SYSTEM MANUAL – CTDA
(Cuban Theatre Digital Archive)

DESIGN REPORT

Project Name: CTDA

Table of Contents

DESIGN REPORT

Project Name: CTDA

Executive Summary

CTDA serves as a repository for original materials and scholarship on the history of Cuban theatre. Its staff is engaged in education and outreach to its community of scholarly and artistic users on best practices for documenting and researching theatre using digital tools. CTDA staff has extensive first-hand experience documenting live performance, digitizing theatre ephemera, and preparing theatre content for the web, and shares its knowledge and tools in the venues below.

The CTDA is powered by Romeu, an open source content management system designed especially for the collaborative documentation of theater performance. Written in Python using the Django content management framework, it was named after the Cuban jazz musician Armando Romeu. The Romeu system is available for free download on Github.

1. APPLICATION MANUAL

This report presents the technical documentation for the Cuban Theatre Digital Archive. The system design is presented in terms of:

- The technical architecture which will support it.
- The flow of data in the system
- Technology stack

2. SYSTEM OVERVIEW

A. System Objective

The CTDA serves as an innovative example of scholarly methods for documenting the history of ephemeral performance in a virtual environment. Throughout the years of its development, the CTDA has been used strongly in the University of Miami's teaching and learning environment.

Following are the objectives of this proposal:

- Support metadata search functionality with content tags and keywords
- Sustain Scalar, an open source digital preservation technology system with added functionality to: extract preservation metadata from the submitted files, annotate videos and select data and digital content from the system for repackaging in digital publications
- Allow site members to interact with online content using Disqus social media technology
- Integrate online social networking and micro blogging with Twitter.
- Support import and export of BibTeX-compliant bibliographies

B. System Functions

C. Technologies used

- Python 2.7.x
- Django 1.4.x
- PostgreSQL 9.x
- Apache Solr 4 w/ Jetty
- Apache httpd server with mod_wsgi component
- Java 7
- JavaScript / jQuery
- HTML
-

D. Technical Constraints

Python 2.7.x or lower, doesn't support Python 3.x

E. Application Documentation – Phase I

http://docs.cubantheater.org/

Things that need update on that document:

- Add newly added apps to http://docs.cubantheater.org/serversetup.html#installing-third-party-apps

- Add psycopg2, selectable, taggit_autocomplete
- Add installation of Solr and modifying solr config files.
- Add procedure to modify haystack index

3. APPLICATION ARCHITECTURE

A. Servers

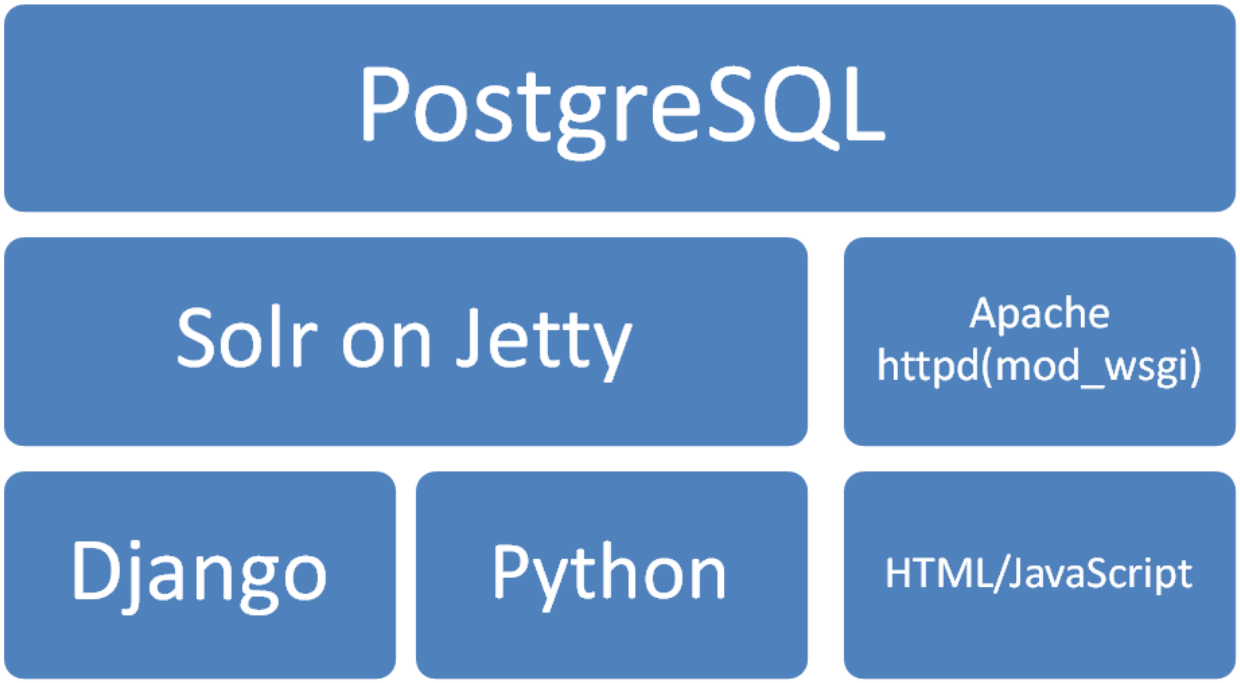
Production:

