Key Components of Virtual Communities
– Case IRC-Galleria –

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Abstract

This paper discusses the virtual community success factors found in earlier studies. In the heart of the study is the question: what factors support the growth, development and continuity of virtual communities and virtual sense of community? This paper categorizes these factors in nine groups that are interaction; content; common purpose and grounds; rules, values and norms; trust; visibility; member growth; technical platform; administration. A hypothetical framework is formed according to these categories. This hypothetical framework can be used to evaluate existing virtual communities. In this paper it is used to evaluate a Finnish virtual community IRC-galleria.

Keywords: Virtual community, social network, virtual identity, community building, success factors.
1 Introduction

Virtual communities are getting more and more important in our everyday lives. As the use and user base of internet is growing, different kinds and forms of virtual communities are taking bigger parts in our work, free time, entertainment and relationships to mention a few. In the cyberspace there can be identified millions of virtual communities each varying in shape, size and function. But they all do have one thing in common: they bring different people together with the help of information technology based medium such as the internet.

All virtual communities are not equal. As there are more active and live communities in real world, in virtual world there are also communities that are successful and communities that are not. What is the difference than? What makes some virtual communities flourish and others wither? In this paper we are trying to find out, are there some common factors that are able to make virtual community successful in the sense of activity, member growth and sense of community.

Thus, our research problem is:

- What factors support the growth, development and continuity of virtual communities and virtual sense of community?

From these factors found in earlier research we form a hypothetical framework that can be mapped into an existing virtual community. This virtual community framework is supposed to be able to say something about the success of the virtual community in general.

We also test this hypothetical framework in a well know Finnish virtual community IRC-galleria. On the one hand we are trying to find out how IRC-galleria is succeeding from the viewpoint of this framework. On the other hand we are testing the framework in it self: is it suitable to evaluate an existing virtual community?

1.1 Research methods

The research is done based on a literature analysis. Our main sources of information are articles that handle matters like communities and virtual communities in general, virtual community success factors and virtual community building.

Our literature analysis is based on the methodology described by Webster and Watson (2002). We tried to follow the structured approach given in their paper and followed citations backward and forward as Webster and Watson (2002) suggested.

We did an extensive literature study to gather knowledge about the topic. Originally we tried out three sources to search data: Google Scholar (scholar.google.fi), UMI Proquest (proquest.umi.com/login) and Nelli portal (www.nelliportaali.fi). During this process we found out, that Google Scholar incorporates both the two latter search engines, so it was
obvious that we could use only Google Scholar to search all these sources simultaneously. And that we did with thousands of hits.

We planned an initial set of key words that was the base for our search. We divided the key words between our group members. Table 1 presents the key words and hits that were found with Google Scholar. Everyone went through his hits and pick articles that best match our topic. The result sets for some key words were too big and some focusing words were used to be able to go through these hits.

<table>
<thead>
<tr>
<th>Key words</th>
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<td>&quot;community building&quot;</td>
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</tbody>
</table>

We found 82 articles that somewhat matched our research question. From these articles we selected 42 for further investigation. Finally, about 25 articles were selected for the basis of our work. We divided these papers between two persons in our group and both of us read through his set of paper.
1.2 Structure of the Report

This report is divided in five parts. First we introduce our subject, research problem and methods in the introduction. Then in section 2 we define the concepts of community and virtual community. In section 3 we present the finding from literature study: what factors help building virtual community and sense of community in the virtual world? In section 4 we present our own virtual community framework. In section 5 we introduce our case community IRC-Galleria and apply our hypothetical framework to it. The final section is reserved for concluding remarks.
2 Communities and Virtual Communities

Being in a community is usually seen as a basic part of being human. Communities can be defined as group of people interacting with each other. The concept of community usually involves the members of community, the communicative acts and communicational practices, but also identity-political issues like how the identities of members of community interact with the concept of community itself. (UTU 2006.) According to Lehtonen (1990) communities are related to many factors. These are for example regionality, locality, interaction, sense of community and norms and values.

Many communities are based on the voluntary will of the members to be a part of the community. But there are also communities where being part in is not matter of the decision: One example of these kinds of communities is family where one is born into. In forced communities such as prisons or semi-forced such as states (everybody has to be a citizen of one state) people usually have many different kinds of motives, goals and opinions. (Harva 1954.) Thus, friction and differences can be a part of community too.

