INTRODUCING TAL SECURITY, SOCIAL NETWORKING AND COLLABORATION

By Wayne Caswell, TAL Webmaster

TAL Security

This paper explains the risks and benefits of Internet services, describes how we secure the TAL website and your confidential member information, and describes future plans for unique member services that are not available in any landman association.

The ability to ensure Security, Reliability, Flexibility and Scalability was high on our list of criteria when selecting technologies to support TAL, both initially and in the future.

TALandmen.org is a public website that serves as an electronic brochure describing the organization and promoting membership. Security is not much of an issue since we store no confidential information on our site and require no ID or password to access the site.

Confidential contact information collected during membership enrollment is not stored online, so the only place where an ID and password is needed today is if you choose to pay membership dues with a credit card.

Why we use PayPal

TAL members can pay dues with a check or major credit card, and for added security we use PayPal to handle the transaction. PayPal is viewed as the safer, easier way to pay online, because you don't have to expose your financial information to us or any merchant, and PayPal zips you through the checkout process.

It's Secure:

- Avoids exposing credit card numbers to merchants.
- Every purchase is confirmed with an email receipt.
- 100% protection against any unauthorized payments.

And it's Convenient:

- Speeds you through checkout faster when shopping online.
- Lets you pay by credit card, debit card, or bank account.
- No need to retype your financial information.

Does using PayPal have risks? Sure it does since no security system is absolute. But the risks are far less than giving your credit card to your waiter at a restaurant or sharing it with an online merchant. And it's likely more secure than sending a check through the U.S. Postal service since the check has your signature, account number and routing/transit numbers.

Future Services in the Cloud

We hope to do much more with the TAL website in the future to offer unique member benefits in a secure section that does require a user ID and password. Future plans include:

- Provide new Information & Education materials
- Facilitate Social Networking, Collaboration & E-Commerce
- Distribute Maintenance among Trusted Editors
- Enable Automatic & Dynamic Updates with Version Control

Some of our plans include the use of remote services residing in the Internet "cloud," so the rest of this paper address the security of such services.

Cloud computing is a new buzz word derived from the cloud image often used to represent the Internet. The concept of using Internet and network-based services is driven largely by big corporate players like IBM, Microsoft, Google and Amazon, but it's just another form

of distributed computing. That means you don't have to install and maintain the software and data on your own computer system but can rely on a trusted service for that. All you need is a web browser and access to the Internet. The key word here is "trust," and any service we offer must be trustworthy.

We use some form of distributed computing every time we access the Internet – to make airline and hotel reservations, buy stocks, read and respond to news stories and blogs online, use Facebook or Twitter, share photos, watch videos on YouTube, etc. – and each time we give up some personal information in exchange for a benefit.

We don't think or care much about what's going on out there in the cloud except that we want to reliably and securely do stuff and share stuff. Cloud computing adds a new layer – services – to the Internet collection of data pipes, routers, servers and networks. Behind the services are companies we trust to manage the data and computing resources for us. We don't necessarily care about how it's implemented, what technologies are used or how it's managed, only that we have access to it and that it meets our reliability and security needs.

When entering a credit card number to buy something online, do you look for the little "closed padlock" image at the bottom right of the browser to be sure that the data is encrypted? You should.

If you installed a wireless network at home, do you realize that the default Wi-Fi installation has security encryption turned off? You should, and you should take steps to turn encryption on. But even that won't make Wi-Fi security bullet-proof, as I describe in Comparing the wireless security of HomeRF and Wi-Fi, a white paper I wrote about two competing technologies.

How much Security is needed?

The answer is based on a formula that balances the Cost versus the Risk, where risk includes the value of what's at stake times the likelihood of compromise.

A simple example is home security and the locks we have on doors and windows. They keep honest people honest but won't keep out determined criminals who can just go right through the window, wall or roof. More sophisticated security is justified if your personal property is exceptionally valuable or your home is in a high-crime area susceptible to break-ins.

A more complex example is the physical and data security at Los Alamos National Labs, where government scientists do nuclear and weapons research. I did a good amount of computer consulting there while at IBM, which is one of the computer vendors serving the site. We had to design our PCs specifically for the high altitude and ultra-high security needs. Portable devices were not allowed, and desktop devices had no removable media or ports for USB drives that might be used to smuggle sensitive data past security scanners. Most businesses, however, don't need to go through such expensive measures.