- One Server

Development/Test:

- One Server

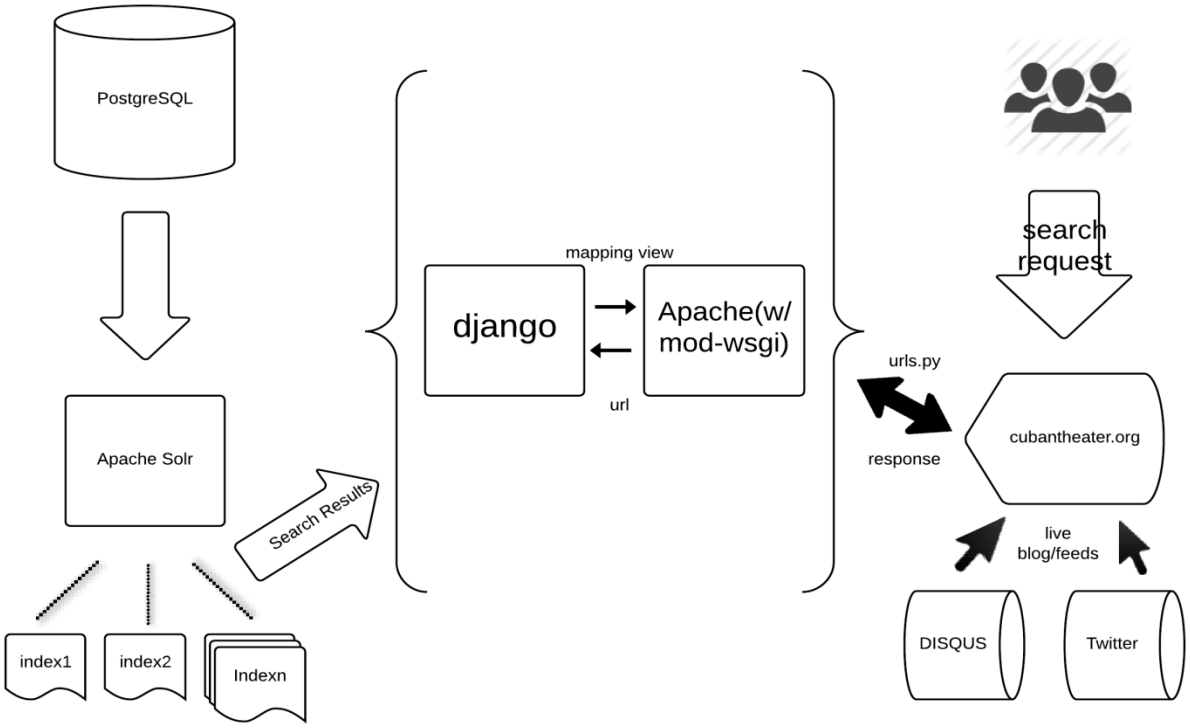
B. Technology Stack



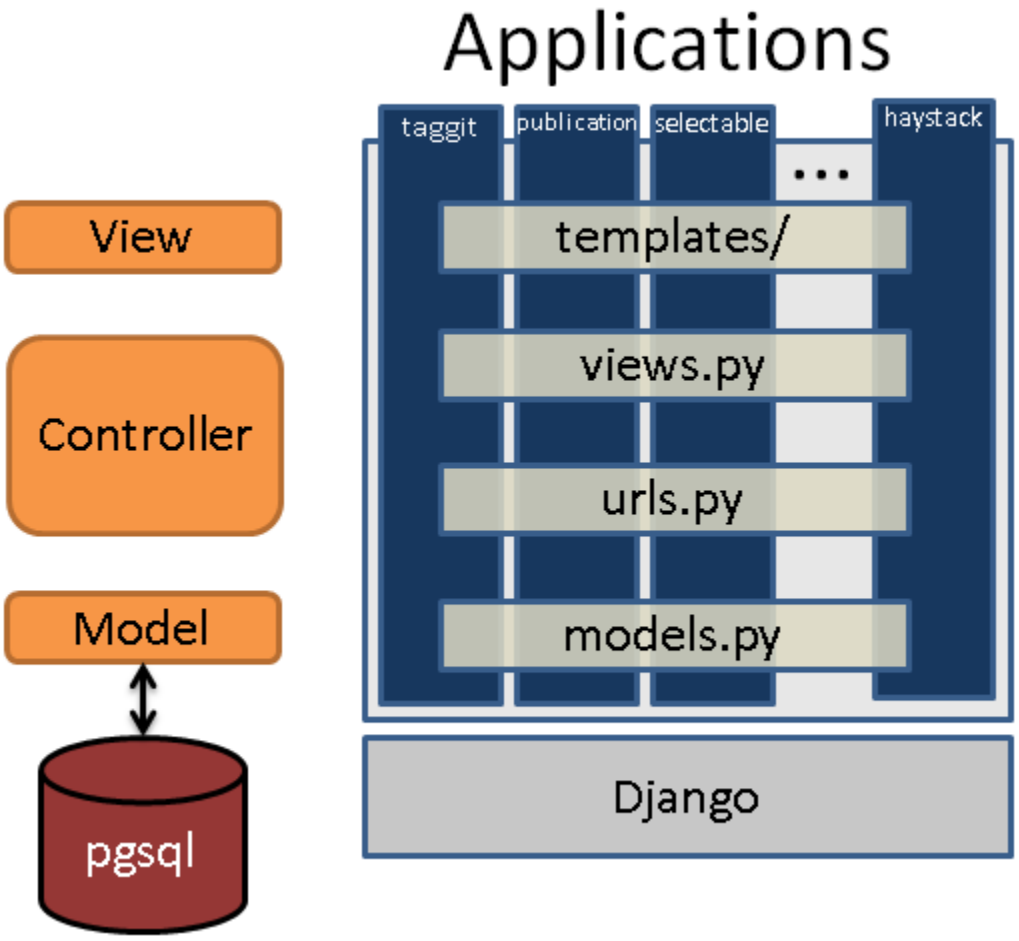
C. Application URL

http://cubantheater.org

4. PROCESS FLOW



5. ARCHITECTURE DIAGRAM



6. CODE REPOSITORY

- **Repository Location**
  - Github:
    - https://github.com/umdsp/romeu

7. STANDALONE SERVICES

A. Java service to export data from CTDA database to ContentDM

University of Miami's library maintains an archival server to preserve all the digital objects from CTDA. This utility synchronizes the metadata information added to CTDA database with the archival server.

B. Java web service as a search API for scalar

Scalar is an open source, semantic web authoring and publishing tool that allows authors to assemble media from multiple sources and juxtapose them with their own writing. With Scalar, the CTDA website gained a platform that supports collaborative authoring and publishing. This API hits the CTDA database and fetches metadata information for all digital objects and return the response to Scalar's request as a JSON object. This web service is currently hosted on Jetty servlet container that is packaged with Solr installation.

URL - http://cubantheater.org/objsearch/?q=Teatro

8. FEATURES AND IMPROVEMENTS ADDED

- Integration of DISQUS discussion and commenting technology

  SUMMARY: Disqus is a networked community platform used by hundreds of thousands of sites all over the web. With Disqus, the CTDA website gained a feature-rich comment system complete with social network integration, advanced administration and moderation options, and other extensive community functions.

- Integration of TWITTER social networking technology

  SUMMARY: Twitter is an online social networking and micro blogging service that enables its users to send and read text-based messages of up to 140 characters, known as "tweets". With Twitter, the CTDA website will gain social impact, promote communications and increase participation amongst followers.

- Integration of Solr search platform

