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## Social Stream Marketing on Facebook: A Case Study

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**Abstract:** Recently, social network marketing has gained tremendously in popularity. There are increasing numbers of Web-based companies that focus their marketing strategies on social network platforms such as Facebook, Twitter, etc. Even if social network marketing is perceived as a huge success, little or nothing is known about how well such social network-based marketing campaigns perform.

To contribute to this field of research, we present in this paper the results of an ad-driven social network based marketing campaign centered on the social network Facebook. In particular, we demonstrate in the extent to which ads placed on the user's social stream and generated by the Facebook tools and applications can increase the number of visits, profit or ROI of a Web-based platform called VirWoX. In addition to these findings, we present an analysis of a number of simple real-time measures to detect the most "valuable" users on Facebook.

To the best of our knowledge, this is the first work that provides such detailed results of a social stream marketing campaign using Facebook. This paper is relevant for engineers, researchers or teachers who are interested in the field of social media marketing.

**Keywords:** Social Networks; Social Stream Marketing; Facebook; Ad Placement

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## 1 Introduction

Recently, social networks gained tremendously in popularity. According to (Fox et al. 2009), nearly half of all Internet users today use social network platforms such as Facebook or Twitter etc. on a daily basis. The most popular and largest platform in this context is Facebook (Facebookbiz 2011a, Facebookbiz 2011b). According to their most recent statistics, Facebook currently hosts over 750 million users spending over 700 billion minutes on the platform each month (Facebook 2011). This popularity, and the associated rapid growth of the platform, led to the situation where Facebook outstripped Google at the end of March 13th in 2010. Prior to that, Google was the most popular site on the Web in the US, accounting for up to 7% of all US Internet activity (Hitwise 2010). This hype (Facebookbiz 2011a, Facebookbiz 2011b) is also the reason why many Web based companies these days shift with their marketing strategies to social network platforms such as Facebook. For example, according to (Gelles 2010) more than 350,000 sites installed the Facebook Like Button in first few month since its debut ranging from popular websites such as BestBuy.com to TMZ.com. Currently, there are more than 7 million websites that are integrated with Facebook (Facebook 2011).

Another big platform in this context is VirWoX. VirWoX (Virwox 2011) – also called The Virtual World Exchange – is a Web-based platform to buy, sell or exchange virtual currencies for Virtual World Environments such as Second Life (Rymaszewski et al. 2006), Open Simulator (Opensimulator 2011) or Avination (Avination 2011). The platform was originally founded in 2007 by the Virtual World Exchange company and currently attracts more than 4,000 unique users each month who convert over \$2 million (US) in virtual currencies such as the Second Life Linden Dollar L\$, the Open Simulator Metaverse Currency (OMC) or the Avination Currency C\$. Since 2007, VirWoX is known as the largest third

party Web platform to trade or change real world money in virtual currencies and vice versa.

In order to populate the platform and to increase the number of visitors, profit and ROI, the VirWoX company decided to implement an ad driven marketing campaign on the social network Facebook. Even if VirWoX had a certain level of success with ad-based Web marketing strategies such as Google Adwords (Google 2011a) over the past few years, they observed that the profit margin of the campaign was moderately low. As of August 2011, (and after months of keyword tweaking), the average revenue of the Google AdWords campaign is around 607EUR per month. The current investment is 480EUR. This leads to a profit of 127EUR or a return on investment (ROI) of 27%. Due to this moderate success with their Google AdWords campaign, we collaborated with VirWoX on a project to invent a simple social network based marketing campaign utilizing Facebook. Specifically, the overall goal of this project was to invent a successful ad based social media marketing campaign that attracts new users and generates higher profit and ROI than the current Google AdWords campaign.

Hence, in this paper, we present the results of a social network based marketing campaign for a company called VirWoX based on using the social network platform Facebook. In particular, we reveal the extent to which ads generated by the (i) the Like Button and (ii) a Facebook application called the VirWoX Bonus Club can compete with ads generated via Google AdWords in terms of increasing the number of visits, profit or ROI of the Web based platform VirWoX. In addition to these findings, we provide an analysis of a number of simple real-time measures to detect the most “valuable” users on Facebook. To the best of our knowledge, this is the first work that presents such detailed results of a social stream marketing campaign hosted on Facebook.

The paper is structured as follows: In Section 2, we present related work. Section 3 will discuss different methods of ad placement on Facebook and how we adopted those methods for VirWoX. In Section 4, we then present the results of the Facebook social stream marketing campaign. In Section 5, several simple real-time measures are introduced and analyzed in terms of their ability to detect the most valuable users on Facebook. Section 6 concludes the paper and discusses future work in this area.

