



Interpretation in the Digital Age

Interpretive Techniques in New Media

We're in the opening innings of a whole new ballgame: affordable, do-it-yourself, mass communication. Launch a podcast, post an e-hike, or create a wiki, and you can interpret your park's resource for a wider potential audience than ever before.

But using the latest technology doesn't ensure that you'll reach people successfully. After you've learned about digital recording, editing, and uploading, you still want to use the medium so that people come to care about your park. Luckily, NPS guidelines for creating effective (traditional) interpretive media are just as relevant in the new ballgame.

The Interpretive Development Program (IDP) lays out the Service's approach to interpretation. Whether or not you use it for training and certification, you'll find that it's full of great strategies for creating publications, exhibits, waysides, and other media. Let's see how the IDP guidelines—especially in modules 101 and 311—can help you create a captivating digital or online product.

Audience

First, have a look at the "Knowledge of the Audience" component of the Interpretive Equation (*see below*). Perhaps you've already met some of the audience who would subscribe to a podcast or rent a GPS-triggered device—they're already visiting your park. But there are members of your online audience whom you might never see.

How do these statistics match your assumptions about the potential audience for new media online?

- 72% of Americans aged 50-64 use the Internet.¹
- 93% of college graduates use the Internet, compared to 67% of people with only a high-school degree, and 38% of people who didn't complete high school.¹
- Only 18% of Americans have listened to at least one podcast.²
- Among those who have listened to a podcast, 20% come from each of these age ranges: 25-34, 35-44, 45-54; only 13% are 18-24 years old.²
- Nearly half (48%) have visited a video-sharing site, such as YouTube.³
- Around half (51%) of Internet users have taken virtual tours of another location online.⁴

Before you invest a lot in posting content on your website, see what you can find out about the people who visit the site. Does the content and cognitive level of your programs match the audiences most likely to see it? Think about the range of interest level among your visitors—there will be similar ranges among your "virtual" audience. Are you providing for both the casual and the committed?

Of course, your virtual audience isn't necessarily sitting at a computer keyboard. One of the most important factors in reaching your audience is knowing the context in which

The Interpretive Equation

$$\left(\begin{array}{c} \text{Knowledge of} \\ \text{the Resource} \end{array} + \begin{array}{c} \text{Knowledge of} \\ \text{the Audience} \end{array} \right) \times \begin{array}{c} \text{Appropriate} \\ \text{Techniques} \end{array} = \begin{array}{c} \text{Interpretive} \\ \text{Opportunities} \end{array}$$

1. Survey of Americans 18 and older, February 2008, Pew Internet and American Life Project.

2. Survey of Americans 12 and older, March 2008, Edison Media Research.

3. Survey of Americans 18 and older, January 2008, Pew Internet and American Life Project.

4. Survey of Americans 18 and older, November 2006, Pew Internet and American Life Project.

they experience your interpretation. The power of a wayside exhibit is that the resource, the audience, and the interpretation are all in the same place, at the same time. This will certainly be true of a GPS-triggered device, but it's not necessarily true of a cell-phone program or a podcast. Many podcast listeners appreciate having content available while they're commuting to work or working out at the gym. Also, whether your audience can look at images or listen to narrative—or both—should make a big difference to the content of your interpretive media.

Appropriate Techniques

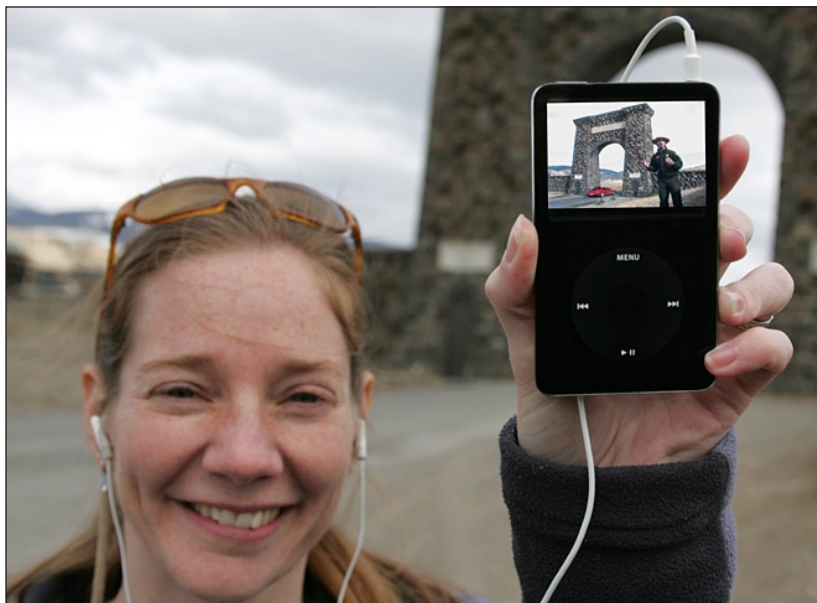
When using something called “new media” or “emerging technology,” we're usually delivering our interpretive product—made of images, words, and sounds—through a digital device. The technology gives our audiences greater control over when, where, and how they attend to the interpretation. Although the means of delivery may be different, we're still using those familiar elements: images, words, and sounds. So we can rely on some proven interpretive techniques for using those elements.

