



The rise of social networking

Changing the web as we know it

- Historically, it used to be enough to have an online presence on the Internet for the one-way broadcasting and dissemination of information. Today, social networks such as Facebook and Twitter are driving new forms of social interaction, dialogue, exchange and collaboration. Social networking sites (referred to more broadly as social media) enable users to swap ideas, to post updates and comments, or to participate in activities and events, while sharing their wider interests. From general chit-chat to propagating breaking news, from scheduling a date to following election results or coordinating disaster response, from gentle humour to serious research, social networks are now used for a host of different reasons by various user communities.

Social networking services are not just bringing Internet users into fast-flowing online conversations — social media are helping people to follow breaking news, keep up with friends or colleagues, contribute to online debates or learn from others. They are

transforming online user behaviour in terms of users' initial entry point, search, browsing and purchasing behaviour. Some experts suggest that social media will become the Internet's new search function — predicting that people will spend less time navigating the Internet independently and instead search for information or make decisions based on "word-of-mouth" recommendations from their friends, the so-called "friend-casting". In the process, social media are changing users' expectations of privacy, acceptable online behaviour and etiquette — fast.

Morgan Stanley estimates that there were about 830 million "unique" users of social networks worldwide at the end of 2009. Based on a total Internet user population of 1.7 billion at the end of 2009, according to ITU's *World Telecommunication/ICT Development Report 2010*, this suggests that around half of all Internet users could currently be using social media applications. Current estimates of the number of social media users vary significantly, partly due to



difficulties defining and categorizing sites and applications as “social networks”, but also due to margins of error in estimating the number of “unique” users (since users of one social network are more likely to use several other social networking services as well).

Many social network users access these services over their mobile phones. According to ITU’s report *Measuring the Information Society 2010*, mobile broadband subscriptions reached an estimated 640 million at the end of 2009, driven by growing demand for smartphones, new applications and social networking services, and are set to exceed 1 billion this year. The market research firm eMarketer projects that just over 600 million people will use their phones to tap into social networks by 2013, compared with 140 million in 2009. Facebook passed the historic milestone of 500 million users on 21 July 2010 — if Facebook were a country, it would be the third most populous nation in the world after China and India.

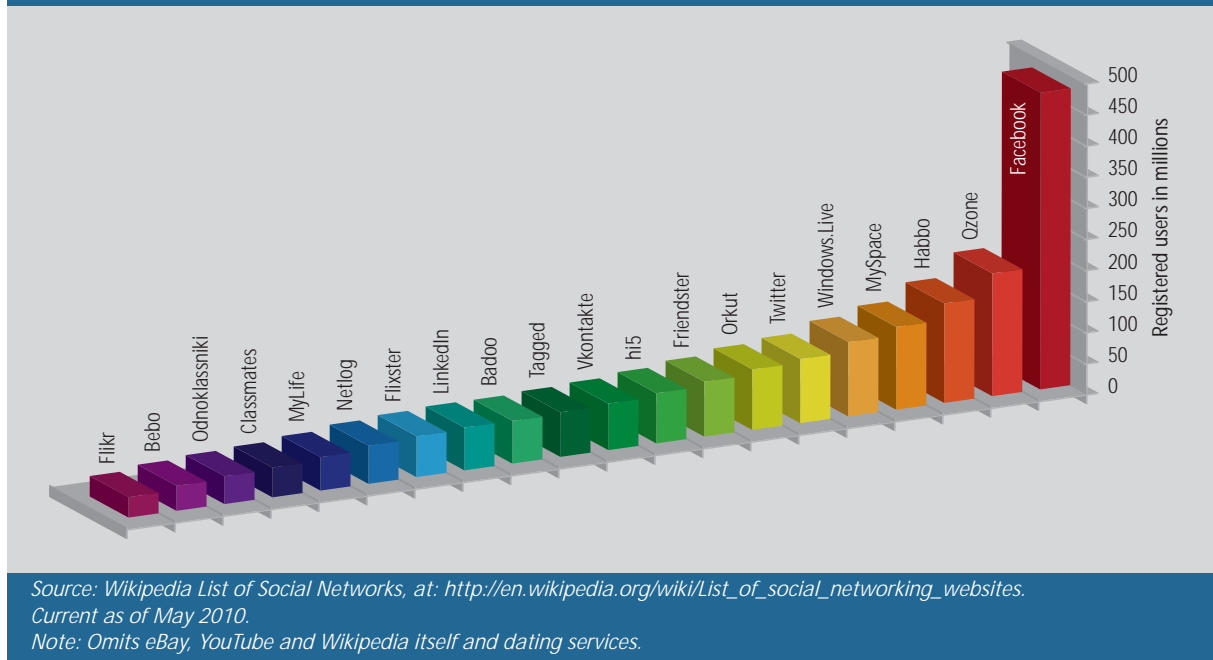
Figure 1 shows how many users are drawn to some popular social networks in early 2010. Twitter enables its members to post or send short (140-character) messages called “tweets”, whereby users can broadcast what they are doing or thinking to the world, to closed “list” groups or to other individual Twitterers. Its original question (“What are you doing?”) has been reinterpreted as: “What do you find interesting or funny?”, “What do you think?” or “Please help spread the word!” (or sometimes all three together). MySpace concentrates on music and entertainment, while LinkedIn targets career-minded professionals. Orkut, a service owned by Google, is used mainly in India and Brazil, while in China, Qzone is reportedly one of the largest social networking sites with over 380 million registered accounts now. Other community sites include Skyrock in France,

