



## SIMformation

### Trends to Watch in 2019

As has become our custom here at SIMformation, we take the first edition of the new year to gaze into the tech crystal ball to see what the industry sees as the hot topics for the year to come. So, here we go. If 2018 was the year of the data breach, the thinking among IT pros is that this will be the year companies take concrete steps to prevent future breaches. A recent poll found privacy and security to be the top enterprise tech issue for 2019 (45%), followed by artificial intelligence (30%), cloud computing (16%), and blockchain (9%).

Since we have been dealing with data security since the first days of the PC, what will be different in 2019 to finally make an impact in improving security? Insiders believe that advances in cloud computing and blockchain will help organizations better protect their data. Though these aren't new technology trends – after all, both blockchain and the cloud were hot topics throughout 2018 – how businesses utilize these tech tools for their operational security will likely transition dramatically. Also, advances in cybersecurity will help, particularly encryption technologies and securing data in the cloud/collaboration tools. Data governance and data privacy regulations are also important, with HIPAA perhaps evolving due to the GDPR regulations that went into effect in 2018.

Other enterprise technology trends to watch for in 2019 include Artificial Intelligence (AI), a perennial front-runner in the “what’s new and exciting” arena. Insiders feel AI will make significant inroads, but not as quickly as many expect, because it is still too hard for many to do. As a result, the biggest trend this year will be about making significant advances to user interface simplification – making software tools available to the masses and not having to require advanced data scientists to do every analysis.

Others see advances coming from AI-enabled chips that will increase the speed by which AI can execute programs, enabling improved workload management and predictive analytics. Companies that do implement AI will get a dose of reality on what AI and machine learning can easily do versus what takes long term, ongoing investment. Smaller companies will likely reconsider their AI investments, but more enterprises and large companies will take more steps to leverage the technology, as well as machine learning.

Some of this will come because there are more AI tools and technologies that make working with data, AI, and machine learning easier. Even deep learning is becoming more mainstream. Others will take basic steps with their data and agile practices, then take on modest AI proof of concepts, in part because the technology will converge with the Internet of Things (IoT) and the Industrial Internet of Things (IIoT)..

Expect cloud computing to push ahead in 2019, with adoption rate further increasing, reaching new markets and industries. In fact, a cloud computing study conducted by IDG Communications in August 2018 found nine out of 10 companies will have some part of their applications or infrastructure in the cloud by 2019; the rest are expect to follow by 2021.

Blockchain made its mark in 2018 — some say it might even have been over-hyped — but 2019 will be the year when real-world use cases emerge. It’s an essential technology, but it’s misunderstood, as the distributed ledger technology is more than a tool for the financial industry.

One of the exciting prospects for blockchain is with network security. Software-defined networks (SDN) are an ideal fit for it, experts believe. Blockchain-enabled SDN would substitute a cryptocurrency transaction for an information-based transaction between network devices. Instead of a network manager handling bugs, patching servers, updating software, or monitoring performance, they could instead focus on more strategic technology initiatives; for instance, working with an artificial intelligence (AI) to optimize the blockchain-enabled SDN. Blockchain technology will also likely disrupt the IoT and cloud-based infrastructures.

But the Enterprise is not the only focus for the coming year. Many insiders believe that 2019 will be the greatest Windows to Mac migration in history. Windows users are about to come to a fork in the road as extended support for Windows 7 ends on January 14, 2020. This is deeply significant.

Not only are most enterprises exposed to multiple cyber attacks on a daily basis, but deploying systems that are no longer supported and that may have gaping security flaws could leave business users exposed to more – potentially making them liable to prosecution by customers or statutory authorities. That’s even before one stops to ponder the need to deploy computer systems fit for future purpose as digital transformation revolutionizes every industry.

In addition, Microsoft’s plan to end support for Windows 7 will leave well in excess of One Hundred Million users stranded on the 10-year-old OS. These users will either have to migrate to Windows 10 or move to Apple, and given the frustration with Microsoft products, buggy updates and cumbersome code, many insiders believe this will be the break point where users will shift away from the Windows world and move to the Mac OS. Plus, iPhone users are accustomed to the Apple interface and won’t have issues with moving to it in the business world.

So, we will watch and see if these predictions truly come about for this new year. As always, SIMformation will be here keeping an eye out for you and reporting back monthly.

## Is It Good-Bye, Cortana?

That might be what Microsoft is contemplating saying to its digital assistant. Cortana, or at least Cortana as we know it today. Cortana has been struggling. It hasn't reached the mobile ubiquity of Apple's assistant, Siri, or made any headway into the booming market for smart speakers as have Amazon's Echo and Dot and Google Home.