Here's an example from a parkcast at Black Canyon of the Gunnison National Park. The “Chasm View Geology” episode is part of a series, a ‘tour’ of canyon overlooks. You can watch it on your computer or carry it right out to the Chasm View overlook on an iPod, Blackberry, or other similar gadget.

The narrator immediately gives you an activity and asks a question: Compare the apparent distance to the opposite rim and to the river below. Is the rim further away? Even if you're at home, the question gives you a tool for imagining yourself at the overlook, and the video furnishes a (diminished) view.

The video shows a diagram, a cross-section of canyon labeled with distances, as the narrator explains how the canyon's depth and width differ in places. The view and the diagram introduce tangible qualities of the canyon. Video and audio then move in clearly linked steps toward an explanation of the canyon's intangible significances. Depth and width vary because some rocks—especially granite—are harder than others and more resistant to erosion by water. Near Chasm View, “the river had to really focus its energy to narrowly cutting down through granite.” These evocative words accompany the rushing sound of water and a close-up on river pounding against rock.

Several “old” interpretive techniques—activity, question, illustration, word choice—appear in this “new” medium. Other



Yellowstone National Park's “Roving Ranger” videocasts enable visitors to download interpretive content from the Web to their own digital device, and then play back the content during their park visit. New technology like this gives our audiences greater control over when, where, and how they receive interpretive information. (NPS Photo)

techniques that work well in a video are: visual before and after comparisons; chronological events; rhythm (created as you cut from one scene to the next); and quotations (either re-enacted or from interviews).

Characteristics of good interpretive (new) media

To make a good downloadable video tour, you should choose techniques that exploit the strengths of the video medium. This is a characteristic of any good interpretive product: that it functions well within the medium's strengths and weaknesses.

Imagine trying to describe how shoelaces are tied. Spoken narrative is not the best way to describe an intricate sequence of motions or events. A written, numbered list might do the job, but a series of images would work even better. (Then consider how your choice of medium could change, depending on the audience for shoelace tying.)

You'll find summaries of traditional media's strengths and weaknesses on both the HFC and IDP websites. Some of these qualities apply to new media, especially those related to audio and video production. However, sometimes new media might “break the rules” we're used to.

For instance, a limitation of traditional park films shown in a theater or on TV monitors is that people have high expectations for their quality. Low-budget productions can leave

a bad impression of NPS professionalism. As more people see “home-made” videos on YouTube and download video onto hand-held devices, our audiences may apply different standards to some digital products. The intimacy of hearing an expert’s voice over a cell-phone may outweigh the poor sound quality (although a bad original recording might make it impossible to understand the expert!). A ranger’s enthusiastic demonstration of maritime knot-tying might be more engaging than a well-rehearsed actor’s voiceover on an online virtual tour.

The IDP has a rubric for evaluating good interpretive media. We’ve reviewed the first measure—exploiting the strengths of the medium—and seen that it applies just as much to the new technology as to the old. As you read this summary of the rubric, note which criteria would not apply to new media:

- works within the medium’s strengths and weaknesses
- links tangibles and intangibles and introduces universal concepts to convey resource meanings
- communicates appropriate depth and amount of relevant information
- provides factual balance, acknowledges multiple viewpoints
- creates context, supports content, and enhances connections with photos, illustrations, objects
- uses the physical space to enhance interpretation
- applies basic principles of design to develop relationships between the “things” or information (tangibles) and the ideas or meanings (intangibles) they represent

The only irrelevant criterion concerns “physical space.” Perhaps even that might be translated to apply to a computer screen just as well as to a publication page. Of these seven measures, notice that three of them have nothing to do with media—

they apply only to the quality of your interpretation, not to how well you use the medium to convey your interpretation. Even a great web designer, videographer, or editor must be a good interpreter to create good interpretive media.

The last criterion on the list concerns basic design principles. In the past, most park staff who created their own interpretive media relied largely on graphic design skills, whether contributing to publications, waysides, or exhibits. A well designed graphic layout makes effective use of proximity, alignment, repetition, contrast, balance, and negative space. Similar principles apply to new media. However, much new media interpretation will rely on skillful audio and video production. AV producers must account for the fourth dimension—time—among their design principles.

