



<http://www.diva-portal.org>

Preprint

This is the submitted version of a paper presented at *ADADA2018 (The 16th International Conference of Asia Digital Art and Design)*.

Citation for the original published paper:

Hayashi, M., Bachelder, S., Tsuruta, N., Sasaki, K., Kondo, K. (2018)
Wordpress-based Blog System with a Capability of Showing Entries by TV-program-
like CG Animations

In:

N.B. When citing this work, cite the original published paper.

Permanent link to this version:

<http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-368981>

Wordpress-based Blog System with a Capability of Showing Entries by TV-program-like CG Animations

Masaki Hayashi, Steven Bachelder
Department of Game Design, Uppsala University
Visby, Sweden
masaki.hayashi@speldesign.uu.se (Masaki Hayashi)

Kazuo Sasaki, Naoya Tsuruta, Kunio Kondo
School of Media Science, Tokyo University of Technology
Tokyo, Japan
kondo@stf.teu.ac.jp (Kunio Kondo)

Abstract

We have developed a blog system with Wordpress which has a capability of automatically converting its blog entries into CG animations. By embedding necessary functions in Wordpress' s theme, a user can select this theme and construct a blog where readers can watch CG animation instead of reading the blog entry. The CG animation is created by TVML (TV program Making Language) technology which enables to make a TV-program-like animation with CG characters with synthesized voices, image data display, sound data playback, superimposing and so on. Not only to contribute to the Wordpress community, in particular, expected as an auxiliary function of the blog service, but also this could work as a production tool for creating various types of CG animations rather than blogging assistance.

Keywords: Blog, CG animation, TV production tool

1 Introduction

As part of digital journalism, we are advancing research and development to automatically create CG animations from blog entries [1]. The system processes the HTML of the blog entries by Web scraping technique to extract necessary information that the auto-generating CG animation is based on using TVML (TV program Making Language) [2]. This paper reports on a scheme designed with Wordpress for the blog site. In our development, a special theme of Wordpress which is created to adapt to CG animation generation is provided to the blog user.

2 Method of auto-generating CG animation

Figure 1 shows the configuration of the CG animation auto-generation system. The system applies Web scraping technique to the HTML of the blog entry to extract the title, the main text, and the image URLs. It then generates a TVML script based on those data and converts it into CG animation by the TVML engine. The TVML engine uses CG character with synthesized voices, image data display, sound data playback, superimposing, etc. for the generation of TV-program-like CG animation.

