

Podcasting for Academia

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A podcast is an audio and/or video program that can be loaded directly onto a computer or digital audio player (such as an iPod). Typically, listeners subscribe to podcasts through providers' websites and podcast directories (virtual libraries), such as iTunes. After a listener registers for a podcast, each new episode is automatically loaded onto his or her computer or digital audio player. The listener need not revisit the provider's website to download new episodes.¹

Early podcasts emulated radio and were designed to appeal to a broad audience. But it is now clear that the great potential of podcasting lies not in addressing large audiences, but in catering to small ones. The power of the Internet is in its ability to serve, indeed to create, communities with niche interests. Podcasting has introduced a novel system for circulating information to dispersed audiences, and the ease of targeting and distributing podcasts is proving to be an especially useful feature for the specialized communities of academia.

ADVANTAGES FOR ACADEMIA

My profession is ophthalmology, a relatively small field in medicine dealing with medical and surgical management of eye disease. Ophthalmologists represent a fraction of one percent of the population at large and an

insignificant market segment for traditional mass media. Although our area of study is small, its claim to our time is not. Physicians, like most academics and successful business people, have little disposable time. Audio and video presentations have been available online for some time, but all share the requirement that their audience view their material on a computer. Podcasts, however, can be loaded onto portable players and listened to or viewed at any convenient time: while commuting, exercising, doing chores, etc. Another advantage of podcasts is that they are available on demand (in contrast to "webcasts" or radio programs, which are usually distributed at a particular time) and easily accessible to colleagues dispersed over many time zones.

In February of 2005, I launched an ophthalmology podcast called *As Seen From Here* (<http://asseenfromhere.com>). Podcasting was still a relatively new medium at the time, and there was no template for academic podcasts. I modeled *As Seen From Here* after Terry Gross's *Fresh Air* (<http://freshair.npr.org/>), a daily program broadcast on National Public Radio. It was my good fortune to obtain the help of an expert, Sue Spolan, a director of *Fresh Air*.

As Seen From Here episodes consist of a single lengthy interview. Although the tone is conversational,

I speak very little and nearly all of the airtime is given to the guest. Guests are mainly ophthalmologists and vision researchers who have published significant research in peer-review journals within the previous few months. Publication of an article represents the culmination of a project, and researchers are inevitably eager to discuss their work. Where possible, I interview authors whose manuscripts are in-press, so that these podcasts circulate contemporaneously with the publications.

An engrossing interview unfolds as a kind of a story, but since some guests are better storytellers than others, it is essential to prepare an outline for each interview and to be ready to improvise, as needed. Careful reading of an author's manuscript can pay substantial dividends towards this end. The introductory section of an article lends insight into the way that a guest frames his or her own work. Such information enables me, at the beginning of each interview, to help the guest establish context in the way he or she feels most comfortable. Typically, the end of a manuscript addresses questions peer reviewers have raised, and these can often make for interesting conversation during the interview.

The interview format has two advantages over a simple review of the published manuscript. First, guests are generally willing to describe

1. See "Five Things You Should Know About Podcasting" by Vincent Doogan in the Spring/Summer 2006 issue of *Connect* (www.nyu.edu/its/pubs/connect/spring06/doogan_podcasting.html) for more background information on podcasting.

their subsequent work as well as the responses their publications have received. Second, interviews give authors an opportunity to describe the significance of the research for their own professional work.

PROFESSIONAL ACCREDITATION

As Seen From Here broke new ground, not only as the first podcast for physicians, but also as the first to obtain professional accreditation from the Accreditation Council for Continuing Medical Education (ACCME). Each year, practicing physicians must obtain a certain number of credit hours, usually 50. In order for *As Seen From Here* to meet ACCME requirements as a source of credit hours, a peer review board was established at the NYU School of Medicine. Each program is reviewed by members of this board to ensure that academic goals have been met and that no commercial bias has been introduced. Indeed, meeting the ongoing requirements of ACCME accreditation represents a significant portion of the labor expended in producing *As Seen From Here*. Listeners obtain credit by downloading and printing out a quiz from the NYU School of Medicine website and mailing it back to us; in the future, we hope to migrate to a fully electronic format.

A TWO-WAY CONVERSATION

One challenge I have encountered in my use of podcasts is their intrinsic lack of interactivity. Academia is discursive by nature, and, from the start, I was interested in finding a means to introduce participation into *As Seen From Here*. Since the interviews are not broadcast live, it is impossible to

include a call-in segment. Instead, I set up two VoIP (Voice over Internet Protocol) telephone lines, in New York and in London.² Since these lines capture voicemail digitally, content is easily recorded and accessible from any computer.

The audience of each episode is encouraged to call the telephone lines with questions for guests they have just heard. Their questions are recorded and then emailed to the relevant guest. The guest then calls and records his or her response using the same arrangement. The entire



Dr. Joshua Young

process of question and answer can take several days, but this is not apparent to listeners of *As Seen From Here*; recordings of the questions and answers are combined and included as an addendum to the next podcast. This arrangement resembles an academic symposium, in that the initial presentation, the questions from the audience, and the speaker's response are all accessible to the *As Seen From Here* audience.

