



MÄK Gateway 3.5 Release Notes

This release note provides release-specific information for MÄK Gateway Release 3.5.

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System Requirements

This section lists supported platforms and hardware and software requirements.

Platforms Supported

The Gateway Release 3.5 supports the Windows NT 4.0 and Windows 2000.

Software Requirements

The Gateway uses various supporting software packages. Refer to manufacturers' instructions for installation.

- ♦ One of the following RTIs for your operating system:
 - MÄK RTI 1.3.4-ngc
 - DMSO RTI-NG 1.3v3
- ♦ Java 2 Virtual Machine (JVM) (JDK 1.3 and JRE 1.3). The JVM is optional. You need it to run the Gateway graphical user interface (GUI).



Releases of the JVM and JDK change fairly often and older versions may not be available. New versions are usually backwards compatible, but we cannot guarantee that the Gateway GUI will work with a later version than the one on which we tested it.

Hardware Requirements

The Gateway requires the minimum hardware configurations described in this section.

Windows NT/2000

Hardware:

- ♦ IBM-PC compatible machine with Pentium-class CPU (or above)
- ♦ 32 MB of physical memory
- ♦ 15 MB disk space.

RPR FOM Support

The Gateway 3.5 release is implemented using the RPR FOM 1.0 release. The principal changes that the Gateway FOM makes to the RPR FOM 1.0 are as follows:

- ♦ The Gateway adds the IFF object classes.
- ♦ It treats some attributes as conditional that have been specified as static in the RPR FOM
- ♦ The Gateway does not support any of the RTI object name based SIMAN interactions.

For complete details of these changes, see [Table 1](#).

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Some attributes defined by the Gateway FOM as conditional may actually be static. The RPR FOM 1.0 defines some variables as static that have been reclassified as conditional in the Gateway FOM. The Gateway will not prevent these attributes from changing; however, the DIS data will probably never change. To test compliance, you would have to determine whether or not the targeted DIS application changes the values of the associated PDU fields.

Table 1: Differences between the RPR FOM 1.0 and the Gateway FOM

Class	Attributes/Parameters	Difference
Designator	CodeName DRAlgorithm	Update types changed from static to conditional (see note)
PhysicalEntity	HasAummunitionSupplyCap HasFuelSupplyCap HasRecoveryCap HasRepairCap	Update types changed from static to conditional (see note)
ActionRequestToObject	All	Deleted interaction class
ActionResponseFromObject	All	Deleted interaction class
AttributeChangeRequest	All	Deleted interaction class
AttributeChangeResult	All	Deleted interaction class
CreateObjectRequest	All	Deleted interaction class
CreateObjectResult	All	Deleted interaction class
RemoveObjectRequest	All	Deleted interaction class
RemoveObjectResult	All	Deleted interaction class
Note: RPR FOM 1.0 defines static update type. It is probably the case that the DIS data is static, but the HLA Gateway will allow this attribute to change.		

DIS Protocols and RTIs Supported

The Gateway supports DMSO RTI-NG v 3, the MÄK Real-time RTI 1.3.4-ngc and the following versions of the DIS protocol:

- ♦ IEEE 1278
- ♦ IEEE 1278A
- ♦ DIS 2.0.4.

Product Updates and Changes

This release of the MÄK Gateway has the following changes:

- ♦ Updated graphical user interface
- ♦ Support for additional networking options (DIS)
- ♦ Support for environment objects.

Updated Graphical User Interface

The MÄK Gateway window replaces the Command Input window. This interface still allows you to enter Gateway commands, but you can execute the following commands from menus:

- ♦ Autostart federation
- ♦ Activate HLA/DIS interface
- ♦ Activate verbose output of messages
- ♦ Specify network configuration
- ♦ Quit the Gateway.

The Gateway Window

When the Gateway starts, it displays the Gateway window ([Figure 1-1](#)). You use the Gateway window to enter Gateway commands. You can enter commands in the Gateway window or in the command shell from which you started the Gateway. You can also execute common commands by selecting them from the menus in the Gateway window. [Table 1-1](#) lists the menu commands.

Table 1-1: Gateway window menu commands

Menu	Command	Description
File	Exit	Closes the Gateway window.
Command	DIS/HLA Interface	High Level Architecture interface.
	Verbose Output	Enables the output of all informational messages.

Table 1-1: Gateway window menu commands

Menu	Command	Description
	Autostart Federation	Creates and joins a federation.
Options	Network	Lets you add send and receive addresses for DIS.

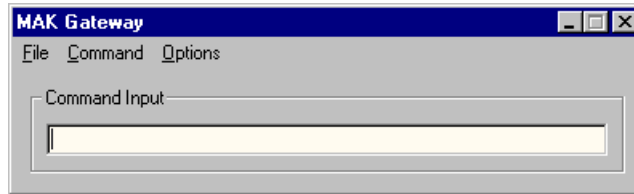


Figure 1-1. Gateway window

Support for Additional Networking Options for DIS

The Gateway supports the following networking options for DIS:

- ♦ Adding and removing send and receive addresses
- ♦ Changing the exercise ID at runtime
- ♦ Multicast networking.

