



## CASE STUDY:

Manufacturing

# Vought Aircraft Industries

## Company Background

Vought Aircraft Industries, Inc. is the world's largest independent supplier of aerostructures. Headquartered in Dallas, the company provides wings, fuselage subassemblies, thrust reversers and other components for prime manufacturers of aircraft. Vought has more than 5,000 employees and annual sales exceed \$1 billion. It has operations in Dallas, Hawthorne, Calif.; Stuart, Fla.; Milledgeville, Ga.; and Perry, Ga.

The largest segment of Vought's commercial aircraft business is structural airframe work. The company has work share on virtually every Boeing jetliner in production, from the 737 to the 777.

## Manufacturing System Environment

Vought's manufacturing control system, referred to as MCSII, is a homegrown, IMS database transaction system running on IBM Mainframe that has been developed over the past 20 years. This system is designed to monitor all input and process instructions. All bill of materials are entered into the system, and then that data is fed to other systems to generate purchase and work orders.

## Business Problem

When using the manufacturing control system a process planner had to navigate through more than 30 legacy "green screens" to input or review data. This cumbersome navigation required a process planner to memorize myriad codes and commands that were required in certain fields. This time consuming and complex process often resulted in incorrect data codes being entered into the system that resulted in delays in the release of important process plans to downstream users.

## Project Goal and Results

Vought's goal was to create greater efficiencies in process planning by reducing the number of screens a planner had to navigate, providing drop-down tables that define various codes, implementing rules-based selection of data codes, and allowing access to other systems without having to exit the planning system.

Vought accomplished all of these objectives with the MitemView application, and in addition, developed several other transactions within the application that aid a process planner in performing functions such as: effective code searches, illustration lookup, standard operation lookup, cut, paste and copy, and word search. This new functionality has significantly reduced keyboard time and improved the accuracy and timeliness of process planning.

Previous to the MitemView interface, process planners had to deal with so many screens that they normally resorted to printing out the entire plan, marking it up by hand and then entering the required changes. Now that the number of screens has been reduced and the data has been arranged into a logical presentation sequence, process planners no longer have to print out the entire plan.

Vought also wanted to build an easy-to-use Web application for non-process planning people who had "read only" access to the manufacturing control system. The new Web application has eliminated the need for these employees to remember the 30 or so required screen transaction names. The new Web application also allows many off-site employees stationed across the country to view data for a given plan. This new Web interface is deployed via a MitemView programmatic integration server and is available to any employee that has access to the company Intranet.

(More)

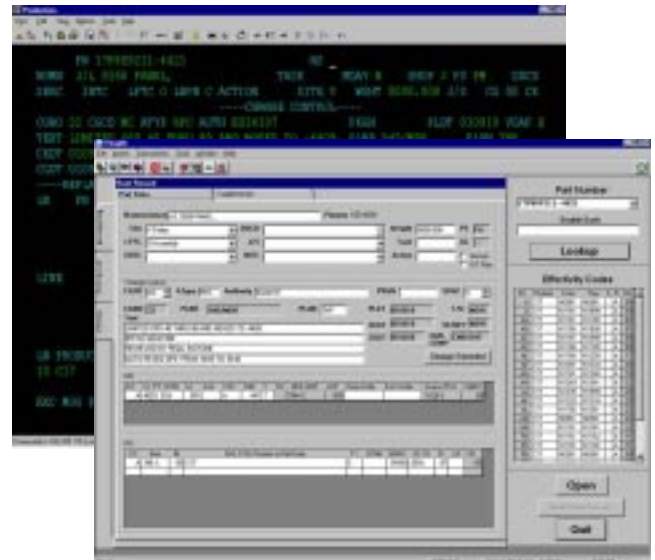


Figure 1. From 30 Green Screens to One Dream Screen

## Why MitemView Was Selected?

*"MitemView retrieved the required data in under 10 seconds while the other product was taking up to 45 seconds to pull back only one-fifth of the information (that MitemView was doing), and with a lot more code, thousands of more lines of code."*

*Ralph Heinefield  
Senior Production  
Engineer  
Vought Aircraft*

MitemView performed favorably during a proof of concept demonstration. Vought developed a statement of work for the proof of concept and established ground rules and expectations for 2 finalist being considered for the project. Both suppliers were then allocated three days in which they were to come on site at Vought to develop the interface as defined in the statement of work. MITEM was able to complete the task in less than two days.

According to Ralph Heinefield, Senior Production Engineer at Vought, "A MITEM consultant came in for the proof of concept and in about 4 hours completed the initial transactions to the mainframe that we requested. The consultant spent the next day and ½ refining the user interface."

Heinefield added: "The software being presented by the other vendor just didn't work efficiently. MitemView retrieved the required data in under 10 seconds while the other product was taking up to 45 seconds to pull back only one-fifth of the information (that MitemView was doing), and with a lot more code, thousands of more lines of code."

In addition to superior performance, another feature that won MITEM the business was that MitemView easily recognized errors coming back out of the system. The competitor did not have that ability. Heinefield commented, "If you send a bad piece of data out to our mainframe, the system has business rules that check that the data coming in is good. When an error is detected, the mainframe will re-display the screen with the error hi-lighted in RED. Of the two products we tested, only MitemView was able to recognize the error and indicate the particular condition it encountered and present the user with that error message. This was a feature that really convinced us to go with MitemView."

## Development Time Frame

Vought initially kicked-off the design phase in August 2001. Three preliminary releases were made to pilot teams for testing. Final deployment took place in January of 2002. Heinefield stated that "The MITEM team worked extremely well in helping us meet a very condensed project time line."

A MITEM consultant worked on site from August to January to help get the project done. In all, it took only four months, from the start of the design phase to the final release, to achieve Vought's project implementation goals.

Vought has currently deployed the new MitemView desktop application to about 180 users at all 4 manufacturing locations located in Florida, Texas, California, and Georgia. Vought purchased an additional 100 concurrent session server licenses for the Web-based application.

## MITEM's Customers Include:



communications



ABN-AMRO

