

National Geographic

National Geographic embraces digital media to increase reader engagement through interactive design.



LOOKING BACK over its 125-year history, the National Geographic Society and its flagship publication, *National Geographic* magazine, have a lot to celebrate, including a proud history of research, conservation, and education. The ability to adapt and stay relevant over the years has enabled *National Geographic*, which began as a scholarly journal for the scientific community, to evolve into a brand that extends beyond print to films, television, radio, music, books, videos, maps, and digital publishing.

Most recently, the nonprofit organization's achievements in developing iPad, iPhone, and Kindle Fire editions of its magazines, as well as several specialty apps, have made it a leader and role model within the publishing industry. The National Geographic Society's success in taking

advantage of new technologies has also enabled it to develop creative new ways to fulfill its mission: to inspire people to care about the planet.

Establishing A Successful Foundation

In 2006, *National Geographic* began a two-year effort to streamline a labor-intensive print production workflow. Paper-based proofing was an inefficient, manual process that contributed to a long production cycle that lasted 15 weeks, from layout and design through going to press. In addition, the magazine was frustrated by its aging Quark-based desktop publishing software and file management system.

That's when the magazine turned to Technology for Publishing for help. Margot Knorr Mancini, Founder and CEO of TFP, had experience helping publishers evaluate and streamline their

workflows and was well positioned to work with senior staff from *National Geographic's* IT, editorial, and production groups. Together, they began to reshape the magazine's editorial, design, and print production workflow into a process that would better serve its business requirements—with more nimble production processes, and more-timely content that could be used across multiple platforms or formats.

"When we started, everyone at *National Geographic* had their own way of doing things; no one could describe what their workflow was," Knorr Mancini said. "We facilitated discovery sessions where we dug in and openly examined why things were the way they were. We were able to get to a point where everyone got the same understanding of the existing process and what it would take to dramatically shorten the production cycle. This was a pivotal

point in enabling NGS to move forward."

TFP guided the magazine's staff through the process of documenting steps in the current workflow, and organized workshops to gather stakeholder input and consensus for new processes. After a detailed evaluation facilitated by TFP, *National Geographic* decided to switch from QuarkXPress to InDesign, and from QPS to vjoon's K4™ product for workflow management, to take advantage of the new software's features and stability.

As head of the graphics team, Bill Marr, Creative Director of *National Geographic*, was eager to make the switch from Quark to Adobe InDesign. As part of this initiative, Marr won support from the editorial team to adopt Adobe's InCopy as well, to facilitate text editing and fact-checking.

Once the software decision

was made and a new workflow was outlined, TFP continued to work with *National Geographic* throughout the implementation, providing training in the use of the Adobe products and support for the new editorial system.

“TFP is a critical part of our team. They have helped to establish best practices, educate us as to what other publishers are doing, and help us to understand what tools are in the marketplace,” said Dave Smith, Vice President of Publishing Systems Technology for the National Geographic Society, who was a member of the project team that worked with TFP. “They document a process, help us to understand the benefit of the process, and share how other publishers are solving these same problems.”

Within a year, *National Geographic* had shaved three weeks off the magazine’s production cycle, reducing it from

15 weeks to 12. It was also able to cut costs and manual labor by reducing the need for paper-based page proofing, and it streamlined processes and collaboration across departments.

Although they didn’t know it

publishing technologies that would soon be on their way.

Embracing Digital

National Geographic was an early adopter of digital publishing technology and had already

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yet, the changes implemented with the help of TFP had positioned *National Geographic* to take advantage of cutting-edge digital

released its first tablet edition of *National Geographic* magazine for both the Kindle and Nook in April 2010.

During the first year, production of the digital magazine was outsourced to Zinio, a digital newsstand and publishing services company. At the time, that platform didn't support interactive elements, so the magazine's first 12 issues were produced as PDF replicas of the print editions.

Shortly after Apple released the iPad, the *National Geographic* creative team began a serious search for a digital publishing solution. Their goal: to produce a digital version of the magazine that incorporated interactive features for a richer reader experience.

Marr wanted to provide tablet users with the same visually engaging experience that readers of the print publication had come to expect, and give the design team greater artistic control over the final product. Identifying technology that would enable the magazine to take advantage of the digital medium's interactive features

was a key criterion. Smith, for his part, wanted to ensure that the technology selected would be one that would support the expanding needs of the organization and that his team could support in-house.

When the team began exploring potential technologies, they found very few options on the market. They considered creating a custom solution but wanted to avoid a dependency on outside developers for custom updates and support.

In the early months of 2010, when Knorr Mancini approached Marr and Smith about Adobe's Digital Publishing Suite (DPS)—an emerging technology that was yet to be publicly announced—the timing couldn't have been better.

As one of the industry leaders in cross-media technologies and process, Knorr Mancini had been following the prerelease development of DPS and believed that it would put the right mix

of InDesign-accessible tools, interactivity, publishing control, and industry standards into the hands of the team at *National Geographic*.

