ABSTRACT

Bracing the Bertrand Russell Archives Catalogue Entry and Research System, was a mainframe era system housing over 100,000 electronic records from a unique collection of Bertrand Russell's artifacts owned by- and housed in the McMaster University Library.

While bracing the Russell BRACERS for the modern era, we developed a virtual machine-based deployment environment as well as methods and procedures to put a growing diverse artifact collection online rapidly. The environment, methods, and procedures can be used both to put such a collection online for the first time or to migrate such a collection from an antiquated system. We have braced the mainframe era BRACERS for the modern era with them.

LEGACY PROBLEMS

• Old machine (e.g. mainframe) decommissioned
• Limitations in system environment (e.g. CDOL & DB2 database)
• 60 character limit per field
• Data keyed in upper case only
• Functionality scalability, not allowing for future growth
• Unable to use certain characters (e.g. Cyrillic)
• Time-consuming, tedious procedures (e.g. data entry)

MAKE USE OF OPEN SOURCE

Virtual Machine – e.g. CentOS Linux 7, KVM Virtualization
SQL Server – e.g MariaDB
Scripting Language – e.g. PHP
Search Platform – e.g. Apache Solr

Content Management System (CMS) – e.g. Drupal 7

CMS FUNCTIONALITY

The required CMS functionality can be provided in the CMS core or in contributed modules/plugins. The examples below are for Drupal.

• Support for creating different field types (e.g. File, Image, List, Number, Options, Date, Serial)
• Support for (aggregate) data from text files (e.g. Feeds)
• Support for preprocessing of data (e.g. Feed Tamper)
• Support for creating different field types (e.g. File, Image, List, Number, Options, Date, Serial)
• Support for creating different field types (e.g. File, Image, List, Number, Options, Date, Serial)
• Integration with other applications (e.g. RESTful web services)

CONVERT & MIGRATE

If migrating from a legacy system:

1. Pre-process data using a scripting language, if needed
2. Define & configure fields in CMS (e.g. create content type in Drupal)
3. Configure how to import data from text files (e.g. using Drupal Feeds & Feeds Tamper modules)
4. Import data (e.g. using Drupal Feeds)
5. Setup the Search Platform (e.g. Apache Solr, Drupal Search API for Server & Index)
6. Create public and admin web interfaces (e.g. Drupal Views to create search screens & reports)

If creating a new system:

1. Define & configure fields in CMS (e.g. create content type in Drupal)
2. Setup the Search Platform (e.g. Apache Solr, Drupal Search API for Server & Index)
3. Create public and admin web interfaces (e.g. Drupal Views to create search screens & reports)

MANAGE THE PROJECT

• Reassure sensitive content owners that all their data will be safe and accessible to them all the time
• Ensure access to legacy system documentation to all involved
• Retrieve tacit knowledge from content owners by scheduling regular face-to-face meetings and involving them in the decision-making process, thus building trust
• Manage expectations (legacy vs. modern capabilities)
• Reduce scope creep by defining early on the parameters of the project
• Agree and sign off on action items and deadlines

LAUNCH

• Launch unofficially with a limited audience, which includes content owner and content editors
• Solicit feedback from audience and perform only minor changes and urgent fixes (reduce scope creep)
• Launch officially with promotional emails to staff and stakeholders, involving stakeholders in the drafting of material
• To manage a steady stream of change and feature requests post official launch, implement a freeze on change requests

RESULTS

• “It’s so easy to add new records” - Ken Blackwell
• Gave content editors more energy & encouragement to add/edit data
• More modern, professional look
• Allows for more diacritics
• Allows for HTML to be used in fields
• Robust, scalable, extendable for future plans

REFERENCES

Drupal, http://www.drupal.org

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