Shoogleit.com: Engaging Online with Interactive Objects

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ABSTRACT

Today's Web users are spoilt by a vast quantity of online content. If they find a website boring or not engaging, they will just press the back button and likely never return again. In this paper, we describe our new online tool (Shoogleit) which aims to increase user engagement and make online pages more sticky. Shoogleit adds interactivity to any object using short video clips or a sequence of images. In addition, we describe in this paper some examples of successful collaborations and finally demonstrate user engagement using analytics data from our website.

Categories and Subject Descriptors

H.5.m [**Miscellaneous**]: Information Interfaces and Presentation (e.g. HCI) Miscellaneous.

General Terms

Documentation, Design, Human Factors.

Keywords

Interactive, presentation, engagement, web, rotations, animation, tool, motion, visualization, Shoogles, Shoogleit.

1. INTRODUCTION

Since the early days of the Internet, the combination of text and still images has been extensively used to present objects online. In recent years, there has been a huge surge in the use of animation and video to further engage with Web users. These are however difficult and costly to produce. Therefore, our aim was to build a tool that produces interactive object visualizations which are more engaging than static images, but easier and cheaper than producing a high quality video of an object.

Presenting an object using single static images allows users to get a good understanding of the object's essence. The interpretation of these static images however can be ambiguous (e.g. Bas-Relief ambiguity [1] or lighting discrepancies [2]) and many of the object's properties can also be difficult to discern (e.g. gloss [3]). Most of these disadvantages can be solved by adding a small motion or shoogle (dialect chiefly Scot: to shake, sway or rock back and forth) to the object as shown by Wendt et al [3], Sakano et al [4] and Gibson [5]. We therefore decided to make movement the core concept for our new tool.

One could use video to represent the motion, however, non interactive videos of motion do not work well as it is known that people get very anxious when they can't control things on the browser, as noted in the Nielsen studies [6]. In Shoogleit, we add interactivity to short motions to increase cognitive and affective

responses as reported by Park et al. [7].

To encapsulate the concept, shoogles[1] can be described as interactive objects produced from short videos (or a sequence of images) of an object in motion.

2. CREATING SHOOGLES

Our aim was to produce a tool that would enable anyone to create shoogles with ease. Users first need to record a short video (or capture a sequence of images) of an object in motion. They then upload this to our servers were they split video into frames. Then users can fix the frames and add interactivity using Shoogleit. Finally, they publish the Shoogle on our cloud servers or embed it in their own website. Figure 1 shows the steps in creating a Shoogle.
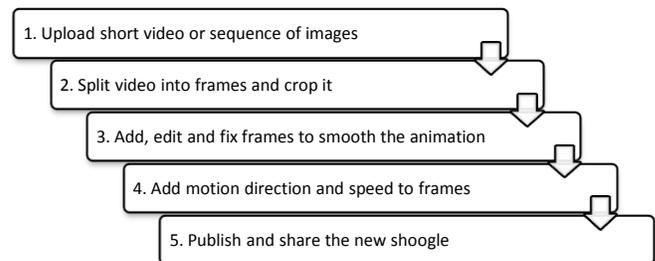

1. Upload short video or sequence of images
2. Split video into frames and crop it
3. Add, edit and fix frames to smooth the animation
4. Add motion direction and speed to frames
5. Publish and share the new shoogle

Figure 1. Example of the workflow to create a shoogle.

3. A SIMPLE TOOL FOR EVERYONE

We decided to create a tool that could be used by professionals and the general public; therefore, we designed a few self-impose rules:

- *Make it as simple as possible*. To achieve this rule we created a simple interface that mimics a film strip, where users can add, cut or reorganize frames.

- *Run in all computers*. Shoogleit runs using Adobe's Flash Player as it is present on most computers (96% compared to around 60% of HTML5 enabled browsers[2]).

- *Viewable on all devices*. We accomplished this by separating the data from the Shoogle player. Shoogles runs on all Flash enabled devices including mobiles (Android 2.2) and in all iOS devices (http://www.shoogleit.com/app).

- *Able to find, share and embed*. Shoogles are indexed daily by search engines. Anyone can share and embed them on their Facebook, Twitter, website, blog or on eBay.

- *Quick to download*. We added various optimizations to our data including inter-frame and data compressions. Currently,

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[1] We use the term shoogles to describe the outputs of our tool.
[2] Flash player adoption rate as reported on Adobe's website. Please note that any 'HTML5 friendly browser' statistics vary a lot depending on the source.

shoogles are 64% smaller in size compared to small video (480p), 24% to normal size videos (720p) and about the same size as high definition videos (1080p)[3].

4. EXAMPLE APPLICATIONS

There are hundreds of applications for Shoogleit, below we describe four examples where the tool was used successfully to engage online users.

