

Innovate with Collaboration

How Web Service Providers Can Win in the Web 2.0 Era

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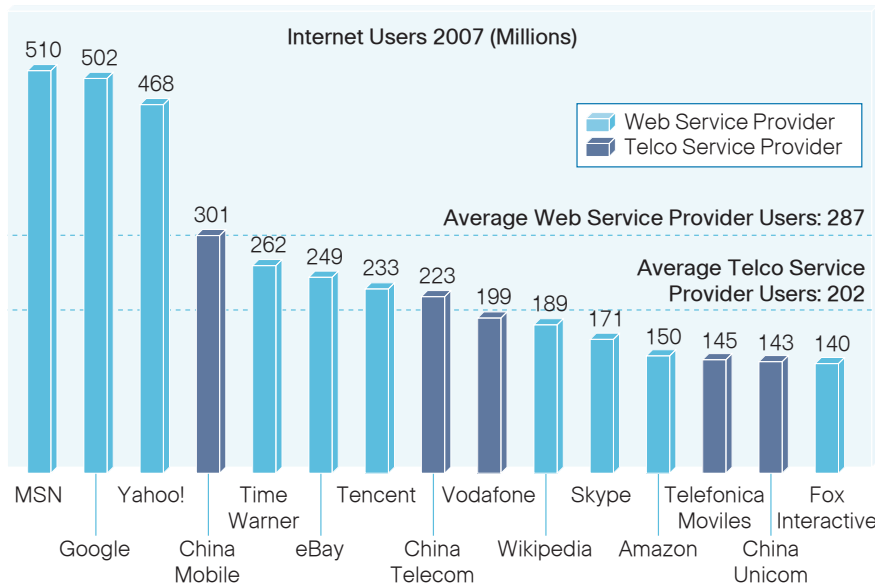
Emergence of Web 2.0 and Web Service Providers

The World Wide Web has evolved rapidly since its inception in the early 1990s. It has now reached what many are calling “Web 2.0”—an important phase of the web that has led to enhanced creativity, sharing, and collaboration.

Most businesses and organizations no longer operate in a stand-alone environment. Even individual web users are undergoing a paradigm shift. The amount of user content available on the web is staggering. Wikipedia has surpassed 10 million entries.¹ In 2008, YouTube announced it served more than 400 million video clips per day.² With the proliferation of user-generated entries, photos, and videos on the web, it appears Web 2.0 has become mainstream.

Given this trend, today’s web service providers—companies including Google, Facebook, and Flickr that provide services over the Internet—attract more users than telcos such as AT&T, British Telecom (BT), and Deutsche Telecom that offer traditional phone services. In fact, as Figure 1 shows, 10 of the top 15 service providers in terms of user base are web service providers, averaging 40 percent more users than their telco peers.

Figure 1. Web Service Providers Attract More Users than Traditional Telco Companies



Source: ComScore, 2007; Annual reports, 2007

1. Wikipedia, 2008.

2. comScore Video Metrix, October 2008.

The Boom-and-bust Cycle

The popularity of the web and success of many web service providers have led to a proliferation in services from “copycat” companies. For example, user-generated content pioneer YouTube has given rise to Internet video providers such as Break, Revver, and Veoh. In China alone, arguably the fastest-growing Internet market outside the United States, there are more than four major local-language search engines and 200 video-sharing sites modeled after Google and YouTube. This immense growth in the number of web-based companies and services has created a boom-and-bust cycle.

The web provides a “blank canvas” for new ideas and innovative businesses. This, coupled with low barriers to entry and relatively easy access to funding, ensures there will be a continuous flow of new companies and services leading to the boom phase. Some of these companies won't be built on solid business fundamentals or will be too early to market, which creates the bust phase of the cycle.

