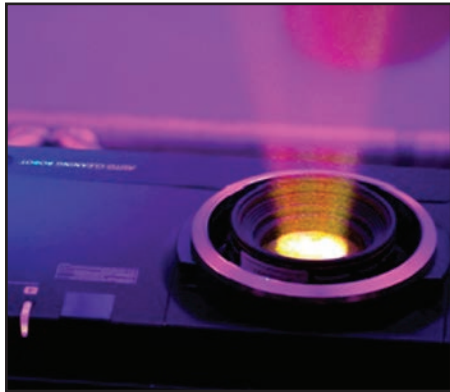


INSIDE



The 10-year mistake

Ingolf deJong says that a good communications and presentation system at your business can make or break you. When planning a new office or remodeling your current one, investing in the wrong equipment to meet your needs can mean living with the mistake for 10 years or longer before the budget allows you to correct the error.

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TECHNOLOGY



After the system has crashed is not the best time to establish IT procedures and policies

There is one commonality among all information technology (IT) systems that stop working: Before they stopped working, they were, at least to some extent, working.

Prioritizing the time and money for creating an updated and comprehensive IT system can often take a back seat to seemingly more pressing issues. Many companies believe a system that is currently running “just fine” means there is no need to allocate funds to improving either the actual system or the policies surrounding its use. Companies are often forced to reevaluate their decisions after having been hit with a virus or various other network and system failures.

So, whether you have been forced to change your IT approach, finally have been given funding or have entered into a new organization that needs some overhaul, you likely are facing a daunting task! While the “to-do” list is long, here are three places to start in order to get the ball rolling and start taking steps towards a healthier IT system.

Reactive or Proactive

You must decide if you want to be proactive or simply reactive when it comes to your IT needs. A reactive system merely addresses issues as they arise whereas a proactive system should involve more monitoring of the current hardware, software and network to protect and run more smoothly. If you choose the reactive approach, it is important to weigh the costs in case anything goes wrong. Many networks contain data that is very sensitive – for example, client or student personal and financial information. A virus, leak

or loss of any of this material may go beyond the organization and may require the response from various legal, insurance and even PR agencies.

If you choose to be proactive, it is important to implement, through in-house means or an internal or external IT professional, policies designed to regularly analyze and monitor systems. This includes everything from monitoring hard drive space to patch management, data backup, layered security,

etc. It is also important to keep a detailed inventory of technology used and owned by a company. This will help assist with any loss issues, as well as monitor the aging of the equipment and better prepare for upcoming upgrade or replacement costs. This can also help provide a triage list of what issues must be dealt with first — helping take steps towards a more optimal IT system.

Policies

Whether the main concern is wasted time or security, many leaders need the ability to review what users are doing while on the network. Ensuring that the proper policies are in place to monitor this information, as well as warning individuals about their guidelines while using a network, are important steps to keep a system running effectively and efficiently. These policies assist in both proactive and reactive situations.

It is important to be proactive with ensuring that employees know how they are to use systems and the repercussions if they violate these policies. Additionally, should a problem arise



BAHAR SHARIFAN

see SHARIFAN pg. F4



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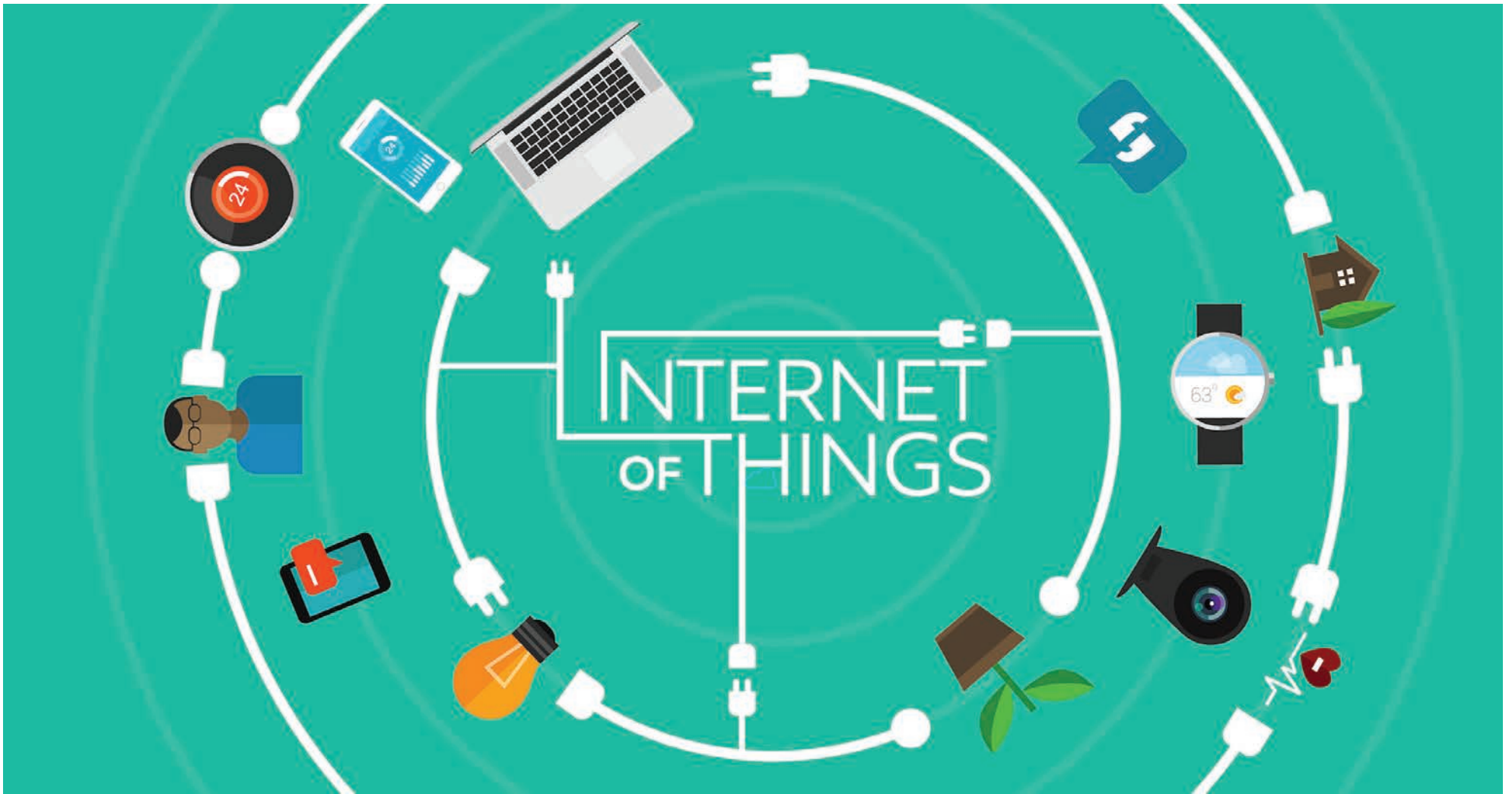
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Just what are those 'things?'