In any medium, technical skill alone is not enough to forge a connection with your audience. Along with mastering the hardware and software, you also need good design and interpretive skills to create good interpretive media.

Visitor listens to an audio tour on his iPod while following a map at Richmond National Battlefield Park, Virginia. (NPS Photo)



Caitlin McQuade, an exhibit specialist at Jefferson National Expansion Memorial, authored this article.

What New Media Products are Parks Using Today?

Cell Phone Tours

In 2005, staff at Valley Forge National Historical Park, Pennsylvania, found that approximately three-quarters of their park visitors were regional users—local people who used the site to walk, jog, or just enjoy the outdoors. The park subsequently conducted a formal Visitor Use Study which confirmed this visitor profile. The study also revealed that these local visitors, who came to the park monthly, weekly, or even daily, typically bypassed the park visitor center.

Assistant superintendent Barbara Pollarine recognized a need to somehow communicate with these local park visitors. Says Pollarine, “We needed to find a way to reach this audience and connect them to our park’s significant stories.” Wayside exhibits were certainly one way to tell their stories, but Pollarine was looking for a more interactive approach.

“One thing almost all these local users had in common,” according to Pollarine, “was a cell phone.” Everyone who came to the park, which is just a few miles west of Philadelphia, seemed to have one. This fact was a major influence in her research, and led her first to “Talking Street,” a company which specializes in cell phone tours in urban areas. One of her museum contacts also recommended another company called “Guide by Cell.”

The park subsequently invited three companies who provide cell phone tours to come to Valley Forge and make presentations. Pollarine ultimately chose Guide by Cell, and the park couldn’t be happier with their choice. She cites four compelling advantages to the Guide by Cell service:

- The park can record messages directly from their own telephone handset
- The park can constantly update their cell phone messages
- Cell phone tours can be easily converted to podcasts
- The park can access the Guide by Cell website at any time to see what the call volume is on a stop by stop basis

The park launched their cell phone tours in the summer of 2006 with 11 recorded messages for stops along the Encampment Auto Tour. Today, the number of messages and stops has grown to about 60. Each message is typically narrated by subject matter experts from either the park or the local communi-



Cell Phone

Cell phone icon developed for Valley Forge National Historical Park by the NPS Sign Program.

ty. The park distributes a brochure with a map of the stops, and uses a cell phone icon developed by the National Park Service Sign Program to identify stops at sites throughout the park.

Pollarine credits three 2006 summer interns with really helping the park develop, launch, and fine-tune their cell phone tours. One intern was recruited from Unilever’s “Healthy Parks-Healthy Living” summer internship program. Another intern was provided through the park’s partnership with the Valley Forge Convention and Visitors Bureau. A third intern was solicited through Craigslist.

“These interns really helped us understand the cell phone medium,” says Pollarine. “They took our primary interpretive messages and distilled them down to about 1 to 1½ minutes in length. They really emphasized just how short most people’s attention span for audio is.”

Today, call volume ranges from about 200 calls per month during the off-season to 3,000 to 4,000 calls per month during the summer season. Cost per month, which is based on call volume, ranges from \$200-\$800—or about \$5,000 per year.

Valley Forge’s cell phone tours continue to evolve. Guide by Cell recently translated all the park’s messages into Spanish for \$1,700, allowing the park to reach an important new audience. The park has also added a text messaging feature offered by Guide by Cell, which prompts users at specific stops if they would be interested in receiving a text message about an upcoming park event related to that site. If a user selects “yes,” they will receive a text message prior to the date of the event as a reminder. The park is also adding trail-specific messages to assist visitors with wayfinding.

In addition to Valley Forge, four other national park sites are presently offering Guide by Cell audio tours:

- Edison National Historic Site
- Grand Teton National Park
- Lincoln Boyhood National Memorial
- Lincoln Memorial and National Mall

To learn more about Guide by Cell and to listen to sample recorded messages, logon to www.guidebycell.com.