How far behind is Cortana? Reports this summer said that Amazon had sold 50 million smart speakers. Google's smart speaker sales have been surging as well. In fact, the analyst firm Canalys found that Google's smart speakers outsold Amazon's for the first time in the first quarter of 2018, selling 3.2 million units to Amazon's 2.5 million. Cortana? Sales of the only smart speaker with Cortana built into it, the Harman Kardon Invoke, were too small to measure. And although Apple is essentially a no-show in the smart speaker market, Siri is so popular on Apple's mobile devices it's essentially become a cultural touchstone.

What does that mean? A look at a deal between Microsoft and Amazon about how Cortana and Alexa will work together provides some clues. In August 2017 the companies announced their deal. The companies agreed that you could open up Alexa from Cortana, and vice versa, by saying "Alexa, open Cortana" or "Cortana, open Alexa," and then issuing a voice command for the appropriate digital assistant. What ultimately does that mean for Cortana? In essence, when it comes to smart speakers, Cortana will likely become merely one Alexa skill among tens of thousands of others. Beyond that, Cortana will probably live behind the scenes in Windows, offering help to people when they do things like trying to find a convenient time to schedule meetings and other kinds of productivity tasks. That may sound like a deal between equals, but it's not. Smart speakers do their magic using what are called "skills," which are essentially voice applications for things like playing music, controlling a smart home, playing games, interfacing with business and productivity applications, and much more. The effectiveness of a smart speaker and digital assistant depends entirely on the variety and usefulness of those skills. Amazon announced via a blog on Sept. 1 that Alexa had more than 50,000 skills. Microsoft hasn't recently divulged how many skills Cortana has, but at the end of 2017, it had only 230 of them. (Alexa at that time had 25,000.)

But here's the thing about all this bad Cortana news. Microsoft's willingness to downgrade Cortana instead of getting into a long-term, multibillion-dollar losing war against Amazon, Google and Apple in the digital assistant business shows the company has learned from the past. Microsoft may have finally shed the belief it can win every fight by spending billions of dollars and using Windows as a battering ram. So saying goodbye to the current iteration of Cortana could be a good thing for the company, not a bad one.

## Firefox to Warn of Breaches

Mozilla has added a data breach notification to Firefox that warns the browser's user when their e-mail address and credentials may have been obtained by hackers.

Called Firefox Monitor, the free breach notification service was released in September. Anyone, not only Firefox users, can go to the service's website, enter an e-mail address, and be told if that address was among those involved in a successful, publicly-known breach. After that, it is up to the user to take appropriate steps such as changing passwords for that account. As a Mozilla spokesman said, "Your e-mail address will be scanned against those data breaches, and we will let you know through a private e-mail if you were involved."

Mozilla has also added a notification to Firefox browser users that alerts desktop users when they visit a site that has had a recently-reported data breach. Users will need to visit the Firefox Monitor site to see whether their e-mail address was one of those exposed in the breach. This alert does not mean that the breach definitely affected the user. The in-browser alert has a link to the Monitor website so the user can verify if they are involved in a breach.



Each hacked site will only produce one alert, so you won't be nagged constantly about this issue, and only breaches within the past 12 months will generate the warning.

Mozilla will gradually enable the Monitor function in Firefox, and IT insiders expect to see it in the December release of Firefox 64. The service has been developed in conjunction with the "Have I Been Pwned" database, which is a service that tracks data breaches and affected accounts. In addition to reporting on possible involvement in a breach, the Monitor website offers tips on improving your security such as complex passwords or two-factor authentication. For example, one tip is to use those security questions many websites ask as a second password, where you can enter any random answer – after all, these do not score you on the accuracy of the information, only that the answers match what you entered initially.

More information can be found at the website for this service:

<https://monitor.firefox.com>

If you find your information has been exposed, SIM2K can help you take preventative steps to protect your accounts. Contact us for more information.

## Life or Death Choices

While the tech world is “gaga” over what artificial intelligence (AI) will bring to technology, it sometimes takes an outsider’s viewpoint to make you realize that AI may not have all the answers or deliver the best outcome every time.