## **2 Related Work**

Even if there is a significant interest in social network based marketing (particularly on Facebook), very little notable research in this area has been produced. The most notable work in this area of study, as well as being the most closely-related article to our own work is (Maurer and Wiegmann 2011). In their work, the authors analyze the effectiveness of advertising on social network work sites. In particular, they conducted a case study on the social network Facebook to determine the perception of users with regards to Facebook ads. Were they helpful and did they influence purchasing decisions? Or, were users annoyed or distracted by the ads? Interestingly, the authors found that most of the participants perceived the ads on Facebook as annoying or not helpful for their purchase decisions. Their study also revealed that most users utilize Facebook to stay in contact with their

friends rather than anything else. However, contrary to our own work, the authors investigated only the effect of the integrated Facebook ad service (Facebook 2011c) feature on users. They did not investigate the effect of ads placement on the user's stream as was done in our study.

Another interesting related work is a case study conducted by (Serapio and Fogg 2009). In their work, the authors describe the design and execution of a video marketing campaign on Facebook. In particular, they present practical recommendations for designing effective and persuasive videos, focusing on a new kind of video player presentation and the distribution of the video content through Facebook. At the end of their paper, they present detailed results of their campaign and discuss the successful factors and limitations of their approach.

The third related work is a study conducted by (Bhatt et al. 2010). The authors study the adoption of a paid product by members of a large and well-connected Instant Messenger (IM) network. They show that the spread of product adoption in the IM network was not only due to the presence of individual influencers in the network but also a result of peer-pressure where users with more adopter friends were themselves more likely to adopt. They also reveal how predictive models focused on a combination of user and social features can predict adoption better than heuristic measures.

In (Gilbert and Karahalios 2009), the authors present a predictive model that maps Facebook data such as number of friends, wall words, outbound posts, likes shared, apps shared, etc. to strengths of social ties. In particular, their model builds on a dataset of over 2,000 social media ties created by users of Facebook. That model performs quite well in distinguishing between strong and weak ties, achieving over 85% accuracy.

Another very relevant paper by (Ma et al. 2008), introduces a social network marketing framework which includes three diffusion models and three marketing candidates selection algorithms. Apart from the novelty of their social network marketing framework, the authors show in their work how to defend against negative comments within social networks.

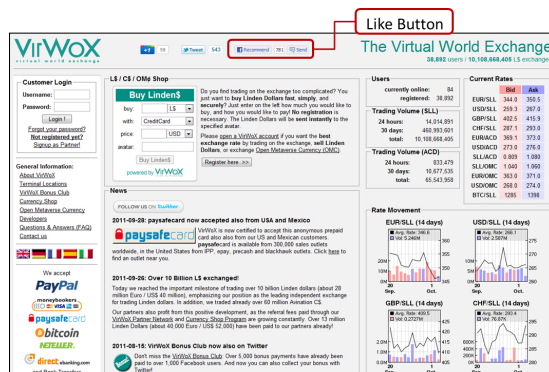
(Trusov et al. 2008) describes how the authors developed an approach to determine which users have significant impacts on the activities of others using the longitudinal records of members' log-in activity in a large social network at an anonymous company. The authors propose a nonstandard form of Bayesian shrinkage implemented in a Poisson regression. Their approach identifies the specific users who most influence others' activity.

### **3 Placing Ads on the User's Social Stream**

Currently, there are two methods available on the Facebook platform to place ads on the user's social stream (Facebook 2011b):

- The Facebook Like Button and
- The Facebook Application Post Method

In the following subsections, we will give a short overview of these two methods and reveal how we adopted them for the VirWoX platform.