GPS Ranger

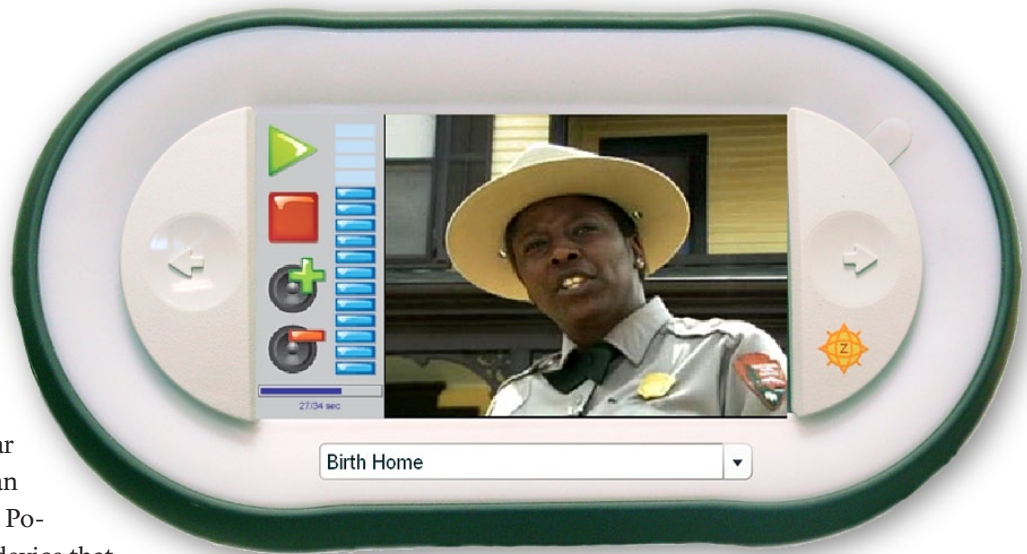
In early 2006, Eastern National approached Martin Luther King, Jr. National Historic Site about developing a prototype “GPS Ranger” tour. Chief of interpretation Melissa English-Rias and her park staff met with Lee Little of Bar Z Adventures, and work on the GPS Ranger began.

The GPS Ranger, developed by Bar Z Adventures of Austin, Texas, is an interactive handheld GPS (Global Positioning System) mobile guiding device that can deliver audiovisual messages to visitors as they explore your site. The device can be programmed with unlimited content. It allows for daily updates such as your park’s events or activities. The GPS Ranger automatically delivers audio, video, text, or still photos when a visitor approaches the pre-programmed GPS coordinates that correspond to every point of interest (buildings, landmarks) throughout the tour. The user can also manually navigate to any of the auto-triggered content. The device is about six inches wide and fits into the palm of a visitor’s hand. It is lightweight, rugged, and water-resistant with a sunlight viewable touch-screen.

English-Rias, who is now an interpretive specialist in the Southeast Regional Office, was really intrigued by the new device. She recalls her impression when she first learned about the GPS Ranger: “I always want all our visitors to have an interpretive experience with a ranger while they explore the historic Sweet Auburn Area of Atlanta. When I heard about the GPS Ranger, I knew I had to get it for my visitors.”

Using visitors’ most frequently asked questions from the park’s training manual, Bar Z Adventures began developing content for the device. They had a professional video photographer follow English-Rias on a tour of the park, recording her interpretive talk at about a dozen points of interest. Working closely with the vendor, park staff helped develop text for each tour stop and reviewed rough cuts of the vendor’s video.

Finally, in October 2006, the first prototype of the GPS Ranger was delivered to the park. The park was delighted with the content of the device. Using the GPS Ranger, visitors could hear Dr. King’s message of social justice and equality, view images of the civil rights movement, and experience the aftermath of his untimely death, all in the palm of their hands.



The GPS Ranger, developed by Bar Z Adventures of Austin, Texas, is an interactive handheld GPS (Global Positioning System) mobile guiding device that can deliver audiovisual messages to visitors as they explore your site. Melissa English-Rias appears on the GPS Ranger at Martin Luther King, Jr. National Historic Site.

But there were also problems with the first prototype. Battery life proved to be inadequate for the entire walking tour, and the device’s LCD screen was impossible to see under sunlight. A subsequent GPS Ranger device has worked much better, providing a larger, easier to view screen and longer battery life.

A more persistent problem is unique to Martin Luther King, Jr. National Historic Site. The GPS Ranger can be rented for \$9.95 exclusively at the Eastern National Bookstore inside of Fire Station #6, located on the corner of Auburn Avenue and Boulevard. Unfortunately, Fire Station #6 is more than a block away from the park visitor center where most people first arrive. By the time visitors get to the bookstore, they’ve already seen most of the park, and don’t see much need to rent the device. English-Rias estimates that visitors rent the GPS Ranger just a few times each month.

Vicksburg National Military Park, which launched their own GPS Ranger tour in June 2007, reports much higher visitor use of their device. Available for rent at the Eastern National bookstore inside the park visitor center for \$14.95, the GPS Ranger is their 4th best-selling product.

