

# Evaluation set up for a Regional Social Network Service

Assessing content, social networks and user attitudes of the Austrian SNS “Sankt Onlein”

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**Abstract**— Social Network Services (SNSs) are vastly popular and used by millions of people worldwide. A few years ago, research has begun to analyze these platforms as well as the social networks and social interactions that are enabled by these technologies. Many of the well-known and popular SNSs such as Facebook or YouTube have already been analyzed and profiled under numerous different aspects. However, regional SNSs have largely been disregarded. In this work in progress paper, we introduce a newly launched regional SNS from Austria, outline the particularities of this regional social networking platform, set up first hypotheses and outline our evaluation approaches to analyzing this service. It is our belief that by putting the particularities of a regional SNS in focus, and by using an interaction graph that visualizes intimate social links instead of the commonly used classical social network analysis, valuable insights on the connection of online networking activities and offline social interactions as well as on the users’ perception of familiarity and place can be obtained. The paper illustrates the particularities of regional SNS and describes an evaluation set up to gain more insights into this specific type of networking platform.

**Keywords** - Social Network Service; social network analysis; content analysis; evaluation; measurement.

## I. INTRODUCTION

Close to 900 million people actively use Facebook every month. The need for using digital SNSs to share content and interact with other people seems to be consistent. Facebook is, however, struggling with extensive privacy and data mining discussions and also globalizes social interaction possibilities, making it thus more complex to connect online social networks with offline social networks. This fuels the development of alternative, local SNSs that encompass country- or region-specific differences in their functionalities and the language used in the user interface. An example of a very successful and well-established regional SNS is Qzone, a platform developed for Chinese users with an estimated number of 480 million users of whom 150 million users update their accounts at least once a month [1]. Qzone provides blogging, media sharing, and social networking functions additionally to an instant messenger which is deemed to be one of the key success factors of the platform.

Another factor of success is deemed to be the fact that Qzone is reserved for Chinese users, supporting the Chinese language only. Thus, this regional SNS can hardly be compared with Facebook: Although the platforms partially offer the same functionalities to their users, the boundaries of the two SNSs differ in terms of language and cognitive confinements. Whereas Facebook is open to any Internet user above the age of 13 with a valid email address, supporting a broad selection of languages and users from all over the world, Qzone demands first and foremost the knowledge of the Chinese language of the user.

This concept seems to be a factor of success: As reported by analysts and industry professionals, Qzone is more important than Facebook in China. Apart from the example Qzone, other regional-specific SNSs have established themselves in confined regions all over the world, among them vkontakte in Russia, Odnoklassniki in the Ukraine and Kazakhstan, and Mixi in Japan [2].

This leads to our research questions: Is a local, language-specific or regional-specific SNS more appealing to users? Does a regional SNS enable a deeper connection of their online social network with offline social activities? Can a regional SNS be characterized by more intimate node connections and thus more interaction-intensive social networks?

In order to verify our assumptions, we plan to conduct several evaluations which will be outlined in this work in progress paper. At first, the functionalities and characteristics of a regional SNS will be described in more depth; then, state-of-the-art evaluation methods for social networks will be presented, and in the third part, the planned evaluation set up will be explained. Finally, we provide an outlook on further research topics connected to this topic.

## II. SANKT ONLEIN: A REGIONAL SNS

In order to verify our hypotheses, we chose to analyze Sankt Onlein, a SNS which launched in 2011 and can be described as a profile-centric, identity-driven SNS [3]. Just as the very successful Qzone, Sankt Onlein is set up for a specific target group, which is comprised of the Austrian population. This limitation is, however, not forced by regulatory restrictions but instead promoted with the

proposition as being the “digital capital of Austria”. This is underlined by signature terms from typical Austrian vocabulary being used for different functionalities and descriptions. The Austrian idioms are dialect forms of standard German, belonging to Bavarian family of languages for the most part.

Sankt Onlein also tries to diversify itself from other networks by providing a comprehensive set of privacy and data protection settings to its users, thus setting up a more trustful environment for social interaction. For example, Sankt Onlein promises to erase all user data and interaction records whenever a user chooses to delete his or her account. Additionally, Sankt Onlein strives to draw a greater value from user-generated content. With “Der Onleiner”, Sankt Onlein has created a user-generated online newspaper that draws its contents from the platform’s members. Sankt Onlein is currently used by more than 10.000 users situated in Austria. Mobile applications for smartphones are also offered: They provide the same functionalities as the website and are available for iOS devices and Android phones.

