Web Data Corporation

Web Data Corporation leads the market for online surplus property management systems and online auctions for surplus property. Its flagship surplus management system was originally developed for the University of Arizona and has since gone on to be sold to many more large universities, state surplus agencies and private industry.

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Business Situation

The market for surplus property is beginning to rev into overdrive as states increasingly turn to online auctions as a way to attract more bidders and bring more revenue into state coffers. Web Data Corporation, having been uniquely positioned in this market since 1998, smartly turned to Rich Internet Application (RIA) technology in order to preserve and grow its online auction business and to meet the growing demand for richer user experiences.

Application Description

The application is called FleetSurplusAuctions.com. It is an online service, hosted by Web Data Corporation, that specializes in seized and surplus vehicle auctions. This application allows businesses to post their lots and then commence an online bidding process that enables all parties to view bids in real-time. The advantage to auctions taking place online, as opposed to off, is that the bids can literally come from anywhere in the world. As a result, the market potential for any surplus property item is automatically expanded, which means there is more competition allowing final bid levels to end higher.

Problem Definition

Web Data Corporation had originally created its own brand of AJAX, which means that the communication layer between client and server was SOAP/XML-based (originally the architecture used COM on the server and recordsets on the client). As the user base grew and the content in the database was populated with more products, the
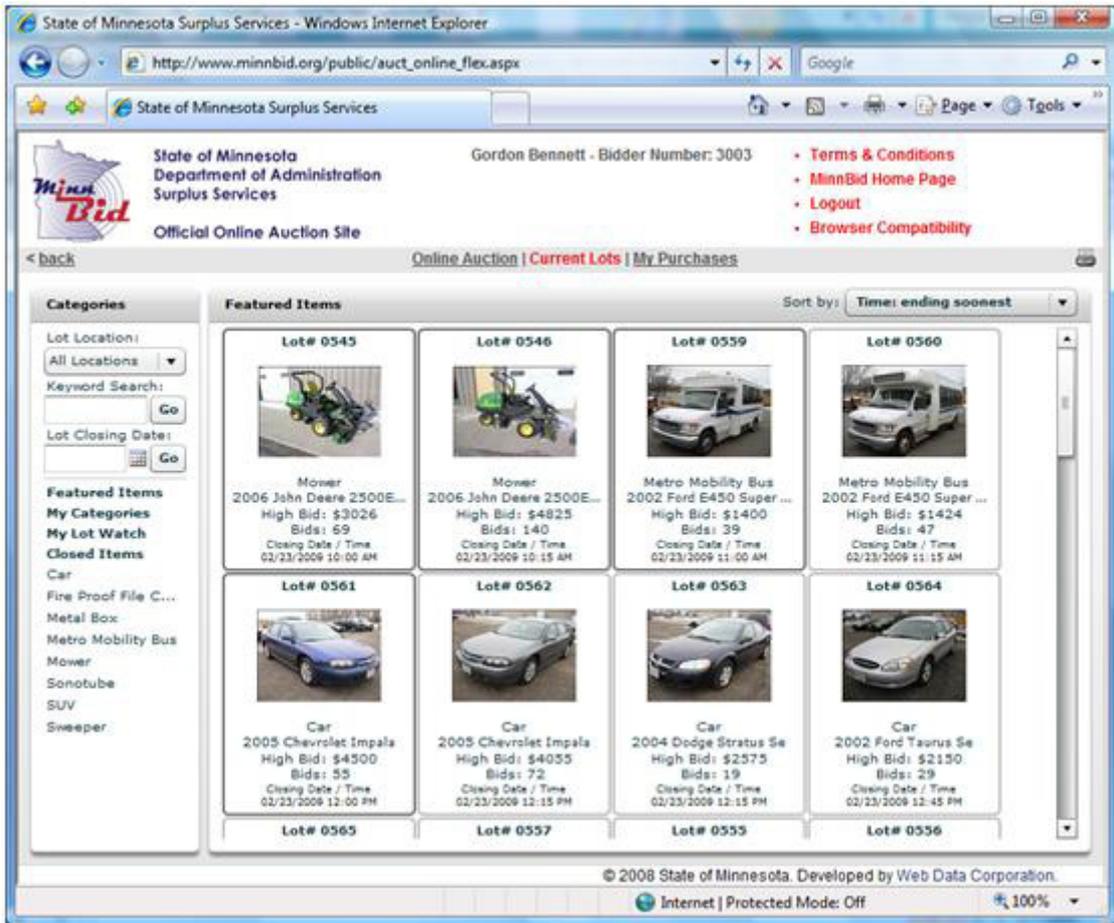
servers were becoming over-taxed. The existing system would call a stored procedure from a web service every second and then cache the results, so that each browser connected to a specific auction lot was grabbing the latest data from the web service cache. In turn, the web service was calling a stored procedure each second to refresh the cache. As an example, if there were 50 or 100 open lots with users bidding on them, there would be that same number of stored procedures running every second. This meant performance degraded significantly and the long-term goals, such as data push broadcast of new bids, would not be realized with a system that could not scale.

In addition to the performance problems, Web Data Corporation faced a few additional challenges when they decided to adopt the AMF protocol for its performance advantages over SOAP/XML. The development team would need to learn a new technology; the integration of the client with a .NET backend wasnít going to be easy if they did it themselves and time was of the essence - they only had three months to refactor their existing application with a new user interface.

Solution

Web Data Corporation evaluated several options to take its 10-year old technology into the next generation of RIAs and found that the solutions that supported the AMF

remoting protocol, were few, but AMF remoting support was required. According to Gordon Bennett, CEO, "We chose WebORB for the speed of pushing data out to the end-users and reduced payload on our servers. In our business, the speed of delivering real-time bidding is a great benefit for bidders who do not have to refresh their screen to see competing bids. The result is higher prices at auction, because bidders can react more quickly. Our competitors, on the other hand, are mostly stuck in old 1990's server side technology."

Benefits

Some of the benefits the Web Data Corporation enjoyed include:

- **Better Performance – There was no longer a need to make a call to the server every second. Therefore, the payload was less and the speed of pushing data to bidders was greatly improved.**

- **Better Real-time Functionality – WebORB supports Data Push, so that when a new bid is placed, the WebORB dll is updated with the latest bid data and that data is pushed out to all bidders connected to the lot.**

- **Future-Proof - Web Data Corporation is porting its applications to mobile devices and WebORB supports communication with mobile devices too.**

- **Richer Content – The Flex technology supports efficient use of space for data presentation. For Web Data Corporation's customers, the more images and information that can be presented on an auction lot, the greater the likelihood that the bids will be higher.**

- **Flexibility – One of the requirements was that the generated code had to be transportable to other versions of the application.**

- **Speed of Development - WebORB provided rich functionality right out of the box that meant Web Data Corporation wouldn't have to re-invent the wheel.**

- **Code Reuse - WebORB for .NET meant that Web Data Corporation could connect it's existing .NET code base to a new Flex client without having to do a rewrite of the back-end services.**