Other parks using the GPS Ranger presently include:

- Cedar Breaks National Monument (available from the Zion Natural History Association bookshop at the park visitor center for \$9.95)

- Death Valley National Park (available from the Death Valley Natural History Association bookstore in the Furnace Creek Visitor Center for \$19.95 for a full day or \$14.95 for a half day)
- Shenandoah National Park (available for rent from the Shenandoah National Park Association bookstore in the Byrd Visitor Center at Big Meadows for \$9.95)

The Shenandoah National Park GPS Ranger was just launched on Memorial Day weekend in May 2008. The Shenandoah device offers four different hikes: Dark Hollow Falls, Hawksbill Mountain, Big Meadows, and the Appalachian Trail.

Interpretive specialist Claire Comer, who worked closely with Bar Z Adventures on content development, wanted to offer much more than just videos of interpretive rangers talking in front of a camera. “We’ve incorporated historic photographs, taped interviews with resource specialists, Flash animation, and other rich interpretive content into our GPS Ranger,” says Comer. She’s particularly pleased with a graphic demo of plate tectonics geology at Hawksbill Mountain, and historic film footage of the Civilian Conservation Corps (CCC).

One problem Comer is concerned about is battery life. Some GPS Ranger models, like the ones used at Death Valley National Park, include car chargers to prolong battery life. But the model used at Shenandoah doesn’t include this feature. There is no on-off switch, and their GPS Ranger can only operate from 3½ to 4 hours before recharging is necessary. That’s not enough time to use the device on more than one or two of Shenandoah’s four GPS Ranger hikes. This may cause some users to feel rushed, and to miss opportunities to enjoy the resource.

On the plus side, Comer sees great value in being able to change their GPS Ranger content whenever necessary. “Through our online account, I can actually upload new digital pictures or WAV audio files directly to the Bar Z Adventures website.” The vendor can then incorporate the new content into the GPS Ranger program, and transmit the updated content back to the park overnight. Because each GPS Ranger device is stored on a recharging grid that is connected to an Internet-enabled computer, the updated content is available for the next day’s rentals. “That’s pretty cool,” says Comer.

For more information on the GPS Ranger and to see online demos of park video content, logon to www.barzadventures.com.

Pocket Ranger

This year Cheatham Lane, a premier provider of professional interactive 360° panoramic virtual tour photography, has partnered with Lightspeed Media to prototype a new product called the Pocket Ranger. Lightspeed Media specializes in creating highly immersive, interactive user experiences. Development of the Pocket Ranger is being underwritten by the National Park Foundation and National Park Service.

The goal of the new Pocket Ranger is to empower visitors to national parks—and potential visitors—to access the interpretive elements of a specific park from home, and to take the park “on the road” using iPod and/or iPhone devices.

Once the content—VR and still photography, HD video, text, audio, etc.—is downloaded, the user can view and interact with the content from their desktop via Pocket Ranger’s custom interface/application. The Pocket Ranger will also allow the user to configure their own “tour,” so that if someone wants to they can take their iPod or iPhone on the trails and have access to information which augments their experience. Obviously, nothing beats a real live park ranger, but since there can’t be a ranger assigned personally to each park visitor, there’s Pocket Ranger.

The vendors have already begun documenting Santa Monica Mountains National Recreation Area. During 2008, the team will gather content at one or two more national parks and establish their processes and workflows. They plan to then spiral out and ultimately document each location within the National Park System.

Hand-Held Audio Tours

In February 2008, the “Mount Rushmore Audio Tour: Living Memorial” received the Director’s Award for Excellence in Interpretive Media at the Association of Partners for Public Lands (APPL) awards banquet in Denver, Colorado. This is the third national award for the audio tour, which was developed by the Mount Rushmore History Association. The audio tour also won a 2007 APPL Award in the audio/visual division and a 2007 National Association for Interpretation (NAI) Media Award in the audio tour division.

“Mount Rushmore Audio Tour: Living Memorial” incorporates a lightweight, handheld wand which features narration, music, interviews, sound effects, and historic recordings of sculptor Gutzon Borglum and his children, Lincoln Borglum and Mary Ellis Borglum Vhay. Interviews with workers who helped carve the mountain and members of local American

Indian tribes highlight different perspectives on the carving. Visitors can listen to this self-guided tour while sitting beneath Mount Rushmore or by walking around the memorial on a suggested route. The audio tour and accompanying brochure and map are translated into German, Lakota, and Spanish.

The project was funded by the Mount Rushmore History Association (MRHA), a nonprofit organization and Mount Rushmore partner. Working with Q Media Productions of Florida, a committee consisting of the National Park Service, MRHA staff and committee members, and Mount Rushmore National Memorial Society board members developed the direction, content, and flow of the tour. The wands themselves were developed by Tour-Mate, internationally known for developing quality audio tour technology for parks and museums.

