500 Things You Need to Know to Succeed in Your IT Career

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10 things you should know about developing soft skills to advance your IT career

*These suggestions are based on the article "*Five tips for developing the soft skills IT pros need*," by Carla Firey* (http://techrepublic.com.com/5100-1035_11-5034443.html).

Most IT support professionals know that the development of technical skills is fundamental to their careers. But learning about the subject matter is only one of the necessary talents every IT pro should cultivate. The human component to excel at your work requires good communication, leadership, and relationship skills, otherwise known as soft skills.

1. Actively listen

Most IT pros tend to be analytical by nature, so when a customer or coworker approaches with a problem, they're likely to hear only the literal statements. Being an active listener requires more focus and sometimes more patience. You need to wait for your turn to speak, ask for clarification, and pay attention rather than thinking ahead to your response.

It's easy to treat a frustrated customer like a technical issue, but empathizing with the person with the problem can help build a stronger relationship with your client. Try paraphrasing the other person's words and repeating them to ensure you understood their concerns. They'll feel as though you're truly listening to their problems, and you'll find out whether you've received all the facts. If you have a few hours in the evening, consider enrolling in an active listening course, many of which are offered by community or technical colleges.

2. Communicate with illustrations

Many customers will become confused—or worse yet, defensive—the moment you start talking acronyms like DHCP, SQL, DNS, and OBDC. A nontechnical person's eyes may glaze over after just 10 seconds of jargon, and it's a guaranteed method of alienating your client. Choosing common terms or illustrations to demonstrate your point will help facilitate communication. Sometimes a simple analogy can help you explain a technical concept. For example, you might compare an IP address to a phone number and explain that the DNS "looks up the phone number" for Web sites.

3. Take the lead

More IT pros are taking on the role of leader, particularly in smaller departments. Even if you're heading up a minor initiative, developing leadership skills will pay off for you. Take the time to observe some of the successful leaders within your company and note their actions and management style. If possible, choose diverse assignments or enroll in team-building classes to increase your knowledge about employee motivation.

4. Nurture your inner writer

Many IT pros need to write and respond to RFQs and create system documentation, but their only exposure to drafting text was writing a high school term paper. The secret is to write the technical material in nontechnical terms. You may also need to rely on visuals, charts, and diagrams to illustrate important points.

The best way to develop this skill is simple: Practice. Each day, choose a problem you've encountered and write the solution with a nontechnical person as your audience. Give it to a friend or family member to review. You might also benefit from taking a business writing course or checking out the Society for Technical Communication (www.stc.org), which offers training, information, and resources geared toward developing effective technical communication skills. For a general overview of best writing practices, download this TechRepublic checklist (http://techrepublic.com.com/5138-10881-729474.html).

5. Step out of the box, physically and mentally

It's easy to spend an entire day in your cubicle or office, but it's not the best career move. You should have a broader view of the company goals and how your contributions fit into the big picture. Sign up for some office committees or meet colleagues for lunch to expand your working relationships and understanding of the company's mission. To help cultivate relationships with clients, stay up to date on world business news. Subscribe to one or more general business magazines so you'll be prepared to speak with any client about current trends and industries.

6. Become a mentor

One of the best ways to practice your communication skills and reinforce your own understanding of technical issues is to provide guidance to a less-experienced colleague. You'll find yourself doing a lot of explaining, demonstrating, and teaching, and in the process, your ability to convey complex information will improve. You'll also develop a reputation as accessible and knowledgeable, which will benefit you now and in the future. And of course, you'll also be providing your protégé with valuable experience and guidance.

7. Learn to inspire and motivate your coworkers

Your attitude has a big impact on how much you accomplish and on the overall dynamics of your work group or department. It may take some effort, but try to cultivate a positive outlook even when you're facing a troubled project or cantankerous coworker. Become known as someone who doesn't complain or denigrate others' work but who instead takes ownership where necessary and strives to improve the process rather than enumerate its shortcomings.

8. Develop the habit of consistent follow-through

IT departments are full of hard-working, diligent tech professionals who plan and launch initiatives or take on responsibilities for particular tasks… and then move on to something else without completing the work. Juggling projects and commitments, often under pressure and within shifting timeframes, is certainly demanding. It's easy to let things slide or lose track of a promise you've made. But successful IT pros learn early that finishing what you start—even if that means handing a job off to another team or escalating a help desk ticket—is essential to a smooth-running IT operation.

9. Don't shy away from compromise

You've probably worked with peers and managers who never give an inch on any substantive issue (or even on trivial issues). They're always convinced they're right, and they're locked into pursuing their own agenda, on their own terms, no matter what. That type of narrow-minded conviction may come from insecurity or immaturity, or it may simply reflect an individual's ingrained behavior or personality. But you'll be more successful if you approach your job with reasonable assurance rather than an uncompromising refusal to consider other viewpoints and strategies. Learn when to take a stand and when to let go. By staying flexible, you'll discover alternative ways to resolve various issues, making you're a more versatile and astute problem-solver. And by showing confidence in the decisions of others, you'll establish yourself as a team player who is worthy of their confidence as well.

10. Cultivate strong organizational skills

Not everybody needs a system to stay on top of shifting priorities and mile-long lists of tasks and responsibilities. Some IT pros just fly by the seat of their pants and manage to deal effectively with scheduled work, meetings, e-mails, client issues, and emergencies. But if that doesn't describe you, it's definitely worth developing some habits to help you stay organized. You might want to invest in some time management training, adopt the practices of the highly organized colleague down the hall, or hone your skills on your favorite personal information manager, whether that's Outlook, Lotus Organizer, Mozilla Calendar, or some other PIM solution. ❖

10 essential competencies for IT pros

By Jeff Relkin

Enjoying a successful career as an IT professional has always presented a challenge, in that you're expected to be a jack of all trades, master of none. Or maybe that's a master of all trades, jack of none. In any case, and however you approach it, you need a bewildering and ever-expanding array of cross-functional competencies to get and stay on top of your game. One thing in particular should strike you about the following list: Most of the competencies lie beyond the traditional IT skill set and could be equally well applied to other functional disciplines. There's less difference between us and "them" than is usually thought.

1. Understanding existing and emerging technologies

Probably the most fundamental competency that all IT professionals need is a deep and broad knowledge base in their bread-and-butter technical skill sets. If we were talking about Maslow's hierarchy of needs, this would be the food and water level: No matter what else, you must have this for simple survival. Take courses, read publications, research products, join a professional organization, spend more time on TechRepublic, but make sure you have all the information you need on the technology you're using, along with the best practices for applying it.

If you go for certifications, remember your goal is not simply to put more letters after your name but to maximize the value of the educational experience. Winning the game requires that you not only keep your eye on the ball but also anticipate what the next pitch will be. Historical evidence suggests that the average lifespan of any system is approximately 18 months, so the planning process for how you're going to replace what you just built starts pretty much the moment you finish building it. Planning is a lot more effective when you know what you're talking about. Being informed on emerging trends is a fundamental job responsibility, something in our business that needs to be done daily to keep up.

2. Designing technical architecture

Anyone can build a system component that as an individual function is brilliantly conceived and executed. But if it sputters and groans when you plug it into the larger system, you haven't accomplished very much. Whether you're responsible for overall application and network design or part of a team building components in support of an enterprise architecture, you need to know the principles of good, solid architectural design.

The design of an effective technical architecture puts the pieces together such that the machine works without sacrificing ease of use and cost. I've always found that architectural design is best done when based on Occam's Razor, which literally translates from Latin as "entities should not be multiplied unnecessarily." Stated another way, simpler is better. When thinking about design, remember that while every organization has some unique processes, most operational procedures are fairly common and can be addressed with configurable commodity solutions. Many architectures can be based on buying and assembling a fairly small number of pre-existing components rather than trying to reinvent a better mousetrap. By so doing, you can typically provide your customers with a quality, easy-to-operate product in less time and at less cost. This

same concept translates equally well to the design and development of individual applications and systems.

3. Integrating systems

Technology serves many purposes, and high on the list of important capabilities is automating processes. Rather than use traditional methods of ordering supplies, managing inventory, and getting products to market, supply chain processing streamlines the operation by allowing suppliers and producers to control the complex interactions that enable raw materials to move through the manufacturing process and get finished goods in the hands of customers. Any organization that has an architecture populated by legacy systems (and who doesn't) can improve productivity through better movement of data through those applications. Sarbanes-Oxley and other regulatory compliances require companies to certify internal controls, which are often found at the common boundaries between systems. As products and platforms continue to proliferate and as companies increasingly connect their systems with others, high quality interoperability is imperative.

4. Understanding business practices, approaches, organization, politics, and culture

Corporate entities are complex organisms, and just like snowflakes, no two are the same. The dynamics that drive how a particular business operates are not easily understood. Oftentimes, especially in larger organizations, multiple cultures must be reckoned with--one at the enterprise level and others at the divisional or departmental level. And just when you thought it was safe to go back in the water, your finely honed instincts about how your company works fail you in the wake of a merger or management upheaval that changes everything. We ignore politics at our own peril. We may dislike ostrich managers--those who put their heads in the sand and pretend nothing's going on out there. But we can't be so smug as to think we can navigate treacherous corporate waters without paying any attention to the strength of the tides or the direction of the winds. Likewise, although much about organizational dynamics is generic, transferable knowledge, it's foolish to think that success in one corporate environment guarantees success in another. We must learn the idiosyncracies of each new environment we find ourselves in.

5. Managing projects; planning, prioritizing, and administering work

Joe Torre is commonly regarded as one of the best managers of all time. It's doubtful that the New York Yankees would have had nine out of 10 first place finishes, six AL championships, and four World Series rings since 1995 if Joe didn't have a pretty good game plan. Not just a plan on how to get to and win in the post season each year, but a plan for each and every game.

Whether you're a manager or a player, a superstar or a second stringer, you have to be able to plan your work for the short and long term. What do you plan to do today? This week? This year? How are you going to achieve that? Ask a lot of questions that begin with "what" and "how." If you're a developer or a net admin and you have any designs on making it into the management ranks someday, you need to be developing those planning skills right now. If you can't manage yourself, you're surely going to have a hard time successfully managing people and complex projects.

6. Communicating and listening; gathering information

Be mediocre at everything else but be perfect at this: communication. It's one of the two key competencies everyone must have, and it's especially important for IT pros. Good communication is bidirectional, giving as much as receiving. This is a wonderful place to indulge your generous spirit, because there's no such thing as too much communication.

No matter what you think you do for a living, every IT professional is actually a consultant. As a consultant you have a responsibility to your customer to provide maximum value. Doing so means you know your customers' business at least as well as they do, and that means listening. Your customers are entitled to know what they're getting for the money they're paying you, and that means you must proactively and regularly let them know what you're up to on their behalf.

This is a hard one for your typical IT professional. Most of us went into this field in part because we related more to code and wires than we did to people. And most of us, by and large, are accommodating folks. We hate to say no, and we hate to deliver bad news. Better to just sit at our desks with our heads down and do our jobs. These are all fatal mistakes, and although it's far from easy and may be run counter to your personality, you have no choice but to develop these skills. Here's the good news: Anyone can learn how, and it gets easier with time and practice.

7. Focusing on results

The other absolutely critical competency is the ability to execute. Plans are great, but talk is cheap. At the end of the day, you have to have something to show for your efforts. A good way to start is by knowing some key facts about your customer, like who are they and what do they want? As an IT professional operating consultatively, you have a responsibility to advise your customer, based on your knowledge and experience. But don't forget that ultimately it's up to your customer--your boss, your co-worker, your team leader, whoever is the ultimate consumer of your efforts--to make the decisions, and sometimes those decisions are not what you recommend. Check your ego at the door and do what's necessary to achieve the agreed-upon results. Don't let analysis paralysis slow you down and don't indulge yourself in a quixotic crusade to achieve some random level of perfection. The 80-20 rule is in force: 80 percent of the result can be achieved through 20 percent of the effort, and the incremental value beyond that level is frequently not worth the cost.

8. Thinking strategically

It's an increasingly competitive world, and today's IT professionals must prove, every day, that they can add tactical and strategic value and that they belong and are welcome at any meeting taking place anywhere in their organizations. Over the course of the last 10 or so years, businesses have started to recognize the strategic importance of IT and to see that IT is not just a backwater stepchild of the accounting department but adds value throughout the organization. IT professionals are service providers, and we must think of ourselves as such.

Get intimate with your company's business and strategic plans and constantly strive to come up with ways of supporting and furthering those plans. Your company has no such plans? Devise one for technology. Your department, at least, will be operating strategically and you may be able to use that as a springboard to provide thought leadership to management in expanding the plan to cover the whole business.

Most IT departments are reactive, waiting for their business customers to bring them ideas for new systems. High functioning, highly successful IT departments are proactive, working consultatively and collaboratively with their business customers in pursuit of overall corporate goals and objectives.

9. Influencing and persuading

The military style hierarchial chain-of-command organizational model of the 1950s has given way to flatter, more horizontal structures. I know, we all still have bosses, and bosses still have direct reports. However, the person who does your performance review may not be the one giving out your work assignments. Throw into the mix some geographical dispersion, add a dash of decentralization and a pinch of autonomous work groups, and you've got quite a stew.

Direct management has been supplanted by influence management. We no longer order people to do things, we sell them on it. We convince them. We negotiate, cajole, and urge. Remember communication? Here's a great place to exercise all those wonderful communication muscles you've been developing. This is a capstone competency, in that it brings to bear other skills, including strategic thinking and results orientation. IT professionals adept at influencing others almost always stand out as effective, competent, well regarded producers. Don't make the mistake of thinking this is a competence for managers only. Influence and persuasion are among the key skills that drive collaborative work environments.

10. Being adaptable

Gone forever are the days when being a technology professional meant having expertise in a particular development environment or being able to build and support a network. Don't get me wrong, you can still make a good living doing just those things, and you're every bit as professional as anyone else who gets paid to provide an IT service. But to become a truly well-rounded IT professional, you need to work constantly on expanding and honing your skills.

Some competencies, such as technical skills and knowledge, are relatively easy to acquire. Others, such as business knowledge, take more time. Management of individuals and teams, leadership, and the ability to work collaboratively with colleagues and customers require behavioral competencies based on personal attitudes and characteristics.

If you chose a career in IT, you also chose, by definition, to be an agent of change. Our profession changes swiftly and profoundly, and we have to take seriously our responsibility to change along with it. Our businesses change, like it or not. Competitive pressures, new industry entrants, management turnover, strategic shifts, product development, and any number of other factors cause change. There's almost no area in any organization that isn't touched by technology, and as responsible professionals, we must help by leading our organizations in adapting to that change. ❖

10 things you should know about being a great IT manager

By Janice Ward

IT Managers can easily get caught up in day-to-day operations and activities and lose sight of important management behaviors. Whether you're a new or seasoned manager, the following suggestions can help you be a great IT manager.

1. Spend time (and money) developing your people.

IT is a constantly changing field and many IT workers love to learn about new and improving technologies. For many, learning is not just enjoyable, but is necessary to do the best job possible. IT Managers should budget for training and development and encourage staff to participate in events whenever possible. If your budget is tight, explore free regional presentations and workshops, set-up in-house training and get creative with your development dollars. Don't forget about cross-training exercises as well. Even in a large IT group, there are jobs which only one person does routinely. Make sure others know what to do if that person were suddenly gone for an extended period.

2. Get to know what your staff really does.

Although you don't need to master every task your staff handles (see Item 3), you should understand your staff's normal work routine. If you aren't already, familiarize yourself with each person's responsibilities. Ask team members to explain and demonstrate important tasks--such as data backups. I once had an existing IT employee transferred to my sub-group. Immediately after the transfer, I began working with the individual to learn their job role. One month after the transfer, during a key production period, the employee suffered simultaneous tragedies--a parent died and the employee developed pneumonia. With no direct backup, I jump in and accomplished the job with the knowledge I had learned during the first month and a great deal of help from others. As a result, I gained a great deal of respect from the employee who had previously suffered negative experiences with management. Understanding what your staff does not only increases their level of respect for you, but it also makes you more credible as a manager when faced with difficult situations or decisions.

3. Don't do it for them.

If you move from an "in the trenches" IT worker to a management role, avoid the tendency to take the reins too quickly. Your knowledge and skill level may exceed your employees', but you must help your staff learn and grow. There is a fine line between coaching and doing. A good manager will know the difference. While there may be an initial training period where you are more involved in doing the day to day work, use appropriate delegation and training strategies to move the work into your staff's capable hands. If you are new to delegation procedures, read Steven Watson's TechRepublic article, *New managers must learn what and how to delegate* (http://techrepublic.com.com/5100-1035-5059505.html).

4. Know the business and make sure they know you.

It is almost cliché to say it, but all IT managers must understand the business they support and use this understanding to build services and infrastructure that support business goals. You should also show your direct reports how their work impacts overall business goals. You should also ensure that business administrators understand what IT does for them. Showcase your department's activities through annual reports, regular communications and frequent project updates.

5. Treat communication as a busy, fast-moving, two-way street.

Information is not a limited commodity to hold. Information should flow freely and easily between management and workers. If you sense that you are not getting important information, carefully consider ways to increase communication. Likewise, don't hoard information, unless it is absolutely confidential. What seems irrelevant to you, may be highly relevant for someone else. Reward information sharing between your direct reports.

6. Encourage everyone to work as a team.

The whole really is greater than the sum of its parts. Encouraging collaboration and teamwork helps remove silo-like isolation that often occurs in technical organizations. Cross-functional teams are extremely important because small changes in one area can have significant ripple impact across other IT units. Reward efforts that allow for collaboration and develop an environment where workers can feel comfortable asking and giving assistance to one another. Frustrations often result when one team member knows something that others spend hours working to resolve. Teamwork will fuel your communication vehicle.

7. Provide feedback regularly and let employees know what you want.

Some IT jobs make people feel like islands. They work on a project or assignment independently and may not regularly interact with their manager or co-workers. Be sure your staff knows what they are doing well and what needs improvement. These can be casual conversations, formal performance reviews or public praise events. Check Robin Thomas' TechRepublic article, *Performance evaluations: More gain with less pain* (http://techrepublic.com.com/5100-10878_11-5692479.html).

If someone isn't living up to expectations, be sure they know what those expectations are. Staff members may not realize that the assignment you gave them last week was a priority item for a high profile project. Be clear and direct when making assignments. When an employee finishes a job, make sure they know how pleased you are with the work they did. Geeks need love too!

8. Hire well.

If you have never hired before, ask for assistance and do your homework. Hiring poorly can be more costly than not hiring at all. Technical skills are only a small piece of the puzzle. You should know if person will adequately integrate with the team. It may also help to get you team involved in the hiring process, when appropriate and allowed. Your staff can help you determine if the applicant relates well to others and has the appropriate soft skills. Check out Abbi Perets'

TechRepublic download *Seven Signs that a Job Candidate Won't Work Out* (http://techrepublic.com.com/5138-6240-5634524.html) or the TechProGuild download, *IT Hiring Kit: Support Professional* (http://techrepublic.com.com/5138-6355-5685302.html).

9. Understand best IT practices, but don't just make them buzz words.

ITIL? Disaster Recovery? Service Oriented Architecture? Security? If you don't have a technical background, these terms may be unfamiliar. Learn and understand the best practices that apply to your environment and measure yourself and your department against them. Explore ITIL and determine if you should implement at least portions of it in your department? Ensure your disaster recovery plan is up-to-date and ready for action. Perform regular security assessments. Proceed with caution however, throwing buzz around words won't gain you any clout. You must truly understand the ideas, their application to your environment, and then plan and implement appropriate related changes.

10. Be a good project manager.

Did your last project creep suffer scope creep? Most projects, particularly IT ones, don't fail because the project itself was bad. Most failures are a result of weak project management. If you haven't had any formal project management training, find and invest in a good program.

Read and utilize resources like the following TechRepublic downloads:

- Build a foundation for project success with this definition template (http://techrepublic.com.com/5138-27-730152.html)
- Master these 10 processes to sharpen your project management skills (http://techrepublic.com.com/5138-6337-730266.html)
- 10 things you should know about managing IT projects (http://techrepublic.com.com/5138-10878-5856635.html)

Don't fall into the trap that by simply having regular meetings you are managing the project. And since IT usually has more projects than people, be sure to train lead workers with basic project management skills so you can delegate specific aspects of the project or even entire projects to their control. ❖

10 ways to effectively estimate and control project costs

By Jeff Relkin

Building a better bottom line is just as important for an IT department as it is for the whole organization at the enterprise level. Implementing sound financial management within an IT framework is broader than simply being more efficient. Many factors are involved: an understanding of the main drivers of IT costs, aligning IT spending plans with overall business strategy, using financial resources efficiently, viewing IT expenditures as investments and having procedures to track their performance, and implementing sound processes for making IT investment decisions.

Estimating what a project will cost is only half the battle; controlling those costs during the project and after delivery is equally critical. In this article, we examine some methods to predict and manage costs, part of a sound basis for overall IT financial management.

1. Control baseline costs

Nondiscretionary money spent maintaining established IT systems is referred to as baseline costs. These are the "grin and bear it" costs, those required just to keep things going. Baseline costs constitute around 70 percent of all IT spending for the average organization, so this is a good place to start. These costs tend to creep over time due to the addition of new systems, meaning there's less money available for discretionary project work. Worse yet, this creep gives the appearance that IT costs are rising while the value derived from IT investments stays the same or actually goes down.

Fortunately, baseline costs can be easily controlled. Renegotiate vendor contracts, reexamine service levels, manage assets effectively, consolidate servers, sunset older applications, maintain a solid enterprise architecture, and practice good project and resource management. By so doing you can lower the percentage of the IT budget allocated to baseline costs and keep them in line, avoiding problems with opportunity costs. Think of IT projects as an investment portfolio; the idea is to maximize value and appreciation. Baseline costs are food, clothing, and shelter; we have to spend the money but it doesn't have to overwhelm the budget.

2. Acknowledge hidden IT spending impacts

Gartner estimates more than 10 percent of corporate technology spending occurs in business units, beyond the control of IT. Several factors contribute to increasing hidden IT spending:

- Flat organizational models more difficult to rein in and control
- Virtual enterprise structures ostensibly set up as nimble, agile organizational constructs but without regard for policy and procedure
- Changing organizational authority where business unit managers are given (or take) responsibility for decentralized technology spending
- Selective IT outsourcing, in which a business unit will independently decide it doesn't need to participate in overall enterprise architecture to fulfill its departmental mission

The impact of all this hidden technology spending can be profound and prevents IT from being able to control project costs. Architectural pollution from rogue projects can delay change, resulting in cost overruns and lost opportunities. Business unit-sponsored systems eventually become the responsibility of IT, increasing the cost of support and maintenance (there are those baseline costs again). Cultural biases in business units may conflict with overall strategic goals, increasing costs and resulting in the destabilization of information and knowledge. This is just as important for small companies as well as large; fundamental business decision-making is driven by solid information, and if we don't have it we can't do it.

3. Understand long-term application costs

As a general rule, ongoing application costs are about 40 percent to 60 percent of the original development cost for each year in an application's life cycle. Sound like a lot? These are the costs associated with application support, maintenance, operations, software licenses, infrastructure, and allocated help desk and operational staff. Controlling these ongoing costs is critical; as a component of baseline costs, they're necessary evils. Collect and maintain information about all new development work underway throughout the entire enterprise and actively participate in all projects as a value-added business partner. Communicate effectively and relentlessly; report to senior management anticipated costs both at the start of projects and at appropriate intervals thereafter. Don't forget to maintain a historical record of all costs.

4. Understand IT cost estimation truths

How good an estimator of project costs are you? I'm sorry to disappoint you, but no matter how good you think you are, you're not that good. None of us is; your crystal ball is just as cloudy as anyone else's. This is the single biggest reason IT projects have such a high failure rate. Remember: The cost of IT initiatives will typically exceed original estimates by an average of 100 percent.

Institutional knowledge is lacking as to the result of major intitiatives, the advice and counsel of IT is routinely omitted or ignored, and business process change relies too heavily on IT ownership of those business processes. How often have you been called upon to estimate, if not virtually guarantee, a project cost before the scope has been fully defined?

As an IT professional, whatever your role on a project, you must provide business managers with parameters for setting funding expectations and force those business managers to explain why their assumptions are valid. If you're an IT manager, track all major development efforts throughout the enterprise and regardless of your role, participate in the creation of a knowledge base of maintenance and support costs to drive future verifiable and credible estimation. Don't underestimate the future costs of maintenance and support and whatever you do, don't make the classic cardinal error: Do not, under any circumstances, pad budgets in anticipation of an underestimation. Keep track of project costs as the project unfolds and communicate, immediately and vociferously, the instant you detect even the potential for an overrun.

5. Leverage current system investments

Applications, purchased software, networks, infrastructure, and any IT investment should all be regularly reviewed, at least on an annual basis, to ensure maximum value is being extracted and that original ROI goals are being met. Start with the original requirements and review them to ensure return on investment goals were delivered. Examine changes in the business and

review new requests to determine whether they fit with the existing systems. Consider business reengineering. Review embedded processes to determine whether they're consistent with new organizational models and make changes where necessary. Review vendor and product features, making sure they still fit within the organization. Enterprise architecture is organic; it's not once and done. It changes over time. Keeping up with those changes allows for adjustments either at the periphery or by making modifications to existing components. This is an effective way to control overall costs.

6. Implement short-term cost cutting measures

Often we can control costs by putting in place tactical solutions. Short-term thinking can also be an effective tool in project cost estimation, in that it focuses us on the details. Getting from New York to Tokyo involves a fairly long flight, but we can't forget that we still have to figure out how we're going to get to the airport to begin with.

Try to postpone capital purchases as long as possible. This may not only provide time to negotiate better costs, but an idea for a less expensive solution may present itself after the project has begun. Always control project scope. Come to agreement as quickly as possible with business unit customers and sponsors as to the overall project scope and put that in writing. Have an effective change management process for the inevitable "just one more thing" discussions, which will limit or postpone until after project delivery the single biggest reason for cost overruns.

Try to control human resource spending. There are only two reasons to use external consultants--to fill a knowledge gap (we don't know how to do something) and to fill a resource gap (we have too few to complete the project on time). Negotiate the best possible rates and where possible, use fixed-price agreements rather than T&M (time and materials).

7. Implement long-term cost cutting measures

Be tactical, but don't forget to be strategic at the same time. Make sure there's an enterprise architecture; it's hard to put the puzzle together when you have no picture on the front of the box to go by. Eliminate duplicate processes and systems, eliminating unnecessary costs in the process. Reprioritize and rejustify all IT projects on a regular basis. Just because something made sense in January doesn't mean it still does in August, so why waste the budget? And outsource selectively. These are the costs that typically are the most controllable yet too often lead to the highest cost overruns.

8. Implement pricing and chargeback mechanisms

I once worked for a CIO at a Fortune 500 company who decided an internal chargeback process was needed to make business units more accountable for technology costs. He successfully implemented the new approach and was credited with saving the corporation many millions of dollars. He was also fired, because this approach is the one most fraught with political peril.

Absent a chargeback mechanism, business units tend to look upon IT as a giant free toystore. Put one in place and those same business units feel free to go to the outside to get more competitive technology pricing, and IT loses control and becomes marginalized.

If your company is going to consider this, there are ways to achieve both goals: making the business units accountable and maintaining central technology architectural control. Internal IT must be competitlve with external service providers. Periodic benchmarking exercises are

key. Don't underestimate the substantial resources needed to effectively administer chargeback mechanisms to ensure that business units have all the information they need and no one feels at a disadvantage. IT must have a clear understanding of all costs and manage the demand appropriately. Use client satisfaction surveys and service level agreements (a good idea no matter what the circumstances) and always show a balance between costs and benefits.

9. Use governance to drive IT investment decisions

Too many organizations fly blind, with little synergy between IT and the business. In most organizations, IT is a discretionary expense center; there's a fundamental framework (baseline costs again) but most, if not all, of what's required beyond that isn't necessarily mission critical.

Enlightened organizations understand that IT is a value-added strategic business partner, and a successful collaboration between IT and the business drives significantly increased stakeholder value. Establish, or if one exists become a participant of, a strategy council to examine enterprise-level issues of strategy, politics, priorities, and funding. Set up a business council to define priorities, oversee projects, and measure (and communicate) project success across business units. This group must, of course, have the courage to cancel projects when that becomes necessary; not everything that starts must finish. Put together a technical council to develop guidelines and principles for technology standards and practices. These are three very different organizational constructs, and while there may be some overlap in terms of participation, the mission of each is mutually exclusive.

10. Quantify the value/benefit proposition for IT investments

Why do we do what we do? That's not an existential or rhetorical question. IT exists to provide value, to participate in the achievement of organizational strategic goals. How can we prove we've done so? Just because we've built a thing, that doesn't mean much. Does the thing work? Does the thing provide value? Is that value measurable and consistent with the corporate mission?

Some quantifiable benefits of IT work can be improved operating efficiencies, enhanced personal productivity, enhanced decision quality, and/or enabling or supporting organizational strategic initiatives. What's most critical is to ensure the credibility of any measurements used to justify IT investments and provide after-the-fact valuations. You may be working on a project that will reduce a process from five person-days' worth of work to two. Does that mean three people are going to be fired, with the resulting compensation cost saving attributable to your project? Probably not. Those folks will most likely be reassigned, so don't take credit for expense reductions that aren't going to happen. ❖

10 things you should know about managing ITprojects

By Rick Vanover

IT projects can be daunting, especially to the novice. It's relatively easy to propose a solution, but much more difficult to implement the desired performance levels on time for the right price. This list will help IT pros bring organization, professionalism, and goal-oriented progress to the projects they manage.

1. Get professional

IT projects historically have a negative reputation for being over budget, late, and poorly implemented. Having a professional individual in charge of the project can add great organization and credibility to your efforts. If your project is of a size where a project manager role can be used, go for it.

Working with a Project Management Institute (PMP)-certified individual (www.pmi.org/) will greatly enhance the effectiveness of your software projects. The PMP is also a good benchmark across all project management disciplines and is a big credibility booster when a project integrates with non-IT individuals, external customers, business partners, or part of a larger project.

2. Identify the leadership roles

Having individuals responsible for specifics metrics of the project is important. This should be done in a way that puts capable individuals in roles that are best suited for their talents but that doesn't overwhelm individual team members. IT projects often put too much emphasis on the technical contributions of a small number of individuals—or even just one person—and effectiveness is limited when these resources are maximized during the project cycle.

You should also ensure that individuals in charge of specific areas of the project do not hoard responsibility. For example, a person or small group may make great contributions to the progress of the project in regard to overall systems performance, not using so much time for the project (when working from a fixed-price/hours amount project), and getting finished ahead of schedule. But these efficiencies may come at the price of this individual or group not updating project documentation or ensuring revision control with authoritative instances of documents or code and possibly missing "the little things" in the project.

Individuals with leadership roles within the project can ensure that the project follow-through is done according to the required standards. Examples of this include roles such as Technical Lead, Project Lead, or Documentation Lead. These leadership roles can provide checks and balances in the event that a person becomes reassigned unexpectedly or leaves the organization. The continuity chain can be made stronger by tighter integration across individuals for progress points and ensuring the administrative follow-through of the project.

3. Focus on scope management

Scope management is one of the most important aspects of IT projects, and it's the team's responsibility to make sure that any scope changes are introduced in the correct forum. The project process should include procedures for making a scope change proposal.

It's also important to ensure that the official mechanism for project documentation maintains robust revision control, because scope can change functionality requirements and thus change the documentation that accompanies a project. In the event that a scope change is backed out, proper revision control will ensure that the original functional levels are available from a documentation standpoint.

Real-world example

We solicited feedback from Bill Reits, a certified PMP at Siemens Logistics and Assembly Systems for some comments on scope management. He said that one of the most common and troublesome scope problems within IT projects is Gold Plating.

Gold Plating is adding undefined features to a project that were not within the agreed scope of the project. It's common in the software industry because programmers, software engineers, and IT pros decide on their own to add "cool features" that they determined would be fun to code, tools, or other benefits to the implementation project or customer's deliverable system. Although the intentions are often well meaning, Gold Plating can have the following costly consequences:

- The individual can underestimate the effort, get caught up in developing or showcasing unnecessary features, and end up taking a great deal of time that was not budgeted at the expense of deliverable requirements.
- Because the task was not planned, it often affects other areas of the project that were not considered. This can be negative performance impacts, unclear training materials that differ from practice, or other methods.
- If the tasks introduce a nonconformance (a.k.a. software bug), a great deal of warranty effort can be expended correcting something that was never within the scope of the project.
- When an individual adds a "feature" that was not in the scope of the project, additional work from other team members can be required. For example, the feature must be added to the master documentation, the functional specification, the operators manual, the unit test plans, the integration test plans, the acceptance test plans, the traceability matrix, etc. It should be obvious that one small easy-to-code feature can add many hours to a project.
- It may be possible, that the added feature is not desired by the customer, resulting in time and effort to remove it and in customer dissatisfaction. For instance, a "slick feature" may be added to a banking application that is against government regulations or bank policy.

4. Create the project definition or charter

Having the project clearly defined can pave the way for all subsequent aspects of the project to be implemented correctly. A well-defined project definition and corresponding processes gives the project a strong foundation.

The project definition will define an agreed-upon performance baseline, costs, efforts required, expected functionality, implementation requirements, and customer requirements, and it identifies the individuals and organizations involved in the project. Project definitions

that include specific technology details on how a task is to be accomplished will benefit all stakeholders of the project.

Real-world example

One TechRepublic member was implementing a project whose initial project definition referenced communication between two systems as the following:

"The host system automatically will send the order system the order information over the network using a standard interface."

This language spells trouble, since it could mean so many things: An EDI transaction, an FTP exchange between the two systems, two custom socket interfaces exchanging a messaging formats, an XML file, connectivity through a standard product like MQ series, SQL database replication, or any other number of ways of two systems exchanging data.

5. Identify the risks

IT projects can incur risk in unique ways, as IT projects make frequent use of vendors, consultants, and contractors. For example, if your organization contracts Acme IT Services to assist your IT staff in its upcoming Active Directory and Windows 2000 Professional to Windows XP Professional client migration, you may face the risk that Acme IT Services could go out of business, get a "more important" client, or do an inferior job.

Each element of risk—resources, schedule, performance, cost, etc.—should have assessments performed. These tasks are usually delegated to the project manager or individual most closely associated with that role. Periodic risk assessments and tracking are due diligence of the project process. Risks manifesting themselves in the project cycle should have recourses as well. For example, if Acme IT Services leaves your project for another client, ensure that there are recourses to working with this agency.

6. Manage relationships with external parties

IT projects will almost always have some level of involvement with external parties. These parties can be:

- Consultants
- Business partners
- Service providers
- Vendors
- Software publishers
- Equipment manufacturers

Having external parties involved in the project will add resources and ability to the appropriate deliverable of the project. However, ensure that each organization's role and need is clear. The project plan should identify an individual to be in charge of administering the relationship and availability of external parties. If your organization executes many projects at once, this individual may perform this function for all active projects.

7. Maintain strong documentation standards

Documentation is the key to a successful IT project, especially when changes need to be made after implementation. Ensure that your organization has clearly defined documentation expectations as well as standardized repositories for various types of documentation. Revision control mechanisms are also important if custom development is being performed.

In addition, it makes sense to have documentation that defines the documentation requirements. That may seem like overkill, but as a project scales in complexity, this becomes more valuable to the success of the project implementation and manageability.

Strong documentation standards offer the following benefits to IT projects:

- New team members can assimilate more easily.
- Future work related to this effort are more easily started.
- Functionality changes are easier to stage or test.

8. Build effective communication channels

Project management should coordinate clear communications. E-mail seems to be the preferred mechanism for this, but it can easily become overwhelming and inefficient. One popular good practice is to identify specific individual(s) when a response is required. By using the TO: and CC: fields appropriately, you can avoid unclear messages about who needs to do what. The figure below shows a good example of an e-mail communication that outlines specific responsibilities.

