Inside InsectaPod Cast: An Entomology Podcast Disarticulated

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Since former MTV VJ Adam Curry coined the term in 2005, the popularity of podcasts has grown exponentially. In 2007, 16% of the population age 12 and over had watched or listened to a podcast by August; 61% were between the ages of 12 and 44 (Hein and Jakuska 2007). The primary target audience we outlined for InsectaPod Cast ranges from age 15-35. This age group is not commonly reached with standard extension education techniques, but includes a large group of technologically savvy individuals. We recognized the potential to reach this audience, but also knew that the technology of podcasting wouldn’t hold their attention on its own. While many podcasts feature one or two people talking about an issue, others, such as Science Friday from National Public Radio, are highly edited audio programs with narration. We deemed this narrative format more likely to hold the attention of our target audience and developed InsectaPod Cast accordingly.

The project began several months before we recorded our first interview. In developing a comprehensive project plan, we wrote potential episode synopses, solidified our concept of the podcast as a narrative audio program, and identified the technical skills and equipment necessary. We then submitted the plan to the Michigan State University (MSU) Department of Entomology chairperson to request funding. We stressed the likelihood that InsectaPod would reach young people interested in learning about science and the environment, and the positive contribution podcasts would make on the Department’s reputation for innovation in outreach and education.

Production Procedure

There is a tendency to assume that the bulk effort in making a podcast goes into recording, but with InsectaPod Cast, the time we spend with a microphone is far outweighed by the planning and writing required for each episode. From the start, we sought to simplify the production process by documenting a procedure and delegating responsibilities for each step. In developing the procedure, we consulted resources about nature recording (Ritzer 2003), radio documentary production (Isay 2008), and podcasting (Vogele 2007). We also sought to include MSU Entomology faculty involvement to improve the accuracy of information and underscore our status as a product of the department.

The typical episode was created through a workflow that included several distinct steps. We began production by brainstorming about topic ideas, making an effort not just to discuss the subject matter, but also to frame human aspects in a compelling way. We then interviewed sources in the field; this was best accomplished by having one person conduct the interview while another handled audio recording. Recordings were then transcribed and a script was written that included the material we planned to pull from the field recordings as well as narration yet to be recorded. Once a script was complete, an entomology faculty member served as guest editor, reviewing the script and suggesting areas for improvement. Narration and introductory and concluding segments were recorded and, working from the script, these pieces were edited together with audio collected in the field. The process was completed by updating the Web site and RSS feed to include the new episode (Fig. 1).

This process is labor intensive, and most episodes were produced over several weeks or even months. More than 12 hours were required to produce each episode, such that they reflected our vision of InsectaPod Cast as a dynamic audio program accessible to the layperson. Each episode includes music, narration, on-site interviews, and recordings of environmental noise such as the buzzing within a hive or a scientist flipping through a stack of microscope slides. It’s been said that in podcasting, “the worst crime is to be boring,” and we sought to avoid this by making our listeners’ experience as rich as possible (Habib 2008).

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Audio Equipment and Techniques

After identifying our target audience and determining our program concept and production process, we turned to matters of audio recording and editing equipment. In determining what equipment was necessary for podcasting, we consulted Web sites and online podcasting communities (Benjamin 2008, Podcast Alley 2008). The backbone of InsectaPod Cast is mobile field recording, and so our first equipment purchase was a handheld recorder that stores audio on the same cards as those found in digital cameras. We opted for a Zoom H4 (Samson, Hauppauge, NY), which accepts an external microphone, and paired it with an ElectroVoice RE50 (ElectroVoice, Burnsville, MN), an industry-standard interview microphone.

We recorded episode narration in a studio, and many podcasters use condenser microphones in studios because they offer higher fidelity. Our studio was not acoustically treated, however, so we chose the less-sensitive Shure SM58 dynamic microphone (Shure, Niles, IL), which does a great job rejecting background noise (Figure 2). Once all audio was recorded, we transferred it via USB from the recorder to a computer and used Cubase LE software (Steinberg Media Technologies, Hamburg, Germany) to edit the program. Because each episode includes audio from field recordings, narration, and music, we mixed 5–10 audio tracks into a single file, and then compressed the data to MP3 format to reduce file size and download times.

Creating a Listener Base

From the start, we knew that offering people an innovative podcast wouldn’t be enough to get people listening: we had to find ways to let people know InsectaPod Cast exists and make it easy for them to experience it. Our first step was to partner with the Michigan State University College of Agriculture and Natural Resources Communications Department to create and distribute a press release, which was picked up and redistributed in at least one newspaper and four Web sites, and on the radio.

