Methods for Creating a Team for Managing a Virtual Community

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Abstract. Virtual communities can be considered as a separate type of project, but with its own peculiarities. Therefore, as in other projects, creating a virtual community has its stages, resources, and the need to form a team. Types of virtual communities are analyzed by persistence, by WWW integration, by community types. A model for creating and managing a virtual community has been developed. The algorithm of team formation and the management algorithm of tasks execution by the team are developed. By using the team to create and manage a virtual community, we reduce time costs and improve communication with community users.

Keywords: virtual community, team, performers, social network, project

1   Introduction

Given the current trends and popularity of the Internet increasingly, when a new brand, event, or product is created, its pre-presentation takes place on the Internet. The same thing is happening with the finished product. And the best platform for this is virtual communities. It is also an advertising and marketing strategy, which covers a wide category of different age groups.

Virtual communities make up a large part of the web space, providing opportunities for meeting information needs and interaction between participants, and every day more and more of them are already developing.

Virtual communities for certain people are even addictive. Often people in virtual communities interact for hours, make purchases, find useful and relevant information, and etc. In today's world, this is the norm, especially for generation Y and Z, which are dependent on the Internet [1].

Most traditional types of activities – this is a project, an action plan, allocation of stages and resources. Scheduled projects achieve success and goals. Virtual communities – is an activity, making money, fulfilling of needs. Therefore, virtual communities can be considered as a separate type of project, however, with its features. There

are some stages, resources that are standard for the project when create a virtual community.

Observations have shown that those projects are successful, which they refer to as projects with specification of requirements, sequence of steps, documentation. But the specificities of virtual communities must be considered, rather than treating virtual communities as a traditional project. For the most part, without project work, virtual communities are a failing. And, in fact, the creation of a virtual community must be approached with specific project goals.

2 Analysis of Social Networks and Types of Virtual Communities

According to an Irish company «StatCounter», which deals with web traffic analysis, and site «dreamgrow.com» which determines the monthly activity of users on social networks, the most popular and used social network is Facebook (fig. 1, 2) (data for the period: November 2018 – November 2019). [2-5]
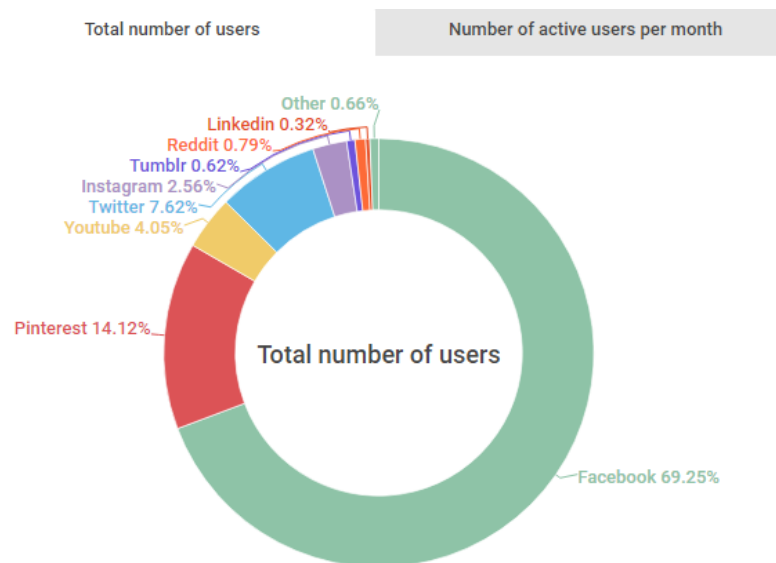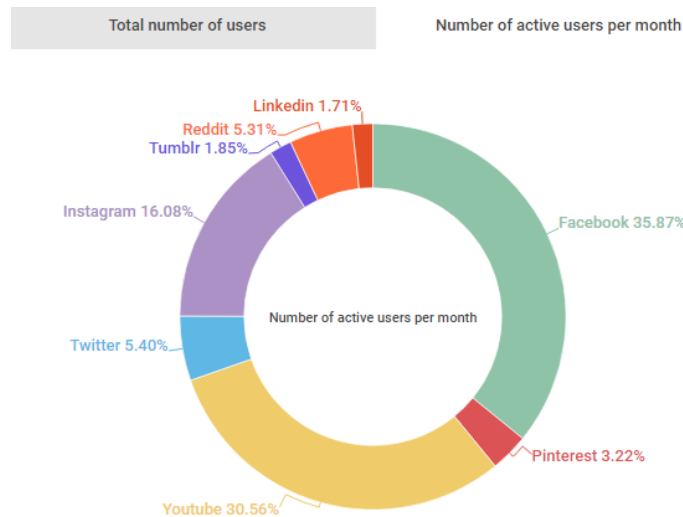