**Figure 1** Screenshot of the VirWoX Homepage and the Facebook Like Button at the top of the homepage.

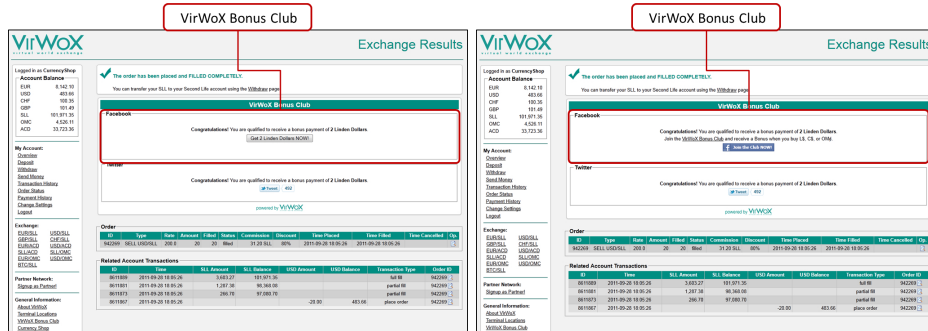
### 3.1 The Facebook Like Button

The easiest (and also the least expensive way) to place an ad on the wall of a Facebook user is through the Facebook Like button (Gelles 2010). By simply adding a few lines of JavaScript code to an existing website or page, one can post a message (in our case, an ad) on the user's Facebook wall with a predefined advertising message, link and image. Today, many popular companies such as CNN (CNN 2011) or Levis (Levis 2011) use the Facebook Like Button to promote their websites on Facebook and to refer users to their websites.

To profit from the Facebook Like Button on the VirWoX Web platform, we integrated this plug-in on the homepage in February 2011 (Virwox 2011). In addition to integrating the button at the top of the VirWoX homepage (see Figure 1), we also decided to install the Facebook Like button on the confirmation page that appears when a user has successfully bought or traded virtual money via the VirWoX platform. We considered doing this because we thought that people would be more willing to "like" the VirWoX platform after a successful transaction. This was successful in that we increased our "likes" to nearly 100% with this method. An example of how the VirWoX Like button ad message appears on the user's social stream is presented in Figure 3. As shown, the ad message includes a small VirWoX website logo, a link to the VirWoX homepage and a short ad message stating that "VirWoX is the best place to buy or sell Linden Dollars, Avination C\$ and OMC\$".

### 3.2 The Facebook Application Post Method

A more complex method to place ads on the user's social stream is provided by Facebook through its Facebook Application Post Method. Simply put, a Facebook application is a program that is installed by the user to gain extra functionality that is not supported by the default Facebook platform. The beauty of such applications is that they provide the ability to access or modify the entire profile of the user. Apart from retrieving the user's relationship status, pin wall entries, Likes, etc., it is also possible to post a message on the user's Facebook wall.



**Figure 2** The VirWoX Bonus Club application as shown on the confirmation page in the VirWoX currency shop after the user has successfully bought or traded virtual money. On the left side, we present a screenshot of the page before the user has installed the application. On the right side, we show how the screen looks like after the application has been successfully installed by a user.

The Facebook Like button permits limited ad placement due to the fact that the button can be used only once by a user per website or page. On the other hand, Facebook applications enable the unlimited posting of ads on the user's Facebook wall. The limited nature of the Facebook Like button is actually the reason why more and more companies have switched to the development of Facebook applications to support advertising. According to Facebook's most-recent statistics (as of August 2011), there are more than seven million applications and websites that are integrated with Facebook (Facebook 2011).

So that VirWoX could profit from this type of message posting, we developed a Facebook application called the VirWoX Bonus Club. The VirWoX Bonus Club grants each customer a bonus payment of 1% of their trading volume whenever the user buys, sells or trades money on VirWoX Web platform. The bonus payment is given to the user in the form of L\$\$, OMCs or AC\$\$ and is directly paid out after the user has installed the VirWoX Bonus Club application and clicked the "Get Bonus Now!" button. The ad message itself is posted on the user's Facebook wall after she has successfully received her bonus payment. The ad message itself consists of these three parts:

- A statement (in the user's own language) that the user has gained a Bonus payment of X L\$\$, OMCs or AC\$ by using the VirWoX platform
- A link that refers to the VirWoX website and
- A small icon in featuring the VirWoX logo

In Figure 2, two screenshots are presented showing how the VirWoX Bonus Club application appears to the user before and after the application has been successfully installed and a bonus payment has been granted.



**Figure 3** Like Button ad and VirWoX BonusClub application ad as it appears on the user's social stream.

## 4 Results

In this section, we will provide detailed results of the ad driven social stream marketing campaign advertising VirWoX on Facebook. Specifically, we will show the impact of the VirWoX Like Button and the VirWoX Bonus Club campaigns on the number of visits, profit, ROI, etc. of the Web-based platform VirWoX. Additionally, we will investigate how the Facebook social stream marketing campaign (= VirWoX Like Button campaign + VirWoX Bonus Club campaign) competed with the VirWoX Google AdWords campaign.