Users on Sankt Onlein are able to set up a profile for themselves, share media such as photos, add other platform members to their contacts, and interact with these contacts in a private or semi-public manner. Public posting, i.e., so that individuals who are not registered on the platform can view a message, or seeing a user’s profile without registration is not possible. A user can choose to categorize his contacts into three privacy circles. This enables him to choose which circle a status message or shared medium is addressed to. Interaction possibilities include semi-public messages on the user’s stream as well as comments on posted semi-public messages and published photos – this content appears on the user’s “Schaukasten” a stream of activities on the user’s profile page. Additionally, it is possible to send private messages, and finally, special, non-written messages in form of interaction buttons that allow a user to “wink at”, “pad shoulder of”, and “flirt with” another user.

Additionally to these user-to-user interactions, Sankt Onlein also provides a tool for creating community pages for companies, clubs, and other organizations. Users can express their sympathies for such a page by clicking the corresponding button and interacting with the community members afterwards.

### III. THEORETICAL BASIS AND THEORETICAL BASIS

At the present, SNSs are beginning to be of rising interest to the research community. Various studies have profiled different platforms such as YouTube, Flickr, and Orkut [5] and used classical social network analysis methods for gaining deep insights. In this approach, individuals are nodes in a network where links between nodes are formed through the state of being a “contact”, “friend”, or “buddy”. One of the most comprehensive social graphs is the visualization of data from Microsoft Messenger which shows 180 million nodes and 1.3 billion undirected edges [6].

For the evaluation of Sankt Onlein, we have chosen a slightly different approach that also encompasses other

methods of evaluation and therefore broadened the theoretical basis as follows.

The characteristics described in the prior chapter (regional focus, use of dialect forms, and self-positioning of the platform) imply that Sankt Onlein and the interests of its users are focused on Austrian users, culture, and news. This leads to our first hypothesis:

*H1: Members of the SNS Sankt Onlein primarily discuss topics that focus on Austrian users, culture, and news.*

Recent studies [4] have shown that in large SNSs such as Facebook, most users only interact with about 50 percent of their contacts (so-called “friends”, however, this term does not infer to a real friendship underlying the connection). 20 percent of a Facebook user’s friends are responsible for 70 percent of all interactions on the platform. This observation can be applied to about 90 percent of all Facebook users. This corroborates the findings that networks on Facebook are very widespread across regional, linguistic and interest fields. A regional SNS such as Sankt Onlein on the other hand, has by our definition more defined boundaries, limiting possible social actors to a regional and linguistic group. We assume that this prohibits a direct comparison of Facebook and Sankt Onlein and thus formulate our second hypothesis:

*H2: In local SNS, social networks and social interactions shift from a global level to a more regional level, resulting in a higher number of and more intimate node connections. A regional SNS acts primarily as a tool and enabler for interactions in the offline sphere.*

Digital social networking platforms or communities may be classified in two main categories in terms of the structure of social networks on the respective platform [3]. On the one hand, there are networks focused on facilitating novel acquaintances through shared interests or shared objectives, e.g., dating communities or passion-driven special interest communities. On the other hand, there are networks that enable transferring existing social networks and node connections onto a digital platform. Profile-centric platforms that are not focused on special interests fall under this category. Sankt Onlein can also be positioned here, although it does indicate some functions (e.g., “wink at”, “flirt with”) used for making first contact with possible new acquaintances. Sankt Onlein as a local, profile-centric SNS with more intimate node connections thus has another implication which we summarize under the following hypothesis:

*H3: Consequently to H1, local SNS facilitate a better connection of online networks and activities; and offline networks and activities.*

In their theory of virtual space and place [7], the authors show how the perception of space and place inside virtual worlds influence actions and enjoyment of the users. Continuing our assumption of Sankt Onlein to be a local SNS with the above-mentioned cognitive limitations, it can be positioned as a confined areal within the web. The platform’s own slogan “Austria’s digital capital” also indicates a certain positioning as a defined space. The third indicator for Sankt Onlein to be a confined place rather than

an open space as per definition in [7] is the fact that Sankt Onlein does not offer platform-enabled functionalities outside of its website. While large services such as Google or Facebook are ubiquitous in the web, enabling registration, logging in, commenting and sharing functionalities on third-party platforms, Sankt Onlein users can only interact and use the platform's functionalities while using the SNS itself. This eventually creates a homely atmosphere of familiarity [8]. Thus, our third hypothesis is as follows:

