

Matrix Mapping Tool

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Background

The Matrix Mapping Tool (MMT) is a software application created by Virtual Technology Corporation (VTC) for the Department of Defense (DoD) that aids DoD officials in identifying assets and needs and acquiring and deploying weapons used by the armed forces, ranging from small arms to fully equipped aircraft carriers. "The MMT is a database with supporting software, which documents relationships between warfighting activities, the Uniformed Joint Task List (UJTL), materiel solutions (systems and technologies), and joint capability areas. It allows for a common set of reusable data to support portfolio management (functional and operational), analysis of capability gaps, and other studies where it is necessary to understand the relationships across the dimensions listed above."^[1]

Introduction

VTC was actively developing the third "spiral" of the MMT when they decided that a web based interface would be more useful in some environments because of the difficulty involved in installing software of Defense Department computers. My project was to create a web based interface for the MMT that required no special software (such as browser plug-ins) or permissions, while still providing all the functionality of the desktop based application.

Methods

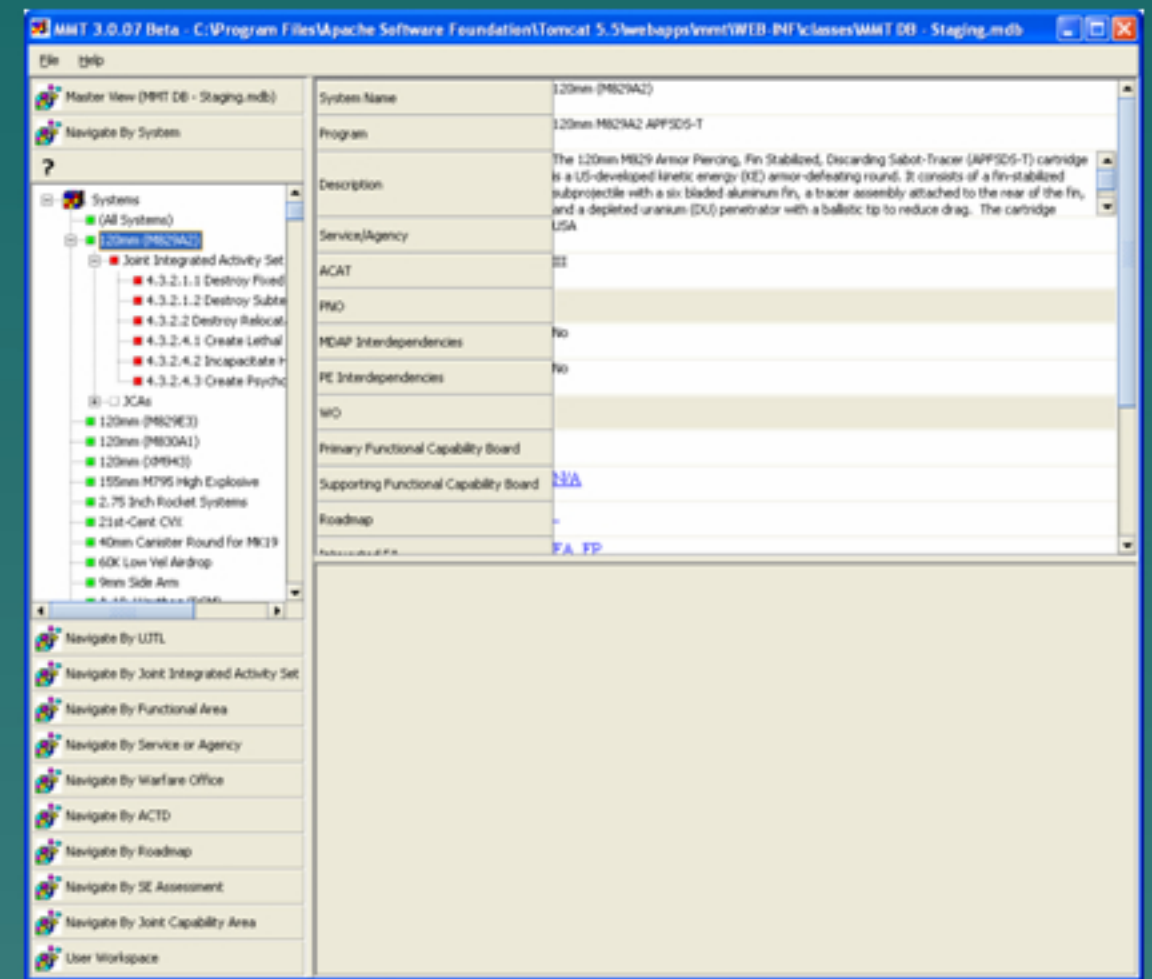
Since features were still being added to the desktop application, I tried to reuse as much code as possible so that when features are added to the desktop version, they can be easily added to the web based version.

