**THE MANAGER'S GUIDE TO RUNNING A COMPANY WEBSITE**

*Are you being held hostage by an over-tasked IT department or a webmaster who keeps you in the dark with high-tech mysteries?*

*Perhaps your situation isn't as dire as this, but in an economic environment where websites have proven success and increasing importance, understanding website management may save you both headaches and dollars.*

**Overview**
This white paper reviews the short history of websites and how some companies have fallen into a knowledge void on how to continue managing the website. Changes in software, Internet servers and skill levels required are discussed to reveal where the real costs are today. Finally outsourcing is compared with internal costs to reveal how a manager needs to blend both for successful website management.

**Topics**
Content management, webmaster skill, website cost containment, in-house webmasters, outsourcing web content, web writers, database driven websites.

The early days of the Internet spawned the term "Webmaster." While this title seems to indicate a mastery of the web, in just ten short years since the term was developed, it is clearly a misnomer.

Requiring a technical programmer has become a thing of the past. In the early days, a webmaster spent most of his time writing HTML code. Today, almost no "programming" is required to accomplish a polished website. In fact, the technology available today makes early websites look like child's play, no coding required.

Today's reality is that web workers spend the vast majority of their time in design, layout and content development, which includes text. Where website maintenance is concerned, the skill-set needed is clearly no longer in the technical domain. While technical skills are necessary at the web-server level, the relative cost of this portion of maintenance is now less than one-percent.

Most managers are busy running their operations, and although they have become proficient web users, they have not been exposed to the complexities of solid website management. The clear importance of the Internet to commerce, education, communication, and leisure is no longer seriously debated.

Unlike most operational costs, few managers really understand the needs and costs of managing a website. Becoming familiar with these costs is critical, as budgets of websites will continue to rise due to the broad range of business and marketing functions that consumers now demand.

The counter balancing benefit is that many of these functions can be made more efficient using the Internet, which is creating a positive cost/benefit. Therefore, cost-conscious managers will invest more into their websites. Over time, this will create some efficiencies in business. However, the overall trend will be to shift more cost to website and Internet applications, taking a larger percentage of the company budget.

For these reasons, managers must strive to really understand the skills required, plus understand how to optimally use the appropriate skills needed, in order to keep pace with competitors. This white paper explores a realistic view of what it now takes to maintain websites, the skills required, and the subsequent costs incurred in the process of hiring or outsourcing to qualified personnel, in order to accomplish one's website objectives.

It is useful to briefly recount the development of what has been called "Web Design." The term *web design*—what a webmaster actually does, is dramatically different compared with the early days of the Internet. Many observers mark this date as 1995.

The Internet we know today came into existence when the *World Wide Web(www)* was created as a subset of the Internet. This is why so many websites have a www. preceding the domain name. Today, few domains still require this prefix, and the "www" is now used less often.

The difference between the *www* and the original Internet was the HTML coding language. HTML stands for Hyper Text Markup Language. This programming language was a brilliant way to format text and images in color, in a way that required very little memory, so that it could be transmitted over slow telephone data lines.

Using HTML in the early days was quite literally programming. It is a dull but precise task of placing text and boxes (with images) at a specific location on the page. Every tab, line break, font, headline, etc. had to be written in programming language. This is the environment in which the word *webmaster* was developed.

Following page layout and publishing software development, several innovative companies immediately realized that this laborious and precise task was taking too long and could be done more easily by using a graphical interface - using a mouse to move an image and allowing the program to write the underlying code.

While early users were captivated by the online access of formatted text documents, the design and layout was just awful. This fact was clearly understood by the Adobe and Macromedia, who have always had a design orientation. These and other companies developed software,

making layout relatively easy and fast compared with programming. Quite literally, HTML programming became obsolete for most design. (It is still useful to understand basic HTML for professional web maintenance, but manual changes represent a small percentage of today's industry.)

With good web development software available, web design quickly became the domain of designers. Most programmers then struggled to understand the designer mind, and rarely do programmers and designers have the same skills set. Today these skills sets overlap only minimally, but each should understand the value of the other. Managers must understand this difference as well.

