

## 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
Milsoft	WindMil	7.3	EA			
Autodesk, Inc	(Autodesk Topobase) AutoCAD Map 3D Enterprise	(2011), 2012	GIS	GIS→EA		

### Summary:

Milsoft WindMil can load a complete connectivity model created using AutoCAD Map 3D Enterprise (Electric North American model). Assuming that the user provides complete and correctly connected facility information in AutoCAD Map 3D Enterprise (a document is provided to support correct data creation), a circuit model can be exported from AutoCAD Map 3D Enterprise and imported into WindMil using a batch file transfer. Once the circuit model has been imported into WindMil, it can also be used by Milsoft DisSPatch.

### Prerequisites:

For this interface to work as intended, facilities must be designed in AutoCAD Map 3D Enterprise with sufficient detail to create an engineering model in WindMil and those facilities must be connected together correctly.

The batch interface takes a circuit breaker as the starting point and generates a MultiSpeak 3.0 file containing all downstream devices and conductors connected to that circuit.

The following data model constraints must be observed to ensure that correct information is provided to Milsoft.

- The starting circuit breaker must be located in a substation. In database terms, this means that the FID\_STRUCTURE of the breaker (EL\_BREAKER) must equal the FID of the substation (EL\_SUBSTATION) in which it is located.
- The breaker must have a circuit assigned to it. In database terms, this means that the FID\_CIRCUIT of the breaker must equal the FID of a valid circuit in the EL\_CIRCUIT table (or the V\_MSPK\_CIRCUIT view).
- The export tool assumes that the circuit is correctly assigned to the elements downstream from the breaker. Users should ensure that the Reconfigure operation has been performed in AutoCAD Map 3D Enterprise prior to running the export utility.

- The elements of the circuit must be connected in an appropriate fashion. The connectivity of the network is represented in MultiSpeak by a “sectionID” and “parentSectionID”. The parentSectionID of a feature must be the upstream sectionID of the parent feature. Note that the MultiSpeak export utility does not verify the correctness of the devices on a particular circuit.
- For all current-carrying equipment, the phase domain values must be resolved to the three letter US standard of A, B, C or a combination of these values. If phase information is not available, the application reading the MultiSpeak export file will be unable to use the phase values.
- No attempt is made to validate Electrical properties of devices and conductors. These values are exported to the MultiSpeak file as-is.

### **Specific Vendor Assertions:**

#### **1) AutoCAD Map 3D Enterprise will publish GIS Connectivity data to Milsoft WindMil at the Circuit Level.**

***Importance to user:*** The AutoCAD Map 3D Enterprise software maintains complete electrical connectivity on all electrical GIS features and can generate an engineering model from those features. This model can be imported by Milsoft WindMil software and used for subsequent analyses. This allows mapping and design users to conveniently analyze the electrical details of a correctly designed system without manual data re-entry. It also allows the network to be used for Outage Analysis.

***How Achieved:*** AutoCAD Map 3D Enterprise makes this engineering model (connectivity) available using a batch file. Milsoft WindMil can import this connectivity model by importing the batch file.

**Summary of Interoperability Test Results**  
**Interface #22**  
**EA→GIS (Batch)**  
**GIS→EA (Batch)**

**Table 1**  
**MultiSpeak Data Objects Exchanged (Recommended)**

Object Name	Importance to User	Supported by Map 3D Enterprise (GIS)	Supported by WindMil (EA)	Verified Inter-operable <sup>3</sup>
Circuit elements	The circuit element data object in MultiSpeak is a means to permit two programs to change the connection of existing line sections without the need to exchange all of the data about those line sections.	-	-	-
Connectivity, including:	The set of data objects that collectively define an engineering model for a system is called connectivity. A connectivity model includes all of the objects shown as being indented in the first column. Support for all of the objects, except fake node section is required in order for a complete engineering model	X	X	X
Overhead primary line		X	X	X
Overhead secondary line		X	X	X
Underground primary line		X	X	X
Underground secondary line		X	X	X
Capacitor bank		X	X	X
Transformer bank		X	X	X
Regulator bank		X	X	X
Overcurrent device bank		X	X	X
Switch bank		X	X	X
Service location		X	X	X
Substation		X	X	X
Motor		X	X	X
Generator		X	X	X
Fake node section		X	X	X

Certified by:

For Autodesk:



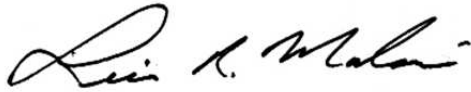
Name: Alan Saunders

Industry Manager, Utilities  
Title

6/17/2011

Date : \_\_\_\_\_

For Milsoft Utility Solutions:



Name: Luis R. Malavé

Executive Vice President / CTO  
Title

6/17/2011

Date : \_\_\_\_\_

Assertions Verified by:



Name: Hannu Huhdanpaa

MultiSpeak Testing Agent  
Title

UISOL, Inc.

Company Acting as Testing Agent

6/17/2011

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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Date – 11/06/02

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