Communities have been one of the core elements of the social sciences research in the 20th and 21st century. Here communities are not usually seen as neutral of value-free groups: quite the contrary communities involve many explicit or implicit hierarchies and mechanisms of power. Also political shades are not uncommon parts of concept of community. (UTU 2006.)

One of the most famous definitions related to communities is made by Ferdinand Tönnies. His Gemeinschaft–Gesellschaft -distinction describes two forms of communities in a society. The Gemeinschaft refers to traditional and very solid social network that could be found for example in a little village. Everybody in the community knows each other and they share a common history as well as common rules, habits and beliefs. Gesellschaft on the other hand is more industrialized and modern form of sociality and community. People in Gesellschaft are isolated individual units. The organic connection that flourished in Gemeinschaft is lost as relationships and interactions between members of community foremost defined by money, contracts, regulations and transaction of goods. (Kunelius 1998.)

The concept of virtual community was used more and more during the 1990’s, as researchers where paying more attention to the social sides of internet use. This meant, that internet was no longer seen as a transactional communication technology, but in a sense, that it was a virtual place where people could interact with each other, form relationships and build their identity. (Voerschueren 2005.)

A virtual community is usually defined as a group of people that may primarily or initially communicate or interact via the internet. According to Howard Rheingold a virtual community is a social construct that is build in the internet when people carry on public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace. (Rheingold 1993.) In this definition Rheingold does not define how long is long enough and what is the level of sufficient human feeling. This
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seems to mean that virtual communities come in many forms: the definition itself takes account that the factor has to be evaluated in each case and in each virtual community separately. (Willson 1997.) This seems quite logical, because the sufficient sense of human feeling for example might vary a lot when comparing general bulletin boards and massive multiplayer online role-playing games such as the World of Warcraft.
3 Factors That Help Building Virtual Community and Sense of Virtual Community

In this section we describe the factors that help building virtual community and sense of community in the virtual world. We concentrate solely on things that stem from the needs of a virtual community: what does it require to grow, evolve and achieve continuity. The factors are based on the findings gathered from related articles found in literature study described in section 1.1.

From the articles we found tens and tens of factors that have something to do with sense of community and community building. We grouped these factors in ten categories that are interaction; content; common purpose and grounds; rules, values and norms; trust; visibility; member growth; technical platform; administration. Each of these categories holds factors that have something in common.

Our categorization given above is based on an informal visual clustering method that uses post-it notes that are grouped with each other on a wall or table. Our categorization method consisted of four parts: 1.) Every name of a virtual community factor found in any article is written down with a reference on a post-it note. 2.) The factors (post-it notes) are put on a wall or table. 3.) Similar or related factors are grouped and moved close to each other until all the factors belong to one group that can denote all the factors in that group. 4.) The groups are named so that they describe the factors inside the group clearly.

3.1 Interaction

One of the most crucial categories in community building is surely interaction. There cannot be any community if no interaction is to be happen. The cruciality of this category was underlined in many articles (Hummel and Lechner 2002; Rothaermel and Sugiyama 2001; Preece and Maloney-Krichmar 2003; Erickson and Kellogg 2000; Girgensohn and Lee 2002; Laine 2006; Foth 2003; de Souza and Preece 2004; Parks et al. 1996; Koh et al. 2003).

According to de Souza and Preece (2004) many virtual communities exist mainly because of interaction. Further it is suggested by Rothaermel and Sugiyuma (2001) that the interaction in the community should be continued in order to make the community evolve. This means that the interactions in virtual community should last some time.

Many authors relate interaction to specifically social interaction in which sociality and social networks are in important position. Also social presence and relationship formation play a big part here (Preece and Maloney-Krichmar 2003; Foth 2003; Girgensohn and Lee 2002). It is good for the virtual community if its members have some feeling of other people being present and if they are encouraged to form relationships with each other. Also Sangwan (2005) writes that nurturing social interaction and it forms is one part building the sense of community, but she also argues that for some less active and “latent” users the interaction part may seem less important.
On the whole, the encouraging user participation and interaction can be seen as the fuel of the community. Without the interaction of the community members, no social context would be present and there would not be any virtual community either (Girgensohn and Lee 2002).

### 3.2 Content

Besides interaction there are key factors that relate to the content. Klang and Olsson (1999) point out the need of integrating interaction and content by making the communication done with the content. The content can be provided by community provider or generated by community members (Leimeister et al. 2004; Laine 2006). It can take any form like text, graphic or sound (Laine 2006).

