

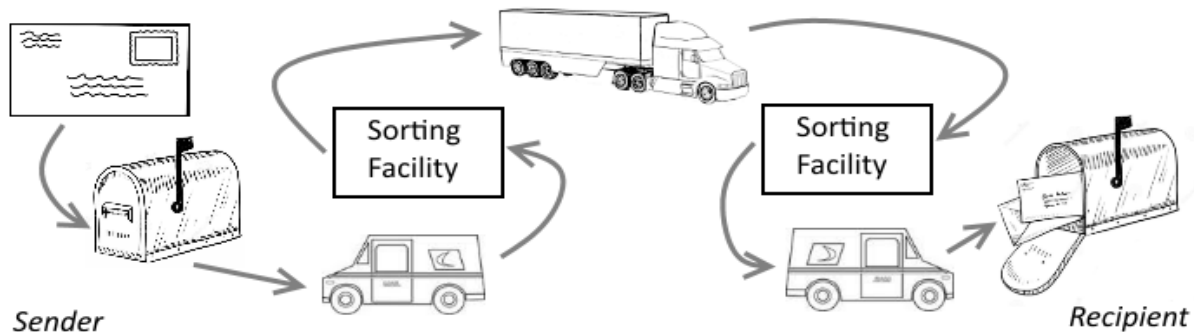
## Understanding How Email Works

By Joe Magura, Director of IT and Software Development

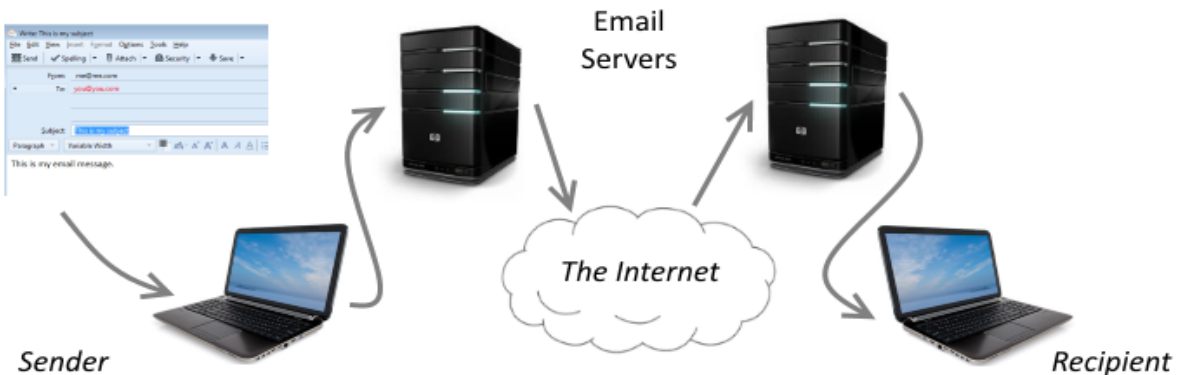
Like most things in life, email is great until it isn't. It's easy to dash off a quick note to a colleague or friend and just click send. But when that note isn't delivered to the intended recipients, we're often left confused, frustrated, and even angry. My goal in this article is to help you understand how email works (and doesn't) without a lot of technological jargon so you can better appreciate when it does work (and when it doesn't.)

In a way, email suffers from its own success. When it is working flawlessly, you can send a message and the people on the "To" line get it within a split second. We can't imagine email NOT working this way. But the fact is, email delivery is pretty complicated, with lots of "moving parts," as techies like to say. To give you some appreciation, let's compare how a paper letter travels from sender to recipient with how email makes the same journey.

### Mail Flow in the Real World



### Mail Flow in the Electronic World



In this diagram, we see that sending a letter is, in itself, pretty complicated. Once the postal worker picks up your mail, an entire network of sorting facilities, long-haul trucks, perhaps even airplanes and ships, carry your humble envelope. And the entire process of sorting and routing is reversed at the other end with the result, we hope, that your letter arrives in the addressee's mailbox.

Email routing is really very similar—when you click “send” the email message gets transferred from your computer to an email server, usually hosted by your Internet Service Provider (ISP) or perhaps by your firm. By parsing the email addresses on the “To” line, the mail server is able to send the message to the email servers that handle email for the intended recipients. This routing is done over the Internet, which is itself a web of servers and network gear all connected by cables and fiber optics and even radio or satellite links. At the receiving end, the email server for the addressee accepts the email message, notifies the individual that it's arrived, and waits for its retrieval.

