Developing Video Game Archives as an e-Research Platform for Game Studies

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Contents

Standing Point

Before I start...

- **Video Games as research objects**
  - Not old as other historical documents...
  - Japan, Kyoto is one of the key place of Video Games.
- **Collaboration with other Web Services in Web2.0 age**
  - Non-academic has deeper knowledge, especially in sub-culture.
  - Wisdom of Crowds

Introduction

- **Researching Video Games**
  - **One of the most demanding topics in Game Studies.**
- **Video Games are consumer electronics, so it requires:**
  - 1. bibliographic information (Academic and Commercial Platform)
  - 2. consumer side information (CGM through Web2.0 Platform)

Related Works

- **Researching Video Games is Interdisciplinary Research:**
  - Media Studies, Cognitive Science, Business Management, and so on.
- **Game Studies Theory:**
  - Salen and Zimmerman(2004) tried theorize game design, but this is for all game studies, but not specific to video games.

- **Archiving Video Games is must for first step for research:**
  - There are Several projects in the world to create video game database.

Related Works

Video games Archives

- **Cabrinety Videogame Collection** by Stanford University
  - softwares, computer hardware, peripheral devices, hand-held games, and computer industries documents on the micro-computing gaming industries from 1975 to 1995

- **The UT Videogame Archive** by University of Texas at Austin
  - lists of creators and the game industry (preserving documents of the process of developing games)

- **Preserving Virtual Worlds** by University of Illinois at Urbana-Campaign, and collaborates with the University of Maryland, Stanford University, Rochester Institute of Technology and Linden Lab.
  - developed basic standards for metadata and content representation and conducted a series of archiving case studies for early video games

Related Works

Game Archive Project(GAP) by Ritsumeikan University

- Established 1998.
- Collaborates with Nintendo, Sega, and other game industries.
- Archived metadata of hardware, software titles, and official ROM data.

Preservation of Actual Software and Hardware on the Top,
and Emulator System on the Bottom

Designing a Platform

Collaboration in academic institutions

- Database for bibliographic information
  - Standard metadata?
  - Web API Access for academic use
- International deliberation

Collaboration!

Designing a Platform

Collaboration through mashup with other web services

- Integrating consumer side information
  - CGM information
    - Wikipedia, YouTube, Amazon, and so on.
  - Web API helps us to integrate those conte

Figure: Article of Super Mario Brothers in Wikipedia

Figure: Videos of Super Mario Brothers in YouTube

Designing a Platform

Design

- **Traditional database**
  - Database, Application Logic, Web Interface
- **Collaborating with other Academic resources**
  - Sharing in View, Logic base
- **Collaborating with Web Services**
  - Sharing in View, Analyzing information