To allow members to generate content by them selves, is mentioned as a functionality that should be emphasized (Laine 2006; Parks et al. 1996). According to Rothaermel and Sugiyama (2001) an important element of community is continuous adding of content that community members consider valuable. This target of valuable content can be achieved by encouraging community members to generate content (Girgensohn and Lee 2002; Leimeister et al. 2004).

There are other elements of content that deal more with the individual needs of the community members. By joining the community the members are seeking for content that is entertainment for them (Sangwan 2005). Interesting thing is that for those who generate content, the reason for doing it is self-expression (Sangwan 2005). This leads to the situation where there is a positive relationship between enjoyability and membership (Koh et al. 2003).

### 3.3 Common purpose and grounds

Common purpose and common grounds are also important when considering community building. The former means that the community has some purpose and target that each community member shares. The latter describes more broadly the fact that community members have something in common in general (Girgensohn and Lee 2002). It is worth noting for that in some articles common grounds was related more to time-and-space dimension of virtual community (Preece and Maloney-Krichmar 2003), such as sharing the same physical space or simultaneity. We see common grounds more as was said previously: community members have something in common with each other.

According to Stanoevska-Slabeva and Schmid (2001) the common grounds is formed of many smaller factors such as common vocabulary or slang, a common topic a interest, common values and targets, shared history and persistence of common meaning. Also collective held knowledge was seen as one part of common grounds (Rothaermel and Sugiyama 2001). Each of these factors is important when building community on common grounds.
As mentioned before the common purpose or focus is also seen important for virtual communities. Laine (2006) suggests that it is one of the key elements in building sense on community and virtual communities. He says that the focus states the purpose of the whole community: what for the virtual community is and where it is heading? Laine discusses further that the focus of the virtual community has to be somewhat in coherence with the intentions of the members and community providers. As virtual community evolves, the focus evolves also.

### 3.4 Rules, values and norms

The rules, values and norms are things that are always present even if we don’t necessarily notice them. Virtual communities need common principles and active provider that comprises the rules of the game (Rothaermel and Sugiyama 2001). Provider needs to have a cultural and social understanding of the norms and practices that the members can adapt and consider appropriate (Girgensohn and Lee 2002). This means that it is important to have common rules and norms whether they are visible of tacit.

There is also a place for clearly defined group of actors and organizational structure (Hummel and Lechner 2002; Stanoevksa-Slabeva and Schmid 2001). It is interest and motivation that motivate the community members to interact in a way that such an interacting group distinguishes itself from its context (Hummel and Lechner 2002). According to Foth (2003) introducing, strengthening and confirming mostly unwritten social policies and norms can activate and increase e.g. social capital.

From negative point of view there are also things that need to be handled by the provider to keep the overall atmosphere supportive. To get such a situation it is needed to prevent flames by having unique membership id, and present and advertise good community norms and values (Preece and Maloney-Krichmar 2003). This kind of approach can be supported with direct recognition to the community members that have inspired others with their action and by giving bigger role in the community (Chan et al. 2004). On the whole there is room for some virtual community governance from the provider too.

### 3.5 Trust

Many times in the articles the importance of trust for virtual communities was pointed out (Chan et al. 2004; Abdul-Rahman and Hailes 2000; Leimeister 2004; Foth 2003; Preece et al. 2003). Trust in virtual communities means basically that community members can trust in each others and also in community providers (Chan et al. 2004). In more formal notion defined by Gambetta this means that in virtual communities “trust is a particular level of the subjective probability with which an agent will perform a particular action, both before [we] can monitor such action and in a context in which it affects [our] own action” (Abdul-Rahman and Hailes 2000). Because we see that trust comes in many forms, we link many other trust-related factors in this category. These are for example anonymity, reputation or data sensitively.

According to Kremar, Leimester and Siridas (Leimeister et al. 2004) the most important success factor for a virtual community from members’ point of view is that member data is handled sensitively. Community members want that their own and personal data is in
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safe hands. Kremar, Lemester and Siridas (Leimeister et al. 2004) also say that “building trust among members” was seen important by the actual community members.

An important component of trust is reputation. If members of a virtual community can have a known reputation the trustworthiness of them can be reflected to it. As in real communities, in virtual communities reputation is information that says something about community members expected actions. (Abdul-Rahman and Hailes 2000) With this information and reputation we can say something about the trustworthiness of a community member.

