

PODCASTING: THE EMERGING BUSINESS OF NANOCASTING

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The new medium of podcasting, through which audio files are downloaded from the Internet to an MP3 player, cell phone, or similar digital portable device, is being hailed as the 'next big thing,' or 'the next frontier of personalized media' that will succeed blogging and e-mail as the way people want to publish and receive information - in this case sound - via the Web. [1] While tech-savvy enthusiasts from the interactive Internet community talk about *podcasting* as the hottest trend on the Web, many media professionals argue that it is just the latest example of how grassroots technology is getting around big media.

More specifically, *podcasting* - a wordplay or neologism constructed as a combination of Apple Inc.'s iconic MP3 player, *iPod*, and *broadcasting* - is the creation of digital audio files that may be easily downloaded from the Web to any portable MP3 player and listened to at the user's convenience. However, media professionals caution that users should not merely relate it with the iPod; rather, they should associate it with 'easy dissemination of audio' as a broadcasting model. Webster's New Millennium Dictionary of English defines podcasting as "the web-based broadcast of music which works with software that automatically detects new files and is accessed by subscription."

Through easy-to-use technology, podcasts are available via the Internet as sound files, and more recently in video format too, which are delivered directly to the user's computer, and can then be automatically transferred to a portable music player. New podcast software enables listeners to subscribe to shows and

to program their computers to automatically search for, download and store new episodes.

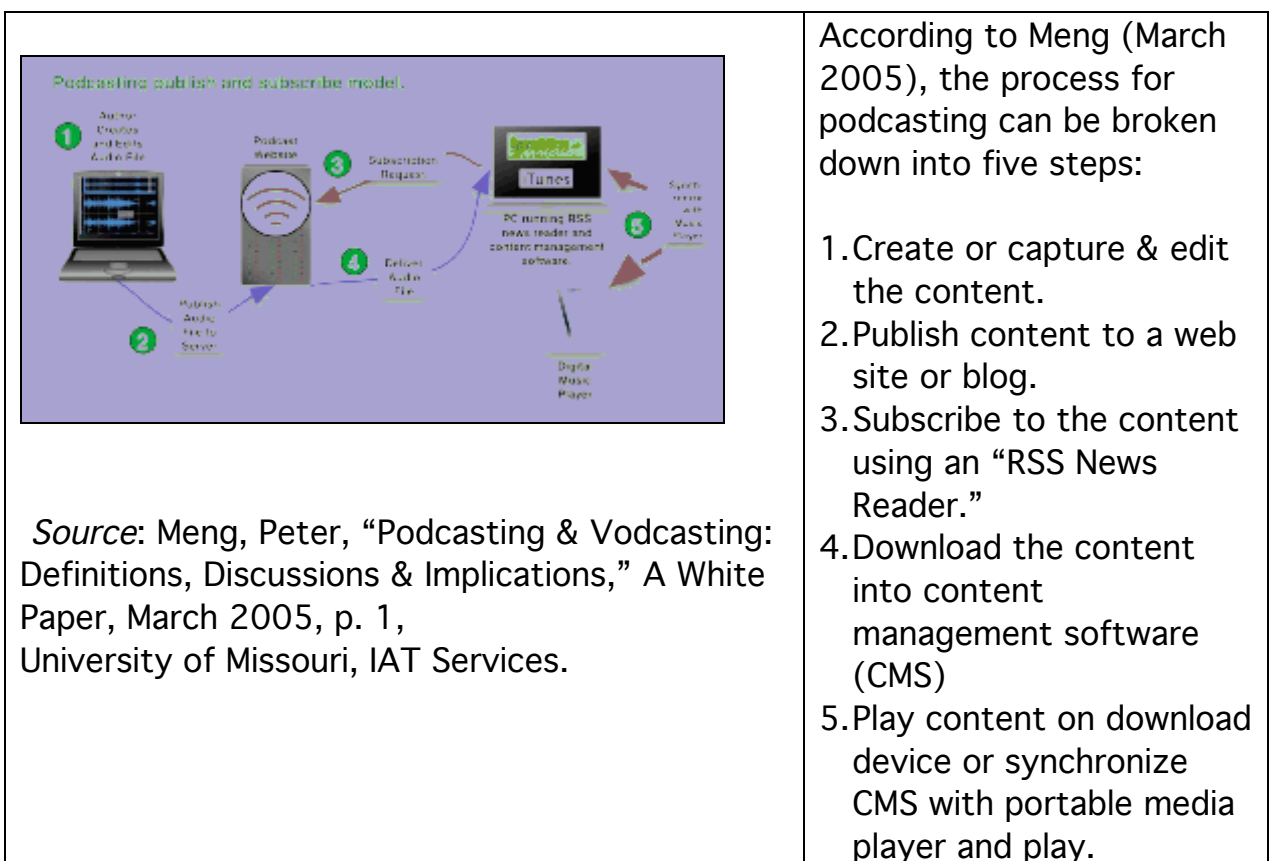
The beauty of podcasting is that it is free and, unlike traditional radio, allows listening at the user's convenience and not the broadcaster's schedule. Most importantly, listeners can create their own podcasts. Much like the time-shifting experience for television viewers using VCRs, and now DVRs like TiVo, podcasting has "extended such capability to mobile players for audio and radio programming." [2] The number of online-deliverable podcasts has grown exponentially from 7,000 in July 2005, [3] to a total of more than 15,000 in October 2005 offered by Apple's iTunes alone. [4] As user-generated audio, and more recently video, content can now be distributed automatically over the Web to a PC. According to Peter Lewis writing in Fortune magazine, Podcasting manifests a "celebration of the Internet's power to let individuals offer their own voices to a global audience." [5]

