

# EXPERIMENTING WITH MUSEUM AND USER FRIENDLY VIDEO FILES DISTRIBUTION PLATFORM ON THE WEB: THE “VOLUMEONE”

Junko Iwabuchi

*Keio University, Research Institute for Digital Media and Content (DMC)*

*2-15-45 Mita, Minato-ku,*

*108-8345, Tokyo, Japan*

*[jade@dmc.keio.ac.jp](mailto:jade@dmc.keio.ac.jp)*

## ABSTRACT

The platform now called “VOLUMEZERO” (<http://www.volumezero.jp>) was introduced by a team led by Prof. Junko IWABUCHI of Research Institute for Digital Media and Content, Keio University, Tokyo, Japan in May, 2006 as the original “VOLUMEONE.” The implementation of this prototype multi-channel video files distribution platform was made possible by the Special Coordination Funds for Promoting Science and Technology of the Ministry of Education, Culture, Sports, Science and Technology in Japan. Since its introduction, there have been several alterations done to the original platform and the current version “VOLUMEONE” was released with new features such as RSS, podcasting to iPods via iTunes, rating by audience and my favorite function. The biggest change on the new platform is that it aborted the multi channel presentation style and video files are now sorted by categories and also by search tags. The “VOLUMEONE” is designed to host museums of various disciplines including zoo, aquarium, botanical gardens to distribute their in-house produced educational video programs for pupils at Elementary to High Schools, University students, adults and young patients in hospitals with long term illness who require educational and intellectual entertainment programs without going outside. Prof. IWABUCHI's firm belief is that the more diversified use of museum content will be a great service to those who mentioned above, and with that in mind, her team created a video content distribution platform that is easy to manage by the administrator and graphically attractive to the audience. This paper examines the development of "VOLUMEONE" and how it has been utilized since its introduction in May, 2006.

<http://www.volumeone.jp>

\*Flash Player (Ver.9 recommended) is required to view this platform on-line.

For more details on the project, please consult with the following Web site.

<http://volumeone.dmc.keio.ac.jp/>

## KEYWORDS

Web based video-casting,, MP4, FLV, Web 2.0, intermediary, User-oriented

## 1. INTRODUCTION

Almost three years ago, the author first came across the idea to create a video files distribution platform with museum content. From the beginning, she always thought of an audience of restricted mobility such as patients at hospitals and senior citizens in retirement homes as users. Based upon the experience that the author has family members working at hospitals, she has

always had a keen interest on developing something useful using ICT for young patients with long term illness who do not have a freedom to go outside and share experiences with their friends and family members. The author decided to create a web based Video-on-Demand programs using museum collections in educational context, in a hope to enhance on-site educational programs in hospital environment.

The idea was to bring a museum experience to viewer's real living environment by delivering video captured content directly from curators and educators at museums, zoos, botanical gardens, or any public institutions with collections and exhibitions. The author also believed that developing a video files distribution platform on behalf of museums will be a good solution for under funded smaller museums since many staff members at such institutions were wishing to make better usage of their knowledge and holdings.

## **2. DEVELOPMENT**

Teaming up with designers, engineers, museum curators, film makers, educators and legal advisors for copyright issues, the author started discussions to create a video files distribution platform in December 2005. The team didn't know exactly how to describe the image of the platform at that time, but now, it is probably best describe the concept as "vandalism free YouTube designated for museums and educators."

The platform had to be secure, easy to manage by administrators and it had to be attractive visually at the same time by the users who would actually view the content. In order to reduce the time and cost of implementation of the system, the team

decided to use an existing server and only employed widely available technologies. The "VOLUMEONE" is based on flash video technology and conversion is done on FFMPEG. The team's decision was to pay more attention to the details of graphical user interface to make it look inviting. The first prototype was completed in March, tested for two months and introduced to the public on May 10, 2006.

### **2.1 What exactly is the "VOLUMEONE"?**

In order to explain what exactly "VOLUMEONE" does, let us start describing what "VOLUMEZERO," the first prototype in multi-channel style does. By using "VOLUMEZERO", any program administrator (shown as "Panelist" here in the Figure. 1 below) of a museum with assigned ID and a Password issued by DMC Institute (the administrator of the whole platform itself) could upload their movie files on the Web wherever they are and make these files video-castable by flash video Web streaming almost instantly. This version, "VOLUMEZERO" was released in May 2006, as the first version "VOLUMEONE" and changed its name in mid-September 2006 to "VOLUMEZERO" when the new "VOLUMEONE" was introduced with better GUI and more user-friendly feature additions.

