MOTIVATING CONTRIBUTION WITHIN A NETWORKED COMMUNITY ENVIRONMENT

This thesis is presented in partial fulfillment of the degree of
Master of Design.

Massey University
College of Creative Arts
Toi Rauwharangi
Institute of Communication Design
Wellington, New Zealand

Chris Brown
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ABSTRACT

To be successful, social network sites need continual activity to flourish and grow. One of the most important challenges faced by designers of social network sites, is to encourage contribution from community members. 'Self-sustainability' is critical to the survival of networked communities and is dependent on community members adding content in a sustained way over time. Motivating community members to take it upon themselves to freely contribute information is the key to the success of any social network environment (Powazek, 2002; Ling et al., 2005).

This thesis aims to investigate whether persuasion techniques can be used to inform the design process in order to motivate members of a social network community to contribute content.

While persuasion theories have been effective in influencing target behaviour outside of the online environment, traditionally they have not been utilised by digital media designers. With the advent of social media, the application of social psychology is becoming more valuable in the development of features and strategies for the online environment. Recently the field of Captology has begun to systematically investigate computers as persuasive technology. Within this field, this thesis has investigated using the 'Elaboration Likelihood Model' (ELM) as a strategic framework and 'Social Proof' as a motivating influence to develop peripheral elements designed to encourage user online contribution, and to design a site that is visually appealing and functional. This is essential in establishing the credibility of the site without which the influences of persuasion are unable to function.

This Masters 'research through design' project engages an existing community group of water sports enthusiasts in a trial of a live prototype website. The website was designed to utilise the internet as a medium and social networking as a tool, in order to gather individual knowledge, give it a context, and to create a self-sustaining collective knowledge base of locations, optimum conditions and user experiences. Users were divided randomly into two groups – the test and the control. Using ELM, the peripheral and central routes of processing communication were identified, and used to build the framework on which to develop the test environment. Both groups were exposed to the same fundamental design and functionality, however the test group was presented with additional peripheral elements designed using the principles of Social Proof.

The research charted user contributions over the course of 82 days, with a survey undertaken with both groups at the completion of the test period. Results indicated a significant difference between the two test groups with users exposed to the influences of Social Proof more motivated to contribute content and visit the website more often than users from the control group. The findings of this study show that motivating contribution can be achieved using ELM and Social Proof to design persuasive elements in a social networking environment.

The synthesis of graphic design, interface design and the theories of social science can guide designers in the creative process of developing networked environments for social media, and lead to a more engaging user experience.

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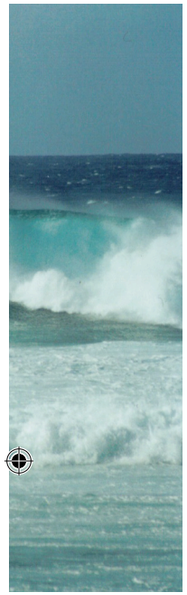
I'd also like to thank the New Zealand windsurfing community for taking part so enthusiastically in the study.

CONTENTS



THE PROJECT SCOPE

I have windsurfed and surfed for over 20 years. It's great to get outside to harness the raw power of nature's elements whether it be in the surf, the wind or both.

One problem with participating in surf sports is that unless you're lucky enough to live close to the beach, it can be hard to find the right conditions ... it's the eternal quest of the surfer to 'find the perfect wave'. Add wind to the equation and a windsurfer's quest can be even more elusive.

Over the years windsurfers and surfers have taken careful note of what local conditions are like in relation to weather forecasts. They have had to mix forecast information with local knowledge in a way that can only be gained through experience. The first part of this equation – the forecast – is continually being refined by meteorological agencies such as National Oceanic and Atmospheric Administration (NOAA) in the United States and the MetService in New Zealand, which now offer fairly accurate global and regional forecasts.

However, the second part of the equation – the local knowledge of what the forecasts translate to on the ground in the context of a particular activity – is often securely lodged in the heads of a few local experts. If you're a visitor to an unfamiliar region it can be pure luck to find a particular location working well.

For this project, windsurfing was selected as the target group within the wider surf sports community. Access to a user base from this community was made available by *www.deepfried.tv*, a New Zealand based website dedicated to the sport of windsurfing. Designed and built by myself and Kate Brown in 2001, *deepfried.tv* is now the home to over 5,000 members

Taranaki. Author's collection.

who are passionate about the sport of windsurfing both online and offline. Through the experience of participating in this community it was found there was a need to know when and where we should go to participate in the sport. Information gathered over years of experience about where to go windsurfing and in what weather conditions, has been difficult to find and share beyond a very close network of friends.

Deepfried.tv was one of the first websites that was an international source of content specific to the sport of windsurfing. As time went on the number of New Zealand community members grew and the site became more nationally focused. In a 'ground up' process, the community began to use the tools available in their own way for their own purposes.

Local forums were initiated on *deepfried.tv* by the members themselves and were used to link to forecasts and to organise sailing sessions amongst members. Shortly after, people started to post reports about these sessions. As of June 2008 there were over 42,000 posts to the Wellington Session Logs thread alone. Very quickly it became clear that with so many threads the forum was becoming unwieldy and hard to find specific information on particular locations.

There are a number of windsurfing websites which also try to meet this need with varied success. Sites offering forecast information are wide spread and varied in presentation. While often reasonably accurate, what they fail to do is to provide a context to the forecast information and can often look intimidating.

Taranaki. Author's collection.

WWW.WINDGURU.CZ

One of the leading sites currently used by the wind sports community is *Windguru*. This site offers fairly accurate forecasts based on models from the likes of NOAA and they attempt to offer some kind of highlighting of information in the form of colour coding and stars rating. The only thing that can be gained from their data is the direction and strength of the wind and the swell direction and size. The star ratings and colour coding offer little in the way of a context to these forecast – Does this forecast translate to good windsurfing conditions at this location? *Windguru* offers the forecast information but personal knowledge is still essential to interpret it.