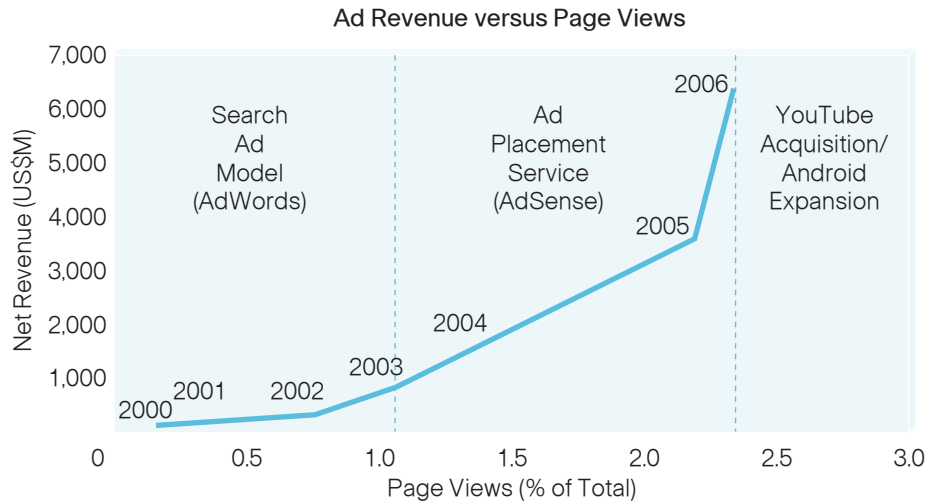
The United States experienced an Internet boom in the late 1990s, followed by a bust in 2001. In the last three years, the market has entered a new boom phase fueled by the Web 2.0 concepts of networking, collaboration, and “infotainment”—anytime, anywhere access to information and entertainment. A similar scenario is being played out in China. Given the current global economic crisis, a key question for web service providers becomes: How does my business survive the next bust cycle?

Surviving and Thriving through Innovation

The answer to surviving (and even thriving) in the boom-and-bust cycle is innovation. Google is a great example of how innovation in services and business models can sustain growth. Although advertising is Google's main source of revenue, the company goes beyond placing ads on its own site and inserts ads on other companies' websites to earn a percentage of the view- and click-based revenue (see Figure 2). The net effect is an explosion of third-party sites signing up to become members of Google's ad network.

This has allowed Google to sustain revenue growth that is disproportionately high compared to the company's user base. Google is also set to expand its tremendous growth by offering ad placement services on mobile platforms. This move is being bolstered by Google's acquisition of web video provider YouTube and the company's sponsorship of the Android mobile consortium. The consortium is an alliance of companies building solutions based on Google's open-source mobile phone operating system.

Figure 2. Google: An Example of Innovation-driven Growth



Sources: Google, 2000–2007; Lehman Brothers, 2007; Alexa, 2007; Cisco IBSG, 2007

The theme of innovation is also top-of-mind with many well-recognized web leaders. The Cisco Internet Business Solutions Group (IBSG) recently conducted interviews with key executives from major web service providers including Yahoo! in the United States, and Tencent, SINA, Sohu.com, UUSee.com, Youku, Tudou, and Shanghai Media Group (SMG) in China. Interviews were also conducted with Korea-based Daum and NHN. Common themes emerged around the following areas of innovation as the next strategic imperatives for the web:

- **Build intelligent advertising capabilities:** provide means for precision advertising that yield higher revenue and differentiation as competition intensifies over limited spending on advertising
- **Create video-based features and functionality:** use video as a differentiator and foundation to integrate messaging, social networking, and other features
- **Extend to the mobile platform:** the mobile platform, typically undertapped by web service providers, is the next source of growth and provides compelling, high advertising revenue per subscriber
- **Manage costs with rapid scaling and high quality of service (QoS):** balance bandwidth cost acceleration due to rapid scaling and demand for quality versus revenue growth

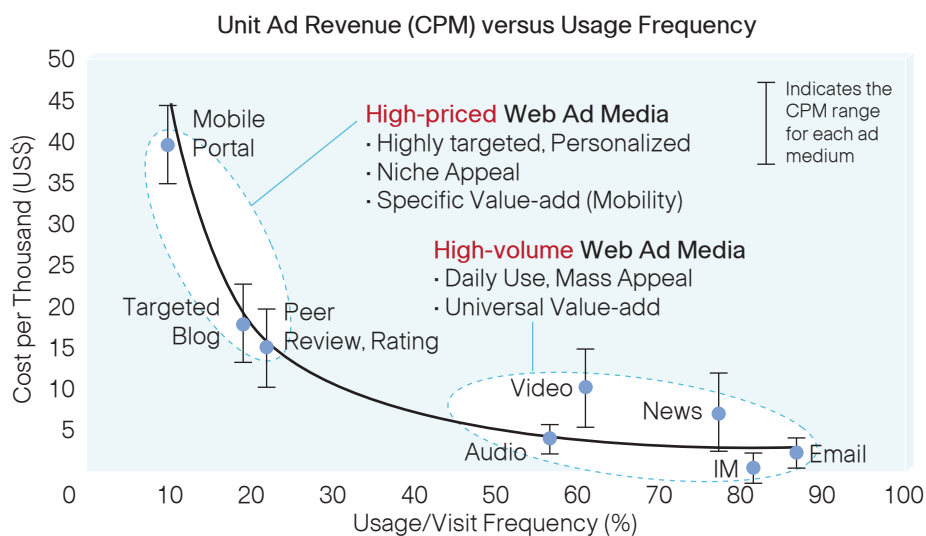
Intelligent Advertising as a Sustainable Revenue Stream