Vkontakte in the Russian Federation, and Cyworld in the Republic of Korea. There are also numerous smaller social networks that appeal to specific interests, such as ResearchGATE, which connects scientists and researchers, or to languages or nationalities (for example, the Polish Nasza-klasa.pl service with 11 million users or Tuenti in Spain, with 4.5 million users).

Given that online content and traffic volumes are increasingly interlinked with the pipes over which they are carried, it is vital to understand the demands that the evolution of social networks will make on underlying information and communication technology (ICT) infrastructure. First and foremost, social media are resulting in a huge explosion in demand for capacity in both fixed and wireless infrastructure. Real-time connectivity is required, to ensure that status updates can be accessed and distributed instantly across networks. Geolocalization raises important technical challenges in pinpointing, publishing and disseminating users’ location in space as well as time, as well as questions over personal security.



Figure 1 — Twenty most popular social networking websites (according to Wikipedia), May 2010



At the WSIS Forum in May 2010 in Geneva, co-organized by ITU, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Conference on Trade and Development (UNCTAD), a high-level debate on “Social Networking” was held, which triggered lively discussions on political and social implications of social networking for knowledge societies. The debate, jointly by UNESCO and ITU, brought together representatives of government, legislators, policy-makers, industry, civil society and users to exchange views on the opportunities and threats of these tools for the future (see pages 13–14).

Who are your friends?

In the information economy, Pete Cashmore, editor of Mashable (a key information portal for social media services), suggests that your friends may become content curators for your consumption, filtering information such as movies, books and television shows and making recommendations for your leisure time online. He cites Facebook’s Connect programme as one early example of this. Facebook’s most recent changes to personalize the web will see emoticons and friends’ avatars popping up all over users’ browsing. The content of sites can be tailored to readers’ preferences, as defined by the preferences of their social networks.





There will be a move from current personalized advertising (based on cookies and websites you have browsed recently) to personalized web content, with search results ranked according to your online profile, preferred language, profession or interests, as well as the preferences of your online social networks — the web you see may be shaped by the web your friends like. The risk? Far from being a leveller of content and opening people's eyes to the broader online world, Internet users' world-view may in fact be restricted and constrained by "filter bubbles" whereby they link with similar communities of like-minded individuals sharing a similar outlook. Conversely, your activities and preferences could in turn influence your friends' surfing behaviour. Surfing online will no longer be a question of browsing the same sites as everyone else in a vast online library of resources — the sites you see may be predetermined or preselected to suit your tastes in advance.