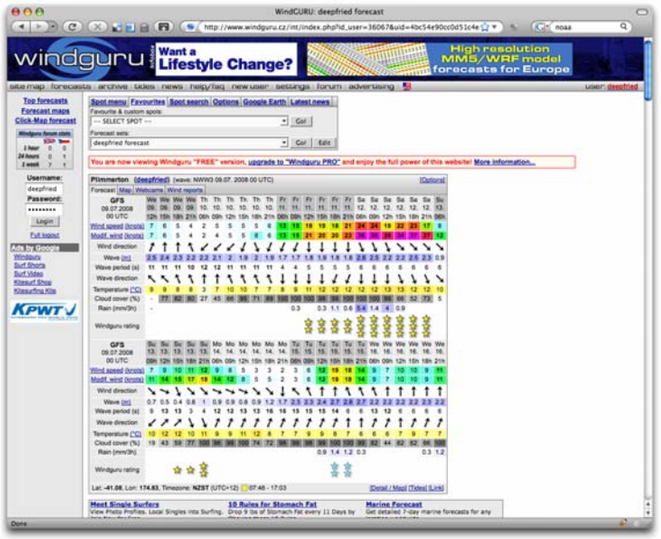


Fig A. Windguru showing a 7 day forecast for the Plimmerton region. Colour coding is based on strength alone with little real world quality context. While the graphs do display trends over time, they are daunting to view and take time to understand.

WWW.MARINEWEATHER.CO.NZ

A local New Zealand service takes things a little further in that they offer multiple visualisations of wind and swell forecast. The user is able to see animated graphics that show how the swell and wind will flow around large landmasses.

While this is a step in the right direction, the amount of local knowledge needed to interpret how these conditions will affect a particular location is still high. So again we do not have a context for what this information means.

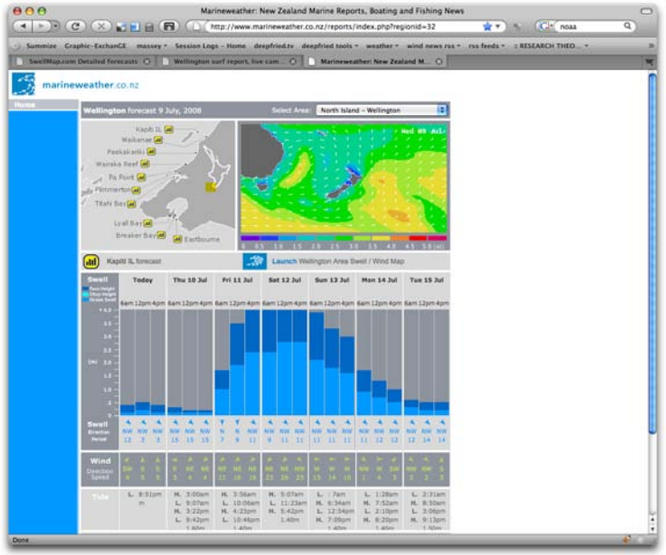


Figure B. MarineWeather takes a more visual approach in displaying the same information as WindGuru. MarineWeather shows a map of locations, a wider regional forecast visualisation and the same 7 day forecast as Windguru (based on NOAA data).

WWW.SOULRIDER.COM

Coming at the problem from another angle is *Soulrider*. This website has been set up to allow people to blog about their surf sport activities. While it doesn't have forecasts, it does allow people to talk about their general experience at a location. However this information is not utilised to its full extent and remains as individual posts and is only loosely based around a location. The interface, navigation and design of the site further compounds the issue by burying content deep within the site making it hard to find.

Figure C. Soulrider uses a blogging model to allow people to share their experiences. Aesthetics and interface design are significant hindrances in allowing contribution of this information within the Soulrider website.

WHAT'S MISSING?

Many of the current websites and services lack the ability to tap into the collective knowledge and experience of a community group, whatever the activity they perform might be. Many sites feature a 'published' guide as to what conditions are best at a particular location, however this is essentially the opinion of one person – the author, and therefore highly biased.

Another solution might be to allow for a wiki type publishing system where the entries can be updated and changed by the community. Unfortunately this often only leaves the viewer with the latest opinion posted to the system, which again might not be accurate for the wider community.

A better solution to the problem would be to gather information from the collective community group based on each individuals actual 'real world' experience. A system that would collect usage information every time a person went to a specific location, could start to build an accurate 'real world' pattern based on actual activity from multiple experiences by multiple individuals over a broad time period. This sort of information could then be used to filter other data and provide information on trends and specific usages at particular locations.

This thesis attempts to utilise the internet as a medium and social networking as a tool, in order to gather individual knowledge, give it a context and to create a self-sustaining collective knowledge base, or collaborative filtering, of locations, optimum conditions and user experiences.

As a building block for gathering this information various theories on community design, usability, user experience, visual and interface design have been used. These however are a means to an end and are not the focus of this thesis.

What this thesis will do is drill down to the core of the participation and contribution process. It will identify the points where motivation plays a part in an individual's decision making process, and asks if persuasion techniques can shift a user towards contributing knowledge and sharing experiences.

Persuasion techniques derived from the Elaboration Likelihood Model and motivation influences of Social Proof will be used to design the user experience and test features that encourage contribution within a self sustaining social network environment.

LOGGING ON TO THE TEST SITE

For evaluation purposes both test versions of the site can be viewed at this web address:
http://www.deepfried.tv/slogger

TO SEE THE A STREAM

Login: thesupervisors
Password: giveitanA

TO SEE THE B STREAM

Login: kpbTester
Password: kpbTester