To date, advertising has been a significant source of income for web service providers—in some cases representing more than 80 percent of total revenues. Sustaining the growth of online advertising is critical to all Internet-based businesses. A majority of

web ads have been “view-based” schemes where advertisers pay based on number of impressions or clicks. As Internet usage extends beyond the core 20- to 40-year-old age demographic, growth of traditional view-based schemes will begin to slow. This is because Internet newcomers simply do not use the web as intensively as early adopters.

This phenomenon is depicted in Figure 3. There are two general strategies for web service providers to derive advertising revenue. The first is a volume strategy, where web service providers depend primarily on the frequency of page views and clicks, thereby placing ads on “real estate” or web pages that reach the largest audiences, such as email pages, instant messaging windows, and news portals.

Figure 3. Two Strategies for Web Advertising



Source: China BDA Survey, 2008; MMG Worldwide, 2008; Cisco IBSG, 2008

This strategy works well until audience penetration reaches the point of diminishing returns (new users do not generate as many page views or clicks as early adopters). When this occurs, web service providers need a new approach.

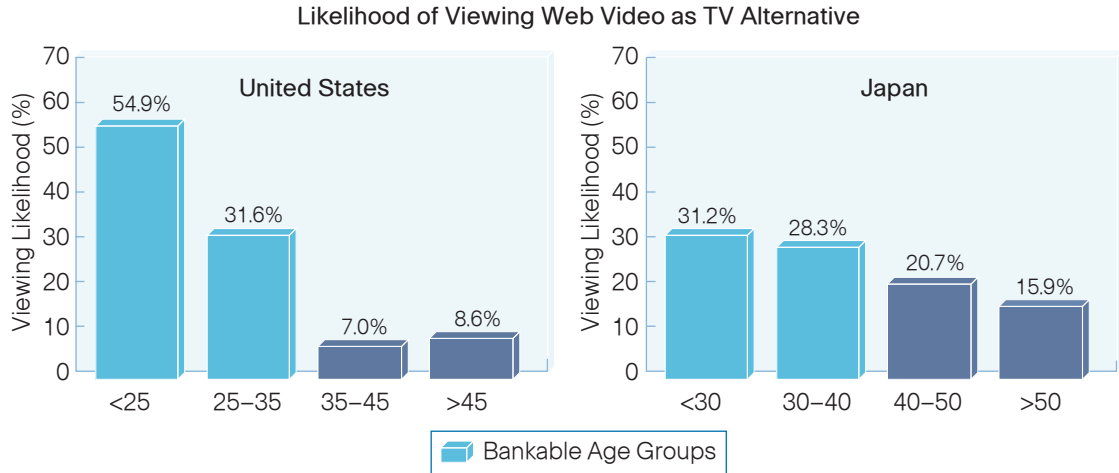
The second strategy—a value-based approach by which ads are placed on highly targeted web real estate such as blogs, product review sites, mobile portals, and professional networking sites—can be the answer. LinkedIn, for instance, can charge up to US\$100 per thousand ad views. The company receives this high rate because its ads are more targeted. This generates greater value for advertisers since the audience is more likely to respond to the ads.

Major web players are acutely aware of this phenomenon and are looking to innovative advertising techniques such as targeted placement, user profiling, and telescoping—where users can be directed to an information site to get more information about what is being advertised.

Video as Differentiator to Bankable Demographics

It is clear the web video phenomenon is powered by younger generations. Increasingly, these bankable age groups—those under 40 years old with both the income and inclination to use web video services—are treating web video as a viable alternative to TV. Figure 4 shows the trend is not limited to the United States, but is also happening in other developed countries such as Japan.