  SUMMARY: Solr is the most popular open source enterprise search engine. Its major features include full-text search, hit highlighting faceted search, dynamic clustering, database integration, and rich document (e.g., Word, PDF) handling. With Solr, the CTDA website gained more functional queries and full-text search capabilities. Previous search engine WHOOSH was replaced by Solr for an extensively improved search

- Integration of content search with tags and keywords

  SUMMARY: Tags and keywords are non-hierarchical terms assigned to a piece of information. This kind of metadata helps describe an item and allows it to be found again by browsing or searching. With tags and keywords, the CTDA website gained knowledge management capabilities by categorizing content. The objects may now be associated with tags and the user may filter the search results through these tags.

- Integration of SCALAR digital preservation technology, from University of Southern California contributors.

  SUMMARY: Scalar is an open source, semantic web authoring and publishing tool that allows authors to assemble media from multiple sources and juxtapose them with their own writing. With Scalar, the CTDA website gained a platform that supports collaborative authoring and publishing.

- Purchased hardware to be used in CTDA video production in the United States and Cuba

  SUMMARY: Network infrastructure resources are critical to support the digital documentation of CTDA collaborative projects. With a new server the CTDA gains the necessary resources to store and process significant amounts of information. This server was purchased with the University of Miami Richter Library, not with the Mellon Grant.

- Writing a utility to synchronize metadata between CTDA database and library's archival system

SUMMARY: University of Miami's library maintains an archival server to preserve all the digital objects from CTDA. This utility synchronizes the metadata information added to CTDA database with the archival server.

- Adding bibliography feature

SUMMARY: Bibliographies can now be added into CTDA system. They can also be associated with creators, productions or work records. The bibliographic records may be imported from an external bibtex document and they may be exported by the user to download bibtex format for those objects as well.