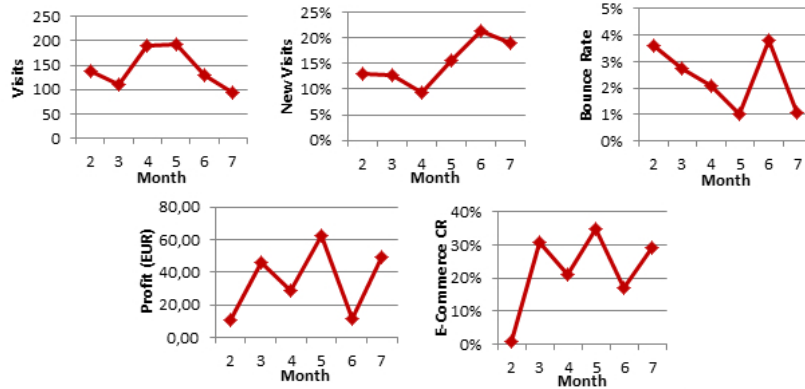
### 4.1 Tracking and Logging

To measure the success of the Facebook social stream marketing campaign, we installed Google Analytics (Google 2011b) on the VirWoX platform. In order to be able to distinguish between VirWoX Facebook Like button ads and ads generated by our VirWoX Bonus Club application, we used different tracking URLs in each of the ad messages.

In order to acquire more fine-grained information about the users, we also installed a server side tracking system to log detailed profile information about our Facebook users. All in all, our dataset includes 1172 unique Facebook user profiles as of August 2011.

### 4.2 Metrics

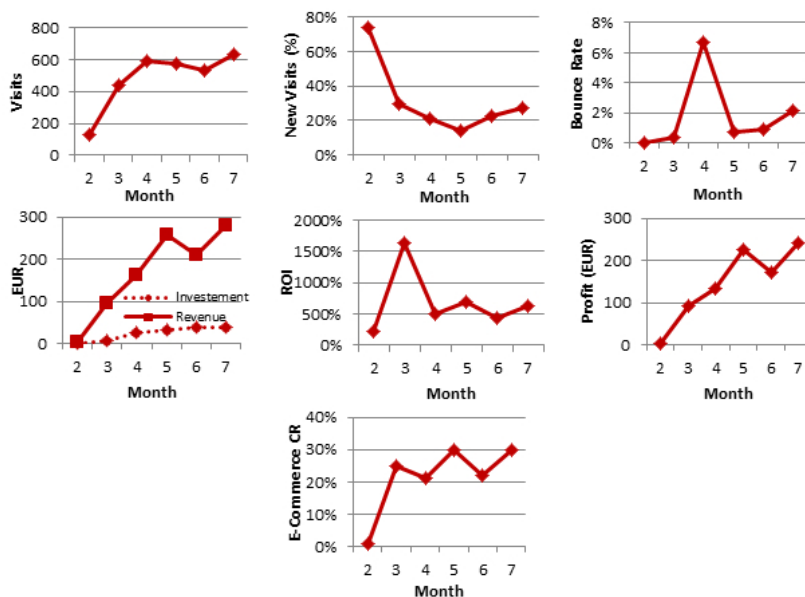
To measure the performance of our campaigns (Facebook and Google AdWords), we used the following metrics as provided by Google Analytics (Kaushik 2007, Peterson 2004):



**Figure 4** Number of monthly visits and new visits, bounce rate, profit and E-Commerce CR generated by VirWoX Like button campaign.

- **Number of Visits:** The number of visits is the most basic measure in marketing. It is used to detect how effective a marketing campaign is to promote a site.
- **Number of New Visits:** The number of new visits is an important measure to identify whether or not the marketing campaign is effective in driving new users to a site: the fewer new users, the less effective the marketing campaign.
- **Bounce Rate (BR):** The bounce rate is a measure to identify whether or not the marketing campaign can keep the interest and attention of the user. In other words, the bounce rate represents the percentage of visitors who enter the site and then leave the site immediately. The effectiveness of a marketing campaign can be judged by a low bounce rate for new users.
- **E-Commerce Conversion Rate (E-Commerce CR):** The E-Commerce conversion rate is a measure of the percentage of visitors undertaking an e-commerce transaction. One can assume that the campaign is effective if the e-commerce conversion rate is higher.
- **Revenue/Investment:** The revenue and the investment are two other important measures that can be used to quantify the actual success of a marketing strategy. Typically, the revenue should be higher than the actual investment.
- **Return on Investment (ROI):** The return on investment is calculated as  $ROI = (Revenue - Investment) / Investment$ . A higher ROI indicates that less money was actually invested and more profit was gained.
- **Profit:** The profit is calculated as  $Profit = Revenue - Investment$ . A more significant profit is the sign of a better marketing strategy.