Figure 4. Web Video Is a Viable Alternative to TV



Sources: inStat, 2007; Dentsu, 2007; Cisco IBSG, 2008

Web videos do not need to be professionally created. In fact, most videos on the web today are developed by users. The success of YouTube, the originator of the web video phenomenon, is impressive. Since its inception in 2000, the company has become the number-one video site worldwide and has a business value of more than US\$1.6 billion.³

The excitement surrounding user-created video content is not lost on major web players. Out of the top 10 Internet sites by traffic, seven feature user videos.⁴ This development is even more interesting because professional media companies, such as Time Warner and FOX, are launching user-video-sharing businesses of their own. The user-created-video phenomenon is gaining traction and is here to stay.

Mobile as a New Source of Income

Web players should also consider mobile devices as a platform for web-based video because of its sheer market size. In China alone, there are close to a half-billion mobile users—almost eight times the number of fixed-line broadband users.⁵

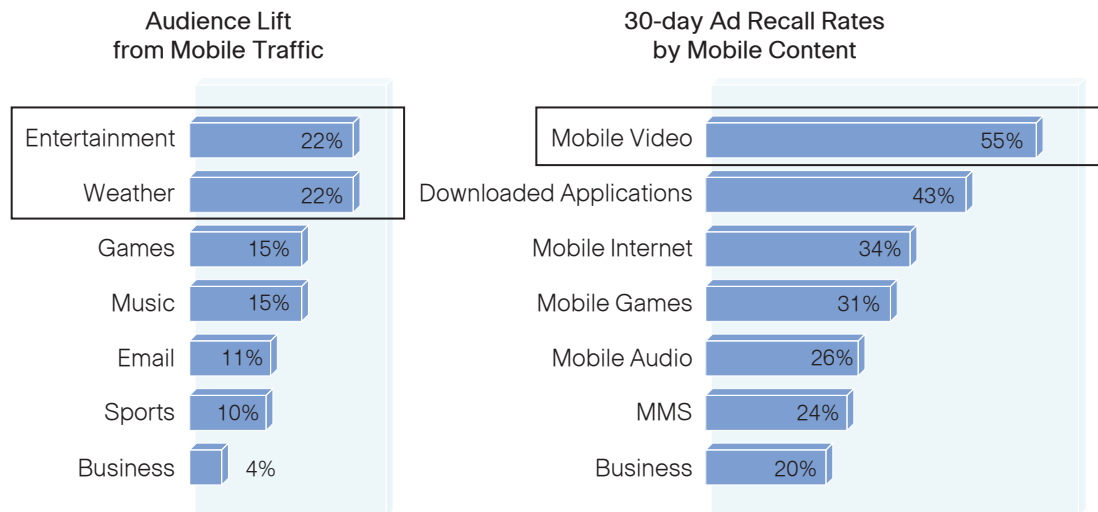
3. Google, 2006.

4. comScore Video Metrix, 2007.

5. China BDA Research, 2008; Cisco IBSG, 2008.

As shown in Figure 5, the mobile platform can provide significant audience uplift to PC-based content. In cases where content is often assessed “on the go,” such as weather reports and entertainment information, the increase can be as high as 22 percent. Mobile video has also proven highly effective because consumers remember video better than other media types such as static banner ads.