The future social web may see users driving innovation and development in new applications. According to Forrester, a technology and market research company, social networks could become more powerful in building brands and relationships than corporate websites and customer relationship management systems. In what Forrester calls "the

era of social context", sites will start to recognize personal identities and social relationships to deliver customized online experiences. One simple example of such a customized online experience is Facebook and LinkedIn's ability to propose possible new friends and contacts.

Internet traffic

The Internet transports roughly 10 billion gigabytes of data a month — a figure that some observers expect to quadruple by 2012. The market and advertising research company Nielsen estimates that the average time spent on social networks grew from three hours in December 2008 to five and a half hours in December 2009, based on a survey of social media use in ten countries. Half of all mobile data use in the United Kingdom is accounted for by Facebook, so social media look set to continue driving future growth in traffic, with video-streaming applications (such as YouTube) expected to account for a large proportion of that traffic.

Over the past seven years, Internet data traffic has grown by a factor of 56, driven partly by people uploading more data. On average, people uploaded fifteen times more data in 2009 than they did just three years previously. Cisco projects that global

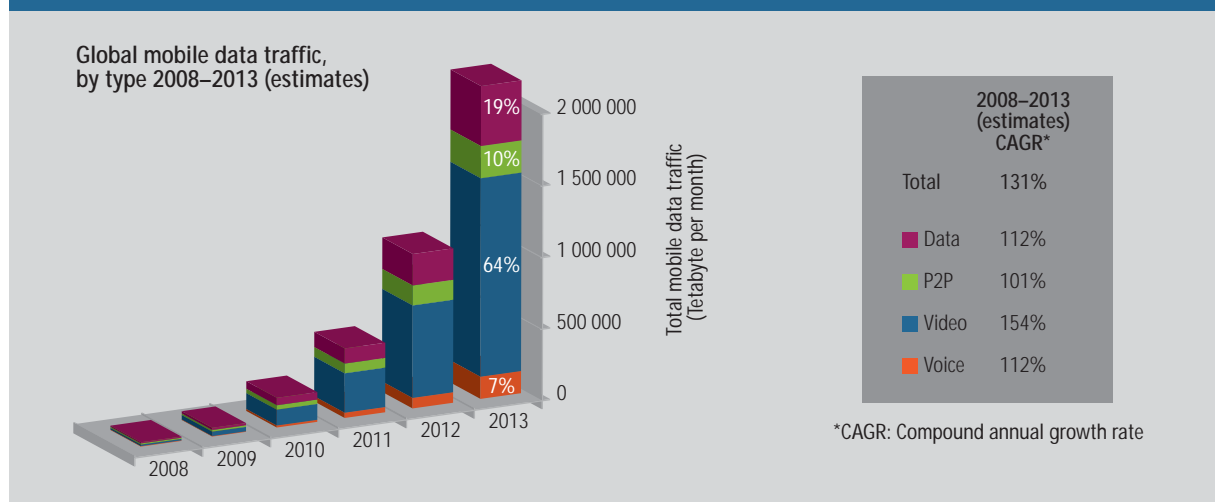
mobile data traffic will grow by sixty-six times from 2008 to 2013, with video forecast to account for around 64 per cent of all global mobile data traffic by 2013 (Figure 2).

YouTube is a major contributor to the current explosion in Internet traffic and demand for bandwidth. Not only does it make available video and user-generated content on demand, it also enables comments, popularity ratings and easy sharing of sources — all features of social networks. YouTube has also introduced a system called Video ID, which checks uploaded videos against a database of copyrighted content to avoid copyright violations. Launched in November 2005 and founded by three former PayPal employees, YouTube is now owned by Google. In May 2010, YouTube was serving more than two billion videos a day. YouTube is one example of a social networking service that could have major implications for network infrastructure in terms of its present and growing demand for bandwidth.