Technology

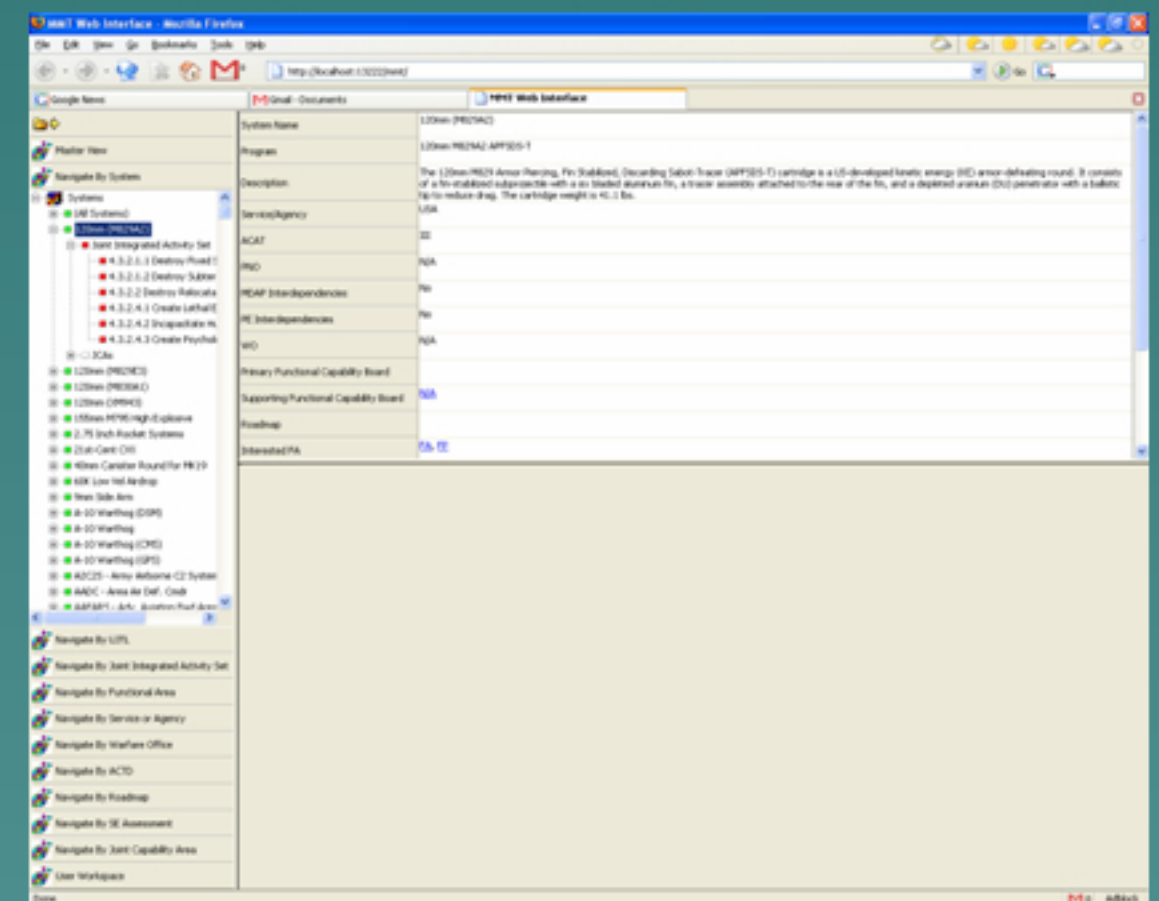
The server runs Apache Tomcat and uses Java Servlets and JSP pages. The only software needed by the client is a modern web browser, such as Internet Explorer 6 or Firefox. The web application uses JavaScript and the XMLHttpRequest object to communicate asynchronously with the server.