This e-mail message clearly identifies that its target is William. If there are any issues with the topics presented, it is the primary responsibility of William to raise them. The other members are presented with an opportunity to raise concerns and to share them with the selected distribution.

Little habits can add great effectiveness to the communication patterns, especially when involving external parties. For instance, in the example above, members from each organization are grouped to give clarity to distribution. How many e-mail messages have you received where you aren't even sure whether you're being addressed, much less whom you should reply to?

Also make it a priority to communicate the schedule (and its changes), status reports, scope topics, and new issues that arise in the project process. Clear, concise, and targeted communications are all positive habits for IT projects.

9. Keep an eye on costs

The closer you are to the technology, the less pleasant the topic of cost becomes. Nevertheless, cost is among the most important aspects of the project process. Each project member should be aware of the costs associated with his or her aspects of the project. This also becomes important if it's determined that the scope of a project should be changed. For example, consider the following technology scenarios:

- A new version of a critical software component is released.
- A security risk for a software component is discovered.
- Newer or faster computer equipment is required or desired.

Scope change can address these topics, but there may be dependency scope changes that go with them, which can greatly increment the costs involved. Licensing, space concerns, "lost licensing" or unused equipment and software, and rework or lost time all can add to the cost of scope change.

Fear of the price impact should not deter scope change, but it's an element the project team must keep in mind.

10. Don't forget the closeout

Once the deliverables of the project have been met and all appropriate signoffs have been obtained, exert the same effort to correctly close the project. Depending on your project type and scope, the project's closeout and post-mortem are important to ensure that all project members have executed their required steps and that the customer (internal or external) is satisfied with the project results.

Depending on the scope and nature of the IT project, the closeout may be a required step to take the project (or customer) to "support mode." Project turnovers, closeouts, and other mechanisms to prepare the project for ongoing life are important to ensure that all the ends are in place so that when this topic arises again, there is a good reference point on the details of the project. ❖

10 things you can do to turn useless meetings into productive ones

By Shannon Kalvar

A quick survey of Amazon.com reveals hundreds of books purporting to help manage meetings. The vast majority do, in fact, contain good ideas if you initiated the meeting, have the ability to set its agenda, and possess the social skills to keep all of the attendees focused. However, we all must occasionally attend meetings we do not control. What do we do in those meetings, especially when they go awry? The following tips will help you make each meeting an effective, interesting experience. No IM required.

1. Know why the organizer called the meeting

The idea of a meeting agenda seems almost quaint in this era of too much e-mail and not enough time. When an actual agenda makes an appearance, it quickly breaks down as participants meander in a variety of unplanned directions.

Do not wait for an agenda. Instead, take a moment to contact the meeting organizer before the meeting. Ask him to explain to you, in 10 words or less, what he wants from the meeting. Once you know what he wants, you can help him achieve it.

In this case, forewarned is forearmed.

2. Know what you want from the meeting

Finding out what the meeting organizer wants allows you to help him; knowing what you want from the meeting allows you to help yourself. So before the meeting begins, set yourself one action item you absolutely need to accomplish with this group of people at this time.

Select an action item compatible with the meeting organizer's goal if you want the meeting to succeed. Otherwise, you could end up with a reputation for disrupting meetings.

Whether that's bad depends on your point of view.

3. List what you need to say

Meetings never start on time. Someone always needs a cup of coffee or has to answer a cell phone call about an unforeseen disaster. These idle moments make an ideal time for firing out instant messages to friends, family, and co-workers.

You can also use this time to make the meeting more productive. Jot down a list containing five things related to the action item you want to share. The act of writing helps focus your thoughts, even if you don't use the list at all.

If you have something to say to the people in the meeting, you might not have to send IMs after all.

4. Take the meeting minutes

Meetings come, meetings go. Their details vanish into a haze of similar events because no one bothered to write them down. Then the next meeting rolls around, and you spend the first 10 minutes trying to remember what happened last time.

Break this cycle by taking the meeting minutes. You don't have to record everything everyone says. Instead, focus on recording assigned action items, decisions made, and key information or questions revealed during the discussion. These minutes then become the meeting's artifact, the record of what happened and what decisions came about. This record guides whatever actions take place after the meeting ends.

As the writer, you make most of the judgment calls about what was important.

5. Keep to the rules of order

All meetings, large or small, involve people interacting to achieve one or more goals. In a perfect world, these interactions would spontaneously organize themselves. Everyone would respect one another's time. Comments would emerge in an organized fashion. Action items would appear and be agreed on, and the group would move to the next point.

Back in the real world, we need ways to stay organized and on track. You do not have to adopt Robert's Rules of Order, but you should know the ground rules by which the meeting will run. If your organization does not have rules of order, make some. Share them with others and follow them.

Chaos happens, but you do not have to let it ruin an otherwise productive meeting.

6. Reflectively listen in information meetings

There exists a breed of meetings seemingly designed to frustrate the attendees. These meetings "provide information" about a topic or update the attendees about the status of things they do not care about. In the breed's most extreme forms, no one at the meeting can do anything with the information provided.

That does not excuse you from finding something useful to do. The meeting organizer obviously needs to communicate this information. Take the opportunity to practice your reflective listening skills. You get some practice, and the organizer will feel like he positively connected with someone.

It's a win/win, or as close as you can get in this situation.

7. Set things aside

It never fails. In every meeting, someone derails the discussion with a host of interesting tangents. Sometimes these tangents relate to the topic at hand. More often, though, they affect it only indirectly. In either case, the time spent on them detracts from the meeting's real goal.

Do not be this person. Ask yourself the following question before you interject a new idea or question: Is this really the right venue? If the meeting focuses on brainstorming, go ahead. If not, and if the question/idea does not directly relate to the meeting's goal, set it aside for later conversations. Make it an action item, so you do not forget it.

Yes, everything connects to everything else in business. That doesn't mean you have to bring it up in a focused session.

8. Ask for action items

The meeting ends, someone cleans up the conference room, and…then what? Ask the meeting organizer for action items as the meeting starts to wind down. If need be, prompt him by asking if he wants you to take care of one or more items you noted during the meeting. Alternately, you can make some up if you have a good idea of what needs to be done.

Action items speak louder than words when it comes to ending meetings.

9. End the meeting when it's done

Meetings, with or without agendas, often drag on long past their useful lifespan. People get lost in quagmires or the meeting organizer forgets what he's there for. Nothing useful gets done, but no one can escape without offending the powers that be.

Fortunately, you have a 10-words-or-less description of the meeting's goal from your previous research. Ask the meeting organizer if he has achieved his goal. If not, help him get to it. If yes, mercifully end the meeting before everyone goes insane.

Mercy is, in this case at least, one of time management's greatest gifts.

10. Ask questions afterward

Meetings gather informed, active people into one place to address an established list of topics. Why not take advantage of the opportunity? If you have questions for someone who will attend the meeting, make a list of them before you arrive. Then, during the after-meeting meeting, whip out the list and get your questions answered.

Asking unrelated questions in the after-meeting meeting means you do not have to disrupt the meeting with them.

With these 10 tips you can participate in the meeting rather than just attending. Actively participating reduces your stress levels during the meeting. It also gives you some control over what happens next. ❖

10 things you can do to organize and lead effective meetings

By Shannon Kalvar

In "*10 things you can do to turn useless meetings into productive ones*," we suggested ways you can add value to the meetings you attend, even when the organizer isn't entirely on top of the proceedings. These suggestions, though, can go only so far in correcting a derailed meeting. It's far easier to take corrective steps while planning and leading a meeting, assuming you have control over the process. The following tips will help you conduct your meetings so that they're productive, effective, and interesting.

1. Know why you called the meeting

We accept meetings as a fixture of modern business. Unfortunately, not all fixtures are created equal. In fact, some have almost no purpose beyond the ritual consumption of paper and time.

Do not allow your meeting to fall into the ritual consumption category. Spend five minutes before you send out the meeting invitation to formulate, in 10 words or less, exactly why you need everyone's time. Write your reason down and then set it aside. Review the reason an hour later; if it still seems valid, go ahead and send out the invitations.

Ritual consumption may work for sacred cows but it's not good for meeting organizers.

2. Know what action you expect from the meeting

Meetings draw people away from their daily tasks and into a closed, influenced environment. As the organizer, you have the attendee's attention. It's up to you to use that attention wisely. The moment you squander it, the meeting grinds to a halt.

Do not squander others' time. Instead, spend a few minutes before the meeting trying to answer the following question: "What do I expect the attendees to DO at the end of this meeting?" Try to formulate your answer in 10 words or less.

Knowing what you want from others makes it much easier for them to give it to you. Otherwise, everyone tries to engage in mind-reading with depressingly predictable results.

3. Never send a meeting to do a conversation's work

Electronic messaging systems give us the power to invite everyone and everything in the organization to meetings. The power to do something, though, does not make it a wise or even a correct choice.

If you need to speak to only one or two of the meeting's attendees, just go to their cubes and have a conversation. It takes less time, communicates more information, and establishes that "personal touch" everyone claims has vanished from modern business.

And hey, if worse comes to worst, you can always IM the person while you're in someone else's meeting.

4. Designate someone you trust to take the minutes

The power to designate action items is the power to change the world. Okay, maybe not quite. But it is the real power to be had in a modern business meeting. As the meeting organizer, you want to make sure this power rests either in your hands or in the hands of someone you trust.

An amazing number of meeting organizers seem averse to taking their own meeting minutes. "It's secretarial" or "It's too much paperwork," they say. However, the minutes become the permanent record of what was agreed to and decided on. Take the minutes and circulate them yourself or have a trusted associate do the honors.

Oh, and you do not have to write down everything said at the table. A list of action items and agreed to dates will suffice.

5. Establish the rules of order

All meetings, large or small, involve people interacting to achieve one or more goals. In a perfect world, these interactions would spontaneously organize themselves. Everyone would respect one another's time. Comments would emerge in an organized fashion. Action items would surface and be agreed on, and the group would move to the next point.

Back in the real world, we need ways to stay organized and on track. You do not have to adopt Robert's Rules of Order, but you should know the ground rules by which the meeting will be run. If your organization doesn't have rules of order, make some. Share them with others and follow them.

Chaos happens, but you do not have to let it ruin an otherwise-productive meeting.

6. Start on time, end early

There are a wide variety of ways to waste time before a meeting begins... and that's before we even start thinking about wireless networking. Similarly, all but the most focused meeting will run into distractions and other "personality issues."

When you schedule the meeting, deliberately ask for more time than you think you need. Generally a half-hour pad will cover most tangents or quirks. Try to start within three minutes of your beginning time. Then, end the meeting when you achieve your actual goals (see points 1 and 2).

People rarely, if ever, complain about meetings ending early. The same cannot be said for meetings that drag on without any hope of resolution.

7. Maintain focus

It never fails. In every meeting, someone derails the discussion with a host of interesting tangents. Sometimes these tangents relate to the topic at hand. More often, though, they affect it only indirectly. In either case, the time spent on them detracts from the meeting's real goal.

Do not let this happen to your meeting. Stop tangents as they form. Cut off speakers who want to ramble on about related but unimportant issues. Develop and maintain a reputation as a hard, organized meeting leader so that people don't challenge your authority during the meeting itself.

Yes, people will become upset at first. However, in the long run, even the people you cut off will eventually appreciate your attempts to avoid wasting their time.

8. Assign action items at the end

The meeting ends, someone cleans up the conference room, and… then what?

Begin assigning action items at the first moment of consensus. Start at the top of your list of agreed-to items. In some cases, a participant will have agreed to the action item already; in other cases, you will have to assign it to someone on the spot. Either way, get verbal acknowledgment from each participant that he or she understands and accepts the action item.

Action items speak louder than words when it comes to ending meetings.

9. Verify agreements

If the power of a meeting rests in its action items, the long-term effect of a meeting often comes from the agreements reached during the course of discussion. These agreements help guide both the meeting's action items and future interactions among the participants.

Take a minute at the end of the meeting to summarize what you agreed to. Record it in the minutes just under those action items you assigned. This allows you to verify that you properly understood the agreement and that the meeting attendees reached a consensus on the issue.

Consensus and agreement are not bad words; they just get badly misused.

10. Follow up with assignments and agreements

As a general rule, people remember the hurt feelings, annoyances, and frustrations of a meeting rather than whatever work got done. As meeting organizers, we generally help this negative association by not following up with the participants after the meeting comes to an end.

Spend a few minutes with each meeting participant after you send out the meeting minutes. Answer any questions they might have. This personal touch may seem quaint, but it makes a huge difference in how well people react the next time you call them to a meeting.

Nothing is a substitute for good manners.

By following these simple tips, you can run a more effective meeting. Be warned, though: Effectiveness sometimes attracts notice. Notice leads to responsibility; responsibility leads to risk; risk leads to success; and success leads to even more work. ❖

10 things you should do to effectively implement change management

Change management deals with how changes to the system are managed so they don't degrade system performance and availability. Change management is especially critical in today's highly decentralized, network-based environment, where users themselves may be applying many changes. A key cause of high cost of ownership is the application of changes by those who don't fully understand their implications across the operating environment.

In effective change management, all changes should be identified and planned for prior to implementation. Back-out procedures should be established in case changes create problems. Then, after changes are applied, they are thoroughly tested and evaluated. Here are the process steps for change management and factors critical to its success.

1. Define change management process and practices

As you would with other systems management disciplines, you must first craft a plan for handling changes. This plan should cover:

- Procedures for handling changes—How changes are requested, how they are processed and scheduled for implementation, how they are applied, and the criteria for backing out changes that cause problems
- Roles and responsibilities of the IT support staff—Who receives the change request, who tracks all change requests, who schedules change implementations, and what each entity is supposed to do
- Measurements for change management—What will be tracked to monitor the efficiency of the change management discipline
- Tools to be used
- Type of changes to be handled and how to assign priorities—Priority assignment methodology and escalation guidelines
- Back-out procedures—Actions to take if applied changes do not perform as expected or cause problems to other components of the system

2. Receive change requests

Receive all requests for changes, ideally through a single change coordinator. Change requests can be submitted on a change request form that includes the date and time of the request.

3. Plan for implementation of changes

Examine all change requests to determine:

- Change request prioritization
- Resource requirements for implementing the change

- Impact to the system
- Back-out procedures
- Schedule of implementation

4. Implement and monitor the changes; back out changes if necessary

At this stage, apply the change and monitor the results. If the desired outcome is not achieved, or if other systems or applications are negatively affected, back out the changes.

5. Evaluate and report on changes implemented

Provide feedback on all changes to the change coordinator, whether they were successful or not. The change coordinator is responsible for examining trends in the application of changes, to see whether:

- Change implementation planning was sufficient.
- Changes to certain resources are more prone to problems.
- When a change has been successfully made, it is crucial that the corresponding system information store be updated to reflect them.

6. Modify change management plan if necessary

You may need to modify the entire change management process to make it more effective. Consider reexamining your change management discipline if:

- Changes are not being applied on time.
- Not enough changes are being processed.
- Too many changes are being backed out.
- Changes are affecting the system availability.
- Not all changes are being covered.

7. Evaluate and test all changes

Changes should be evaluated and tested prior to implementation. It is practically impossible to predict the outcome of all changes, especially in a complex, interrelated system architecture. You must carry out a thorough evaluation of all changes, especially those dealing with critical system resources.

We also highly recommend that you test all changes prior to full-scale deployment. For minimum impact on the system, test with a user not on the critical path, with test data, during off hours, and on a test system.

8. Make sure all changes are covered

Cover all changes, big and small. Minor changes can have major effects on system performance and availability. A simple change in a shared database's filename could cause all applications that use it to fail. An additional software utility installed in the user's workstation could cause the

user's system to become unstable. Or a move of a user's workstation from one department to another could prevent it from properly accessing the network. You might occasionally need to bypass certain change management processes, such as in the case of emergency changes required to recover from a fault condition. But even in these situations, document the change thoroughly and have it approved after implementation to ensure that system records are updated.

9. Document all changes

Perhaps the hardest part of change management is documenting all actions performed before, during, and after the change has been applied. Technical people often fail to document changes, and we have seen many problems caused because not everyone knew about earlier changes. Many IT organizations are familiar with the Monday Morning Crisis—that most problems occur on Monday mornings because someone implemented a change over the weekend without following correct change management procedures.

10. Communicate the benefits

Many people mistakenly view change management as more IT red tape. They fail to realize that good change management acts like a traffic light that regulates the smooth flow of changes and does not stop all change from happening. With a well-planned and well-deployed process, you can ensure that changes do not negatively affect system performance as a whole. ❖

10 things you should know about winning support for an IT policy

By Jody Gilbert

Rolling out an IT policy is a tricky business. You need to make sure users will take the policy seriously, but you have to be careful not to be too heavy handed about introducing it. Convincing users to respect the need for the policy—instead of assuming that it will just hamper their work or restrict their freedom—takes some finesse. It also takes a well-crafted policy and a thorough, inclusive process for creating and sharing it.

1. Gain executive buy-in from the start

Users will generally have an easier time accepting the inevitability—if not the necessity—of a policy if they can see that senior executives are totally behind it. In the best case, senior leadership will have played a role in the early stages of policy formulation and will be able to articulate its benefits to employees. At the very least, make sure you have executive support before you invest too much time in drafting a policy. You could find yourself with a brilliant and much-needed document that no one adheres to or enforces because they know it's a lame duck policy that has only tepid support from management.

2. Involve all affected parties in the policy-building process

No policy should be created in a vacuum. Consider bringing together a committee consisting of the policy owner, subject matter experts, and representatives from the groups that will be affected by the policy. In some cases, it may also be a good idea to bring in someone from your HR, financial, and legal departments to contribute their expertise. Not only will this across-the-board involvement help ensure that all angles of the policy's impact are identified, it will build a broader base of support, since more people will be stakeholders in the policy.

3. Educate users and manage expectations

The last thing you want to do is spring a policy on employees without establishing any preparation or foundation for understanding it. For starters, you might want to hold a company meeting or a series of lunch-and-learn presentations that introduce some of the underlying reasons you'll be implementing certain policies. For instance, you could have someone explain the risks and business costs of downloading P2P file-sharing programs or the consequences of being careless with passwords.

As the policy is being developed and you get close to rolling it out, you can have managers meet with their staff to talk specifically about the impending policy and how it will affect them. This serves a dual benefit: In addition to helping prepare users for a new set of rules, it gives them a chance to discuss their concerns—some of which might need to be addressed before the policy is formalized.

4. Communicate the reason behind the policy

This is a biggie. Nobody likes to be told "Because I said so" when they question the rationale behind a rule or directive… or an IT policy. On the flip side, nearly all users will accept and support the conditions of a policy when they understand that there are legitimate reasons behind it. For example, if you explain that a policy is needed to ensure compliance with federal regulations—and that failure to comply could result in drastic consequences—you're likely to get a cooperative user response. This step goes hand in hand with managing user expectations, but it shouldn't stop there. A brief explanation of the policy's purpose should be part of the policy so that those who missed out on any early work you did to build support (or those who have conveniently forgotten about it) will see that the policy is based on legitimate need.

5. Write the policy in understandable terms

This seems fairly obvious, but there are plenty of policies out there that are so convoluted and overwritten, users can't make heads or tails of them. In some cases, they may give up on trying to figure out exactly what the policy says and dismiss it altogether. Policies should consist of a statement of purpose, a description of who it applies to, clearly stated requirements, examples of what constitutes acceptable and unacceptable behavior, and the consequences of violating the policy. And none of those sections needs to be a one-act play. Keep the whole thing as brief as possible so that users won't be confronted with a daunting amount of text.

Your policies should also be written in terms anyone can understand—no confusing technical jargon or legalese. This is one aspect of policy-building where feedback will come in especially handy. If you give a policy draft to five users and four of them respond, "Huh???" you might want to reconsider the language used in the policy.

6. Know the policy's impact on the users—and try to minimize it

A certain amount of inconvenience is almost certain to accompany policy restrictions, but you can reduce user resistance by developing the policy so that it reflects a full understanding of your organization's business processes. If a policy places a serious burden on users' daily work, you can bet some of them will find a way to circumvent the restriction. It will also sour their attitudes about the policy and probably any other policy you attempt to introduce. So it's worth developing knowledge of how users work and how the policy will affect them.

To educate yourself, talk to as many users ans possible. Find out what their jobs entail and what types of constraints would constitute a major roadblock to getting their work done. This is also an opportunity for you to convey the fact that the policy could introduce some inconveniences but the organization has no choice because it's the only way to safeguard its assets, protect itself legally, move toward some type of compliance, or whatever the case may be. Users who see that you're taking their situations into account will be far more accepting of the policy when it's introduced.

7. Obtain feedback and approval before you roll a policy out

You want to have complete confidence in a policy so that you can sell users on its value. That means making sure it's accurate, thorough, and well written. To help with this quality assurance,

have a number of people review it before it's distributed. Ideally, you'll want to obtain feedback from users who will be affected by the policy and who represent a variety of job roles. You may also want to show it to members of the IT department who weren't involved in drafting the policy. They may notice that something is missing—or point out that some restriction is unnecessary because measures are already enforced on the network. Run the policy by legal counsel to ensure that it complies with state and federal law. And make sure senior leadership signs off on the finished policy. All this may seem excessively cautious, but it's far better to be thorough at this stage rather than to redistribute a series of corrected versions. Users will tend to disregard the policy if it's under constant revision.

8. Introduce the policy the right way

The approach you take to introducing a policy can make or break the entire effort. To get users to recognize and accept that a new policy is in place, it's best to present it formally and stress its importance. An all-company e-mail from a senior executive endorsing the policy, reiterating its benefits, and thanking users for supporting it may help set the right tone. Depending on how drastic the policy's guidelines are, managers may want to follow up by holding meetings with their staff to discuss the ways the policy will affect them. Users should be encouraged to express comments, concerns, criticisms, and complaints—and managers should share those reactions with other managers and senior executives. It could be that the policy really is too restrictive, presenting an obstacle to a certain business process that nobody considered. The discussions will also help ensure that there are no misconceptions about the policy's purpose, its restrictions, or the consequences of violating it. And users will appreciate the opportunity to air any grievances they have.

9. Ensure timely reviews of all policies

Users will have more confidence in your policies if they know someone's monitoring their ongoing relevance and applicability. You'll also be able to demonstrate your diligence in maintaining control and compliance if you run into a legal need to defend your practices.

One way to ensure timely reviews is for the policy owner to establish a regular schedule for reassessing the policy and recommending any necessary updates or revisions. Another possibility is to form a subset of the original policy committee (or a separate dedicated committee) that convenes periodically to review all the policies that are in place. If changes are implemented, be sure users understand what has changed and why. If a policy is discontinued or completely replaced, managers should address the reasons and implications with their staff.

10. Keep communication channels open after the policy is distributed

You want to keep your finger on the pulse of user discontent; you want to learn about any serious problems a policy might be causing for employees, partners, or vendors; and you want users to have some recourse for expressing dissatisfaction or obtaining clarification if a policy doesn't make sense to them. You'll be able to achieve all these objectives if you designate a person or group for users to contact with questions and concerns.

You might publish your policies on a company intranet and list a contact person (maybe the policy owner or members of the drafting committee) there. Or you might put the contact information in the policy itself. If you send out regular IT department status reports or

newsletters, contact information regarding policies could be part of a standard masthead or footer. How you provide that information is up to you. The important thing is that users have an easy way to contact someone—and that they know such contact is encouraged. ❖

10 things you should know about conducting successful client negotiations

In the IT services business, it's relationships we're after, not one-off transactions. That makes it critical for us to engage in negotiations that leave all parties satisfied. Here are 10 ways to effectively conduct such negotiations.

1. Don't let your pitch drown out what the client is saying

Finding out what the client wants may be just a matter of asking the question, or it may require some investigative work. The best results include elements of both. Many consultants have talked themselves out of jobs by dominating the conversation with references, success stories, and braggadocio. When all we do is pitch, the client is left wondering if we care what they want.

2. Do your homework and arrive prepared

Asking the client about their goals, desires, and "must haves" puts the focus on them and their needs. You can take this technique to the next level by asking the question in context—which is done by being prepared. When you do your homework on the client and their business, the questions you ask are pertinent and meaningful, and they show the client that you're trying to see the world through their eyes, not from the perspective of what you want. If you need a little structure to conduct a basic investigation before you meet with a potential client, this research form (http://techrepublic.com.com/5138-27-6040914.html) will help you perform some business homework.

3. Know what you want from the negotiation

Consultants can help clients visualize the success of a project by asking them, "When this project is done, what will you have?" In negotiating, you should ask yourself a similar set of questions:

- What do you really want from this negotiation?
- What is the minimum you must have to be satisfied?
- What compromises are you absolutely not prepared to make?

Note that these decisions are not just about what deliverables you're prepared to commit to or what budget and schedule you're ready to accept. It's also important to remember your responsibility to the success of the project and not negotiate away things like change control or robust project management. Many IT service firms are successful at negotiating price and schedule but don't stick to their guns when it comes to enforcing the basic project disciplines. Include elements like working conditions, authority to make decisions, reporting and escalation procedures, as well as the typical "triple constraint" items of time, cost, and performance.

The clearer you are about your bottom-line requirements before you sit down at the table, the less likely that you'll be improvising, or reacting emotionally, in the heat of conflict.

4. Check yourself

Rookie consultants often try to affix problems to the client: "The client doesn't understand the technology; they don't know how to use consultants; there's too much politics…." If you find yourself doing that, it's time to check yourself. Did you articulate the technology? Did you explain the consulting process? Did you assess the political risks? Similarly, when you prepare for a negotiation, you should check yourself by asking these questions:

- What assumptions do you bring to the bargaining table that could influence or impede your understanding?
- What prejudices or preconceptions do you harbor that could cause you to misinterpret the other side's needs?

If we agree that understanding both our own and the other party's position is critical to negotiating success, it follows that anything that colors that perception can have a negative impact on the process.

5. Speak clearly

In negotiation, as in all phases of consulting, communication is key. Language has different meanings to different folks and among different cultures. Strong negotiators go the extra mile to be sure that they've clarified the intent of the language used by the other side by restating and summarizing to ensure shared understanding.

One of the communication shortcomings we have as specialists in a highly technical field is the use of jargon and other technical language that may be unclear, or interpreted differently, in our negotiating sessions. Use plain English when negotiating.

6. Read the client

As important as it is to realize our own assumptions, it's also critical to understand the other side's motivations and preconceptions. What is their bottom line and how will they take it if you try to budge them from that line? What are they afraid of in this negotiation? What do they most want to accomplish? What ego, prestige, or power needs are they trying to satisfy beyond the surface content of the negotiation?

The best negotiators seemingly read the minds of the other side, offering the exact outcomes visualized. They do this by examining the other side's human needs and using that knowledge to offer up a negotiating stance that satisfies the client.

7. Set the tone

We all come into negotiating situations with fears: Will I be intimidated? Will I be bamboozled? Will I be outnegotiated or manipulated? Knowing this, the experienced negotiator makes a special effort to allay these fears, to reassure all participants that they seek a fair and honest outcome. Wise negotiators explicitly and implicitly project themselves as fair, likeable, trustworthy, and ethical.

By seeking areas of commonality, by using nonthreatening body language, and by doing small things—like sitting interspersed with the client instead of gathering on one side—smart negotiators use the atmosphere and tone of the meeting to impart qualities of honesty and trust.

From the level of your voice to the questions you ask, every element in the bargaining room either reflects mutuality and trust or tears them down.

8. Avoid arguments

It's critical to make sure that negotiation never turns into argument. Kare Anderson proposes a method she calls "The AAAA Approach" to guide negotiators through the tense moments of conflict in a bargaining session. When emotions start to flare and conflict begins to bubble over, think of the four As and use them to defuse the situation:

- Acknowledge their position. Simply restating the client's position indicates that you're hearing them.
- Ask for more information. Asking clients to clarify or restate their position can give them a chance to express their requirements in a less divisive manner.
- Align with their needs. Make an honest effort to see things from the client's point of view and to understand why they're insisting on their interpretation. Find some way of expressing your sympathy for the importance they place on their position, even if you disagree.
- Add more information. Help the client understand why you are so adamant about your needs.

9. Present a united front

A perfect way to derail a negotiation is to bring in a team that lacks cohesion, a common plan, and poorly defined roles and responsibilities. When teams negotiate, which is common on both the client and the vendor side, it's critical that there be agreement about these elements:

- Who is in charge? Who has the right to make commitments, to close the deal, to make concessions?
- What are the team goals? This may seem like a basic assumption, but in some team environments, although the team goals are known by the senior members, they're never divulged or discussed with the entire team. This is a recipe for negotiating failure, as team members present an inconsistent message to the client and proceed less confidently, knowing that they can see only a slice of the total picture.
- What is every player's role? There's nothing more disheartening, and frankly humiliating, than to be asked to attend a bargaining session and then to be required to sit on your hands with no opportunity to participate. It's a waste of time and a dispiriting experience. If a consulting manager is going to invite someone to a negotiating session, he or she must make sure that person has a meaningful contribution to make and understands the role and how to play it. Not defining that role can lead to surprises at the table as that team member tries to contribute without a clear understanding of the parameters and boundaries of the discussion.
- What is your strategy? Along with understanding your bottom line and the roles and responsibilities of the team members, it's also critical to do a walk-through of the bargaining session before it occurs. Make sure any presenters are prepared and all supporting documents are printed and ready to distribute. If your discussion may take a technical turn, ensure that the supporting technical material and expertise is available. Most importantly, think through your bargaining position in detail and try to anticipate the client's team's

responses and objections. This exercise in visualization of the actual session forces you to build a set of expectations about the team members' roles in the session and to put yourself in the client's place and see their point of view.

10. Don't be knocked off course by "tricky tactics"

Although old hardball tactics of negotiating are discredited these days, that doesn't mean that everyone has abandoned them. In fact, you've probably been confronted with these manipulative tactics at some time in your negotiating career. Let's examine a few and explore some countertechniques that will allow you to retain your negotiating integrity without becoming a victim.

- Deception. Some less-than-scrupulous negotiators will fudge the facts, make up statistics, or mislead you about their authority to bargain. In this case, there's nothing wrong with asking clarifying questions and forcing them to back up their claims. You may want to preface negotiating sessions by asking outright if they have the authority to make a deal or if any deal needs to go up the chain before it can be approved. Question any "facts" until you're convinced they are rooted in reality.
- Intimidation. From loading the table by bringing in a big team and seating them together across from you to verbal jiu-jitsu, such as remarking on your appearance or preparation, to good cop/bad cop routines, hardball negotiators use all sorts of manipulative tricks to ratchet up your stress level and get you to act in ways you wouldn't normally behave. The best response to these tactics is recognition and preparation. Whether you're facing bullying, threatening, or gamesmanship, recognize the symptoms and refuse to play. Stick to the content of the deal, avoid the emotion, and don't be afraid to let them know you recognize their tactics.
- Escalation. The escalation game is one of the oldest tricks in the book. You walk out of a session believing you have a deal only to be greeted with further demands the following day. Again, recognition of the ploy and letting the perpetrator know that this is not what you agreed to is often the best medicine for this tactic. The important thing to remember when you're faced with any of these negotiating tricks is to keep your emotions out of the mix. The whole point of these tactics is to get you emotionally riled up and manipulate you into unwise behavior. Stick to the content of the deal and keep referring to the fair process you expect, and you can avoid these traps. ❖

10 things you should know about starting an IT consulting business

It takes more than a business card and some organizational ability to start your own consulting business. It requires a host of skills, from accounting to time management, and you can expect more than a few hurdles in your path. The key items in this list will help you determine whether you're ready to take on the challenge.

1. Begin with a gut check

Before leaving your job or shelling out bucks for business cards, you need to ask yourself several questions:

- What skills do you plan to consult with? Deciding what skills you're going to market is key to being a successful consultant. Presumably, you have some type of programming or networking skill that someone else needs—otherwise you won't be able to step into the market with ease. There are a wide variety of skill niches, from VB programmer to e-commerce site designer, that are in demand by clients who don't have the staff skills or time to train employees.
- Can you handle long hours? You need to seriously consider the hours a consulting business involves, especially at the outset. If you've done any consulting on the side, you already know about long hours—but running your own business ups the ante.
- Do you know basic accounting? Every consultant needs to be able to do basic accounting—to document project work, track and keep tabs on work time, and monitor expenses and client billing. You don't need a full-time accountant, but you do have to be able to stay on top of things.
- Do you dread collecting on unpaid bills? As a consultant, you have to accept the role of bill collector. You'll need to set up one day a month to generate bills and track those individuals who haven't cut you checks. This is your accounts receivable. It's essential because some of your best clients can be the worst when it comes to remitting payment. Late payments by clients can kill a business before it gets up and running.
- Do you mind doing your own marketing? Every business needs marketing to get exposure and clients, and you have to be willing to sell yourself. This nontechnical aspect of being a consultant is one of the top issues that can kill a business if not handled right. You will always need to be making contacts to get more business. It's imperative that you constantly ask current clients for more work and also ask them if they know of other similar businesses that can use your skills. This is an ongoing networking process that you need to develop to establish a long-term business.

2. Determine your expected income

The best way to start your consulting business is to get a client prior to starting out on your own. It's easy to get part-time work to see whether it will be viable before you go full time. This

will also give you an idea of what kind of income you can expect when you go out on your own. The key figure you need to determine is what dollar amount you are worth to a client on the open market. Let's say you decide to bill a client to work on their computer system. You decide to charge $30 per hour for your services. This gives you a target figure to go after.

Consulting is built upon billable hours. A calendar year has 2,000 billable hours, based on a 40-hour week and an eight-hour billable day. This also takes into consideration a two-week vacation. So if you bill $30 an hour for 2,000 hours, in a year you would make $60K gross income. This type of calculation will give you an idea of what your revenue will be.

3. Develop a business plan

Some consultants spend quite a bit of time developing a great business plan but never get any billable income. So you might want to hold off on drafting that plan until you get some revenue started. In fact, the best time to write a business plan may be when you're getting the feeling that you have too much work to do and are beginning to turn away business. At this point, take a weekend, sit down for a few hours, and develop a basic business plan for the next three months. By starting after you get billing income, you can accurately create your business plan, instead of developing it from what you think might happen. This will give you a plan that is actually a valuable tool for running your business.

4. Set up your business housekeeping

Once revenue begins to come in, it's time to set up basic business housekeeping. There are multiple business types: a sole proprietorship, a partnership, a limited corporation, and a corporation. Most people in this business start as a sole proprietorship and then change business entities as they grow. You will next need a business name and at least a few minimum business basics:

- A business phone number with an answering machine or service
- A cell phone with voice mail
- A quality printer
- Business licenses
- Errors and omissions insurance
- Business letterhead and invoice statements
- A business e-mail address
- A Web site, once your business is up and running
- Business cards with your contact information
- A nice brochure that details your business focus and skills

As you grow and get more income, the quality of the brochures can improve as well as the business cards. Start with a black-and-white brochure after business starts coming in. You can go to any copy shop and get 100 copies printed on a color printer for $25 to $35. This is the way to go until you get cash flow.

5. Market your business effectively

The easiest way to promote yourself is by word of mouth. But in today's market, that isn't enough. The best way for a full-time consultant to market the business is to attend business conferences or meetings of the chamber of commerce to meet potential clients. It's also a good idea to set up a booth at local business expos and hand out your brochures and business cards. You can even do a giveaway, such as five free hours of consulting services. Have everyone fill out a form and drop it in a box. If you get 50 responses, you have 50 potential customers you can call to drum up business.

6. Deal professionally with the billing process

Most consultants hate to deal with billing paperwork, but you need to handle it diligently and professionally. Every hour you work, you must get a signed statement from the clients verifying that you billed those hours and then, once a month, send invoices to your clients requesting payment. By doing this up front, you will be sure that you get paid, and you can also cut off any client who has a problem with your work before you roll up a big invoice. It's unfortunate, but a lot of clients have no problem trying to put off paying you if they think they can get away with it. By establishing your professionalism at the outset and by billing monthly or weekly, your client will know that you mean business and that your work does have value.