Brice Wallace
The Enterprise

When experts talk about the “Internet of Things,” or IoT, some people may get lost in the “things” part of the phrase.

Mark Sunday, chief information officer and senior vice president at Oracle, recently clued in a Salt Lake City audience, stressing that those things include sensors used in medical care, vehicles throughout the transportation sector, and devices that can be controlled by thoughts.

During a keynote presentation at the Utah Technology Council’s annual members meeting, Sunday said IoT is having a huge impact — and will have more in the future — on people’s ability to control their medical care, cars and homes.

“It’s really incredible, as we look at the single biggest area it’s impacting now is healthcare,” he said. Medical errors trail only heart disease and cancer as a cause of death, “and IoT can have a big impact on that” he said.

One problem technology can address is making sure patients and their medical issues are appropriately identified. Wearable devices can store patient medical information, can monitor what’s going on inside their body, and deliver medication, he said. Implanted devices, in place for up to

16 years, can allow doctors to control the timing and amount of a patient’s medication dosages to address chronic illnesses.

About 5 percent of the world’s population suffers from chronic obstructive pulmonary disease (COPD), but the illness is expensive to diagnose. Technology now allows a person to use their smartphone to dial a number, blow into the phone and within seconds be diagnosed and given a COPD treatment plan, Sunday said. Smartphones also can be used to identify blood disorders such as iron or hemoglobin deficiencies or optical issues such as cataracts.

Being able to think to control smart devices currently involves a linking of technology directly to the brain. At Stanford University, a computer/brain interface allows a patient with no ability to move or communicate to type 39 characters per minute (when coupled with an auto-complete feature). Soon, implants will be available to provide a person with a robotic arm or leg controlled by the brain, he said.

“Our whole ability to use thought to control things is amazing,” Sunday said.

For a broader audience, thought-controlled devices for communication could eliminate using a computer mouse or even speaking to a computer, he said.

Likewise susceptible to elimination due to technology advances is

car ownership. It peaked in 2006 and has dwindled, boosted by millennials who don’t want to drive and have opted instead for ride- and car-sharing, and vehicle self-driving capabilities are “exploding,” Sunday said.

He envisions a day soon where a person will call for a vehicle, have it arrive and then transport the passenger with autonomous driving. “It’s pretty exciting,” Sunday said.

Already, a French company called EasyMile has tested in San Francisco an electric, driverless shuttle that covers short distances and predefined routes. And a one-person, self-driving hover-taxi is expected to begin operations in Dubai in July. *The Times of India* reports that the EHang 184, produced in China, will be able to travel on a programmed course at 60 mph at an altitude of 1,000 feet. Trips in the quadcopter powered by eight propellers can last up to 30 minutes, the newspaper said.

“This stuff is real. ... You just get on board, press a button for your destination, and a command center on the ground can control a whole fleet of these things as they take you safely from place to place — a pretty exciting way to get around,” Sunday said.

Sunday said some of his technology expectations in the future dovetail with those of innovator and futurist Ray Kurzweil. His predictions for the future include having nano-bots and

gene technology eliminating most diseases in the next decade; self-driving vehicles making it illegal for people to drive on highways in the 2020s; virtual reality feeling 100 percent real in the 2030s; non-biological intelligence being a billion times more capable than a human in the 2040s; nanotech being able to create any physical thing, like food, out of the thin air; and humans being able to multiply their intelligence by a billion times by connecting wireless with a virtual neo-cortex “in the sky” by 2045.