**Figure 5** Number of monthly visits, new visits, bounce rate, ROI, revenue, investment, profit and E-Commerce CR of the VirWoX Bonus Club campaign.

#### 4.3 The VirWoX Like button campaign

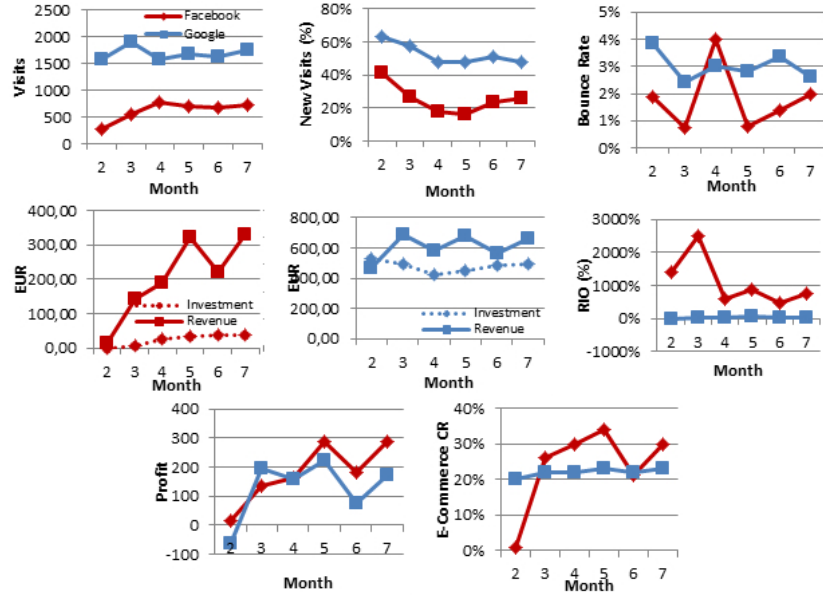
From February through August 2011, our VirWoX Like button campaign generated with more than 730 Likes and 730 ads which were placed on users' Facebook walls.

As shown in Figure 4, the VirWoX Like button ad campaign generated an average of 143 visits per month with a low bounce rate of 2%. Of these visits, 15% were from new users. The average monthly profit of the campaign was 35EUR and the E-Commerce CR was 22%. Even though these are quite small numbers, we can see that the campaign was effective. Without an additional investment (users did not receive a bonus for clicking the Like button, as they do with the VirWoX Bonus Club application), we obtained nearly 35EUR in profit per month from this campaign.

#### 4.4 The VirWoX Bonus Club campaign

As of August 2011, we generated 2,533 ads with our VirWoX Bonus Club application campaign. Typically, the application had 770 active monthly users, and 230 new installations. The acceptance to install the application was high. Over 80% of all users who clicked on "Get Bonus Now!" button also accepted to install the application in the end. One other positive result (cf. Hofman and Fodor 2010) of our application is that we received approximately 100 Likes and 100 positive comments per month and very few (one or less) spam reports every third month.

As shown in Figure 5, the VirWoX Bonus Club campaign motivated 663 visits with an average bounce rate of 2%. Of these visits, 27% were new users on average.



**Figure 6** Number of monthly Visits, New Visits, Bounce Rate, ROI, Revenue, Investment, Profit and E-Commerce CR of the Facebook social stream marketing campaign compared to the VirWoX Google AdWords campaign.

Although the profit and revenue in the first month of the campaign was quite low (profit and revenue were around 3EUR), we can now see that the campaign generated a profit of 240EUR, a revenue of 278EUR, and an investment of only 38EUR. The ROI is on average approximately 688%. This is actually five times more revenue/profit as was generated by the VirWoX Like button campaign.

#### 4.5 *The Facebook social stream marketing campaign vs. The VirWoX Google AdWords campaign*

As shown in Figure 6, the Facebook social stream marketing campaign (= VirWoX Like Button campaign + VirWoX Bonus Club campaign) created nearly 618 visitors per month; 25% of these were new visitors. The bounce rate was approximately 2%. In comparison, the VirWoX Google AdWords campaign generated an average of 1684 visitors, 53% of which were new to the VirWoX platform. The bounce rate was approximately 3%. Even if the Google AdWords campaign performed better in terms of number of visits and percentage of new visits, the results for ROI and Profit are the opposite. As pointed out in Figure 6, the revenue of the Facebook social stream campaign was approximately 330EUR but the amount invested was only 38EUR. On the other hand, the revenue of the AdWords campaign was 662EUR and the investment was 490EUR. In other words, the Facebook social stream campaign generated a profit of nearly 300EUR and a ROI of over 760% per month. Compared to this, the Adwords campaign generated a profit of only 171EUR and a ROI of 35% per month. The same situation occurred regarding the E-Commerce CR. The E-Commerce CR of the