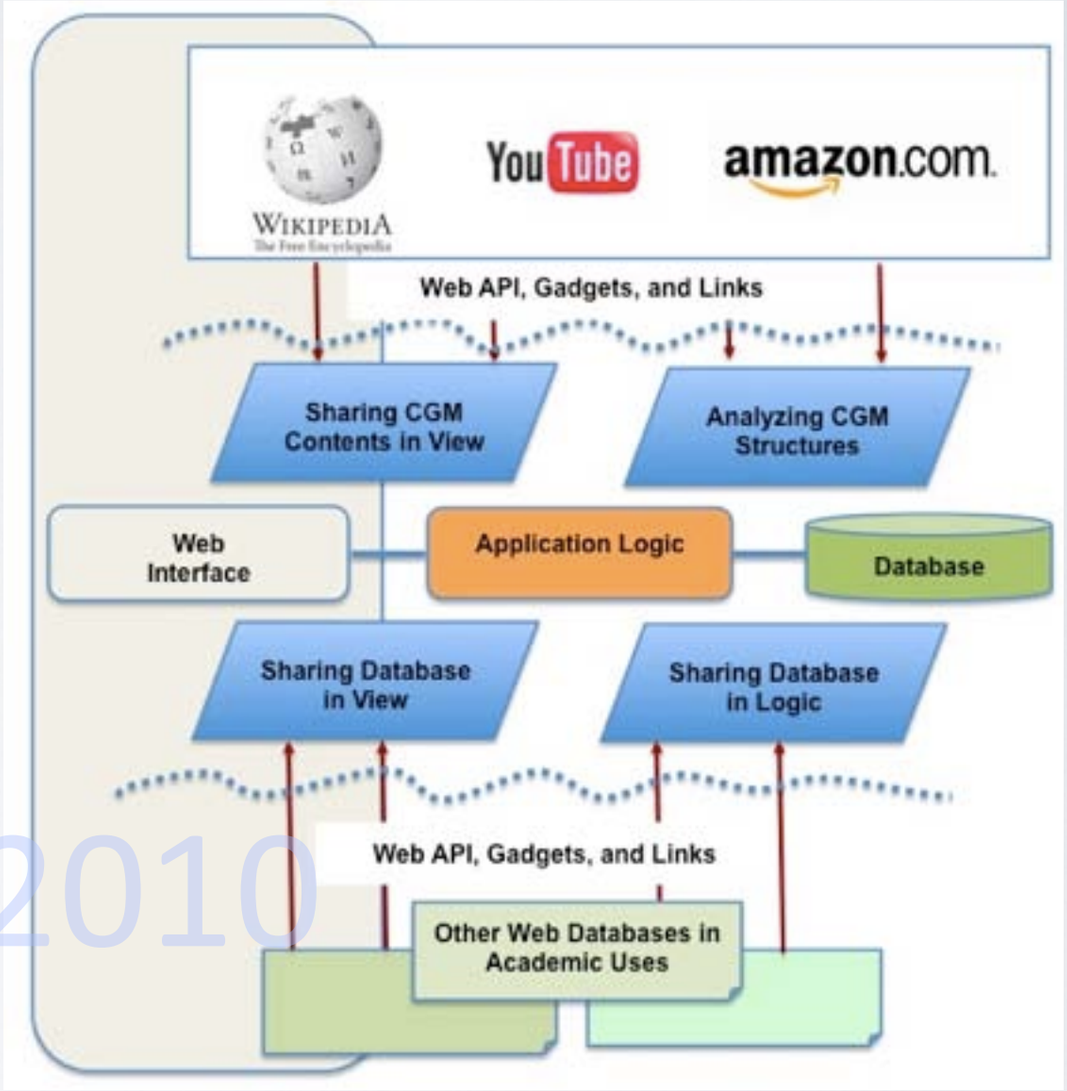

Figure: Design for a Platform in Academic Use as a Web Database Application

Implementation

Ludoly

- **Firstly, stored the data of GAP** (Nintentendo's Family Computer Collection, and Sega Saturn)

- **Data fields**
  - Title, release date, price, publisher, developer, platform , copyright, and misc.

- **Not accessible from Internet**
  - Now, it is only for local network.

Figure: Screenshots of Ludoly

Implementation

Providing Web API

- **Designing WEB API for XML Schema**
  - No standard data format, but initiating is important
  - Comes with opening to WWW.

```
<videogame>
  <title>Super Mario Brothers</title>
  <publisher>Nintendo</publisher>
  <developer>Nintendo</developer>
  <price>4000yen</price>
  <published_at>1983-09-13</published_at>
  <platform>Family Computer</platform>
  <copyright>Nintendo</copyright>
< tags>
  <tag>Action</tag>
  <tag>Adventure</tag>
</ tags>
<external>
  <wikipedia>
    <url>http://en.wikipedia.org/wiki/Super_Mario_Bros./</url>
  </wikipedia>
  <youtube>
    <url>
      http://gdata.youtube.com/feeds/projection/videos?vq=Super+Mario+Brothers
    </url>
  </youtube>
</external>
```

Figure: Sample of XML Schema for a Video Game

Implementation

Possible Collaboration

- **As an analytical tools:**
  - How's Wikipedia article created?
  - How many comments?
  - How do users review?
- **As a sharing in view:**
  - Display what is hot in Wikipedia
  - Display result of searching YouTube, Amazon.co.jp

	Sharing CGM Contents	Analyzing CGM Structure
Wikipedia	Result of Analyzing by Logic	Edit Structure Language Coverage Category Structure Link Structure Text mining of the Discussion page
YouTube	Result of Search by Web API	Comment Structure
Amazon.co.jp	Result of Search by Web API	Text mining of the review content

Figure: Non-academic Web Services' Possibilities for Sharing and Analysis

Conclusion

- Demands for Video Game Studies Platform.
- Design a platform suitable for Web2.0 age.
- Ludoly’s database itself is small, but implement the space for collaborating with other resources in both academic and other databases.

- Having Video Game Researchers in Ritsumeikan, and evaluate Ludoly’s effectiveness.

謝謝