

Dutch Government – Testbed

Tessella, together with partners Audata Ltd., were selected by the Dutch Government, through an open European tender procedure, to carry out the Digital Preservation Testbed project, working closely with a project team of Dutch government staff. It is a 3 year project which began in September 2000.

Project Details

The Testbed project is a research project: its purpose is to investigate and evaluate the possible approaches for long-term preservation of electronic records in order to make recommendations to Dutch government departments and the Dutch National Archives on their future strategy. These recommendations will cover guidelines on immediate steps to be taken to facilitate long-term preservation of electronic records, recommendations on the preservation approaches to be adopted for different record types and cost models to assess the present and future resources necessary to implement a reliable long-term electronic archiving framework. The project is structured around a series of experiments, intended to generate specific practical knowledge about the pros and cons of different combinations of preservation approaches and record types. The analysis of the series of experiments will be used to develop the recommendations and advice mentioned above.

The Testbed project is addressing several potential preservation approaches, principally migration, emulation and conversion to standard formats (which is concentrating on the use of XML). Combinations of these approaches are also being considered. The main record types addressed in the project are: documents (e.g. MS Word), emails, spreadsheets and simple databases.

Tessella's Role

Tessella's role in the Testbed project is:

- ❑ to develop a computer system to act as a framework for carrying out and documenting experiments on preservation approaches and records
- ❑ to develop a series of software tools as part of the experiments, for example prototype systems for automatic migration of documents between formats and for conversion of emails to XML format.
- ❑ to provide advice to the project team on technical computing and technology issues.

Solution

The Testbed software is not intended to be an operational repository system for preserving records, but rather a framework for systematic testing and prototyping of the key elements of a future operational system.

At the base of the Testbed system is an Oracle database. The data is accessed through the Oracle Internet File System (IFS) middleware layer. This is an object-oriented and document-centric approach to accessing the raw data. Custom objects have been developed to combine documents with metadata and other information, for example to create record objects and to define the structure of the experiment process. Various software tools have been written (in Java), interfacing to the Oracle IFS API, to allow processing of the information in the database. The IFS layer is also used for security and user management.

The user interface to the system is web-based and consists of Java Server Pages (JSPs), running on an Apache web server and JSP/servlet engine. JSPs allow executable server-side code to be combined with HTML and client-side scripting (e.g. Javascript) to provide a complex and interactive user interface to the system, which is entirely accessible over HTTP by a standard web browser.

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