Figure 5. Advantages of Mobile Video for Advertising



Source: Nielsen, 2008; Telephia, 2007; Cisco IBSG, 2008

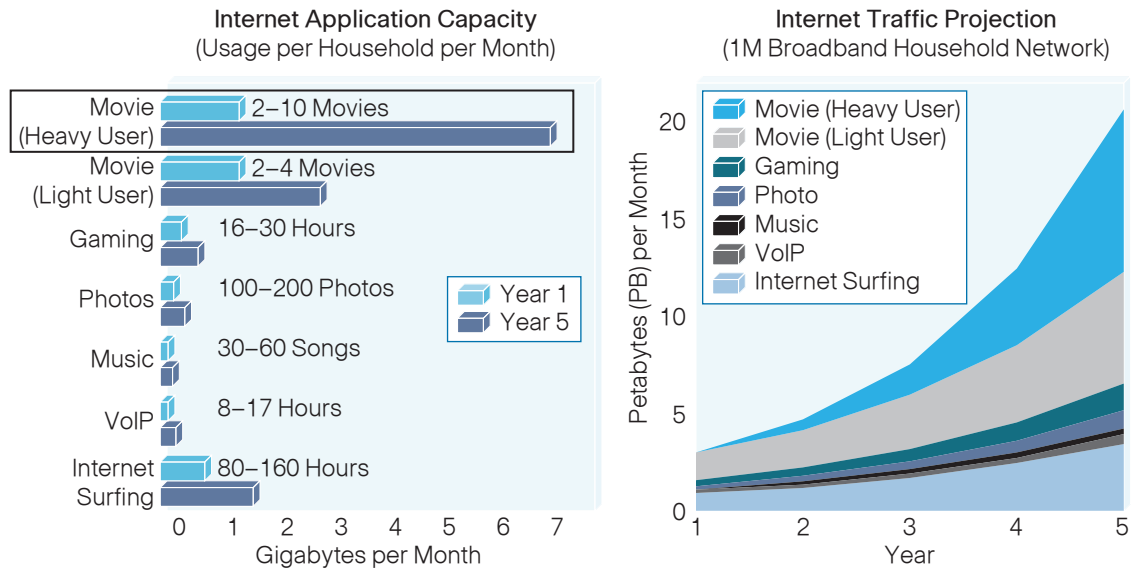
As noted by Jeff Herrmann, vice president of Mobile Media for Nielsen Mobile, “The mobile Internet can not only increase frequency of visits, but also grow overall size of the pie. Content providers can now monetize cross-platform audiences, and advertisers will better understand the value of the mobile web.”

Bandwidth Cost Management as a Way to Profitable Growth

The growth in web traffic, caused by the explosive use of video, will consume ever greater amounts of bandwidth over the next five years. For example, online movie viewing is expected to quintuple, tripling household bandwidth consumption from 2GB per month to more than 6GB in five years⁶ (see the left graph in Figure 6). Similar growth will be seen across different categories of rich media such as online gaming, photo sharing, and music downloads.

6. Cisco IBSG, 2008.

Figure 6. Bandwidth Increase Due to Web Video and Rich Media



Source: Cisco IBSG, 2008

On aggregate, growth of web video and other rich media will result in huge demand for bandwidth from telco service providers. Cisco IBSG analysis shows for a hypothetical telco with 1 million household subscribers, bandwidth usage will grow from approximately 4PB to more than 20PB per month (see the right graph in Figure 6). The immediate implication for service providers is the need to expand network and traffic capacity to maintain satisfactory user experience. This last point is important because the explosive growth of web video has already led to user dissatisfaction in terms of connection, picture, and sound quality.

Executing the Strategic Imperatives: Collaborate with Telco Service Providers

Collaboration with telco service providers is arguably the best way for web service providers to implement and benefit from the strategic imperatives in a timely manner. Telco service providers bring a number of benefits to a “telco-web” partnership.

- Telcos typically own the network infrastructure and therefore can offer preferred bandwidth pricing to web partners.
- Since they have user profiles for customer service and billing purposes, telco service providers tend to know their customers better (as opposed to web service providers, which are naturally over-the-top players). Given this, telcos may be willing to share this customer knowledge with their web partners.
- Telco service providers also have significant resources, including strong balance sheets, R&D departments, and field staff that can be used in collaborative partnerships.

Collaboration between telcos and web service providers is not new. In fact, some of the world's top telcos are already partnering with web players. Telco service providers like AT&T and BT are cooperating with web service providers like Forbes.com and AccuWeather.com either by providing delivery-acceleration services or jointly developing web-based services.⁷

- In the United States, AT&T provides web content management and delivery by deploying caching servers at key locations throughout its network. This has proven to be a win-win situation, since installing caching servers is less expensive for telco service providers than increasing core bandwidth. With this arrangement, web players are able to deliver better quality to their customers, who then are more willing to pay higher prices for better service.
- In the United Kingdom, BT encourages web service co-development to ensure traffic running on its network is free of extraneous communications overhead. BT also provides a web service interface to its next-generation broadband network called BT 21C. By providing this software development toolkit, BT allows developers with no telecom knowledge to develop videoconferencing, messaging, authentication, and location- and profile-based services. This has the net effect of increasing network utilization and, therefore, monetization. BT then shares the revenue it receives from end users with application developers.

Web service providers have much to gain by becoming true partners with telco service providers to enable a high-quality, cost-effective web experience for users.