NPR Cites Security Concerns as Agencies Migrate To E-mail in the Cloud

I raise the two examples above to give perspective to a 07/26/10 story by NPR's All Tech Considered, which some people to worry about the Cloud Computing concept. The story is a radio interview with Omar Gallaga, a reporter with the Austin American-Statesman who writes a technology column. He's far from a technology or security expert but referenced a PC World article by Tony Bradley that described concerns the Los Angeles Police Department had with plans to use Google's Cloud Computing services to replace their in-house IT systems.

Google Apps – their Cloud Computing platform

The LAPD contract with Google requires "a new separate data environment called 'GovCloud.' The GovCloud will store both applications and data in a completely segregated environment that will only be used by public agencies." Google is late in providing GovCloud to separate the data onto separately managed servers.

While some people in the IT industry have argued that moving data from internal systems to remote services removes control and has security risks, other IT experts say Cloud Computing saved them millions of dollars and is more secure than what they could have done internally.

Potential Disadvantages of Cloud Computing include:

- **Lost Jobs.** "By outsourcing IT services, employee jobs may be at stake, including my own."
- **Performance Concerns.** "I worry that performance of a system shared by others will be slower."
- **Security Concerns.** "Will a service provider protect my data and prevent unauthorized access better than I can?"
- **Control of Passwords.** "They let users control their own passwords without the stringent requirements we use here, such as changing passwords weekly."
- **Too Much Control in the hands of Too Few.** "As data consolidates, I have 'Big Brother' concerns."
- **Too Much Hype.** "While I recognize the benefits, Cloud Computing not a panacea that's suitable for all app. I wouldn't trust it for managing IRS and Social Security systems."

Advantages of Google's Cloud Computing include:

- **Competition.** The illustration below shows some of the bigger players in Cloud Computing, but there are more – enough for competitive bidding to keep prices low and to ensure that they take security and performance seriously.

- **Cost savings.** The savings are so significant because companies providing cloud services amortize costs over thousands or millions of clients. Physical site costs include replicated facilities, computer systems, wiring, ultra-fast Internet connections, air conditioning, fire protection, battery backups, and other redundancies. Operational costs include advanced network operations, backup and customer care, among others.
- **Data Integrity.** You and others can be assured of always working on the most current version of a file or document rather than wondering if the one you got as an email attachment has changed.
- **Data Security.** The large Cloud Computing datacenters have better physical and data security protections than all but the most secure sites such as Los Alamos Labs. But there other factors to consider. Files are sent as email attachments are a security risk since email in inherently insecure, and there's no easy way to prevent someone from forwarding your mail to others without your consent or knowledge. And have you noticed how many stories have been printed about lost laptops alone?
- **Data Backup & Redundancy.** With Google, not only are your files backed up regularly, but they are replicated onto servers in other cities. That means even if there's a fire or natural disaster at one site, the data is still online and accessible to you from another site.
- **Improved Performance.** Performance worries are usually unfounded since Google's datacenters use more sophisticated servers and network connections than most businesses can afford on their own and since the redundancy of datacenters puts data closer to the users.
- **Users Control Their Own Stuff.** Documents created with Google Docs, the equivalent of Microsoft Outlook, are private unless you grant access to others, and even then you get to determine who can see or edit what.
- **Team Collaboration.** People in teams can edit the same document, individually or at the same time, and a history of prior versions is maintained.
- **User Controlled Security.** If you have a Google account you can take security into your own hands and decide who gets to see or edit your Google Docs or discussion groups. You can even be alerted via email if somebody logs into your account from a different IP address. The fact that Google allows you to be vigilant with your own account and data is pretty amazing and should help with some of paranoia surrounding cloud services.
- **Proven and trusted.** Google Apps has helped companies of all sizes, in every industry, in every corner of the world save time and money and improve how they work together securely. Here's what the say.

The User's Role in Security

Like so many other online systems, Google grants access to services through the web browser and a unified login. Unfortunately, if someone's PC is hacked into, their passwords can be stolen and used to access other systems, including Google apps.

Users must accept some responsibility for security themselves, but too often they don't. Some people are unable to protect their own PCs and online accounts themselves, even by changing browsers and updating other software, with stronger passwords, updated antivirus scanners, and antikeyloggers.

Usually, when trade associations create websites with secured member-only areas, the security can be easily compromised if only one member's PC is hacked and their password used to gain access. As TAL webmaster, I propose a different approach using Google Apps that is far more secure, because security is more granular, meaning security can be limited to specific groups of people, such as independent or company landmen and those interested in royalty issues, gas fracking, petroleum engineering, mineral rights, and renewable energy.

