

	Total Score	Comments
<i>Wicket</i>	9	
<i>JSF</i>	8	<i>Performance Issue</i>
<i>Seam</i>	7	
<i>Struts2</i>	6	
<i>Stripes</i>	6	<i>Small community, not actively developed</i>
<i>Existing System</i>	6	<i>Already implemented</i>
<i>Spring MVC</i>	4	
<i>Tapestry</i>	3	<i>No backward compatibility</i>

Figure 2.9.: Comparison result summary

The architecture is very simple and required only basic knowledge of web development to understand. Only web.xml need to be taken care of. No specific IDE and tools support needed.

Spring MVC and Tapestry have poor result and can be categorized into low quality frameworks. Spring MVC is one of the most well-known web framework in its high flexibility, high capability of integration to other technology and frameworks, and ease of testing (which is originally, the purpose of Spring MVC). However, Spring MVC also known-well as one of the most complex framework. With very steep learning curve and pure XML configuration method, the flexibility of Spring MVC causes extremely high complexity single XML configuration file with no tools and IDE support. Tapestry has the lowest score and crucial drawbacks, which is no backward compatibility. Until the latest release (Tapestry 5), the framework developer team still have not promised anything for the next version.

2.4. Requirement Gathering

The requirements from the users of the MeDIC and XAM system, who get benefits from this technical report is needed in order to select the suitable frameworks. The requirements meeting was held in a meeting room of the building where all the attendances are working at January 2011, 28th. There were 5 attendances. All of the attendances are developers working in the MeDIC or the XAM project.

The meeting started with short proposal presentation of this technical report. After that, any attendances were free to give their own opinions about the original prototype, expected characteristics of the new architecture, and prioritize all requirements.

The purpose of this requirements meeting is to get technical feedbacks and suggestions from the users of the original prototype and use those information as criteria for the 2nd frameworks selection and comparison. The selected frameworks will be analyzed in detail, implemented as prototype of the existing system, and evaluated in the following chapters.

2.5. System Requirement and Analysis

2.5.1. 1st priority (1)

- Avoid complex and hard to understand configuration files.
- Many small files are more preferable than less amount of large files.
- AJAX is optional but the system should be able to work without it.
- The framework's community should be active and the project must be currently running.

Most of the attendances chose to avoid basic pitfalls which, increases the complexity of the system as the first priority. One factor that affect the complexity is large files in the system especially, configuration files such as xml files. There are several ways to configure the framework but mainly, by xml file or annotation. Small amount, but large artifacts are harder to maintain than higher amount, but small and simple artifacts since, there are very few tools/IDE, which support xml auto-completion and verification. Unlike xml, configuration by annotation eliminates additional artifacts and easier to understand. However, the advantage of xml is the ability to manages the properties/parameters of deployed system without recompilation or redeployment. According to the feedback from user, convention over configuration framework is preferred, and possibly, zero configuration will be the best.

Asynchronous Javascript And XML (AJAX) is a web development method used on the client-side to create interactive web application. With AJAX, web application can send and retrieve the data from web server asynchronously (in the background) without any sign of page refresh. For the existing system, any frameworks have AJAX support are advantageous, but the system must still working perfectly, even without AJAX. This requirement was the old requirement brought from the original prototype.

Community and support also important. The chosen framework's community