Open Source Middleware

- Built on top of the Java Message Service (JMS)
- Exceeds Performance Requirements
  - Middleware can reach the performance targets of throughput and latency required by different clinical deployments.

Administrative & Clinician Consoles

- Segregates system management between two primary stakeholders: Clinicians and IT Administrators
- Provides basic sanity checks for interoperability scenario deployments.

MDCF Development Environment

- Component based: interoperability modules are specified as components with typed ports.
- Input ports
- Output ports
- Eclipse plugin facilitates component specification
- Component library forms a palette of MDCF interoperability modules

Inter-op Design and Modeling

- Eclipse plugin provides scenario design and modeling capabilities:
  - Inter-op scenarios are realized as a network of components
  - Plugin provides active typing
    - Prevents developers from improperly connecting incompatible components
  - Provides a graphical and table interface for scenario specification

Autocoding and Spec Generation

- Generate XML Deployment descriptors for MDCF inter-op scenarios + properly typed component skeletons.

Collaborators

- FDA

MDCF Overview

- Core functional code written by component developer.

Table 1. Message latencies - OR scenario

<table>
<thead>
<tr>
<th>Mode</th>
<th>Mean</th>
<th>% &lt; 5ms</th>
<th>% &lt; 10ms</th>
<th>% &gt; 20 ms</th>
<th>% &gt; 30 ms</th>
<th>% &gt; 40 ms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-P</td>
<td>1ms</td>
<td>99.99</td>
<td>99.99</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Persistent</td>
<td>5ms</td>
<td>99.62</td>
<td>99.62</td>
<td>0.38</td>
<td>0.38</td>
<td>0.00</td>
</tr>
</tbody>
</table>