The Podcasting Innovation: All it takes is a computer with Internet access, a portable digital audio player, and podcasting software. The online media distribution technique behind podcasting is to combine the "web posting mechanism of blogs, the distribution system of an XML-based technology called Really Simple Syndication (RSS), and the desktop software that organizes downloaded audio files and automatically loads them onto portable digital files." [6]

RSS, or Atom, as a subscription model, is an alternative and generally faster way for Internet users to get digital audio/video content from Web sites. Through RSS, users can download an RSS desktop application, a 'feeder,' and "have customized content updates pushed to their individual desktops, rather

than having to browse from site to site to read their Web content.” [7] Those RSS feeds provide information about the audio files that are read by desktop podcatching software, downloading the desired content to users' MP3 players. Apple helped advance podcasting into the mainstream in June 2004 with the release of its free iTunes 4.9 software, “which offers podcatching capabilities and also makes it easy for podcasters to publish content at iTunes.” [8]

Figure 1: Podcasting publish and subscribe model.



The key elements of podcasting’s media distribution model as explained by Meng [see Fig. 1], as a means of producing, publishing and listening to audio content, can be summarized as follows:

(a) *Programming* – podcasters create audio programs, usually in the form of MP3 files, which are then uploaded to Web sites;

(b) *Publication and Subscription* – via Web sites that index and facilitate the finding of and subscription to podcasts according to subject matter, source, author, metadata tags, and other criteria; and

(c) *Playback* – a user downloads a podcast to his computer and subsequently transfers it (often automatically) to an iPod or other music player. Access is simplified by subscription and by the automatic transfer of downloaded podcasts from a computer to a portable music player when the player is docked. [9]

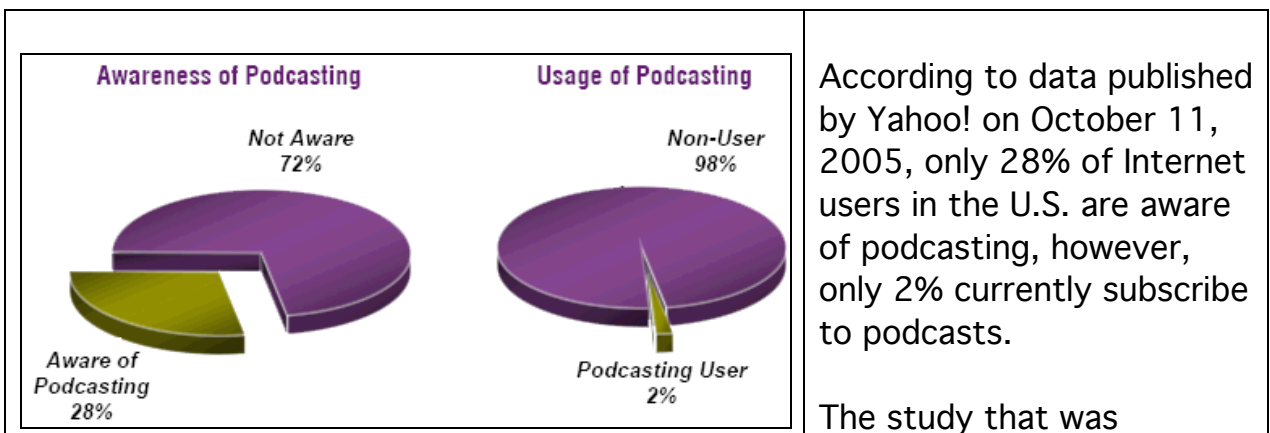
Origins of this Technology: The term *podcasting* was coined by technology reporter Ben Hammersley in the British daily, The Guardian, in February 2004. Until that time, other technology early-adopters had used such terms as ‘audioblogging’ and ‘GuerillaMedia’ to describe this new phenomenon. [10] Adam Curry, the former MTV host and video jockey, is credited with “driving podcasts towards mainstream.” [11]