The tour is available at Mount Rushmore National Memorial for \$5 in the Audio Tour building during the summer months and in the MRHA bookstore located in the Information Center during the winter months.

For more information on Q Media Productions, logon to www.qmediaproductions.com. For more information on Tour-Mate, logon to www.tourmate.com.

Flash Virtual Tours

On November 30, 2007, the first virtual tour of Acadia National Park was launched on the park's website. Called the Acadia *eCruise*, this interactive online tour takes participants on a virtual exploration of the park's coastal islands and the surrounding waters of the Gulf of Maine. Participants can tailor their experience by choosing from a variety of media—audio, video, text, panoramic images, maps, and photographs. The *eCruise* includes the sounds of calling seabirds and crashing waves; the sights of lighthouse beacons and coastal scenery; close-up views of museum content and tidepool animals; and more.

Acadia National Park staff, led by graphics and technology specialist Todd Edgar, developed the *eCruise* through a partnership with David Restivo of Glacier National Park. Restivo, the 2007 recipi-

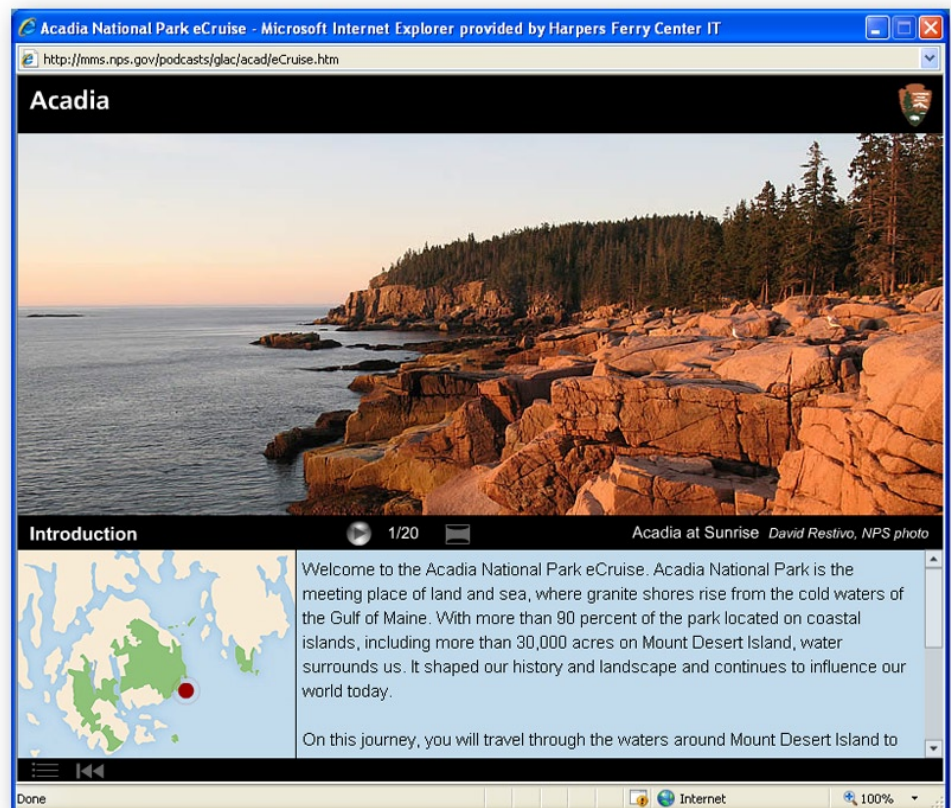


Tour-Mate

ent of the National Freeman Tilden Award for excellence in interpretation, had previously created a series of *eHikes* for Glacier using Adobe Flash software. Support from Tom Davies of the Northeast Region's Interpretation and Education Office was also instrumental in making the project possible. The Northeast Region paid for Restivo's time and travel, which totaled one week at Acadia National Park.

Edgar, who had seen Glacier National Park's *eHikes*, recognized that this interactive online format was well suited to Acadia's own interpretive goals. Although the ocean and offshore islands play an integral part in the story of Acadia National Park, only a very small percentage of the park's two million annual visitors actually get out on the water or visit the islands—which are accessible only by boat. "A virtual tour," according to Edgar, "would be a perfect way to provide an engaging interpretive experience about the ocean and offshore islands around the park."

Both Edgar and Restivo are well-versed in Flash. Adobe Flash software is the most advanced authoring environment for creating rich, interactive content for digital, web, and mobile platforms. By developing and delivering applications with Flash, authors can deliver content over the Web via the ubiquitous Adobe Flash Player software to ensure their content reaches the widest possible audience.