Fig. 1. Total number of users

Fig. 2. Number of active users per month

And, in fact, the social network «Facebook» is the most common platform for creating a virtual community.

Given the features of virtual communities, they are classified according to different parameters [6-8]. Based on the analysis, actual types of virtual communities were identified (fig. 3).
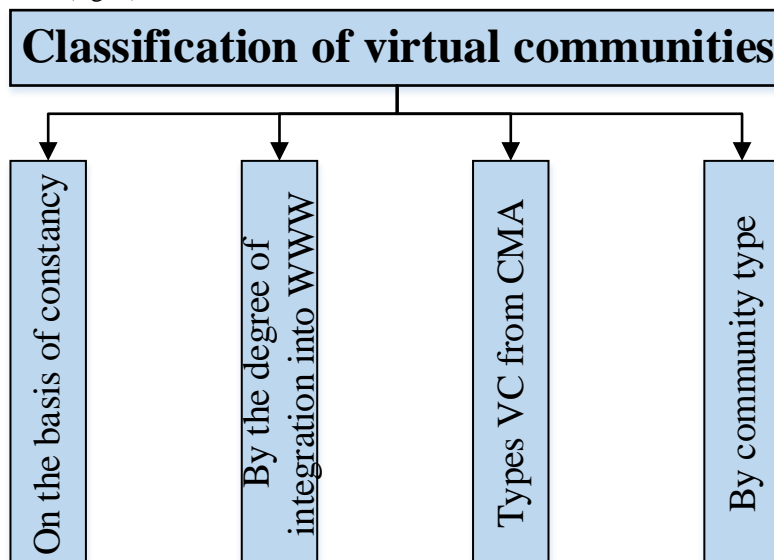

Fig. 3. Types of virtual community

Types of virtual communities based on constancy:

- *permanent virtual community.* A virtual community whose functioning is permanent. The community has a constant theme, a long existence, a clear purpose for creation;
- *situational virtual community.* A virtual community that works for a certain amount of time. It often happens that a resource disappears and changes the topic of virtual community. And this transition takes place from a situational to a permanent virtual community;
- *situational-repetitive virtual community.* An active virtual community then suspends and resumes activity for a period of time.

By degree of integration in the WWW author [9] identifies the following types:

- social networks - not integrated in WWW;
- discussion letters - partially integrated into WWW, only archives are integrated in the WWW;
- public social networks - integrated into WWW, to a large extent, only the published results of the activities are integrated;
- Web communities - fully integrated into WWW.

Researchers from FeverBee (Community Management Academy) [10] distinguish these types of virtual communities:

- actions - to use collective force for certain actions;
- practices - Virtual community members favor the same activity;
- places - a community of geographically integrated members;
- interest - for participants with common interests;
- circumstances - a community of participants united by a common situation.

Classification by community type is presented in [11]:

- in scale - from personal communities to large, branded communities;
- by scope - exchange of views, technical support, etc.;
- for settings - from private to public;
- by term - the time period of community existence;
- by value of the offer - from ordinary participation to privileged participation in the virtual community;
- by membership - from interested to specific users;
- by toolkit - from online virtual community platforms to independent and individual communities.