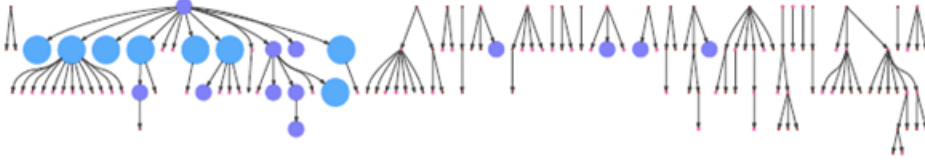
Facebook social stream campaign was 30% while the the AdWords campaign had a CR of only 21%.

## 5 Detecting Valuable Users

We also observed throughout the Facebook social stream marketing campaign that there are Facebook users who referred more new users to the VirWoX platform with their ads than others (see Figure 7). However, this phenomenon had been established earlier: recent research on social media such as Twitter showed that there are some users on Twitter who have more influence than others (Twittermaven 2008). Such users are called authorities (Java et al. 2007) or influential users (Trusov et al. 2008). One method to identify such users on Twitter is the TunkRank (Tunkelang 2009) algorithm. Similar to the well-known PageRank algorithm (Page 1998), TunkRank exploits the directed friend-to-friend network in a recursive manner to calculate the actual authority value for each user of the network. Another method using the PageRank has been introduced by (Green 2008) to reveal such users in blogs. However, since Facebook friendship relations are not directed (which is necessary to calculate PageRank and TunkRank in that network), and other non-directed graph based measures such as degree, closeness or betweenness centrality (Freeman 1979) are impossible to calculate in real-time, we decided to investigate other simple real-time measures to detect such influential users on Facebook (or as we call them, “valuable users”).

In particular, we investigated the following six measures/variables:

- **Number of Friends:** With this variable, we evaluated whether or not the number of a user’s friends is a realistic indicator for identifying the most valuable users on Facebook. We test this variable in dependency of the number of new VirWoX customers a VirWoX Bonus Club user generates by placing ads on her social stream.
- **Number of Likes:** With this variable, we assess whether or not the number of likes a user gained for her posts on the Facebook pin wall is a good indicator for detecting the most valuable users. Again, we test this variable in dependency of the number of new VirWoX customers a VirWoX Bonus Club user generates by placing ads on her social stream.
- **Number of Comments:** Here, we investigated how the number of comments a user gained for her posts on the Facebook wall could be is an indicator that she is a most valuable user. As the dependent variable, we take again the number of new VirWoX customers a VirWoX Bonus Club user generates.
- **Activity Level:** The activity level (cf. Hofman and Fodor 2010) is basically defined as the time between the most recent post and the oldest post by a user, as retrieved via the Facebook API. With this variable, we test again whether the activity level is an appropriate measure to detect the most valuable users on Facebook. As dependent variable, we utilize the number of new VirWoX customers a VirWoX Bonus Club user generates.



