

## **Management Information Systems**

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## Chapter 7: Telecommunications, the Internet, and Wireless Technology

## Learning Track 4: Introduction to Web 2.0

Many of the unique features of e-commerce and the Internet come together in a set of applications and social media technologies referred to as Web 2.0. The Internet started out as a simple network to support e-mail and file transfers among remote computers. Communication among experts was the purpose. The Web started out as a way to use the Internet to display simple pages and allow the user to navigate among the pages by linking them together electronically. You can think of this as Web 1.0—the first Web. By 2007 something else was happening. The Internet and the Web had evolved to the point where users could create, edit, and distribute content to others; share with one another their preferences, bookmarks, and online personas; participate in virtual lives; and build online communities using social networks like Facebook. This "new" Web was called by many Web 2.0, and while it draws heavily on the "old" Web 1.0, it is nevertheless a clear evolution from the past.

Let's take a quick look at some examples of Web 2.0 applications and sites:

- Twitter is a social network/micro-blogging service that encourages users to enter 140-character messages ("tweets") in answer to the question "What are you doing?" Twitter has more than 320 million active users worldwide, sending around 500 million tweets per day and more than 5 billion tweets a month. Twitter has begun to monetize its subscribers by developing an ad platform and providing marketing services to firms that want to stay in instant contact with their customers.
- YouTube, owned by Google after a \$1.65 billion purchase, is the world's largest online consumer-generated video-posting site. In 2015, YouTube is morphing into a premium video content distributor and video producer, offering feature length movies, television series, and its own original content. In 2015, YouTube had around 260 million unique viewers in the United States, and more than 1 billion a month worldwide. According to Google, 300 hours of video are posted to the site every minute! YouTube reportedly streams more than 4 billion videos per day, including more than 1 billion a day to mobile devices. However, although YouTube's revenues reportedly doubled in 2014 to nearly \$4 billion, it does not turn a profit.

Web 2.0 a set of applications and technologies that allows users to create, edit, and distribute content; share preferences, bookmarks, and online personas; participate in virtual lives; and build online communities

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- The Apple iPhone (with more than 700 million sold worldwide through June 2015) supports mobile versions of Web 2.0 applications such as Facebook, Facebook Messenger, YouTube, Instagram, Skype, Pandora, Spotify and Line, not to mention games like Candy Crush, Fruit Ninja, and Angry Birds. In 2015 there are over 1 million apps for iPhones, and a similar number for Android phones. Apple's iPad, introduced in 2010, builds on the iPhone foundation for a truly mobile e-commerce capability. As of June 2015, about 250 million iPads had been sold since its introduction.
- Instagram is a mobile photo-sharing application available for Androids and iPhones that allows users to easily apply a variety of different photo filters and borders, and then post the photos to social networks such as Facebook, Twitter, Foursquare, Tumblr and Flickr. Launched in November 2010, Instagram quickly attracted more than 50 million users and in April 2012 was purchased by Facebook for \$1 billion (Buck, 2012). In 2015 Instagram has over 64 million users, and its rival photo sharing site Pinterest has over 47 million U.S. users, 100 million worldwide.
- Wikipedia allows contributors around the world to share their knowledge and in the process has become the most successful online encyclopedia, far surpassing "professional" encyclopedias such as Encarta and Britannica. Wikipedia is one of the largest collaboratively edited reference projects in the world, with more than 5 million articles available in English and more than 37 million in total, in 285 languages. Wikipedia relies on volunteers, makes no money, and accepts no advertising. Wikipedia is consistently ranked as one of the top 10 most visited sites on the Web.
- Tumblr is a combination of blog platform and social network. It allows users to easily post text, photos, links, music, videos and more. As of June 2015, Tumblr hosts over 240 million blogs, containing almost 99 billion posts. On a typical day, users make over 113 million posts (Tumblr.com, 2015) Wordpress is another company that provides software that allows you to easily create and publish a blog or Web site on the Web. WordPress is an open source product built by a community of volunteers and available for use free of charge. According to WordPress, more than 409 million people read blogs on WordPress.com, and users produce about 56 million posts per month (WordPress.com, 2015).

What do all these Web 2.0 applications and sites have in common? First, they rely on user- and consumer-generated content. These are all "applications"

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created by people, especially people in the 18-34 year-old demographic, and in the 7–17 age group as well. "Regular" people (not just experts or professionals) are creating, sharing, modifying, and broadcasting content to huge audiences. Second, easy search capability is a key to their success. Third, they are inherently highly interactive, creating new opportunities for people to socially connect to others. They are "social" sites because they support interactions among users. Fourth, they rely on broadband connectivity to the Web. Fifth, many of them are currently only marginally profitable, and their business models are unproven despite considerable investment. Nevertheless, the potential monetary rewards for social sites with huge audiences is quite large. Sixth, they attract extremely large audiences when compared to traditional Web 1.0 applications, exceeding in many cases the audience size of national broadcast and cable television programs. These audience relationships are intensive and long-lasting interactions with millions of people. In short, they attract eyeballs in very large numbers. Hence, they present marketers with extraordinary opportunities for targeted marketing and advertising. They also present consumers with the opportunity to rate and review products, and entrepreneurs with ideas for future business ventures. Last, these sites act as application development platforms where users can contribute and use software applications for free. Briefly, it's a whole new world from what has gone before. Web 2.0

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