*H4: Sankt Onlein is a confined areal within virtual space and can be considered a place which eventually evokes an atmosphere of familiarity.*

#### IV. EVALUATION SET UP

For evaluating and verifying our theses, our evaluation set up contains three different aspects that reach from content analysis to a quantitative and qualitative social network analysis. In detail, our evaluation set up is as follows:

##### A. Part 1: Content Analysis

In order to verify our first hypothesis that Sankt Onlein is indeed focused on Austrian news, culture and content, and thus qualifies for a region-focused SNS, a content analysis of shared messages will be conducted. The status messages posted on the users' "Schaukasten" will be sampled, unitized, and coded manually. The decision to complete the content analysis manually instead of using automated text mining and entity extraction is based on the fact that automatic content analysis for German texts is not yet sophisticated enough to produce viable results – especially in case of Austria-specific idioms. In the final analysis, the data are assessed quantitatively and qualitatively. As a result of the analysis, we hope to find whether there is a significant tendency for Sankt Onlein users to converse about Austria-specific topics. Through the qualitative analysis of the sample we also hope to see first indicators of whether the dialect currently used on the platform to describe functionalities and trigger actions is the same dialect as used in the user-produced content.

##### B. Social Network Analysis

In order to verify our second hypothesis that a regional SNS facilitates social networks with a higher number of and more intimate nodes, a social network analysis will be conducted. Not only will the amount of social links be analyzed, but also the quality of the links measured in user interactions. For this purpose, we plan to base our study on the concept of interaction graphs as presented in [4]. The expected results will provide insights on the network structure on Sankt Onlein. These results may be compared to data extracted from Facebook to underline the differences between the two SNSs. An especially interesting topic in this context is the comparison of an individual's network on different platforms, e.g., on Facebook and on Sankt Onlein, to find usage patterns and first qualitative insights into discussed topics.

##### C. Online User Survey

In the last part of the evaluation set up, an online user survey will be conducted. Through questioning users of Sankt Onlein about their usage patterns of the platform and their attitude towards this SNS, we hope to gain more qualitative insights and verify our theses 3 and 4. For designing the survey, we will build upon the use of the expectation disconfirmation theory (EDT) as presented by in [9] in the context of IT systems. In this approach, cognition and behavior is taken into account as well as temporal changes in technology acceptance models. We plan to survey two different user groups: One group  $G_1$  which is already familiar with the platform and has been using it for some time; and one group  $G_2$  which is new to the platform. The questionnaires will be sent to the users at two different points in time  $t_1$  and  $t_2$ , and will survey perceptions, attitudes, and satisfaction of the users. The questionnaire for  $G_2$  at time  $t_1$  assesses the perceptions and attitude towards the SNS prior to use. The data gained in this first survey will be compared to the information gained from the questionnaire at  $t_2$ , in which disconfirmation, satisfaction and modified perceptions and attitudes as well as behavioral changes are surveyed.

#### V. CONCLUSION AND FUTURE WORK

In this short paper, the regional SNS Sankt Onlein was introduced and preliminary hypotheses on the usage characteristics of this platform were proposed. We presented our planned research activities concerning this regional SNS in hope of gaining valuable insights for learning more about this special type of SNS, as we have realized in our research and literature review activities, most research work focuses on large social network such as Facebook. A focus on smaller, regionally bordered SNSs may help to delve deeper into psychological, socio-scientific, and interaction issues that arise in the crossover zone between online social interaction and offline social interactions. These insights could be helpful for researchers and practitioners seeking to use regional SNS for e-commerce activities alike.

However, our approach represents only a small aspect of the many different research aspects of this SNS and can be seen as the first step towards deeper investigations. Comparison studies of other SNSs as mentioned in the introduction (vkontakte, Odnoklassniki, Mixi) could provide insights on generalization of regional SNS characteristics. However, possible limitations caused by data availability must be dealt with.

Also, individual aspects could be assessed in more detail. For example, linguistic research within the platform could result in first indicators about changes, shifts, and/or unifications of Austria-specific idioms.

Future work could also include a view on the mobile application of Sankt Onlein. Mobile penetration in Austria currently amounts to about 150 percent and mobile usage of SNS is constantly rising (as can be observed with Facebook and mobile-specific networks, e.g., Badoo). These statistics could suggest that the connection of online and offline social networks and interactions may be facilitated by the mobile

phone and SNS applications. As the mobile phone is “always on”, it creates a state of ubiquitous social networking activities.

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