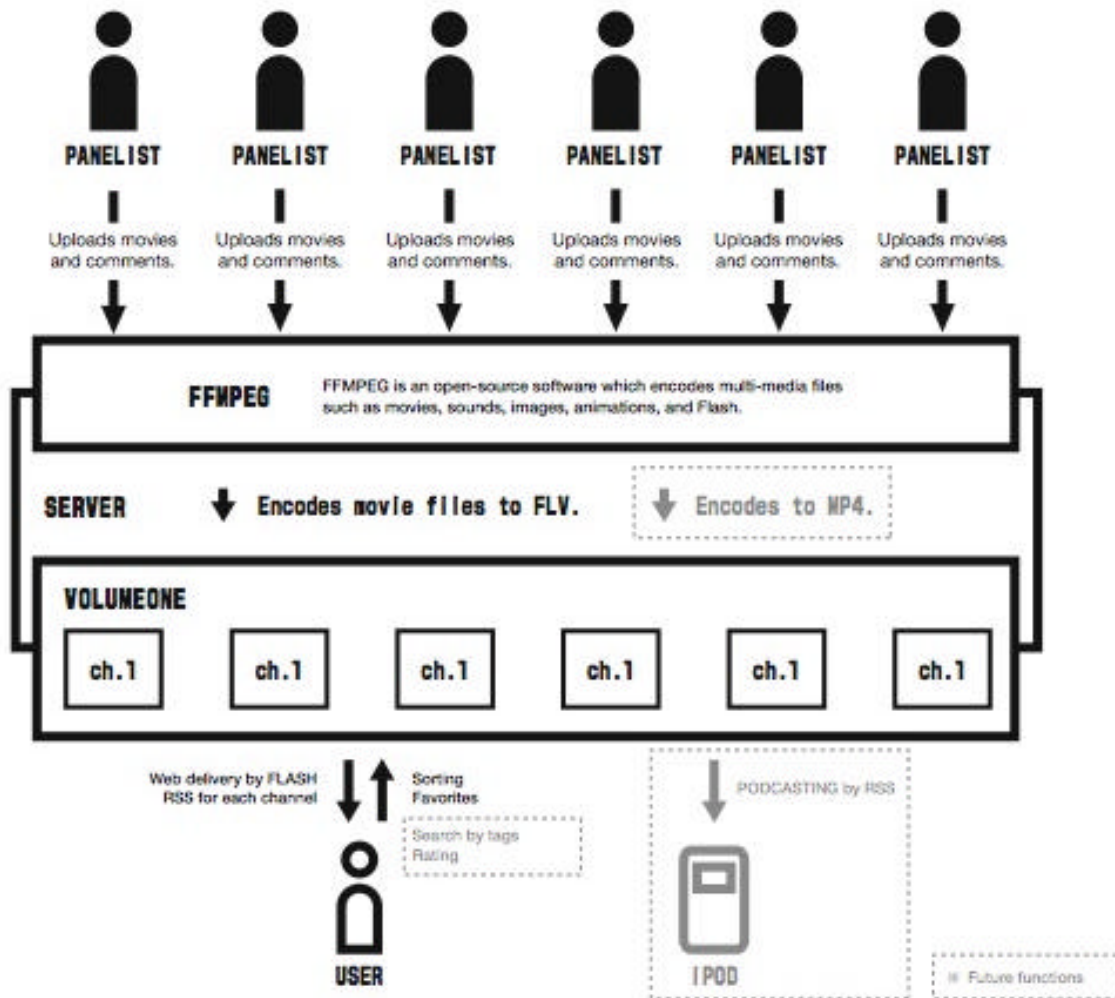


Fig. 1: Technical illustration of "VOLUMEZERO"

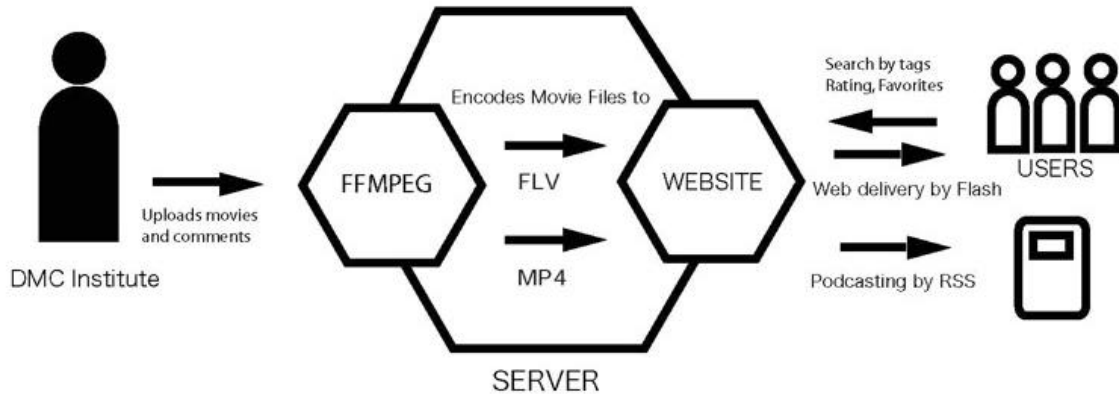
A unique feature of the "VOLUMEZERO" since the time of its release is that each video file is assigned with a permanent link. The merit for having this function is, just by one click, it can produce a link to that particular video from anywhere on the Web. It is also equipped with a button to produce a script to transport video clips to any Web page or Blog site run independently. With a little help of "VOLUMEZERO," museums could make their Web sites full of video content by using this pasting up video function and

provide their own text to go along with it.

