Chapter 4
Bridging Provider-Centric and User-Centric Social Networks

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ABSTRACT

Current social networks are centralized and driven by the providers' formats, policies, and rules. Subscribing to several networks usually implies duplicating profile information and the effort of replicating changes when needed. Recently, there have been several proposals to support decentralized social networks, but these maintain the client-server paradigm. This chapter recognizes that the user is no longer a mere consumer, but rather a producer, and calls for a paradigm shift, with the user at the center of the social network scenarios, taking the role of an active service, in equal terms with social network providers. This leads to a unified user model: both individual and institutional entities are both users and providers and share the same protocols, although with different emphasis. We call this the user-centric approach and show a migration path from current social network models. To support this approach, we present a new Web access device, the browserver, which includes a browser and a server working in close cooperation, with the goal of replacing the classical browser but being backwards compatible with it to ease the migration path.

INTRODUCTION

More than the technological developments they entail, social networks (SNs) represent an impact on society potentially greater than the Web itself. It's also happening faster and in a large scale.

People no longer go to the Web to obtain information, but rather to change it.

SNs have undoubtedly become indispensable tools, both at the personal and professional levels. For simple leisure, as an information source for taking better decisions at the company or as an aid in finding the best employer or employee, SNs

fulfill their role in bringing people together in less time, less effort and in a larger scale that would be possible in the physical world, attracting more and more users every day.

However, one of their biggest problems today is their success. There are too many of them, each trying to grab as much market share (number of users) as possible and their interoperability is guided more by convenience and commercial interests, expressed in bilateral agreements, than true openness concerns. There are no standards at this level and each SN has its information format, services and policies.

Users interested in membership of several SNs need to reintroduce their profile data for each of them, in the SN's own format (each different and none really adequate to each and every user), and maintain them whenever changes are needed. On the other extreme of the scale, users seeking information can be provided with incompatible information coming from different SNs, most likely inconsistent, outdated or in formats that are not easily comparable.

On top of this, each user has his own interests, which are not easy to categorize in a structured hierarchy. There are thematic SNs, but then a user whose interests do not fit exactly with the scope of the SN has to deal with several SNs.

SNs are not always easy to use and transparent, either. The privacy policies of Facebook, for example, are so complex that are really hard to fully grasp and to make things hard many features are open by default, requiring explicit disabling by the users (which many simply don't do). But these policies pertain mostly to privacy between users. Who guarantees privacy regarding the SN provider itself? No one can, since the information is stored at the SN provider's server, raising security and privacy concerns that hamper many users from sharing information that could be invaluable to others (including their own network of contacts, which they have built over the years).

The fact that some SNs become more popular than others, such as Facebook or LinkedIn, does not mean that these answer the users' needs better than the others, but rather that users tend to flock around the SNs with more members to get more value of the network (Reed's law) and to reach the widest possible audience while having to deal with the lowest possible number of SNs.

The main objectives of this chapter are:

- To present a SN classification scheme that encompasses the several types of SN models, from those centralized and server based to those decentralized and focused on the user as an active member of the Web community;
- To introduce the idea that a paradigm shift is needed to contemplate the new user semantics and role, from client-server to unified service. The user is no longer simply a consumer, but an active producer, and needs to be treated as an active service provider, in equal terms to other entities such as SNs;
- To describe the *browserver*, a package comprising a browser and a server, and justify its need as the new Web access device for human users.

BACKGROUND

SNs do not really entail new technology, but rather a new use of existing technology. Their added value lies in the functionalities they offer and in the human interaction they support. Today, any site with registered users sharing some interest and able to add information (blogs, namely) can be called "social network", but here we distinguish three main types of SNs, according to their primary use:

- **Social Networks (SNs).** This the generic name given to social networks intended primarily for leisure (or at least non-professional interests). Facebook, MySpace, Twitter, YouTube and Flickr are examples;

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