7. What if you can't meet deliverables?

If you realize that you can't meet a deliverable for some reason or another, you must tell your client as soon as possible. You may even have to do some work free to make sure you get anything at all. This happens to everyone sometime. It isn't always your fault, but it is something you will have to learn to deal with.

8. Be realistic about your cash flow

You have to know how much cash you need to keep your business going. Most businesses fail because they don't have enough cash to fund daily operations. Some business experts say you need at least three months of funds to get a business going; others say you need six months of cash in the bank. Everyone's situation varies, but it generally makes sense for new consultants to start while they still have a full-time job. That way, they won't have the cash flow pressures they'd have if they went out on their own immediately. After you get a feel for what you can make, you can decide how much cash you need in the bank before you break out on your own.

9. Set up a routine to help avoid pitfalls

Consulting can be a lucrative business. It's definitely a way to become self-employed and make a good income, but it does have its pitfalls. The best way to avoid them is to set aside time weekly to review what you have planned for the next week:

- Are there any problems that I need to address with my current clients?
- Do I need to make any marketing meetings or calls this week?
- Are there any critical lunch meetings I need for the following week?
- How is my cash flow looking for this week and for the next four weeks?
- What deliverables do I need to make for the next week?

10. Solicit feedback from your clients

Even though you've completed a project, you're work isn't quite done. Follow up with clients to ensure that they're satisfied with the job you did. Asking for feedback also demonstrates that you value their business. You might want to ask them to complete an evaluation form (http://techrepublic.com.com/5138-6337-730204.html) so that you can learn how they perceive your work and what areas you might need to improve upon. ❖

10 things you should know about using an executive IT recruiter

By Tim Heard

When the economy turns sour and jobs are scarce, IT professionals often turn to recruitment specialists to help find their next job. IT consultants can also make use of recruiters when the economy directly affects work and project prospects.

The executive level is not my recruiting specialty, so I sought the help of three executive recruiters and asked them to share thoughts and advice that would help consultants get the most out of a executive recruiter relationship.

I interviewed Jeff Goldberg, president of Executive Search Group, a national firm specializing in placing information technology executives and sales executives; Steve Kendrick, founder of Kendrick Executive Resources, a retained executive search firm specializing in the recruitment of information technology executives; and Colleen Geyer, director of operations for Corporate Consulting Associates, a boutique executive search firm that specializes in the placement of executive and middle-management professionals.

I've compiled their advice in a list of 10 tips for establishing a fruitful relationship with an executive recruiter.

1. Make decisions before choosing a recruiter

The first and maybe most crucial step is finding the right recruiting firm to assist with your career progression strategy, said Geyer. Identifying a recruiter that specializes in your area of expertise is as important as locating a firm that regularly works with individuals in your salary range and within your geographic perimeters.

Before you call a recruiter, analyze your requirements for the position, industry, compensation package, and geographic region you're seeking. You can then investigate recruiting firms and specialists. There are many sources available online and through your local library that will assist you in narrowing your search.

2. Create the right resume approach

The recruiters said that the candidate's resume should be performance-based rather than simply a list of past job responsibilities. It should contain significant accomplishments that are represented quantitatively, for example, "Improved profits by 23 percent" vs. "Improved profits."

Also, most recruiters prefer to have resumes in electronic format rather than hard copy. From the outset, keep track of when and to whom you've sent your resume. After choosing recruiters to work with, keep a record of search activity and results.

"This allows you to monitor the search firm's effectiveness, as well as preventing your resume from being submitted to the same prospective employer by more than one firm," advised Geyer.

3. Set specific expectations

View your relationship with a recruiter as long-lasting and mutually beneficial; decide who you would like to work with and generally limit it to two to three firms in the final selection process, said Geyer. In interviewing recruiters, ask each one what would be a reasonable frequency of contact and whether they prefer phone calls or e-mail—you want a very comfortable communication experience.

During the initial discussion, inquire about other searches with which the recruiter is having difficulty and see if you can help with referrals or contacts. The recruiter will appreciate your networking assistance and most likely will attempt to work harder in assisting you with prospective leads, said Geyer. Remember that an experienced recruiter can be a valuable career counselor. Even if the recruiter doesn't end up helping you find your next position, that person can bring an invaluable resource to your long-term career.

4. Understand the recruiter's true role

Understand from the outset that executive recruiters will call you about a specific set of requirements for which they have been engaged. As Kendrick explained, executive recruiters already have a client—a company seeking specific candidates—so their business is driven by that client's leadership recruiting needs, not the "availability" of candidates. This is a major misconception about high-level recruiting and is always an issue when candidates begin working with executive recruiters, he added.

"While there are some firms that, for a fee, will focus solely on your job search, my personal feeling is that the value they offer isn't worth the payment that they're going to require. Generally, a good executive recruiter is going to offer a lot of the same assistance for free," he said.

5. Keep an open mind and take counsel

Goldberg advised job seekers to listen to their recruiter with an open mind—especially when it comes to vital preparation and interview practice. Often, IT professionals believe they're ready for interviews and don't need practice.

"I spend roughly one hour preparing each candidate for their interview, going over basic interview skills. In order to maximize chances of success on the interview, candidates need to put aside their ego for a few moments and listen to the recruiter's interview advice," he said. While candidates are sometimes skeptical about the need for preparation, Goldberg said he is always thanked profusely after the prep.

"I couldn't manage a NOC, but two things I do know are what my client is looking for and how to interview properly," he said.

6. Tell the truth

It may be tempting to pad experience and exaggerate abilities, but it's the wrong thing to do, according to recruiters. You have to tell the truth, the whole truth, and nothing but the truth to your recruiter. Recruiters are solidly behind you and will be doing their best to help you get the great job you want. It's imperative that recruiters know everything, said Goldberg.

"If we know the dark-side stuff in advance, we can help you best position it so that it doesn't get in the way. If we don't, and it comes out later to the potential employer, we all look bad and can end up losing the opportunity and our credibility," he explained.

7. Keep the relationship ongoing

Quick and efficient responses are necessary to a successful recruiter relationship, and a key element is returning phone calls, said Kendrick.

"This is probably the biggest source of aggravation for recruiters. They invest quite a bit of time developing a relationship, critiquing a resume, coaching a candidate for interviews, then when you get the job, you stop giving them the time of day," he said. Just because the job search has ended doesn't mean the recruiter relationship should end, he added. You may need those services again, and recruiters with whom you've developed a strong relationship will really knock themselves out to help you when the time comes.

8. Contribute to the relationship

The candidate-recruiter relationship is a symbiotic one, said the recruiters interviewed. Job seekers should always try to be helpful with ideas, input, suggestions, or recommendations, noted Kendrick.

"Good recruiters will appreciate this and remember this in the future as it pertains to better understanding the candidate's/source's situation," he said.

9. No undermining

While frustration and anxiety may tempt you, never circumvent the efforts of a recruiter who has submitted your resume to their client, stressed the recruiters. Although you may become impatient from lack of feedback, attempting to go around the recruiter could lead to an immediate dismissal of your background and jeopardize your relationship with the search firm (and possibly other referral sources of the firm), said the recruiting experts.

If you feel you can improve on the presentation of your resume to the recruiter's client, you should document your justification in a concise summary that the recruiter can use to further qualify your background with their client.

10. If the relationship doesn't work, find another recruiter

According to Geyer, candidates need to know that not all recruiter relationships are successful, and it's important to know you can move on to another if the experience isn't proving rewarding or valuable.

"Remember that your search consultant is your best representative to their client; if you are uncomfortable with their ability to represent you, withdraw your resume from their database and find a consultant you are comfortable working with," he said. ❖

10 things you should know about creating a resume for a high-level IT position

Building a resume that targets an upper-level IT position, such as architect or consultant, requires a different approach than creating a resume to land an entry-level tech job. Although many of the standard rules still apply, you need to follow some more specialized guidelines. In fact, a few of these tips may actually contradict your previous notions of what your resume should include (and exclude).

1. Keep your list of "core skills" short and sweet.

When you've worked with a lot of technologies, you want to show the world all you've done. However, having a long list of core skills actually gives the impression that you know only a little bit about most of those things and that you're a generalist, not the specialist that the potential client/employer needs. Keep this list to a handful of key skills or possibly eliminate the list altogether.

2. Don't list certification exams.

At the very least, minimize the impact of this list. The average IT pro might want to list exams passed to build up a resume, but for the IT veteran, this actually marginalizes real-world experience and accomplishments.

3. Quantify projects and results.

For example, if you do an Active Directory implementation, specify how many sites, domains, and servers were involved. If you design an e-commerce system, specify the increased percentage of sales that resulted from the project. Tell the potential client/employer exactly how you helped a previous company that you worked for.

4. Bullets, bullets, bullets.

Don't use paragraph style writing to describe your projects, tasks, and duties. Bullet-point every major accomplishment or project and leave out the minor things. (Your resume is already going to be too big anyway.)

5. Include examples of work, if possible.

For instance, maybe you've written articles for an online magazine or built an e-commerce site. Include links to pertinent examples so potential clients/employers can see firsthand what you do.

6. Highlight major accomplishments.

If you're a high-tech consultant, you may have a lot of smaller projects and clients. Maybe you were hired as a "grunt" for a couple of short-term assignments but had a major project last year. You can't exclude the small stuff or potential clients/employers will question what you've been

doing. But you can minimize the impact by focusing attention on the bigger things. Some ways of doing this include using a slightly larger font, boldface, or italics, or even drawing a thin border around the major accomplishments. But don't go overboard—subtlety is still key.

7. Seek advice from actual managers.

Recruiters, agents, brokers, and human resource personnel are all different from managers. Managers want to see results, and they usually know how to spot a weak candidate. If managers think your resume reflects someone who can't do the job, you'll never get anywhere. Run your resume by some managers you know and have them critique it for you.

8. Know when to stop.

If you list all your experience from all the jobs, contracts, or projects you've handled, your resume will be more like a book. Find a place to stop listing your experience. If you feel you must at least acknowledge previous experience, try making a separate section and just bullet-point where you worked and what your title/function was. Of course, you'll usually want to do this only for the less-accomplished jobs that you don't want to highlight on your resume.

9. Make sure your design is simple, attractive, and readable.

As with any resume, you should use a clean font such as Times New Roman or Arial. Be consistent in your use of boldface, underline, or italics to help lead the reader through the document and avoid contrived graphical elements.

10. Edit, revise, and proofread.

Experts suggest that a resume should go through three to seven drafts before it begins to reflect the multidimensional individual on a piece of paper. Be grammatically correct, spell check the document, and have someone else proofread your resume carefully. ❖

10 extra questions to help you make the best help desk hire

Good candidates for a help desk analyst job need more than basic technical ability. They must possess strong communication and problem-solving skills. Help desk managers also need analysts who like working with people and can adapt to flexible work schedules. The following 10 questions are designed to help you pinpoint those traits. Including these questions in your interview should add only about 20 minutes to your current routine and will tell you a great deal about each candidate.

1. Can you work this weekend?

This is a great question to ask early in the interview. Watch closely for an initial reaction. Obviously, the candidate will be surprised. You haven't even offered the job and now you want to know about this weekend. Since most help desk analysts have to work odd hours, you want the candidate's first response to be a resounding yes. Something like, "I've actually already promised to work at my current job for some of this weekend" or "When exactly do you think you need me?" What you don't want to hear are excuses that explain why the applicant isn't available.

2. Tell me about your current job. What do you like about it? What do you dislike?

This is another good question for weeding out those applicants who just won't want to deliver. Although "heads down" programmers are great, the help desk needs analysts who enjoy talking to users. Avoid candidates whose favorites have more to do with the systems than the users. Good answers indicate that the applicant enjoys talking with users or investigating tough problems.

3. What kind of people are your current users? Do you like them?

This sounds like a dumb question. Who's going to say they hate their current users because they're terrible people? But it does happen; sometimes applicants can't help venting a little. For example, they might tell you they have little patience for needy users or for those who want to show you how smart they are. Patience and tolerance are desperately needed on a help desk.

4. What was your best subject in high school?

Don't let cliché questions like this one put you off. Just because people expect a question doesn't mean you can't learn a lot from their answers. Of course, the applicant wants to impress you and may say something like "computer class." That's not a bad answer, but people who liked math should be good at solving even non-math problems. And applicants who admit to liking English could have the communications skills you seek.

5. What operating system do you prefer and why?

You probably don't really care what operating system anyone prefers. However, you do care that anyone you hire knows about operating systems and can articulate why one or another is preferable.

6. What role do you think computer support analysts should play in the company?

There are a lot of good answers to this question. The important thing here is that the candidate mentions the needs of the users and not just the systems.

7. Assuming you have to work for a living and all jobs pay the same, how would you describe the job you want? (Don't say this job.)

This is similar to question 2, in that you're looking for an answer that includes people. Support analysts must deal with users day in and day out. The job is a lot easier for someone who actually likes to work with people.

8. I would like to set up a second interview with our evening supervisor. Can you come back this evening at 7:00?

Once again, this is not about the evening supervisor. The answer should help you judge how flexible the candidate is and how well he or she handles less-than-ideal situations. Obviously, you should only ask this question if you're giving second interviews and you have someone available at 7:00.

9. Write a paragraph explaining how DHCP works.

This task is good for both experienced and inexperienced candidates. It seems like a test of knowledge, but actually it's a test of communication skills. If the candidate admits no knowledge of DHCP, explain it first and then request the paragraph. If the candidate returns a well-written explanation, he or she could be a good support analyst.

10. Complete the following word problem:

At 7:00 A.M., a train leaves Palo Alto, CA, carrying 30 passengers with laptop computers and a lot of work to complete before they are due at their respective offices. At 7:15 A.M., the train arrives at the San Jose station (20 miles away). During that time, eight passengers completed their work. Of the remaining 22, 10 completed 40 percent, eight completed 50 percent, and four completed 80 percent. How much farther must each group travel before they have enough time to complete the work they each have due?

Not a lot of people are going to be able to answer this question correctly, but that's not really important. The point is for the applicant to see the humor in being asked a train question on a job interview. Not being ruffled and giving the correct answers would be a bonus, but it isn't

essential. In case anyone needs to know, group one completed only 40 percent of its work and must travel 30 miles further. Group two completed 50 percent and must travel 20 more miles. And group three completed 80 percent and has five miles to go. ❖

10 traits CIOs look for in hiring a manager

A job hunter's chances of snaring a new role is tied to a simple correlation—that the candidate's skills and experiences are what a CIO is looking for in a certain position. But by going one step further—and identifying personal and professional traits you have—you can give yourself an added advantage in the job hunt.

To help in that endeavor, I've put together a list of 10 traits that extend beyond the required skills and experience; as you know, there'll be at least 20 other applicants with similar resumes on the CIO's desk. These traits can set you apart from the dozens of other candidates.

As you review the list below, pull out your resume and try to correlate work and project examples that tie in to these traits so that you can introduce these added skills in cover letters and during interviews.

1. A self-starter attitude

I'll take 10 thoroughbreds over 15 average runners every time. CIOs want employees that take initiative and want to do a good job. Being proactive is an excellent trait as long as it is consistent with the mission.

2. Adaptability to change

Our IT world is constantly changing and those that are adaptable tend to achieve more. Managers need employees that can adapt to change and can maintain high levels of productivity even in uncertain times.

3. Appreciation for good customer service

People who understand the importance of client service know that clients, or users, are the reason we have an IT career. They also know how to take precautions when working on issues that can cause systems downtime and loss of productivity for their "clients".

4. Team players

Managers need staff members that can work well in teams and that the team can rely on. Too many excellent technicians lose their value to an organization when they can't work effectively in a team environment. Demonstrating an ability to work successfully with mixed teams of IT staff and users, or clients, is a positive indicator of teamwork skills and a tangible asset.

5. Proven commitment

CIOs want people that they know will go the extra mile when called on to take care of a situation and that do what it takes to succeed individually and for the team. True performers come through under pressure.

6. A strong desire to achieve

It's hard to teach people to want to succeed if they don't already have the desire. Having such a desire puts an emphasis on getting important issues resolved, and CIOs need people that know when a situation calls for "all hands on deck."

7. Problem-solving skills

Putting out fires is a big part of any IT manager's role, and competence doesn't necessarily mean a manager has to have all the answers. But good managers are those who are willing to work hard to find answers and enjoy the challenges that land on their desks.

8. Solid communication skills

Having the ability to communicate effectively with others is no longer just a desirable trait; it's necessary in most IT management roles. IT managers communicate with everyone these days—from the CIO to the internal user to the external client. Strong verbal and written communication skills can set you apart from many of your peers.

9. Strong follow-up skills

Nothing is more frustrating for a CIO than to have a manager drop the ball by not following up on a commitment or issue. It can probably do more harm to the credibility of the IT organization than anything else. The ability to follow-up is a trait that shows commitment and an understanding of client service.

10. Low maintenance

CIOs want managers who can operate individually, solve problems, and not create unneeded personnel or workplace issues. No CIO wants a manager tapping them on the shoulder all day, double-checking things and seeking help. The manager who requires minimal direction and who can deal with issues while validating that the appropriate steps are being taken is a valuable asset to an organization.

Just a few can go a long way

If in looking at this list, you see just a few traits that you can connect to your own experiences, don't despair; that's pretty much the norm. Very few IT managers have every trait listed. The goal, though, is also to identify those areas in which you consider yourself weakest and work to improve them.

Regardless of what you might think, the bottom line is that CIOs hire people they can relate to and that they think will make a positive contribution to the team. It's not always about the technical skills. In fact these "soft skills" can make the difference between you getting the job vs. a competitor. ❖

10 things you should know about the Gramm-Leach-Bliley Act

By Scott Lowe

In 1999, the US Congress passed the Gramm-Leach-Bliley Act, formally known as the Financial Modernization Act of 1999. This act imposes privacy legislation on financial institutions by regulating how information can be shared. Because most sensitive information is stored on or shared through your network, IT professionals should understand how the Act effects them. Here are ten things that you should know about the Gramm-Leach-Bliley Act.

1. The Gramm-Leach-Bliley Act covers a wide range of businesses

Not all businesses are required to comply with the Gramm-Leach-Bliley Act (GLB). For example, if you sell trinkets through a Web site, you don't need to worry about GLB (although you should still safeguard customer information). GLB covers businesses such as banks, appraisal companies, mortgage brokers, securities firms, insurance companies, credit card issuers, income tax preparers, debt collectors, real estate settlement firms, and other companies that may have self-financing plans. For example, if you work at a college and your institution provides loans to students to pay their tuition bill, you might fall under the GLB umbrella. GLB indicates that any business "significantly engaged" in financial activities is subject to GLB.

2. Compliance is not an IT-only project

GLB makes information security the purview of a company's Board of Directors. Although information technology is a major component of this process, the overall customer information security mechanism should not be left completely to IT.

3. Get your information security policies in order

If you haven't done so already, you should finalize your written information security policy. GLB requires institutions to "develop, implement, and maintain a comprehensive written information security program that contains administrative, technical, and physical safeguards that are appropriate to the size and complexity of the entity, the nature and scope of its activities, and the sensitivity of any customer information."

4. Continually identify potential risks

Make sure that you keep your security standards current. After you meet GLB's initial risk identification requirements, you must refined those requirements as you make changes to your environment, either through acquisitions or the implementation of new technology. You should also update your written policies and procedures accordingly. Consider institutionalizing this process. For example, require every IT project to undergo a complete security analysis and GLB document update before completion.

5. Secure both nonpublic and public personal information and any lists that may be derived from this information

GLB includes provisions for the release of both private and public information. For example, financial institutions may share a customer's publicly listed phone number more freely than a customer's account balances or credit card purchases. Even when institutions share publicly-available information, they may only do so under specific circumstances. For example, a real estate settlement company may release a home buyer's name and phone number only if the information is part of the public record. GLB defines information in the public record--name and address for example--as "directory information". Directory information can be shared without the customer's consent. Institutions however, must offer customers the ability to opt out of such sharing and must honor those requests.

GLB also requires that lists compiled from personal information be released under specific guidelines, even if the information is publicly available. For example, an institution could not release a list of names for mortgage applicants with low credit scores, even if the information is culled from public records.

6. Annual privacy policy notifications should include more than a Web page

GLB requires that institutions notify consumers of the institution's privacy policy. This policy must indicate what personal information the institution discloses. It isn't enough for an institution to just bury the notice somewhere on their Web site. Instead, the notice must be completely conspicuous and delivered as a part of a transaction. If the customer has to acknowledge receipt of the privacy policy, the institution has met its responsibility, as long as the notice remains accessible and changes to the policy are similarly provided to the customer.

7. Keep tabs on third-party service providers

All third-party providers with access to confidential customer information should operate under contracts that stipulate what data the provider has access to, how the provider will protect the data, and how the provider will use data. The contract should also include an assurance from the third-party to keep the data confidential and secure.

8. Encrypt data both in storage and in transit

Whether you move data over the network, on CDs, on tapes, or on floppy disks, you should encrypt all sensitive information. If unencrypted data is compromised, your company could be held liable for the privacy violation. You should also encrypt the data you store—on your SAN, for example—and make sure that access rights are strict and minimal.

9. Destroy what you don't need

Follow the legal retention requirements for the information your organization collects, but destroy what you no longer need. Thoroughly wipe or destroy old floppy disks, CD-ROMs, tapes, hard drives, and other media, including paper documents.

10. Real questions require a lawyer and/or consultant

You already know this, but it's worth repeating. If you have a question, the answer to which means the difference between your institution being sued or staying out of court, you need to ask a lawyer, even if you do your own research. "But I read on the Internet that this was legal" won't likely be a suitable defense if you fail to follow GLB guidelines. Regardless of how little or how help much you need, many IT security consultants will provide GLB support and/or sell GLB-compliant equipment. ❖

10 things you should know about the Family Educational Rights and Privacy Act (FERPA)

By Scott Lowe

The Family Educational Rights and Privacy Act (FERPA) was enacted in 1974 to protect student education records and pertains to any school, either K-12 or higher education, public, or private, that receives funds under any program from the U.S. Department of Education.

Since most schools in the United States fall into this category, if you work in this environment, you should be aware of how FERPA's provisions that might impact you.

1. FERPA covers both private and public schools, colleges and universities

While, on the surface, it might not seem like a private school would fall under FERPA, consider this: most colleges, whether public or private, accept federally-backed student loans and grants, such as Pell grants. As such, even private colleges fall under the FERPA umbrella.

2. FERPA was crafted before education's move into the Information Age

FERPA became law in August of 1974, before many institutions had sophisticated computer networks. This means that FERPA provisions often require interpretation to be appropriately applied. As such, the Family Policy Compliance Office (FPCO), the office within the U.S. Department of Education that oversees FERPA, often receives questions from schools that ask for clarification, or ask for a ruling on a particular issue. If you have questions, use Google to see if someone has already answered it, or visit http://www.ed.gov.

3. Use "Directory Information" carefully

FERPA established a class of information called "Directory Information"—information about a student that can be shared without that student's consent. According to regulations, directory information includes information "contained in an education record that would not generally be considered harmful or an invasion of privacy if disclosed and includes a student's name, address, telephone listing, email address, and other types of information about the student." Such directory information could include the student's name, e-mail address, telephone number, and other, non-sensitive information about a student—information that is commonly made available in a student directory. Information such as a Social Security number would not fall under this definition.

4. Student network use records may be covered under FERPA

Schools that record information about a student's network use, including Web sites visited, contents of e-mail messages, and more, may be required to protect that data as stringently as other personal information, assuming that the information in question could personally identify a particular student. If stored on institutional servers, this information could be considered part of a student's educational record.

5. Make sure that "hold" requests are honored at all times

Although FERPA allows the release of directory information, schools must make provisions for students who do not wish to share their information. If you have processes that automatically generate directories, or make some directory information public, you must use flags and/or logic that omits students who have opted to place a hold on their directory information.

6. The "last four" won't cut it

You've probably worked with a bank, or some other entity, that asks you to provide the last four digits of your social security number as a way for you to verify your identity. If you work in education, this practice won't cut it, particularly if you post information that includes these four digits. Of course, by now, most schools have either moved away from, or are in the process of moving away from, any regular use of a student's social security number.

7. Maintain appropriate access rights

FERPA calls for strict adherence to a student's educational record, and requires, with few exceptions, that only those with a need to access information should access that data. As such, information technology staff in educational environments need to closely monitor account permissions. Access to the student information system, file shares, course management systems, and even student work, including papers and exams, must be carefully monitored and controlled lest the information fall into improper hands.

8. How can parents pay a student's bill if the student's account information is protected?

This is a classic chicken-and-egg dilemma. Parents are often responsible for paying a student's bills but FERPA indicates that personal information, including billing records, are the rights of the student. This generally isn't a problem except for elementary, middle, or high school students, but does raise important issues for college and university students.

Many colleges and universities have incoming freshmen complete a standard form that grants their parents rights to some or all of their education record, including bills. For colleges that use an outsourced service, such as CashNet, for online tuition bill payments, many of these companies have built in the capability for a student to be able to provide a parent or guardian with a PIN number that grants that person access to the student's account. The key part here is that the student must initiate the creation and sending of this PIN in order to stay in compliance with FERPA.

9. FERPA has been around a long time

Why all of the discussion now? FERPA was created in 1974, long before students were coming to campus with computers, iPods, Blackberries, and so forth. FERPA was enacted long before the digital age, but as technology now permeates education, learning institutions must adequately create, monitor, and enforce adequate privacy policies. Scandals that have occurred outside education and resulted in legislation such as HIPPA, Sarbanes-Oxley, and Gramm-Leach-Bliley, have refocused people's attention on privacy issues and put organizations and institutions on notice.

10. Real questions require a lawyer

You already know this, but it's worth repeating. If you have a question, the answer to which means the difference between your school being sued or staying out of court, you need to ask a lawyer, even if you do your own research. "But I read on the Internet that this was legal" won't likely be a suitable defense if you fail to follow FERPA guidelines. ❖

10 flagrant grammar mistakes that make you look stupid

These days, we tend to communicate via the keyboard as much as we do verbally. Often, we're in a hurry, quickly dashing off e-mails with typos, grammatical shortcuts (I'm being kind here), and that breezy, e.e. cummings, no-caps look. It's expected. It's no big deal. But other times, we try to invest a little care, avoiding mistakes so that there's no confusion about what we're saying and so that we look professional and reasonably bright.

In general, we can slip up in a verbal conversation and get away with it. A colleague may be thinking, Did she just say "irregardless"?, but the words flow on, and our worst transgressions are carried away and with luck, forgotten.

That's not the case with written communications. When we commit a grammatical crime in e-mails, discussion posts, reports, memos, and other professional documents, there's no going back. We've just officially gone on record as being careless or clueless. And here's the worst thing. It's not necessary to be an editor or a language whiz or a spelling bee triathlete to spot such mistakes. They have a way of doing a little wiggle dance on the screen and then reaching out to grab the reader by the throat.

So here we are in the era of Word's red-underline "wrong spelling, dumb ass" feature and Outlook's Always Check Spelling Before Sending option, and still the mistakes proliferate. Catching typos is easy (although not everyone does it). It's the other stuff -- correctly spelled but incorrectly wielded -- that sneaks through and makes us look stupid. Here's a quick review of some of the big ones.

1. Loose for lose

No: I always loose the product key.

Yes: I always lose the product key.

2. It's for its (or god forbid, its')

No: Download the HTA, along with it's readme file.

Yes: Download the HTA, along with its readme file.

No: The laptop is overheating and its making that funny noise again.

Yes: The laptop is overheating and it's making that funny noise again.

3. They're for their for there

No: The managers are in they're weekly planning meeting.

Yes: The managers are in their weekly planning meeting.

No: The techs have to check there cell phones at the door, and their not happy about it.

Yes: The techs have to check their cell phones at the door, and they're not happy about it.

4. i.e. for e.g.

No: Use an anti-spyware program (i.e., Ad-Aware).

Yes: Use an anti-spyware program (e.g., Ad-Aware).

Note: The term i.e. means “that is”; e.g. means “for example.” And a comma follows both of them.

5. Effect for affect

No: The outage shouldn’t effect any users during work hours.

Yes: The outage shouldn’t affect any users during work hours.

Yes: The outage shouldn’t have any effect on users.

Yes: We will effect several changes during the downtime.

Note: Impact is not a verb. Purists, at least, beg you to use affect instead:

No: The outage shouldn’t impact any users during work hours.

Yes: The outage shouldn’t affect any users during work hours.

Yes: The outage should have no impact on users during work hours.

6. You’re for your

No: Remember to defrag you’re machine on a regular basis.

Yes: Remember to defrag your machine on a regular basis.

No: Your right about the changes.

Yes: You’re right about the changes.

7. Different than for different from

No: This setup is different than the one at the main office.

Yes: This setup is different from the one at the main office.

Yes: This setup is better than the one at the main office.

8. Lay for lie

No: I got dizzy and had to lay down.

Yes: I got dizzy and had to lie down.

Yes: Just lay those books over there.

9. Then for than

No: The accounting department had more problems then we did.

Yes: The accounting department had more problems than we did.

Note: Here’s a sub-peeve. When a sentence construction begins with If, you don’t need a then. Then is implicit, so it’s superfluous and wordy:

No: If you can't get Windows to boot, then you'll need to call Ted.

Yes: If you can't get Windows to boot, you'll need to call Ted.

10. Could of, would of for could have, would have

No: I could of installed that app by mistake.

Yes: I could have installed that app by mistake.

No: I would of sent you a meeting notice, but you were out of town.

Yes: I would have sent you a meeting notice, but you were out of town.

Bonus peeve

I'll just throw one more thing out here: My current burning pet peeve. At some point, who knows when, it became common practice to say that something is "hit and miss." Nuh-UH. It can't be both, right? It either hits or it misses... "Hit OR miss." Granted, it's a small thing, a Boolean-obsessive sort of thing. But it's nonetheless vexing because it's so illogical. Okay, that's mine. If you've got a peeve of your own, share it in the discussion (or post a comment and tell me to get over it). ❖

10 tips for designing successful Web-based training

This article originally appeared in the February issue of Inside Technology Training *and appears on TechRepublic under a special arrangement with the publisher. Sarah Fister is a contributing editor to* Inside Technology Training.

You can lead learners to the Web, but can you make them stay—and learn? It's one of those lofty questions trainers will ponder as Web-based training (WBT) continues to gain acceptance.

Designing training for the Web is a formidable challenge, especially if you've spent most of your career working in the classroom. You have to reconfigure your instructional design techniques, think in a nonlinear fashion, and design your courses so students can actively gather information rather than having it fed to them. You'll also find that those clever games and activities that keep students from getting bored in the classroom are useless in the virtual world.

Frustrating? Sure. But once you figure out how to design for the Web, you can put your courses online, then relax and let employees train themselves while you take long lunches, right?

Not so fast. Just because technology allows employees to take courses on the Web doesn't mean they will do it. And if they do decide to enroll in a course, how can you be sure they'll complete it?

How many fall off the wagon?

Statistics on the percentage of learners who fail to complete Web-based courses are, for the most part, anecdotal. According to Eric Parks, a Fair Oaks, CA., WBT designer, 50 percent of trainees who start WBT courses don't finish them—a troubling figure that's gleaned from his own research and experience. Others would argue that percentage is low.

Trainers would like to believe that people don't finish courses because they learn what they need to learn, then go back to work whether they've completed the course or not. That's rarely the case. Instead, Parks says, the high dropout rate is a result of three things:

- Poor instructional design
- A mismatch between the user's computer system and the technology required to do the WBT
- Organizational disincentives that compete with the training, such as not being allowed work time to take Web-based courses.

How to make it work

So how do you prevent these problems and create WBT that holds learners' attention? Here's what trainers on the front lines have to say:

1. Make sure the content has value

Before you invest in a Web-based course, make sure the end users need it. "People will take time to do those things which they feel are important," says trainer Pete Blair of Pete Blair and Associates, an independent consulting firm in Raleigh, NC.

Because of today's demanding work schedules, nice-to-know training can't compete with vital day-to-day responsibilities. So when creating WBT programs, leave out segments that focus on the history of the topic or other irrelevant material. Work closely with managers to find out what critical performance-related mistakes are costing them money.

Also, ask employees what skills they believe will make them more marketable. "These are your WBT training targets," says Gerald Gschwind, a consultant for VisionCor, an information development company in Charlotte, NC. "The result will be courses that people care about, that provide obvious value, and that sell themselves to learners and managers."

2. Make the technology invisible

Be sure you know what kind of computer systems the learners will be using to do WBT and design your courses to run on them. If you don't know, create courses for the lowest common denominator—a 486 computer, a 14.4 kbps modem, and early versions of Microsoft Internet Explorer and Netscape Navigator.

Tom Cooke, an instructional developer in Rockville, MD, admits he has failed to complete several Web-based courses. In one case, faulty technology derailed his effort. "It was too great a hassle to take the course, so I bagged it," he recalls.

3. Make the personal investment considerable

If employees have something at stake—whether it's a mandatory deadline, a performance review, a promotion, or their own money—they will be more inclined to finish the course. Cooke, who dropped a Web-based course his employer was paying for, admits he might have been more likely to complete it had the tuition come out of his own pocket.

4. Make yourself accessible to end users

To give learners a sense that there really is a person behind the training, Blair uses his name and photograph in his Web-based courses.

He also issues an open invitation to send him feedback and questions by e-mail. This gives users a forum to comment on the courses and their effectiveness, and it gives Blair a measure of how well he's doing. "You can bet your bottom dollar that if I start getting adverse feedback, my days and nights will be filled to overflowing with revisions," he says. "I will get good feedback. If not at first, then eventually."

By connecting with your learners, you also make it more difficult for them to quit. Because Cooke found the WBT course he took impersonal, he says, it was easier to drop the course than if it had been taught by a living, breathing instructor.

5. Chunk material into small bites

"Take full advantage of the flexibility offered by the 'W' in WBT," says Gschwind. He recommends breaking large blocks of content into modules that can be completed in a short amount of time—say, the last 15 minutes of an employee's lunch hour. While Gschwind admits it's not easy to do this, he believes it's vital for effective WBT.

Robert Zielinski, vice president of sales and marketing at Allen Interactions, a Minneapolis interactive multimedia training and development company, agrees. "If people aren't finishing the training, it must take too long to finish," he says.

Gschwind and Zielinski say dissecting a skill into many segments allows users to gain competency quickly. Modular training also serves as a helpful tool for users who need to brush up on a skill once they're back on the job. Employees can quickly scan a course module list and find the lesson they need without wading through pages of unnecessary content, says Zielinski.

6. Give minimum presentation, maximum hands-on work

"People are always more interested in seeing how well they can perform rather than how much they can learn," says Lynn Fassnacht, learning program director at the Middleburg Heights, OH, office of CAP Gemini America, an IT and business consulting firm. She suggests starting lessons by testing students' skills to see how much they know.

"Some people will tell you this approach is unfair because you ask questions before giving answers," she says. "But which do you remember more: the question you answered right because you read some stuff and remembered it until the test? Or one you answered wrong, received corrective feedback about, and couldn't wait to try again?"

7. Make sure learners have enough time for the training

WBT is usually sold as an "anywhere, anytime" solution, says Gschwind. Unfortunately, managers who buy that argument often don't allow employees the time they need to complete the training during business hours. Employees are then forced to take courses during lunch, early in the morning, or at home after getting the kids to bed.

"The learning experience comes under time pressure, so employees become much more concerned with finishing than actually learning," he says. If you expect employees to complete training, educate managers about the importance of the learning experience. Make it clear to them—and to the employees—that time spent on WBT is not time spent goofing off.

8. Give learners a chance to speak out

Create group participation activities to help people keep on track, says Patti Shank, president of Insight Ed, LLC, an educational technology consultancy in Boulder, CO. She recommends creating discussion groups so learners can talk about the training while they're going through it. She also suggests including links to subject matter experts in case learners have questions or need more information.