Now let's take a look at the "VOLUNEONE," the current version. The team at DMC institute started testing of the new "VOLUMEONE" (shown in the Figure. 2 below) in late August 2006 as the team was getting ready for the sneak preview at the time of CIDOC (The International Committee for Documentation of the International Council of Museums) conference in Mid-September, but the official date of release

was not until October 23, 2006.

With the web based video content distribution platform "VOLUMEONE," video files can be uploaded and managed by DMC Institute, using XML. At the same time, podcasting is achieved by RSS. Various types of movie files are encoded to FLV and MP4 automatically by FFMPEG once uploaded, and filtered by categories, tags and other information that had been previously entered at the time of uploading files.



\*FFMPEG is an open-source software which encodes multi-media files such as movies, sounds, images, animations and Flash

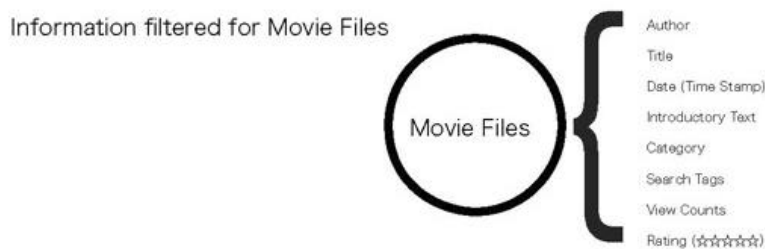


Fig. 2: Technical illustration of "VOLUMEONE"

The most dramatic change with this version is the start of video pod-casting via iTunes and addition of a section to distribute news that are independent of descriptions of video content. Now the users can search for a content of their interest by categories such as "museums," "history," "short movies," etc. and by keywords or search tags.

With the completion of this current version "VOLUMEONE," DMC Institute at Keio University has launched a year round collaboration with Kawasaki City Museum

(<http://museum.dmc.keio.ac.jp/en/>) in August 2006 and after the official release of the new "VOLUMEONE", the team helped Tokyo FILMeX (<http://www.filmex.net/index.htm>), the international film festival of independent movies with focus on Asia, for distributing their promotional trailers and pod-casting these video clips. Interviews with directors and actors on the spot were added to their Web site everyday and widely appreciated by the followers of this film festival.

The platform, since its introduction, has been accumulating video content for several months as a preparation in author's hope to conduct experimental programs on site at hospital environment. However the author thinks it is necessary to have more museums and educational institute of various disciplines participate as content providers in order to secure variety of video clips. The team has recently signed the Memo of Understanding for collaborative work with a new partner, Tokyo Wonder Site, well known municipal gallery of contemporary art and artists-in-residence facility at three different locations in Tokyo, and at the same time a preparation is making progress with one particular University hospital as possible candidate for on site experiment at the time of submitting this paper.

As a member of an educational institute, the author doesn't mean to intervene with interests of producers of museum audio tour. The purpose of this project, hopefully, is to explore the possibilities to enhance multi-media capability of museum's educational programs, so that those who love museums, yet cannot come to the museums due to their restricted mobility, could have better chance of enjoying the content of museums in much better perspective.

Since "VOLUMEONE" is so easy and quick to upload any movie files, museum staff could make a new presentation and upload one almost everyday, or make a full advantage of existing video archives within their institutions and show them all on the Web. They can choose, or not to choose programs to be downloaded. A museum staff with a DV Cam could ask a group of 10 years old to tour with him, capture comments on what these kids see as they walk through galleries and make the video clips available on the Web for public viewing afterwards within few hours. Such lively comments that only real 10 years old could give, with moving images of their faces with exhibition and other activities going on in the background, will be a gift to the kids of same age group in a hospital. At the same time, elderly group might enjoy watching the kids

having a good time in the museum as it will remind them the atmosphere and physical sense of being in museums with young people.

The author's hope, as of today, is that the "VOLUMEONE" would continue to provide alternative ways to enhance more structured museums' official educational programs in the future.

### 3. CONCLUSION

The "VOLUMEONE" is, basically, a flash based video content distribution platform pretty similar to the "YouTube" if you are familiar with their service. But currently, the "VOLUMEONE" is designed to restrict the access only to one administrator who have the ID and password to upload the video files on the platform in order to avoid illegal materials and vandalism on line. The biggest difference from "YouTube" is that "VOLUMEONE" is not open to the mass audience for uploading their own materials. One could assure that this platform provides more controlled and clean looking environment without any advertisements and operated like a club of not-for-profit organizations who are approved by DMC Institute/Keio University as research partners for collaboration.

For the time being, DMC Institute/Keio University welcomes any interest from museums for further collaboration and anticipating an on site experiments for distributing educational video materials for children's hospital in coming months.

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