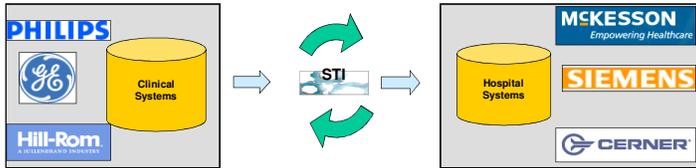


Introduction

STI Interface Product



- Currently, a separate outbound interface has been implemented, monitored and maintained for each clinical system - giving rise to multiple tightly coupled monolithic architectures.
- With the current application, users do not have enough capability to freely configure and customize reports.
- A lot of time and effort is spent on designing and implementing a new outbound interface.

Problem

- Need for an outbound interface that will allow configuration, scheduling and generation of reports for L&D units of different hospitals.

Project Goals

- Allow scheduling and generation of Health Level 7 message and other standard data from multiple data sources.
- Allow users to configure and customize reports and reduce STI's involvement in redundant effort.
- Provide an interface that is efficient at customizing reports and generic enough to adapt to new L&D units.

System Architecture

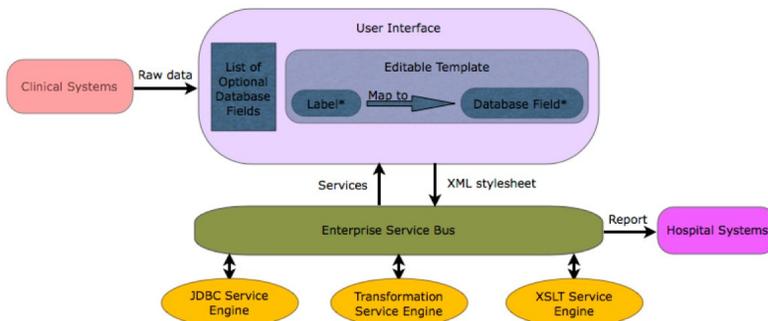


Figure 3: System Architecture

Results to-date

- Successful generation of HL7 message through Chainbuilder ESB.
- Generation of formatted documents is not straightforward - ESB can provide the XML output that has to be then converted to PDF. For this conversion the formatting information should be provided using an appropriate stylesheet.
- An alternative approach was tried for generation of PDF reports using an open source tool - Jasper Reports. However its utility is limited given that it cannot integrate with multiple data sources at a time.

Problem Analysis

To provide a generalized approach, we evaluate the state-of-art in mash ups.

Scope of Mashups	Purpose	Example	Benefit	Architecture	Limitations
Consumer Mashups	Related to presentation layer	Google maps	-Little or no coding -Drag and drop functionality	-URL aggregation -Use of widgets and gadgets	-Not suitable for business applications
Data Mashups	Combines multiple data sources into a new data source	Google news i.e. combining several news feeds into one	-Little or no coding -Very flexible as can interface with multiple back end systems	-Data aggregation	-Security and maintenance is an issue
Enterprise Mashups	Mashups techniques within organization internal application	Sales report	-Faster answers -Improved resource use -New opportunity	-Integration from enterprise search engines, web services, messaging systems etc and data integration from external services	-Lack of common accepted model -Very less support from major software firms -Low awareness and realization of Mashups true potential by business community
Business Mashups	Combination of all the above Mashups	Management Dashboard	-Useful for integrating business and data services -To develop new integrated services quickly - Make services user friendly	-Integrate business and data services	-All of deficiencies faced by Enterprise Mashups

Future Work

Architecture

- Optimize the time to implement outbound interface when integrating with a new clinical system.

Interface

- Find an alternative way of generating pdf output through ESB, while eliminating the complexity of XSLT stylesheet.
- Develop a user interface for customizing HL7 message generated by ESB.

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