As trust is important, also is the possibility for the member to be anonymous. Some even suggest that trust of anonymity encourages participation and interaction in virtual communities. (Chan et al. 2004.)

3.6 Visibility

There are several references in the articles that visibility and visualization is something that a well doing virtual community is handling properly (Girgensohn and Lee 2002; Erickson and Kellogg 2000; Preece and Maloney-Krichmar 2003). It can appear when activities are made visible to community members by showing a character that moves or conversation to all members’ presence in the community (Erickson and Kellogg 2000). It is really simple thing from normal community perspective, but in virtual community it has to be provided by the provider.

This visibility is somewhat important in real time action, because it has usually relations to the situation at that time (Erickson and Kellogg 2000). It might also have other forms that are valid all the time. These other forms of visibility can be the information that contains the community members’ personal information at the level of their choice (Foth 2003). This kind of additional information that other members can get is helping to build better relationships between the community members.

3.7 Member growth

Key issues mentioned for a good and flourishing virtual community is also the growth of the mass of members in the community. Achieving critical mass was discussed in particular by Laine (2006) who underlined on the motivating, acquisition and conversion of new members as means to achieve fast member growth rates. Also Preece and Maloney-Krichmar (2003) suggests that encouraging critical mass by for example new and up to date content is one part of the story.

Some authors find is also important that current members are further motivated by different forms of more valuable memberships (Hagel et al. 1997; Foth 2003).

3.8 Technical platform

Technical platform has everything to do with the virtual community, it is the key component. Still building a basic technical platform is rather simple, the important thing is to understand what is needed and required by the community members (Preece and
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Maloney-Krichmar 2003). There are different issues raised up in different articles, so the real challenge is just to fill the particular community’s needs and avoid the rest.

The most crucial thing is to have stable and fast enough platform that won’t stop working when there is lots of activity or other load (Leimeister et al. 2004; Laine 2006). The reason for this is that community members want to be in the community when they like, and if they fail to do it, they might move to another community that is stable and fast enough (Preece and Maloney-Krichmar 2003). Other similar element is security, but it is not so important, if the community members won’t notice any security problems (Laine 2006). It has all to do with the common feeling of the platform and that is mostly archived with platform that is alive and responsive.

When the platform is stable and fast enough, the next thing is to have good interface to use it (Girgensohn and Lee 2002; Laine 2006). It is mentioned that when taking the community members involved with the interface developing, the provider doesn’t have to guess what members want. It is rather simple thing in paper, but actually the hardest thing is to collect the ideas and opinions from the members. It is not said that the members are having exactly same kind of taste, so to the platform should have function to collect quantitative data of community members’ opinions (Preece and Maloney-Krichmar 2003).

Preece and Maloney-Krichmar (2003) name also co-temporality, simultaneity, co-presence and synchronous/asynchronous communication important things that the technical platform should handle to enable successful community building.

Relating to visibility there are also other senses than eyes, which can be fulfilled with information. Audibility is concentrating to thing that community members are hearing (Preece and Maloney-Krichmar 2003). Audibility is today present in many places with some sounds similar to movie background music. Also functionality that enables speaking within the community is getting more popular. On the whole technical thing are important, but still a good technical platform is not very complex in technical sense. It is just needed to keep stability and speed in mind when building a technical platform.

3.9 Administration

There is an element that is playing a very big role while building a community. The people that are leading the provider’s organization have to have a motivation to do so (Klang and Olsson 1999; Hagel et al. 1997). Usually this motivation is activated with money; it might also be stocks or something that could bring money at some time interval (Hagel et al. 1997). Many cases a virtual community has a group of leading people at first place. Their leader’s enthusiasm help to get new community members inspired about the community (Koh et al. 2003). The natural way is that the group of leaders is starting to act as provider, when the size of community is getting bigger.
4 From Factors to Framework

In this chapter we propose our own hypothetical framework for community building in virtual worlds. The aim of this framework is to find out, what kinds of matters need to be considered when building the technical platform and user interfaces for a virtual community. The framework can also be used to evaluate a present virtual community as is done in section 5. Our framework is based mainly on the findings from section 3 and the categorization we made there: here we try to open these categories and factors to suite for the purposes of an evaluation of a virtual community.

It is worth noting for that these kinds of design principles for community building have certainly been done also in previous studies, most famous being frameworks by Kim (2000), Kollock (1998) and Preece (2000).

