



BY MOLLY E. HOLZSCHLAG

Turning Chaos into Order: Managing Web Projects

Does chaos rule your Web development roost? Then it's time to define a method to manage your unruly Web projects. In this month's column, I propose a method that combines the best production techniques from the world of media production with those found in the software development environment. This approach provides practices that—should you welcome them into your nest—might help you be less nagged, squawked at, and otherwise nitpicked for past chaotic practices.

Web-site development in today's demanding environment typically doesn't follow any clearly defined methods or standards of practice. This may be due to the fact that the development of Web sites is perceived as an entirely new venture. And although there are scads of "how to" Web-design resources available, it's interesting to note that precious little information has been published about how to effectively organize and manage the development of Web sites.

As a result, each Web developer or design shop must draw from seat-of-the-pants experiences to create effective methods. And, as effective as these methods might be for one organization, they can translate poorly to the next. This makes it difficult for new hires to quickly adapt to the methods of a given business. However, there's no reason that Web-site project management can't be refined using the wisdom of existing methodologies, and be brought up to standard with a modicum of practices.

Drawing Inspiration from Media Production Techniques

Whether working on a film, TV program, product launch, or package branding, media developers have a basic system that is used to coordinate the process. Media production typically follows these steps, in sequence:

1. Preproduction
2. Production
3. Publication
4. Post-publication

Each of these steps is essential to the success of a media

project. In the preproduction or planning phase, brainstorming is followed by the development of a plan of action that carries the production through to fruition. The planning phase is followed by hands-in-the-dirt production work: the task-by-task process of producing the media in question. Publication is the process by which the media is made public, and post-publication is the cleanup, review, and examination of the project to determine its future positioning, or filing it away as a job well done.

Table 1 shows how this methodology works in the context of Web development.

Many professional Web developers follow these steps, or similar ones, when developing their projects. That's a good thing! Structural organization makes for a better end result. However, there are some important lessons to be learned from examining what's happening in the technology realm, too.

Software Development Concepts

Software developers will likely be familiar with rapid application development (RAD) methodology. This technique, or methods derived from it, are often put into place during the production and deployment of software products.

Significant principles in the RAD process include:

- One project manager manages the project throughout its lifetime.
- Organization and querying of focus groups aids in positioning and refining the product's efficacy.
- Effective communication ensures that personal conflicts are managed promptly, and that the development process is a positive one.
- Inventory and reuse of existing technologies enables materials to be rapidly incorporated into the project, reducing workload.
- Clear scheduling better controls the workflow.
- Existing risks that can impede the process are examined.
- Management software helps organize scheduling and communications in a shared environment.

MEDIA DEVELOPMENT TECHNIQUE	CORRESPONDING WEB DEVELOPMENT ACTIVITIES
Preproduction	Brainstorm the approach Gather and generate content Construct the site map Develop and approve an interface Determine technological needs
Production	Develop and refine content Get graphics production underway Produce HTML and scripts Deploy database and server-side programming Organize server administration and hosting
Publication	Aggressively test site for cross-platform, cross-browser compatibility Review code for consistency and functionality Check all links Review site for spelling and grammar concerns Upload site to the live server where it will reside
Post-Publication	Perform routine maintenance Add regular updates and additional content to the site as needed Promote site to the public (or within the organization in the case of intranet development) Discuss future expansions and redesigns

Table 1: Web development activities as they occur when following media production techniques.

These methods can serve Web developers by providing techniques to increase productivity, optimize time spent on the project, and output a quality site. In Table 2, I've put together a list of seminal techniques in software development, and demonstrated how those techniques can translate to the Web environment.

Combining the Techniques

Individuals and Web shops striving to create a standardized method for achieving project goals can borrow practices from media and application development. By combining techniques from each of these work worlds, one can arrive at a very efficient method.

At the center of the method is the Web project manager. He or she oversees the project logistics and works with each team to ensure that the work is accomplished in a timely, appropriate fashion.

From this central figure extends the individuals or teams who together envision, produce, and refine the site's development. These teams incorporate members from a number of specialty areas, including content developers, Web graphic designers, HTML and client-side coders, server-side programmers and database managers, server administrators, and marketing and

publicity personnel. Other relevant teams exist in different scenarios, including the areas of sales, client relations, and financial management.

Once the manager and teams are in place, and a project is on the table, the following techniques can be employed to aid in the development of the site:

- 1. Preproduction.** This phase now includes all of the media development steps listed in Table 1 combined with the setup of focus groups, schedule development, and risk assessment.
- 2. Production.** During the production phase the teams are hard at work performing their tasks. It's the Web project manager's job to hold regular meetings to ensure open communication, keep the schedule up to date, watch for potential obstacles, and find solutions to problems or delays that occur. This is also a good time for the project manager to reconvene focus and study groups for early-phase testing of the site's technology and interface. Relevant feedback can then be incorporated immediately into the production.
- 3. Publication.** Once the site is published,

feedback groups are again reconvened and attempt to "break" the site. Essential repairs, upgrades, and necessary changes are made in the first week of a site's life.

- 4. Post-Publication.** Unlike other forms of media, such as print, Web sites are live entities. They grow and change; they must be revamped and revised at various stages of their existence. Maintenance, updates, and redesigns should all be planned well in advance of the need to do so. This gives the development team the upper hand when it comes to managing the site effectively.