“The pace of change is exponential, so if we think of what’s occurred over the past 10 years, many times that is going to occur over the next 10,” Sunday said. “Stuff is happening, it’s happening fast, and it’s exciting.”

All of the changes are going to require people to thinking differently about what technology can and will mean in the future, he told the audience.

“I’m a linear thinker, and I imagine many of you are as well, but the world around us is changing exponentially. So, as I spend my time leading my organization, I’m trying to really instill [that] we need to think exponentially,” Sunday said.

“What used to be a month is now a week. What used to be a week is now a day. And everything we do, we can’t expect linear change from where we’ve been in the past.”

SHARIFAN

from page F1

from either time waste or through a virus, it is helpful to have the right to access all necessary information without any concerns for the legality of such data review. While the specific needs for each company should be discussed with an IT or legal professional, the key policies may include, but are not limited to, the following:

- **Acceptable-Use Policy (AUP)**, also known as a fair-use policy, is an integral component of a company's monitoring procedure. An AUP is designed by the owner of a network or website governing how the platform should and should not be used, explaining various monitoring strategies used to enforce such behaviors and the consequences for policy violations. One purpose of the AUP is to reduce legal action by creating stan-

dards of behavior by individuals using these platforms and providing notice to users of monitoring activities aimed to ensure adherence to the guidelines. It is here that a company can define what behaviors are unacceptable, such as excessive use of resources or time-wasting activities, distribution of confidential information, distribution of indecent or offensive data and other security measures surrounding virus transmission or dissemination.

- **Internet Access Policy** involves the use or restricted use of various websites by an individual. Internet usage should be reviewed as the Internet connects to various assets such as the company server. Further, an Internet access policy can be designed to support the AUP by blocking various sites that are not central to the purpose of company.

- **Bring Your Own Device Policy** covers the requirements governing an individual's personal device being used

on a network. Companies must strive to ensure such devices are accessing sensitive information in ways to avoid unauthorized dissemination of information or the introduction of vulnerabilities entering the network. This policy may include automatic lockout requirements, anti-virus and encryption requirements, synchronization prohibitions and rights held by the company to review the device to ensure compliance.

Education

Even if you have the most ideal IT system, you cannot remove the human error associated with use of such networks. Most people would prefer not to infect an entire network with a virus — especially if the virus results from something avoidable. The best way to mitigate these problems is to educate all users. Knowing what to watch out for and what to avoid is crucial in the ability to avoid such traps.

The majority of computer users have heard of ransomware or at least have an awareness of recent virus attacks; however, the ever-changing methods to infect systems are continually evolving. Whether through self-study or an IT professional, keeping updated on ever-changing trends and educating others are essential ways to help reduce the chances of falling victim to ransomware attacks.

Technology users must be trained to understand that all devices are at risk: computers (both Macs and PCs), tablets, smartphones, servers, etc., and the various means of attack. It is important for users to understand how these viruses can spread. It may not only impact their own device, but may spread across the entire network and compromise all files and systems on that network. Attack methods may exist even on legitimate websites. Free apps or those from unregulated third parties are at a higher risk of containing viruses. Spam emails masquerading as energy bills, tax returns, delivery notices, etc., are also common. These seemingly legitimate emails often have email attachments or contain a link to call, unsubscribe, fill out a form or obtain more information that lead to triggering the virus. It is important to keep current, inform others of the email scam trends and to reiterate the necessity to avoid opening suspicious emails.

It is also important to be aware of the various psychological trickery often used to pressure victims into paying or not contacting the appropriate IT staff members to help resolve the issue. One example is ransomware attacks ties to one's fear of ridicule or submission to law. Certain attacks will allege a user was acting unlawfully online and threaten arrest if the penalty is not immediately paid. The user may be blinded by fear of the law and pay to avoid the threatened repercussions or potential ridicule.

Lastly, it is important to communicate the policies in place for reporting any suspicious emails, advertisements, etc., as well as the required response procedure should any virus be triggered. A known and structured plan for communication of suspicious items will help alert others to these trends as well as serve as a means to determine whether or not the suspected email or link is, in fact, problematic. Timely relay of information is important to begin ensuring the resolution is properly executed.

While revamping your IT system may seem like a daunting task, getting started is key in the turnaround. These three points are by no means comprehensive, but aim to help start the line of thinking and create an attack plan for a healthier network.

Bahar Sharifan is president of Wasatch I.T. in Murray, a provider of outsourced I.T. services for small and medium-sized businesses.



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IT'S NOT WORTH MUCH IF IT DOESN'T DRIVE BUSINESS

Why conversion rate optimization is important for websites

Conversion Rate Optimization is the act or goal of converting interested customers into solid leads. In a nutshell, it means persuading clients coming to your website that they should pick up the phone and call your business or make that online purchase.

When you create a new website, building in conversion rate optimization strategies is a very smart move. It helps your website act as a conversion funnel. This means that your website will help take interested/potential customers and turn them into viable leads. And this gives your business the chance to acquire more clients who actually need your services.