Acadia National Park's *eCruise*, a Flash-based online virtual tour.

One key to successful development of the *eCruise*, according to Edgar, was the creation of a good interdisciplinary team of interpretive specialists, subject matter experts, and technical experts. Once park staff agreed upon the interpretive focus for the virtual tour, they then put together a comprehensive storyboard, developed a script, and compiled a list of text, photographs, maps, and video footage for the virtual tour.

Edgar emphasizes that building a Flash application like the *eCruise* requires considerable technical expertise. “Developing a virtual tour like this,” he cautions, “requires expertise with digital photography, video editing, and graphics software.” Among the software the Acadia team used to prepare files for the virtual tour was Adobe Photoshop for photo editing, Adobe Premier Pro for video editing, and Audacity for audio editing. Restivo provided Adobe Flash programming expertise, including knowledge of ActionScript, which is critical to the development of a robust interactive online application.

Clearly, development of the *eCruise* was a team effort, combining the subject matter expertise of park staff with the digital media and software skills of Edgar and Restivo. By combining this expertise into their team, Acadia was able to develop an effective online interpretive experience. Edgar estimates that a total of about 280 staff hours were spent on the Acadia *eCruise*.

To take the Acadia National Park *eCruise*, logon to www.nps.gov/acad/photosmultimedia/virtualtour.htm. To take one of Glacier National Park’s *eHikes*, logon to www.nps.gov/glac/photosmultimedia/ehikes.htm.

To see another example of a Flash virtual tour, logon to *The Clara Barton Interactive Experience* at www.nps.gov/features/clbalfeat0001/flash.html (see “*The Clara Barton Interactive Experience*,” May/June 2007 *HFC onMedia*, page 2).

Audiocasts, Videocasts, & Podcasts

Several national park websites offer audiocasts, videocasts, or both. These media files can be played directly from a park’s website, and in some cases you can also download the files to your local computer for playback at a later time. Many of these audiocasts and videocasts are also available as “podcasts.”

A podcast is a series of digital-media files, such as audiocasts or videocasts, which are distributed over the Internet using syndication feeds for playback on portable media players and

computers. The term podcast, like broadcast, can refer either to the series of content itself or to the method by which it is syndicated; the latter is also called podcasting.



This icon identifies an RSS feed on a Web site.

Though a podcast may be directly downloaded or streamed from the podcasters’ own website, a podcast is distinguished from other digital media formats by its ability to be syndicated, subscribed to, and downloaded automatically when new content is added, using an aggregator or feed reader capable of reading feed formats such as RSS (Really Simple Syndication). Apple’s iTunes website is a popular place where users can subscribe to a podcast and receive automatic downloads when new content is added.

Audio PastCasts

In May 2006, staff from Jefferson National Expansion Memorial attended a meeting on podcasting sponsored by the St. Louis Attractions Association. These staff members included chief of museum services and interpretation Mardi Arce, education director Elisa Kunz, education specialist Peter Hovey, and archivist Jennifer Clark.

Clark was already familiar with the emergence of podcasting as a popular communications medium. She often downloads podcasts from Apple’s iTunes website and listens to them during her spare time. Energized by what she learned at the St. Louis Attractions Association presentation, she downloaded several audio podcasts from Colonial Williamsburg and burned a CD to share with her colleagues.

The following summer the park saw an opportunity to begin producing their own audio podcasts. Superintendent Peggy O’Dell suggested that the 2007 “Live on the Levee” event, which is held every summer adjacent to the park, would be the perfect venue to launch these podcasts.

The park produced six audio tours, called PastCasts, which visitors could download to their iPods or MP3 players at home and then take to the park. These audio tours were developed to complement live interpretive presentations given by park rangers and volunteers at five stations around the park during “Live on the Levee.” To identify which PastCast tour stop the listener was at, the park placed numbered markers around the park.

Content and scripts for each PastCast were developed by park education specialist Elisa Kunz and exhibits specialist Myron Freedman. Freedman, who’s had extensive acting experience, helped develop script details, served as voice talent on some

of the audiocasts, and recruited voice talent. Park historian Bob Moore also furnished his subject matter expertise.

To produce the PastCasts, the park purchased a RODE Podcaster USB microphone, hooked it up to a laptop computer, and made the recordings in the park's theatre. Exhibit specialist Sue Ford made the recordings using Audacity on a Windows-PC laptop, then ported recordings to a Mac OS computer where she edited the recordings using Apple GarageBand.

The entire process included recording, mixing sound, and eventually adding music as Ford became more familiar and competent with the software.

"Obtaining royalty-free music was a challenge," cautions Clark. "We eventually worked out an agreement with a musical group that has performed here many times, and they let us use their music for free as long as we gave them credit."