Google Mail

People without Microsoft Outlook can use Google Mail for free, and if you're already using it you already have an ID and password that lets you use other Google apps. Google says its mail application has the best spam & virus filtering in the industry, offers 25 GB of storage, allows 50 MB attachments, and supports quick search.

Security of any email system is an issue when messages are transmitted across the Internet unencrypted. Google Mail does not include integrated encryption, but it can be used with a free CloakGuard FireFox browser add-on. Emails then stay encrypted, even when they reside on Google servers.

Google docs

Google docs was used to create the Confidential Contact Info form that's on the TAL Membership page. Each entry was automatically added to a spreadsheet that we secured locally.

Google docs can also enable collaboration among TAL members in a secure fashion without having to send email and attachments. It is compatible with Microsoft Word, Excel and PowerPoint and can be used for documents, spreadsheets, presentations, drawings and forms. It can even support multiple editors simultaneously while maintaining a full revision history of all changes. Microsoft users can upload and download documents onto a shared network drive and then define who has access – the entire TAL membership or just a group of close friends.

TAL can use Google docs, for example, to facilitate collaboration on draft legislation among a review committee, share draft course materials among an education committee, or enable an entertainment committee to all be on the phone working on the same document(s) at the same time.

Google sites

Google sites

The TALandmen.org website was created on a PC using a software tool called XSitePro, but that's not the only way to create webpages. If you use FaceBook or LinkedIn, you've already created a personal webpage using Internet-based software.

Google sites is like that but both easier and more powerful. Google describes it as powerful enough for a company intranet, yet simple enough for a family website. Here's an intro video on YouTube.

Building web pages is as simple as editing a document, and you shouldn't need help to get started. Here in Austin we're already building a Google website template that looks just like the TALandmen.org website and can integrate right into it.

So why would you use Google sites? Let's say you're a TAL committee chairman who wants to bring together all the information your group needs to share, including docs, calendars, photos, videos and attachments. You want your team to collaborate on a project in the easiest and most secure way possible and then present your work to the entire TAL membership. You could invite committee members and co-workers to edit a committee site with you to keep it fresh and up-to-date and, when ready, you can have us attach it to the TAL site and authorize as many or few people to view your site as you want.

Google calendar

Google calendar

Now let's say you want to schedule group meetings, but your team doesn't all have Microsoft Outlook. Some have PCs, others have Macs, and still others are away from the office with only a phone. Google calendar can reach them all with meeting invites, attachments and the ability to sync with mobile devices.

Google groups

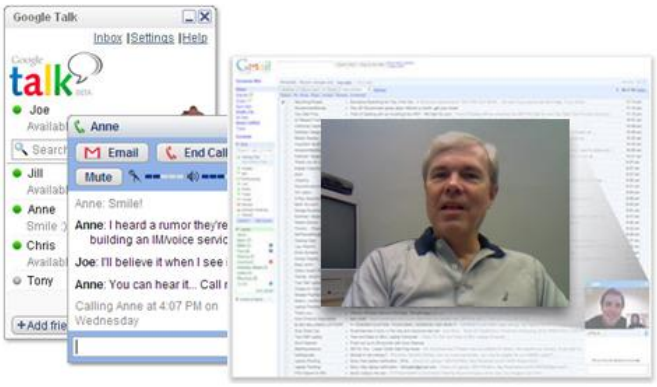
Google groups

Google groups facilitates the secure sharing of files and knowledge in online discussions or over email and can be used by small groups or large. Individual landmen can create their own groups and invite the people they want, and the group can create its own webpage that can be integrated into TALandmen.org and secured for the team. We're not yet ready to do that, but that's the vision.

Google talk

Google talk

Reduce travel time and long distance phone bills by using your Internet connection to text and talk online through Google talk. And with a webcam on your PC you can place video calls. It's kind of like Skype but integrates with your other Google apps.



About the author

Wayne Caswell is Communications Director, Legislative Strategies, LLC, and serves as TAL webmaster. He's a computer technologist and marketing consultant with over 40 years of experience at IBM, Dell, Siemens and CAZITech, a consulting firm that he founded to focus on Digital Home and Broadband Internet solutions.

Wayne also serves as Communications Director & Webmaster for Homeowners of Texas, a nonprofit consumer advocacy working to enact legislative reforms that protect Texas homeowners and provide a level playing field with dealing with contractors, insurance companies, lenders, HOAs, and service providers.

He's a past member of FCC Consumer Advisory Committee, serving on Technology, Homeland Security, and Underserved Communities working groups. He has held leadership positions in various industry standards groups and was part of a grass-roots initiative that defeated >100 SBC lobbyists and protected the rights of municipalities to install their public wireless Internet services.