9. Get rid of the eye candy

Try to remember the last time streaming video of a talking head added value to a Web site or training course you visited. "People endure animations and video clips with the hope that they will find information that is valuable to them," says Zielinski. If you are going to include these elements, make sure they're meaningful and aren't just there for the "gee whiz" factor.

10. Add elements of suspense

Instead of presenting the objective, teaching the material, and then testing knowledge, trainers should make the learning an experience, says Zielinski.

He describes a course his company created to teach preflight preparation to flight attendants. It begins with an animation of the plane pitching and yawing. The pilot screams "mayday" over the intercom, then the plane plummets before making an emergency water landing. Students are

asked to explain what happened. When they can't, the course tells them the plane went down because the cabin wasn't pressurized.

Such an experience is much more likely to teach the importance of remembering to pressurize the cabin than a written test on the 10 steps to preflight preparation, says Zielinski. "It's not about telling and testing, it's about testing and telling."

How have you been able to keep students interested in Web-based training? Let us know by sending an e-mail or by posting a comment below. ❖

10 tips for helping your tech writer deliver good help

A programmer can do plenty to facilitate development of help functions when a technical writer is on the team. Especially for larger projects, you may have a technical writer on your team to assist in the development of the help system. Here are 10 things you can do to make it easier for a technical writer to implement JavaHelp help systems that will enable end users get the most out of your applications.

JavaHelp-specific tips

1. Help determine the presentation of the helpset.

The limiting factors in this decision are likely to be the available system resources and the amount of time the technical writer has to deliver the help system; unfortunately, this probably sets the limit for its usefulness too. Field-level context-sensitive help takes more space and more time to develop, but if the application is fairly complex, it may be important to include. A standalone help presentation can be delivered faster, but it won't be as valuable.

2. Help develop and implement the ID strings for context-sensitive help so that your Java application properly invokes the help.

Field-level help requires an ID string for each component. Secondary and pop-up windows will require your involvement as well.

3. Work on customization together.

Advanced functionality can be added to the JavaHelp help set using Jcomponents. Most likely, that'll be your job.

4. Determine how to deliver the help system.

JavaHelp help systems can be delivered locally, on the user's machine, or they can be server based. Factors to consider here are the resources of the server and/or the users' machines and the help presentation complexity. Will you encapsulate the application?

5. Include the appropriate Java classes to implement JavaHelp support, including the JavaHelp JAR file jh.jar or jhall.jar.

In Creating Effective JavaHelp, author Kevin Lewis suggests including in the installation program the ability to check the user's site to see if the JavaHelp JAR has been installed. Here is a list of Java classes that must be included:

- —javax.help.TOCview
- —javax.help.JHelpTOCNavigator
- —javax.help.IndexView
- —javax.help.JhelpIndexNavigator
- —javax.help.SearchView
- —javax.help.JHelpSearchNavigator

General tips

6. Bring them in early.

If it's feasible, conduct the subject matter interviews together when gathering the business requirements for the application. Technical writers are typically adept at the user presentation side of development and may have questions to clarify issues at the beginning, which can prevent changes when the development process has already begun. And the sooner they understand how the application will work, the less explaining you'll have to do.

7. Make yourself available.

Be available to explain the application complexities when the technical writer has questions. Because online help requires a concise writing style that gets right to the point, the author should fully understand the functionality. And to achieve the goal of creating useful and usable documentation, the author needs to convey the right information to the defined audience. Give feedback to ensure that the author is developing topics that make sense for the application.

8. Be open to suggestion.

Let the technical writer be your gauge for the usability of your application. Realize that if a seasoned technical writer has trouble explaining how to use a particular screen or field, it may be worth a second look at how that feature is presented. If an item can't be explained clearly, you may need to revise its presentation into a more user-friendly format.

9. Communicate.

Inform the technical writer of any code changes that affect the application presentation and require a change in the help content or display. Timelines usually dictate that the help system is authored simultaneously with the application, rather than when the application is complete. If the author can keep up with application modifications, you'll decrease the possibility of delays in delivering the product.

10. Use a style guide.

Save yourself time. Let the author develop a style guide (a good technical writing team already follows one, and it is most likely customized for your company) and the style sheets for your application. Follow the guidelines they set. Additionally, supply a guideline for naming conventions. You probably have standardized naming conventions for your application files.

Worth the effort

The JavaHelp download, available from Sun, includes examples and templates to make it easier to understand how to build professional help systems using Sun's spec. If your technical writing staff uses a third-party tool to build help systems, it may provide support for JavaHelp, which further simplifies some of the more complicated aspects of developing help. At any rate, a well-designed help system makes your application easier to use and understand—and knowing how to assist the documentation staff will simplify your life in the long run. ❖

10 keys to successful outsourcing

By Anthony Tardugno

When an organization is struggling with IT services or support of a specific system or application, there's a propensity to say, "We don't have the skills or understanding to do it right. Let's outsource it to someone who does." But the mindset should be, "We don't have the skills or understanding to do it right. Let's develop our requirements, service-level expectations, and associated metrics. Then, let's entertain options for how best to source them."

I know this sounds ridiculously basic, but if you look at the reasons surrounding any outsource failure, at the top of the list will be not defining requirements, expectations, and metrics sufficiently. Waiting until the period of due diligence is too late; you need to complete this process before going into the partner selection process. If your company is contemplating or pursuing outsourcing, these 10 keys can help you develop a successful outsource partnership.

The decision to outsource is not purely an economic consideration. The ability to react to changes in the business with timely delivery of quality services (the D and Q of the quality, cost, delivery, and value [QCDV] equation) plays a big role. QCDV also plays a very large part in customer satisfaction, your most important factor. To determine whether it makes sense to outsource, you must understand what makes for a successful outsourcing partnership.

1. Customer satisfaction

The most important factor to consider is customer satisfaction. How many times have you been willing to pay more for a good or service because your level of satisfaction was so high? If the customer isn't satisfied with the goods or services you provide, you can be sure they'll either be looking elsewhere or escalating their concerns. You must take a customer approach and insist that your outsource provider have the same commitment.

2. Definability and measurability

Successful outsourcing is dependent on not only how well you define your customer requirements but how well you can measure how they're being met. This may sound basic and obvious; however, the fact remains that if you can't clearly define what you need and are unable to put the appropriate measurements in place, how can you expect your outsourcing partner to meet, let alone exceed, customer expectation? You must be able to put the appropriate metrics in place.

3. Financial savings

Outsourcing in many cases provides a financially compelling alternative to providing the services in-house. However, if reducing cost year over year is a key measure, it's essential that you craft the partnership so that the provider has the incentive to help you meet your goals.

Changing the mindset of the outsource provider to go into year over year cost-cutting mode after they've enjoyed a year or two of flat or increasing revenues is very painful. The initial reaction is to rotate the most marketable and experienced staff off the assignment and either

backfill with junior or lower cost resources or spread the work to the rest of the less-experienced team.

Like every other company, their goals are to grow revenues with existing clients and increase profitability. You can see how things will begin to degrade if you don't define this up front; if you don't, the end user is the one who suffers.

4. Share the risk

Share risk with your outsource provider, both from a reward and recognition perspective and from a remuneration perspective. If you're meeting or exceeding your goals and expectations, make sure that accolades are shared appropriately. On the flip side, you need an "or else." The failure of your outsource partner to meet any of the established service levels or metrics must result in a predefined penalty (dollars or services).

5. Delivery and quality

Delivery and quality aren't always used in the same sentence, but they should be. Be very specific and deliberate when documenting your expectations on delivery and quality. For example, it's not enough to say that all requests for service will be responded to within 15 minutes from time of call and closed within eight hours.

To truly make this a "robust" requirement, add a metric that tracks the number of requests for service that are reopened with the same problem. This adds the quality aspect to delivery. This all needs to be bounded in the overall level of service agreement. Don't just be hung up on delivery.

6. Scalability

Your outsource partner needs to be positioned to meet your growth requirements, so don't just look at their current capability—look at their ability to scale. Just as you need time to ramp up skills and staff, your outsource provider needs time to react to your needs.

It's very unlikely they'll have a "bench" filled with resources ready on demand. If they do, I can assure you that you're paying for it somehow. Partnering with your outsource provider means sharing your strategy and goals (without compromising your corporate mission) as much as possible.

7. Stability and variability

Some of the most successful outsourcing ventures are with components of IT or applications that are very stable, mature, definable, and measurable. This is why legacy operations (which have very little variability associated with them) are a perfect example of how you can be very successful with outsourcing.

When I say variability, I refer to changing requirements, changing functionality, and a dynamic customer base. As stated before, variability drives change, change drives instability, and instability drives breakage, which drives cost and downtime—all resulting in customer dissatisfaction. Think about the different pieces of your operation; those with the least amount of variability are the ones that are most manageable from both a delivery and a financial perspective.

8. Predictability

How many times have you gone to your favorite fast food franchise expecting to get predictable quality, service, and price, regardless of the town you're in? It's the same with any good or service: Customers expect predictability. Establish metrics around what you define to be "predictable" and measure your outsource provider against them.

9. Competency and staffing

Competency and staffing are strategic business issues. Decide whether the environment, set of services, or application that you will outsource is deemed "business critical" and whether the intellectual property surrounding it must remain in-house. Once you've decided that, it is equally important to assess your ability to adequately staff according to the business needs.

10. Velocity (reaction to change)

Outsourcing has associated with it an increase in "formality," which manifests itself in the form of "red tape." Therefore, if your business requirements change frequently, the ability for your outsource partner to respond with the same velocity may be hindered. Clearly document your rate of change and expectations of delivery and quality. This will also allow your outsource partner the ability to staff appropriately. Addressing these factors early on will ensure your greatest chances of success. ❖

10 ways to avoid being the victim of identity theft

By Debra Littlejohn Shinder, MCSE, MVP

Identity theft, which involves using another person's credentials and personal information (name, address, social security number, driver's license number, credit card and bank account numbers, etc.), is one of the fastest-growing crimes in today's information-laden world. ID thieves usually use this information to access the victim's money, obtain property fraudulently in the victim's name, or distinguish the thief's own identity when committing other crimes.

According to statistics from the Federal Trade Commission's January 2006 report, the organization received more than 685,000 complaints of consumer fraud last year, with 37 percent representing cases of ID theft. Estimates of the true number of cases is much higher; fightidentitytheft.com estimates that 10 million Americans have already been victimized, at a total cost of more than $50 billion.

Luckily, there are things you can do to avoid becoming one of these statistics, as well as ways to minimize the damage if you do become the target of an ID thief.

1. Shop only secure sites

Some people think buying things online puts them at inordinate risk of identity theft—yet those same people think nothing of allowing a waiter or retail store clerk to whisk their credit card away to some back office where they could easily record the numbers and information or even make a "white card" copy of its magnetic strip. The key to safe online financial transactions is to shop only at reputable Web sites and to be sure transactions are secured with SSL encryption (which you can recognize by the little "locked" icon at the bottom of most Web browsers).

One caveat, though: You want to deal with sites that use encryption so someone can't steal your payment information as it passes across the Internet—but scam sites can encrypt their transactions too. So we're back to the basic: Buying from Amazon.com or the Microsoft Web site is safer than ordering from Joe's Homepage (unless you know who Joe is and that he can be trusted).

2. Protect your personal information

Online or off, it's not just your credit card numbers that you need to guard diligently. In some cases, just a name is enough for an ID thief to gather much more information about you. If you have a name that's common, like John Smith, it won't be so easy, but if your name is unusual, so that you're the only one with that name in your particular city or region, an ID thief may be able to find out your address, phone number, and date of birth through an online "people search" service, such as Zabasearch. Then with that information, if you own your home and live in a county that puts its property records on the Web, the thief can go to that site and find out how much your home is worth, getting a good idea of whether you're a good target. Some tax districts even include a photo of your home, which may show your car sitting in the driveway with license plate number displayed. Be aware of your online presence and opt out of as many directories and databases as possible.

3. Protect PINs and passwords

Make sure you have strong passwords for your online banking services, electronic bill-paying, and other financial accounts. Don't use easily discovered passwords such as your mother's maiden name, your social security number, or your birth date. A good password is long (at least eight characters; 14 is better) and complex, containing a mixture of upper- and lowercase alphabetic characters, numeric digits, and symbols and not containing any words found in the dictionary. PINs are often limited to four numeric digits. If you have a choice in creating the PIN, make sure the numbers are random and not easy to guess (for example, don't use your street number or the last four digits of your SSN).

It goes without saying that you shouldn't write down your passwords and PINs, and you should never share them with anyone else. If it's absolutely necessary to do so (for example, in an emergency situation where you need a friend to withdraw money from an ATM with your card), change the password or PIN immediately afterward.

4. Protect sensitive data on your computer

If you have any personal or financial information stored on your computer, use Windows EFS or a third-party encryption program to protect it. Update your virus software regularly and use a firewall to prevent intrusions. Keep your operating system and applications updated, especially with critical security patches. Use an anti-spyware program. Don't use file-sharing programs or visit Web sites that are more likely to contain dangerous code, such as hacker sites, porn sites or warez (pirated software) sites. Don't open attachments from people you don't trust and don't click on links in strangers' e-mail messages.

Don't put sensitive information on laptops, handheld computers, or other portable devices unless absolutely necessary. If you need to access such data while on the go, store it on a flash drive or memory card and carry the storage device separately from the computer. Don't set your computer up to log automatically, especially portable computers.

If you sell or give away an old computer, first use an overwriting program to get rid of the information on the drive (just deleting or even formatting is not enough), or even better, remove and destroy the hard disk and let the new owner install another one.

5. Use an alternate identity for casual Web surfing

Many savvy Internet users have learned that it's smart to have multiple e-mail addresses and to use an alternate (for example, an account with a Web mail service such as Hotmail, Yahoo, or Gmail) when you need to enter information to access a site. If you're just casually surfing and not conducting business, there's no reason to give any site your real e-mail address or even your real name, address, and other personal information.

Some sites require you to register (at no charge) to access or post to the site. And some of these sites sell the lists of registered users for marketing purposes. An identity thief can easily pose as an advertiser and buy the same list. Having several alternate identities can help you track down what sites are selling your info. For example, Jeff might use the name Jeff Johns when he registers on a site called John's Fishing Gear, and the name Jeff Booker when he registers on a site called the Big Book Place, and use e-mail addresses associated with those names (jjohns@gmail.com and jbooker@hotmail.com, for example). Now when he starts getting tons of spam addressed to his jbooker account, he knows the Big Book Place is the one who sold his info.

6. Learn to recognize phishing scams

Phishing e-mails are a particularly insidious form of spam. It's annoying enough to have your mailbox fill up with junk mail from legitimate companies, but phishers aren't really selling anything; they're just "phishing" for your credit or debit card information or bank account numbers, or other personal information they can use.

A good example is the ever-popular "You qualify for low rates on home refinancing." The scam site isn't a mortgage company, but its Web site is set up to make you think it is. When you fill out the detailed loan application, you give the phisher a wealth of information that includes your social security number, banking information, income, employers, present and former addresses, relatives and friends' names and addresses, and much more that can be used to impersonate you successfully.

Other examples of phishing messages include those purporting to be from your bank or credit card company or a legitimate site with which you do business, such as eBay, notifying you that you must click a link to update your account information. Many even claim they're asking you to do this to prevent your account from being closed or used fraudulently.

Phishing messages can often be detected by the fact that links go to a different URL from the one that appears in the message. For example, if you hover over "www.ebay.com" in the message, you might see that the hyperlink actually takes you to www.scammersite.com/ebay. A good rule of thumb is to never respond to any e-mail message asking you to return personal information. Instead, call or write directly to the company that the message purports to be from.

7. Use cash or credit

There are lots of ways to pay for your purchases these days, but some are safer than others. When it comes to protecting your identity, good old-fashioned cash is still king. Unfortunately, there's no way yet to insert a twenty dollar bill into a slot in your computer to make a purchase.

Often, you have the choice to pay for online purchases by credit card, debit card, electronic check, or direct bank account withdrawal. All of these require you to submit precious information that an ID thief would love to get hold of. None of these types of information is more or less likely to be stolen, but there are a couple of advantages to paying by credit card. First, many sites require that when you pay by credit card, you enter the security code (the three-digit number on the back of your card). This adds a layer of protection, since a fraudster who obtained your credit card number from a receipt or other source would not know this number.

More important, if you do become a victim of credit card fraud, the law limits your liability to $50. You don't have this protection with debit cards—they work like paying cash, in that once the money's gone, it's gone.

Checks also contain a huge amount of information for scammers: your name, address, and phone number, and many people have their driver's license number printed on the check. And of course your bank account number, the bank's routing numbers, etc., are also printed on the check. A clever scammer can create new checks on your account and forge your signature or use direct withdrawal to take money from your account.

8. Get off the lists

Keeping "preapproved" credit offers out of the hands of identity thieves by using safe mail management practices is good; stopping them from being sent to you altogether is even

better. (After all, even if you use a PO box or locked mailbox, it's possible for a dishonest postal employee to intercept them.) You can contact the three major credit reporting bureaus (Experian, Equifax, and Tran) individually to have your name removed from their marketing lists. Or call 888-5OPTOUT (888-567-8688). This won't stop all the offers, but it will reduce the number.

9. Check your credit report

Identity theft can go undetected for a long time. Someone's out there, using your name and social security number to open credit accounts or apply for loans, but because he or she is diverting correspondence to a different address, you may not know until the collection agencies start hunting you down. By that time, thousands of dollars of charges may have accumulated. One way to keep an eye on what's going on with your account is to check your credit report regularly.

New federal laws require that the credit bureaus provide you with one free credit report each year. You can space them out, getting one from Experian in the spring, one from Trans Union in the summer, and one from Equifax in the fall, for example, to better monitor your credit activity without paying extra. Look for inquiries or new accounts you didn't authorize. The sooner you find out you're an ID theft victim, the easier it will be to repair the damage. You can also order free reports through www.annualcreditreport.com.

10. Report identity theft attempts

If you're a victim of identity theft, report it to your local police department. You may need a copy of the police report to submit to creditors as proof that you were a crime victim. Contact the fraud departments of the three credit bureaus and put a fraud alert on your account; this will require creditors to contact you before opening a new account in your name or making changes to your existing accounts (such as sending your bank statements to a new address). Close the accounts that have been compromised.

File a complaint with the Federal Trade Commission (FTC) to go into their database, which is used by law enforcement agencies in investigating ID theft. You can file this report online (https://rn.ftc.gov/pls/dod/widtpubl$.startup?Z_ORG_CODE=PU03). ❖

10 things you can do to ensure career survival in 2009

By John McKee

With unemployment rates climbing into the stratosphere and job prospects becoming increasingly tenuous, IT pros need to think strategically and act effectively to keep their heads above water. Here are some recommendations to help you safeguard your career during the months to come.

1. Make a specific plan

I'm not talking about making a wish list which, like New Year's resolutions, will be forgotten by the third week of January. You want a plan that has specific goals for your job (what's the best role for you next?) and your income (exactly how much would you like to be making by the end of 2009?). Writing down your plans makes them concrete, and it's more likely you will attain them.

2. SWOT yourself

Be honest with yourself. Review your strengths — like what you've got that can move you ahead; weaknesses — like those things you have or do that are holding you back; opportunities — things you can pursue at the company or in the industry; and threats — things that can derail you or sabotage your career advancement.

3. Update your resume

Smart careerists are always ready for the next opportunity. Taking time to review and modify your resume before you want to send it to someone makes it a better product. This is often your first introduction to a new employer or boss — so make sure it's topnotch.

4. Invest in your career

Most people forget they really have two jobs. The first is to do what you get paid for and do it better than others. The second is to do what's required to ensure that your career isn't left to someone's wrong opinions that were made in your absence. Be in the office when your boss is. It gives you additional opportunity to let him or her get to know you for things other then the job you're currently filling.

5. Get financially smart

Get involved with managing your financial affairs. Paying attention to money matters is one of the smartest and easiest ways to improve your personal balance sheet. There are many books and online courses on the subject of money management basics. Looking after your financial health doesn't take a lot of time; but it could save your life.

6. Develop a sense of urgency

Many people think that working hard, being busy, and burning a lot of energy is equal to managing their career and life. It's not. Developing a sense of urgency means knowing how to pick through all those "to-do's" and focusing your time and energy on just the ones that count.

7. Look up, not down

When downsizing is the operative word, developing your team is no longer the smartest way to ensure success. Spend less time with your staff members and more time looking after your boss' needs. When you show that you're working hard to make him or her look good, you'll stand out from the crowd. And your boss will be more likely to provide you with the resources that you and your team need to do the job better.

8. Update your skill set

It pays to demonstrate that you are interested in "upgrading" yourself — and in 2009, your ability to grow may be more important than ever. With unemployment now at record highs, demand for jobs greatly exceeds supply. Not staying on par with colleagues and those vying for your job will be a death knell. Take seminars, do coursework, or leverage other vehicles to get on the leading edge and thus, maximize your personal value to the organization.

9. Self promote

Face it: Often, decisions are made affecting who gets moved upward and who gets downsized without your involvement. It's important that the decision makers know you and what you are doing. Have regular meetings with your boss or send regular e-mails to update those in charge about your contributions.

10. Look after your loved ones

One way or another, when 2009 is done and over, you'll still be here and you're going to want those you care about to still be with you. While it's important to look after your job and career, don't neglect those who make life most worthwhile. Tell them you care and spend time with them "just for fun." ❖

The industry's 10 best IT certifications

By Erik Eckel

IT certifications boast numerous benefits. They bolster resumes, encourage higher salaries, and assist in job retention. But which IT certifications are best?

Technology professionals generate much debate over just that question. Many claim vendor-specific programs best measure a candidate's skills, while others propose vendor-independent exams are the only worthy way of measuring real-world expertise. Still other observers believe the highest-level accreditations — Microsoft's MCSE or new Architect Series certification, Cisco's CCIE, etc. — are the only credentials that truly hold value.

Myself, I don't fully subscribe to any of those mindsets. The best IT certification for you, after all, is likely to be different from that for another technology professional with different education, skills, and goals working at a different company in a different industry. For that reason, when pursuing any professional accreditation, you should give much thought and care to your education, experience, skills, goals, and desired career path.

Once a career road map is in place, selecting a potential certification path becomes much easier. And that's where this list of the industry's 10 best IT certifications comes into play. While this list may not include the 10 best accreditations for you, it does catalog 10 IT certifications that possess significant value for a wide range of technology professionals.

1. MCITP

The new-generation Microsoft Certified IT Professional credential, or MCITP for short, is likely to become the next big Microsoft certification. Available for a variety of fields of expertise — including database developer, database administrator, enterprise messaging administrator, and server administrator — an MCITP validates a professional's proven job-role capabilities. Candidates must pass several Microsoft exams that track directly to their job role before earning the new designation.

As with Microsoft's other new-generation accreditations, the MCITP certification will retire when Microsoft suspends mainstream support for the platforms targeted within the MCITP exams. By matching the new certification to popular job roles, as has been done to some extent with CompTIA's Server+ (server administrator), Project+ (project manager), and A+ (desktop support) certifications, Microsoft has created a new certification that's certain to prove timely, relevant, and valuable.

2. MCTS

The new-generation Microsoft Certified Technology Specialist (MCTS) helps IT staff validate skills in installing, maintaining, and troubleshooting a specific Microsoft technology. The MCTS certifications are designed to communicate the skills and expertise a holder possesses on a specific platform.

For example, candidates won't earn an MCTS on SQL Server 2008. Instead, they'll earn an MCTS covering SQL Server business intelligence (MCTS: SQL Server 2008 Business

Intelligence), database creation (MCTS: SQL Server 2008, Database Development), or SQL server administration (MCTS: SQL Server 2008, Implementation and Maintenance).

These new certifications require passing multiple, tightly targeted exams that focus on specific responsibilities on specific platforms. MCTS designations will expire when Microsoft suspends mainstream support for the corresponding platform. These changes, as with other new-generation Microsoft certifications, add value to the accreditation.

3. Security+

Security continues to be a critical topic. That's not going to change. In fact, its importance is only going to grow. One of the quickest ways to lose shareholder value, client confidence, and sales is to suffer a data breach. And no self-respecting technology professional wants to be responsible for such a breach.

CompTIA's Security+ accreditation provides a respected, vendor-neutral foundation for industry staff (with at least two years of experience) seeking to demonstrate proficiency with security fundamentals. While the Security+ accreditation consists of just a single exam, it could be argued that any IT employee charged with managing client data or other sensitive information should, at a minimum, possess this accreditation. The importance of ensuring staff are properly educated as to systems security, network infrastructure, access control, auditing, and organizational security principles is simply too important to take for granted.

4. MCPD

There's more to information technology than just administration, support, and networking. Someone must create and maintain the applications and programs that power organizations. That's where the new-generation Microsoft Certified Professional Developer (MCPD) credential comes into play.

The MCPD accreditation measures a developer's ability to build and maintain software solutions using Visual Studio 2008 and Microsoft .NET Framework 3.5. Split into three certification paths (Windows Developer 3.5, ASP.NET Developer 3.5, and Enterprise Applications Developer 3.5), the credential targets IT professionals tasked with designing, optimizing, and operating those Microsoft technologies to fulfill business needs.

A redesigned certification aimed at better-measuring real-world skills and expertise, the MCPD will prove important for developers and programmers. Besides requiring candidates to pass several exams, the MCPD certification will retire when Microsoft suspends mainstream support for the corresponding platform. The change is designed to ensure the MCPD certification remains relevant, which is certain to further increase its value.

5. CCNA

The Cisco Certified Internetwork Expert (CCIE) accreditation captures most of the networking company's certification glory. But the Cisco Certified Network Associate (CCNA) might prove more realistic within many organizations.

In a world in which Microsoft and Linux administrators are also often expected to be networking experts, many companies don't have the budgets necessary to train (or employ) a CCIE. But even small and midsize corporations can benefit from having their technology

professionals earn basic proficiency administering Cisco equipment, as demonstrated by earning a CCNA accreditation.

As smaller companies become increasingly dependent upon remote access technologies, basic Cisco systems skills are bound to become more important. Although many smaller organizations will never have the complexity or workload necessary to keep a CCIE busy, Cisco's CCNA is a strong accreditation for technology professionals with a few years' experience seeking to grow and improve their networking skills.

6. A+

Technology professionals with solid hardware and support skills are becoming tougher to find. There's not much glory in digging elbow-deep into a desktop box or troubleshooting Windows boot errors. But those skills are essential to keeping companies running.

Adding CompTIA's A+ certification to a resume tells hiring managers and department heads that you have proven support expertise. Whether an organization requires desktop installation, problem diagnosis, preventive maintenance, or computer or network error troubleshooting, many organizations have found A+-certified technicians to be more productive than their noncertified counterparts.

Changes to the A+ certification, which requires passing multiple exams, are aimed at keeping the popular credential relevant. Basic prerequisite requirements are now followed by testing that covers specific fields of expertise (such as IT, remote support, or depot technician). The accreditation is aimed at those working in desktop support, on help desks, and in the field, and while many of these staffers are new to the industry, the importance of an A+ certification should not be overlooked.

7. PMP

Some accreditations gain value by targeting specific skills and expertise. The Project Management Professional (PMP) certification is a great example.

The Project Management Institute (PMI), a nonprofit organization that serves as a leading membership association for project management practitioners, maintains the PMP exam. The certification measures a candidate's project management expertise by validating skills and knowledge required to plan, execute, budget, and lead a technology project. Eligible candidates must have five years of project management experience or three years of project management experience and 35 hours of related education.

As organizations battle tough economic conditions, having proven project scheduling, budgeting, and management skills will only grow in importance. The PMI's PMP credential is a perfect conduit for demonstrating that expertise on a resume.

8. MCSE/MCSA

Even years after their introduction, Microsoft Certified Systems Engineer (MCSE) and Microsoft Certified Systems Administrator (MCSA) credentials remain valuable. But it's important to avoid interpreting these accreditations as meaning the holders are all-knowing gurus, as that's usually untrue.

In my mind, the MCSE and MCSA hold value because they demonstrate the holder's capacity to complete a long and comprehensive education, training, and certification program requiring intensive study. Further, these certifications validate a wide range of relevant expertise (from client and server administration to security issues) on specific, widely used platforms.

Also important is the fact that these certifications tend to indicate holders have been working within the technology field for a long time. There's no substitute for actual hands-on experience. Many MCSEs and MCSAs hold their certifications on Windows 2000 or Windows Server 2003 platforms, meaning they've been working within the industry for many years. While these certifications will be replaced by Microsoft's new-generation credentials, they remain an important measure of foundational skills on Windows platforms.

9. CISSP

As mentioned with the Security+ accreditation earlier, security is only going to grow in importance. Whatever an organization's mission, product, or service, security is paramount.

(ISC)², which administers the Certified Information Systems Security Professional (CISSP) accreditation, has done well building a respected, vendor-neutral security certification. Designed for industry pros with at least five years of full-time experience, and accredited by the American National Standards Institute (ANSI), the CISSP is internationally recognized for validating a candidate's expertise with operations and network and physical security, as well as their ability to manage risk and understand legal compliance responsibilities and other security-related elements.

10. Linux+

While pursuing my first Microsoft certification 10 years ago, I remember debating the importance of Linux with several telecommunications technicians. They mocked the investment I was making in learning Microsoft technologies. These techs were confident Linux was going to displace Windows.

Well, didn't happen. Linux continues to make inroads, though. The open source alternative is an important platform. Those professionals who have Linux expertise and want to formalize that skill set will do well adding CompTIA's Linux+ certification to their resumes.

The vendor-neutral exam, which validates basic Linux client and server skills, is designed for professionals with at least six to 12 months of hands-on Linux experience. In addition to being vendor-neutral, the exam is also distribution neutral (meaning the skills it covers work well whether a candidate is administering Red Hat, SUSE, or Ubuntu systems).

Let the debate beginTechnology professionals almost always have strong reactions when debating certification's value. Listing the top 10 certifications leaves room, of course, for only 10 credentials. That means many favorite and popular designations, such as HIPAA and Sarbanes-Oxley (SOX) certifications, have been necessarily omitted. Other important accreditations, including those for VoIP providers and from PC manufacturers, Red Hat, and even Apple, have also been left out here.

Which certifications would you leave off this list and which would you add in their place? Join the discussion and share the logic behind your choices. ❖

10 ways to take the pain out of staff performance planning

By Calvin Sun

When done properly, performance planning need not be an event that both managers and their subordinates dread. In fact, the process really can lead to improvement. Here are some tips to help managers turn the task into a positive experience for all concerned.

1. Try to view the process as a "win/win" situation

If you view the process as "you against your subordinate," you've already lost. Your subordinate will sense that attitude and will react accordingly, seeing the process as a means by which you will "get" the subordinate. Instead of reaching for greater performance and achievement, that subordinate will work defensively, so as to avoid making mistakes. To borrow a sports analogy, that subordinate will play not to lose instead of playing to win. However, if you view the process as "win/win," both you and the employee will benefit. In the next point, I'll explain why.

2. One hand washes the other

Such an attitude makes sense, because if you think about it, both of you can help the other. By properly guiding and coaching your subordinate, you help him or her to work better. When that subordinate works better, it reflects well on you.

Once you have that attitude, be frank about sharing it with the subordinate. Use the "one hand" saying if you want. In any event, tell that subordinate that the two of you need each other, and each of you can help the other to succeed.

3. Develop mutually agreed-upon criteria

Whatever criteria you establish, make sure that both you and your subordinate agree on them. Otherwise, you open yourself up to possible charges that you were setting up your subordinate to fail. If nothing else, unilateral measurements may cause resentment and resistance in that subordinate. Of course, you don't have to completely accept the proposed measurement criterion, but rather can negotiate with the subordinate. The important point is to gain such input from the subordinate.

4. Use measurable and objective criteria

Any criterion you decide on should be measurable and objective. In other words, you should be able to apply a quantitative analysis to that criterion. A criterion of "Answer incoming calls promptly" means different things to different people. However, a criterion of "Answer 80% of incoming calls by the third ring," or "Keep abandoned calls at a maximum of 5%" can be measured.

5. Use realistic criteria

When setting criteria, make sure they're realistic. Of course, your subordinate often will let you know quickly and directly if a criterion is unrealistic. Still, take time to review it yourself. Can a subordinate achieve the criterion without spending 100 hours a week at the office? Can the subordinate achieve the criterion and still handle other assigned responsibilities? If not, review and revise the criterion.

6. Set priorities

Let your employee know which objectives are the most important and which are less important. That way, the employee can plan and manage his or time accordingly and can set priorities for day-to-day tasks. Don't make every objective "priority 1." Doing so is meaningless and defeats the purpose of setting priorities.

7. Distinguish between performance measures and conditions of employment

You or your company might have specific actions or behaviors that are conditions of employment rather than performance-based criteria. In other words, doing certain things, or failing to do certain things, won't hurt your evaluation — rather, they could get you fired. In some companies, attendance and punctuality might be a condition of employment. Even if an employee was a top performer, he or she could be fired for constantly being a no-show at work or being chronically late. If you have similar items, be clear with your employees about this distinction.

8. Set a definite time for the meeting

Have you ever seen a minister or judge talk casually to a man and woman, then casually say to them, "Oh, by the way, you were both single before this, but now you're married"? Of course not. A wedding is a special time, and involves a special ceremony. For that reason, we prepare for it, and publicize it. Then, when it happens, we know to treat the moment with special significance.

I'm not saying that you should send out announcements and invitations to a performance planning meeting. I AM saying, though, that it should occur at a time agreed upon by both you and your employee. Both of you should realize that at that time, the meeting will occur. Such a meeting shouldn't, therefore, happen casually by the water cooler, or during a hallway meeting. In this way, your employee knows that the meeting is important.

9. Ensure consistent criteria

Software developers concern themselves with traceability of requirements — that is, ensuring that each requirement for a software module relates, directly or indirectly, to a strategic objective of the organization. In theory, any requirement that fails this traceability test should be struck from the requirements list.

In the same way, be sure that your criteria are consistent with each other and with department and company objectives. A classic example of "criteria clash" in a call center is having a measurement regarding minimum targets for caller satisfaction, plus another measurement for maximum call duration. If your subordinate is penalized for taking too long for a call, he or she

might be tempted to try to shorten such calls. However, in doing so, the subordinate might be creating dissatisfied callers.

10. Carefully consider meeting locations

Where should you work on performance criteria and later, conduct the evaluation? Usually, these sessions occur in the manager's office. In this case, consider sitting on the same side of the desk as your subordinate, rather than on the opposite side.

Although privacy is important, be careful about meeting a person behind closed doors, especially if the other person is of the opposite gender. To protect yourself against potential false allegations, it's best if the office has a window, so that other people can see you even if they can't hear you.

If the office you use has no window, consider leaving the door at least partially ajar. Or consider an open location, such as a Starbucks or your company cafeteria. You'll have less privacy, but if you hold your meeting during a non-peak time (say, 10 AM or 3 PM) it might be enough. An additional advantage is that such a place is "neutral" and might be less threatening to your subordinate. ❖

10+ ways to work more effectively from home

By Calvin Sun

It's all the rage and has been for some time. But now, with recent issues regarding energy consumption, the environment, and "work/life balance," working from home has grown even more important. Whether you're an employee of a company or an independent professional working for yourself, you might have a chance to work from home. Be aware, though, that this arrangement can cause problems if you're not prepared. Here are some tips.

1. Dress the part

No, you don't have to don the three piece suit or the wing tip shoes — or the female equivalent. But neither should you simply roll out of bed and move to your desk, clad in your pajamas. Yes, it's unlikely your co-workers or clients will see you dressed this way. Nonetheless, the way you dress can affect your attitude and your productivity. In addition, the act of changing can help you distinguish, psychologically, between work and home — an important distinction, discussed more below.

2. Keep a separate office

For the same reason your dress should be different for work, so should your office. You probably could work from the kitchen counter or in the family room. However, the chances of distractions and of lowered productivity increase significantly compared to working in your own separately defined home office. The separate area might also be necessary to satisfy IRS home office requirements (but check with your tax advisor to make sure).