This was brought home in a recent issue of Motor Trend magazine. While the focus of the article was on self-driving cars, the article began with posing a troubling scenario. In summary, what the Motor Trend editor posed was this – you are driving on an Interstate at high speeds, there is a Mom and baby in an SUV to your right, a motorcyclist to your left, and then the truck in front of you drops a heavy object directly in your path. For dramatic emphasis, the editor asks, “who dies here?” Will the AI system driving the car swerve left, right, or try to brake in time only to collide with the object. The article says, *“Autonomous technology adds an active element to (the calculation of potential damage). When a collision is unavoidable, it has the potential to be able to direct the vehicle to hit the smallest and lightest of objects – the motorcycle rather than the SUV, for example – to enhance the probability its occupants will survive. That outcome is the direct result of an algorithm, not instinct. so who bears the responsibility for the death of the motorcyclist? The programmer who wrote the algorithm? The automaker that determined such an algorithm should be part of its autonomous vehicle’s specification? The person whose journey put the motorcyclist at risk? Good questions. No easy answers.”*<sup>1</sup>

This is what technology must remember about AI. Somebody, somewhere, wrote a line of code that resulted in some action. AI doesn’t “learn” like people do. While it may be able to scrutinize options much faster than people, in the end, the final choice depends on what some codewriter told the program to do. Computers still only recognize “one” or “null” in the bit of data it is processing, and somebody had to tell it what to do with this information. What if the programmer gets it wrong?

In the case of self-driving cars, this is why testing is still ongoing with no end in sight. How can a car “learn” all the potential issues it might face out in the real world. And even with a human observer, a self-driving car still ran over a pedestrian (as the observer was streaming videos on her phone and not watching the outside world). So will AI ever be ready to replace people behind the wheel. And cars are only one market segment where AI is supposed to make our lives better. We better hope that the programmer made the right choice if the AI system is supposed to be shutting down the runaway nuclear reactor.

This is not to disparage AI, but only to raise the caution that we in the tech field often get caught up in the “gee whiz, look what we can do” mentality and don’t see past the end of our nose. If we truly want “better living through technology” it has to come in a measured way.

## “Random Tid-Bytes”

### Microsoft Windows 10 Finally Passes 7

Nearly three and a half years after its release, Windows 10 last month surpassed its enterprise predecessor, Windows 7, as the most popular operating system on the planet. According to analytics vendor Net Applications, Windows 10 jumped by 1.1% in user share in December, climbing to 39.2% of all personal computers and 45.5% of all PCs running Windows. (The second number is larger than the first because Windows does not power all PCs; in December, Windows ran 86% of the world’s systems. Most of the remainder ran macOS, Linux or Chrome OS, in decreasing order.) Meanwhile, Windows 7 lost 2 percentage points last month, four times the loss of November and the largest one-month decline in over a year. Windows 7 ended 2018 on 36.9% of all personal computers and on 42.8% of all Windows PCs. When Windows 7’s support ends, it should be powering slightly more than 36% of all Windows PCs, while Windows 10 will be running 55%. The first number - the projected user share for Windows 7 at its retirement - fell from the month-ago forecast (which pegged it at a record 40%) because the 2009 OS returned to a large decline in December. By comparison, Windows XP accounted for 29% of all Windows PCs when it dropped off the support list. Six months after Windows 7’s support expiration date, the OS should still power between 32% and 33% of all Windows PCs. By then, Windows 10 will have climbed to approximately 59%. In plainer terms, there will be lots of personal computers running the then-outdated Windows 7 without the safety net of security updates.

### Alternate Browser Falls Back into “Chrome-land”

Brave Software just completed a months-long alignment of its Brave browser with Google’s Chromium open-source project, ending a stretch when Brave crafted its own user interface (UI) even as it ran Google’s rendering engine. Although Brave adopted Chromium – the open-source effort that generates code for Google’s Chrome – at its inception, Brave started with “Muon,” an HTML-JavaScript front-end its developers had built. As of January 1, however, Brave relies on the Chromium UI. In plainer words, Brave has gone “full-Chromium.” Importantly to users, the full-Chromium Brave has access to the add-ons hosted by Google’s Chrome Web Store. Those add-ons can be installed from within Brave, although some - those Brave hasn’t itself vetted - will display a warning prior to installation. Brave also claimed a major speed boost by dropping Muon, saying that its average page load time would be 22% faster. So if you are a fan of a different browser experience, Brave may or may not be what you are looking for.

### Microsoft to take on Chromebooks?

Windows Lite, a.k.a. Windows Core OS (WCOS), will come out in 2019, according to the rumor mill, prepacked on dedicated laptops. How much will Windows Lite resemble Windows 10? Not much at all, according those who have previewed the OS, Windows Lite will only run Progressive Web Apps (PWA) and Universal Windows Platform (UWP) apps. If that’s indeed Microsoft’s plan, there are two big problems with it right out of the gate. First, not being able to run normal 32-bit Windows apps is one of the things that killed Windows RT and has left Windows 10 S floundering in search of users. Second, what do you call a Microsoft OS that can’t run Windows programs? Does it really want to make the same branding mistake three times in a row? The Chromebook experience is set apart from Windows, not an embrace of it like Microsoft is attempting. We will see if this flies or not.

<sup>1</sup>Motor Trend, February 2019, pg. 98.