By revisiting the structure of media development and adding the intelligence of software development techniques, Web teams will have a powerful and organized system that, when followed properly, can keep projects on track, making clients and audiences much happier!

The Web Project Manager: A Closer Look

Since this model relies heavily on the Web project manager's role, a closer look at what is demanded of this position and how the manager can be most effective in achieving goals is warranted.

A project manager acts as a liaison among diverse specialists. Such a manager must be well-versed in a variety of fields, since he or she will be working with designers and content developers, programmers, system administrators, and marketing professionals.

To successfully communicate with such disparate personalities, make decisions, organize tasks, and manage a project from concept to fruition, a Web project manager must have a broad knowledge of the elements of Web design and business management.

Web project managers come from a variety of backgrounds including general management and software development. Depending upon their experience, they may come from some area that provides them with depth in a particular specialty. Over time, the project manager will gain depth of skills, but the immediate need is to become familiar with the broad range of specialties—and the jargon unique to each specialty—that make up Web development as a profession. This enables the project manager to efficiently communicate needs between team members, and also make relevant suggestions during various phases of a project.

A Web project manager:

- is responsible for a given Web project from start to finish (and often beyond);

- assigns tasks, runs meetings, sets the tone and course of a project;
- is a visionary, able to see both logistical details and long-term results;
- understands the technology and design of Web development with enough breadth to make appropriate decisions regarding a given project;
- is able to delegate responsibilities and trusts team members to get the job done;
- in some cases, is responsible for aspects of client relations, legal issues, and fiscal concerns;
- is diplomatic and understands corporate and organizational politics.

Other concerns for Web project managers might also include workflow risk management, budget development and adherence, and marketing.

Tips for Web Project Managers

For Web projects to run most efficiently, it behooves managers to learn tips and seek out resources to educate and empower them in their roles. The following tips will be helpful to the less-experienced project manager, and provide seasoned managers with some guidelines.

Ask team members about issues that most concern them. This action not only aids the Web project manager in finding out more details about a given specialty and how those details relate to the project, but it also helps create respectful relationships between managers and specialists.

Schedule milestone goals. By evaluating all of the known variables, factoring potential risks into the picture, and, in some cases, setting up test environments to see how long a particular task might take, the project manager can effectively set specific goals for each team and for the project in its entirety. Naturally, problems occur (team members get sick or have personal emergencies, project directions change in midstream), and these can affect scheduling. A skilled project manager will anticipate these kinds of concerns and respond quickly by adjusting goals and deadlines where appropriate.

Coordinate efforts between teams. Communication is essential for projects to run efficiently. It's up to the project manager to hold meetings, review workflow on a daily basis, and quickly pick up on any communication problems, offering support and suggesting solutions.

Maintain calm in the face of chaos. Readers

SOFTWARE DEVELOPMENT TECHNIQUE	CORRESPONDING WEB DEVELOPMENT TECHNIQUE
Feedback and focus groups are organized and queried.	Employees of the Web shop can be organized into groups and asked to provide feedback about what their management and organization needs are. Focus groups should also comprise people from outside of the organization. These groups can be reconvened throughout the process to check on the site's efficacy.
Existing technology should be reused wherever sensible and possible.	An inventory of all existing content (brochures, photos, and interactive media) will help developers instantly see what they can recycle or update. This step will be especially useful for those managing a site redesign, helping determine which information can be used in the new version.
Scheduling and risk management are imperative for quick yet efficient application development.	Development and adherence to a schedule is critical to deploy a quality Web site in step with the evolution of the project and company goals.
The project is managed by a project manager.	Assigning a single individual to manage a team for the lifetime of the project ensures that milestone goals are met. For projects spearheaded by a single individual, using management software is routine.


Table 2: Integrating software application development techniques into the Web design process.

who work or have worked in managed environments are all too aware that a trickle-down effect occurs. If a manager is uptight, upset, negative, emotionally labile, hypercritical, or unreasonable in any other way, members of the team will often pick up on those traits. A successful project manager maintains his or her calm, is professional, communicative, and stands firm with kindness and grace. Personalities who are prone to fits of fiery temperament (such as myself) should avoid the Web project management role, or aggressively seek to improve their skills.

Motivate through acknowledgment rather than through threats or inducement of fear. Management is an art that demands professionalism. Managers who use fear or threats to motivate teams create unhappy work environments and cause undue upset for the individuals with whom they work. I had a team manager at Microsoft who used to threaten to take our contracts away if we didn't perform. This created an incredibly unstable work environment, increased stress and unhappiness, and ultimately affected the team—made up of some very highly moti-

vated, skilled individuals—by reducing their morale and subsequently, their performance. A good project manager is honest about problems, but equally honest about successes, and gives credit for the contributions of every team member.

Lights, Camera, Action!

We're all aware that Web development is a challenging profession. Every day we must learn new methods of approaching problems, incorporate new technologies and standards, and balance a wide range of concerns with style. Our work methods are directly related to our ability to manage projects and simultaneously give us time to deal with the nature of the changes to which we are constantly subjected. By standardizing approaches, we provide a best-case scenario for our project's—and our personal—success. 

An author, instructor, and designer, Molly has been honored by Webgrrls as one of the 25 Most Influential Women on the Web. She has written and contributed to numerous books about the Internet and the Web. Visit her Web site at www.molly.com.