In addition to the press release, we engaged in a less traditional publicity tactic: social networking. We set up a page for InsectaPod on MySpace.com, which allowed us to network with people interested in insects and the environment. In only a few weeks, we amassed a list of several hundred potential listeners, whom we could contact whenever new episodes were posted. We also designed full-color promotional business cards and created a poster, both of which are displayed by the MSU Department of Entomology at events, including the national ESA meeting and outreach functions in the local community.

Additional publicity efforts included a link to InsectaPod Cast on the main page of the MSU Department of Entomology Web site and registering the podcast with a number of podcast directories. To date, the Department’s Web site has driven a great deal of traffic to InsectaPod Cast. We also encouraged those who are the subject of podcasts to link to the InsectaPod Cast episode in which they were interviewed to their own professional, company, and government Web sites. In this way, we further increased the potential InsectaPod Cast listener base.

Measuring Success

Since we posted the first episode of InsectaPod Cast, statistics provided by our Web host indicate an increasing listenership to the podcast. In July 2007, the Web site received 880 visits, a number that rose to 5948 in March 2008 (Figure 3). We track visits, unique visitors, and page views. These numbers give us a measure of the number of visitors we receive, how many are repeat visitors (about half), and how many pages each visitor views before exiting the site.

By definition, a podcast includes a Real Simple Syndication file (commonly called an RSS feed) that allows users to subscribe and have the podcast downloaded directly to their MP3 player or computer, or provide notification of Web site updates within their Web browser. The RSS feed page is the most commonly accessed page on the InsectaPod Cast Web site and the most frequent point for both entry and exit to the site. This indicates that many listeners are subscribing to InsectaPod Cast and listening on computers or mobile MP3 players without spending time on the site. Also worth noting is that months during which site visits increased dramatically, such as between August and September 2007, coincided with times when we were very active in publicizing the podcast. Conversely, the only month in which we experienced a decline in visits was December 2007, when we did not update the Web site with a new episode. This suggests that ongoing publicity efforts and a commitment to regular updates are needed if we are to continue boosting our listenership.

In addition to site statistics, feedback from listeners has been a valuable metric for gauging InsectaPod Cast’s impact. Contact from listeners is not overwhelming, but when it comes it is positive, as shown in this message from a listener in Chicago:

I want to say I really enjoy your podcast. Don’t stop doing it. I look forward to future installments! I am doing some insect research for a written project, and your show is perfect for my purposes!

InsectaPod Blog, an online journal within the InsectaPod Cast Web site in which we detail the experience of producing an extension-minded science podcast, has also provided an avenue for interaction with professionals in the fields of both entomology and communications. We have discussed InsectaPod Cast on an Agricultural Communications Listserv with communicators interested in podcasting and with fellow academics who also blog and podcast about entomology. These interactions have improved our podcast, and it is our hope that they will encourage others to use this technology.
Further potential for science podcasts

The success of InsectaPod Cast demonstrates that podcasting can be an effective technique for introducing new topics to listeners. We see several ways to further develop the educational efficacy of InsectaPod Cast and science podcasts in general.

Science podcasts may be incorporated into classroom education at the secondary and undergraduate level. One way to connect science educators to podcasts is the Education Podcast Network (www.epnweb.org). This Web site currently lists 98 podcasts with scientific content, and we are working to get InsectaPod Cast included on that list. Podcast producers may also work with educators to develop learning modules and encourage teachers to develop and share lesson plans that link to podcast Web sites.

There is also a place for science podcasts on broadcast radio. After initial Web posting, InsectaPod Cast will be broadcast on a public radio station in Michigan and we plan to leverage that success with other stations in the community. We recognize public radio stations, commercial stations with a talk format, and college stations as potential partners in getting our podcast to more listeners. It is clear that we need to continue educating potential listeners about the option to listen to podcasts at their computer or to download them onto any MP3 player. People are more comfortable listening to podcasts at their computers (Hein and Jakuska 2007), and several individuals have expressed the misconception that they can’t listen to podcasts because they don’t own an iPod®.

Conclusion

By the metrics we identified at the onset of this project, Insectapod Cast has been successful. It is our hope to build upon that success, reaching more listeners and making the podcast a sustainable activity for the MSU Department of Entomology. InsectaPod Cast has demonstrated that science podcasting can have a wide appeal for listeners, and we are excited to find ways to partner with educators in the future. Producing a high-quality edited audio program like InsectaPod Cast has not been easy, but it has been rewarding. It is our hope that sharing our experiences will encourage others to consider the possibilities podcasting holds for science education.

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References Cited


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InsectaPod Cast is a monthly audio show from the Michigan State University Department of Entomology that explores the connections between people, insects, and the environment. Anyone with an internet-connected computer can listen.

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