That's how both systems are supposed to work. But sometimes they don't. In the case of mail, letters can get lost in the postal worker's truck or eaten by an automated mail sorter or the stamp could disappear. Unfortunately, mail trucks and planes even crash sometimes! We tend to recognize, since we, too, have to travel the roads and deal with mishaps and losing things, that mail delivery isn't a sure thing. It's a pretty good bet, but it's not guaranteed.

Email delivery isn't a sure thing either. There are the problems we've all experienced before: mistyped email addresses that lead to email “bounces” or letting your inbox get so full you exceed your quota and can't receive new email. There are more mysterious failures that our IT people try to explain with expressions like, “their server must have crashed, your message was lost” or “their ISP is down so they won't get your email for a while.” Email has to flow just like paper mail and sometimes it can't for reasons that are beyond our control.

So what does all this mean to us in the real estate business? Since we rely on email to deliver time critical requests and important legal documents, email, as it's replaced paper mail and faxing, has become an essential communications medium. Let's look at some aspects of email important to our industry that can impact our effective and private use of email:

- Secured email: Trucks that carry paper mail are padlocked since the roads are open to both law-abiding citizens and thieves. The Internet where your email messages flow is like the road system—unsecured from intrusion. It is possible, although not easy, for unauthorized parties to read the content of email messages as they are routed through the Internet. Secured email is the equivalent of padlocking your message. Through encryption that encodes the message so it can't be easily read, a secured email system keeps your emails and attachments from prying eyes.
- SPAM or unsolicited email: If you are like me, you sort your paper mail over the recycling bin so you can promptly trash the flyers and coupon leaflets as you separate the wheat from the chaff of modern postal mail. When it comes to email, your ISP, and even your email client software, such as Outlook, try to do this for you—effectively hiding messages that they think are junk mail. The only catch is, just as you might accidentally drop a bill in with yesterday's yogurt cup, some SPAM filters end up suppressing valid email messages. One common misconception about SPAM filtering is that it's static—if an email to an addressee gets through today it will also get through tomorrow. The problem is the people that send SPAM are ceaselessly working to slip their messages past the protective SPAM filters. This means the

maintainers of the filters are, in turn, constantly updating their systems to weed out the newly-crafted SPAM. All too often the victim of this raging war is the innocent and valid email message!

- Delayed delivery: Just as mail delivery trucks have difficulty driving through snow-covered roads, sometimes email experiences delays. The delay could be anywhere along the path between you and the intended recipient. It's important to keep in mind that it's impossible to know when you *aren't* getting an email message! As the sender you know you sent the email, but the recipient, those who lack ESP, have no idea that they should have gotten it!
- Getting Hacked: Every email account is protected by a username and password. Everyone has been guilty of using a weak password or keeping the same password in use for too long. The problem is hackers use sophisticated tools and good old fashioned research and trickery to gain access to other people's accounts. Once they have done so, they can send emails that appear to be from you, harvest your address book to sell to spammers, and even spread malware in emails they send while masquerading as you. Other than the obvious warning to protect your own account, it's important to always be suspicious of emails you receive, even ones that look valid. Opening attachments or even clicking on links within the body of the email could trick you into divulging your credentials or infect your system with malware.

Here at Attorneys Title, we have developed a set of policies that seek to strike a balance between our mission to provide you with the best and most responsive customer service possible while still maintaining the security and integrity of our computer systems. The fact is, threats like malware and hacking sometimes mean that we have to compromise between responding quickly and acting safely.

For example, since secured email notifications closely resemble a type of email attack known as "phishing," we have developed a process whereby we vet any notification from a new secured email vendor to insure its validity. While this will inevitably delay our response to your first secured email, it is essential since the risks of clicking on unsafe hyperlinks in an email are so great. Ultimately, by protecting our IT systems from malware infection or hacking we're acting to insure that we're available to provide you with our services and are also helping to keep our communications with you safe and secure.

What can we take away from this overview of email? Perhaps the most important message is this: while it usually works, email is not as "sure fire" as we might think. You can trust that the staff at Attorneys Title will respond to any correspondence we receive from you in a prompt and efficient manner. If you haven't heard from us we suggest that you call to follow up—it's possible your email never arrived or might have been flagged as SPAM. Similarly, we encourage you to check your own junk mail folders to make sure our efforts to reach you haven't been hidden by your own protective systems. Ultimately, we are all in the same boat—highly dependent upon the complex set of technologies that filter and deliver email, but all sharing the same goal of getting the job done safely and efficiently.