## Product Description

PowerSwitch

Version 1.0

WITSML Object Specifications Version 1.2.0 and 1.3.1.1

WITSML API Specification Version 1.2.0 and 1.3.1

PowerSwitch is the inter-store data synchronization tool that allows data transport between WITSML stores. It supports all vendor extensions and is capable of handling the non-standard implementations.

## Availability

From January 2008

## Submitter Information

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WITSML Function Coverage

Check all that apply. Explain limitations and/or special circumstances in the Comments area.

Notes:

Functional coverage is organized according to five kinds of product functionality with respect to the WITSML Standards: two kinds of client functions and three kinds of server functions.

- A product may exhibit multiple kinds of functionality.
- The terms client and server are used here exclusively with respect to the WITSML Server API interfaces. Clients issue requests to servers. Servers receive and respond to requests from clients.
- Behaviors for products that do not use the WITSML Server API are classified in an analogous manner.

The five product classifications of WITSML functional coverage are:

1. **Client Products** --
   - **WITSML Producer Client** -- a product that generates or otherwise obtains data that is formulated as WITSML object instances and sent to a WITSML Server to be incorporated in that server's data population. Examples of such products include products that pick up real-time data from sensor devices, format it, and send it to a server; and products that extract data from data stores, format it, and send it to a server.
   - **WITSML Consumer Client** -- a product that issues requests for data as queries of subscriptions to a WITSML Server and then receives data as query responses or subscription publications. Examples of such products include products that acquire data from a server, possibly reformat it, and deliver it to an application program or viewer utility.
   - 1&2. Products the exhibit **combined Producer and Consume Client** functions may be application programs that operate directly on a WITSML Server, such as a mudlogging application or a pore pressure analysis application.

2. **Server Products** --
   - **WITSML Receiving Server** -- a product that performs WITSML Server functions in general and, in particular, acquires data from external sources. Data acquisition may be through WITSML API interfaces or other mechanisms.
   - **WITSML Delivering Server** -- a product that performs WITSML Server functions in general and, in particular, delivers data to external destinations. Data delivery may be through WITSML API interfaces or other mechanisms.
   - **WITSML Managing Server** -- a product that performs WITSML Server functions in general and, in particular, supports requests from authorized client applications to augment (extend), modify, or delete (part or all) WITSML object instances.
   - 3&4. The general understanding and expectation is that a product characterized as a WITSML Server supports both Receiving and Delivering Server functionality.
   - 3&4&5. The **addition of Managing Server** functionality allows a WITSML Server product to do more than store and forward data, such as supporting data quality management client applications that help ensure the integrity and quality of data content in a Server data population.

3. **General Functions** --
   - 6. Virtually all products associated with the WITSML Standards will issue and/or process **WITSML Server General Functions** to determine the capabilities and version of a server product.

<table>
<thead>
<tr>
<th>1. <strong>WITSML Producer Client</strong></th>
<th>A product that (generates and) sends WITSML object instances to a destination process:</th>
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<tr>
<td>1a [ ] Sends to a WITSML Server using AddToStore interface</td>
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<td>1b [ ] Otherwise</td>
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2. **WITSML Consumer Client**
A product that requests and receives WITSML data from a source process:
2a [X] Queries a WITSML Server using GetFromStore interface
2b [ ] Subscribes to a WITSML Server using Publish interface
2c [X] Otherwise

3. **WITSML Receiving Server**
A product that performs the WITSML Server interfaces and receives data from source processes:
3a [ ] Receives WITSML object instances via AddToStore interface
3b [ ] Otherwise receives WITSML object instances
3c [ ] Receives non-WITSML form data treated as if it were WITSML object instances or a virtual equivalent

4. **WITSML Delivering Server**
A product that performs the WITSML Server interfaces and delivers data to destination processes:
4a [ ] Delivers WITSML data in response to queries via GetFromStore interface
4b [ ] Publishes WITSML data in response to subscriptions via the Publish interface
4c [ ] Otherwise delivers WITSML data
4d [ ] Delivers non-WITSML form data derived from WITSML object instances or a virtual equivalent

5. **WITSML Managing Server**
A product that performs the WITSML Server interfaces and manages (augments, changes, deletes portions, or deletes entirely) WITSML object instances or a virtual equivalent:
5a [ ] Processes modification requests via AddToStore, UpdateInStore, DeleteFromStore interfaces
5b [ ] Otherwise processes modification requests

6. **WITSML General Functions**
A product that issues general WITSML Server interface requests to a WITSML Server:
6a [ ] Issues GetVersion and/or GetCapabilities
A product that performs the general WITSML Server interfaces:
6b [ ] Processes GetVersion and/or GetCapabilities

### WITSML Object Coverage
Mark D for Deliver and R for Receive, as applicable. If all functions do not apply, note either functions supported or functions not-supported, e.g. supported by 1a. Explain other limitations or special cases in the Comments area.

- [ ] Realtime
- [ ] Well
- [ ] Wellbore
- [ ] Log & WellLog
- [ ] Trajectory & Traj. Stn.
- [ ] Message
- [ ] Mud Log
- [ ] Rig
- [ ] Survey Program
- [ ] Target
- [ ] Fluids Report
- [ ] Operations Report
- [ ] Risk
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<td>[___] Formation Marker</td>
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<td>[___] Other, specify:</td>
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**Comments:** None.

**Last Update** November 13, 2007 by Lee Geiser