

**How Achieved:** After SCADA point IDs have been assigned to their appropriate WindMil elements, the WindMil user can click the “Read SCADA status” button on the SCADA page of the circuit element editor of the device he wishes to read. WindMil then calls the GetSCADASStatusBySCADAPointId method on the Survalent SCADA server. The returned SCADA statuses (possibly more than one if multiple phases are desired) are displayed in the circuit element editor.
### Summary of Interoperability Test Results

**Interface #8  SCADA → EA**

#### Table 1
**Recommended MultiSpeak Methods**

<table>
<thead>
<tr>
<th>Method Name</th>
<th>Importance to User</th>
<th>Supported by Server¹ (SCADA)</th>
<th>Supported by Client² (EA)</th>
<th>Verified Interoperable³</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetMethods</td>
<td>Requests a list of methods supported by the server.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>PingURL</td>
<td>Verifies that the server is running and reachable.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GetAllSCADAPoints</td>
<td>Returns a list of SCADA Point definitions.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GetSCADAAnalogBySCADAPointID</td>
<td>Returns a specific SCADA Analog by SCADAPointID.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GetSCADASTatusBySCADAPointID</td>
<td>Returns a specific SCADA Status by SCADAPointID.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

1) Supported by Server means that the server has demonstrated in some interoperability test (not necessarily with this client) that it can support the method.
2) Supported by Client means that the client has demonstrated in some interoperability test (not necessarily with this server) that it can call the method.
3) Verified Interoperable means that both the client and server have demonstrated in this interoperability test that they can usefully transfer data using this method.

#### Table 2
**Optional MultiSpeak Methods**

<table>
<thead>
<tr>
<th>Method Name</th>
<th>Importance to User</th>
<th>Supported by Server¹ (SCADA)</th>
<th>Supported by Client² (EA)</th>
<th>Verified Interoperable³</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetAllSCADAAnalogs</td>
<td>Returns all SCADA Analogs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GetAllSCADASTatus</td>
<td>Returns all SCADA Status data.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GetDomainMembers</td>
<td>Returns a list of members of a specific domain supported by the server.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GetDomainNames</td>
<td>Returns a list of domain names supported by the server.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GetModifiedSCADAPoints</td>
<td>Returns a list of SCADA Point definitions that have changed since the session identified by sessionID.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

June 11, 2006
Certified by:

For Survalent Technology Corporation:

[Signature]

VP Software Development
Name: Cornel Munteanu
Date: July 18, 2006

For Milsoft Utility Solutions, Inc.:

[Signature]

Executive Vice President/CTO
Name: Luis Malave
Date: July 18, 2006

Assertions Verified by:

[Signature]

Name: Hannu Huhdanpaa
UISOL, Inc.
Testing Agent
Date: July 18, 2006

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.

Neither NRECA, Cornice Engineering, Inc. (MultiSpeak Project Coordinator), nor UISOL, acting on behalf of NRECA, makes any warranty or guarantee that the software will perform as described in this assertion when installed at any specific utility. Furthermore, neither NRECA, Cornice Engineering, Inc., nor UISOL makes any warranty or guarantee that the software described will be suitable for any specific purpose or need.

June 11, 2006
As used herein, the word *verify* shall mean an expression of the Testing Agent’s professional opinion to the best of its information, knowledge and belief, and does not constitute a warranty or guarantee by NRECA, Cornice Engineering, Inc., or the Testing Agent.