Chapter V
Architectures of Existing and Conceptual Applications of Podcasting in E-Learning Systems

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ABSTRACT

Podcasting has quickly emerged as a leading technology in the new field of mobile learning. Tracing this new technology's history over the past two years reveals just how broadly the use of digital audio files may become in the fields of education and training. The ease of use, low cost of creation and hosting, and most importantly pervasiveness of user access to compatible hardware combine to make podcasting a major force in both traditional and distance education. This chapter explores the history, technology, and application of podcasting as an instructional tool.

INTRODUCTION

This chapter will explore audio podcasting from both the theoretical and practical perspectives. Through a combination of research findings and professional experience, the authors will relate what is involved in the use of podcasting in instructional environments, including pedagogy, design, technical specifications, implementation, and operation. Given the relatively new emergence of podcasting as an e-learning technology, there is very little literature about the architecture of

podcasting applications specifically. Therefore, to address the implementation of this new technology, it is necessary to utilize architectures of other e-learning applications that are similarly distributed with similar purposes. In doing this, the reader will gain an understanding of how podcasts are created and distributed as well as how learners benefit from having access to podcasts.

Podcasts are architecturally unique in their relationship to e-learning, in large part because of the many different ways they can be employed. Because a podcast can be a recording of a live event or a specially prepared recorded message it is more than just another media format for course documentation; it can serve as a record of learning activities for use in the future. In order to capitalize on this capacity it is necessary to consider the full range of podcasting implementation, from initial creation to access by the learners.

The objective of the chapter is to provide the learner with definitions of what podcasting is and also an understanding of how podcasting works. After reading this chapter, the learner should be prepared to move towards the implementation of a podcasting program in their own organization.

BACKGROUND

Defining Podcasting

To begin the discussion of podcasting, it is first necessary to build an understanding of what podcasting is and just how prevalent its use has become in a very short period of time. In examining the lifespan of podcasting to the time of this writing in 2006, there has really only been about two years since its public inception. Despite this short time in the public eye, podcasting has already expanded beyond the expectations of even its most zealous advocates.

In a blog entry dated September 28, 2004, Doc Searls, a co-author of the book *The Cluetrain Manifesto* discussed podcasting in some detail

and noted that a Google search on "podcasts" brought up 24 hits. Searls went on to predict that in another year, the same search would "pull up hundreds of thousands, or perhaps even millions" of hits. That estimate probably seemed liberal to Searls, but in reality it was far too conservative. On May 25, just eight months later, a commenter on Searls's blog entry clicked on the search link and found 4,460,000 Google hits for "podcasts." On June 23, that same Google search link returned well over 6,000,000 hits. On August 28, it returned over 21,000,000 hits. On September 18, the number had exceeded 60,000,000. Clearly, this medium has caught the imagination of a large and growing audience (Cambell, 2005). On August 4, 2006, the same search produced 390,000,000 hits in .05 seconds. These numbers are evidence of the fact that podcasting's popularity continues to grow exponentially.

In March 2005 a survey was conducted by Pew Internet and American Life Project that discovered 29% of adult owners of MP3 players have listened to a podcast—amounting to a current podcast audience estimated to exceed six million people (Rainie & Madden, 2005). Another recent Pew Internet survey reveals some very interesting facts about this new phenomenon called podcasting:

- More than six million American adults have listened to a podcast, 29% of those own MP3 players.
- Some 11% of American adults surveyed said they own an iPod or other type of MP3 player. That amounts to over 22 million people.
- Almost one in five (19%) of people ages 18-28 have iPods/MP3 players. Fully 14% of those ages 29-40; and 11% of younger Baby Boomers (ages 41-50) are all owners of MP3/iPod players. That compares to 6% of older Baby Boomers (ages 51-59), 6% of those 60-69 and 1% of those 70 and older.
- Nearly half of those between the ages of 18-28 who own iPods/MP3 players have downloaded a podcast as compared to about

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