Why Optimize?

How can optimizing your website for a higher conversion rate benefit your business? First, it helps you attract more business. Let's say John comes to your website and likes what he sees. However, the website design doesn't include any calls to action — meaning that John doesn't know what to do next to contact you about your services. So instead of contacting your business, John hits the "back" button and leaves.

Optimizing your website will ensure that it includes all-important key points like calls to action, credibility, concise copywriting, and standout design. Your customers will land on your website and immediately understand who you are, what you do and why they should choose you over your competition. And what business owner wouldn't want that?

How Conversion Rate Optimization Affects Customers

What happens when a customer lands on a website that has been optimized for conversion? Ideally, that customer follows a simple, intuitive "funnel" that leads them to complete a key action.

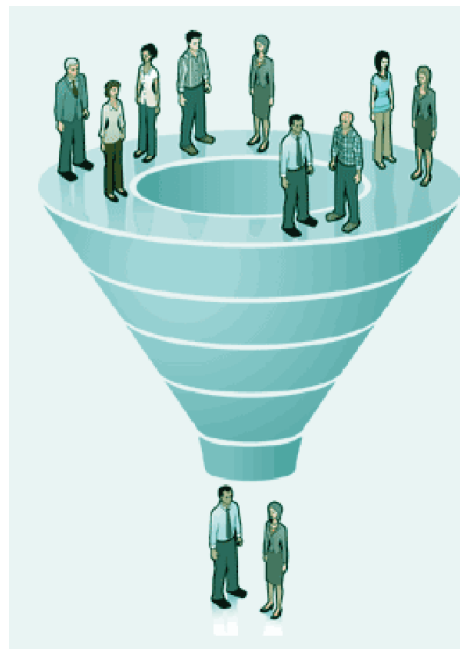
Setting up a conversion funnel that works for your customers requires some well-thought-out strategies. A few key points to consider are:

- Who is your target audience?
- What are they looking for?
- How can you incentivize them to complete an action?

- Are there industry certifications or logos they are familiar with?
- Are there specific keywords they are searching for?

Take time to consider what type of a role you want your website to play in your business. Consider how you want it to interact with your target market, and take a moment to consider the viewpoint of your customers.

When a potential client lands on a site that meets their expectations, gives them what they are looking for at a glance and perhaps even offers them a new-customer promotion or discount, the odds of that customer converting to a paying customer or lead go up — and quickly!



CRO

CONVERSION RATE OPTIMIZATION

Tools for Website Conversion Rate Optimization

What can you use to make your website conversion-friendly? Your conversion strategy should always include:

- Calls to action.
- Credibility boosters.
- Concise messaging.
- Incentives and promotions.
- Competitive advantages.
- On-trend design for your industry.

Calls to action are clear, simple statements that tell your customers to do something. One example could be "Call Us Today for a Free Website Analysis: 1-800-555-5555." You can see that the action within the statement is bold and clear — "Call Us Today."

And equally importantly, the way to complete that action is clearly defined with the included phone number.

Credibility boosters are logos, text or images placed in your site that boost trust with your clients. A few examples include testimonials, familiar brand logos, industry certifications, case studies, team images or office photos.

Concise messaging means that your website is written in a way that is easy-to-digest. Are you telling your customers what they want right away? Don't make customers dig for information — only about 20 percent of your website will be read at first glance. Make those headlines count.

Incentives and promotions should be included to persuade customers to complete the goal/action. You want your customers to do something for

understand how customers behave when they visit your website. These include heat maps, split testing tools, traffic measurement tools and more.

Heat Maps have been around in the web design industry for years and are good sources for understanding how the eye moves when reading a webpage. Dreamglow has a quick explanation on three different types of heat maps that is useful for a newcomer to the web design industry.

Although the patterns differ slightly as the reader moves down the page, the reader always begins at the top and then scans quickly from left to right. This is why your header is so important. It must communicate your company branding, your services and an action, all while remaining easy to read at a glance.

Split testing is the method of testing two similar yet slightly different webpages to see which one compels more of your visitors to act. For example, while listing the same services, one webpage may include a different promotion than the other. By measuring which one converts more leads, you can learn more about what your visitors are looking for.

Traffic Measurement. Google Analytics is a highly preferred tool that allows you to track traffic and data across your website. It has a full suite of capabilities and its uses range from a simple tracking tool to a predictive analysis strategy map.

Conversion Optimization Helps You Get More Value

Using a combination of the points above will help you build a website that converts. Once you begin thinking about your audience and how they interact with your website, you can build a strong strategy. Because there is a high rate of competition on the web, making your site clear, intuitive and optimized will help you beat out your competitors.

Optimizing your site for conversion will also help you get more "bang for your buck" as your website becomes a functioning marketing tool that drives visitors to take action and converts them into interested or paying leads.

Shea Diepeveen is a senior copywriter and team leader for Your Design Guys, a web firm that builds conversion-optimized websites.

you (contact you), so what can you offer them in return?

Competitive advantages are key differentiators for your market. What makes you better or different than your competitors? Knowing who else is out there and how you measure up gives you important information you can use to strategically build your new website.