4.1 Our Framework – What Has to Be Considered When Building a Virtual Community?

As section 3 might suggest, our framework consist of nine key components that can be mapped to a given virtual community. All these questions ask a question considering the virtual community at hand. The actual hypothesis behind this framework is, that each of these questions, when answered “yes”, have a good impact on the potential success of the virtual community. An illustration of our framework is given in picture 4a.

1. Does the virtual community platform support interaction?
   This means asking question like: does the virtual community platform have functionalities to support interaction. To give a few examples these might be the members’ ability to send messages with each other or to link their profiles with each other. The possibilities are endless.

2. How does the virtual community platform deal with content?
   This question handles things like, are the community member able to generate own content and is this supported well enough. Also, how much up to date and relevant content the community provider offers is an important question.

3. Does the virtual community platform have some meaning or common purpose?
   It is important for the community to have some common purpose or meaning. What for it is and why people participate in it?

4. Does the virtual community have rules, values and norms?
   Rules, values and norms are essential part of virtual communities. They are needed either they are explicit or implicit.

5. How is trust related issues handled in virtual community?
   Does the virtual community provider handle member dada sensibility and is the provider considered trustworthy. How is trust encouraged?

6. What is the role of visibility in the virtual community?
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Is visibility supported? Do community members see the actions of other community members? Are their own actions visualized?

**7. How well does the virtual community platform support member growth?**
How well the new community members are motivated and acquired? Have community already achieved critical mass?

**8. How reliable and suitable is the technical platform of community in itself?**
This means, is the technical platform stable, robust, usable, available etc?

**9. Is there some driver behind the community provider?**
Does the community provider(s) have real motivation and drive to run the community?

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**Picture 4a: Key Components of a virtual community framework**
5 What Does Our Framework Say About IRC-Galleria?

In this section we map our framework presented in section 4 to a Finnish virtual community called IRC-Galleria. The IRC-Galleria service is introduced in more detail in next section 5.1. The findings from our framework are then presented in section 5.2.

5.1 What Is IRC-Galleria?

IRC-Galleria is the biggest social network and virtual community in Finland. It was based in 2000 and achieved considerable nationwide success, especially among teens, only a few years later. The original idea behind IRC-Galleria was to give the members a change to post their pictures on the site and comment these (own or other) pictures. Lately there has been numerous activities by IRC-Galleria to generate new services and functionalities for their IRC-Galleria community: these include for example IRC-Galleria groups, IRC-Galleria blogs and commercial IRC-Galleria “widgets” (in Finnish ihqu-sälä) that can be bought by sms-messages. (IRC-Galleria 2007.)

Currently IRC-Galleria has about 400 000 registered users in Finland (IRC-Galleria 2007). The popularity of the site has been on a growth pattern, especially in early year 2007 (chart 5a below). This has probably been due to the fact, that there is a parliamentary election in Finland in March 2007 and IRC-Galleria has cleverly incorporated the pages of the parliamentary candidates in its site.

![Chart 5a: The number of visits on IRC-Galleria.net from the past three years. (Alexa 2007).](chart)

5.2 Results from IRC-Galleria

Our findings show that the virtual community IRC-Galleria is fulfilling almost all the elements of the framework presented in section 4. The only minus is coming from
provider’s a bit too tight control over everything. The more detailed analysis is provided below.

1. **Does the virtual community platform support interaction?**
   In IRC-Galleria the original form of interaction was to comment each others pictures. While adding a comment, the system also linked your comment to your profile’s homepage. By having this kind of link or footprint behavior in the system, there is now a huge amount of interaction networks presence in IRC-Galleria.

   Besides interaction networks created with comments, members are also able to join IRC channel or subcommunities inside IRC-Galleria. These are more structured way to connect to members sharing same interests. With these features it is easy to say that IRC-Galleria supports interaction among its members.

2. **How does the virtual community platform deal with content?**
   The members of IRC-Galleria can add their own pictures to the system, so that other members can comment them. This basic feature of IRC-Galleria has achieved an enormous popularity among the community members. To enrich the pictures, the provider has added a possibility to create and buy commercial widgets that can be attached on the top of original pictures. This feature is helping the members to make their pictures more attractive and supports creative members to make best selling widgets.

   There are also additional features like written and spoken blogging that have been added later in IRC-Galleria. As minus side all the new content driven features have to be created by the provider. There are no tools available for members to extend IRC-Galleria by themselves. On the whole IRC-Galleria has excellent features to deal with content, but the lack of tools for members to extend the platform can be problem in the long run.