Today Macromedia has moved on to sophisticated applications that create code which only a top-notch software engineer can understand, let alone write. *Flash*, Macromedia's brilliant animation software, is the world standard; it is creating capabilities for designers that will rival television.

In 1987, early in the game for desktop publishing, computer nerds learned how to use the formatting of the old word processors. Designers quickly took over the leadership—they understood the visual dialog that a wonderful layout produces. Today, most experienced computer users can easily use Microsoft Publisher. However, for higher-end publications, professional graphic designers are still used; not for their application competence, but because they are designers who have mastered the tool. Having a grand piano does not make one a concert pianist, design is no less the case for publishing or websites.

This is what has happened in the website industry. Many businesses have someone who can manipulate a web design program. This is no different than making everyone who can type on a word processor into a writer! Having a technical person design a website does not mean a business will be well served.

This brings us to the threshold of website maintenance, where technology has empowered those skilled in other crafts such as writing and design. Software developers have handed the user wonderful tools—applications that write HTML (such as *Front Page* and *Macromedia*). This new relationship is taking a small part of what was the IT domain, empowering the manger to manage the website to the benefit of the organization. This is better illustrated by a discussion the skills sets necessary for today's typical website.

**SKILLS**

To understand who should be contributing to the website, it is necessary to know how much of each skill set must contribute to the total. The specialized tasks are listed below for the basic site which does not include online applications.

| Task | Skill | Comment | Cost | % of cost |
|---|---|---|---|---|
| Server selection and hosting set up | Technical | Easily done by outsourcing company[1] | Inexpensive | 1% |
| General architectural navigation of website | Webmaster | Important for high level of logic, skill, and experience | Moderate | 3% over life Initial:15% |
| Content Category planning | Owner or Executive | Internal function; done with above | Internal cost | 10% |
| Web design and layout | Designer | This is an aesthetic job; professionals are recommended for highest value | Moderate | Higher Initial:10%-15% |
| Content flow / Maintenance | Web Tech | This function is now largely automated | Low-Moderate | 3% |
| Content development | Writer or subject authority | Generally internal. | Moderate to High | 65% up |
| Content editing | Web writer | Knowledge of SEO | Moderate | Included in Content Development |
| Search Engine Optimization (SEO) | Ideally done during design process | No additional cost when done by pro | Expensive – done after the design | As high as $100 per page (when done on an existing website). |

[1] This does not include online applications, where it may be necessary to have an in-house server. A complete evaluation for most organizations indicates that serving a website from an in-house server is many times more expensive than a professional hosting company can provide. Outsourcing is also clearly better on up-time and security for all but the largest websites with data applications.

From this illustration, it is obvious that the total cost of maintaining a website is heavily dependent on how the content is created. For a site that might cost $1500 for the semi-technical support, the internal content creation might cost an additional $4000 or more, depending on the internal company salaries. The pronounced issues are that developing content generally requires knowledge of the subject, as well as basic writing skills – technical skills needed are extremely minimal.

**TECHNICAL COSTS**

Technical duties can vary widely in an organization. They are generally allocated to the mission-critical applications for day-to-day operations. They are expensive, and usually in

short supply. The technical issues of today's websites are largely outsourced to large, highly efficient companies called server warehouses. These facilities are far more secure, and staffed by high-level technicians focused on internet servers only. The cost for hosting an average large website is literally in the few-dollars-per-day category (a fee that would be used up by internal technicians in about five minutes!) When organizations attempt to serve general websites in-house, they spend hundreds of times the necessary costs.

Today, most professional web-techs can post websites and manage the servers on which they work. To correct problems, they simply report issues to the high-level technicians in their server facility. Small and medium-sized companies (having small websites of less than 1000 pages) can get hijacked by IT folks who want to "play" with web technology. Websites are anything but toys. For some industries, they are becoming a major part of corporate and brand communications, a job traditionally left to marketing, not technical personnel.

