

MultiSpeak Version 3.0 Interoperability Assertion

Statement of Interoperable Functionality Between:

| Vendor(s) | Product | Product Version | Role | Batch Interface | Web Client Interfaces | Web Server Interfaces |
|---------------------------|--------------------|-----------------|------|-----------------|-----------------------|-----------------------|
| Clevest Solutions Inc. | Mobile Field Force | 2.5 | DGV | | OA←DGV | DGV→OA |
| Milsoft Utility Solutions | Milsoft Web Server | 7.2 | OA | | OA→DGV | OA←DGV |

Summary:

Milsoft's DisSPatch OMS product is capable of receiving AVL data from Clevest's Mobile Field Force using MultiSpeak web services. Clevest's Mobile Field Force application serves as the central receiver for GPS and vehicle metadata coming from mobile devices. The Milsoft Web Server accepts real-time updates and backlog information on behalf of DisSPatch. It then prepares/stores the AVL data for display & interaction within DisSPatch clients.

Assuming initial configuration parameters are defined, DisSPatch clients can display an icon on the screen representing the AVL data source. They are also capable of viewing the history of any single AVL data source both in tabular form and as breadcrumb icons on the DisSPatch client map.

The AVL data is flowing from Clevest into DisSPatch via the Milsoft Web Server. The scope of this interface does not allow AVL data to leave the DisSPatch system for 3rd party applications.

Prerequisites:

The Enhanced Crew Management & AVL add-ons for DisSPatch must be installed and configured for proper integration. Both Mobile Field Force and DisSPatch must agree on the unique identifier AVLID field to describe an individual data point. Additionally, both Clevest's Mobile Field Force application and the Milsoft Web Server must be accessible to each other.

Declarations:

During the development of this interface, an additional pair of methods was created and deployed to the pilot site to ease configuration issues. These methods were submitted to the MultiSpeak Technical Group for approval and ratification into the standard. After debate and significant changes they were approved, therefore the existing methods were renamed (RegisterForAVLService & UnregisterForAVLService) and deprecated. Those methods will be discontinued once their official versions have been published and both companies have implemented the ratified version of RegisterForService & UnregisterForService.

Specific Vendor Assertions:

1) The Milsoft Web Server will do its best to recover from maintenance cycles.

Importance to user: The user wants to have a reasonable guarantee that the downtime the Web Server incurs will not create holes in their data.

How Achieved: When the Web Server starts up, it will query records potentially missed from that point to the last record known in the database using the GetAVLEvents method.

2) DisSPatch will update defined vehicle location icons as real-time AVL information arrives.

Importance to user: The user will be able to centrally view where their trucks are within DisSPatch so dispatchers can judge how to best utilize resources and provide increased safety to mobile workers.

How Achieved: Milsoft's Web Server will call the deprecated RegisterForAVLService method when the product is started and then receives AVLChangedNotifications in real time as vehicles send in GPS updates to the Clevest server.

The DisSPatch clients pull information from the Milsoft datastore as new data is being translated by the MultiSpeak AVL interface of the Milsoft Web Server and update defined vehicle icons with a new map location.

Based upon the EventType coming from Clevest, the icons put on the DisSPatch map change to reflect conditions of the vehicle such as moving, speeding, or stopped.

3) DisSPatch will allow users to view historical AVL data

Importance to user: The user will be able to view from within DisSPatch where a vehicle has been using the data collected from Clevest.

How Achieved: By clicking on a vehicle in DisSPatch you can open a window that displays a grid of where that vehicle has been over a specified time period. This also puts new icons on the map to represent where that vehicle has been. When a record is selected in the vehicle info grid, the historical icons change size to represent selection.

Products: Milsoft Web Server and Mobile Field Force

**Summary of Interoperability Test Results
OA→DGV**

**Table 1
Recommended MultiSpeak Methods**

| Method Name | Importance to User | Supported by Server¹ (OA) | Supported by Client² (DGV) | Verified Inter-operable³ |
|--------------------|---|---|--|--|
| GetMethods | Requests a list of methods supported by the server. | X | X | X |
| PingURL | Verifies that the server is running and reachable. | X | X | X |

**Table 2
Optional MultiSpeak Methods**

| Method Name | Importance to User | Supported by Server¹ (OA) | Supported by Client² (DGV) | Verified Inter-operable³ |
|------------------------|---|---|--|--|
| AVLChangedNotification | DGV Notifies OA of changes in AVL object(s) by sending the changed AVLLocation objects(s) | X | X | X |

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.

Products: Milsoft Web Server and Mobile Field Force
Summary of Interoperability Test Results
DTV → OA

Table 3
Recommended MultiSpeak Methods

| Method Name | Importance to User | Supported by Server ¹ (DTV) | Supported by Client ² (OA) | Verified Inter-operable ³ |
|-------------|---|---|--|--------------------------------------|
| GetMethods | Requests a list of methods supported by the server. | X | X | X |
| PingURL | Verifies that the server is running and reachable. | X | X | X |

DTV → OA

Table 4
Optional MultiSpeak Methods

| Method Name | Importance to User | Supported by Server ¹ (DTV) | Supported by Client ² (OA) | Verified Inter-operable ³ |
|---------------------|---|---|--|--------------------------------------|
| GetAVLEvents | Returns all AVLLocation objects for a given time period | X | X | X |
| GetAVLEventsByAVLID | Returns all AVLLocation objects for a given time period and AVLID | X | | |

- 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.

Certified by:

For Milsoft Utility Solutions, Inc. :



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Date : _____

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Assertions Verified by:



MultiSpeak Testing Agent

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Testing Agent

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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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