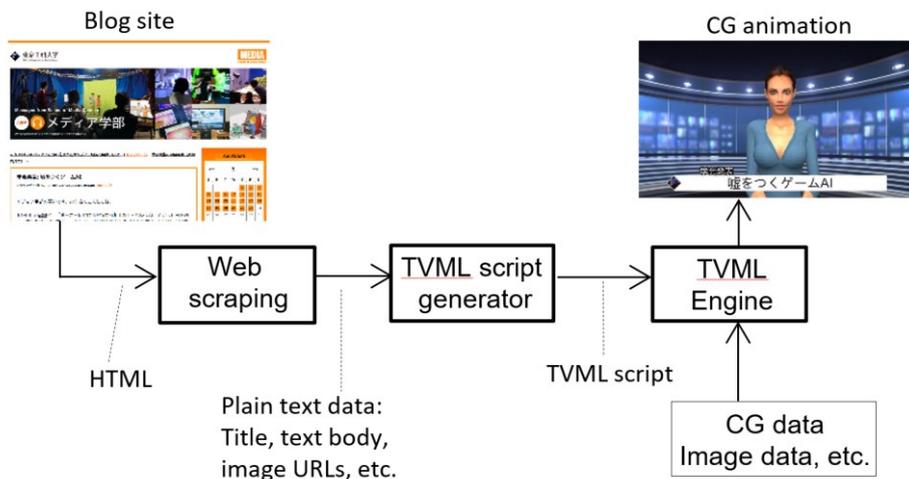
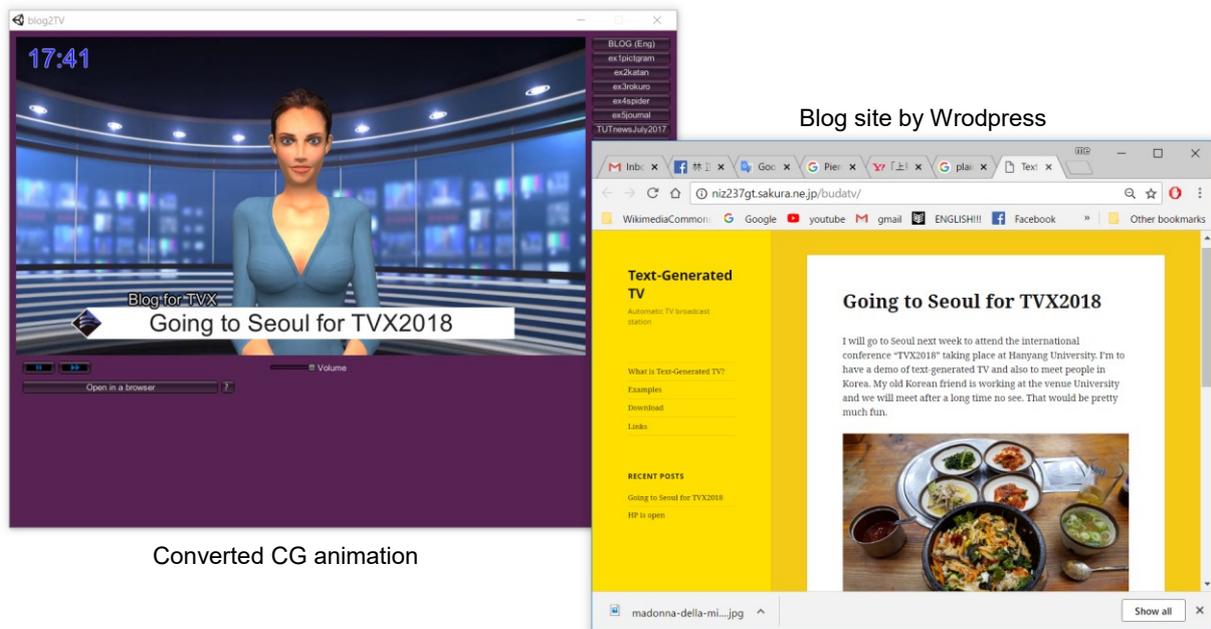


Figure 1. Configuration of auto-generating CG animation from blog entries



Converted CG animation

Figure 2. Conversion of Wordpress blog entry to CG animation

3 Why is the Wordpress?

We have already developed the system described in Chapter 2 for general blog sites, but there are the following problems.

- Web scraping method needs to be prepared for each blog site.
- If the blog owner changes the CMS (Content Management System) unexpectedly, it would not work anymore.

This time, we changed the idea and adopted another method to provide users with a special CMS capable of CG animation automatic conversion. This has the following merits.

- 1) Auto-generation of CG animation is always guaranteed.
- 2) To embed special functions to the CMS such as movie playback button on a blog entry screen to make it convenient for blog readers.
- 3) It leads to contribute to the CMS community
- 4) The CMS can be used in reverse, as a user interface of CG animation generation.

This time we picked up Wordpress as the CMS and created and supplied a special theme of Wordpress for CG animation generation.

4 Test system development

We use the official theme "Twenty-fifteen" provided by the Wordpress community as a template and modify it to embed new functions in the PHP source codes of the theme, and use it as a new theme. This time, the target machine for the user is PC. By clicking on the movie playback button on the blog entry page, the pre-installed TVML player is popped up to automatically generate CG animation from the entry. The user can "watch" the blog entry instead of reading it (see Figure 2).

5 Discussion

The standalone TVML player is used as a viewer for this time, however, this should be able to be played in the Web browser. It would be relatively easy to be achieved since the TVML engine is implemented on the Unity3D game engine which is a multi-platform development environment. Also, our method is only available to users who can launch a Wordpress blog site. Conversely, with this as a starting point, we might be able to promote to introduce this method to any blog service provided as a browser-based net service.

Although the initial purpose is to convert blog entries to TV-program-like animations, we have noticed through the experiment that there is a possibility of thinking that using a blog system as a tool for producing CG animation rather than seeing the blog with CG animation. Using this method, users who want to make CG animation can choose any Wordpress theme which has been prepared in advance for the use of making, for example, news programme, language educational programme, debate show programme and so on. We would like to consider developing it as a new form of CG animation production tool.

References

[1] M. Hayashi, et al., *Automatic Generation of a TV Programme from Blog Entries*, ACM TVX2018, Poster, 2018.
 [2] M. Hayashi, et al., *T2V: New Technology of Converting Text to CG Animation*, ITE Transactions on MTA, Vol.2, No.1, pp.74-82, 2014