Conclusion

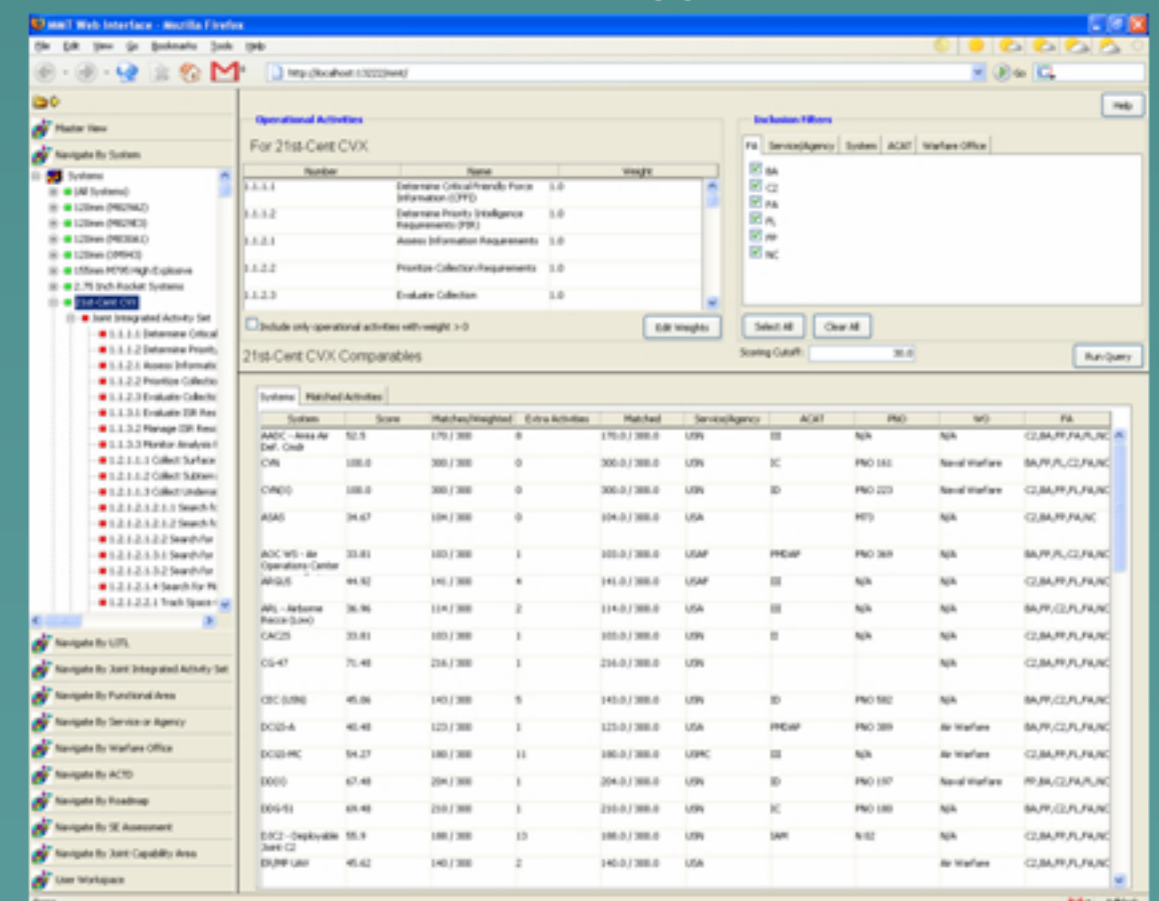
The Matrix Mapping Tool web interface is able to provide the same functionality as the desktop application without requiring the user to install any special software. Furthermore, the web application provides a similar looking interface as the desktop application so that users can easily switch between the two. There are still a few features of the desktop application that were not yet implemented, such as associating war fighting activities with user defined activities.