Beyond accelerated content delivery services and co-development initiatives, telco service providers can deliver higher value-added services (VAS) to web service providers. As shown in Figure 7, these services can become essential building blocks, enabling new Web 2.0 and media-specific services:

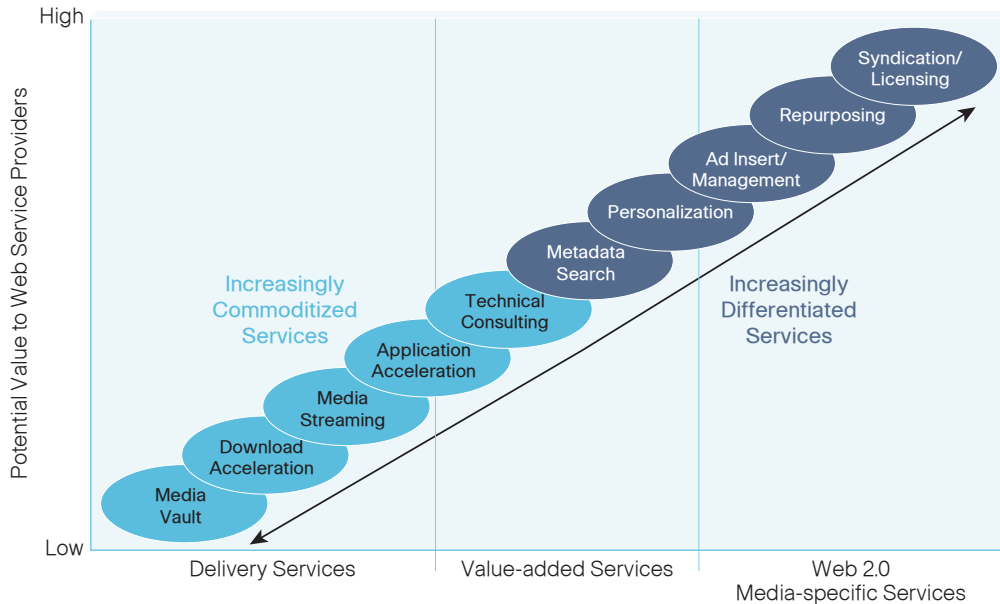
- **Metasearch:** Many short-format videos are created and uploaded by users. Cataloging these videos automatically is beyond the capability of most web companies. Video content search technologies from companies such as Virage and Blinkx—normally targeted only to larger companies—allow service providers to offer metasearch capabilities to video-sharing sites, which then can deliver more relevant content that translates into higher ad dollars.
- **Personalization:** Telco service providers have detailed customer profiles and location information that can be used to deliver highly relevant content and advertising. This personalization can be done transparently from both the web service provider's and customer's point of view. For example, geographically targeted ads typically provide 10 times more revenue per thousand impressions than untargeted ads.⁸
- **Ad management:** Together with metasearch and personalization, ad management services allow providers to deliver and monetize content.

7. AT&T, May 2008.

8. Pubmatic AdPrice Index, May 2008.

- **Repurposing:** With the mobile Internet growing at 125 percent and IPTV expanding by 104 percent annually,⁹ service providers are in a unique position to tailor content to their devices. This opens the possibility of delivering optimized content to mobile devices or set-top boxes, greatly expanding reach with minimal configuration issues for the user. A recent study by Nielsen shows mobile traffic can generate an audience lift of 22 percent in the entertainment genre.¹⁰

Figure 7. Telco Services Present Opportunities for Collaboration



Source: Cisco IBSG, 2008

Conclusion

Since its inception in the early 1990s, the web has proven an effective and useful means for people to live, work, learn, and play. More recently, web use has become mainstream as web-based services permeate many facets of people's lives. History and other examples, however, show this can be fleeting. The dotcom bust reminds us that successful businesses must be based on sound principles and ideas. With this volatile backdrop, how can web service providers continue to be successful?

As Cisco IBSG's research shows, many executives of leading web companies believe that innovation is the key to long-term success. Google, for example, has continually reinvented itself in the belief that, as former Intel CEO Andrew Grove put it, "Only the paranoid survive." What started as a simple search engine service provider has now become a multibillion dollar company selling ad space on the Internet, providing web video to hundreds of millions of users, and serving applications on its own mobile platform. In short, Google has set the standard for what web service providers can achieve.

9. Cisco Systems, Inc., "Cisco Visual Networking Index 2007–2012," June 18, 2008.

10. Nielsen TotalWeb, May 2008.

The Internet Age consists of interwoven interests, where businesses both compete and cooperate. Success in the Web 2.0 era will require collaborative partnerships, many of which are already under way. For web service providers that have not started to work with telco service providers, it is not too late, since the future promises to be full of exciting opportunities.

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