
E poster board

PROJECT PLAN

Luo Kairen
Supervisor: Prof. Lau Francis
The University of Hong Kong
Department of Computer Science

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Abstract

E-poster board is a web based content management system(CMS) designed for managing large amount of digital posters with configurable policies. With the use of latest web technology, this system can be a flexible and user-friendly way of providing interactive poster content to interested audience. The goal of this e-poster board system are to promote information sharing and to enhance social participation between poster readers and poster providers.

Keyword e-poster touchscreen CMS web

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Chapter 1

Introduction

1.1 Background

Sharing information using large display panel within institution has become a common practice in both private and public space. Delivering event information and notices through a digital media is far better than paper poster in term of management and speed. Also, public digital displays save the effort from poster reader to actively search for these information from social media or emails and therefore it help readers focus on closely related information.

However, most existing displays are designed for distributing content in a broadcast manner and few of these display have interactive capacity. This one-way sharing channel hinder the distribution of interactive multi-media content and stop reader from getting involved into any kind of social events on posters.

In the last few years, thanks to rapid growth in smartphone market, demand for touch screen panel with high resolution and high precision has greatly increased. Price of touch screen has also been driven down by this trend.[4] It is now practical to use large affordable display panel with touch capacity to replace traditional poster board and display with no touch capacity to provide better information service for institution members.

1.2 Objective

The aim is to build an electronic poster board that can promote information sharing and enhance poster viewing experience with latest web and multimedia technology. It is hoped that through the use of the new e-poster board, the social tie between poster reader and poster content provider will be greatly strengthen and reader could feel that it is more intuitive to get

involved in new events.

1.3 Scope

This project serves as a content management system(CMS) behind any arbitrary e-poster board hardware with display screen and touch capacity. This system will provide a workflow for content provider to create and submit interactive poster,an web based poster viewing interface that follow rules and policies designed by system administrators and a data analysis platform for finding out reader viewing pattern.

Chapter 2

Related Work

There are several existing e-poster systems on the market. A brief analysis will be conducted on squareVIEW, iPosterSessions and ePosterBoards.

2.1 squareVIEW Digital Posters by Digital Media Systems[1]

SquareVIEW digital posters are commonly seen on Hong Kong street. It is a stand alone digital poster for displaying poster in picture, video and powerpoint format with no additional modification. When poster providers need to update poster content, they can transfer files from a USB stick to the digital poster stand.

2.2 iPosterSessions by aMuze![3]

The iPosterSessions is commercial SaaS e-poster system for hosting poster webpage based on pre-define template. The system has video and audio support, and each e-poster screen can only show one poster at a time. Support for remote putting up and taking down of poster item is available.

2.3 ePosterBoards by ePosterBoards LLC[2]

The ePosterBoards is a all-in-one e poster system rental service which hardware and software work as a whole. Each e-poster screen can only show one poster at a time. For e-poster format, ePosterBoards only accepts pdf file that created based on pre-define template, and their system doesn't have

video or interactive elements support. However, remote putting up and taking down of poster item is possible.

2.4 Limitation of existing products

There are several drawbacks for these well known e-poster products.

First, leading e-poster solutions usually come with all-in-one rental service business model. Hardware model, software system and technical support are sold in an inseparable way. In that way, service providing is limited to certain territories which don't always include Hong Kong. Second, most commercial solutions don't provide self-host functionality and this might not be suitable for internal use. Third, many popular e-poster systems such as squareVIEW Digital Posters are not internet connected which make content management very difficult. Lastly, some existing e-poster systems address conference needs only which means each e-Poster is displayed on one terminal as space is not the primary concern, therefore support for multiple posters on single screen is missing or limited. Due to the constrain of space and building infrastructure for most other scenarios, this makes e-poster adaption very hard for low-budget user.

Chapter 3

Methodology

3.1 System Architecture

There are several considerations before start building the system. Since the purpose of this project is to demonstrate potential of a modern e-poster system, design of the system will be focused on usability, maintainability and extensibility. In the first iteration, maximum usability is the foremost thing to consider. A system working prototype with monolithic structure will be built, and based on users' feedback, the system could quickly evolve to address possible issues and additional requirements. In the next stage, front-end user interface and back-end system will be separated into two parts and communication between them are replaced by API interface instead of direct function call. This helps separate concerns between drawing a user-friendly user interface and building a robust back-end system. Decoupling of unrelated parts help make the system to be more maintainable and extensibility.

