edifecs

Health Level 7 (HL7) Adapter

Edifecs SpecBuilder and XEngine Accelerate the Design, Development, Validation and Integration of HL7 Messages

Background on HL7 Messages

Healthcare providers are facing a daunting challenge: to provide the best clinical patient care while reducing costs. Adoption of HL7 message protocols provides a valuable resource in overcoming these challenges. HL7 is an ANSI-accredited standards organization that publishes specifications for the electronic exchange of administrative, clinical, and financial information among independent healthcareoriented systems. This approach enables provider healthcare organizations to select and integrate best-of-breed systems for patient care, clinical lab, etc. However, implementation of HL7 is not plug-n-play because each organization and department has its own specific business needs. These needs translate into custom requirements that must be properly documented, communicated and applied to the various systems in order to function properly. Edifecs products include HL7 support to provide an easy way to capture, document and maintain these requirements and ensure that messages comply with these requirements.

Edifecs HL7 Highlights

- ✓ Supports HL7 versions: 2.1, 2.2, 2.3, 2.3.1, 2.4, 2.x and 3.x (XML based)

- ✓ Produces CCD and CDA, including schematron validation

- ✓ Validates against HL7 message specifications and custom rules

- ✓ Creates automatic acknowledgements

- ✓ Supports full envelope and batching

- ✓ Converts to and from HL7 2.x XML format

- ✓ Exports HL7 message specifications to W3C XML Schema format

Comprehensive HL7 standards support with seamless, fast integration

Comprehensive Standards Support

The Edifecs HL7 solution offers comprehensive standards support, a powerful editor with compliance checking and easy, seamless integration through a COM, Java API, or standalone server (includes connectors to IBM Websphere MQ, Java messaging server (JMS) or folder). The Edifecs solution supports all HL7 2.x versions that are currently released (2.1, 2.2, 2.3, 2.3.1, 2.4, 2.5 and more). For each version, all event message types are supported. Support for new HL7 2.x versions such as 2.6, 2.7.x is provided within the Edifecs products, when they are released by HL7. For organizations moving to HL7 3.x, Edifecs offers a full library of version 3.0 interactions events with the ability for further customization and export to W3C compliant XSD. Edifecs solution's Continuity of Care Document (CCD) is complete with support for pre-built schematron rules for the various contexts.

Design-Time using Interface Editor with Compliance Checking

The Edifecs SpecBuilder design-time tool provides a single integrated development and QA environment that dramatically simplifies and speeds up the process to create, edit, publish and analyze HL7 specifications.
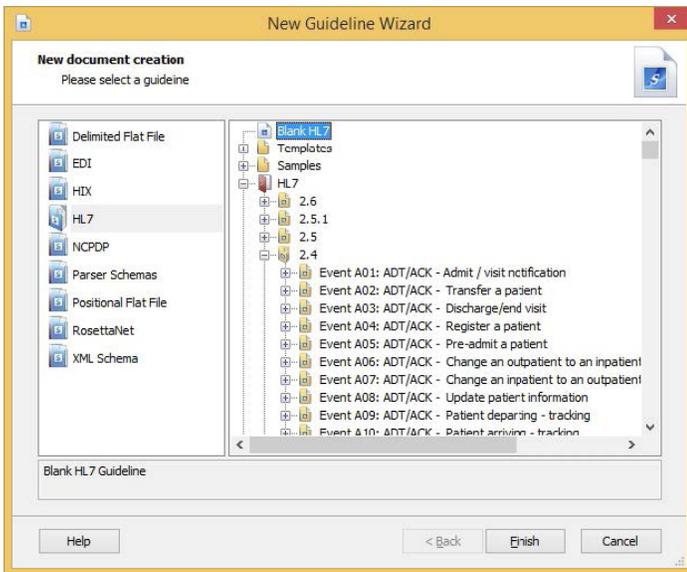
Edit: With the SpecBuilder Editor (Figure 1) you can start with a message from the standards library and quickly annotate it to reflect your compliance needs. With multiple user notes you can maintain a single source for specification and still meet the needs of various audiences such as map developers and business analysts. simplifies and speeds up the process to create, edit, publish and analyze HL7 specifications.