Podcasting pioneers Adam Curry and Dave Winer, developer of RSS 2.0 specification, in 2001 brought together blogging software and the automatic feed mechanism RSS. With the assistance of another blogger, Tristan Louis, they added the ability to enclose podcasting elements within Winer's Radio Userland weblog aggregator. Curry also created iPodder, the first podcasting aggregator, and in August 2004, he began distributing a daily MP3 audio blog called “The Daily Source Code.” [12] Curry now offers a number of “podcast-related resources online and on-air,” including "Adam Curry's PodShow," carried on Sirius Satellite Radio and the iTunes PodFinder guide to podcasts. [13] Other

bloggers and technology writers followed the trend, with notable examples such as “Stephen Downes, who began aggregating and distributing audio files” from his Ed Radio site in 2003, as well as talk-show host/journalist of Harvard’s Law School, Christopher Lydon, who started “publishing online audio interviews.” [14]

As a consequence of the RSS flexibility and people wanting information on their own terms, only a few days following the introduction of its podcast-subscription service on June 28, 2005, Apple reported iTunes users had subscribed to more than 1 million podcasts, and in July that number had risen to more than 5 million subscriptions. Even though, for now, podcasting is still dominated by spoken-word content and independent music, its content distribution model is challenging the business model of established media companies. Major commercial media conglomerates such as Clear Channel, Infinity, and AOL, public broadcasting companies such as NPR, PRI and American Public Media, the London-based BBC and Canada’s CBC Radio, as well as big multinational corporations like IBM, have all started packaging programming in podcast formats. [15] Industry experts sound confident [see Fig. 2] in predicting “tremendous growth” for podcasting, and go as far as envisioning that “one year from now all major media will be available as a podcast.” [16]

Figure 2: Awareness and Usage of Podcasting of U.S. Online Population.



<p><i>Source:</i> Grossnickle, Joshua, et al., “RSS – Crossing Into Mainstream,” White Paper, October 2005, p. 5, Ipsos Insight & Yahoo!</p>	<p>conducted using Internet-based methodology concluded that “high awareness of podcasting reflects the volume of recent media coverage and buzz, but very few Internet users have translated this buzz into personal consumption” (Grossnickle, 2005, p. 4).</p>
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Why Podcasting is Needed: It appears that podcasting, as a cultural phenomenon, is revolutionizing the way audiences access and consume content, leading to the expansion of radio/audio (and even video, albeit not so widely in use yet) into an audience-based medium. On the other hand, it is releasing traditional programming from the strictures of real-time listening. Ease of use and convenience are the key terms that best describe the podcasting media consumption experience. With the subscriber-based medium of podcasting, content can be retrieved, refreshed, consumed, stored and shared as often as desired. Favorites lists make it easy for the audience to access their preferable content, and programs are all rated by listeners for quality and popularity.

Podcasting is seen as an alternative to the traditional business model of radio broadcasting. It attracts a younger, more affluent demographic. It offers the ability to listen to whatever the audience wants at a time that is convenient to them. Since podcasting is an interactive pull medium rather than the passive push medium of traditional radio, users will have genuine interest in the programs they select.

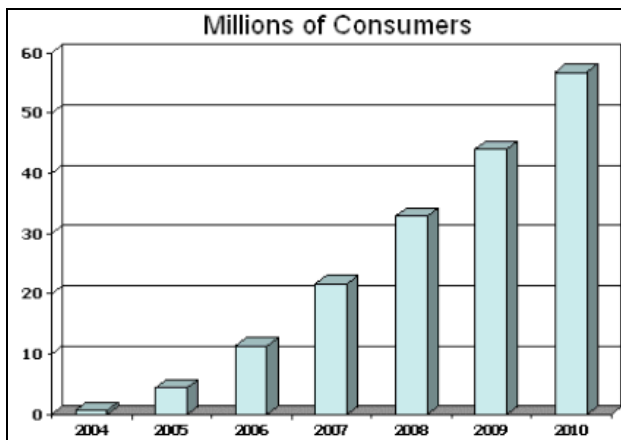
Either as a vehicle serving selective advertising, or as a tool to further enhance one's educational experience, and serving so many other purposes, podcasting will surely pose a challenge to traditional business media models. As Warlick argues, "[b]uying multimedia content on demand and by the piece, time-shifting all programming and running it from multiple devices where and when convenient is and always has been the end game of digitized media." [17] In this case, podcasting and RSS, as user-controlled media platforms, seem to serve perfectly what the audience is looking for from distribution of media content. User-generated content and user-controlled media platforms, such as podcasting, will evidently be driving digital media consumption at a much faster pace than previously assumed.