Out-sourcing updates to web professions who repeatedly perform the same tasks, is usually more cost effective, even if they charge up to $150/hour, when compared to in-house IT personnel, who are permanently on the payroll at around $40/hour.

The total technical cost is just 1.5% to 2% of the website cost. It is illogical to have a technical person produce writing, content flows, and design. Even when competent in these non-technical skills, they are too expensive – especially when mission-critical issues usually place web updates at the bottom of the task priority list (at least once the novelty has worn off).

Web specific skills such as architecture and SEO (search engine optimization) navigation are very economical to the overall site costs. These elements are critical to the overall success of the site. Since they change rapidly, only those who work full time in this field, with broad exposure to the industry, can maintain the website's search skill and speed.

Another specific skill is design. While web professionals (who have mastered the technical aspects of web applications) can be told where to place an object, only those who are blessed with an eye for design can design. Few talented *technicians* rarely become talented *designers*. Some aspects of design can be learned. However, experience indicates that without natural design talent, it is difficult to maintain economical production speed. A production designer is not only gifted, he or she is fast and understands enough technical aspects to accomplish the design in a cost-efficient manner.

Many larger companies have *design types* who can direct a web tech. While these designers make large contributions to what can be seen, they are unfamiliar with what cannot be seen. Not all designers are technically oriented. This can cause misunderstandings and miscommunications. Web design and maintenance is expensive – whether conducted in-house or outsourced. Best practices in this area are to have internal designers consult with an outside web professional. Good web designers will desire guidance and support in understanding the company's branding, identity, and target markets. Great web content companies will have an

experienced marketing professional on staff to coordinate with the company marketing executive.

**CONTENT**
Content is the critical issue; it is core of telling your company story. In general, this very important aspect of the website usually stays in-house. Good web companies will be open and collaborate with in-house personnel by discussing issues of web writing, SEO, and key word usage (which have become critical since Google).

The cost of producing an advertisement's content is still a small part of the laborious task of collecting the information and images, then writing the words that tell the story. Several categories of content exist, which makes the cost difficult to estimate.

General "billboard" information such as ***About Us, Products, Services, Contact Information***, and ***Events***, is straight forward and easy to provide. However writing a "sell" should have the marketing person's input; technical information may need an engineer, and so on. Therefore, the cost to create good content can skyrocket. However, much of this information should already be prepared in some form, so the investment is mostly made. It simply needs to be re-purposed to another media.

This new media can tell the story in every possible way except face-to-face. Adding illustrations, voice tracks, music, animations, interactive applications, and movies may assist the content. These areas still require competent designers who possess technical skills. While the cost of some of these options is still relatively high, the communication value they can achieve with most audiences is superior in quality.