3 Structural Model of Performers Creating and Managing a Virtual Community

Creating a virtual community consist in organization of performers to create a virtual community, formulation and distribution of tasks between performers of the virtual community lifecycle organization [12-19].

In turn, the virtual community element consists of steps and directions organizing the lifecycle of a virtual community.

The process of organizing the lifecycle of a virtual community is distributed, individual components performed by executors of the life cycle organization, which should be divided into levels. Managers of all levels are the virtual community manager.

Virtual Community Manager – is a specialist, which is responsible for the success of the virtual community lifecycle. The manager is responsible for the managerial set of tasks life cycle organization, it is distribution, the basis of which is: control timeframes and budgets, risk analysis and forecasting, prompt problem solving, maintenance of technical documentation, etc. Structure of the virtual community lifecycle organization presented on fig. 4.

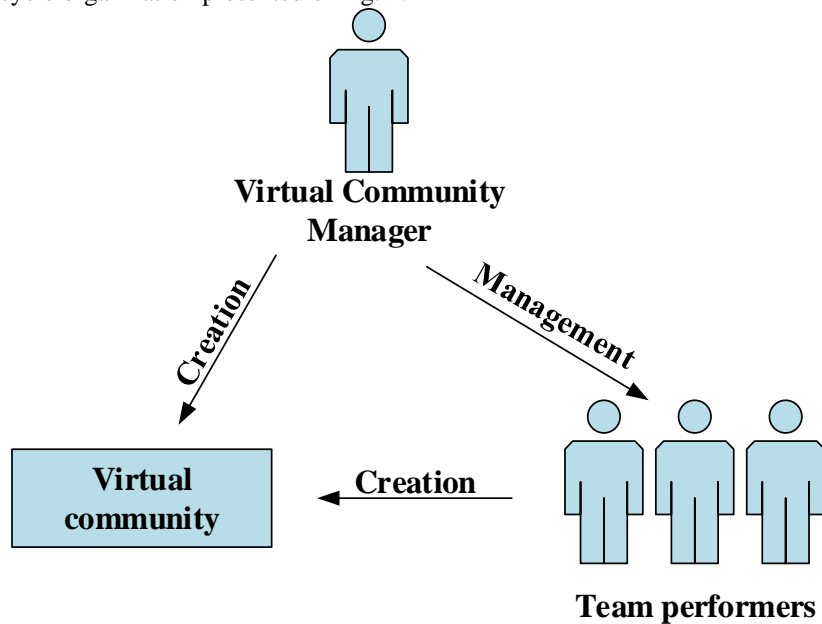**Fig. 4.** Structure of the virtual community lifecycle organization

Virtual Community Creation Manager manages the team, which includes performers of stages and directions – specialists with the necessary qualifications and industry. The manager is also responsible for liaison between the team and the customer for the virtual community. The manager distributes the tasks between the team by com-

plex work, forming the organizational structure of the performers. However, to save costs during the life cycle, you can outsource the necessary professionals.

The allocation identifies the performers of the stages, directors and analysts.

Stage Performer – specialist, who is responsible for completing the lifecycle phase of the virtual community. The stage performer makes methodical recommendations for the stage performance, for which the community manager delegates the directions to the executors of the directions.

Each specialist in the lifecycle of the virtual community is responsible for the execution of each stage. For example, he analyst is responsible for performing the analysis phase, the developer is responsible for the development phase, testing of the prepared virtual community is carried out Quality Assurance-specialist, the stage of operation is performed by the administrator and moderator the virtual community etc.

Directly Performer – specialist, who is responsible for fulfilling the tasks of organizing the lifecycle of the virtual community.

Today, when creating a virtual community, they pay more attention to destinations than to stages. Therefore, the profession of specialists, responsible for the user, information, reputation and resource directions are quite popular, and there are many experts in the subject areas such as: ssm- specialist, content managers, seo-specialist.