Adding and Removing Send and Receive Addresses

You can have multiple, separate, send and receive addresses in the Gateway.

To change send and receive addresses at startup, edit the *Sim.cfg* configuration file. To add a send address, edit or add the following parameters:

```
send_addr = address
```

This adds *address* to the destination address list. To add a receive address, use the following:

```
recv_addr = address
```

You can also use the following commands from the Gateway command input window.

```
p s a address - adds address to the send list
p s r address - removes address from the send list
p r a address - adds address to the receive list
p r r address - removes address from the receive list
```

You can also configure send and receive addresses in the Network Configuration dialog box.

1. In the MAK Gateway window, choose Options → Network.
2. Click the Add button in the Send To window or the Receive From window. The Add Address dialog box opens.
3. Enter the standard or hexadecimal address, for example, 10.255.255.255 or 0AFFFFFF.
4. Click Add.
5. In the Network Configuration dialog box, click OK.

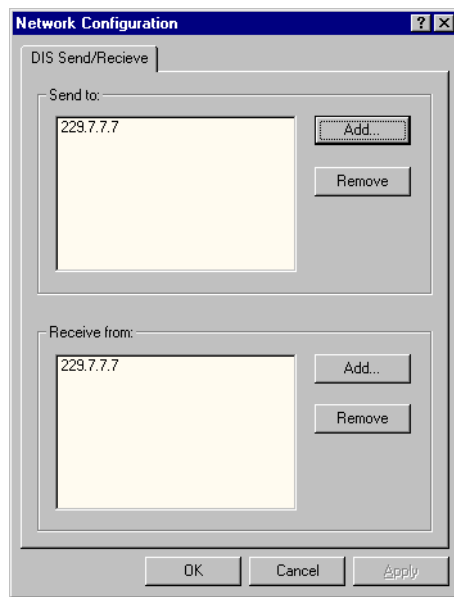


Figure 1-2. Network Configuration dialog box



All changes that are made from the command input or the network configuration window will be saved in the *Sim.cfg* configuration file on exit.

Changing the Exercise ID at Runtime

You can change the Gateway's exercise ID at runtime by entering the following command:

```
p e exercise_id
```

Multicast Networking

The Gateway now supports multicast networking, which you can configure by using any of the configuration methods described in the previous paragraphs.

Support for Environment Objects

The Gateway translates Environment Objects using the *VR-LinkEO.fed* file.

Documentation Updates

The final entry in Table 4-2, on page 4-11 of *Gateway User's Guide* is Fed-Filename. It should be FED File name.

Section 1.2.2 in *Gateway User's Guide* now reads as follows:

Mandatory Attributes

There are several attributes that are required by the Gateway for creating specific DIS PDUs from HLA data. [Table 1-2](#) lists the attributes, the containing class, and comments on any indirect requirements.

Table 1-2: Mandatory Attributes (Sheet 1 of 2)

Class	Attribute / Parameter	Comment
EmitterSystem	EmitterName, EmitterNumber, HostObjectID, (active beams)	HostObjectID (emitting entity) must refer to an object that has been registered or discovered by the Gateway. System must have active beams except when being removed.
EmitterBeam	BeamID, EmittingSystemID, BeamParameterIndex, ERP	EmittingSystemID must refer to an object that has been registered or discovered by the Gateway. Heartbeat updates require BeamParameterIndex and ERP to be non-zero.
Designator	HostObjectID	HostObjectID (designating entity) must refer to an object that has been registered or discovered by the Gateway.
RadioTransmitter	HostObjectID	HostObjectID (transmitting entity) must refer to an object that has been registered or discovered by the Gateway.
RadioReceiver	HostObjectID	HostObjectID (receiving entity) must refer to an object that has been registered or discovered by the Gateway.

Table 1-2: Mandatory Attributes (Sheet 2 of 2)

Class	Attribute / Parameter	Comment
IFF	HostObjectID, SystemType	HostObjectID (emitting/receiving entity) must refer to an object that has been registered or discovered by the Gateway.
BaseEntity	EntityID, EntityType, Position	
ResupplyCancel	ReceivingObject, SupplyingObject	Objects IDs must refer to an object that has been registered or discovered by the Gateway.
ResupplyOffer	ReceivingObject, SupplyingObject	Objects IDs must refer to an object that has been registered or discovered by the Gateway.
ResupplyReceived	ReceivingObject, SupplyingObject	Objects IDs must refer to an object that has been registered or discovered by the Gateway.
ServiceRequest	RequestingObject, ServicingObject	Objects IDs must refer to an object that has been registered or discovered by the Gateway.
RepairComplete	ReceivingObject, RepairingObject	Objects IDs must refer to an object that has been registered or discovered by the Gateway.
RepairResponse	ReceivingObject, RepairingObject	Objects IDs must refer to an object that has been registered or discovered by the Gateway.

Bug Fixes

The option to obtain PDU printout from the Gateway is enabled. In version 3.4, this option was disabled. To turn on PDU information printouts, use the following commands:

```
p d
p v
```