3. Discipline yourself regarding break times

Yes, you can knock off work every 10 minutes to watch television or pop in a DVD. If you do, though, you might go through the day without accomplishing anything. The need for time management and discipline becomes even greater when you're on your own. Establish those periods of time when you work and those times when you take a break and stick to them.

4. Discipline yourself regarding snacking

In the same way, watch what you eat. It's easy to wander to the kitchen for a snack. Too much snacking will ruin your productivity and your waistline. Exercise discretion and discipline here as well.

5. Check insurance

Make sure your homeowner's insurance covers your work-at-home activity. This issue is particularly important if you anticipate having visitors, such as co-workers or clients. You might even check to see whether your company will subsidize part of that insurance.

6. Educate and set guidelines for the family

Do you have a spouse, children, or even parents living with you? Make sure they know about this arrangement. It might be difficult, but they need to realize that even though you're at home, you're still, at times, "at work." Having a constant knocking on the door to handle this or that domestic emergency will prevent you from concentrating and completing your tasks. Establish guidelines for when you are available and stick to them.

7. Establish start and stop times

Many people think that working from home helps achieve work/life balance. Yes, it can, as long as you keep clear the distinction. If you don't, your work/life balance actually could become even worse because you won't know when to stop "working" and start "homing." As with dress and with your office, set clear times when you start working and when you stop. When the latter time comes, really DO stop. Avoid going back to your home office "just to send one more e-mail." That one e-mail will become a second, and a third. Once the time comes, just stop until the next day.

8. Use a separate phone line for business

Regardless of whether you're an employee or on your own, get a separate line for your business. Having your five-year-old answer the phone for relatives or friends might be cute, but it could mark you as unprofessional to others who might call. If you use an answering machine or service, call your own line and check the quality of your greeting. You don't want to sound like you're speaking from the wreckage of the Titanic.

9. Clarify computer ownership and policies

Whose computer equipment will you be using? Will the company supply you with a computer or will you be using your own? If the latter, how will any acceptable use policies affect your computer? Does your company use of your own computer preclude you from using it for personal matters? What antivirus or patch update policy will you need to follow? Clarify these questions before you begin your computer work, because they touch on important privacy and security issues.

10. Check zoning if necessary

Check with your local government about your work arrangement. If you're receiving visitors or receiving regular deliveries, the government might be concerned about traffic and parking. However, if all you're doing is plain work, you likely will have less, if any, problem. In any event, it's always good to make sure.

11. Keep in touch with the boss

You've heard the saying, "out of sight, out of mind"? Don't let that happen to you. Make sure your boss knows about your accomplishments. If your schedule calls for you to be physically at your "real" location once or twice a week, consider meeting with your boss about what you've been doing. Otherwise, make sure your boss knows about your projects and successes, either via phone or e-mail. You don't want your lowered visibility to hurt your chances of promotion and salary increases. ❖

10 ways to improve your office etiquette (and avoid being the annoying co-worker)

By Calvin Sun

We spend one-third of our working lives at the office. The people we work with can affect our productivity and our careers, and vice versa. Practicing office etiquette makes the place and the workday just a bit more bearable.

1. Watch the volume of your voice

Keep your voice at a reasonable level. Other people are trying to work, and your voice may distract them. Besides, do you really want them to overhear what you're saying? If you have something personal or otherwise sensitive to discuss, consider doing it in a private office or conference room.

2. Use speakerphones with care

If you're on hold and waiting for someone to pick up, then yes, a speakerphone can save you time. Just keep the volume as low as possible. On the other hand, if you're planning to have a regular conversation with the other person, do it behind closed doors. Your co-workers in the area will not appreciate your disturbing them with a conference call.

3. Be sensitive about what you bring for lunch

We're supposed to be inclusive and accepting of people from different backgrounds and cultures, I know. And those other people are supposed to behave likewise. Nonetheless, be aware of how others may react to the lunch you bring. If you think about it, any reaction it causes can't be good for you. They'll either hate the smell and complain about you, or they'll love the smell, assassinate you, and eat your lunch. Either way, you lose out.

If you have food with a distinctive aroma, consider either eating it outside or in the lunchroom, rather than at your desk. And some foods probably shouldn't be brought in at all, even to the lunchroom, such as stinky tofu or durian.

4. Respect people's privacy

Because you're most likely in a cubicle or other open office area, you inevitably will overhear snippets of conversations other people are having. Maybe you'll hear something about a project you're involved with or a problem you've encountered before, and you believe you have something to contribute. Yes, if you go over and join the conversation, you could save the day or provide valuable insight. However, you might also be viewed as a busybody.

Think carefully before joining that conversation. One consideration might be the amount of desperation you sense in their voices. The more desperate, the more willing they might be to hear from others.

If you do choose to join them, I suggest you go to their office or cubicle, let them see you as you're listening to them. Then, at a break, casually mention that it sounds like there is a problem, and that if you can help, you'd be happy to. This approach is better than rushing over and telling them you overheard their conversation.

5. Fix, or attempt to fix, what you break

How many times have you gone to the photocopier to find that it was either out of toner, out of paper, or experiencing a paper jam? The problem was still around when you arrived because the previous person did nothing about it and simply left the copier in its problem condition.

Don't be that person. If you can clear the paper jam safely and according to procedure, try to do so. Most photocopiers have diagrams to show you how. If you can't fix the jam or the other problem, leave a signed dated note describing the issue and what you are doing to fix it or have it fixed. Those actions could be a call to the maintenance vendor or to an administrative department. Your co-workers will appreciate your efforts, and signing your name to the note demonstrates your willingness to take ownership.

6. Keep the lunchroom clean

Neither the refrigerator nor the microwave should resemble the Queens Botanical Garden. If you spilled something in either place, clean it up. If you forgot to eat something from the refrigerator, and it's starting to mold, throw it out yourself. Don't leave it for someone else.

7. Be punctual for meetings

If you're an attendee, be on time. If you can't make a meeting or you're going to be late, let someone know. Don't arrive late and ask for a recap. Doing so wastes everyone else's time. If you're the one who's running the meeting, start it on time and resume it on time after a break. To do otherwise (for example, to start late to accommodate latecomers) is unfair to those who showed up on time and only encourages more lateness in the future.

8 Be careful about solicitations

Even if your company has no strict prohibition against solicitations (for example, selling candy for a child's sports team fundraiser), be careful about doing so. Your co-workers may not appreciate being put on the spot. If you do anything at all, the best approach is to display the merchandise in a central location, with a notice about the reason, and an envelope to receive checks or cash.

9. Avoid borrowing or lending

The rich rule over the poor, and the borrower is servant to the lender.

We've heard, in the past few weeks, more than we want to about issues with borrowing and lending. Those issues still apply even at the office level, even between individuals. Any borrowing that occurs can jeopardize a relationship if the repayment is slow, late, less than expected, or nonexistent. No matter how small the amount, the lender may feel resentment. In fact, a small amount might cause resentment precisely because the lender feels embarrassed about asking about repayment.

Avoid borrowing or lending if you can. If you absolutely must borrow, write the lender an IOU with the amount and sign it. Then, pay it back as soon as you can.

10. Don't ask co-workers how to spell

Microsoft Word has a spell checker. Use it. Don't bother your co-workers with such questions. It hampers their productivity and lowers their opinion of you. Some probably won't even want to answer, because doing so makes them feel stupid. When I get such questions, my response is, "Wait a minute while I check the dictionary" or "Wait while I use the Word dictionary." ❖

10 simple things you can do to improve your writing

By Jody Gilbert

Maybe you've never penned a single blog entry, never been asked to write a progress report, never had to read over a colleague's work for errors, and never had to send a critically important e-mail message to your boss. If that's the case, you're free to go now. But for most of us, a certain amount of writing is part of our job — and unfortunately, our efforts aren't always as effective as they should be.

We've talked before about some of the big blunders — grammatical mistakes and misused words — that find their way into our written communications. Now, let's consider some of the general best practices that contribute to clean, consistent writing. These pointers are based on TechRepublic's in-house conventions, which are based on commonly recommended guidelines. (In other words, you don't have to agree with them. And of course, variations may exist depending on what country you live in.)

The good thing about following a few rules in your writing, even if some of them seem arbitrary or trivial, is that it frees you up to concentrate on what you're trying to say instead of trying to figure out why something doesn't sound right or worrying that it's just plain wrong.

And there's this: People will notice when your writing is tighter and more consistent. I guarantee it.

1. Echoes

Bad practice: Repeated words or phrases set up an echo in the reader's head or a "Didn't I just read that?" glitch that can be distracting.

Example:

- Several "but"s or "however"s or "for example"s in one paragraph (or in nearly every paragraph); a series of paragraphs that begin with "Next"
- A favorite crutch word or phrase used throughout an article ("ensure that," "as such", "that said")

Best practice: Vary the language to avoid annoying or distracting readers with repeated words. Even better, get rid of some of the repeated verbiage, which usually turns out to be overkill anyway.

2. Nonparallel list items

Bad practice: We often use an inconsistent structure for lists or headings.

Example:

- We will cover these topics:
- Backing up the registry
- The Registry Editor is your friend
- Using REG files

- Use a GUI tool
- Searching the registry
- Take advantage of Favorites
- Clean the registry

Best practice: Reword where necessary to make the items parallel.

3. Agreement problems

Bad practice: Sometimes we lose track of what the subject is, and our verb doesn't match.

Examples:

- Neither of the editors are very smart.
- The dog, as well as the goat and chicken, are easy to parallel park.
- One-third of the company are color blind.

Best practice: Scrutinize the subject to determine whether it's singular or plural. It's not always obvious.

4. Referring to companies, organizations, etc., as "they"

Bad practice: A company — or any collective group that's being referred to as a single entity — is often treated as plural, but it shouldn't be.

Examples:

I wish Wal-Mart would get their pot hole fixed.

Microsoft said they'll look at the problem.

Best practice: Unless there's some compelling exception, use "it."

5. Hyphenating "ly" adverbs

Bad practice: "ly" adverbs never take a hyphen, but they pop up a lot.

Examples:

- We like to avoid commonly-used expressions.
- Click here for a list or recently-added downloads.

Best practice: Don't hyphenate ly adverbs. The "ly" says "I modify the word that comes next," so there's no need to tie them together with a hyphen.

6. Using "which" instead of "that"

Bad practice: We sometimes use "which" to set off an essential clause (instead of "that").

Examples:

The meeting which was scheduled for 1:00 has been cancelled.

The option which controls this feature is disabled.

Best practice: The commonly-accepted (haha) convention in American English is to set off a nonessential clause with the word "which" and a comma. One good test is whether the

information is extra — not essential to the meaning of the sentence. If the clause is essential, use "that."

7. Wordy constructions; deadwood phrases

Nothing is worse for a reader than having to slog through a sea of unnecessary verbiage. Here are a few culprits to watch for in your own writing.

• Has the ability to	• can
• At this point in time	• now
• Due to the fact that	• because
• In order to	• to
• In the event that	• if
• Prior to the start of	• before

8. Using "that" instead of "who"

Bad practice: Some writers use "that" to refer to people.

Examples:

- The bartender that took my money disappeared.
- The end user that called this morning said he found my money.
- The folks that attended the training said it was a waste of time.

Best practice: When you're referring to people, use "who."

9. Inconsistent use of the final serial comma

Bad practice: One convention says to use a comma to set off the final item in a series of three or more items; another (equally popular) convention says to leave it out. But some writers bounce between the two rules.

Examples:

- Word, Excel, and Outlook are all installed. (OR: Word, Excel and Outlook are all installed.)
- Open the dialog box, click on the Options tab, and select the Enable option. (OR: Open the dialog box, click on the Options tab and select the Enable option.)

Best practice: Decide on one convention and stick to it. Those who read what you've written will have an easier time following your sentence structure if you're consistent.

10. Using a comma to join two dependent clauses

Bad practice: Commas are a great source of controversy and often the victim of misguided personal discretion. But there is this rule: Two dependent clauses don't need one.

Examples:

- I hid the ice cream, and then told my sister where to find it.
- The user said he saved the file, but somehow deleted it.

Best practice: If the second clause can't walk away and be its own sentence, don't set it off with a comma. ❖

10 ways to survive office politics

By Calvin Sun

Office politics will never go away. It's a fact of company life. However, destructive office politics can demoralize an organization, hamper productivity, and increase turnover. Here are some tips, applicable for both staff and management, on dealing with office politics.

1. Live at peace with others

The easiest way to avoid problems with politics is to get along with people. I'm not saying you need to hug everyone and sing songs, and I'm not saying you have to be a pushover for everyone. You can be pleasant and professional, while at the same time being assertive when necessary. If you have a concern, focus only on the issue, not on the person. If you have to refuse a request, explain why and try to come up with alternative solutions.

Living at peace with others also means being careful about choosing sides during office power struggles. Aligning yourself with one faction or the other will prevent you from working effectively with people from the "other" side, thereby hampering your productivity and thus your performance. It's even worse if "your" faction loses out. Instead, try to focus on your tasks, dealing with people in either faction on the basis of the tasks alone, and avoid talk on the political issue that separates the groups.

2. Don't talk out of school

"Three can keep a secret if two of them are dead." – Benjamin Franklin

Does your organization have issues? Have people told you things in confidence? Then keep those matters to yourself. Talking to outsiders about issues within your organization makes all of you look bad to that outsider. Furthermore, your boss or your boss's boss will not appreciate that behavior. People will find out that you spoke about what they told you, and they'll lose confidence in you and respect for you.

3. Be helpful

We all have responsibilities and objectives, and those things should receive priority. Nonetheless, if it doesn't take too much time, being helpful to others can reap benefits for you. Does someone need a ride in the direction you live? Did your co-worker leave headlights on in the parking lot? Is someone having trouble building an Excel macro? If you can help that person, especially if you can do so without taking too much of your time, you benefit yourself as well as the other person. By doing these things, you're building political capital and loyalty. In doing so, you reduce the chances that you will be the victim of political intrigue.

4. Stay away from gossip

"I never repeat gossip, so listen carefully." — Old joke

Nothing destroys the dynamics of an office more than gossip. Stay away from it, because nothing good comes from it. Just be sure you avoid the "holier than thou" attitude of lecturing your co-workers on the evils of gossip. You'll make them lose face, and they'll resent you. Instead, try subtly changing the subject. For example, suppose the group is talking about Jane's problems

with her child, and of course Jane is absent from the group. Do some free association and try to come up with some topic that's related to Jane or her child, but won't involve gossip. Then, make a comment about that topic.

For instance, suppose you know that Jane's child is involved in a sports league. Mention this fact, thereby linking the child and the league. Then, shift the conversation so that you're now talking about the league rather than Jane's child. You could ask when schedules will be published, or if they need parent volunteers. If you do it right, no one will even notice that you've moved them away from the gossip.

5. Stay out of those talk-down-the-boss sessions

Suppose your co-workers start complaining about the boss. If you join in, it makes you look disloyal to the boss. If you don't, it looks awkward in the group. What can you do? As with the situation of gossip, try changing the subject by linking the boss to another topic, then talking about that topic instead. Or you could simply respond to your co-workers with a smile and a tongue-in-cheek, "Come on, aren't we exaggerating? [name of boss] really isn't THAT bad." Be careful, though, because it could be taken as an admission by you that the boss is bad.

6. Be a straight arrow

The best way to keep out of trouble politically is to be seen as someone who doesn't play office politics — in other words, a straight arrow. Do what you say you're going to do, alert people to problems, and admit your mistakes. Others will respect you, even if they don't always agree with you. More important, you have a lower chance of being a victim of politics.

7. Address the "politics" issue openly when appropriate

Many times, when I do organizational assessments, I sense anxiety on the part of client staff. To address this anxiety, I tell people I interview that I'm not there to get people fired. I'm there to help the organization function better. It might not completely allay their fears and suspicions, but at least I've brought up the issue and addressed it.

Think about doing the same thing if you believe politics is an underlying theme at your company. Tell people you're not interested in scoring political points but only in getting the job done. It might not work, but unless you bring the matter up, there's no chance at all that they will believe you. So if a co-worker is unavailable, and you have to act on that person's behalf, consider saying to that person, "I had to act because of your absence. I wasn't trying to go behind your back and I wasn't trying to show you up."

8. Document things

Nothing saves a job or career more than having a written record. If you believe a matter will come back to haunt you, make sure you keep a record of the matter, either via e-mail or document. Documentation is also an effective way to highlight of your own accomplishments, which can help you when your performance evaluation is conducted.

9. Set incentives to foster teamwork

If you're a manager or senior executive, take a close look at your incentives. Are you unwittingly setting up your staff to work against each other? Do your metrics address only individual departments, or do they also address how departments could benefit the larger organization?

For example, suppose the hardware department of Sears reduced all its prices by half. If you measured only profitability of the department, you would conclude that it is performing horribly. However, that measurement would neglect to account for increased volume in all other departments because of the hardware department.

If you reward employees in a department based only on how well that department does, you may inadvertently cause destructive competition among departments. Each one will be competing against every other one, and all the departments could end up in a worse position. To minimize this possibility, give employees incentives based not only on department results but on organization results as well. That way, employees from different departments have more motivation to work together and less motivation to engage in destructive politics.

10. Set an example for your staff

People in an organization look to leadership to see how to act. Do you want your staff to refrain from negative politics? Do you want to see collaboration and teamwork instead of petty rivalries, jealousy, and back-stabbing? Act the way you want your staff to act, and they will follow you. ❖

10 mistakes to avoid when seeking a new job

Calvin Sun

Searching for a job requires you to do a lot of things the right way, avoiding missteps that can doom your efforts despite your strong qualifications and experience. Here are a few simple things to watch out for when your job-hunting campaign is underway.

1. Relying on human resources office

You've heard it before, certainly, but the advice still remains valid: Don't send your resume to human resources, or the hiring department, or the hiring manager. In most cases, these departments serve only screen people out. You're much better off finding the name of a specific person, namely your prospective boss. If that person likes your qualifications, he or she might be able to push you through the human resources bureaucracy. Is it possible that that person may simply forward or refer you to human resources? Sure. But you've lost nothing in the attempt.

2. Using an unprofessional e-mail address

You and your friends might think cutiepie@aol.com or drinkstoomuch@gmail.com are funny or clever addresses. Think, however, how a hiring manager might view them. That person might lack your sense of humor, and his or her reaction might hurt your chances. You're better off with simply your name plus, if necessary, a numerical suffix.

3. Having an unprofessional telephone greeting

The same logic applies to your voicemail greeting. All you need say is that you're unavailable — not that you're out clubbing or playing Wii. Why give a potential hiring manager a reason to pass you by?

4. Overlooking misspellings in your cover letter

Back in college, a classmate of mine told me that he was applying for a job with what was then known as Morgan Guaranty. The trouble was, throughout the entire cover letter, he referred to them as "Morgan Guarantee." Not surprisingly, he didn't get the job.

Misspellings are never good, but they hurt you the worst if they involve the name of the company or the names of people. Check them out thoroughly before sending a letter. Names can be spelled in different ways, e.g. "Anne/Ann," "Michelle/Michele," "Scott/Scot." Furthermore, as companies merge or become acquired, their names often change accordingly. If in doubt, check the company Web site or simply call the receptionist and explain that you want to confirm a spelling.

Remember that while Word has a spell-checker, it doesn't have a "what you meant to write-checker." If you wrote "they're chances" or "there chances" when you meant to say "their chances," Word won't flag your phrase (at least it didn't for me just now). Make sure of your sentences even if Word says the spelling is okay.

5. Failing to write a post-interview thank you letter

Contrary to what others may say, writing such a note is not signaling desperation on your part, nor does it constitute groveling. When you travel to a company to interview, you are a guest. The person who invited you had to do many things to prepare, such as reserving a conference room and coordinating peoples' schedules. Your note shows your appreciation for those efforts and gives you an additional chance to reinforce your strong points. Failing to write a note deprives you of that chance and may mark you as being unprofessional.

6. Dressing inappropriately for the interview

If you're interviewing at a bank, dress like a bank person. Forget the t-shirt, shorts, and sandals. Forget the too-high or too-tight skirts and too-low blouses. They're out of place and will hurt your chances. When in doubt, dress more conservatively. Even better, research how people dress and do likewise.

7. Omitting accomplishments from your resume

Don't just list responsibilities on your resume. Talk about your accomplishments, and if you can, quantify them. For example, don't just say, "Wrote programs in [name of language]." Instead, say "Developed system that reduced order entry processing time by x%."

8. Arriving late for an interview without letting someone know

If you're running way behind, call or text ahead to let the interviewer know you'll be late. Sure, it's better to be on time. But if you can't be, at least the people you're meeting with can continue with other work while waiting for you. The worst alternative of all is to simply show up late. It smacks of rudeness and unprofessionalism and may hurt your chances.

9. Bad-mouthing a former employer

Much as you might be tempted, and even if the interviewer asks you, avoid bad-mouthing your former company, co-workers, or boss. All you need say is that while you learned a great deal (a true statement, even if your boss and co-workers were horrible), you felt a need to move on and gain more challenge. Bad-mouthing the old company may mark you as a troublemaker by your prospective employer.

10. Failing to leverage existing contacts

If you're looking for a job, you don't have to do it alone. Think of other people who can help, such as former co-workers, vendors, and especially fellow alumni from high school or college. If you fail to do so, you simply make your own search more difficult and frustrating.

This point illustrates the old saying that "One hand washes the other." Before you need to leverage your existing contacts, think about how you can help others in their own job searches. When you do, you will feel tremendous satisfaction at having done good for someone. And you'll make it more likely that those persons will later help you in the same way. ❖

10 ways to learn new skills on the cheap

By Jerry Loza

The one thing we know for sure about IT is that the technology is constantly changing. Staying current with that technology, and acquiring the skills to support it, is a career necessity. Whether you simply need to learn the latest techniques or you want to completely retool, if your employer or client does not fund the training, it could be very expensive for you. Fortunately, there are some low/no-cost alternatives to conventional training programs that might even be more effective and be a better fit for your learning style.

1. Public library

As obvious as this resource is, I am always surprised at how many people never think of it. Though some of the material may not be the latest, you might be surprised, especially if you have access to a fairly large metropolitan library. Do not forget about videos and DVDs either, especially for training on less technical, common applications, such as QuickBooks or Microsoft Access. If you are looking for business or methodology training, you may also want to look for audio books. You may not be able to find detailed information on the Rational Unified Process (RUP), but Six Sigma and other initiatives in which your company or client may be involved may well be there. Audio books also enable you to convert idle drive time, or exercise time, into a value-add for you and your client.

If you are stuck in a small town with limited resources, consider approaching a larger library system to become a guest patron. Many times this is available to the public for a fee, but your local library may also have a reciprocal agreement with them, in which case access to the other library system may be free. Also, if you do teaching at a school of any type, you may be granted access to a library system if you can show proof of your status as a teacher.

University libraries are another rich store of material from which you can learn new skills. But unless you are a student at the school, it may be less than straightforward to check out materials. If the university is state-funded, you might be permitted to check out material if you are a resident of the state. If the university you approach does not permit you to check out material, you can always make a routine of camping out there for a couple of hours each week and learning on the premises.

2. Company library/resources

Many companies have their own libraries and training that are available for the asking. Training is usually a part of human resources, so you might start there if the company doesn't have a formal training department. If you are an independent consultant, does your client have a library you could tap into? It has been my experience that clients are generally quite willing to open up their training to outside consultants, especially if the training makes the consultants more effective in working with them.

If there is a cost associated with the training, however, reimbursement can be complicated, as clients usually lack a process for accepting that type of payment. Very large companies have

particularly difficult time accepting money for training, but do not give up. Your client's department may still be willing to carry your training if they see a material benefit.

3. Vendor training

It is to a vendor's advantage to have you use their product, and use it effectively. To that end, many vendors offer training for little or no cost. This training is made available in a variety of formats, including:

- Training sessions at conferences and trade fairs
- White papers
- Online tutorials
- Online/on-demand videos
- Special training events

You will not find a five-day intensive training session available for free, but you can still learn quite a bit from these free vendor resources. The more prepared you go into a vendor's event, including being armed with questions, the more you will gain from the experience.

4. Podcasts

Podcasts are becoming increasingly popular among the typical channel of technical media and vendors. They include product information or interviews with experts in a particular field and tend to cover fairly narrow topics, such as the software quality topics offered by StickyMinds. There are also a number of resources from more public sources, such as iPod and YouTube. These may come from a number of academic sources, or they may be the product of someone who simply has a passion for the subject.

5. Webinars/webcasts and virtual trade shows

One of the greatest developments for people who actually have to work for a living, webinars and virtual trade shows offer a no-travel way to accomplish in an hour what used to take an entire day. Virtual trade shows are not as well attended by vendors as live trade shows, but as vendors figure out how to use the new venue, I expect more will start to join in. Advantages, besides the obvious lack of travel and enormous time savings, include having a fairly narrow topic focus and relatively easy access to representatives. There are also some pretty awesome networking opportunities, as well.

Webinars usually consist of an industry expert providing general information, followed by product information from the sponsoring vendor. The product typically has some tie to the overall topic, and many times, the product information portion of the webinar may be as informative as the general topic portion. If the sponsor has a broader interest in the industry, such as an association or a publisher, the entire webinar may be information-oriented, with no product application.

6. Associations and user groups

National organizations typically have a number of resources that you, as a member, can participate in. These may include online libraries, peer forums, and training courses. There may be a cost associated with some of this training, and access to some of the resources may

require a paid, or premium (read: more expensive), membership. But when you consider that a membership to the Association of Computing Machinery, for example, can give you access to more than 1,100 books online, in addition to their journals and proceedings, it might well be worth the annual membership fee.

User groups, or other local groups that share your interest in a particular topic, offer a great forum to learn and share information for little or no cost. Special interest groups (SIGs) within the user group offer further topic specialization and can be a tremendous way to learn or be mentored. Check with vendors that interest you, as they may maintain a list of user groups in your area that relate to your product. Microsoft, for example, has a site with user group information, as do other major manufacturers. Consider, also, simple word of mouth and the "community calendar" section of your local paper to find out about upcoming meetings of groups that may interest you.

7. Volunteering

The best way to learn is by doing. However, most companies are not willing to pay you while you learn. If you have all of the books and tutorials, but just need to get your hands dirty, why not volunteer to do a project for someone for free? Churches and nonprofits might need some work done that you can help with. A new Web site, a donor tracking system, or automation of monthly billing are all things that might benefit them and can give you the hands-on experience you need to approach a prospective employer or client. This is an especially good approach if you are trying to retool yourself with some new technology, or least a technology that is new to you.

This same approach can be applied in an incremental fashion with existing work you may be doing. Can you work a little beyond your current job description? If you are working within an old development methodology, for example, but want to try what you have learned about RUP, redo a portion of your work in the style of the new methodology, such as use cases. There is nothing like trying a skill on a real project to give you a real sense of the process, and sometimes a real sense of how much you still need to learn. Who knows — besides getting some great experience, you might even start to convert your team to the new process (but don't get your hopes up).

8. The Internet

Who has not Googled to learn more on a topic or to clear up an office dispute on the origins of some phrase or song lyric? This same resource is a great learning tool. A simple topic search can produce content from college courses, vendor training, and government information sites. Don't be surprised if some of this content offers better explanations than some text books.

Online publishers are another great source for information to enhance your skills. Consider dropping a topic that interests you into the search field at a site such as DevX, and you may be surprised how much detail you will find.

9. Continuing education

Continuing education programs, also called adult education or community outreach, offer nondegree classes that are generally conducted in the evening for a modest fee. Besides the stereotypic class on how to weave a basket, many programs also offer database, networking, and a number of other technology classes. Many of these programs are run through high schools and

colleges, so if you are not aware of any programs in your area, start by checking with your local high school, career center, or university for contact information.

10. Community college

State-run community colleges generally offer a number of affordable classes you can take without seeking a degree. Many of these colleges offer technology and programming classes. Because you have probably not taken the prerequisites for the class, you may need the permission of the instructor, but that should not be a problem if you are already a professional in the field. These programs are usually far less expensive than your typical week-long vendor training and are usually scheduled during the evening to minimize the impact on your workday. There may also be for-profit community colleges in your area. But since they may lack public subsidies, be prepared to pay substantially more for their course offerings.

One less hurdleLimited time, family demands, and travel may still keep you from dedicating to learning a new skill, but if you're creative, cost doesn't have to be an obstacle. In fact, the nature of some of these suggested training alternatives lend themselves nicely to working around the time and travel constraints that are so often a barrier. Take advantage of as many of these training approaches as you can, and you will have one less hurdle to moving your career forward. ❖

10 ways to establish rapport with others

By Calvin Sun

The ability to establish rapport with others, and thus to get them to open up to us and like us, can help our career. You don't have to be a salesperson. It can serve you well regardless of your position in the IT organization. Here are some tips to help you develop this skill.

1. Remember people's names

"Remember that a man's name is to him the sweetest and most important sound in any language." – Dale Carnegie, How to Win Friends and Influence People

Few sounds are as dear to a person as the sound of his or her name. When you remember people's names, they generally take that to mean you value them (unless you're Khan, and the other person is Captain Kirk). I once gained a client during a conference call because I recognized a participant as being the father of a student I had attended high school with. After I made the connection, the father said to everyone, "Let's hire Calvin."

There are many books that teach techniques of association and visualization, but for me, the best way to remember a name is to repeat it when I am first introduced, and then to use it several times thereafter.

2. Ask questions about spelling, pronunciation, or the meaning of names

Most people have the good sense not to ask about someone's physical handicap, deformity, or other physical issue. Yet asking questions about someone's name, such as spelling ("Mac" vs. "Mc") or pronunciation (hard "g" vs. soft "g" in a surname such as Bollinger, Ellinger, or Henninger) may be welcomed by that person. When you ask these questions, it shows your interest. Do it within reason, of course, or else the person might think you're a stalker.

3. Balance the asking and the telling

Do you know people who spend all of their time talking about themselves? It's hard to establish rapport with such a person. But even though you don't want to talk incessantly about yourself, don't go to the opposite extreme and only ask questions about someone. That person may feel great at first, but eventually he or she will feel uncomfortable at not gaining information from you in return. So try to balance the information you share with the information you ask about the other person.

4. Look for things in common

When asking about another person's background, look for areas you have in common, such as birthplace, hometown, hobbies, or school attended. These topics make for natural areas of discussion.

5. Look for things in common with relatives too (but your not wife's sister's husband's brother's wife)

The previous point doesn't have to just apply to you and the other person. Think about connections involving your relatives as well. Maybe you're not from that same town, but maybe your father was, or the other person's mother was. Making the connection to relatives also can work. Just keep it within reason. It might not help if the connection is through your wife's sister's husband's brother's wife.

6. Use cognitive dissonance

The theory of cognitive dissonance states that people dislike conflict and will try to eliminate it whenever possible. You can use this theory to build rapport by expressing frustration or at least annoyance at an outside event. Suppose you're meeting a new employee this morning. On your way to work, you encountered a huge traffic jam, one that the new employee probably also encountered. When you meet that employee, it's OK to show frustration or annoyance at the traffic jam, saying, for example, "I can't believe that traffic jam, it just messed up my whole day." That employee probably has the same thoughts, and your expressing them can draw that employee closer to you.

7. Sit rather than stand

A conversation is far more peaceful and comfortable if you're sitting. Conversely, having a conversation while standing makes it easier to begin fighting. So sit whenever you can, if you want to establish rapport

8. Be on same side

If you're on the opposite side of a desk, consider coming out from behind it. Being on the same side of the desk sends a message to the other person that you really are on his or her side. If there's no desk, at least try to align yourself so that you're facing the same direction as the other person.

9. Be careful about comments on photos

Commenting on photos could get you into trouble and undo all the good you gained from following tips 1 through 8. If you see, for example, a photo of an older woman and a younger woman, and the former is the person you're talking to, don't assume the relationship is mother-daughter. If you say that, and they're really sisters, you're dead.

10. Never speculate on pregnancies

Similarly, never assume that woman who looks expectant really is so. If you ask, and the answer is "no," you're similarly dead because you have no graceful way of retreating, other than "Please excuse me while I remove my foot from my mouth." Even worse, if your conversation occurred during an employment interview, you've done more than commit a faux pas — you've set yourself up for a lawsuit as well. ❖

10 ways to get maximum value from a professional development class

By Calvin Sun

From time to time you will find yourself taking a professional development class. It could cover communications, conflict management, business writing, or some other area. It might be a class that's internal to your company, or it might be a class you attend outside, with people from other companies. In any case, your company (or you personally) made a substantial investment in this training. Here are pointers for management — and for you — to ensure both of you gain maximum value from the class.

1. Management should attend

I wish I had a dollar for every time, during a session I teach, a non-management attendee said to me, "Calvin, your material is great, but you need to be saying this to our bosses." On the other hand, lest I become too vain, maybe there are others who said to themselves, "This was a waste of time, so our managers should suffer as well."

In either case, management increases its credibility among staff by attending the same training. Unless it does so, the chances are great the management may undercut the philosophy that the class is attempting to impart.

By the way, if you hold to the "waste of time" view, please see point 5 below.

2. Separate managers from subordinates

It's generally inadvisable to have managers in the same entire class with direct subordinates. The presence of the former could inhibit the latter from speaking up, particularly when organizational issues and policies are being discussed.

Two alternatives address this concern. First, management can attend its own separate session. Second, management can attend the same session as direct subordinates, but 30 to 45 minutes from the end, can be excused. At that point, staff attendees who have issues can raise them. In other words, that's the time attendees can start saying, "Calvin, you're right in what you're saying, but that won't work here because…"

3. Management must respect class time

If management is sending staff to training, it has to respect that time. The "tap on the shoulder" to handle an issue that takes "just a second" of course never takes that long. It ends up taking that attendee out of class completely. When that happens, it defeats the purpose of having that person attend class. Management needs to respect the time that the attendee is in class.

4. Distribute attendance among many departments

Given the choice of having many attendees from one (or only a few departments) vs. having only a few attendees from many departments, I choose the latter. From a practical standpoint, this

strategy reduces the burden on those who aren't attending class but still must support business operations. From an organizational standpoint, the latter approach can help build morale by giving an attendee exposure to other departments and department workers.

5. Recognize the value of the training

From time to time, when I talk about skills in communicating with customers, I see people with rolling eyes and folded arms. No doubt they're saying to themselves, "Why am I wasting my time here? I could be writing a program / configuring a router / completing a problem ticket."

That's why I often open with a quiz: what do Operating System/2, Betamax, and the Dvorak keyboard all have in common? Answer: They were technically superior to their competition but nonetheless became obsolete. In the same way, technical people who rely only on their technical skills for career success could be in for a shock, because skill in working with others is at least as important, if not more so.

Try to keep an open mind. Will some training turn out to be a "bomb"? I hope not, but even in that case, you can still benefit. Sit down and analyze why you thought the session failed. Then, before your next session, resolve to discuss those concerns with the instructor if you can.

6. Make sure your job is covered during your absence

You can do your part to avoid getting the aforementioned tap on the shoulder by the boss. Make sure your co-workers and customers are aware of your absence. Adjust your voicemail greeting and set an e-mail or instant message autorespond, if you can. Make sure they know of any open items or issues and how they should be handled.

7. Have specific personal objectives

Your time in class will be far more meaningful if you set personal objectives for yourself beforehand. Read up on any class descriptions and syllabi or topic list. Then, go over mentally the areas where you believe you most need improvement. When you set your objectives, make sure they are measurable — and more important, that they're realistic.

8. Speak up

The biggest shock to many would-be law students is the total irrelevance of class participation in one's final grade. Nonetheless, I still remember Professor Woodward's advice in contracts class. He said that we still should speak in class, because doing so forces us to master the material. In other words, we may think we know the material, but having to articulate it is the acid test.

You probably won't get a grade for your professional development class. However, you probably will pick up the concepts more quickly, and retain them better, if you speak up.