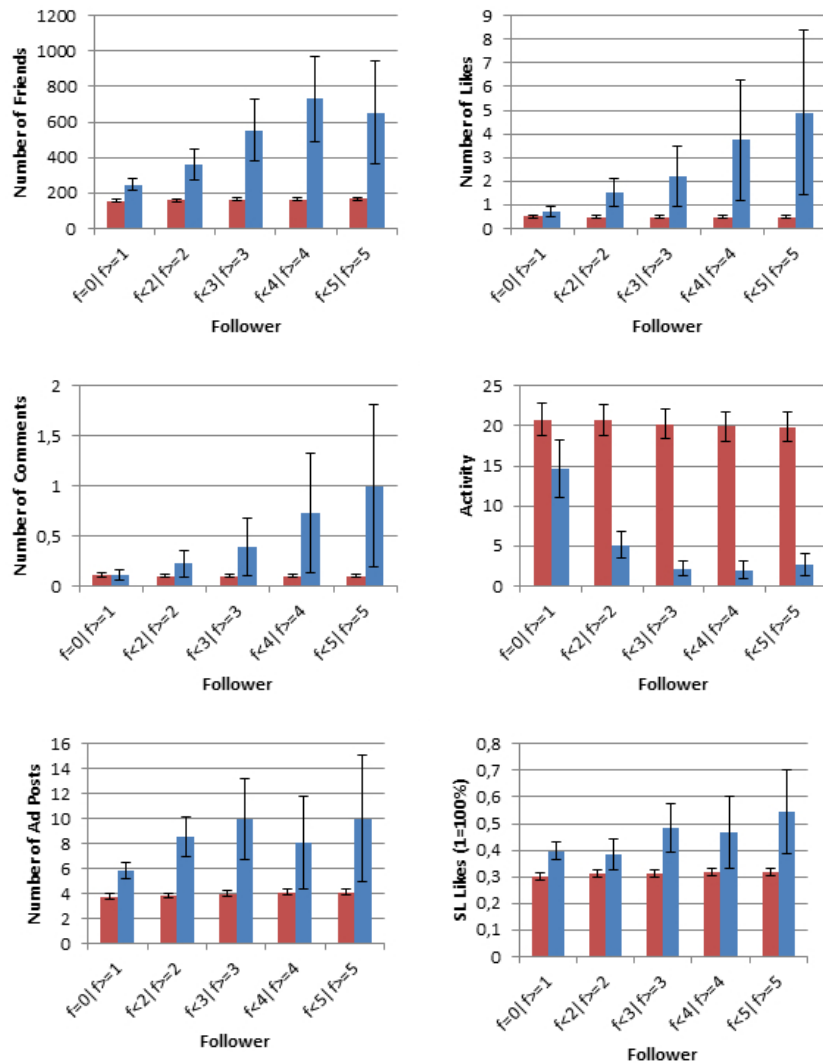
**Figure 7** Excerpt of the Facebook follower network (who followed whom) of the VirWoX Bonus Club application. As shown, some users generate more followers than others. The size of the node illustrates the number of friends a user has (bigger nodes = more friends).

- **Number of Ad Posts:** Another interesting measure to detect the most valuable users on Facebook might be the number of ad messages posted by a user on Facebook. We use the same dependent variable as before.
- **SL Likes:** As shown in Figure 9, most users (32%) who installed the VirWoX Bonus Club application (32%) also liked the Second Life fan page on Facebook. Hence, using this variable, we want to investigate whether or not a Second Life Facebook Like is a good indicator for detecting the most valuable users on Facebook. For the dependent variable, we took the number of new VirWoX customers a VirWoX Bonus Club user generates.

In order to acquire valid results for our analysis, we first had to clean up the dataset of 1172 unique Facebook users. This means that we first calculated minimum, mean and maximum amount of time that had passed between when the ad was last posted on a user's Facebook wall and when another user followed this ad and traded on the VirWoX platform (=follower-time). We calculated this number for each of our users in our dataset. For the result, we could obtain a minimum (follower-time) of one day, a mean (follower-time) of 44 days and a maximum (follower-time) of 82 days. After that, we removed all users who had not generated a follower yet and who had a less than maximum follower-time. In the end, we had a dataset of Facebook users who had either generated followers or who had generated followers within maximum follower-time.

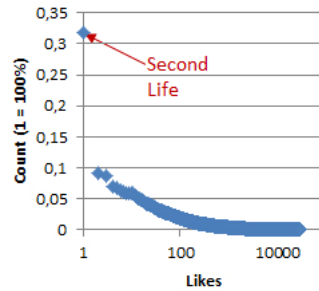
As shown in Figure 8, we perform our analysis on sets of users which means that we measured the impact of the number of friends, likes, SL likes, comments, and trades, as well as the activity in dependency of the group of users who generated zero followers ( $f = 0$ ) or more than or equal to one ( $f \geq 1$ ) followers, one or less followers ( $f < 2$ ) or more than or equal to 2 ( $f \geq 2$ ) followers, and so on, until the group of users who generated less than 4 followers ( $f < 5$ ) or more than or equal to 5 followers ( $f \geq 5$ ).

As shown in Figure 8, the most significant differences (see Table 1 and 2) could be found for the number of friends, the number of trades and the activity level of the users. From the number of likes and comments, we can observe that these measures create high statistical errors as more followers are generated. For the number of likes, we saw significant differences for the group of  $f < 2 | f \geq 2$ ,  $f < 3 | f \geq 3$ ,  $f < 4 | f \geq 4$  and  $f < 5 | f \geq 5$ . When looking at the number of comments, we could only find significant differences for the  $f < 5 | f \geq 5$ .



**Figure 8** Impact of Number of Friends, Number of Likes, Number of Comments, Activity, Number of Ad Posts and SL Likes independent of the number of followers.