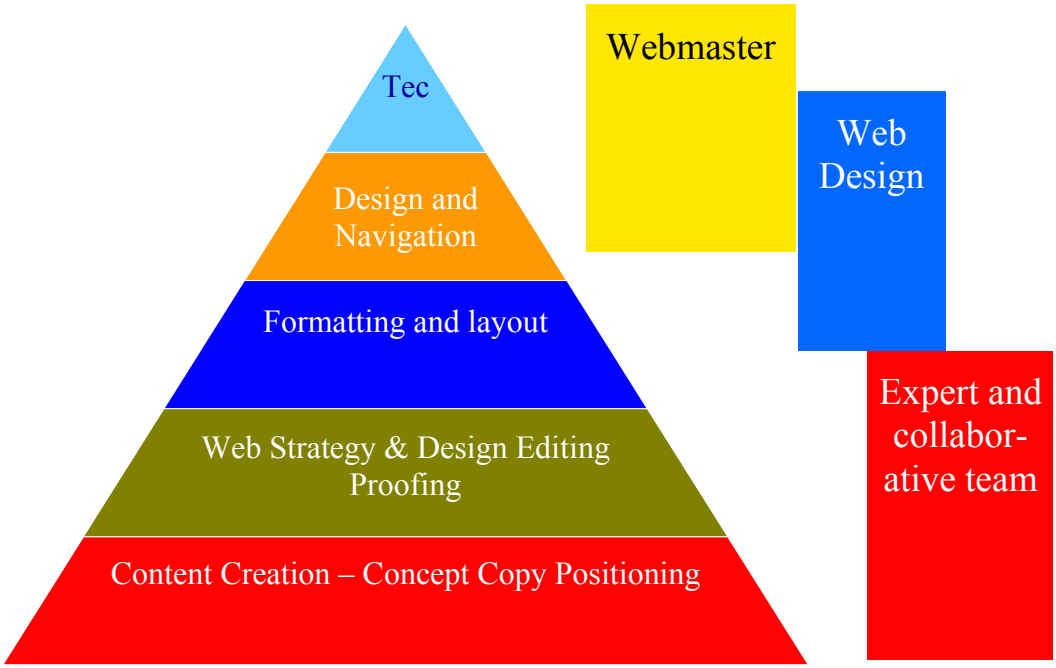
Ads, demonstrations, and other *Flash* features are rarely effectively when done by hobbyists or employees who like to play with technology. In each case, the issue is not the technology, but the communication that is important. Most amateurs are easily identified by pros and viewers alike by how they over-do blinking text, or make a *Flash* intro too long. Today, few professional sites open with *Flash*, as it does not impress the user who does not want to wait for the download to take place every time they log on.

On the other hand, placing these tools on appropriate pages, to illustrate a point or demonstrate a capability, is welcomed by viewers. *Flash* can be expensive, but as professionals become more skilled, the time required to do complex things is dropping, making some *Flash* elements very economical compared with the communication vale.

**INSOURCING VS OUTSOURCING**
Companies have many talented people. By examining the costs of each skill required, it becomes apparent that certain skills are best outsourced, while some (notably content creation) must have strong internal involvement. Few web companies have the expertise to assist with primary content development.

However the technical, web design, and content maintenance aspects make up only 12% to 15% of the cost of a website, and probably just 8% to 10% of the time required. Most companies can easily see this is valuable. But some companies, believing they have large enough websites, may conclude that they can afford professional web staff too. Some times this is the case, but the break-even point to support a web staff can be much higher than expected.

The reason for this is that to in-source, each skill must be provided by someone Even intelligent IT people will need to spend valuable time learning or remembering skills they require only a few times per year. In-house employees are not free. There is a cost incurred for any time spent on a project. Web designers are less expensive than IT people, but the average web designer's total compensation is still over $40,000. While perhaps half the salary of a technical person, a productive web professional can maintain dozens of large websites, each possessing a hundred pages or more. Even a part-time webmaster should be able to post 100 new pages per month and maintain another 1000 pages on an average website. Clearly, outsourcing general website needs is the cost-effective route.




A frequent error by non-profits is to allow volunteers to maintain their website. Too often, these volunteers are hobbyists, who use unorthodox methods, making websites hard to take over by another. They become overwhelmed by the potential demands of the organization. On

the other hand, having volunteers work on content, and outsourcing the critical maintenance issues, creates better websites at a lower cost. Many non-profits can tell horror stories about loosing their domain or a volunteer webmaster missing in action. In these cases, the entire cost of the development is lost; a poor use of donor funds.

**ONLINE APPLICATIONS**
The cost structure changes dramatically when an online application is developed or a database is used as the backend of a website. Both approaches are highly technical and require a manager's careful study.

**DATABASES**
Many database applications were introduced several years ago to handle very large websites where hundreds of new "pages" were added monthly or even daily. The large scale of these huge websites (10,000 pages or more of information), caused programmers to realize that with a user interface they would no longer need to have a webmaster to flow design or post all content.

Naturally, when webmasters were making $50,000 to $80,000 and in short supply, this was very reasonable. If several salaries could be eliminated from the web staff, the high cost of database design would quickly be recovered.

Since then, three things have changed: First, web applications made programming HTML unnecessary, and the number of webmasters soared. Then, Google showed up. Google could not read most database pages, so no one could find them in a search. Major database applications have been stunted since Google came on the scene. AOL has just spent over $100 million to "make sure the search engines could see its pages."