On-trend design should always be a consideration when building a conversion optimized website. Design and images should enhance and complement the strong messaging and should follow guidelines or trends present in your industry.

Use Customer Data to Optimize Better

There are a variety of tools available on the web that can help you

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Businesses can improve efficiency across the board with better communications technology

Nearly every business has a goal to improve efficiency. But not enough businesses recognize one of the simplest, yet potentially most detrimental, areas of impact in their operations.

Communications and presentation systems and the ways in which those technologies connect with an organization's network, can make or break an enterprise. These devices and software may place an unnecessary burden on your infrastructure, both technically and in terms of lost productivity. Or alternatively, they can work so seamlessly that efficiency occurs with seemingly little effort.

Video technology is a part of nearly every aspect of work life today, including meetings, training, information distribution, connection with remote employees, operations management and marketing. More than likely, there is a video display or a need to connect with video content in many day-to-day transactions in an enterprise, and yet those systems are rarely optimized to get the best results.

Making improvements and upgrades to more high-tech video solutions in the workplace is not just a whiz-bang addition to impress millennials (though they do tend to think favorably about companies that operate with an eye toward the future). These changes go a long way toward meeting the expectations of every employee and customer who has grown accustomed to the ease of communication afforded by their mobile devices. And altogether, the evolution may be the key to some impressive boosts in productivity.

For many businesses that are looking for areas where efficiency might be improved, the answer is right there in front of them. All too often, the flat-panel video display in the conference room is showing pixelated images, and the web cam used for videoconferencing isn't adequate for capturing a clear image of every participant in a meeting room. That's not to mention the audio quality in conference rooms and training facilities. If microphones are used, the playback equipment seems to mangle speech or muffle delivery of information.

Meanwhile, none of these technologies work well when the connection to video is limited by bandwidth problems on the network. Choppy video

and garbled audio on a video conference has ended too many meetings in an era when we easily use video chat on just about any mobile device.

It's plain to see where technology is lacking, but it's harder to know where to invest in making upgrades that would genuinely improve business and produce a return on investment. However, with the right guidance and a comprehensive needs analysis about how technology is used by team members in every department, vast improvements can be made.

To truly improve efficiency in a business, the first step is to align technology with operational goals. If meeting clients and making a good first impression via video conference is key, make sure that adequate video meeting facilities have been provided for the number of employees who need access to these technologies. If training and compliance are important, ensure that information delivery is clear and intelligible. If manufacturing teams could use incentives to meet quotas, provide real-time visual information.

Once the research has been done as to how day-to-day operations could be improved with better communications technology, there are countless opportunities for boosting profits and producing return on investment with new audiovisual and information network solutions.

Guidance here should be taken before leaping into massive technological change, however. An AV communications specialist can assist with needs analysis and connect operational goals with the technological tools that will help realize potential improvements.

Just as an enterprise works with an architect and interiors experts to ensure that the physical environment is conducive to producing efficient and profitable results, it's equally vital to connect with an audiovisual systems specialist to identify the right solutions from the wide array of today's new communications tools. The engineered designs produced by an AV integrator will take into account user needs and preferences, and the various pieces of the resulting custom solution will be integrated with a specially configured control solution that makes

the system easy to use. Further, the AV equipment will be implemented by expert technicians who can ensure that the technology works to maximum potential.

Whether your business is expanding in an existing facility, or there are new construction plans in the works, with the right AV specialist on your design team, you'll invest in the right equipment from the outset and avoid

the fate of companies that are less strategic in their technology expenditures and end up making the "10-Year Mistake" (see sidebar).

Ingolf de Jong is president and owner of Gencomm Inc. in Draper. He serves on the Salt Lake Chamber board of governors and is the chair of the Small Business Committee. He has been in the technology industry since 1979 and has served on a variety of audio/visual industry boards.



Avoiding the 10-Year Mistake

Organizations frequently start with a vision of how they want to improve or enhance their operations but make errors in implementing technology, which can lead to the "10-Year Mistake."

Common Oversights in Planning Include:

- Improper evaluation of technology and how it fits your company.
- Insufficient input from departments that will use the technology.
- Inaccurate needs assessment and aligned budgeting.
- Miscalculating the anticipated return on investment.
- Misunderstanding the learning curve for "user adoption."

Each of these items will seriously impact the improper implementation of technology. The main problem is that funds are allocated for technology while the correct solutions are not properly vetted. This results in hundreds of thousands of dollars spent, only to find that the technology systems do not perform the functions required.

Ultimately, the system doesn't get used because it won't perform the functions people need. Your company is then burdened for five, 10 or even 15 years until additional funds are available.

- Brightness or clarity on the projector or screen is inadequate for the room.
- The network bogs down when a video stream is sent.
- Speakers are loud enough but you can't understand what's being said.
- You are unable to read the small print on the PowerPoint presentation or the spreadsheet.
- The user interface panel is confusing and no one knows how to use it.
- How do you turn the darn thing on?

Every organization is looking for ways to be more efficient and productive. The appropriate integration of technology into an organization will enhance performance at every level. The technology must work for you.