Analyst – specialist, who is responsible for analyzing the subject matter of the virtual community and reference communities. The analyst conducts analysis throughout the lifecycle of the virtual community.

Provided universal performers of the virtual community lifecycle organization. The subject matter and subject matter of the virtual community being created may vary.

4 The Algorithm for Forming a Team for Creating and Managing a Virtual Community

Forming a team is an important step in creating and managing a virtual community. First of all, it is the community manager who will form the co-mandate. Analyzing the subject area of a community is an important step before building a team. The subject matter influences the selection of specialists, especially those responsible for content.

The most typical and necessary specialists for creating and managing a virtual community are:

- Administrator, who is usually responsible for interacting with the virtual community;
- Content artist responsible for content of the virtual community;
- Outsourcing contractor, as many of the key tasks in creating and managing a community are narrow-minded. For example, professional photographers are invited to create photo content.

With the increase in users of the virtual community, the question is about expanding the team. Or forming a new team with new ideas after a while. The virtual community manager makes the decision to change the team.

The algorithm for forming a virtual community management team is presented in Fig. 5.
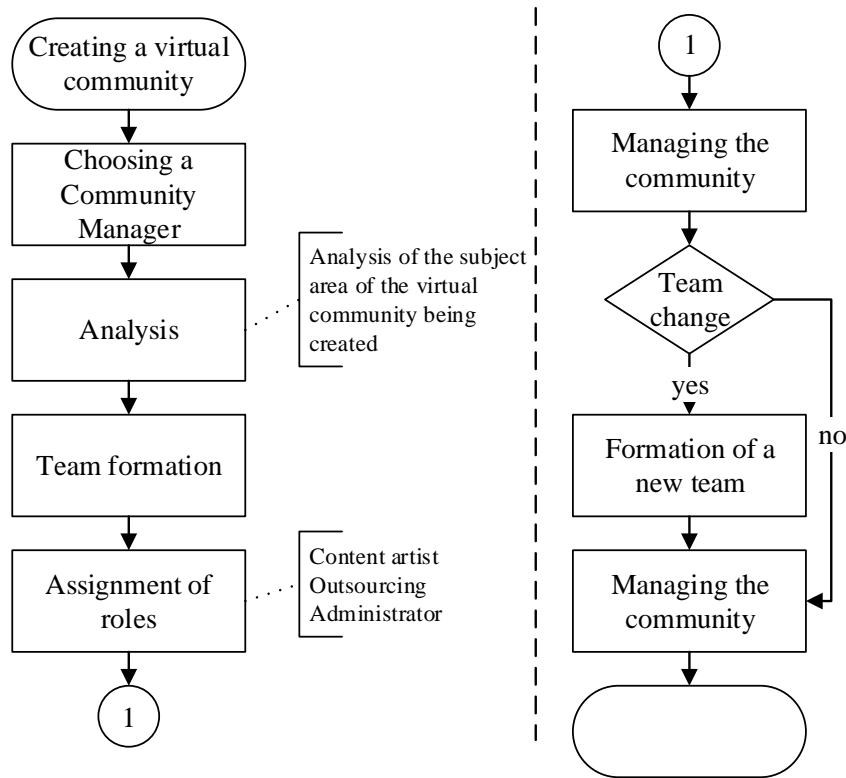
Fig. 5. Algorithm for forming a virtual community management team

5 The Managerial Algorithm for Task Formation for the Virtual Community Team

In the online virtual community lifecycle-networking model, creating a task for the team is an important component. The task is created by the virtual community manager and delegated to the executors. The managerial algorithm of formation of tasks of organization of life cycle of virtual communities is shown in fig. 6.

The algorithm is designed to structure the task formation process for the virtual community team.

The manager of the task scheduling algorithm is the virtual community manager. To execute the algorithm, the manager must know and understand the goals of creating a virtual community.

