



Electronic Archiving: PRONOM

The National Archives is the central archive of the UK. It brings together all publicly available records from both the Government and the Law Courts, and makes them available to anyone who wishes to view them. Their archives span an unbroken period from the 11th Century to the present day.

Business Problem

The National Archives wanted to create a database system (called PRONOM) with the aim of storing information on all software products ever used to generate electronic records.

The main use for the database would be to identify old software products which were no longer supported, and then to plan a migration route for the records generated by these products.

The system had to comply with e-Government/e-GIF standards and be accessible through a web browser.

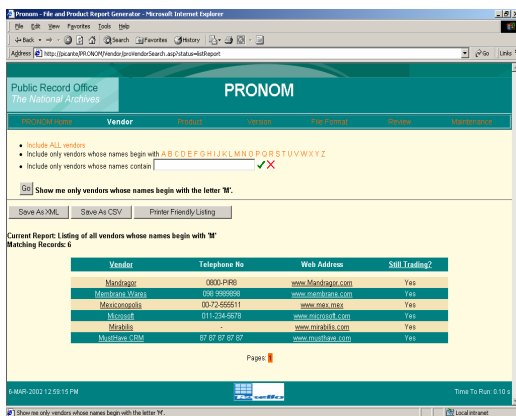
Tessella Solution

The Tessella team combined several technologies to product a fast, effective and robust solution to The National Archives' problem.

The web side of the system was driven by ASP pages running on Microsoft Internet Information Services (IIS). These were used to provide the user with (and then process) JavaScript-controlled HTML forms. The interface was designed to be quick and friendly to use, allowing users to quickly make full use of the system. The use of client-side JavaScript on the forms allowed the system to react to user input without the delay involved in communicating with the server.

The ASP pages interacted with a SQL Server database via a bespoke COM object running under Microsoft Transaction Server (MTS). MTS manages object re-use and offers connection pooling, resulting in reduced demand for server resources such as memory. This gives a significant performance improvement.

Two core technologies used within the system were XML (eXtensible Markup Language) and XSL (eXtensible Stylesheet Language).



The PRONOM system in action

Communication between the ASP and the database was via XML. A request (in XML form) is passed to the COM object by the ASP, based on criteria entered by the user. The object then interacts with the database and returns an XML report. This can be either downloaded to a file, or an XSL stylesheet can be applied to transform it into HTML for display in a browser.

The use of XSL allows a single XML document to be transformed into an unlimited number of different views (e.g. HTML, CSV, etc).

Results and Benefits

The National Archives now has a database system which meets all their requirements. The system is fast and intuitive to use.

The use of XML across the whole system is compliant with the e-Government standards, and offers compatibility across a diverse range of platforms.

The system is scalable, and extra reports and functionality can quickly be added as the need arises.

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