[Figure 1]

Key Features

Publish: SpecBuilder automatically formats your specification to give it a professional appearance. Specifications can be published in paper, RTF, PDF and HTML formats without the need for a third-party tool.
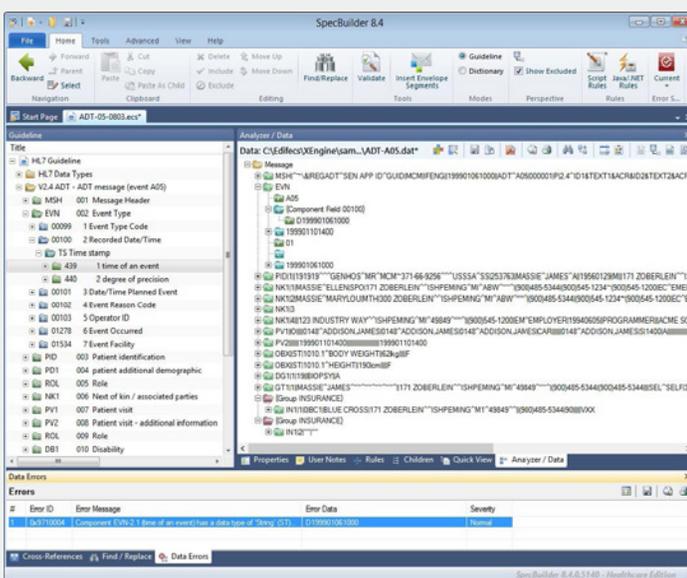
Generate Test Data: SpecBuilder test data generation allows the user to generate test data and scenarios to test the interfaces of messages that will be exchanged between the sender and receiver systems.

Migrate: With SpecBuilder comparison and migration component you can easily stay aligned with the new standard revisions. By selectively choosing what to compare and what to ignore you can quickly perform gap analysis to share with your team and focus on the items that will have the most impact on your implementation.

Produce HL7 CCD and CDA, including schematron validation

[Figure 2]

Export: SpecBuilder allows the user to export the customized message specification to multiple different formats including W3C XML Schema for HL7 2.x messages. This provides organizations a migration path towards HL7 v3.x XML-based messages.

Analyze: The SpecBuilder desktop analyzer (Figure 2) provides a powerful debugging environment with detailed error reports to make it easy to analyze, track, and fix data errors in HL7 messages. You can simulta-neously navigate a data file, error report and specs all linked together in an intuitive graphical environment. At the same time, perform businessrule and syntax-rule validation.

Run-time Integration

The Edifecs XEngine is a run-time solution that can be used as a standalone server or tightly integrated into an existing process workflow, such as with an EAI server. XEngine is multi-threaded to provide robust performance and scalability. **XEngine HL7 offers the following key advantages**:

- Full support for TCP/IP-based MLLP transport for bi-directional send and receive, including transport ACKs

- Full operational integrity of your data by validating HL7 messages for syntax, semantics and application-specific business rules defined in SpecBuilder

- Full support for user-defined variations such as Z-segments, custom data types and more

- Bi-directional conversion of any HL7 2.x pipe and hat format to the official HL7 2.x XML format, including full validation of HL7 2.x XML data to the HL7 message specifications

Validate against HL7 message specifications and custom rules

- Automatic creation of all required HL7 acknowledge-ments and full adherence to HL7 rules for original mode acknowledgements

- Full support HL7 File and Batch level envelopes

- Delivery of HL7 message once parsed, validated and converted by XEngine

- The XEngine HL7 Adapter is a fully multi-threaded high-performance engine that runs on a variety of platforms and operating systems, including Windows, Linux, Solaris, and HP 11 Itanium