9 Apply exercises and activities to your job

Those exercises where you walk the maze, build the toothpick tower, or sequence the 15 items to help you survive the desert aren't there just for the heck of it. They're there because they deal with some skill that's important to your job. The instructor or facilitator, in discussing the exercise afterward, should be making that association. If not, make it yourself. Write a note to yourself about the lessons you learned from the exercise. In particular, ask yourself how these lessons apply to your job and how you might act differently having gained the insights you did.

10. Write a letter to yourself

At the end of sessions I lead, I ask attendees to write a letter to themselves about what they learned. I then take those letters and simply hold them for about three months, after which I return them to their respective authors. I do so because many attendees remember clearly the material immediately after class. However, in the weeks that follow, their memories may dim. Seeing the letter refreshes their memory and reinforces the class session.

If the leader of your session doesn't follow this practice, consider doing it on your own. Write a letter, seal it, and just put it somewhere that it won't get lost. Maybe write a note on the outside, such as, "Open on [date three months from now]." ❖

10 things you should know about launching an IT consultancy

By Erik Eckel

Oh yeah. You're going to work for yourself, be your own boss. Come and go when you want. No more kowtowing to The Man, right?

Running your own computer consulting business is rewarding, but it's also full of numerous and competing challenges. Before you make the jump into entrepreneurship, take a moment to benefit from a few hundred hours of research I've invested and the real-world lessons I've learned in launching my own computer consulting franchise.

There are plenty of launch-your-own-business books out there. I know. I read several of them. Most are great resources. Many provide critical lessons in best managing liquid assets, understanding opportunity costs, and leveraging existing business relationships. But when it comes down to the dirty details, here are 10 things you really, really need to know (in street language) before quitting your day job.

1. You need to incorporate

You don't want to lose your house if a client's data is lost. If you try hanging out a shingle as an independent lone ranger, your personal assets could be at risk. (Note that I'm not dispensing legal nor accounting advice. Consult your attorney for legal matters and a qualified accountant regarding tax issues.)

Ultimately, life is easier when your business operates as a business and not as a side project you maintain when you feel like it. Clients appreciate the assurance of working with a dedicated business. I can't tell you how many clients I've obtained whose last IT guy "did it on the side" and has now taken a corporate job and doesn't have time to help the client whose business has come to a standstill because of computer problems. Clients want to know you're serious about providing service and that they're not entering a new relationship in which they're just going to get burned again in a few months time.

Incorporate. Form an LLC. Have questions about whether an S-Corp is right for you? Talk to an accountant. Then hit LegalZoom.com. The site will walk you through a questionnaire (you'll need to have the advice of your accountant at the ready to answer the queries), and then it'll file the appropriate paperwork for a fraction of the cost an attorney would charge.

2. You need to register for a federal tax ID number

Next, you need to register for a federal tax ID number. Hardly anyone (vendors, banks, and even some clients) will talk to you if you don't.

Wait a second. Didn't you just complete a mountain of paperwork to form your business (either as a corporation or LLC)? Yes, you did. But attorneys and online services charge incredible rates to obtain a federal tax ID for you.

Here's a secret: It's easy. Just go to the IRS Web site, complete and submit form SS-4 online, and voila. You'll be the proud new owner of a federal tax ID.

3. You need to register for a state sales tax exemption

You need a state sales tax exemption, too (most likely). If you're in a state that collects sales tax, you're responsible for ensuring sales tax gets paid on any item you sell a client. In such states, whether you buy a PC for a customer or purchase antivirus licenses, taxes need to be paid.

Check your state's Web site. Look for information on the state's department of revenue. You'll probably have to complete a form, possibly even have it notarized, and return it to the state's revenue cabinet. Within a few weeks, you'll receive an account number. You'll use that account number when you purchase products from vendors. You can opt NOT to pay sales tax when you purchase the item, instead choosing to pay the sales tax when you sell the item to the client.

Why do it this way? Because many (most) consultants charge clients far more for a purchase than the consultant paid. Some call it markup; accountants prefer to view it as profit. But you certainly don't want to have to try to determine what taxes still need to be paid if some tax was paid earlier. Thus, charge tax at the point of sale to the customer, not when you purchase the item.

4. You need to register with local authorities

Local government wants its money, too. Depending on where your business is located and services customers, you'll likely need to register for a business license. As with the state sales tax exemption, contact your local government's revenue cabinet or revenue commission for more information on registering your business. Expect to pay a fee for the privilege.

5. QuickBooks is your friend

Once your paperwork's complete, it's time for more paperwork. In fact, you'd better learn to love paperwork, as a business owner. There's lots of it, whether it's preparing quarterly tax filings, generating monthly invoicing, writing collection letters, or simply returning monthly sales reports to state and local revenue cabinets.

QuickBooks can simplify the process. From helping keep your service rates consistent (you'll likely want one level for benchwork, another for residential or home office service, and yet a third for commercial accounts) to professionally invoicing customers, QuickBooks can manage much of your finances.

I recommend purchasing the latest Pro version, along with the corresponding Missing Manual book for the version you've bought. Plan on spending a couple of weekends, BEFORE you've launched your business, doing nothing but studying the financial software. Better yet, obtain assistance from an accountant or certified QuickBooks professional to set up your initial Chart of Accounts. A little extra time taken on the front end to ensure the software's configured properly for your business will save you tons of time on the backend. I promise.

6. Backend systems will make or break you

Speaking of backend, backend systems are a pain in the you-know-what. And by backend, I mean all your back office chores, from marketing services to billing to vendor management and fulfillment. Add call management to the list, too.

Just as when you're stuck in traffic driving between service calls, you don't make any money when you're up to your elbows in paper or processing tasks. It's frustrating. Clients want you to order a new server box, two desktops, and a new laptop. They don't want to pay a markup, either. But they're happy to pay you for your time to install the new equipment.

Sound good? It's not.

Consider the facts. You have to form a relationship with the vendor. It will need your bank account information, maybe proof of insurance (expect to carry one million dollars of general liability), your state sales tax exemption ID, your federal employer ID, a list of references, and a host of other information that takes a day to collect. Granted, you have to do that only once (with each vendor, and you'll need about 10), but then you still have to wade through their catalogs, select the models you need, and configure them with the appropriate tape arrays, software packages, etc. That takes an hour alone. And again, you're typically not getting paid for this research. Even if you mark hardware sales up 15 percent, don't plan on any Hawaiian vacation as a result.

Add in similar trials and tribulations with your marketing efforts, billing systems, vendor maintenance, channel resellers, management issues, etc., and you can see why many consultants keep a full-time office manager on staff. It's no great revelation of my business strategy to say that's why I went with a franchise group. I have a world of backend support ready and waiting when I need it. I can't imagine negotiating favorable or competitive pricing with computer manufacturers, antivirus vendors, or Microsoft if I operated on my own.

Before you open your doors, make sure that you know how you'll tackle these wide-ranging back office chores. You'll be challenged with completing them on an almost daily basis.

7. Vendor relationships will determine your success

This is one of those business facets I didn't fully appreciate until I was operating on my own. Everyone wants you to sell their stuff, right? How hard can it be for the two of you to hook up?

Well, it's hard, as it turns out, to obtain products configured exactly as your client needs quickly and at a competitive price if you don't have strong vendor relationships. That means you'll need to spend time at trade shows and on the telephone developing business relationships with everyone from software manufacturers and hardware distributors to local computer store owners who keep life-saving SATA disks and patch 5 cables in stock when you can't wait five days for them to show up via UPS.

Different vendors have their own processes, so be prepared to learn myriad ways of signing up and jumping through hoops. Some have online registrations; others prefer faxes and notarized affidavits. Either way, they all take time to launch, so plan on beginning vendor discussions, and establishing your channel relationships, months in advance of opening your consultancy.

8. You must know what you do (and explain it in 10 seconds or less)

All the start-your-own-business books emphasize writing your 50-page business plan. Yes, I did that. And do you know how many times I've referred to it since I opened my business? Right; not once.

The written business plan is essential. Don't get me wrong. It's important because it gets you thinking about all those topics (target markets, capitalization, sales and marketing, cash flow requirements, etc.) you must master to be successful.

But here's what you really need to include in your business plan: a succinct and articulate explanation of what your business does, how the services you provide help other businesses succeed, and how you're different. Oh, and you need to be able to explain all that in 10 seconds or less.

Really. I'm not kidding.

Business Network International (plan on joining the chapter in your area) is on to something when it allots members just 30 seconds or so to explain what they do and the nature of their competitive advantage. Many times I've been approached in elevators, at stoplights (with the windows down), and just entering my car in a parking lot by prospective customers. Sometimes they have a quick question, other times they need IT help right now. Here's the best part; they don't always know it.

The ability to quickly communicate the value of the services you provide is paramount to success. Ensure that you can rattle off a sincere description of what you do and how you do it in 10 seconds and without having to think about it. It must be a natural reaction you develop to specific stimuli. You'll cash more checks if you do.

9. It's all about the branding

Why have I been approached by customers at stoplights, in parking lots, and in elevators? I believe in branding. And unlike many pop business books that broach the subject of branding but don't leave you with any specifics, here's what I mean by that.

People know what I do. Give me 10 seconds and I can fill in any knowledge gaps quickly. My "brand" does much of the ice breaking for me. I travel virtually nowhere without it. My company's logo and telephone number are on shirts. Long sleeve, short sleeve, polos, and dress shirts; they all feature my logo. Both my cars are emblazoned with logos, telephone numbers, and simple marketing messages (which I keep consistent with my Yellow Pages and other advertising).

I have baseball hats for casual trips to Home Depot. My attaché features my company logo. My wife wears shirts displaying the company logo when grocery shopping. After I visit clients, even their PC bears a shiny silver sticker with my logo and telephone number.

Does it work? You better believe it. Hang out a shingle and a few people will call. Plaster a consistent but tasteful logo and simple message on your cars, clothing, ads, Web site, etc., and the calls begin stacking up.

Do you have to live, eat, and breathe the brand? No. But it helps. And let's face it. After polishing off a burrito and a beer, I don't mind someone asking if they can give me their laptop to repair when I approach my car in a parking lot. Just in case they have questions, I keep brochures, business cards and notepads (again, all featuring my logo and telephone number) in my glove box. You'd be surprised how quickly I go through them. I am.

10. A niche is essential

The business plan books touch on this, but they rarely focus on technology consultants directly. You need to know your market niche. I'm talking about your target market here.

Will you service only small businesses? If so, you better familiarize yourself with the software they use. Or are you targeting physicians? In that case, you better know all things HIPAA, Intergy, and Medisoft (among others).

Know up front that you're not going to be able to master everything. I choose to manage most Windows server, desktop, and network issues. When I encounter issues with specific medical software, dental systems, or client relationship software platforms, I call in an expert trained on those platforms. We work alongside to iron out the issue together.

Over time, that strategy provides me with greater penetration into more markets than if I concentrated solely on mastering medical systems, for example. Plus, clients respect you when you tell them you're outside your area of expertise. It builds trust, believe it or not.

Whatever you choose to focus on, ensure that you know your niche. Do all you can to research your target market thoroughly and understand the challenges such clients battle daily. Otherwise, you'll go crazy trying to develop expertise with Medisoft databases at the same time Intel's rolling out new dual-core chips and Microsoft's releasing a drastically new version of Office. ❖

The 10 best ways to handle a job interview

By Calvin Sun

Given the current economy, maintaining contacts with other companies can be critical. Knowing the right people can help you land a better job, one with more pay or perhaps the chance of advancement. Getting that next job, of course, often involves an interview. Here are some tips to help you excel.

1. Be on time

Give yourself enough time to reach your destination, especially if you're unfamiliar with the area. You will have enough stress with respect to the actual interview. Don't add to it by complicating your travel to there. Consider a dry run prior to interview day, especially if you're driving. Remember that mapping and navigational services could take you (as they did me) through an empty field or the wrong way on a one-way street.

Don't get there too early, either. Doing so makes you look as though you have no other job and could hurt you later during salary negotiations. Plan to arrive between 10 to 20 minutes before your time. If you really do get there on the early side, consider joking with the receptionist or your interviewer about your surprise or "anger" over the lack of traffic. Then get serious and say that all you need is a place to sit down, because you have work you can do while you wait.

2. Occupy yourself while waiting

Do bring work with you, so you can do it. There's always another e-mail or memo to write, or a chance to review your to-do list or project plan. You even could start on the thank-you note to your interviewer(s). (See below.)

Whatever you do, don't look up every time someone passes by. Doing so makes you look weak and anxious.

3. Research the company

Don't worry if people call you a creeper or a stalker because you're researching the company. My daughters call me that all the time, but I don't let it stop me. Take time to find out about challenges and problems that company is facing. The simplest method is simply to do a Google search. If the company is publicly traded, you can get additional information from financial sites, such as finance.yahoo.com or money.com.

4. Dress the part

When in doubt, dress more conservatively than less. However, don't go too far, even on the "up" side, because your interviewer might think you are out of touch. The best approach is to find out how people (in particular, the people one level above you) dress, and to follow accordingly.

If dressing that way is noticeably different from how you and your current co-workers dress, you might have a problem. Dressing differently the day of your interview might telegraph your intentions to others, something you may or may not want. If it's the latter, consider leaving your

interview clothing in your car or some other area. If you're a male, maybe you can appear at your current job without a tie, then put one on, along with a sport jacket, when you go for your interview.

5. Tie your answers to issues the company/interviewer is facing

Once you have background information on the company and any problems it's facing, try to tie that information to work you've done. If you can come up with solutions based on work you've already done, you may make a great impression. You will have shown resourcefulness and initiative in doing research, then demonstrated the value you can bring to the company.

Whenever you can, quantify your accomplishments. Don't just say, "I wrote a program that streamlined our inventory process." Say, if you can, "My program increased inventory turnover by 15%."

6. Be courteous to support staff

A measure of a person's character, it is said, is the way that person treats those who have no effect on the person's future. It's easy to be courteous and respectful to the interviewer or the interviewer's boss. What about that receptionist, or assistant, or server (if your interview occurs at a restaurant)? Treating them with equal courtesy speaks well of you, and in fact could be something the company is observing. Disagree with me if you want, but acting like a boor to support staff could hurt your chances.

7. Be energetic but not desperate

There's a fine line between being energetic and being desperate. Show that you're interested in the job, but don't be so interested that the interviewer thinks that this interview is your only one — even if it is. On the other hand, being "coy" can be a good approach, because if the interviewer likes you, he or she might do more to attract you to that company. However, being too coy might come across as aloofness and turn off the interviewer.

The best approach is to have a restrained enthusiasm. Even better, take your cues from the interviewer. If that person is quiet and reserved, you might want to adopt if you can that demeanor. If he or she is more outgoing, you could consider emulating that manner.

8. Don't badmouth current/former employer

Speaking ill of a former employer, no matter how bad your relationship, could come back to haunt you. Even if the interviewer asks you what you disliked about your former boss, refuse to take the bait. You can speak about things you learned, even if the context is different from what the interviewer might be thinking.

Let's say your former boss publicly humiliated subordinates, and that his doing so damaged morale. You could say, for example, "I learned a lot from my former boss about how to motivate people." Did your boss often fail to keep commitments? You could say, "I learned from my boss about the importance of keeping commitments, because breaking them hurts a project and damages one's reputation."

9. Be clear on the next step(s)

Before you leave, get a sense of what will happen next. Will they make a decision? If so, when? Will they ask you to return for more interviews? Who should call whom? By knowing this information, you can get an idea of what to expect and can prepare accordingly.

10. Send a thank-you note afterward

After the interview, take the time and send a "real" (not electronic) note to your interviewer. I know it's means more time, expense and trouble than an e-mail, but sending a note can make you stand out from any competition you might have. In that note, re-emphasize the points you made, plus any others that might have occurred since that time. ❖

10+ IT organizations that can boost your career

Joining a professional organization is more than just a convenient way to beef up your resume. Groups such as the ones listed below can help you enhance your technical and career skills. If you need a first-hand opinion about a vendor — or you want the inside scoop on a competitive job — one of these associations can help.

Many organizations offer a wide range of benefits and services. Besides networking opportunities, several groups provide discounts on everything from magazine subscriptions to travel. Many have comprehensive Web sites and organize conferences or workshops.

TechRepublic contributor Suzanne Thornberry updated our listing of some of the best-known organizations for IT pros.

1. American Society for Information Science & Technology - http://www.asis.org/
2. Association for Computing Machinery - http://info.acm.org/
3. Association for Information Systems - http://www.aisnet.org/
4. Association for Women in Computing - http://www.awc-hq.org/membership.html
5. Association of Information Technology Professionals - http://www.aitp.org/
6. Data Management Association - http://www.dama.org/
7. IEEE Computer Society - http://www.computer.org/
8. Independent Computer Consultants Association - http://www.icca.org/
9. Institute for the Certification of Computing Professionals - http://www.iccp.org/
10. Network and Systems Professionals Association - http://www.npa.org/
11. Network Professional Association - http://www.npa.org/
12. Society of Computer Professionals - http://www.comprof.org/
13. Society for Information Management - http://www.simnet.org/
14. Technology Managers Forum - http://www.techforum.com/
15. USENIX: The Advanced Computing Systems Association - http://www.usenix.org/
16. Women in Technology International - http://www.witi.com/ ❖

10 tips for creating a job-winning IT consultant resume

By Erik Eckel

Most everyone's skeptical. Too many organizations — promised the world but ultimately recipients of substandard service, flaky technologies, incompatible systems or worse — have been burnt by IT consultants. Consequently, organizations of all sizes, from small businesses to large enterprises, are suspicious of claims and promises IT consultants make.

As an IT contractor, your best strategy is to let your reputation speak for you. And the best way to communicate your reputation to a prospective new client (other than via testimonials from clients pleased with the service you've already provided) is to let your resume speak for you.

How do you create a job-winning IT consultant resume? Here are 10 tips.

1. Be truthful

By now, everyone's heard how George O'Leary lost arguably the most coveted football coaching job in America (at Notre Dame) and how RadioShack (Tandy Corporation) CEO David Edmondson lost his lucrative post: They falsified their resumes.

Padding resumes is a long-practiced art. According to a Society For Human Resource Management article, 30 percent of all job applicants misrepresent themselves on their resumes. Worse, the same article revealed that an ADP Payroll study from 2.6 million background checks found 44 percent of applicants flat out lied about their work experience, 41 percent listed false education histories, and 23 percent faked credentials or licenses.

Let those folks work themselves out of the gene pool. Stick to listing only true statements on your resume. There's no better way to distinguish yourself and begin building a foundation of excellence. If you can't prove it, don't list it.

2. Be concise

Resumes must be short to be effective. Don't drone on needlessly. Get in and get out. List work and education experiences, highlight the role you played in specific accomplishments, record accreditations and awards… and be done with it.

As career trainer Richard S. Reed wrote in his do's and don'ts for consultant resumes on TechRepublic, remember that "Resume means summary — so keep it brief." As Reed recommends, limit your resume to two pages or less. The likelihood of a longer document being reviewed in its entirety is minimal, anyway.

3. Be accurate

Review your resume and verify that work dates, titles, responsibilities, addresses, and other information are all correct. It's easy to miss a start date by a month or list an address incorrectly, but if a prospective client decides to follow up on your resume (an ever-increasing trend following those high-profile resume scandals), even minor inaccuracies will reflect poorly on you.

When polishing your resume, be sure to confirm company addresses haven't changed. Do the same with phone numbers. And if you list descriptive information for an employer or past client (third-largest shoe manufacturer, leading sunglasses distributor, Fortune 100 company), make sure those statements are still true (and that the leading sunglasses distributor you worked for hasn't gone bankrupt, for example). Leaving outdated information on your resume only leads to embarrassment.

4. Better highlight your accomplishments

Many technology professionals struggle to effectively highlight accomplishments on their resumes. It's easy to focus on the challenging tasks you've completed. But you must communicate more than just the fact that you completed a project.

For example, you might list something like this: "Completed network overhaul," "Installed new e-mail platform," or "Deployed comprehensive mobile phone systems." While such line-item mentions are accomplishments, they fail to capture the accomplishment's full value. Stating the following is much more illuminating: "Completed network overhaul ahead of schedule and under budget," "Installed new e-mail platform that simplified administration and eliminated third-party service provider dependence," or "Deployed comprehensive mobile phone system that improved field communication."

5. Tie successes to business objectives

When highlighting accomplishments, it's best to go one step further and tie project successes directly to business objectives. This is where an IT consultant's work assumes monetary value (or payback on the original investment). Don't feel a need to exaggerate; instead, confirm backup documentation exists proving statements you make.

Here's how it should work. Instead of just saying you installed a new e-mail platform that simplified administration, provide additional details: "Installed a new e-mail platform that simplified administration and saved the IT department $25,000 annually." Or "Deployed a comprehensive mobile phone system that improved field communication resulting in sales performance increases of 12 percent."

The focus should be on capturing something measurable (cost savings, sales performance, labor reduction, average purchase volume, response rates, etc.). In keeping with the other tenets listed earlier, be sure the statements you list are not claims but facts that are easily supported.

6. Seek high profile clients

When most readers view this recommendation, they think of prestige or name dropping. That's a mistake.

IT consultants should consider seeking a few high profile clients, but not to feed their egos. Instead of chasing a few well-known clients for their wow or coolness factor, providing technology services to a few well-known and well-respected organizations can speak volumes to your reputation. While a prospective client may not be familiar with you or your work, knowing that the chamber of commerce, a local famous manufacturer, or a prominent nonprofit charity entrusts its IT systems to you or your firm will go a long way in helping win the client's confidence.

Such high profile clients need not be massive organizations or even for-profit companies. The goal is to help prospective clients feel more comfortable working with you when they don't know you. Thus, a small local bakery known throughout the region for pride and quality in its products works wonders when listed as a reference on your resume.

7. Explain awards

Often, it's tempting to just list awards within a short accolades section. When I've had to fill an open position in the past, while reviewing numerous resumes listing various awards, I found myself wondering what skills, expertise, or accomplishment the award actually recognized.

Don't make that mistake on your IT consulting resume. Seek opportunities to maximize an award's impact. For example, don't just say you won the chamber of commerce's entrepreneur award. Briefly describe why you won the award. Focus on the qualities that the award celebrated (exceptional service, attention to detail, lowered client costs, reduced production cycles, etc.).

8. Don't forget certifications/accreditations

In my personal and professional experience as both a technology author and small business technology consultant, I've found that IT professionals are placing less emphasis on certification and industry accreditation. But that's no reason to omit these elements from a consulting resume.

If you have industry certification, security clearances, vendor accreditation, or licenses, list them. Prospective clients can make better informed decisions when they know more about your professional constitution — and you better believe competitors will be listing such traits.

9. Target resumes by market

Unfortunately, when it comes to resumes, one size doesn't fit all. Don't expect to create a single resume that works equally well for medical providers and for financial consultants. Tailor your resume to target the prospective client's needs and business objectives.

You do this by listing accomplishments and tying them to business goals, targeting results that will prove timely and relevant to the prospect client.

Unsure what challenges a prospective client faces? Uncertain how a potential customer might measure technology success or weigh IT investments? No problem. Use the Internet and navigate to the professional association and trade magazine Web sites that service those vertical markets. You'll quickly learn just how those industries value and measure technology success.

10. Keep it current

Possibly the easiest mistake to make on any resume is to let it become dated. As soon as you complete work on your IT consultant resume, the file begins to date itself. As I said earlier, it's critical to ensure that company information remains current. More important, as your title, professional role, work responsibilities, and other details change, so should your resume.

Maintaining a resume, however, isn't at the top of everyone's list. This is especially true among IT consultants, who must regularly juggle not only the myriad aspects of running their own businesses but also the responsibility of maintaining numerous client's systems, networks, and data.

Make sure your resume remains accurate. Fall back to an old school method. Create a Task or Calendar reminder within Outlook and set it to remind you once a quarter that it's time to review your resume for accuracy. ❖

10 tips for writing a job-winning developer resume

By Justin James

As seasoned job hunters know, the first step on the road to finding work is to write a resume that gets you the interview. Unfortunately, some of the traditional resume writing rules just do not work well in the software development industry. Here are 10 tips for writing a programmer resume that will increase your chances of getting the interview.

1. Provide a skills list up front

The hiring manager wants to know if you have the skills the company is looking for. An "experience" section gives managers a good idea of how much experience you have, but if you have a "skills" section at the top of the resume, their eyes go there first. Sure, you may be making it a bit easier for them to weed out your resume. But on the flip side, you might bring to their attention some skills they would otherwise overlook. At the very least, the hiring manager will appreciate the skills list.

2. Make the experience interesting

Most developers on the market have written a data-driven Web site or desktop application. To give a bunch of examples of these on your resume is not impressive. What does impress a potential employer is experience that has something unique about it, showing you've done more than just "Hello World" level work. If you've been working under unique constraints or in environments with high levels of transactions or zero tolerance for failure, that looks very good to the person reading the resume. So show me how your experience is different, and I will see you as different.

3. Root out grammar, spelling, and other common mistakes

Over the course of my time hiring, I have seen all sorts of grammar and spelling mistakes on resumes. One of the most embarrassing was when someone misspelled the name of the college he graduated from. Resumes do contain some unique grammatical conventions, and software development work in particular often revolves around acronyms or oddly spelled words. But that is really no excuse. Check your spelling and your grammar. This tip appears on just about every resume advice article I have ever read, but it clearly needs repeating.

4. Education counts, but not for much

Unless you are just entering the job market for programming or are applying for a very specialized position, your education is not terribly important. Sure, you need to put it on your resume, but list it last, please. The hiring managers who need or want to know about it can find it, and the others won't have to spend time on it. The world of programming changes often enough so that somewhere around seven years later, most schooling (except for "principles and theory" subjects, like mathematics or "pure" computer science) and certifications have little in common with the current working world reality.

5. Get to the meat, quick

The traditional resume format includes a lot of information that's just not needed, in the mind of the development manager. Your summary and possibly even the objective are two such sections. There really is no way to provide a summary that describes most programming pros in a way that is accurate, yet shorter than a resume itself. This is why most summary sections read like so much useless drivel: "Seasoned programmer with 10 years development," followed by highlights of the skills section. Thanks, but no thanks.

The objective is often (but not always) just as useless. If you are looking for a change of pace, it offers a great way to keep the reader from pigeonholing you based on your skills and experience. The intermediate programmer looking to slide into a senior developer position can safely skip the objective. The senior programmer who wants to become a software architect or a DBA needs to state an objective. So avoid the summary at all costs, provide only useful objectives, and let the reader get to your skill set as quickly as possible.

6. Formatting matters

The formatting of your resume is important. While the days of mailing resumes printed on premium stationery are long past, it is still a document that someone needs to read on a computer screen and on paper. That can be quite a balancing act, believe it or not. This is not the time to show off your inner Picasso, unless the position you are applying for is of a visually artistic nature. This is the time to enhance readability. That means using a larger font (10 to 12 points), a common font that all computers have (if your document format does not bundle fonts within it), and one that looks good both on the screen and off. My recommendations are Verdana, Arial, Tahoma, Calibri, and Helvetica.

Use enough whitespace so that the document does not seem too dense, which will turn readers off. At the same time, don't waste so much space that it takes eight pages to print 200 words. Of course, the format of the file itself is important. My experience has been that 99.9% of the recruiters out there will ask for your resume in Microsoft Word format if you send it in any other format, so make sure that you can provide a document in the standard .doc format.

Always keep in mind that the resume is your primary tool for selling yourself. If readers can't consume the information in it, whether due to technical issues or readability problems, they will quickly move on to the next resume.

7. Be cautious with the length

Regardless of how your document is formatted, try to keep the length between two and four pages, unless there are extremely special circumstances. People who spend a lot of time doing short-term contract work can have longer resumes, and people just entering the job market can have shorter resumes.

Overall, it is tough to properly highlight your technical skills and more than one position in the traditional one-page resume format. Two pages should be the baseline for any intermediate or senior developer. But after about four pages, the reader's eyes start to glaze over. Much like your education, the experience you had more than seven or eight years ago is not terribly relevant, but the hiring manager does like to see an arc of increasing responsibility or project difficulty.

8. Properly document your history

Programming is not like most fields when it comes to employment history. For one thing, many programmers are contractors, which leads to an employment history that can look like a train. In addition, the dot-com bust is not too far behind us, and IT has always been an industry with a lot of bankruptcies, mergers, and acquisitions.

The problem is, no hiring manager likes to see a long list of short-term jobs. If your resume has a string of such jobs, with job titles that get bigger and bigger, you look like someone who has no loyalty. On the other hand, if the jobs seem basically the same (or worse, get lower on the totem pole), it makes the reader think that you may simply be unemployable. If you have a legitimate reason for the short-term jobs, make sure that the reason is obvious. For example, mark the contracting/consulting positions clearly.

9. Don't put the reader at legal risk

No hiring manager likes to be accused of prejudiced or discriminatory hiring. Not only is it unethical, but it is illegal. So hiring managers who are trying to do the job right will be familiar with the list of questions they can't ask an applicant. Your part of the equation is to exclude this information from your resume. The hiring manager does not need to know your marital status, ethnicity, nation of origin, age, religion, or sexual orientation. There are a lot of other things the hiring manager does not need to know, either. If you include these irrelevant details on your resume, the hiring manager will feel scared and skittish. Leave these details out, please.

10. "What a geek!"

In high school, you may have hated being called a geek. But today, you are trying to find work as a programmer. "Geek" is "gold" to hiring managers. Find a way to show them that you are smart, love programming, and are constantly growing, learning, and exploring new ideas. Talk about your relevant hobbies if you have any, like contributing to open source projects or volunteering to teach local kids programming. Let them know if you like programming or computers enough to deal with them outside of work.

It is a really simple equation for the hiring manager. While two candidates may be equal today, the candidate with passion will be far more advanced tomorrow than the candidate who treats it as "just a job." ❖

10 things you can do to get a promotion

By Kris Littlejohn

Very few people hire on with any company or organization with the intention of remaining indefinitely at the position for which they were hired. Just because you started as the grunt who had to fix the copy machines doesn't mean you don't someday want to be CIO. At most companies, this could entail half a lifetime of climbing the corporate ladder. Each step up that ladder is generally going to involve asking for and receiving a promotion. The thought of asking for advancement is usually pretty frightening, but these tips will help you be more prepared.

1. Show them the numbers

When you make your pitch about what a great job you've been doing and your value to the company, it will help your case if you can show your employer or supervisor specific results. Prepare documentation showing how and how much your brilliant ideas have helped them. This can be especially useful in the common scenario in which the person you're dealing with doesn't have the power to grant you a promotion. If that person has to fight on your behalf with his or her boss, you had better provide the best ammunition you can.

2. Ask for more responsibilities

When asking for a promotion, it's best to avoid that "P" word. If instead, you tell your boss you're ready to take on more responsibilities, it will show that you're prepared to tackle a larger or more complicated workload and aren't just looking for a bigger office and fatter paycheck. It also gives your boss the option of gradually giving you the more important duties rather than just dumping you in a new position. Just make sure that if, after a few months, your tasks no longer resemble your job description, you bring that up and (with luck) get the new job title and paycheck.

3. Invent a new position

If you feel that your skills are best suited to a position that doesn't exist at your current organization, and you think you can make a strong argument for a need for that position, by all means, do so. Even if they won't (or can't) make the new position happen, you will have earned points for creativity while at the same time making it clear you are looking to advance.

4. Bring up the topic in an informal setting

If you have the opportunity to meet with your boss outside the workplace, this can be a good way to make use of the occasion. Whether it's at the bar for a drink after work, a big conference, or the company picnic, people will naturally be in a more receptive mood when they aren't busy busy busy. But be careful in these settings. If you press too hard and your approach falls flat, you could be left in an awkward place for a couple hours with no easy means of escape. Phrase things lightly and back off if you don't make any headway.

5. Schedule a private meeting

Obviously, the alternative approach to having the promotion talk is to ask during regular work hours. Since during this time your boss is generally going to be busy, it's a bad idea to just ask for a couple of minutes of his or her time. If you try to talk about a promotion like that, you could get shot down without your boss even looking up. Instead, schedule an appointment so that a block of time is set aside specifically for listening to you. Also, if possible, try to avoid revealing the specific topic of the meeting beforehand. Don't go too far with this; you don't want to annoy your boss by making the purpose of the meeting too mysterious. It's just a bit harder to articulate a reason to say no to you when you're in the room.

6. Don't be afraid to toot your own horn

Just make sure to play the right notes. It's okay to brag a little — as long as it doesn't sound like bragging. There is nothing wrong with reminding your boss of your accomplishments, since even if they were great, he or she might have forgotten about them. Mentioning that you've done this, this, and this, and that there are 15% fewer incidents in your department since you have started the job is great. Saying you're the best system admin in the company is much less persuasive. Also, don't forget that this is about you, so concentrate on all of your positive aspects and not on anybody else's negative ones.

7. Don't make threats or demands

Be careful not to make your request for promotion sound like a demand. Don't threaten to leave if you don't get what you want (especially if you don't intend to follow through on it). If you have been offered a new job somewhere else, you shouldn't throw it in anyone's face or try to use that offer to leverage a better deal where you are now. Doing so can potentially damage your reputation with both places. Remember to stay calm. Even if you really are fed up with your current position, try not to show it.

8. Make friends in higher places

Before you actually ask about advancement, it's a good idea to find somebody in the position you're aiming for who is willing to take you under his or her wing. This offers four benefits:

- Prior to making your pitch for promotion, it will give you the opportunity to see what's in store and make sure that it's what you want.
- It will show your boss that you've taken the initiative to learn the ropes already.
- It will give you a buddy on the inside — one who may have some influence in deciding whether you get the position.
- After you get the promotion, it will give you a friendly ear you can go to for advice if things get hard.

9. Learn new skills

It should go without saying that any time you have the opportunity to learn something new, you should take it. In particular, when you're seeking a promotion, you'll impress your boss if you can show that you've learned new skills that go beyond your current position. You might consider earning additional industry certifications or maybe go back to school for a higher

degree. Taking on these things while working full time can be quite taxing, but with the ever-increasing availability of night classes and self-study materials, it's definitely possible.

10. Excel at your current position

Sometimes, actions speak louder than words. The best way to show that you deserve advancement is to simply shine where you are now. Go above and beyond the call of duty. Get to work early every day and stay a few minutes late. Try to come up with solutions to problems that haven't been addressed yet. If your deadline is Friday, try to have everything done by Thursday.

Finally, remember to be a team player. Make sure that you aren't irreplaceable. If you're at the top among your peers, take the time to ensure that you aren't the only one who can keep things running. This will show your superiors that you can be a proper leader, and it will help curtail the disastrous response to a request for promotion: "I'm sorry, but you're doing such a great job, we just can't afford to lose you where you are now." ❖

10 tips for increasing your professional visibility and exposure

By Calvin Sun

Being recognized in your field can make you more valuable in your current job and more marketable if you decide to change jobs. The tips below can help you gain that visibility and exposure. The first four are aimed primarily at the employee of a company, while the rest apply either to the employee or to the independent consultant.

1. Develop your elevator talk

The elevator talk is the 15- to 30-second talk you would give to a senior executive while both of you are in an elevator. It's your chance to impress that person, so make the most of it. Important parts of the elevator talk include:

- Who you are
- What project you're working on
- A significant accomplishment you've made

2. Talk to bosses during office social events

During an office social event (for example, the holiday or Christmas party), it's generally easier to approach your boss and his or her boss to say hello. At those times, it's important to have your elevator talk prepared. Business talk is good, as long as you stay away from salary, benefits, and other personnel questions. Try to make your approach, if you can, out of the sight and earshot of your peers, so they don't think that you're being fawning toward your bosses.

3. Introduce yourself when in another location of your company

Your job may take you to another part of the country, where you might be working with another part of your company — for example, with a different branch office. In that case, make an effort to introduce yourself to the head of that office. You really don't need a formal appointment. Simply introduce yourself to that person's assistant and find out whether you can just "stick your head in the door" to say hello. Tell that person who you are and what you're doing for that person's office or staff.