The success of their earlier workflow project had established a trusted partnership between TFP and *National Geographic* and positioned the organization for a unique opportunity to be on the leading edge of digital publishing technology.

Building In-house Expertise

In December 2010, *National Geographic* worked with TFP and the Adobe DPS prerelease team to publish the "50 Greatest Photographs" app for the iPad. "That was our proof of concept," said Marr. The app uses imagery and interactivity to engage readers and tell the story behind some of the most stunning photographs taken throughout the magazine's

history. Features include video interviews with the photographers, geo-tagging, and interactive timelines.

In January 2011, the publishing team began to design and plan for the April 2011 special edition of *National Geographic*, a single-topic issue called “Water: Our Thirsty World.”

This was the first digital edition for the iPad that *National Geographic* designed and produced entirely in-house. The tablet edition was designed after the print version, with the help of a production designer directed by the print design team. In addition to the content and stunning photography from the print edition, the tablet version included extra photo galleries, rollover graphics that animated maps and timelines, and video profiles of the photographers.

In March 2011, the team published its first tablet edition of

National Geographic for the iPad using DPS. Since the design and production teams were already familiar with InDesign, training was focused on creating the interactive elements.

Following that initial in-house effort, TFP helped the group adjust

most difficult part of introducing something like the tablet edition into our workflow was the idea that we were actually going to look at the art and the photo galleries very early on, alongside the print edition,” he noted. “TFP had to come in and basically help us to

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workflows so the photographers, cartographers, and designers would begin thinking about creating digital assets early on in the process, Marr said. “The

organize what we could align.”

Learning to produce a digital publication in addition to the print issue, and to plan for new types of content for interactives, was

an early challenge. TFP met with the content teams regularly to help design achievable processes. Working with Marr, who pushed early on for integrated content workflows, TFP was able to help the teams make adjustments with each successive issue of the magazine to create increasingly effective workflows.

Marr explained, “Up until recently, the print product was designed first and then the tablet designers would take files to create a digital interpretation of the print. Now they are working much more in parallel. It is a modified workflow, and things we can integrate, we do. There are differences between print and digital that require everybody to think differently—to think about motion, sound, and something happening over time. Now, when we first pitch a story to the editor, we start to talk at that time about the various possibilities—blog,

video, or sound. The tablet designers work with the print designers to build the interactive elements and the layout as the print magazine is being produced.”

For both the tablet publications and the web, copy gets exported from the publishing system after it has been “locked down” for the print version. The final version is proofread for each device, and the web content, exported to XML, is available when the print magazine hits the newsstand.

There was a learning curve for the entire staff when it came to understanding the limitations and opportunities of the new medium. In addition to learning how to incorporate interactivity and rich media, designers, editors and photographers needed to address other considerations that are specific to digital publishing. For example, managing the physical size of content is critical—content

should be optimized for high enough quality, but compressed enough to create an optimal download size.

Analytics are another important component. Data on how users interact with a digital magazine, for how long, and at what depth is a significant tool for future planning. The ability to capture accurate analytics begins with the designers and how they create and label all interactive content, buttons, and states so that it’s easily identifiable in analytics reports.

Poised For Growth

According to Smith, keeping up with new technologies is a challenge that all publishers share, but *National Geographic* has reaped the benefits of TFP’s close relationship with Adobe.

“Because of TFP’s strong technical background and extensive industry experience, we are able to stay abreast of ongoing

changes and developments as the landscape evolves,” Smith said.

TFP continues to work with *National Geographic*, helping the staff take advantage of the features that the latest versions of InDesign, InCopy, and DPS offer, and providing support for updates to DPS, which Adobe released every six weeks through 2012. “Whenever we consider tweaking our systems or process, we look to Margot and her team,” Marr explained. “We consider them to be part of our staff.”

“We think of TFP as an extension of our team,” Smith agreed. “They’ve been a great partner.”

Marr has just brought the production of the interactive Kindle and iPhone editions of *National Geographic* in-house using Adobe DPS. And the organization is continuing to look for ways to more easily incorporate publishing to multiple channels into its workflow. While they

can’t divulge all of their plans, the ongoing consumer demand across devices certainly is a driver in the organization’s decision-making. Marr’s team is exploring other device and web viewer formats for digital magazines to determine their feasibility.

“As new devices proliferate and consumers seek to access our content on more and more channels, we need to continue innovating and streamlining our publishing process so we can focus on creating great content,” Marr noted.

So far, the National Geographic Society has produced more than 40 special-topic apps in addition to its monthly tablet editions of *National Geographic*, *Traveler Magazine*, and *National Geographic Kids*, which are now all produced using Adobe DPS. The digital edition of *National Geographic* magazine has a paid circulation of 217,000 across multiple platforms, and

has received several awards for its engaging design and innovative features, including a 2012 ASME Digital Ellie for Best Tablet App.

And initial metrics indicate that the digital version of *National Geographic* is attracting a younger audience to the print version, helping the magazine to continue to grow its readership—and enabling it to inspire yet another generation to be stewards of the Earth.

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