## Add-Ins for Microsoft Office

You probably use Microsoft Office daily for your business, but sometimes you want to do something that Word, Excel, PowerPoint and Outlook can't accommodate. Chances are good, though, that you can find an add-in that will give you that little extra something. Hundreds of add-ins are available, but surprisingly few stand out. Here are a few that may help your workflow. All of them install just like an extension for a web browser, and they'll all give you a boost whether you're using desktop Office apps or Office Online. Some are free, and some come with a monthly cost, and a few require an Office 365 subscription.

**Boomerang** adds a lot of features to Outlook. The most useful for everyday work: It lets you schedule an e-mail to be sent at a later time or on another day. You can also tag an e-mail that you've sent with a reminder to notify you on a later day and time you choose, so you can follow up on it. It helps you schedule meetings by embedding a table of potential times in an e-mail – recipients can click on the times that work for them. All incoming e-mails can be paused, or only e-mails containing certain keywords or from a specified domain or person can be let through. You can get limited access to Boomerang's basic features for free. When billed annually, personal plans run \$5 per month, and the pro plan \$15.

**DocuSign** is handy if you're writing a contract or other document in Word that will require a signature. This add-in lets you implement the digital signature service of DocuSign within that document. You tag the areas of the document where you want the other parties to type in information (e.g., address, date, name) and where they need to digitally sign with the DocuSign service, which meets the eSignature legal standard. You can e-mail the completed document or automatically save it to DocuSign's servers. The DocuSign add-in for Outlook lets you digitally sign a document you've received attached to an e-mail or to e-mail a document that you need signed by someone else. After you install this add-in and sign up for a DocuSign account, you can use it for free for 30 days. Afterwards, plans start at \$10 per month when you prepay for a year.

Microsoft's own free add-in **FindTime** helps you and your co-workers schedule a time when everyone is available for a meeting or other event, and it does this completely through Outlook. FindTime shows you the days and times when all the people can participate, determining this information from their calendars. You select a list of these days and times, and FindTime e-mails them to your co-workers so they can vote. After the day and time with the most votes is determined, FindTime will send out invites to everyone for the meeting.

**MergeCells** is for those who work with Excel. With this free add-in, you can merge the values of columns, rows or selected cells. You choose where on your spreadsheet you want the end result to be placed and whether you want the merged values to have a delimiter to separate them inside their newly merged cell, column or row. In the sidebar panel of Merge Cells, you can see a preview of what a merged result you selected will look like before committing to it.

The developer of this add-in has five other add-ins that also

perform niche tasks for Excel, such as changing the capitalization of letters in cells, generating random numbers and randomly sorting columns, rows or selected cells.

**MiniCalendar and Date Picker** is free add-in lets you insert a small, prebuilt calendar into your spreadsheet, and users can then interact with it. For example, if your spreadsheet requires users to enter a date, this calendar lets them do so by clicking on it. This calendar also lets you input the current time into a designated cell. Overall this can be a useful interactive element you can incorporate into a ledger or timesheet you're designing in Excel.

**Pexels and Pickit** are free add-ins let you search through a library of stock images that you can legally use for free in your PowerPoint presentation or Word document. Pexels and Pickit appear as a sidebar with a search box that you summon along the right side of PowerPoint or Excel. Type in a word or phrase to find images tagged with that description. Pexels also lets you search images based on the main color that is dominant in it, but it is otherwise a bare-bones image search tool. Pickit offers more search flexibility, such as browsing categories of images and searching separately for illustrations or photos. If you pay for Pickit Pro, you get access to more images and ones that are in higher resolution. Pro is \$10 per month, or \$5 per month when you prepay for a year. With the Pickit Business edition (variable pricing),

businesses can upload their own images so that their users can search through company and Pickit assets at the same time.

**XLTools.net Data Cleaning** lets you do cleanup and necessary editing of spreadsheets that were sloppily designed or where unnecessary values were entered into cells. You select a column or row, or highlight a range of cells. Then, through the sidebar panel of this add-in, you can change the capitalization of letters or change number format to text format (and vice versa), or remove unnecessary spacing and unprintable characters in them. Data Cleaning is free.

Finally, when you send an e-mail, how do you know whether the recipient has read it? **Yesware** can verify that your e-mail has been opened, thus confirming that it didn't get flagged as spam by your recipient's email service or that the recipient didn't ignore it. With this add-in installed, a "Send with Yesware" function is added to the e-mail composition window of Outlook. After you send your email, you can follow in the Yesware sidebar panel in Outlook, which will report when the e-mail was opened and whether a link you put in the email was clicked on by the recipient. Yesware isn't cheap. A plan starts at \$12 per month, when you prepay for a year. You can try it out for four weeks for free.

These add-ins may help your productivity and enhance the use of Office. For help, please call SIM2K.



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