As for smaller sites, the original technical-web programmers continued to keep up with the state-of the-art, database serving to websites. The dream and promise of these expensive (generally five to fifteen times more expensive) database sites was that "anyone" could post a story or update a page. Unknowingly, managers compared what they thought was "free" to web rates of $50 to $100 per hour. They expected trouble-free applications, and that their employees would take to the web like ducks-to-water.

Neither has happened. Changes to a database design are expensive. Remember, this is programming again. Programmers could build a basic site, but changes and enhancements got them into trouble. Many small web programming companies simply abandoned them, leaving the owners with no way to fix or update the site. Many sites did work, but the employees were afraid to post to the internet. They were self-conscious about their writing, and criticized by the publicity and marketing people. When workers did post content, the control of the message was lost and internal tension resulted. This circumstance bred a brand new level of content management software.

The new generation of content management software is complex and very expensive, with many programs starting at over $100,000. Yet, the software only does what every PR firm, advertising agency, and in-house writer does. This software "manages" new content in two ways. First, it keeps track of time-sensitive information and acts on it; second, it makes sure one or two supervisors or editors approve new content before it is posted.

Flow charts illustrating how content-management software packages work would more than fill this page. Yet, people can simply manage the same process. As a manager, you obviously need a huge website to justify this kind of expense.

In our experience, most medium and smaller businesses have not built a work flow chart of their current operations, let alone thought through how to manage content online. Most readers will not need to entertain such investments. This is because many creative new "applets" are being created that can be added to your existing HTML site. These applets include shopping carts (and credit card clearing), calendars, calculators, online surveys, and various data gathering programs.

Many of these more complex tools, such as shopping carts, operate on the vendor's server for all their customers. Your webmaster simply coordinates with the vendor and then links to the entry page for the add-on application. Many of these tools have a low monthly cost for the service. If you need to supply customer information, many accounting and production software packages are building the web interfaces for your existing applications. Because they are familiar with the software, industry and the Internet, they simply provide links to the web design company. You rely on existing support for this new feature on the website. You may find a website company to do this work, it is almost certain that your IT company or the software maker will not be able to do what the web content company does. It is not a wise use of resources to put a communication devise in the hands of IT people of any variety.

Many of the established webmasters of the 1990's who love program coding, can build small, custom, one-purpose applications that can be added to the server. These are useful for gathering data that needs to be downloaded and imported into another desktop application. The advantage is simplicity (for a program) and lower cost. A simple type of application may be from $800 to a few thousand dollars. Each of these functions can be evaluated independently to determine break-even or return on investment of known administrative functions.

Bolting onto other applications and services is a cost effective way to provide functionality, or the appearance of technology that may be needed to needed in some markets to compete favorably. Problems that arise don't take down the whole site, and keeping expensive programmers on retainer is unnecessary.

Know who you are dealing with. While most strictly HTML sites are very portable, applets and tools may not be. Selection of a professional website maintenance company will reduce the chances of abandonment. Individual "webmasters" and very small companies tend to have lots

of technical types moving through the industry. They take the opportunity to build the website, but don't really have an interest in maintaining the site. Most companies that have had a website for over five years can attest to this trend.

Organizations which are serious about their websites will recognize that the low priced small web company may be run by a good designer, but lack a sustainable business model. All small start-up companies have a high failure rate for their first five years. Web design companies are probably higher than that. Look carefully for a company that has been in business for over five years. Then, ask how many people and what skills are represented. Also ask who their major partners are, and what skills they bring to the total package. If they list programming skills first (such as *Java* or a database programming such as *Pearl*), use extra caution— they may be more interested in fun projects rather than keeping your needs first.

**MANAGEMENT**

Each website should have a key inside person who will be responsible for keeping the site current, relevant, and growing. This person needs to be a champion of the Internet, and have the ability to coordinate and motivate others to provide the content.