On August 14, 2005, for example, I podcast an interview with Elias I. Traboulsi, M.D., the Director of the Center for Genetic Eye Diseases and Chairman of Graduate Medical Education at the Cole Eye Center at

the Cleveland Clinic. Dr. Traboulsi had just published an article on the genetics of age-related macular degeneration in the *American Journal of Ophthalmology*. Among the several hundred ophthalmologists who listen to *As Seen From Here*, one, in Leesburg Florida, had a question about genetic screening. Several days after the podcast of the interview was released, this ophthalmologist called in his question to the New York telephone line. The question was recorded and forwarded, the next day, by email to Dr. Traboulsi. A day or two later, Dr.

Traboulsi called his response into the same telephone line, and his comments were recorded. Finally, the recordings of the question and Dr. Traboulsi's answer were combined and included in the following week's podcast, for all of the ophthalmologist-listeners to hear.

PRODUCTION TIPS

In my experience with *As Seen From Here*, I've learned a few lessons that might be helpful to others who wish to produce a podcast.

Recording

It is possible to record a podcast on the internal microphone and/or video camera of a relatively new, well-equipped computer. However, the production quality is far superior when recorded with professional equipment.³ NYU provides a variety of podcasting production resources for use by faculty, staff, and students on campus; see www.nyu.edu/podcast/ for details. Alternately, a stationary recording ensemble designed for use with a personal computer can be bought for about \$500, or, for an additional \$500, a field recording ensemble with a digital recorder.

Editing

Radio is a medium that we all understand and this familiarity has

2. Such lines can be purchased inexpensively from Skype: <http://skype.com>.

3. Note that some practice is required to achieve good results with a professional microphone. Although superior clarity is possible, altering one's position relative to the microphone produces widely varying results.

created expectations that extend to radio-like media, such as podcasting. The absence of radio-like production standards in these media is distracting. Next time you listen to an on-location (as opposed to in-studio) interview on NPR, try to pick out where editing has been done. It's usually impossible to tell. Listen for silence between questions: there isn't any. This is because NPR is particularly adept at incorporating ambient sounds into their stories and has been jocularly described as "radio that crunches." While I do not advocate including ambient sound in every interview, podcast producers should keep in mind that audible edits can really distract the audience. It is standard practice to introduce a bit of ambient sound into the silences that are occasionally created by adding pauses during editing. Nothing stands out like dead air.

In addition to ambient sounds, the participants in the interview often breathe audibly. While the listeners may not consciously register these breaths, if one is cut short in an edit, it will become immediately apparent. Indeed, much of the finer work of editing involves adding ambient sound or copying a breath from one portion of an interview

to another. The object is always to make the editing inaudible so that the listener can concentrate on the podcast's content.

EXPANSION & GLOBALIZATION

Six months ago, I was approached by Dr. Kazuo Tsubota, Chairman of the Department of Ophthalmology of Keio University in Tokyo. A faithful listener of *As Seen From Here*, Dr. Tsubota wanted to introduce its contents more widely within the Japanese ophthalmic community. At that time, the audience of *As Seen From Here* was international but concentrated in the English speaking world. Dr. Tsubota's idea was to preface each English language podcast with a Japanese language summary covering the gist of the podcast. His contention was that, while most Japanese ophthalmologists spoke some English, many would feel too intimidated to listen to an entire interview exclusively in English. With a Japanese language summary at the beginning of the program, many would feel comfortable enough to stay on for the English interview.

I saw great value in this approach and have since established collaborations with Peking University, Yonsei

University, and Rajavithi Hospital to produce editions of the podcast with summaries in Mandarin, Korean, and Thai for release this fall. In addition, based at least in part on the success of *As Seen From Here*, the NYU School of Medicine has had the foresight to create an office to take full advantage of podcasting technology. Called The New Media Project, it is, to my knowledge, the first office in any medical school devoted to the production and dissemination of podcasts. Our work includes replicating the ophthalmology podcast in other medical fields and producing both audio and video podcasts for graduate and undergraduate medical education.

The long term effects that the powerful and versatile medium of podcasting will have on the dissemination of scientific, educational, and business material are not yet apparent, but are certain to be substantial.

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>> Continued from p. 6

HOW TO PARTICIPATE IN THE GRID

Don't be left out of the satisfying fun that is grid computing! Anyone wishing to participate should visit www.worldcommunitygrid.org/ to download the free software. Thanks to IBM and United Devices, installing and managing the software client is secure and easy. We also have mechanisms for helping whole institutions push out installations; interested parties should contact IBM via the "About Us" form within the "Become a Partner" section of the World Community Grid website.

Once the United Devices or open source BOINC client is installed,

whether on Windows, Macintosh or Linux, the next step is to attach your client to HPF2 by typing in the following project URL when prompted: www.worldcommunitygrid.org/projects_showcase/viewHpf2Research.do. If you wish, you can also join a team by creating your own or selecting an existing one, the New York University team, for example. Another Grid project of note is working to dock small molecules into HIV protein structures in a search for possible new HIV drugs. I encourage anyone reading this article to convince multiple friends to download the client, as well!

For more information about the Human Proteome Folding Project,

select the project name from the list in the "Research" section of the World Community Grid website: www.worldcommunitygrid.org/.

Dr. Richard Bonneau recently joined NYU's Departments of Biology and Computer Science as part of a joint initiative of Computation in Science and Society and NYU's Center for Comparative Functional Genomics. He has played a critical role in the development and deployment of Rosetta, the state-of-the-art protein-folding program described in this article. See <http://cs.nyu.edu/~bonneau/> for more about Dr. Bonneau's research efforts.