Each PastCast is between 17-25 minutes long. To hear the park's PastCasts, logon to www.nps.gov/jeff/photosmultimedia/pastcast.htm.

Video Parkcasts, Ranger Minutes, and Roving Ranger Videos

Parkcasts, Ranger Minutes, and Roving Ranger Videos are short online videocasts in which a park ranger shares interesting stories and information about their park. Among the parks who are using these audiovisual formats are Acadia National Park (Ranger Minute), Black Canyon of the Gunnison National Park (Parkcast), Grand Canyon National Park (Ranger Minute), and Yellowstone National Park (Roving Ranger Videos).

At Acadia National Park, the Ranger Minute videocasts have evolved over time, starting out as video recordings of rangers documenting their competencies for training. Todd Edgar, the park's graphics and technology specialist, has fine-tuned the format and now focuses on presenting short, concise topics. He asks seasonal rangers to think of interesting subjects they can address in the format of a 1-2 minute video presentation. This approach forces each ranger to think about a specific topic, focus on the topic content, and create a script for the presentation. Edgar helps them think about what they'll say, how they'll say it, what setting is best suited to the content of the presentation as well as for video and audio recording, and what supplementary visuals to include in the presentation.



Park visitor watches a "Roving Ranger" videocast at Yellowstone National Park. (NPS Photo)

According to Edgar, the Ranger Minute format gives viewers a personal experience with a park ranger. "The short presentations provide a one-to-one interface for visitors to the park website to listen to and learn from a park ranger," he says. "It really gives park staff a way to connect with visitors in a new and effective way, and to reach new audiences."

Edgar started out using free Windows Movie Maker software, but is now using Adobe Premiere Pro video editing software.

New Adobe Premiere Elements, which only costs \$99, offers most features parks might need to create simple online videos like the Acadia Ranger Minute.

Black Canyon of the Gunnison National Park has developed a total of 96 parkcasts that tell 48 distinct stories. According to Phil Zichterman, the park's former chief of interpretation, the park began the process of identifying and building content three years ago. Zichterman's goal was to provide unique, non-linear presentations for each of the park's 12 major viewpoints along the canyon's edge.

"Visitors typically drive to just two or three viewpoints during their visit here," he says. "But when they come to our website, they have access to parkcasts on all 12 viewpoints." To provide consistency to their presentations at each viewpoint, the park identified four common themes that tied the 12 sites together: geology, history, life science, and recreation. Each parkcast provides ranger narration with site-specific video, serving as a personal tour guide.

As he surveyed the many technologies and devices available to host and present the park's content, Zichterman focused on devices users already owned. With the growing prevalence of iPods and other portable MP3 media players, he thought it best to develop media for these devices rather than have the park get into a rental program or purchase hardware technology which could quickly become outdated.

"Cost to the visitor was a big concern," recalls Zichterman. "The park had just doubled its entrance fee, so adding a fee for a rental program was not a good option."

Zichterman echoes the advice given by Acadia's Todd Edgar: "Keep your presentations short. Users have short attention spans. Don't try to put too much content into a single vid-

eocast.” Black Canyon’s parkcasts are just 2-3 minutes long. Zichterman also agrees that having technically-savvy staff is indispensable for developing and delivering new media. To fill this need at Black Canyon, Zichterman hired Alison Koch, a SCEP (Student Career Experience) employee who was working on a Masters degree in natural history filmmaking at Montana State University. Koch provided much-needed technical expertise for the development and production of the parkcasts.

Other hurdles Zichterman warns that parks need to address are intellectual property rights and Section 508 accessibility compliance. “Make sure you have use rights for any video footage, photographs, or music you use in your podcasts, and make sure your videocasts are accessible to people who are deaf or have hearing loss.”

For more information on accessibility requirements for government videocasts, see “Accessibility Best Practices for Video Podcasts” on the Harpers Ferry Center website at www.nps.gov/hfc/accessibility/access-podcasts.htm. To watch a park videocast with open captions, logon to the Hawaii Volcanoes National Park website at www.nps.gov/havo/photosmultimedia/multimedia.htm.

To watch one of Acadia’s Ranger Minutes, logon to www.nps.gov/acad/photosmultimedia/rangerminute.htm. To watch one of Black Canyon’s parkcasts, logon to www.nps.gov/blca/photosmultimedia/parkcast_srtour.htm. To watch one of Grand Canyon’s Ranger Minutes, logon to www.nps.gov/grca/photosmultimedia/rangerminute.htm. To watch one of Yellowstone’s Roving Ranger Videos, logon to www.nps.gov/archive/yell/insideyellowstone/index.htm.

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