

Bracing the Russell BRACERS: Putting a diverse artifact collection online rapidly

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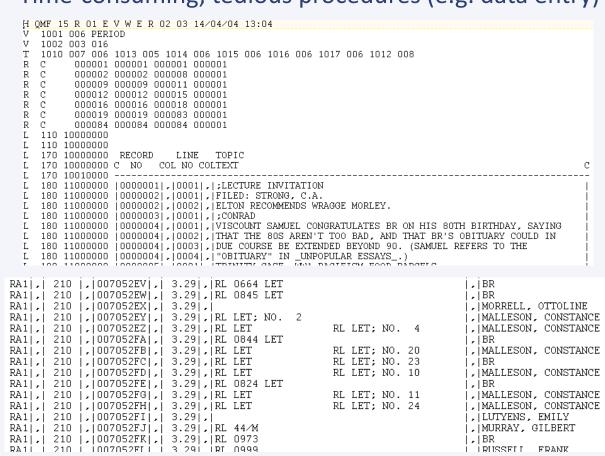
ABSTRACT

BRACERS, 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. COBOL & 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.

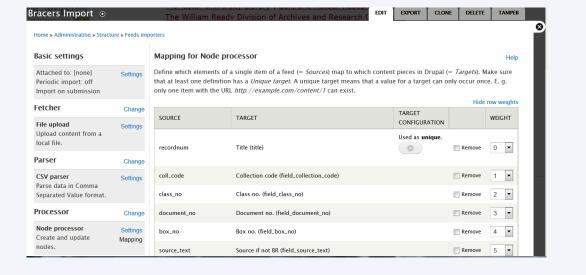
- Support for creating different field types (e.g. File, Image, List, Number, Options, Date, Serial)
- Support for (aggregate) data from text files (e.g. Feeds)
- Support for preprocessing of data (e.g. Feeds Tamper)
- Allow for advanced web editing (e.g. Node clone, CKEditor)
- Integration with other applications (e.g. RESTful web services)
- Indexing & searching of data (e.g. Search API, Solr search, Search API Multi Aggregate)
- Create reports & interfaces (e.g. Views)



CONVERT & MIGRATE

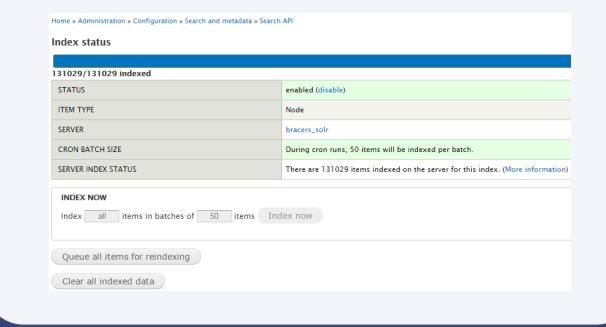
If migrating from a legacy system:

- 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:

- L. 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

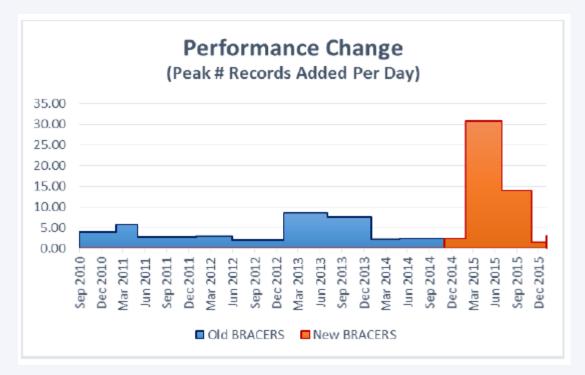
LAUNCH

- 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

Bertrand Russell Archives Catalogue Entry and Research System, http://bracers.mcmaster.ca

Bertrand Russell (1872-1970), British philosopher, logician, essayist, and renowned peace advocate, http://www.mcmaster.ca/russdocs/russell.htm
MariaDB, https://mariadb.org/

Drupal, https://www.drupal.org/

Apache Solr, http://lucene.apache.org/solr/

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