

# HL7 Conformance Statement

## About this Conformance Statement

### Introduction

MIM® and MIM Assistant® are consumers and producers of HL7 messages for communicating with other medical systems. Through this HL7 communication, data integrity of archived studies within MIM and MIMpacs™ is maintained.

MIM and MIM Assistant do not retain or archive received or sent HL7 messages, and act only as a conduit for transmitting HL7 messages to/from custom MIM Extensions™. Through this internal transmission of HL7 messages, the structure and format of transmitted HL7 messages are retained.

### Intended Audience

This conformance statement is intended for administrators of MIM products with the knowledge of system configurations, medical imaging, and general understanding of the integrated solution architecture.

### Related Documents

HL7 Standard: [www.hl7.org](http://www.hl7.org)

LLP Standard: [www.hl7.org](http://www.hl7.org)

### Acronyms

HL7: Health Level 7

LLP: Lower Layer Protocol

## HL7 Broker Model

### LLP Service

When configuring MIM products to integrate with an existing system's HL7 infrastructure, a single MIM machine should be used for receiving and transmitting HL7 messages between MIM's products and the outside HL7 infrastructure.

This machine requires installing the LLP service (through Network Services) and can optionally be running MIM Assistant. Configuration of the LLP service allows specifying:

- Port: The TCP port to accept HL7 messages (default is 4011)
- ACK Port: A separate port for transmitting ACK messages. Default is -1, which indicates it should not be used.
- Use TLS: Whether HL7 transmissions should use Transport Layer Security

Configuration of the LLP service will largely depend on the existing HL7 infrastructure.

### Internal Transmissions

Upon receiving HL7 messages, the LLP service broadcasts these messages on the same machine to a running MIM application or MIM Assistant service using a proprietary protocol. The LLP service does not broadcast ACK messages received as a result of the LLP service having initiated/sent an HL7 message.

If MIM or MIM Assistant initiate the sending of an HL7 message, the message is transmitted over a proprietary protocol to the local LLP service, which then transmits the message to the final destination using HL7 LLP. The HL7 message is initially created by a MIM Extension which can make use of any supported HL7 version message structure. This structure is retained through the transmission between MIM/MIM Assistant and LLP service.

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## HL7 Supported Transmissions

MIM products support sending and receiving HL7 messages through the following protocol.

- LLP (Lower Layer Protocol) – This is configured through Network Services > LLP Service

## HL7 Supported Versions

MIM's LLP service is capable of both sending and receiving HL7 messages compliant with the following version specifications:

- HL7 v2.1
- HL7 v2.2
- HL7 v2.3
- HL7 v2.3.1
- HL7 v2.4
- HL7 v2.5
- HL7 v2.5.1
- HL7 v2.6
- HL7 v2.7
- HL7 v2.8

## HL7 Supported Events

The MIM LLP service provides support for receiving and sending HL7 messages along with routing HL7 messages between MIM and MIM Assistant. Both MIM and MIM Assistant products provide support invoking MIM Extensions with received HL7 messages, but provide no application-specific behaviors based on transmitted messages.

Application-specific behavior upon receiving HL7 messages is delegated to MIM Extensions. Upon receiving any HL7 message over LLP, any running instances of MIM or MIM Assistant will be notified of the message. Both MIM and MIM Assistant invoke all MIM Extensions registered to receive HL7 messages.

## MIM Extensions

MIM and MIM Assistant will forward HL7 messages to installed extensions.

### MIM Assistant Extensions

These extensions accept the HL7 message as input in the format of a single string value. Optionally, the extension can return a Search Query object based on values found in the HL7 message. This Search Query object can then be passed into other MIM Assistant actions such as Search for Series.

An extension also has access to standard file or network operations, allowing it to communicate the HL7 message, or properties of it, to outside services.

These extensions can then be used as a filter for MIM Assistant rules allowing it to filter out certain HL7 messages.

### MIM Extensions

These extensions accept the HL7 message as input in the format of a single string value. The extensions do not have any output. These extensions are run only if there is a running instance of the MIM application open on the system. These extensions can be useful for notifying the user of a specific event.