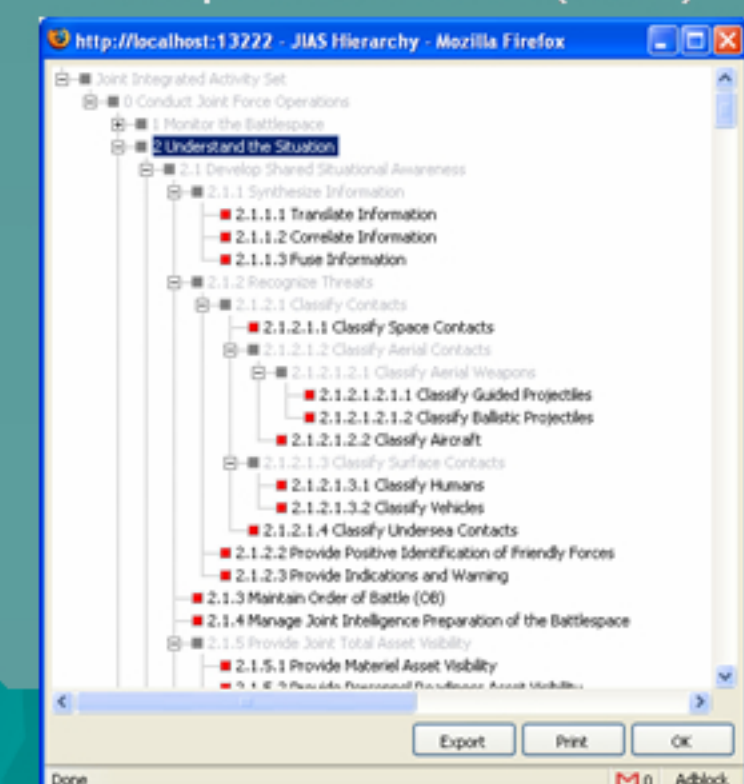
Original Desktop Application



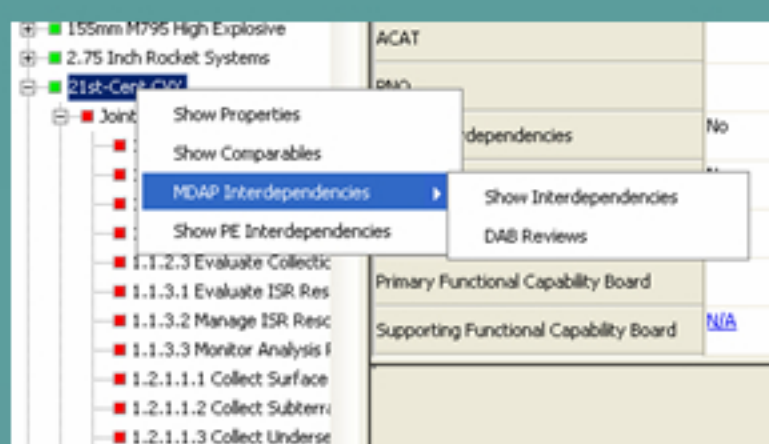
Web Based Application



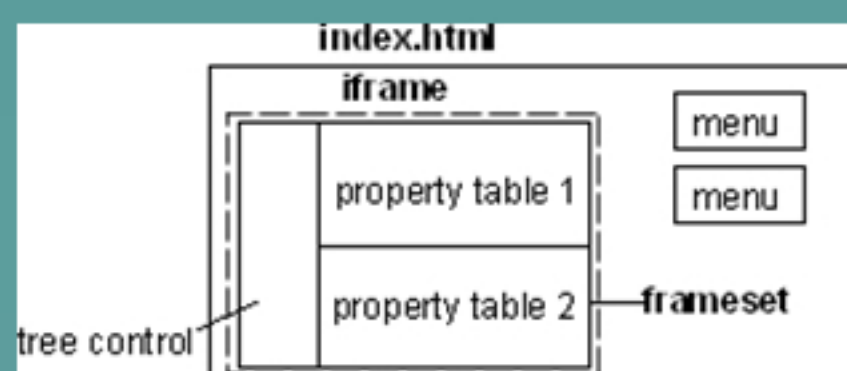
Comparables View (Web)



JIAS Hierarchy Dialog



Right click menu



Menu layout (DOM)

[1] <http://www.sosece.org/pdfs/1stSOSeceConf/abstracts/dahmann.pdf>