Benefits of Properly Designed and Implemented Technology:

- Meeting efficiency with simplistic controls for audio/visual conferencing.
- Expedited decision-making with easy-to-use-and-see presentations.
- Increased learning and retention in classroom and training centers.

The Solution:

An organization's CEO and other financially accountable executives are key to developing a solution. Your organization's visionaries play a critical role in determining how technology will help your team improve communication and learning, yielding maximum productivity for each department.

INTERNET SERVICE PROVIDERS

Ranked by Number of Utah Employees



List Development Laneace Gregersen | laneace@slenterprise.com

	Company Name Address	Phone/Web	No. Utah Employees	Area(s) Served	No. of Subscribers	Top Executive
1	Veracity Networks 170 W. Election Road Draper, UT 84020	801-379-3000 veracitynetworks.com	130	Utah	20,000	Marshall Erb CEO
2	South Central Communications 318 N. 100 E. Kanab, UT 84741	888-826-4211 socen.com	115	Garfield, Kane, Wayne, Piute, Sevier, Beaver and Iron counties	11,694	Michael R. East Chief Executive Officer
3	CentraCom 35 S. State St. Fairview, UT 84629	800-427-8449 centracom.com	105	Utah, Sanpete, Sevier, Millard, Juab, Rich, Tooele, Salt Lake counties	28,000	I. Branch Cox
4	FirstDigital 90 S. 400 W., Ste. M-100 SLC, UT 84101	801-456-1000 firstdigital.com	100	Utah, Intermountain West	*	Wesley J. McDougal President/CEO
5	ServerPlus P.O. Box 970842 Orem, UT 84097	801-426-8283 serverplus.com	81	Services provided worldwide	*	Layne Sisk
6	XMission 51 E. 400 S., Ste. 200 SLC, UT 84109	801-539-0852 xmission.com	38	Primarily Utah	*	Pete Ashdown
7	InfoWest Inc. 148 E. Tabernacle St. George, UT 84770	435-674-0165 infowest.com	35	Utah, Arizona & Nevada	*	Kelly Nyberg President/CEO
8	Utah Broadband 461 Parkland Drive Sandy, UT 84070	801-953-6706 utahbroadband.com	35	Wasatch Front & Wasatch Back	10,000+	Steve McGhie



*Did not disclose. Please note that some firms chose not to respond, or failed to respond in time to our inquiries. All rights reserved.
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Easy to use, but vulnerable to attack

The first thing to understand is that, no matter what a security consultant may say, there's no such thing as a 100 percent hack-proof website. With enough time, talent and resources, anything online can be breached. Just ask NASA, T-Mobile, whitehouse.gov, Sony, AT&T, eBay, Target, Adobe, JP Morgan Chase, the Utah Department of Workforce Services or University of Utah Hospitals & Clinics, to name a few. Your site probably isn't as high-profile as those listed above, but if it's built on WordPress, it has a target on its back. There are, however, steps that can — and should — be taken to make your website difficult to hack.



MATT MASCARENAS

According to *Forbes*, more than 75 million websites run on WordPress. It powers more than one-fourth of the world's websites. WordPress is easily the world's most popular content management system (CMS). It leads the CMS market with more than 60 percent of the worldwide market share.

This is mainly because it's super-easy to use. It allows contributors with zero coding experience to add text, links and images to create a professional-looking website quickly and easily. Of course, WordPress' extreme



popularity also has a downside. All these legitimate websites draw more than their fair share of unsavory characters. Hackers attack WordPress sites for a variety of reasons: to hijack incoming and outgoing links and traffic, to hold the site for ransom, to steal credit card numbers and identity information, and many more.

Plugin Attacks

One of the reasons that WordPress is so popular is the huge number of plugins that are available. Because WordPress is an open-source proj-

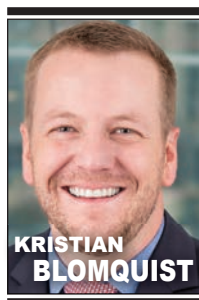
ect, developers from all over the world are able to create and submit free plugins. Unfortunately, not all these plugins are safe. According to wordfence.com, nearly 60 percent of all successful attacks come through plugins. For this reason, you should try to make sure to get your plugins from reputable sources — legitimate companies. This can be tough to determine, but use your best judgment. Look at the company's website, paying close attention to the types of contacts that are available, terms of service, privacy policy and general appearance of the site. Look at the plugin's community rating and popularity. A plugin with a rating of 4 or 5 and thousands of downloads is most

see WORDPRESS pg. F11



Patent markings important in determining damages

Legal notice provided by patent markings may play a major role in patent infringement cases, as it may be a primary factor in calculating damages (e.g., how much money and/or other forms of compensation are to be awarded) when a court decides that patent infringement has occurred. Legal notice can be either “actual notice” or “constructive notice,” each with its own implications in calculating damages.



KRISTIAN
BLOMQUIST

Actual notice occurs when a party is directly put on notice that it is infringing another party's patent. Actual notice usually occurs when a cease and desist letter or summons is received by the infringing party.