All together, these results indicate that the best metric to detect most valuable users on Facebook is the number of friends. The more friends a user acquires, the higher the probability that another user is following the ad that was placed on her social stream (see Table 1). However, we can observe that the activity level (cf. Trusov et al. 2008) is also an interesting way to detect valuable users. The more active a user on Facebook, the higher the probability another user may follow the ad (see Table 2). The same applies for the number of ad placements. The more trades a user performs on the VirWoX platform results in a higher number



**Figure 9** Like distribution of all users who have installed the VirWoX Bonus Club application. As shown, most users who had installed the VirWoX Bonus Club application (32%) also liked the Second Life fan page on Facebook. All other fan pages were liked significantly less.

Groups	Number of Friends	Number of Ad Posts	Number of Likes
$f < 0   f \geq 1$	<b>0.0153</b>	<b>0.0023</b>	0.3946
$f < 1   f \geq 2$	<b>0.0239</b>	<b>0.0041</b>	0.0800
$f < 2   f \geq 3$	<b>0.0318</b>	0.0714	0.1937
$f < 3   f \geq 4$	<b>0.0357</b>	0.3071	0.2276
$f < 4   f \geq 5$	0.1272	0.2680	0.2321

**Table 1** p-values (two sided t-test) for Number of Friends, Number of Ad Posts and Number of Likes. As shown on a confidence interval of 95% the number of friends is best measure (out of the three presented in the table) to detect the most valuable users on Facebook (= most statistically significant differences). The number of posts is a good indicator of those users who will generate 0 or more followers. However, it is not a good measure to project if the user will generate more than 3 or 4 followers.

Groups	Number of Comments	Activity Level	SL Likes
$f < 0   f \geq 1$	0.9066	0.1406	<b>0.0099</b>
$f < 1   f \geq 2$	0.3552	<b>0.0000</b>	0.2412
$f < 2   f \geq 3$	0.3298	<b>0.0000</b>	0.0746
$f < 3   f \geq 4$	0.3048	<b>0.0000</b>	0.2805
$f < 4   f \geq 5$	0.2902	<b>0.0000</b>	0.1769

**Table 2** p-values (two sided t-test) for Number of Comments, the Activity Level of the User and SL Likes. As shown on a confidence interval of 95% the Activity Level is the best measure (out of the three presented in the table) to detect the most valuable users on Facebook (= most statistically significant differences). For the Number of Comments, no statistically significant differences could be found and regarding the SL Likes only  $f < 0 | f \geq 1$  shows statistically significant differences.

of ads placed on the users social stream; therefore, the stronger the probability that another user may follow the ad. In other words, the more active the user and the more the user trades, the higher the probability the user is a valuable user (see Table 1 and 2). Regarding the number of likes, we can say that the more likes a user gets for the post on her pin wall, the higher the probability that she is a valuable user, even if the error rate might be very high. Last but not least, regarding the number of comments and the number of SL likes, we can say that these measures are more or less useless in detecting valuable users as the error rate is very high for nearly all different group sizes (however the SL likes measure performs slightly better see  $f < 0 | f \geq 1$ ).

## 6 Conclusions and Future Work

In this paper, we presented results of an ad driven social stream marketing campaign based on the social network Facebook. In particular, we presented results of the impact of (i) the Facebook Like Button and (ii) the Facebook Application Post method with regards to placing ads on the user's social stream to increase the number of Visits, Profit, ROI, etc. for a Web-based platform VirWoX. In addition, we provided an analysis of a number of simple real-time measures to detect the most "valuable" users on Facebook. We proved that the more effective measures to detect such users are the number of friends, the activity level and the number ad posts a user generates on her social stream.

Currently, we are working on several extensions of our social stream marketing approach. As we believe that other social network platforms such as Twitter or Google+ also offer a great opportunity to attract and acquire new users, we have recently extended the VirWoX Facebook Bonus Club application in such a way that it can be utilized by Twitter users as well. Since the Twitter development team recently advised their 3rd party developers to "not" invent new applications (Ryan 2011), we did a workaround and extended the VirWoX BonusClub application for the Twitter platform by adding a simple Tweet button to the existing one. This posts a predefined ad message onto the user's Twitter stream whenever the button is clicked (see Figure 2). At this time, the results of this approach look quite promising. Within the first two weeks of deploying the extension on the VirWoX platform, we observed more than 270 tweets and a profit of over 40EUR attributable to Tweet button ad placement approach. Apart from extending the VirWoX BonusClub application to Twitter, it is also planned to implement an add-on that will work with Google+. Finally, we plan a study to measure the social stream marketing success over all three social network platforms - Facebook, Twitter and Google+.

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