

Chapter 8.1

When the Future Finally Arrives: Web 2.0 Becomes Web 3.0

Matt Crosslin

The University of Texas at Arlington, USA

ABSTRACT

This chapter examines how the World Wide Web could possibly change over the next 10 years into a concept increasingly being referred to as “Web 3.0,” and how these changes might affect education. It examines how Web 3.0 concepts such as cloud computing, the Semantic Web, and the three-dimensional (3-D) Web are currently being explored and realized. A possible future online learning scenario is also described and analyzed to help visualize these possibilities for education. The author hopes that providing an understanding of and insight into how the Internet and related technologies may continue to develop and evolve in the next several years will help educators be better prepared for the future of online learning.

INTRODUCTION

As technology grows and changes, some people like to sit back and see where the ride takes them. Others prefer to keep an eye on where the ride is going—they have learned from the past that if one fails to keep an eye on the future, he or she could end up with a broken Betamax player and a stack of video tapes that no longer play on

anyone’s machine. In education, knowing what the future holds is especially critical when dealing with technology. Educators are no longer dealing with making technology decisions for themselves; they now have to make decisions for entire classes or even entire departments or schools. Knowing what is coming around the bend in technology could make the difference between creating a cutting-edge classroom or an odd collection of useless gadgets in the corner of a bland, normal classroom.

DOI: 10.4018/978-1-4666-0879-5.ch8.1

When the Future Finally Arrives

“Web 2.0” is one of the many technology buzzwords that has gained the attention of the academic world recently. Many educators are beginning to grasp the concept of Web 2.0—but what comes after that? If Web 2.0 is here, what will Web 3.0 look like? Will it be a revamped attempt to create a three-dimensional (3-D) Web, or something entirely different? What will all of this mean for educators who are still trying to implement Web 2.0 tools and concepts in their classes?

Web 2.0 and its pedagogical implications have been examined thoroughly in other chapters in this book. This chapter will only touch on the basics of Web 2.0 that are pertinent to the discussion of the future of the World Wide Web beyond Web 2.0. The chapter will address the following objectives:

1. Examine how Web 2.0 will pave the way for Web 3.0;
2. Define what the term “Web 3.0” is currently understood to mean;
3. Examine the benefits and pitfalls this may have for education;
4. Predict how Web 3.0 will interact with the 3-D Web in the classroom of the future.

BACKGROUND

To some, the term “Web 2.0” implies a new version of the World Wide Web—one that is perhaps better than “Web 1.0.” This implication might lead some educators to wonder if they are falling behind in technological knowledge, especially since there was never an announcement made about how to access this new version of the Web. Fortunately, this is not the case.

Web 2.0 does imply something new, but this new factor has more to do with how web design is approached instead of a new version of the Internet itself. O’Reilly Media recognized the confusion that some people have over this issue and decided to give the term a precise—although somewhat lengthy and complex—definition in

2005. Tim O’Reilly (2005) listed seven features or characteristics that define Web 2.0:

- The World Wide Web as platform (instead of a computer desktop);
- Utilizing collective intelligence (allowing users to contribute);
- Web services driven by databases (mainly SQL based);
- No more software release cycles (more frequent updates);
- Use of lightweight programs and languages (such as RSS or PHP);
- Applications that work on multiple devices (computers, cellphones [mobile phones], etc.);
- Lightweight user interfaces (based on AJAX) for richer experiences.

Some of these features are still developing and evolving; therefore, Web 2.0 has yet to be completely realized (Alexander, 2006). Full realization of Web 2.0, however, is probably only a matter of time and effort.

As O’Reilly (2005) points out, none of the above features use or require new types of programs or programming languages. The databases that web services are driven by, such as MySQL, have existed for years. So have the open source languages, such as PHP, that are used to end software release cycles. AJAX (which stands for Asynchronous JavaScript and XML) is also nothing new. All of the technological terms used by O’Reilly in the list above are the underlying architecture that allows the real point of Web 2.0 to shine: website users can collaboratively contribute to the site while online—in contrast with working on something alone offline before uploading it. Many have used the phrase “read/write Web” to quickly and concisely describe the nature of Web 2.0 (in contrast to “read-only Web,” which describes Web 1.0).

With more classes offered online every year, and still more face-to-face classes integrating the

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/when-future-finally-arrives/64564

Related Content

The Cost-Based Resource Management in Combination with Qos For Grid Computing

Chuliang Weng, Jian Cao and Minglu Li (2009). *Quantitative Quality of Service for Grid Computing: Applications for Heterogeneity, Large-Scale Distribution, and Dynamic Environments* (pp. 74-90).

www.irma-international.org/chapter/cost-based-resource-management-combination/28271

Observations on Effect of IPC in GA Based Scheduling on Computational Grid

Shiv Prakash and Deo P. Vidyarthi (2012). *International Journal of Grid and High Performance Computing* (pp. 67-80).

www.irma-international.org/article/observations-effect-ipc-based-scheduling/62998

Parallel Shellsort Algorithm for Many-Core GPUs with CUDA

Chun-Yuan Lin, Wei Sheng Lee and Chuan Yi Tang (2012). *International Journal of Grid and High Performance Computing* (pp. 1-16).

www.irma-international.org/article/parallel-shellsort-algorithm-many-core/66353

Intelligent Industrial Data Acquisition and Energy Monitoring using Wireless Sensor Networks

Sumeet Gupta, Shekhar Verma, G.S. Tomar and Raj Kumar Abrol (2012). *Evolving Developments in Grid and Cloud Computing: Advancing Research* (pp. 267-282).

www.irma-international.org/chapter/intelligent-industrial-data-acquisition-energy/61997

Toward a Quality-of-Service Framework for Peer-to-Peer Applications

Ankur Gupta and Lalit K. Awasthi (2012). *Technology Integration Advancements in Distributed Systems and Computing* (pp. 74-97).

www.irma-international.org/chapter/toward-quality-service-framework-peer/64442