

Preface

Humans are social creatures.

Frequently they socialize with likeminded individuals or individuals with whom they are connected in some way such as family ties. Their socializing takes the form of casual interactions at the bar, in the store, on the street, or more formally in associations, clubs, political parties and communities of intention. The study of social interactions forms the basis of the study of social networks as initiated by sociologists in the 1930s.

Social networks are formed when individuals socialize through interaction and communication. These networks have been shaped and formed by the technologies available. Originally networks were built through spoken word, then later by mail, telegraph or telephone.

Most of these means of interaction were relatively slow, they had limitations as to availability and access and the corresponding networks were therefore rather small and often geographically bounded. The advent of the Internet has changed this. It provides an expansive way of communicating with anyone anywhere and one can therefore form social networks with no geographical or numerical limitations. We now have at least one network—Facebook—that encompasses a significant portion of the population of the Earth.

In the last decades, social networks have become the most convenient and preferable means of communication between people regardless of age, culture, educational background or job title.

The tremendous growth of these networks is evident. In May 2012, the most prominent example was Facebook, with 901 million participants worldwide, 1.4 million pages of users and companies and more than 16,000 pages created from major brands such as Coca Cola, Disney, and Starbucks; non-profits such as The Red Cross, Wikipedia and Special Olympics; and governmental organizations such as the United Nations and the Dag Hammarskjöld library. Another popular social network, LinkedIn, aims to connect professionals. It has more than 135 million participants all over the world.

Daily more than 10.5 billion of minutes are spent on Facebook. This is, on average, more than 12 min per day per user. The statistical outliers are users who

spent hours each day entertaining themselves by chatting or playing in the pages of a social network.

More and more companies have started to include social networks as part of their marketing campaign either for brand awareness, or advertising their products or services. Thus, television advertising now is accompanied by URL addresses that refer to the social network pages for contests or gifts to the consumers of the products. Day by day, companies such as Kraft foods and others use social network campaigns for their viral marketing to promote their products. At times they have managed in to create broad awareness among the social network users in a short time by prompting them to play smart games inside the social network or to create unique images for their profiles inspired by the advertised products. Social networks can provide instant access to a very large audience at practically no cost.

The more social networks are used, the greater the challenge for developers of social networks to host more features and tools to expand their user base.

If the developed network is for a company, it is also important that it contributes to the revenue of the company. Social networks which might have been started with a simple but smart idea have frequently been expanded to a very complicated platform with a very sophisticated business model that allows user to socialize, play, make business and entertain themselves; advertisers to promote, advertise and sell their products; and owners of the social network to sell premium services for their users. The concomitant development costs and design sophistication put a strain on the developers of these networks.

In this dynamic and volatile environment, the need for changes and the speed of advancements in the development of social network platforms require design and development teams to work under pressure—often violating traditional design and software engineering methods. As a result, social network platforms may need to be redeveloped at some point when new services need to be introduced or they suffer from serious usability issues. In the case of users they may get hundreds of stimuli from messages, advertisements, photos, and videos, creating communication chaos that at times seems insurmountable to a new user. This chaotic situation puts additional strain on the developers as they supply the vital social network interfaces.

As with many topics these days, the most up-to-date information about the topic is frequently found on the Internet. An individual who wants to design a social network might be tempted to search using a common search engine. In May 2012, a Google search of the Internet using the search string “How to build social network sites” returns about 1,420,000,000 results. Assuming one could display and read each search result in 10 s it would require 44.4 years to read all the pages. If the individual is a bit more familiar with searching and enclose the search string in quotes, the number of hits is then now 190.000 and it would still require 220 days to peruse all the web pages under the same conditions as above.

This book attempts to organize the design and development space of social networking platforms by providing a methodological approach for the development of a social network. It starts by presenting the history of the development of social networks so the reader will understand the origin and the reasons that social networks were started and developed. The book catalogues the main features that

are characteristic of social networks when implemented on a computing platform. Then various techniques and methods are presented to help future designers and developers of social networks to better understand the aim of their concepts, test them with potential users and start designing their platforms according to best practices and established guidelines and standards. Development issues and concerns are analyzed to help future developers plan their implementation on a solid basis and be flexible and scalable to accommodate future requirements.

In addition to these implementation methods, a review of the existing social networking platforms is offered for non-programmers to help them understand what their options are if they want to start deploying a social network. All the necessary components and tools required in a social network are also discussed, providing the reader with an insight of what functionality is expected from a user when interacting with the platform. At the end, a systematic presentation of a step-by-step evaluation process is suggested in order to assess the usability and the usefulness of a social networking platform. In this part, problems and issues pertaining to an existing or a new social network can be identified with the proposed techniques and progressively amended. Finally, future issues concerning the evolution of social networks are discussed.

As it can be seen from the structuring of the content of the book, the principal audience is designers and programmers who desire to develop social network platforms or applications for social networking websites. This book will guide them through the dangerous paths of developing a volatile and dynamic web application that may become obsolete or useless on the next day if the steps to develop the social networking platform are not the appropriate ones. The experience of the author with similar systems as depicted in this book will allow new designers and developers or those who want to systematically approach this field to work with confidence in order to achieve their goal and create a usable social networking platform. The book could also be used as a textbook to courses such as Human Computer Interaction or Social Network Design and Development focused on new trends on the web programming or social networking development.

The book fills the gap between the purely theoretical papers and books and the how-to-books and websites devoted to specific ways of implementing social networks. It is an important and timely contribution to the emerging literature on modern social networks.

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Techniques and Tools for Designing an Online Social
Network Platform

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