4. Volunteer for company events

United Way drive… company picnic…holiday party. All of these events need company employees to run them. They take time, but helping with them can bring you recognition, especially if you're working side by side with upper-level people who one day could be your boss.

5. Speak to outside groups

Speaking to groups can give you credibility and increase your professional contacts. It also builds your own knowledge of your topic, because in researching and creating your talk, you inevitably will learn more about it.

Look for a topic you're familiar with and which would interest an audience. Focus on how your information can benefit audience members.Avoid simply repeating facts. Share any analysis you have done, offering insights for the audience. When looking for groups can speak to, consider industry and professional associations, local chambers of commerce, and service organizations, such as Rotary. Your initial talks probably will need to be given free of charge. However, as your reputation expands, you might be able to charge a fee for them.

One variant of speaking is to teach, perhaps at a local community college. Be aware, however, that such an obligation can involve significant preparation time and little pay.

6. Write for professional publications

Nothing beats seeing one's name in print, with a byline following the title. The same approach applies to writing as with speaking to groups: Pick a topic you know well and which would appeal to the readers of a publication. That means, of course, that you have to know the types of readers a publication has. Most publications will ask for a query letter or e-mail first. In it, you outline your proposed article and possibly submit samples of your previous work. On the other hand, I have gotten articles published simply by sending them in.

The publication Writer's Market has been tremendously helpful to me in this regard.

7. Serve as a source for news media

Reporters like to quote authorities when writing a story. If they quote you in print or on the air, your reputation is enhanced. Once you identify a reporter, introduce yourself by phone or e-mail. If you call, and the person answers, ask first whether the person is on deadline. If he or she is, offer to call back. Such a question indicates that you're sensitive to the reporter's time. If you're sending e-mail, include a biographical statement or resume if possible and stress why your knowledge is important to the reporter's readers, viewers, or listeners. If you work for a company, be careful about mentioning the company by name. Your employer might be upset if you appear to be speaking for the company rather than yourself.

8. Mentor or advise a student group or club

I've never done it, but advising a student group, such as a student chapter of the Association of Information Technology Professionals (AITP), is another way of gaining exposure and contacts.

9. Moderate a panel discussion

Even if you aren't able to give a presentation at a conference, you still might be able to participate by moderating a panel discussion. The responsibilities will vary depending on the conference and the conference organizer. However, most moderators are responsible for making sure the discussion starts and ends on time and that all participants have a chance to speak. You might want to have some questions prepared beforehand that you can ask the panel to answer.

When taking questions from the audience, always repeat the question so that the entire room (panelists and audience) can hear it.

10. Serve as board member or officer of a professional association

It's pretty easy to serve in either of these capacities because generally, no one wants to do it. If you're the treasurer, you'll be responsible for keeping track of money for the association, such as registration fees received for any conferences, and expenses incurred for speakers, facilities, and other reasons. The other officer and board positions generally are concerned with maintaining and increasing membership, for planning and finding speakers for meetings, and various administrative tasks. If you're willing to put in the time, having such an accomplishment would look good on a resume. ❖

10 ways to communicate more effectively with customers and co-workers

By Calvin Sun

We all know what happened to the Titanic. Clearer communications could have prevented the tragedy and the loss of more than 1,500 lives. Communications plays just as important a role in your careers. When asked to name the top three skills they believed their subordinates need, 70 percent of the readers of CIO magazine listed communications as one of them.

Here are some tips on how you can communicate more effectively with people at work, be they customers, co-workers, subordinates, or superiors.

1. Beware of interrupting

Titanic wireless operator Jack Phillips interrupted a wireless message from a nearby ship, telling them to shut up. In doing so, he prevented that ship from sending Titanic an iceberg warning.

Be careful about interrupting others, particularly your customers. They'll be especially upset if, while they're explaining a problem, you interrupt them and start offering a solution. If you feel you have to interrupt, at least cut to the chase and tell the other person what you think his or her main idea was. That way, the other person at least can confirm or correct you, and in either case save time.

2. Listen actively

Did you ever get the feeling, when talking to someone, that you were really talking to a wall? The person may have heard you but gave no indication of it at all. Avoid doing the same thing. When communicating with others, it's just as important that people be aware that you're listening as it is that you're actually listening. For that reason, be involved with and react to what the other person is saying, either via a nod, or an "I see," or a paraphrase of the other person's statements. You'll strengthen your own understanding and make a better impression.

3. Avoid negative questions

Suppose you say to a customer, "You don't have Word installed?" and he answers "Yes." What does he mean? Yes, you're right, Word is not installed? Or yes, he DOES have Word installed?

Asking a negative question creates confusion. It's clearer if you phrase the question positively (e.g., "Do you have Word installed?") or ask an open-ended question ("What applications do you have installed?"). If you must use the negative, try a question such as "Am I correct that you don't have Word installed?"

4. Be sensitive to differences in technical knowledge

Chances are, your customers have less technical knowledge than you do. Be careful, therefore, when explaining things to them. If you use acronyms, be sure you identify what the acronym

means. The same acronym can mean different things, even in an IT context (for example, ASP can refer to "application service provider" or "active server page"). Be careful that you don't make two opposite mistakes: either talking over their head or talking down to them. Keep your eyes on customers when you talk to them and be alert to cues indicating that they don't understand. Ask them whether they understand what you're saying, if necessary.

5. Use analogies to explain technical concepts

A good way to explain a technical idea is to use an analogy. Though they have limitations, analogies are helpful in explaining an unfamiliar idea in terms of a familiar one. One of the best analogies I ever heard compared a firewall to a bank teller. When you enter a bank, you don't just go into the vault and get your money. Instead, you go to a window, where the teller verifies your identity and determines that you have enough money. The teller goes to the vault, brings it back to the window, gives it to you, and then you leave.

6. Use positive instead of negative statements

Your customers are more interested in your capabilities than in your limitations. In other words, they're interested in what you can do, rather than what you can't do. The way you say things to them influences how they perceive you and your department. You, as an IT department or individual, can be seen as a roadblock or you can be seen as a partner. So, for example, instead of saying, "I can't help you unless you log off," consider saying, "Please log off so that I can help you." Your statements often will be easier to understand as well.

Here's another reason to avoid negative statements. Have you ever experienced gaps of silence in your telephone calls, where the conversation breaks up? Usually it happens when using a cell or a VoIP telephone. If the gap occurs as you're saying "not," your recipient could get the opposite message from what you intended.

7. Be careful of misinterpreted words and phrases

Sometimes we say something with innocent intent, but the other person misinterprets it. We mean to say one thing, but our pronunciation or inflection causes us to convey something else. For example, in Chinese, the sound "ma" said in a high level tone means "mother in law." However, said in a falling and rising tone, it means "horse."

Be especially careful of the word "you." Overusing this word can make the person you're talking to feel defensive or threatened. Instead of saying, "You need to speak louder," try saying, "I'm having trouble hearing." Another issue involves the dual meaning of "you." Unlike other languages, English uses the same word to refer to an actual person (for example, the person you're talking to) as well as to a hypothetical person. Suppose you said to someone, "You never know what's going to happen next," and meant to equate "you" with "people in general." The other person might think you're referring to him or her specifically and take offense. A better alternative might be, "It's really unpredictable here."

If someone is upset, one of the worst things to say is "calm down." It might work one half of one percent of the time, but generally all it does is make things worse.

In general, think before you speak. I'm not saying you always have to be polite or diplomatic. Sometimes you do need to (figuratively, of course) beat people up. However, do consider the alternatives before speaking. As the proverb goes, "He who guards his mouth and his tongue keeps himself from calamity."

8. Remember that technical problems involve emotional reactions

When customers have a technical problem (for example, they're having trouble printing), keep in mind that they'll almost always have an emotional reaction as well. Those emotions can range from simple annoyance to outright panic, depending on the importance of the document and the time element involved. I'm not saying you have to be Dr. Phil, but it's important to acknowledge and recognize these emotional reactions. If all you do is solve the technical problem and walk away, chances are the customer will still be upset.

In these cases, simply saying something like, "Pain in the neck, isn't it?" or "I hate when that happens to me" can help the customer feel better about the situation and possibly feel more positive about you.

9. Anticipate customer objections and questions

In his book The Art of War, the ancient Chinese author and strategist Sun Tzu said, "If you know the enemy and you know yourself, you need not fear the result of a hundred battles." Apply this principle when communicating with customers. In particular, try to anticipate the objections your customers will have to your message and address those objections.

For example, suppose you're sending out a directive regarding the downloading and application of Windows updates. Suppose further that you have customers who know enough to be dangerous. Such a customer might think, "Well, I'm current in my virus definitions, so this update is unnecessary for me." Your communications with such a customer will be more effective if you anticipate and address that issue. Consider, therefore, a sentence such as, "This Windows update is necessary even if your virus definitions are current."

10. Keep the customer informed

The area where I live, southeastern Pennsylvania, has a large agricultural presence, in particular involving the production of mushrooms. While they are growing, mushrooms are kept in a dark building and are covered with fertilizer.

Your customers will become upset if you treat them the same way. Keep them informed of developments involving them, particularly with regard to technical problems and outages. In particular, keep them apprised even if nothing is going on. For example, let them know you've contacted the vendor but still haven't heard anything back. No news is still news.

If a customer leaves you a request via voicemail or e-mail, let the customer know you received it, even if you are still in the process of handling it. Doing so gives the customer one less matter to worry about.

When a problem is resolved, let the customer know that, too. Nothing is more frustrating to customers than finding out that they could have been working sooner if they had only known. ❖

10 things you should know about working with an offshore team

By Jerry Loza

As companies try to get the most for their information technology dollar, it seems the conversation inevitably leads to the merits of offshore services. It should be no surprise that there are both advantages and disadvantages to using offshore resources for some, or all, of your IT needs. A brief treatment of the factors involved is not likely to influence whether your company outsources to offshore. But acquainting yourself with the various aspects of offshoring will prepare you for what to expect and help you be more effective in your interactions.

"Offshore" is broad in its implications and can cover many cultures and types of relationships. For simplicity, we will consider the situation of a United States-based company offshoring the programming portion of its project to India.

1. The time difference is good

When you are sleeping, work can continue on the other side of the world. At 9:30 PM Eastern Standard Time on the east coast, your colleagues in Bangalore will be arriving to work at 8:00 AM their time. The design problems you have been mulling over during your workday can be bundled up and shipped off for the offshore team. They can continue their development work, while you get a good night's sleep.

For this to work, of course, there must be good coordination and processes. In fact, it will require more coordination than you might realize. However, if you come up with a process that works effectively, you can leverage the time differential for an operation that runs day and night.

2. The time difference is not good

Different parts of a project's life cycle require different levels of communication. With a relatively narrow window during which the workdays of India and the United States overlap, it can be difficult getting the answers you need when you need them. When that happens, a question that can be answered in five minutes by a colleague in the next cubicle might take until the next day. In fact, a one-day turnaround might be optimistic. If your problem or question is not understood, the back and forth can result in days passing before a problem is resolved — a disastrous situation for a project-critical issue.

Fortunately, the problems associated with an offshore time difference can be mitigated to some degree. The work schedules off shore can be shifted later, and/or the work in the States can be pushed up to increase the time for interactions. A 7:00 AM meeting may not be the way you would like to start the day, but your offshore counterpart may not be especially thrilled about staying late, either. The good news is that you really need to do this only when the need arises and not throughout the entire project.

3. Cultural communication differences can create confusion

This probably is not true of everyone in India, but there does seem to be a tendency to avoid giving negative responses. And if you're dealing with junior individuals, they may not speak up on an issue without permission by a supervisor.

"Yes" is a word you are likely hear quite a bit. If you ask your offshore counterparts if they can have a task completed by the end of business tomorrow, and they say "Yes," you may not have received the response you think. While you think you heard "Yes, it will be done," they are more likely saying "Yes, I understand" or "Yes, I'll do my best." Understand this subtly of communication, and things will go much smoother.

4. They have a life too

I have, unfortunately, witnessed an attitude in the United States in which offshore resources were viewed as slave labor. I don't think that those situations were the result of conscious thought or mal-intent. But being out of sight and somewhat out of mind, offshore can start to become a faceless dumping ground for as much as you can throw at them. That is just plain wrong on many levels.

Your colleagues offshore have families, lives, and bills to pay just like you do. Treat them like you would a team member in the next room. Do this, and you will have the foundation for a healthy, effective team. Besides being the right thing to do, it makes for better collaboration and is simply good business.

5. High turnover is a problem

The India IT job market is plagued with high turnover. I have seen figures ranging from 20 to 50 percent. You need to be aware that the person you are working with today may not be the person you will be working with tomorrow. Further, your current team may not have been there very long.

This represents a huge potential for knowledge loss and an overall low level of expertise with your system. Be prepared for it and manage it as best you can.

6. Different life/business experiences mean different assumptions

You know how your users respond to situations and what their work environment is like. Your offshore team probably does not. Whether it's how an input screen is designed or the way your users utilize reports, you will probably need to be painfully specific in your design because your assumptions will likely be different from those made offshore. Those workers are not inexperienced; they have just had different experiences.

7. Things may get lost in translation

A number of offshore team members I have worked with spoke better English than some of their American counterparts. That said, you will probably find that there are differences in the more British English they are using in India as compared to American English. Even everyday expressions may come off sounding very strange when heard by a foreign ear.

This does not mean you have to worry about what you say or choose your words extra carefully. What it does mean is that you should not assume everything you are saying is being immediately understood. Just as you might wait until after a conversation to look up a word you didn't understand, your offshore team may be doing the same with parts of your speech.

8. Good in one thing does not mean good in all

Like any other IT shop — or any other business, for that matter — skills and expertise may be specialized. Just because the offshore group is well known for its programming prowess doesn't mean that it's capable of creating a test script you would dare show your quality control person. First, make an honest assessment of the team's capabilities. Then capitalize on the strengths and compensate for the weaknesses, just like you would for anyone else.

9. Remote communication is the norm

When you're on opposite sides of the globe, face-to-face meetings just are not going to happen, at least not very often. This is something you will just need to get used to. Sure, you have been on conference calls and have had your share of meetings via e-mail, but when working with offshore, be prepared for nearly all of your contact being done by remote means.

I would be remiss if I did not share that the most successful offshore projects I have been on have had some degree of onshore presence. Even having a single person who can be your point of contact can make all the difference in the world. Frankly, I believe there is no substitute for some face-to-face contact. With so much of our understanding coming from nonverbal communication, any effort spent to have some face-to-face contact will not be wasted.

10. Hidden costs are likely

In spite of the distances between the parties, communication still must happen. That will mean telephone calls, telephone conferences, Web-based meetings, and possibly video conferences. All of this is an additional cost to your project. And if you follow the advice above by having someone onsite as a point of contact, the costs will skyrocket. Make sure everyone understands that these costs will be there. Note, however, that these costs are small compared to the costs to the project of not being well connected.

Summary

Every project has its challenges. Having part of your team on the other side of the world only amplifies them. But if you heed the factors described above, there is no reason the experience can't be an interesting and positive one for everyone on the project. ❖

End Users

The 10 most important things to teach your users

By Becky Roberts

To be effective in their jobs and contribute value to the business, users need at least a minimal grasp of information technology. Exactly what they need to know varies greatly from environment to environment. But in most organizations, they should at least be able to understand and follow certain computing best practices, including how to effectively report problems and how to safeguard their data. Frequently, it becomes the responsibility of the support tech to impart this information. Here are the things I believe are most important for support techs to teach their users. Feel free to challenge these suggestions and add some of your own.

1. Rebooting before calling for help

Although telling users to reboot when they experience a problem may seem like a cop out or delaying tactic, it's an uncomfortable fact that rebooting apparently fixes a multitude of both real and perceived errors. Even if a reboot does not solve the problem, the mere fact that the problem recurs after a reboot can give the canny support tech significant diagnostic information. Rebooting is not a panacea for all computer ailments, and it's even contraindicated in some cases, but appropriately and correctly applied it's a useful and simple tool with which to arm your users.

2. Reporting a computer problem

In addition to knowing the correct procedure for reporting computer problems--e.g., e-mailing the help desk--users need to know what information will help expedite the resolution process. Users can easily be trained to effectively report problems if they're provided with a form that gathers the appropriate information, such as any error messages, open applications, what were they doing when the problem occurred, and whether they can reproduce the problem. Consistently asking users these questions will also serve as training and will help prevent them from either giving too little information or from offering their diagnosis of the problem instead of the symptoms.

3. Keeping passwords safe

There is little point in having a password if it's written down in an unsecured location or shared among co-workers. I have seen passwords written on post-it notes attached to monitors, inscribed in permanent ink on the side of computer cases, written on the backs of hands, pinned to notice boards, and even displayed as the text of the Marquee screensaver. Instructing users not to write down or share passwords has little impact, however, if they don't understand why that's risky or if the password policy is unnecessarily onerous for the environment. On the other hand, an intelligently conceived password policy, suited to the current security needs and well communicated to users, will definitely cut down on the incidence of password carelessness.

4. Constructing secure passwords

While educating users about the importance of securing passwords, take advantage of the opportunity to provide instruction in the art of secure password formation. To a certain extent, password construction is dictated by the constraints implemented through the security system, but in most cases these constraints aren't sufficient to prevent users from creating easily deciphered passwords.

What constitutes a secure password will vary depending on the environment, but typically, names of family members, sequencing numbers, and obvious words and phrases should be avoided. Random numerals and a mix of cases, punctuation, and spaces is generally encouraged. Obviously, a balance between security and convenience must be found. If the requirements for complexity are too stringent, users will simply revert to writing down their passwords. For more information on secure password construction, check out the PowerPoint presentation Raise user awareness about password security (http://techrepublic.com.com/5138-1009-5958576.html?tag=search)and the article "Help users create complex passwords that are easy to remember" (http://techrepublic.com.com/5100-1009_11-6028857.html).

5. Practicing safe computing while traveling

Taking a notebook, PDA, or other device on the road requires increased vigilance to prevent unauthorized access. Users need to know how to protect their data while out of the office and they need the appropriate tools to do it. For example, remote access tokens should not be carried in the same case as the computer; access codes, names, and passwords should not be written down; sensitive data should be encrypted and/or stored on removable data storage devices, also carried separately from the computer; computers should never be left unattended; and consoles should be secured when not in use. See "10 things you should do before letting users take their laptops out the door" (http://techrepublic.com.com/5138-10877-5991621.html) and "End user laptop: Lock it down in 10 steps" (http://techrepublic.com.com/5138-1009-5752939.html) for more best practices.

As a footnote, this might also be an opportune time to remind notebook users that they will keep us very happy if they remember to remove all solid objects, usually pens, from their keyboards before slamming down their lids.

6. Preventing loss of data

Users need to know that backups don't happen by magic, and that if they delete a file before it has been backed up, it may not be recoverable. In most environments, individual users are at least partially accountable for regularly backing up their data, regardless of whether it resides in discrete files or within an application. Users need to know what's backed up and when and not simply assume that every file they create or modify, regardless of location, will be backed up.

This is particularly true for users with notebooks, removable drives, and other mobile devices. Making users aware of backup routines may also have the usually desirable side effect of reducing the number of non-work related personal files saved to backed up locations. "10 things you can do to protect your data" (http://techrepublic.com.com/5138-10877-6061953.html) will give your users a good overview of the basic concepts of data security.

7. Observing usage policies

No, it's not okay to hide pornography in Word docs or install Dr. Seuss Reading Games on "your" computer for your five year old to play over the weekend and then remove it before returning to the office on Monday. When it comes to personal use of corporate IT resources, most organizations have some sort of policy, more or less stringently enforced, defining what is and what is not acceptable usage. Generally speaking, such policies are put in place to protect the company from lawsuits and to protect the integrity of the IT infrastructure. To be effective, such policies must be appropriate for the environment, be clearly communicated, and be enforceable with well-defined consequences for violators.

Regardless of the strength or content of the policy, we would like our users to know that it is not acceptable to violate it, especially not in sneaky ways that insult our intelligence. In addition to knowing the policy, users need to know that we have measures in place for detecting attempts at violation. As much as we don't wish to play the role of compliance police, we are forced to do so to protect our network and our jobs. This information security policy includes sections on acceptable usage of company computer resources.

8. Exercising care in sending e-mails

How many times have you been asked to recall an e-mail accidentally sent to the wrong person or persons? Over the years I have seen the following messages misdirected: termination notices, pay raise denials, extremely personal medical information about a girlfriend sent to the user's wife, and images of a very questionable nature accidentally sent to the director of human resources. Regardless of an organization's e-mail policy, users need to be aware of this danger and be taught to exercise appropriate caution: Think before pressing Reply To All, double-check addressees before clicking Send, refrain from using the corporate e-mail system for non-business related messages, and in general, regard e-mail messages as postcards instead of letters.

9. Protecting against viruses, phishing, malware, and other nasties

Although it is usually the responsibility of the IT professionals to protect corporate resources, this protection can never be 100 percent foolproof, so we are forced to depend on the vigilance of the user. Users need to be taught to recognize and handle threats and the consequences of not doing so. They need to be provided with specific information on how to identify phishing and how malicious e-mail can appear to be from a legitimate contact. They should be warned not to open e-mails from unknown sources, not to open unidentified attachments, not to enter their corporate e-mail address on Web sites, and not to turn off any protection on their computer. They should be understand the need to stay on top of antivirus updates. Frequent reports of new threats and statistics of how many viruses have been caught within your organization can also help raise their security awareness.

10. Remembering that support techs work most effectively when adequately supplied with chocolate ❖

The 10 worst ways to communicate with end users

By Becky Roberts

You think you're a good communicator: You keep your users informed and you listen to their problems. So why is it that no one appears to read your e-mails or seems capable of following your instructions? Are you surprised to learn that the users have been living with computer issues rather than ask you for help? These are all signs of a breakdown in communication--which we, as support techs, frequently misinterpret as user indifference or even stupidity. Before long, we find ourselves on a downward spiral toward complete communications failure. Even with the best intentions, it's possible to sabotage our own attempts to communicate with the users by inadvertently committing one or more of the following deadly sins of miscommunication.

1. Inappropriate nonverbal communication

Our words may say "Absolutely, yes, of course I don't mind helping you change the toner cartridge," while our facial expressions, tone, and body language simultaneously scream, "You complete and utter gimboid, do you honesty think that I spent four years in school, have an IQ of 167, and earned 53 technical certifications just so I could change your toner cartridge? Would you like me to breathe for you too?"

It's not necessary to be a behavioral psychologist to know that tutting under your breath, rolling your eyes, and suppressing little smirks combined with your apparently kind words, sends a patronizing, insulting message to the user. Instead, if you are frequently asked to perform such seemingly menial tasks as changing toner cartridges, turn it into an opportunity to educate and empower the user.

2. Showing off

Just because we happen to know all the correct technical terms and concepts does not mean we should use them when communicating with users. Providing instructions that are overly technical and contain far more information than users need is not the most effective means of conveying our message. Instead of impressing a user with our superior knowledge, it alienates and belittles them and makes us seem supercilious and pompous. For example, telling users to clear their cache and delete their objects to solve a browser issue may be technically correct. But the chances are, if a user knows how to carry out these instructions, he or she has already done it. Try giving the user click-by-click instructions on how to perform these tasks, perhaps accompanied by a single line of explanation in terms the user can relate to. Aim to impress with your attitude instead of your knowledge.

3. Losing patience

If William Langland had not coined the expression "Patience is a virtue" in 1377, I am firmly convinced that it would have been invented by an enlightened support tech sometime during the latter half of the twentieth century, just as humans were being introduced to computers in the workplace. Even though the computer literacy of the general working population has

steadily improved over the intervening years, there always seems to be at least one user who simply doesn't get it, and whose persistence in demanding help for the same problem stretches our patience to its breaking point. Calling the user a brainless twit and bashing him or her over the head with a gel wrist relief may provide a moment of immense satisfaction, but it's likely to result in a miffed user and an unemployed support tech and should, therefore, be avoided at all costs. A better alternative is to develop techniques for (a) preventing such situations and (b) handling them appropriately when they do occur.

4. Being dismissive

Imagine going to see your doctor because you have a mysterious green knobbly growth in your arm pit and all he does is pat you reassuringly on the back and tells you not to worry but do come back in a month or two if it hasn't gone away. How would this make you feel? What if the doctor didn't even look at the growth? This is precisely how we make the users feel when we fail to engage with their problems, dismissing them with platitudes and vacuous reassurances. Even though we may be 100 percent certain that Bob's computer isn't really taking twice as long to boot up and that Marcie must be imagining that high-pitched whine, telling them not to worry about it and to let you know if the problem doesn't go away achieves absolutely nothing except to make them feel stupid and insignificant.

Whether a computer problem is real or perceived makes little difference to users. All they know is that they have a problem that needs to be resolved. Even merely perceived problems can be fixed with some sensitivity and a little creativity. However insignificant the issue, by engaging in the problem and treating users with respect we increase their confidence in us and open the lines of communication.

5. Failure to inform

This may seem like stereotyping, but in general geeks are not natural communicators, at least not when it comes to communicating with members of our own species. Unfortunately, the ability to meaningfully communicate with fellow human beings is a prerequisite for being effective in our role as support techs. In many organizations, the support tech is the user's prime interface with the IT department. Support techs function as Babel fish, translating between geek and human, and are ultimately responsible for ensuring that users are kept informed and up to date.

Constant communication is a critical part of fulfilling any work order, from acknowledging its receipt all the way through the process to a follow-up phone call to make sure the user is satisfied with the work performed. Often, a user can accept a delay provided he or she knows about it in advance and can plan accordingly.

6. Lack of documentation

Not providing the users with consistent, clear, and easy-to-follow instructions is another way in which we frequently fail to communicate. Various aspects of our jobs require us to write user-consumable documentation, such as instructions for new procedures, explanation of corporate computer-usage polices, and manuals for new employees. Before distributing new documentation, test it out on a few users. Well-written documentation, kept organized and up-to-date, should ultimately save you time, as it provides users with an immediate resource for answering their questions.

7. Lying

What should you do if you're asked to perform a task you find laborious or boring? Or what if you're asked a question to which you don't know the answer? What if the answer to a user's inquiry is something that will make them unhappy or that they don't want to hear? In such circumstances, bending the truth or misrepresenting the facts can be alluring, especially if the lie seems harmless and the chances of being caught are small. Is lying to the user ever justified?

Sometimes it's necessary to simplify the facts to give users an explanation they can comprehend, but this is different from deliberately lying to avoid work or save face. Many years ago, I worked with a senior support tech who was in the habit of blaming Microsoft for everything. When users came to him with a problem he could not immediately resolve, he would tell them it was a Microsoft issue and they just had to live with it. After awhile, users stopped going to him with their problems and he took to bragging about what a great job he was doing, as his users had so few issues. This situation continued until the next IT reorg, when he was assigned to a different group of users who were more computer-savvy and accustomed to being treated with more respect. A few weeks later, the tech was out of work due to the high level of complaints and his declining skills.

In short, when presented with a problem we can't resolve, for whatever reason, it's far better to be direct with users and help them find a resolution by some other means rather than mask our ignorance or unwillingness as an insoluble technical issue.

8. Giving too much information

Honesty may be the best policy, but this does not mean it's appropriate to overburden the users with too much information. A mother of five grown-up boys once told me that in her experience, the average teenager will tune out all but the first three sentences of any lecture... so you want to pick those sentences carefully. It may be unfair to compare users with teenage boys, but the principle still applies: Limit communication to what's absolutely essential and don't expect users to absorb too much information at once.

It's possible to fail to communicate by overcommunicating, in terms of both frequency and detail. If we e-mail everyone in the company every time the slightest imperceptible change is made to the users' environment, many of the users will simply ignore the messages. Before long, work orders to set up inbox rules deleting messages from the IT department will start flowing in to the help desk.

Limit mass e-mail to the users who will actually be perceptibly affected by an upgrade, downtime, or some other change. If the impact is for a limited period of time, such as a lunchtime reboot of the e-mail server, set an expiration date and time on the message. Be careful not to overwhelm users with details or explanations that aren't relevant to them. For example, if the e-mail server needs an unexpected reboot at midday, give the users the time, expected length of outage, what it means for them, and what--if anything--they need to do. Users don't need to be given full explanation of why the reboot is necessary, although a single sentence summarizing the problem may help them appreciate the urgency and is more likely to elicit their cooperation.

9. Not providing training

Training is not restricted to sitting in a classroom for three days learning how to create a PowerPoint presentation. Support tech-provided training can be as simple as a 30-second

demonstration to a single user on how to add a contact to his or her address book or as complex as a multi-day onsite class on advanced report writing in Crystal. Even if providing training is not part of the support tech's formal job description, it's almost impossible to effectively fulfill the job function without training users. Some techs deliberately avoid educating users because they regard knowledgeable users as a threat to the integrity of the network or to their jobs. Although these concerns should not be dismissed as mere paranoia, they aren't valid reasons for failing to improve the computer literacy of users.

10. Failing to listen

Communication is a two-way process. As support techs, we need to actively listen to our users. By definition, our role is to support our users, to enable them to perform their job functions, something we can hope to do only if we have a thorough understanding of their needs. As time allows, listening can be a proactive process, with the support tech spending time with users to learn their routines and to see where technology can be applied to improve productivity or safety.

Opportunities for user feedback can be created through feedback forms, satisfaction surveys, follow-up phone calls, and even brown bag lunches. Although it may not be possible or even desirable from a business standpoint to implement all of the users' requests, without making a concerted effort to align the IT function with the business directive, it's all too easy for the IT department to become wholly self-serving and to perceive the users as little more than an inconvenience. ❖

10 things you should do before letting users take their laptops out the door

By Becky Roberts

Face it. There's probably not much you can tell seasoned road warriors about taking care of your company's laptop equipment. Even if there is, chances are they won't listen. But what about the newbie or occasional traveler—those just starting out or who get on a plane for business reasons only a couple of times a year? These users are still relatively open-minded and malleable, so now's your prime opportunity for planting the seed of responsible mobile computing. Here are 10 measures you can take to help ensure the security, successful usage, and trouble-free operation of laptop equipment at large.

1. Back up all data before that computer leaves the office

It is notoriously difficult to develop an infallible backup strategy for mobile devices that does not involve some degree of cooperation from the user. Consider synching with network folders, training the user in the fine art of burning CDs, or copying to jump drives or other type of removable device. In addition to data, give some consideration to what settings, config files, or ini files it may be useful to preserve—basically anything that could make the process of rebuilding a system a less arduous task. In my experience, users are generally more distressed by the loss of their Favorites than their files.

2. Check that the antivirus solution is current and that definition updates are automated

Make sure users are familiar with the software so that if a virus is detected, they know what, if anything, they should do.

3. Give travelers a pre-trip checklist

Include the things they should do before they leave, items they should take, procedures for making remote connections, and other general advice for traveling with a computer—a hitchhiker's guide to mobile computing. This may sound silly, but if you try to make this guide entertaining, it's far more likely to be both read and remembered.

4. Double-check to make sure travelers have all the necessary components, applications, and data

Most notebooks are modular which, while resulting in a lighter machine, can also result in essential modules being left behind. Does the traveler need a floppy drive or CDR? What about the power supply or even an extra battery?

Give special consideration to users who are borrowing a notebook for their travels. Take the time to ask them what applications they're expecting to use while on the road and personally verify that both the applications and the relevant data are available on the notebook in question.

5. Don't forget about pointing devices

The notebook's built-in mousing device—you know, that nasty little knobby thing in the middle of the keyboard or the slide-y square that refuses to respond to overly dry or cold fingertips—may be acceptable for checking the occasional e-mail. But if the user is expecting to spend hours sitting on a plane constructing spreadsheets (or playing Diablo), other options should probably be considered.

6. Address power needs

Where is the person going? If he or she is leaving the country, you may want to consider a power plug adapter. There are nine kinds in use around the world. Also, find out whether the destination country uses 110v AC; if not, you may need to supply a step-down transformer.

7. Ensure connectivity

When was the last time the modem was used? Despite the recent proliferation of Wi-Fi hotspots, it's still sometimes necessary to do things the old-fashioned way, especially if the user is heading for a less-connected country. Make sure that the modem works and that the user is familiar with its operation. If he or she is leaving the country, you may need to supply a phone jack adapter. An astonishing 39 varieties are in use around our planet.

8. Facilitate remote access, including e-mail

Don't assume users know how to use e-mail on the road. Give them a clear set of instructions explaining how they can access and manage their e-mail and encourage them to practice from home before leaving so any issues can be resolved before becoming critical.

If your company allows access to systems in addition to e-mail, users will most likely benefit from both instruction and practice in making a remote connection. Consider setting up time for a short tutorial where you can walk users through the process and make them aware of the different scenarios they may encounter in airports, hotels, client sites, etc. As with e-mail access, encourage them to practice from home before leaving. Make sure that they have all the IDs, passwords, and devices they'll need to make a secure connection.

9. Provide security

You may want to offer users a locking device for the computer. Various types are on the market that attach the computer to a desk leg or something similar. Ideally, the computer shouldn't be left unattended, and realistically no locking device is going to protect against the determined thief. But this may be something worth considerin, if only to raise the user's awareness of the potential risk.

If the computer is stolen, you'll want to be confident that any sensitive data is protected from unauthorized eyes. If this is an issue, consider installing encryption software and instructing the employee in its use.

10. Supply users with recovery tools

You may want to provide users with an emergency repair disk, boot and setup disks for OS, and crucial apps. If the unthinkable happens—even if users don't know how to rebuild their system—you may be able to help them over the phone or perhaps they can get assistance at their destination.

10 questions to ask when a technology solution is deployed by non-IT staff

Every technology infrastructure is likely to have at least one system that's provided by a business solutions vendor that doesn't have an IT focus. Automated serialization, specialized engineering solutions, precision calibration machines, specialty applications--the list goes on and on. Of course, this solution is on a computer, maybe on your network, and it helps your business execute its tasks. But the technician who provided the solution isn't an IT person, which can make your job a little tricky. Asking the following questions will help ensure that you can (with minimal effort) address your needs and concerns about the technology being implemented.

1. How do you back this thing up?

Ask this one first. If the solution runs on a computer, you need an answer to this question. Make the representative train you on the backup procedure AND the restore procedure. It goes without saying that you must have a strong backup and restore procedure, but when someone else implements the solution, you may not have much say in how (or if) IT standards are applied to the solution.

Also push for a cold secondary system, if that works in the plan for the solution being implemented. Having a parallel environment (though possibly with stale data) is a plus in this situation, because there's a test environment and a complete spare parts inventory, which will extend the life of the solution.

2. What are my support channels?

Get phone numbers, e-mail addresses, and Web site links. Label the system to clearly identify the chain of support. For example, you might apply a label that says, "Call Jim in Engineering first, then XYZ vendor support at 800-555-1212."

Be sure to document all subscriber numbers, customer numbers, or relevant identifiers for your account and organization. Also nail down the terms of the support--a one-year warranty, unlimited support forever, etc. Most important, get a clear definition of what the deliverables are for the support you'll be receiving. Is there an onsite technician or telephone-only support? Are there response-time guarantees?

3. Who owns this equipment?

When solutions are delivered, Engineering, Manufacturing, Distribution Warehousing, or other groups may not coordinate with IT to clarify important issues of ownership. For instance, your organization may be purchasing a laser plasma cutter, but it has a computer to input the calibration codes--and Engineering doesn't coordinate this entrant device with IT.

Clearly identifying who owns the equipment does the following:

- Establishes the support sequence of events
- Answers any questions about what happens to the equipment should it be decommissioned
- Sets the priority on whose needs are to be met

4. Who owns this solution?

Within your organization, determine who is the owner of this solution and the backup individual(s). Ensure that these individuals can support the system for the most part on the first level. Make a concerted effort to define IT's role in the solution (if any).