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            │  Beginning  │
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          ╱──────────────────╱      │ virtual community        │
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            └──────┬──────┘         │ tasks for organizing the │
            ┌─────────────┐         │ lifecycle of the virtual │
            │ Choosing a  │         │ community                │
            │direction for│         └──────────────────────────┘
            │  the task   │
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            │Definition of│ ···     │ The manager defines the  │
            │ indicators  │         │ required metrics to      │
            └──────┬──────┘         │ complete the task        │
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            │Delegation of│ ···     │ Identify the executor    │
            │  the task   │         │ and delegate the task    │
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           ╱  Receiving a   ╲ ···   │ Receiving a report from  │
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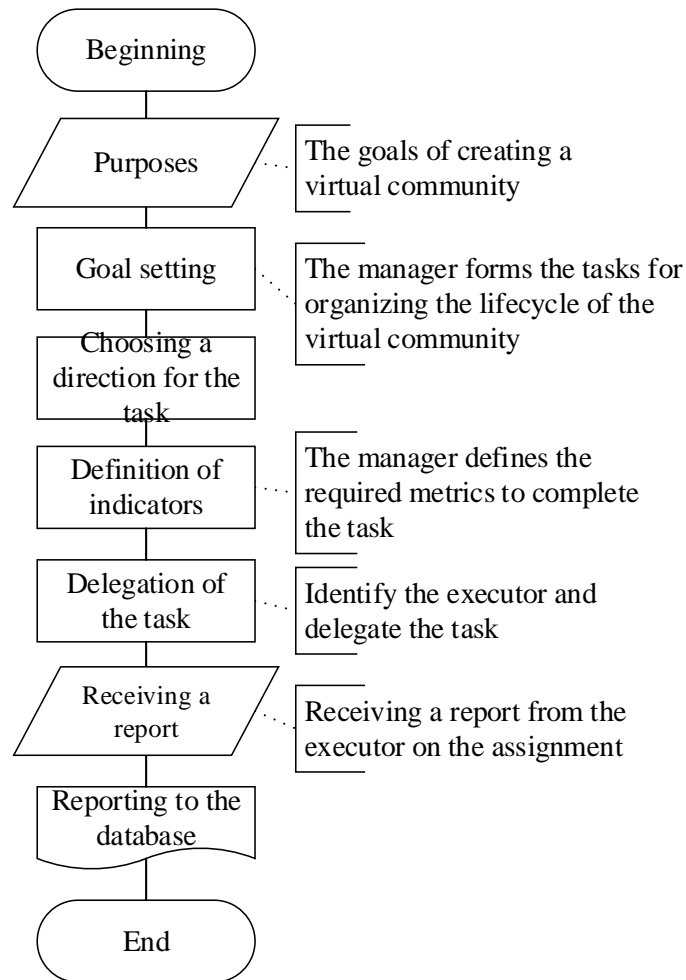
Fig. 6. The managerial algorithm for forming the tasks of organizing the lifecycle of virtual communities

The result of executing the algorithm is to obtain a task execution report from the executor and enter it in the database of the virtual community lifecycle organization.

6   The Effectiveness of the Team in Managing the Virtual Community

Effective use of the team in creating and managing a virtual community significantly reduces time costs and helps maintain reputation.

Indicator metric using the team:

$$\mathrm{Efficiency(Com)} = \frac{N^{(Task)}}{N^{(Arm)}}$$

(1)

where $N^{(Task)}$ – number of tasks for creating and managing a virtual community, $N^{(Arm)}$ – number of team members.

By using the team, our time management costs are reduced. Each specialist qualitatively deals with their business. The only downside here is the pay to performers. However, it all depends on the type of community, with a large number of participants it is profitable, since online communication and communication of information maintains the reputation of the community, and in marketing communities promotes the sale and promotion of goods.

Conclusion

In the article we analyzes the world's most popular social networks and types of virtual communities on various grounds. It is worth noting that the best platform for building a virtual community is Facebook's social network. A model of the virtual community creation and management team is presented. The algorithm of team formation and the management algorithm of tasks execution by the team are developed. By using the team to create and manage a virtual community, we reduce time costs and improve communication with community users.

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