4.1 Heriot Watt's Graduate Fashion Show

Every year, Design and Fashion graduates get the opportunity to display their work to the public. Pictures and videos are generally available after the fashion show; however, it is often the case that these do not have the desired impact or exposure. We were asked to create shoogles for all the students designs, with the aim of engaging future students and using the Shoogles as an archive of the designs for future reference.

To create the shoogles, we asked models wearing the cloths to spin around whilst being filmed. We shot every design (50 minutes filming 109 designs) and spent an extra 2.5 minutes creating the shoogles for each one. In addition, a complimentary page (http://bit.ly/interactive_fashion) was created to let users browse the designs and as a future reference.

In a period of two weeks, the fashion design shoogles were viewed 4500 times (average of 1 minute each) from users in 69 different cities (17 countries) and the most popular design was viewed by 100 different users. Note that this was achieved with no extra advertising.

In addition, we created an interactive installation for the exhibition run in conjunction with the fashion show at Dovecot Studios Edinburgh. In the exhibition, visitors were able to interact with designs from last year's graduates using multi-touch tables (see Figure 2). This proved very popular with visitors from small children to adults.

4.2 360° Sculpture and Antiques

We worked with 12 galleries and antique dealers from the UK to help them create shoogles of their sculptures. The benefits of using Shoogles in sculpture (360 degree rotations) are the added realism, the multiple viewing angles and making the websites more engaging.

We currently host over 100 shoogles of sculptures, where the most visited one has received over 6000 views and has been seen by users from almost a 100 different countries. We believe this level of engagement is not possible with simple text and images.

4.3 Paisley Shawls Archives

We had the good fortune to work in collaboration with the Heriot-Watt's Archive, Records Managements and Museum Service (ARMMS) to create Shoogles from their collection of Paisley shawls. These are items of clothing from 1790s to 1860s loosely worn over the shoulders and upper body originally from the Paisley area.

Unfortunately, the size of the shawls limits their exposure. For Example some shawls measure 2 meters in width and height, making them difficult to handle and wrapping them for safe storage can take hours for a single shawl. Normally, a flat photograph is taken to show the shawls online; however, flat images do not represent the shawls accurately as they don't show how they are worn and the lack of draping alters their appearance (see Figure 3).

Shawls are well suited for our tool and we were able to create 360 degree mannequin rotations of them. These Shoogles show the shawls as they were worn, including the draping and views from different angles.

4.4 Portfolios of CG Animations

Most computer artist create portfolios of their work, but they can't show in detail their skills. Sometimes they create videos of animations but these are difficult to stop, rewind or zoom. Shoogles can display in details their animations allowing them to create web portfolios or display Shoogles in their mobile devices.

We host over 120 different CG animations from various users in our cloud server and we were featured in many CG online magazines, please visit our blog for more details (http://www.shoogleit.com/blog).

5. ENGAGEMENT AND IMPACT

As described, Shoogleit helps engage users in many different ways. In the last year including beta phase, users created a total of 1236 Shoogles, 104,000 Shoogles were viewed with an average interaction time of 1 minute 16 seconds. We also had 12,500 unique visitors from 134 countries on 2771 cities (see Figure 4), the average user looked at 5 shoogles in our website with an average viewing time of 4 minutes and 53 seconds.

We aim in the future to introduce more features and allow more users to enhance their website using Shoogleit.

6. ACKNOWLEDGMENTS

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[3] Default YouTube quality of a recording of a 30 second rotation.

Figure 1. On the left, a few of the designs from the fashion show. On the right, interactive touch-screen tables with shoogleit samples at the Heriot -Watt Graduate Design and Fashion Exhibition at Dovecot Studios Edinburgh.

Figure 2. On the left, folded shawls. On the right, how the interactive version looks, please visit our website to play with them.

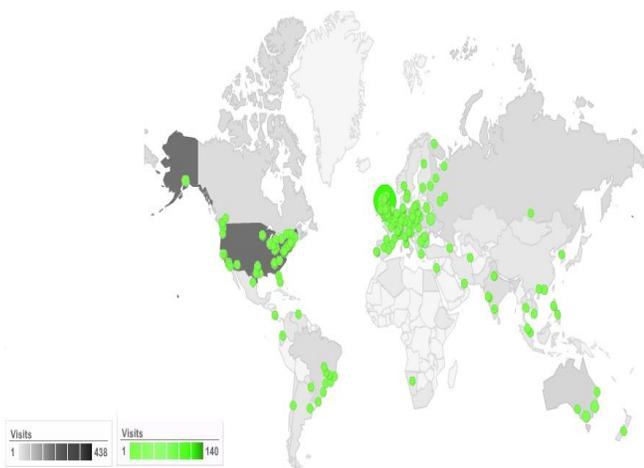**Figure 3. Snap shot of the visitor global audience, only mayor cities shown in green.**

Figure 4. Still from an example shoogle taken from shoogleit.com