Constructive notice, on the other hand, does not require notice or actions to be directed at the infringing party. Instead, constructive notice occurs when a party reasonably should have known that an item is protected by one or more patent, which in patent

cases, typically occurs when an item is properly marked to indicate that the item is protected by a patent. Damages in cases involving constructive notice are calculated from the first time the infringing party infringed after the patented item was properly marked, which usually leads to larger damage awards in comparison to damage calculations involving actual notice.

Because constructive notice can carry significant weight in damage awards, attorneys are commonly asked what constitutes a proper marking of a patented item and when a patented item should be marked as such.

First, a patented item is considered properly marked when the term “Patent” or the abbreviation “Pat.” along with an associated patent number are attached to the patented item. For items associated with multiple patents, constructive notice is determined for each associated patent — meaning,

when an additional patent is issued, constructive notice of the additional patent is achieved when the item is marked with the additional patent number along with any prior patent numbers.

Another option, which is beneficial for items that are associated with several patents and/or pending patent applications, is to virtually mark the item by marking an outside surface of the item with “Patent” or “Pat.,” and to designate a web address where all of the associated patents are listed. Virtual marking items requires that the web address be open-access. For specific details regarding marking of patented items, see 35 U.S.C. § 287(a).

Virtual marking allows a list of associated patents to be easily maintained and updated in a single location, which can be more convenient and economical than having to change production molds and/or processes when the list of associated patents changes.

Second, patented items should be marked as soon as possible after a patent is issued. Although marking

items with “Patent Pending” or some variation thereof is legal when a patent application associated with the item has been filed, this mark carries no legal weight in patent infringement cases since patent protection only starts once a patent is issued with a corresponding patent number. Therefore, while the practice of marking items “Patent Pending” may have strategic advantages from a business standpoint, it will not result in higher damages in a patent infringement case.

Finally, an item should never be marked as patented until an associated patent has issued, as falsely marking an item to appear as if it is associated with a patent is against the law and can result in fines of up to \$500 per falsely marked item sold.

Kristian Blomquist is an associate in the Park City office of Maschoff Brennan. His practice focuses on helping clients with patent preparation and prosecution in various technologies, including optical systems, analog circuits, wireless communication devices and mechanical devices.



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WEBSITE DEVELOPERS

Ranked by Number of Employees



List Development Laneace Gregersen | laneace@slenterprise.com

	Company Name Address	Phone Web	No. Employees	Notable Clients	Specialties	Year Est.	Top Executive
1	The Summit Group 117 W. 400 S. SLC, UT 84101	801-595-1155 summitslc.com	90	Microsoft, Kymeta, Sony, Subway, Unified Purchasing Group, Utah State University, Wireless Vision	UX/UI, WordPress, API integrations, programmatic ad buying, marketing automation, paid social, ecommerce, digital magazines	1982	Christy Whitehouse Alfredo Nava
2	Convirtio 6995 S. Union Park Center Cottonwood Heights, UT 84047	888-851-3319 convirtio.com	45	General Motors, Lionsgate Entertainment, Re/Max, Utah Motorsports Campus	PPC management, search engine optimization, social media management, web design & development	2004	Braxton P. Tulin
3	Love Communications 546 S. 200 W. SLC, UT 84101	801-519-8880 lovecomm.net	40	Google Fiber, Arctic Circle, City Creek Center, Utah Office of Tourism, BioFire, Visit Salt Lake	Branding, advertising, digital, public relations, web development, media	1999	Tom Love President
4	Red Olive 9980 S. 300 W., Ste. 300 Sandy, UT 84070	801-545-0410 redolive.com	38	Novell, Coca-Cola, Ogio, Dental Select, IM Flash, Utah First Credit Union, Edge Homes	Web, apps and digital marketing	1999	Matthew Moeller
5	Oozle Media 11339 S. 700 E., Ste. 300 Sandy, UT 84070	801-562-8557 oozlemedia.com	30	Burg Pediatric, Cannon Safe, Superior Water and Air, Bellus, Aveda	Websites, social SEO, PPC, call tracking	2008	Bret Parkinson Owner
6	RIESTER 1441 Ute Blvd., Ste. 360 Park City, UT 84098	435-647-2100 riester.com	25	Talking Stick Resort, Nationwide Insurance, Arizona Department of Health Services, La Victoria, Herdez, Park City Chamber/ Bureau, PacifiCorp	Custom CMS development, .NET development, Google tag manager	2001	Alan Perkel Principal & Chief Digital Officer
7	SEO.com 65 E. Wadsworth Park Drive Ste. 200 Draper, UT 84020	800-351-9081 seo.com	25	Taylor Andrews, Kaleidescape	WordPress, PHP, Laravel, app development, web development	2008	Boyd Norwood
8	ThoughtLab 56 E. Broadway, Ste. 200 SLC, UT 84111	435-760-6977 thoughtlab.com	22	eBay, Envision Utah, Rakuten Marketing, Cushman Wakefield, Children's Miracle Hospitals, Primary Children's Hospital, City Home Collective	Digital design, web development, digital marketing	1999	Mike Harker
9	i4 Solutions LLC 707 W. 700 S., Ste. 201 Woods Cross, UT 84087	801-294-6400 i4.net	17	Utah State Board of Education, Jordan Wilcox, Telemundo Utah	Websites, Internet marketing, Internet design, hosting, email	2001	Brandon Anderson Mike Rivera
10	Your Design Guys 1305 N. Commerce Drive Ste. 100 Saratoga Springs, UT 84045	1-888-720-0170 yourdesignguys.com	15	Big O Tires, Jamberry, Clean Green Carpet Cleaning, H&O Technologies	Custom website design, WordPress development, copywriting, conversion rate optimization	2012	Chris Wren
11	REVITY 8 E. Main St. American Fork, UT 84003	801-216-4154 gorevity.com	11	Elevated Billing Solutions, Paul Mitchell Schools, Vivint Solar	Custom web development - PHP, JavaScript, Plus Marketing	2015	Jarrett Webster Founder
12	Letter23 LLC 4998 S. 360 W. SLC, UT 84123	801-983-9266 letter23.com	10	American International School of Utah, Liberty Tour	E-commerce, political causes, branding	2000	Kelly Casaday
13	modern8 Corporation 145 W. 200 S. SLC, UT 84110	801-355-9541 modern8.com	7	Jacobsen Construction Co., RizePoint, Ritual Chocolate, Architectural Nexus, LDS Church	Technology architects, engineering & construction companies, consumer goods	2001	Alysha Smith Managing Director
14	Swivelhead Design Works 8813 Redwood Rd., Ste. A West Jordan, UT 84088	801-566-3152 swivelheaddesign.com	2-5	Intermountain Healthcare, Lingotek, Village Baker, AmeriBen, QuickKey	Branding, logo design/ redesign, brochures, catalogs, style guides, sites, kiosks	2001	Matt Doyle
15	Penna Powers 1706 S. Major St. SLC, UT 84115	801-487-4800 pennapowers.com	3	*	UX/UI development & design, SEO, MySQL databases, content management systems (WordPress), web & content audits	1984	Chuck Penna