Economic and Regulatory Issues: The BBC has called podcasting "the effective rebirth of radio," and has successfully packaged a bundle of its time-honored talk-shows in a podcasting format. For instance, as the BBC launched its podcasting trial run, the weekly *In Our Time* history program was downloaded "100,000 times in November 2004 alone." [18] The US-based NPR and its affiliates, as well as Canada's CBC Radio, are following the same path by offering their terrestrially-broadcast programs also via podcasting.

Marketers and advertisers are also looking for new business models and technologies that will be required for the commercialization of podcasting, "despite the wishes of many in the podcasting community who would like to see it be commercial free." [19] Technology and market research company Forrester Research estimated that there could be 300,000 podcast listeners by the end of 2005, and it expects "sustainable podcasting - listening once a month or

more - to reach 12.3 million households by 2010.” [20] Most industry experts argue that podcasting is still in the "early adopter" phase, and audiences will “grow exponentially [see Fig. 3] with education about the benefits of subscribing to blogs, podcasts and RSS feeds” [21]

Figure 3: Growth in Podcast Use Among US Consumers



Source: IDG Group, Rumford, Rodney, L., “What You Don’t Know About Podcasting Could Hurt Your Business: How to Leverage & Benefit from this New Media Technology,” Podcasting White Paper, June 2005, The Info Guru LLC.

August 2005 marked a significant development for podcasting as a viable economic advertising-based content distribution platform, a platform that had originally evolved not as a business-oriented model. The trade press reported that venture capitalists had made the first two serious investments in podcasting start-ups. PodShow raised \$8.85 million from a group of investors that included Ram Shriram, “an early supporter of Google and a member of the search site’s board.” Only a few days later, Odeo co-founder Evan Williams announced on his blog that his company had raised money from Charles River Ventures of Waltham. Before starting Odeo in December 2004, Williams had

helped build Blogger, “an early blog-creation and hosting site Google eventually acquired.” [22]

The music industry is concerned that podcasting too closely resembles the illegal file-sharing services and worries about the implications for copyrighted content. On the downside, “free of the FCC restrictions that have traditionally limited what radio talk show hosts can say,” podcasters are distributing mediated content that can fall prey to indecency infringement. [23] Indeed, podcasting is suddenly home to a lot of adult content. Major media players all appear to be exploring opportunities to time-shift their existing terrestrial and Web-based music/audio programming to portable devices when licensing rules and regulations will permit it. BBC is repurposing its programs for podcasting in an initiative called “Radio-To-Go.” [24]

The radio industry is searching for opportunities to generate new revenue from podcasting, with the help of some big national advertisers. Pepsi, Volvo and Heineken have already tested “sponsorships of a few podcasts nationally.” [25] The newly proposed advertising-based model of podcasting will face a key challenge in determining the true number of listeners and listener demographics. Arbitron, a radio ratings company, has demonstrated that its Portable People Meter system has the ability to track audiences who listen to podcast radio programming.

Unique Applications: While the technology was initially used by individuals to create their own “radio” programs or audio blogs, this medium is now embraced by a wide range of news organizations, education institutions, industry groups

and companies. With its subscription and search-engine-aided distribution, as well as its ease of production, it is now being used for diverse purposes.

For instance, corporate marketing experts argue podcasting is an excellent tool for niche marketing. With “compelling content and good production values” [26] the Nanocasting business model will do well targeting specialized interest groups. Nanocasting differs from early podcasting by beginning with a “clear definition of the target audience, the business model, the revenue model and use of a system specifically developed for targeting commercial audiences called RTS (Really Targeted Syndication).” [27]

Politicians think the new medium could provide the public easier access to government officials, candidates and political parties. It could also serve as a vehicle for disseminating information including propaganda. Media organizations are looking at podcasting as a way to supplement news and entertainment stories and programs. For example, “TV producer Ron Moore has created commentary podcasts for each new episode of the SciFi Channel's Battlestar Galactica.” [28] Other TV shows are starting to set up similar podcasts.

A growing number of educational institutions have adopted podcasting as a means to enhance their students' learning experiences. For example the Musselburgh Grammar School in Scotland “is successfully using podcasting as a vehicle for adding audio content,” such as foreign-language instructions, to school homework assignments. [29] Duke University and other higher education academic organizations have launched “trial runs of lectures, symposiums, and conferences via podcasting.” [30]

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