3.2 E-poster format design

To incorporate rich multimedia and maximum interaction features into the e-poster system, a new e-poster format that has good compatibility with well-known multimedia files and is easy to create will be essential for the success of the system. This poster format should be easily rendered and converted into browser compatible form. Also, it is better to be stored in plain text form with meaningful scheme to enable searching and versioning.

3.3 Learning from usage data

Based on the e-poster’s usage information, it is possible to analyze poster reader’s viewing habits and use these information to help future readers figure out most relevant posters in a given time and place. Types of usage pattern collected from users need to be carefully handled, since it might cause privacy concerns if the system need to be set up in public spaces.

3.4 System Components

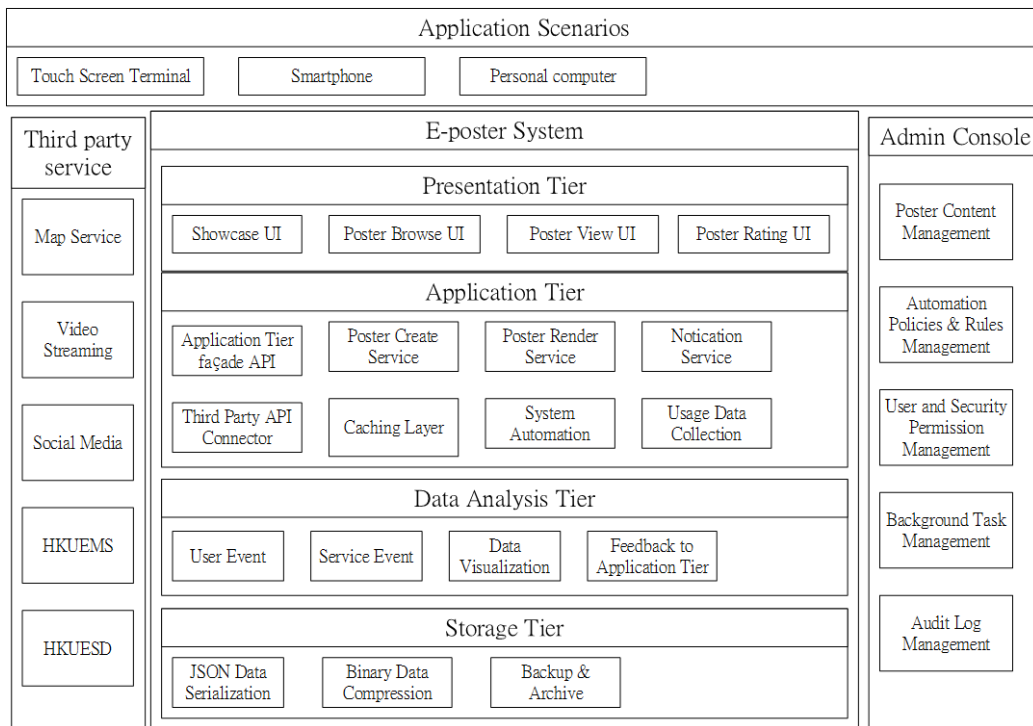


Figure 3.1: This is an overview diagram to illustrate system components and their hierarchy.

Chapter 4

Project Schedule and Deliverables

Date	Task
1st Oct 2017	Deliverables of Phase 1: Detailed project plan Project website
Oct 2017	Find a migration solution for existing posters. Design a poster submission workflow. Design an e-poster board user interface.
Nov 2017	Build poster management backend. Build poster viewing UI.
Jan 2018	Add more interaction elements to poster viewing UI. Build data analysis platform.
20st Jan 2018	Deliverables of Phase 2: Detailed interim report
Mar 2018	Testing and debugging.
15 Apr 2018	Deliverables of Phase 3: Final report Finalized implementation of E-poster board

Table 4.1: Schedule

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