Facebook is estimated to account for as much as 25 per cent of all web traffic (taking into account posted video). There are now over 60 million status updates to Facebook daily and 260 billion page views monthly. Some 100 million users access Facebook over their mobile phones, accounting for a significant proportion of mobile web traffic. For example, half of mobile web traffic in the United Kingdom is for Facebook use.

In the United States, according to a survey conducted in December 2009, Facebook usurped Google as users' favourite entry point to the Internet and now directs a greater proportion of Internet traffic (13 per cent) than eBay (at 7.6 per cent) and Google (at 7 per cent). Also in the United States, Facebook displaced Yahoo! as the leading publisher of display advertisements in the first quarter of 2010 (Figure 3, page 40). Facebook traffic is expected to grow even faster, with the planned release in October 2010 of the movie entitled *The Social Network*, which tells

Figure 2 — Explosion in the demand for Video, 2008–2013 (estimates)



Source: Cisco, quoted at: http://www.morganstanley.com/institutional/techresearch/pdfs/2SETUP_12142009_RI.pdf.

the story of the Facebook founders and how their vision turned into a social networking phenomenon.

Meanwhile, Twitter traffic continues to grow exponentially, with users sending over 50 million tweets a day by February 2010. However, many sources note that estimates of the number of tweets and page views over Twitter may be understated, as they may omit users accessing it through third-party clients from their desktop or mobile devices.

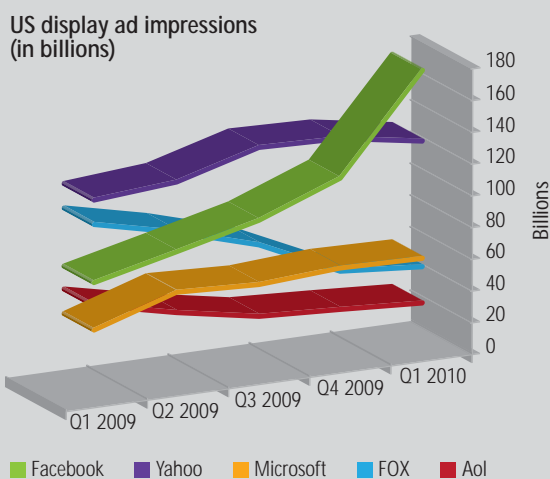
Can the new Internet players make money?

Despite the rapid growth of many social networking services, the central challenge remains — how can these new Internet players generate cash? Some social media networks are just beginning to make money. Facebook is estimated to have turned over

roughly USD 1 billion in revenues in 2009 (Figure 4). Other than Google and Amazon, however, the new Internet players are still by and large waiting for the billions to arrive.

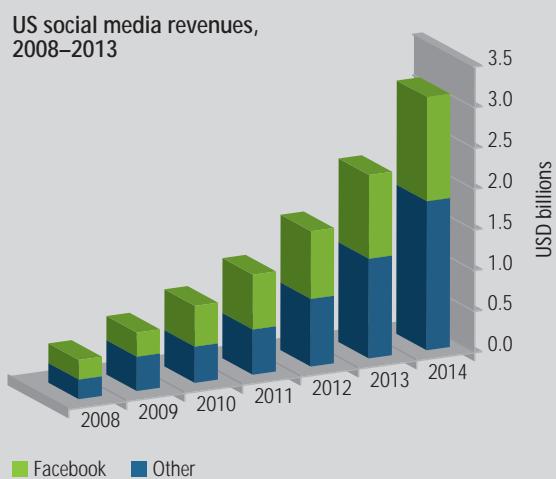
Recent analysis carried out by the Organisation for Economic Co-operation and Development (OECD) for some of its member countries suggests that Internet players are the only group among the top 250 ICT firms to have succeeded in significantly increasing their revenues relative to the year 2000. However, the cash flows of Internet players may have been small in 2000, and Google's growing revenue has a disproportionate effect on the results — Google is still ranked as the number one site on the web (according to the page ranking service Alexa), although Facebook is catching up fast.