WORDPRESS

from page F8

likely safe. Also, search the company name, looking for warnings or accusations of fraud. As a safety net, always back up your data before you install a plugin. Finally, remember to scan for malware once your new plugins are downloaded, just to be safe.

Once a vulnerability is found in a plugin, a reputable developer will update it as quickly as possible to keep attackers from exploiting the weakness. For this reason, you should always keep your plugins updated to ensure security. While there is no 100 percent security guarantee when using third-party software, following a few common-sense guidelines will minimize your site's vulnerability.

Login Page Attacks

WordPress is so popular with hackers that there are automated bots constantly attacking — they literally never stop trying to break into WordPress sites. Bots are programmed to search for login panels. Once a login panel is discovered, the bot attempts to gain access by simply guessing username and password combinations until it gains access to the site. This is called a “brute force” attack. The simplest way to safeguard against brute force attacks is to use a complex user/password combination. Your user name should be a combination of numbers and letters and should never be anything obvious like “admin” or your company name.

Another effective way to safeguard your WordPress site is with cell phone sign-in — also called two-step or multi-step authentication. With cell phone sign-in, the user is sent a number or password via text when they attempt to login, which will need to be verified before they are granted access to the site. This effectively blocks any brute force attacks because the bot has no way of learning the code that's sent to your phone.

Hide My WP

Plugins can also be used to augment your site's security. The WordPress security plugin that I most often recommend is called Hide My WP. Hide My WP hides your WP login page and protects your site from about 90 percent of SQL-Injection and XSS attacks that target PHP files. You can also use Hide My WP to alter your URL and remove the WordPress identifiers. Bots that are specifically programmed to attack WordPress sites will ignore yours if they don't identify it as a WordPress site. Hide My WP will even notify you by email when someone attempts to access your site.

Hide My WP is available at six different levels, which equates to

hundreds of security options. Pricing varies according to the feature package that you choose, and starts at a one-time fee of about \$20.

Sucuri

For business owners who want to take security a step further, I recommend Sucuri, a WordPress security platform. Sucuri monitors your site, scanning for and responding to attacks. Several basic attributes make Sucuri a great option. For one thing, Sucuri doesn't just tell you when your site has been compromised — technicians find and repair damage caused by attacks. The subscription plan you choose will dictate how frequently

your site is scanned and how quickly it will be repaired. Another nice feature is the set annual fee. This means no surprise bills will show up. Lastly, there's no complicated setup. These features make Sucuri a true set-it-and-forget-it security option that you can trust is working behind the scenes to keep your business up and running.

Sucuri is available at three feature levels. You get security monitoring, malware and hack repair, DDoS mitigation, increased performance and 24/7 customer service with all three options. Packages range from \$200 to \$500 per year.

Unfortunately, WordPress has

become a favorite target for hackers. The reason is not a problem with poor security; it's a result of the system's popularity. There are, however, steps that you can take to dramatically improve your site's security. Some are as simple as setting up a username and password that a hacker won't easily guess; others are more involved. It's important to know that you have options and you can make your WordPress site as secure as you'd like, depending on what kind of commitment you'd like to make.

Matt Mascarenas is a digital PR specialist at Red Olive, a full-service agency in Sandy.

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