Because the first and foremost use of the website is for communication and marketing, this person may be the top marketing person in the company. But, many will ultimately need to contribute technical, sales, procedural or product information.

If left to write and post this information on their own, experience indicates that most will perform poorly. It is seen as an additional burden, or "not my job." As a result, successful website projects are almost always driven by the top management, who understand how the website will ultimately interface with multiple functions in the organization.

Outsourcing all "technical" aspects of web management can dramatically ease the tension of teamwork on the website. In this case, using a firm that quickly and cost effectively posts the content that does get developed, boosts morale and increases the creativity of your best people. When the friction of managing a site is removed, friendly competition may even develop between departments.

From a management perspective, even if you have the resources in-house to handle the website, the above experience is valuable to prevent turf wars between the technically oriented, and those who are less technical (often represented by those at management level). Let professionals assist your decisions on how to build and add to the site. This keeps you and your staff focused on your business, much the way your CPA supports your accounting staff.

For companies having dozens of contributors or departments, website management should be structured to be overseen in a way that parallels the business order of the organization. The top executive and marketing person should approve the overall design and navigation. The website, first and foremost, is a communication media. The marketing person should authorize

changes to this structure in the absence of the president. The department head should sign-off on text and images that fit into the page design. Any alterations to the "look and feel" within a page or departmental section need a compelling reason to break the consistency of the site.

These are the kinds of expertise a professional web design and content maintenance company can offer. In addition, you can ask them to police the design integrity across the site. One of the long-term effects of many contributors is what we call "design decay." This is a slow decay of the original design specifications of the site; fonts, logos, design elements, and general style.

Professional designers immediately notice this decay; many others subliminally "see" the decay, but cannot discern why it is wrong until the whole site lacks the original integrity that it originally contained. This is probably the time to comment on aesthetics in general. If your firm has good designers, rely on them. They have a natural eye for such things. Very few companies have "talented" people capable of making these decisions. While companies do have many talented people, those people do not have vast experience or the production quality that professional designers possess. Generally, these talented people only have more talent than you do—almost never more than the designer has.

Remember, the overall design of the site is not for you or your employees; it is for your customers. Understanding your customer requires a careful understanding the customer's demographics and psychographics. If you can find an outsourcing web company with a marketing emphasis, you will get more value in the design. Focus your employee's talent on writing, images, and concepts. Then let the pros turn them into good communication.

**SUMMARY**

The importance of good websites will only increase over time. Good websites require a serious look at what you do, and an explanation of how and why you do it. Websites must be current, and they should have new content continually added, so they are SEO friendly. (For more on SEO see our white paper on this issue).

Companies on a budget should start now to build the site they want to have in two or three years. Even an unlimited budget requires thoughtful consideration, by many of your best people, of the message, so it still takes time.

If you plan to get outside help and to take advantage of the benefit of outsourcing, start looking now for a company you can hire as strategic partners for the long-haul. They can help you with the next step of organization and navigation. Don't make the common mistake of attempting to plan the site by committee. A good web company can literally shorten the process by months. It is not unusual for larger organizations to spend over a year in committee meetings, only to discover that they were working with old concepts or technology.

One of the most amazing and cost effective aspects of a website is its flexibility, when it is designed correctly. This flexibility allows additions and changes as they are ready. It is the antithesis of a glossy corporate brochure—don't treat it that way. Get your people working on what they do well, and hire those who do the rest. You will be ahead in both money and time.

**ABOUT THE AUTHOR**

Ronald Burgess has been involved in computer technology since the Apple II was first used in business. Formally educated in design and business, he has been a consultant to business for twenty-five years in the area of strategic marketing. As an early adopter of the Internet, he has worked with clients to develop websites since mid-1990's. Mr. Burgess has written over one hundred articles on business strategy, marketing, and technology. Out of frustration from working with webmasters, he started RedFusion Media in 1998 with wife Molly and son Jon. RedFusion Media currently manages over 200 websites for municipalities, non-profits, mid-sized companies and agencies, and is the leading web maintenance company in its regional market of Inland Southern California.