3. **Does the virtual community platform have some meaning or common purpose?**
   IRC-Galleria is so popular in national scale that in some age groups most of the people are also member of IRC-Galleria. This is leading to a situation where the common purpose to join the community is to interact with your friends, who have already joined. For many teenagers it is normal form of communication to check what has happened in the community and interact with their friends through it. With these facts it can be said that IRC-Galleria has some meaning and common purpose: interaction with others.

4. **Does the virtual community have rules, values and norms?**
   Starting from registration the provider is emphasizing honesty and good behavior. Basic member information can’t be changed after it has been entered. It is also mandatory to understand the rules and there are consequences if they are violated. The actual supervision is done by provider, but other community members can easily inform provider about not allowed content or violation of the rules. IRC-Galleria feels even a bit too strict with these facts, but they seem to work pretty well with members of age 10-25.

5. **How is trust related issues handled in virtual community?**
The provider is putting a lot of effort to look trustful in the eyes of community members and their parents. They provide explicit information about the use of member profiles and do not give the information to third parties. For parents there is separate information page that is telling basic things of IRC-Galleria and for what it is used for. To achieve the trust of community members parents, the provider of IRC-Galleria co-operating with national child welfare organization (The Mannerheim League for Child Welfare). It is easy to say that trust is handled very nicely in IRC-Galleria.

6. What is the role of visibility in the virtual community?
In IRC-Galleria commenting of the pictures is possible only after logging in to the system. This means that every comment given leads to the commentator. It is very visible way to show members actions and support interaction among community members. There is also additional feature for VIP members to add visibility. By giving and getting the statistics of who has watched the pictures, the community’s VIP members that have enabled the feature can see other VIP member’s tracks left the pictures they have watched. Even when sounding a bit complex, this VIP member’s extended visibility is designed to be equal towards all members, because the higher level of visibility is shown only to those who are on that level.

7. How well does the virtual community platform support member growth?
From small scale picture sharing on the top of IRC usage, has IRC-Galleria growth to national’s biggest virtual community. The little additional feature of adding and commenting pictures it originally provided is still the most popular feature of the service. There are many additional topical features that have been well thought by the provider like a service for choosing a candidate for national election. This pallet of features has kept the virtual community very hot among the members. On the whole the platform has supported member growth on the area of features and performance.

8. How reliable and suitable is the technical platform of community in itself?
IRC-Galleria is build on the top of web servers and the content is mostly text and pictures. The growth has been fast but still predictable, so more servers are added to keep the system fast enough. The biggest load is coming from the pictures and that is the reason why the picture resolution is scaled down by the provider to reduce the network load. There are some service breaks every year, but with the money coming from the community the provider has been able to make the system even more reliable. So it can be said that the technical platform is reliable and well suitable for the community.

9. Is there some driver behind the community provider?
The people working in the provider are first community members and they have really put effort to take the system into more attractive direction. Their community of small group has turned into national’s biggest virtual community. The provider is getting all the money out of the community and IRC-Galleria is nowadays much commercialized than in the beginning. Money is the main motivation for making IRC-Galleria more attractive and all the new features are aiming for better profit.
6 Concluding Remarks

In this study we found out that there are numerous factors that support the growth, development and continuity of virtual communities and virtual sense of community. These factors can be generally grouped in nine categories that are interaction; content; common purpose and grounds; rules, values and norms; trust; visibility; member growth; technical platform; administration.

This study also presents a hypothetical virtual community framework that follows the given success factor categorization straightforwardly. With this framework, the Finnish virtual community IRC-galleria was evaluated. According to our framework, IRC-galleria seems to support many of aspects that a virtual community needs to excel, but there were also some shortcomings. IRC-galleria could, for example, give more freedom to users in content generation and also loosen some control and administration.

On the whole, our hypothetical framework seems to work quite well in the scope of our short case study. The framework gives guidelines and even suggestions how to evolve and improve the virtual community. Although, the framework does not give straight answers, it is able to offer a set of viewpoints to an existing virtual community: it points out what to look for.

On the other hand the framework has also weaknesses. It relies heavily on the analytical skills of the user of the framework. It is also quite hard to say how applicable this framework is on a larger scale. Thus the framework should be further tested with more samples of virtual communities – successful ones and with failure communities also. By doing this the validity and applicability of the framework could be better tested. A further study on the matter could, for example, map this framework on a failed virtual community in an attempt to find out the key failure components of virtual communities.
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