5. What communication does this system need?

Does this system need TCP/IP network connectivity, a modem, special serial connections? If so, outline what the system talks to and how it provides its results. If possible, implement an "island" network that's not uplinked to any other segment on your network. This will reduce the risk of viral infection.

If there's a special connection--such as the feed to that laser plasma cutter--make sure there's a label on each end describing its role. Also make sure that the operators and functional area administrators are aware of this connection.

6. Are any spare parts provided?

With specialty solutions, there's usually a piece of equipment that allows the system to communicate to noncomputing devices when Ethernet isn't used. Identify the custom components that are required for the system to operate and then determine the requisite inventory of spare parts and how to get more if they're needed.

7. What are my options for compliance?

If this system sits on your network to communicate with another system for performance data, automated interaction with other systems, or other communication reasons, you should be concerned about service pack, hotfix, and antivirus compliance. Many vendors of specialty systems provide these services as an option. One service, called Managed Care Light, is a screening service available to custom solutions. Updates are screened and then local IT is empowered to deploy the available, relevant, and approved updates for special systems.

8. Who is our account/sales representative?

A vendor contact is important to your IT department because it can help you manage direction. For the next version of this solution, or when it's time to upgrade, you can consider working with this individual to explore alternative options, should they be available. For example, you don't like the PC in the warehouse that talks to the laser plasma cutter over TCP/IP--why not host it as a virtual machine? The account/sales rep can get you in touch with the right people to explore this possibility.

9. Can the vendor restore the system in its entirety?

It's important to ensure that the vendor can totally restore this system in the event of fire, flood, theft, etc. Consider using imaging tools like Symantec Ghost or LiveState to make sure that you have a full restoration of the system.

10. What is the decommission date/modernization/ replacement timeframe?

This may seem insignificant at system inception, but how long will it be here? How long does this equipment last? These are important questions, and they should not go unanswered. For example, the laser plasma cutter is on a desktop-class computer. A good estimate is to put the life at three years. If this is a mission-critical solution, two and a half years would be more realistic. (And you might want to ask follow-up questions about why it's on desktop-class equipment.) Know what the modernization paths are, if today were the decision point, so that capital funding can be made available if necessary and so that this system won't slip into the forgotten realm. ❖

10 Internet threats your users should ignore

We're bombarded on an almost daily basis with news of new threats to our computer systems. And installing a good antivirus program and keeping it up to date isn't enough; other forms of attack--from spyware that infects individual computers to denial of service attacks that bring down whole networks--are on the rise, too.

But along with all the reports of real threats, the Internet spawns numerous hoaxes: messages that warn of threats that aren't real. The originators of these messages are sometimes just trying to be funny, but other times they instruct users to do things to protect against the fake threat that really will damage their data or render their computer unusable. Most people who pass on the hoaxes have good intentions, but forwarding copies of virus and attack warnings that haven't been confirmed can do more harm than good. Of course, a number of hoax messages out there promise all sorts of good things. Alas, when they sound too good to be true, they probably are.

Share this list with your users to help raise their awareness of the scams they may encounter. They'll be less likely to fall for a hoax and tie up your resources, and they may think twice before hitting that Forward button.

1. Good Times: The mother of all virus hoaxes

This virus warning, in various forms, has been making its way around the Internet since at least the mid-1990s. It supposed originated on America Online, and the warnings claimed that it was far more dangerous than other well-known (and real) viruses of that time, such as Michelangelo and Stoned. Some of the warning messages claimed only that Good Times would "erase" your hard disk. Others really went overboard, claiming that it would physically destroy the disk so it could never used again and could even damage your computer's processor.

A virus can indeed cause all the files on your disk to be deleted or even destroy the partition information on a disk (a good example of this was the CIH virus). Viruses can also overwrite the flash BIOS on a computer, rendering it unusable. However, a virus can damage only software; it can't physically damage a computer's hardware.

2. The FCC says...

Hoax warnings often give themselves away by trying too hard. They'll invoke the Federal Communications Commission (FCC) or some other government agency to make their warning sound credible. Others will make the warnings appear to come from Microsoft, Symantec, or some other large software company or include quotes from supposed "computer experts." Still others claim that the virus warning was reported on CBS News or by the New York Times or some other reputable media outlet. (Sometimes this is even true; news outlets have occasionally been fooled into repeating hoax warnings.) Many hoaxes also make the claim "checked out by Snopes" (a popular Internet site for verifying the status of urban legends and hoaxes) even when Snopes itself lists them as a hoax.

3. Exploding the myth about exploding systems

Another clue that a warning is a hoax is that the claims of the virus's destructiveness are just too incredible. For example, the Death Ray Virus warning is still seen occasionally; it claims that a virus called Death Ray causes home computers to "explode in a hellish blast of glass fragments and flames" and that some specified number of people have already been injured and millions risk their lives every day when they sit down at their computers. The virus is also described as not containing the usual markers that enable it to be identified. And rather than explain exactly how the virus causes this explosion, the hoax says only that "it's an extremely complicated process."

4. Beware the dreaded nth complexity infinite loop

Hoaxes also use technical-sounding jargon that is in fact meaningless. For instance, one variant of the Good Times hoax claimed that it destroyed the computer's processor by setting it to "an nth complexity infinite loop." Sounds impressive--and scary--except that there's no such thing. Hoax warnings count on the fact that most of their recipients are not tech experts and won't know the difference.

5. Not-so-sweet cookies

Cookies are small text files that some Web sites place on your hard disk, containing information such as user IDs, shopping cart information, and configuration preferences, so that when you visit the site again it "recognizes" you. Many hoax warnings have appeared claiming that a particular site or Internet service puts a cookie on your hard disk that will allow anyone to read "any of the information on your drive." Hackers may be able to access and read the files on your system, but they don't do it through cookies. Cookies are created by the Web site; they contain only information you've entered or that concerns your activities on the site (or in some cases, across multiple Web sites). Besides, a cookie that contained all the information on your disk would be an incredibly large file. Cookies do pose a privacy issue, but they don't disseminate viruses or allow access to your entire hard disk.

6. A taxing dilemma

As April 15th approaches each year, we see a variation of a hoax that warns you not to send your tax returns electronically because there is an attacker who is intercepting all tax return files and "changing the current account indicated by the victim to the virus author's account." This will supposedly cause your refund check to go to the virus writer. According to the IRS Web site, more than 68 million Americans filed their tax returns electronically in 2005.There is no evidence of any tax returns or refunds being intercepted via the Internet as described by the message.

7. Don't delete that "virus"

A popular ploy of more malicious virus hoaxers is a message describing a dangerous virus and telling you to search your hard disk for certain files and then delete them to get rid of the virus. The catch is that if you delete the files they tell you to delete, you're actually deleting important system or application files and you'll cause your system or some software functions to become unusable or unstable. A relatively harmless example of this is the hoax message that warns Hotmail users that a virus is being spread by MSN Messenger and is not detectable by McAfee

or Norton. It includes instructions to delete the file jdbgmgr.exe. In fact, this is a file used by Microsoft developers (the Microsoft Debugger for Java).

Other hoax messages have instructed recipients to delete essential Windows files, rendering their systems unbootable. Never follow virus removal instructions contained in e-mail messages. If a virus is real and can't be removed by antivirus software, the major AV vendor Web sites will contain instructions for manually removing it.

8. No free money

Sci-fi writer Robert A. Heinlein coined the acronym TANSTAAFL (pronounced "tan-stawful"), which stands for "There Ain't No Such Thing As A Free Lunch." Keep it in mind when you get one of the hundreds of hoax messages boasting of giveaways. One of the most famous ones claims that if you forward the message to other people, Bill Gates, Disney, or some other famous person or company will somehow know how many times you forwarded it and send you money for doing so. Even if some generous soul actually wanted to do this, there is no way they would be able to track your mail and know how many times you forwarded the message.

Variations on this scam include claims that Miller Brewing is giving away free beer, that Abercrombie & Fitch is giving away free clothing, that Coca-Cola is giving away cases of coke, that Dell is giving away free computers, that Nokia is giving away free phones, and so on. In each case, to get your free prize you have to forward the message to a specified number of people (often as high as 25,000).

9. Playing on your sympathy

Who can resist a request for help--especially when the person who needs help is a little kid? The same "dying child" scams have been floating around the Internet for years, but people still fall for them. They usually describe someone who has a fatal disease, has been the victim of a natural disaster or a terrible accident, or is otherwise in dire straits. Some of these scams ask you to send money; others ask you to send cards or e-mail messages. One variation claims to be from a child who is doing a school project to collect e-mail from as many states and countries as possible. Some, like the "free money" scams, ask you to forward the message to as many people as possible, claiming that some organization, such as the American Cancer Society or Microsoft, will donate money for each time the message is forwarded.

Some of these may start out as genuine situations, but they keep getting forwarded long after the person has died or the problem has been resolved.

10. State of fear

A particularly obnoxious type of scam message warns you of some sort of physical danger that doesn't exist. These are often based on urban legends, such as the one that warns of people being abducted from bars and waking up the next morning with their kidneys missing, or the one that warns of a series of cases where victims heard a baby crying outside their door and opened it up, only to be attacked by a serial killer. These types of stories have been around since long before the Internet, but e-mail has given them new life.

A recent version claims that on a certain day, members of some street gang will have an initiation ritual in which prospective members must drive around at night with their headlights off and kill the first driver who flashes his/her lights to let them know.

These messages usually quote “police officials” or “FBI spokespersons” to lend credence to their claims.

Today’s hoax may be tomorrow’s reality

It would be irresponsible not to emphasize that virus writers, hackers, and attackers are coming up with something new literally every day. Some of the warnings that were hoaxes a few years ago have blossomed into real threats today. For instance, in the late 90s, there were messages going around the Net warning that you could get a virus on your mobile phone. At the time, there were no viruses that infected mobile phones. But as phone technology has gotten more sophisticated and modern mobile phones run complex operating systems such as Windows Mobile and Symbian, they have become vulnerable to viruses. Another popular virus hoax in the early days of the Internet claimed you could infect your computer with a virus by simply reading an e-mail message. At that time, e-mail was plain text and you had to open an attachment to risk virus infection; with today’s HTML messages, it is indeed possible for code embedded in the HTML to infect your computer.

It’s even possible that some criminal may hear of some of the fear-mongering hoaxes and set out to commit copycat crimes. With your computer--and in the rest of your life--you should strive to strike a balance between cynicism and naivety, exercising caution but not believing everything you hear or read.

You can check out virus warnings you suspect of being hoaxes on the hoax pages maintained by Symantec, McAfee, and other AV vendors:

- http://www.symantec.com/avcenter/hoax.html
- http://vil.mcafee.com/hoax.asp

For non-virus messages, check with Snopes or Scambusters:

- http://www.snopes.com
- http://www.scambusters.org ❖

10 user complaints about IT support

The issue of complaints and their resolution is a perennially hot topic in the virtual world of TechRepublic, with views expressed about the peeves of an IT manager and a support tech and complaints about CIOs. But nowhere in all these discussions have the most important people in our universe--our users--been given a voice.

In an attempt to redress this imbalance and put our own complaints in perspective, I took the liberty of asking my users to provide me with their complaints about us, the IT professionals. So here, in no particular order, are my users' grievances, together with a few thoughts about how they might be addressed and/or how they could have been avoided.

1. Applications and hardware that don't work

Several users raised this issue, expressing frustration at features of their applications they knew to be available but that didn't appear to work. Upon investigation of a few specific complaints, it became apparent that although the issues were genuine, the cause of the problems was being misrepresented. In most cases, the apparent application or hardware failure was actually due to lack of knowledge on behalf of the user.

This is not to say that the complaints weren't justifiable--quite the contrary, as my department had been guilty of giving the users new applications and peripherals without providing them with the knowledge to use them. It was interesting that this issue came up most frequently in reference to digital cameras and scanners, raising the further question of whose responsibility it is to provide training for such devices. As more and more devices become available, the issue of who in the company should be responsible for managing the required training needs to be addressed to avoid both frustrated users and overburdened IT departments.

2. Inconsistency of WiFi configurations

With the exception of a handful of the more computer literate users, this is a common complaint among the road warriors. We strive to make the process of establishing a remote connection with the corporate network as straightforward as the necessary security measures will permit, but our users still routinely encounter WiFi configurations we've neglected to prepare them for. Many late nights are spent talking to the techs responsible for a hotel's installation, persuading them to add our VPN software to their permitted list or make other modifications to their configuration. Although we rarely encounter resistance, this is a time-consuming and frustrating process for both us and the user.

3. Slow computer/network

Dealing with this complaint is an occupational hazard. Every place I've worked, users have constantly complained about how long it takes their computer to boot, load a page, open Word, copy a file, etc. I'm not sure that such complaints can ever be completely eliminated, but a few steps can help reduce them. For instance, we can ensure that users who frequently interact and/or perform the same job function have identical, or very similar, computers. This will prevent direct comparisons: "Fred's computer runs the same report five seconds faster than

mine!" Computer performance complaints occur so frequently, it's tempting to dismiss them as unimportant. I would advocate a different approach. Sometimes, simply showing users that you take them seriously and acknowledge that their computer's performance is less than desirable will cut down on complaints, even if nothing is done to actually improve the situation.

Of course, this is not to say that every complaint should be dismissed as the user's perception, particularly if the user reports a sudden slowdown or a slowdown following a specific event. Performing the usual procedures to check for spyware, adware, viruses, and other potential issues not only lets users know that you are taking them seriously--it might unearth a real problem. We had one user who absolutely refused to reboot his computer. Months would go by without a reboot, while we would watch in fascination as he struggled with steadily degrading system. In the end, it took a power outage to cure him of his phobia.

4. Frequently required password changes

Just when everyone has finally adapted to their new passwords, the dreaded message pops up announcing the impending password change. For several days, we reset passwords and remove the ubiquitous post-it notes that start sprouting from monitors: "No, I'm sorry, it's against company policy to write your password down. No, sorry again, I'm afraid it really does require a numeral or a nonalphabetic character, and yes, it really does have to be that long."

Having to remember a whole herd of passwords myself, I can genuinely sympathize with the users' distress over this issue and recognize it to be a real problem. Even when a user can be made to understand the importance of the policy, it doesn't help them conjure up and remember new, sufficiently complex, nonrepeating passwords every 90 days. The more we try to secure our environment, the less convenient it is to use. Apart from sympathizing with users and listening while they tell me just how much I'm increasing the stress in their lives, I really can't think of an appropriate solution to this very real problem.

5. Not being administrators of their machines

A primary goal of almost any IT department is to maximize the availability of all computer systems, including personal computers. Unfortunately, whether it's through inadvertently changing settings or deliberately installing unauthorized applications, the users themselves can present a major obstacle to the attainment of this goal. For this reason, it makes perfect sense to give users the minimum level of privilege necessary to perform their job function on their personal computers. For obvious reasons, this approach is not generally well-received--Big Brother is at it again.

Although educating the users can go a long way toward increasing their acceptance of such restrictions, perhaps a more creative approach is required. What if users, through attending training, could earn the right for increased privilege? Perhaps they should start out as an administrator of their computer and lose that privilege only if they violate clearly stated corporate policies?

6. Spam filtering

This complaint is another one that falls into the Big Brother category. The degree to which my company watches and controls the users' interactions with their computers has dramatically increased in recent years. Until approximately two years ago, we had no company policies governing the use of the corporate e-mail system. Users became accustomed to using their

SMTP addresses for personal contacts, Boy Scout mailing lists, Shakespeare Sonnet of the Day, exchanging movies and pictures with friends, and so on. Before long, spam accounted for more than 90 percent of inbound mail, mailboxes grew to unmanageable sizes, and files you wouldn't want your grandmother to see were being backed up to tape and archived. Something clearly had to be done.

We purchased and implemented an antispam solution and established a corporate policy banning the storage of personal mail. Mail identified as spam was held for seven days and then eradicated. Users were told to send an e-mail to the help desk if they did not receive mail they were expecting, so that the sender's address could be white-listed. The users were not happy, to say the least. The complaints and general discontent were completely understandable, as the users' e-mail environment had been radically restricted without obtaining their buy-in. Although it wasn't inappropriate for the IT department to recommend spam filtering, management should have been given the opportunity to first understand the problem and--more important--participate in the solution. Now we're left dealing with discontented users who feel as though they're being punished by having a privilege revoked and are being watched by the prying eyes of the IT department.

7. Restricted Web access

This is probably the most frequently heard complaint. Cries of "Why can't I order from Victoria's Secret?"; "Why should you get to decide what's 'tasteless'?"; "A site I order parts from has suddenly been restricted"; and "Why can I use e-bay for only 30 minutes a day? How do you know that I'm not using it for business purposes?" echo throughout the building.

This situation parallels the problem with spam filtering. Both e-mail and Web access were introduced at the same time with no thought given to how they should be used. After a few years of completely unrestricted use, the IT department made the decision to implement certain restrictions because of the understandable burden this freedom placed on IT resources. Once again, the IT department was compelled to act unilaterally, and as a result, now has to deal with an unhappy, confused, and threatened user population. Although I don't question the need to exercise some controls over Internet access, the IT department should be in the role of an advisor, implementer, and administrator and not the sole policy maker and enforcer.

8. Not being allowed to use company computers for personal use

This is a common complaint of the notebook users, especially those who spend days at a time living out of hotels and sitting in airports and on planes. We do not have a clearly defined policy on this issue, but in general, although we don't mind the computers being used to watch movies while on the road or to create the occasional personal document, we do have a complete ban on installing unauthorized applications, storing personal documents, or attaching personal devices. This is probably our most abused policy. Even those users who don't abuse it aren't hesitant to express their discontent, frequently citing the example of other companies that allow their employees to install games or any other applications they desire.

I understand the users' point of view, but having spent hours rebuilding systems due to user abuse, I would be reluctant to completely relax the policy. Perhaps instead of declaring war on the users, it might be possible to reach a compromise by providing certain games, allocating an amount of disk space for personal use, and supplying a list of approved devices that may be

attached. But I don't know whether this approach would resolve the issue or merely open the door for more abuse.

9. Unresponsiveness of the IT department

I can run reports until I'm blue in the face to prove to users that 99 percent of their problems are resolved within an hour of being reported, but it is always the 1 percent they remember. What accounts for this difference in perception? To a certain extent it's just human nature. The time the doctor kept us waiting for half a day will always figure more dominantly in our memory than the 27 times we were seen on or before our appointed time.

This tendency probably can't be changed, but we can do a few things to improve matters: (1) Communicate with users, acknowledging that their problem has been received and immediately issuing an ETA; (2) Ask users to sign off on a completed work order; (3) Send users a follow-up e-mail to solicit their feedback after a work order has been completed. Constantly communicating with users and keeping them informed lets them know their problem is important to us, so they'll have less reason to accuse us of being unresponsive.

10. Arrogance of the IT department

We don't have to directly tell a user he or she is stupid to be guilty of this. Less overt signs, such as rolling our eyes, tutting under our breath, or a taking on a certain look still tells the user that we think he or she is stupid. This can also be a problem with the wording of our memos. If we send out memos written in Geeklish instead of the user's native tongue, it alienates them and makes them feel ignorant. The memo becomes useless because nothing meaningful is communicated.

We do this in more subtle ways, too, such as impatiently fixing a simple computer problem instead of teaching users how to do it for themselves. In effect, we're saying, "You are too stupid to perform this simple task, which takes me about 20 seconds." For a look at these and other miscommunication problems, see "The 10 worst ways to communicate with end users" (http://techrepublic.com.com/5100-10877_11-6059399.html). ❖

10 dumb things users do that can mess up their computers

By Debra Littlejohn Shinder, MCSE, MVP

We all do dumb things now and then, and computer users are no exception. Inadvertently pressing the wrong key combination or innocently clicking OK in the wrong dialog box can change important settings that alter a computer's behavior or even crash the system.

Nervous newbies are often fearful that one wrong move might break the computer forever. Luckily, short of taking a sledge hammer to the box, the consequences aren't usually quite that dire. Even so, users often do create problems for their computers and for your network. Here's a description of common missteps you can share with your users to help them steer clear of preventable problems.

1. Plug into the wall without surge protection

Here's one that actually can physically destroy your computer equipment, as well as the data it holds. You may think your systems are in danger only during an electrical storm, but anything that interrupts the electrical circuit and then starts the current back again can fry your components. Something as simple as someone turning on an appliance that's plugged into the same circuit (especially a high voltage one such as a hair dryer, electric heater, or air conditioner) can cause a surge, or a surge may be caused by a tree limb touching a power line. If you have a power outage, you may experience a surge when the electricity comes back on.

You can protect your systems against damage from power surges by always using a surge protector, but it's important to be aware that most cheap surge protectors will survive only a single surge and need to be replaced afterward. An Uninterruptible Power Supply (UPS) is better than a surge protector; it has a battery that keeps power flowing smoothly even when there's an outage, to give you time to gracefully shut down.

2. Surf the Internet without a firewall

Many home users plug their computers right into their spiffy new cable or DSL modems and hop onto the Internet without realizing that they're putting themselves at risk from viruses and attackers. Every Internet-connected computer should be protected by a firewall; this can be a firewall built into the broadband modem or router, a separate firewall appliance that sits between the modem/router and the computer, a server at the network's edge running firewall software, or personal firewall software installed on the computer (such as ICF/Windows Firewall built into Windows XP or a third-party firewall program like Kerio or ZoneAlarm).

One advantage of personal firewalls on laptop computers is that they're still with you when you take the computer on the road and plug into a hotel's DSL or cable port or connect to a wireless hotspot. Just having a firewall isn't enough, though. You must also be sure it's turned on and configured properly to protect you.

3. Neglect to run or update antivirus and anti-spyware programs

Let's face it: Antivirus programs can be a royal pain. They're always blocking some application you want to use, you often have to disable them to install new software, and they have to be updated on a regular basis to do any good. Seems like the subscription is always expiring and prompting you to renew it--for a fee, in many cases. But in today's environment, you can't afford to go without virus protection. The malicious programs that AV software detects--viruses, Trojans, worms, etc.--can not only wreak havoc on your system but can spread via your computer to the rest of the network. In extreme cases, they can bring down the whole network.

Spyware is another growing threat; these are programs that install themselves on your computer (usually without your knowledge) and collect information from your system that is then sent back to the spyware program's author or vendor. Antivirus programs often don't address spyware so it's important to run a dedicated spyware detection and removal program.

4. Install and uninstall lots of programs, especially betas

You like to be on the cutting edge, so you often install and try out new software. Beta programs are usually free and give you a chance to sample neat new features before most people. There are also many freeware and shareware programs made available as Internet downloads by their authors. We know you'd never do it, but some users even install pirated software or "warez."

The more programs you install, the more likely you are to run across ones that either include malicious code or that are poorly written and cause your system to behave improperly or crash. The risk is greater with pirated programs.

Even if you install only licensed, final-release commercial software, too many installations and uninstallations can gunk up the registry. Not all uninstall routines completely remove program remnants and at the least, this practice can cause your system to slow down over time.

You should install only the programs that you really need, stick with legitimate software, and try to minimize the number you install and uninstall.

5. Keep disks full and fragmented

One of the results of installing and uninstalling lots of programs (or adding and deleting data of any kind) is that it fragments your disk. Disk fragmentation occurs because of the way information is stored on the disk: On a new, clean disk, when you save a file it's stored in contiguous sections called clusters. If you delete a file that takes up, for example, five clusters, and then save a new file that takes eight clusters, the first five clusters' worth of data will be saved in the empty space left by the deletion and the remaining three will be saved in the next empty spaces. That makes the file fragmented, or divided. To access that file, then, the disk's read heads won't find all the parts of the file together but must go to different locations on the disk to retrieve it all. That makes it slower to access. If the file is part of a program, the program will run more slowly. A badly fragmented disk will slow down to a crawl.

You can use the disk defragmenter built into Windows (Programs | Accessories | System Tools) or a third-party defrag program to rearrange these pieces of files so that they're placed contiguously on the disk.

Another common cause of performance problems and application misbehavior is a disk that's too full. Many programs create temporary files and need extra free space on the disk to operate. You can use Windows XP's Disk Cleanup Tool or a third-party program to find and delete rarely used files, or you can manually delete files to clear space on your disk.

6. Open all attachments

Some folks just can't help themselves: Getting an e-mail message with an attachment is like getting an unexpected gift. You just have to peek inside to see what it is. But just as that package left on your doorstep could contain a bomb, that file attached to your mail message could contain code that will delete your documents or system folder or send viruses to everyone in your address book.

The most blatantly dangerous attachments are executable files--those that run code--with extensions like .exe, .cmd, and many others. Files that aren't themselves executables, such as Word .doc files and Excel .xls files, can contain embedded macros. Scripts (Visual Basic, JavaScript, Flash, etc.) aren't directly executed by the computer but are run by other programs.

It used to be that you could assume plain text (.txt) or graphics (.gif, .jpg, .bmp) files were safe, but not anymore. File extensions can be "spoofed"; attackers take advantage of the Windows default setting that doesn't display common file extensions to name executables something like greatfile.jpg.exe. With the real extension hidden, it shows up as greatfile.jpg. So the recipient thinks it's a graphic, but it's actually a malicious program.

You should open attachments only when they're from trusted sources and only when you're expecting them. Even if the mail with the attachment appears to come from someone you trust, it's possible that someone spoofed their address or that their computer is infected with a virus that sent the attachment to you without their knowledge.

7. Click on everything

Opening attachments isn't the only type of mouse click that can get you in trouble. Clicking on hyperlinks in e-mail messages or on Web pages can take you to Web sites that have embedded ActiveX controls or scripts that can perform all sorts of malicious activities, from wiping your hard disk to installing a backdoor program on your computer that a hacker can use to get in and take control of it.

Clicking the wrong link can also take you to inappropriate Web sites that feature pornography, pirated music or software, or other content that can get you in trouble if you're using a computer on the job or even get you in trouble with the law.

Don't give in to "click mania." Think before you click a link. Links can also be disguised in "phishing" messages or on Web sites to appear to take you to a different site from the ones they really point to. For example, the link might say www.safesite.com, but it actually takes you to www.gotcha.com. You can often find out the real URL by hovering over the link without clicking it.

8. Share and share alike

Your mother taught you that it's nice to share, but when you're on a network, sharing can expose you to dangers. If you have file and printer sharing enabled, others can remotely connect to your computer and access your data. Even if you haven't created any shared folders, by default

Windows systems have hidden "administrative" shares for the root of each drive. A savvy hacker may be able to use these shares to get in. One way to prevent that is to turn off file and printer sharing--if you don't need to make any of the files on your computer accessible across the network. This is especially a good idea if you're connecting your laptop to a public wireless hotspot. If you do need to make shared folders accessible, it's important that they be protected by both share-level permissions and file-level (NTFS) permissions. Also ensure that your account and the local administrative account have strong passwords.

9. Pick the wrong passwords

That brings us to another common mistake that can expose you to attacks: picking the wrong password. Even if you don't belong to a network where the administrator forces you to select strong passwords and change them regularly, you should do so. Don't pick passwords that are easy to guess, such as your birthdate, loved one's name, social security number, etc. Longer passwords are harder to crack, so make your password at least eight characters long; 14 is even better. Popular password-cracking methods use "dictionary" attacks, so don't use words that are in the dictionary. Passwords should contain a combination of alpha, numeric, and symbol characters for best security.

A long string of nonsense characters may create a password that's tough to crack, but if you can't remember it, you'll defeat the purpose by writing it down (where an intruder may be able to find it). Instead, create a phrase you can remember easily and use the first letters of each word, along with logical numbers and symbols. For example: "My cat ate a mouse on the 5th day of June" becomes "Mc8amot5doJ."

10. Ignore the need for a backup and recovery plan

Even if you follow all these suggestions, an attacker may crash your system or your data may be corrupted or get wiped out by a hardware problem. That's why it's essential that you always back up your important information and have a plan for recovering from a system failure.

Most computer users know they should back up, but many never get around to it. Or they make an initial backup but don't update it regularly. Use the built-in Windows backup program (Ntbackup.exe in Windows NT, 2000, and XP) or a third-party backup program and schedule backups to occur automatically. Store backed up data on a network server or removable drive in a location away from the computer itself, in case of a natural disaster like flood, fire, or tornado.

Remember that the data is the most important thing on your computer. The operating system can be reinstalled and so can applications, but it may be difficult or impossible to recreate your original data.

Nonetheless, you can save time and frustration by backing up your system information too. You can create mirror images of your disks using popular "ghost" or "clone" programs. This will allow you to restore the system quickly instead of going through the tedious installation process. ❖

10 classic clueless-user stories

Technology may be evolving at warp speed, but one thing about IT will never change: Techs love to swap stories about the deficiencies of their users. The dumber, the better. That's just the way it works. How else are you going to make it through the week if you don't get to shake your head in disbelief after hearing at least one tale of epic confusion, ignorance, or arrogance?

TechRepublic member zlito started a discussion thread last December asking everyone to share their best user stories for 2005. An incredible number of members seem to have encountered users who created mayhem with magnets, asked for help locating the "any" key, used the CD drive as a cup holder, or took the word "desktop" to mean furniture. Others showcased user thought processes so bizarre and convoluted, you couldn't track them with GPS equipment. I've pulled a handful of classics to share with you here; check out the entire thread for more.

1. Icon by any other name

I had one user, the sweetest lady, who was not very computer literate. After she got her new computer, she said, "Where are my programs?" I told her that I had made shortcuts on her desktop to the programs she used. She said, "When I click on the icon, that's not the right program." When I asked her which program she was referring to, she said, "The third icon down." I asked her which program that was. "Oh, I don't know the name of it. I just know on my old computer, it was the third icon down program."

This one took a while.

--nabess@

2. Money's worth

Client: I don't understand why that accounting software cost so much. It's only been used once.

Consultant: What do you mean, it's only been used once? You use it every day.

Client: No, I don't. You used it once when you put the program on my computer and it's been sitting in the box ever since.

...Time to get my money up front....

--BWestly

3. IRQ sale

One of the contractors in my office ordered a new computer through his company. Unfortunately, he ordered a NIC with an RJ45 connector and we were on a coax network at the time. This was back in the days of Win95. I informed him of the problem and said I had a spare NIC to give him if he would order the correct NIC to replace the one I provided.

He got on the phone with his company and complained about the NIC. This guy thinks he is a computer genius, but really just thinks that bigger, better, and more are always the solution. So he ordered everything he could think of in this computer. Not a single bay was open and most of the slots were filled. Needless to say he had an IRQ problem. His company gave him the number of the computer company and told him to call their sales department. I was happy to see him on

the phone because then he wasn't bothering me while I set up his computer. I overheard him say to the sales department, "My land guy says I'm out of IRQs. Can I buy some more of those?"

--ldbollert@

4. Retention dissension

We currently have a great policy for keeping e-mail to a minimum. It's only kept 90 days, then it's deleted, so if you want to save it past the retention period, you have to put it into a file somehow.

This has been in effect for several years, but amazingly, we had a couple of executives in the legal dept who built up 40,000 messages in their inboxes each, without having any deleted. I finally got the connection when the new "retention policy" was published. The company lawyers who wrote it had a line in the document that excluded themselves from the policy and made sure they could keep everything forever!

--msholtva@

5.

One of our marketing managers complained that he couldn't make any sense of a telephone management spreadsheet I'd sent him because he couldn't see when the calls were made. I explained that each worksheet in the spreadsheet had a name and the name indicated the applicable month. Two minutes later, he arrived at my desk saying that he still couldn't make any sense of the spreadsheet because there were no dates in the worksheets. I opened my copy and showed him that the dates and times were in column A. He then tried to tell me that I had sent him the wrong file because his column A just had "stars" in it! Oh boy—was his face red when I showed him how to expand the column! Makes you think, huh?!

--PhatKatz

6. Must have been the instructions

Back when floppy disks were the only portable medium (good old 5 1/4 and 3.5 inch disks hold not much more than a mere 360K), I was working as a field engineer for a third-party support firm. Remembering two calls always brings a smile to my face.

Caller #1: A guy rings up and says that he has just received his new update on four 3.5 inch floppy disks and he followed the instructions supplied with the update to the letter. He had a problem with the machine reading the second disk, just would not accept it. After a few probing questions, a site visit was required, so I attended the next day and was amazed by what I saw. Yes, the guy obviously had a problem reading the second disk after following the installation instructions:

1. Insert disk 1.

2. Run setup, click OK when asked.

3. When asked, insert disk 2.

What I found was that he had not removed the first disk and had actually managed to get both disks into the floppy drive AT THE SAME TIME. Ooops.

Caller #2:

Me: Hello, Tech Support.

Caller: Hello yes, I received this update from you for my new PC, but it cannot read any of the floppy disks you sent me.

Me: Hmm. Can you please explain what's happening?

Caller: OK, I opened the box and read the instructions telling me to put in disk 1 and run setup.

Me: Good; next?

Caller: So I got the disks out the box and put the first disk into the drive after removing the protective cover.

Me: Protective cover? Do you mean the little white sleeve that the disk comes in?

Caller: No the big black cover that the disk comes in. Is it supposed to be that hard to get the disk out?

At this point I fell off my chair, only just managing to put the caller on hold before breaking out in a laughter fit. When I attended his home, he had not only managed to take out the disk from inside the disk casing, he had actually managed to get it lodged into the drive and then broke the heads of the drive when he tried to get it out.

--darkside@

7. Memorable lessons

Several years ago, our organization finally got a T1 connection, so everyone suddenly had access to the Internet. The firewall with content filtering software was installed, but we were still playing around with the filtering settings.

Lots of our workers were complete newbies, so I had to teach a class on using browsers and e-mail clients. I had a mixed class of men and women, most of them completely new to computers. One of the guys was a very religious man, and everyone there was well aware of that.

At one point, I asked everyone in the class to enter www.yahoo.com in the URL box. After a moment, I heard a gasp, followed by everyone in the room busting out in laughter. Seems my religious friend didn't know how to spell "Yahoo" and had instead entered "Yuho." To his shock, and in front of a room full of witnesses, he was immediately transported to a raunchy porn site! The poor guy will never live it down!

--Quiet_Type

8. If it don't fit...

Back in the early '90s, I was the PC support person for a tire manufacturing plant. Most of the computers had dual floppy drives (5 1/4 & 3.5), but there were some old clunkers (IBM PCs) with only 5 1/4, as well as some state-of-the-art 286 Compaqs with only a 3.5" drive. It is latter that this story is about.

I got a call from a summer engineering student that her disk had gotten stuck in the drive. When I got to the computer I found that she had her work on a 5 1/4" floppy. She was trying to load this work on one of these new Compaqs. The disk was too big, so she decided that, since the material that the floppy is made from is the same, if she were to fold her large floppy

in quarters to make it fit the drive then the drive would still read it. Thing is, this person was otherwise a very smart, logical person. I also had a fairly good rapport with her, so I asked her, "How is the drive suppose to spin the disk if it is folded?" The lights came on, cheeks reddened, and she made me promise not to tell ANYONE what just happened. I didn't in that job, but we both had a good laugh.

--support@

9. Not a speck of dust

I work for an engineering company. I had an engineer (with an engineering Ph.D., no less) call me about a broken mouse. When I arrived at his office, he showed me the problem by moving the mouse smoothly from one side of the mouse pad to the other while pointing out that the cursor moved in jerks. I showed him how to open the mouse, remove the ball and how to clean the crud from the rollers. After this, the mouse worked perfectly. He was quite happy and I left satisfied that this "problem" had been solved to everyone's satisfaction. However, the next morning, I again received a call from Dr. X to say that his mouse was broken. This time when I arrived, he moved the mouse from one side of the pad to the other while the cursor did not move at all. When I turned the mouse over, I found that our engineer had decided that the mouse was poorly designed to allow all of the dust and debris to enter it. To correct this poor design, he had applied scotch tape over the entire underside of the mouse! I have to admit, he would probably never have had a dirty mouse problem again!

--ESchlangen

10. Most important meal of the day

User: "Is sausage bad for printers?"

To this day, I wish I had replied, "Patties or links?"

--Mchappell@ ❖