Figure 3 — Facebook displaces Yahoo! as the leading publisher of display advertisements in the first quarter of 2010



Source: Comscore, available at: <http://www.businessinsider.com/chart-of-the-day-us-display-ad-impressions-2010-5>.

Figure 4 — Strong growth for social media, by all counts



Source: Forrester, Next Up Research Estimates quoted at <http://techcrunch.com/2010/03/31/sharespost-report-values-facebook-at-9-billion-estimates-2010-revenues-at-1-billion/>



AFP

One factor long-argued to work in favour of the new Internet players is the current size and future growth potential of some social networks. These networks do not need to make large amounts of money out of any individual user — just a small margin on some — or better still, all users. This is the approach that eBay has adopted in charging small commissions on online transactions, and also Google’s approach in deriving revenue from click-throughs.

Compelling content is vitally important. But the overriding difficulty lies in predicting what consumers are interested in at any time and channelling traffic towards promising content. Here, Google is at an immense advantage, with the vast stores of information it possesses about people’s online surfing behaviour. Google Analytics enables webmasters (and Google) to identify how users arrive at sites, where they click and what they are interested in. In contrast, Apple has essentially outsourced the problem of knowing what consumers want to its community of application developers — who are also iPhone users.

Advertising is a tried and tested business model which is already delivering commercial value. Virtual goods have also been heralded as a new source of revenue (such as greetings cards, virtual flowers, e-books, music and ringtones), but the potential

market value of this segment is so far largely unproven. Growing numbers of social media users (especially children and youth) are buying virtual currencies with real money to purchase avatars and other items to decorate their social media page.

As one of the earliest and most commercially viable social online communities to date, one of eBay’s most valuable assets is its PayPal system (now almost a *de facto* virtual currency), as well as its loyal customer base, customer relations and sophisticated online system for ranking users’ reputations. Although eBay is perceived by some as an e-commerce site rather than a “pure” social networking service, eBay features many of the characteristics of social networks, including user-generated content, real-time status updates and messaging, and group interactions between its online communities of buyers and sellers. It is one of the few social media sites that has delivered solid financial revenues and profits since its inception. Total company revenues are expected to reach USD 10–12 billion in 2011, up from USD 8.5 billion in 2008.

“A world of connections”, a special report on social networking, published by *The Economist* at the end of January 2010, looks closely at the rise of Facebook, MySpace and other social networks as



businesses in their own right. It examines the economic models on which these networks are built. It also highlights the way in which industries from videogaming to publishing are introducing elements of social networking into their products and services. It recognizes that social networks are a topic of global importance for business leaders, governments, investors and regulators alike.

Looking ahead

Social media are increasingly blurring the boundaries between work and play. And the online tracking and dissemination of news and views over social media mean that people may now continue to live in a media world long after the end of their working day. In their recently published social media guidelines, the Reuters news organization observed that “the distinction between the private and the professional has largely broken down online and you should assume that your professional and personal social media activity will be treated as one, no matter how

hard you try to keep them separate”. Identity and intellectual property issues take on new dimensions in a world where it is increasingly difficult to separate our professional and personal lives, both online and offline.

Many social media are fundamentally based on the premise that people freely share information and data. Social media users are now determining how — and which — information is shared over the Internet by posting news, views, presentations, pictures and videos, which they share among friends, family, and other communities and acquaintances.

The September 2010 issue of *ITU News* will examine some of the key privacy and security issues raised by social media services, especially the way in which these services may (intentionally or unintentionally) “liberate” personal data over the public Internet, with limited user control or consent over its publication and dissemination. ■

