

TMC'S ADVISOR

Covering IT and Telecom from a Canadian Viewpoint

April 2018 , Volume 5 Issue 3

False News Risks By Peter Aggus

Last month we looked at Social Media risks. If you felt safe because you avoid social media—think again. It turns out that you can have an analytics profile loaded with data about you and your business even if you have never signed up for a social media account. Even worse – the profile data may be untrue, posted by a competitor to gain advantage. This is the world of ‘false news’. Here are our recommendations about how to protect yourself.

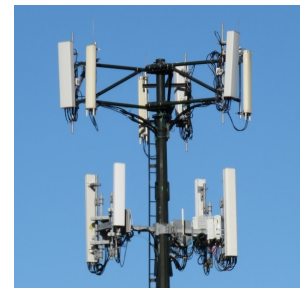
Not on Social Media?



You're Still Not Safe

5G Cellular By Bill Tracey

5G cellular has promised Gigabit/sec speeds for all users for some time now. It is ‘coming soon’ – we now see demonstration systems showing what the technology can do, and it is impressive. Some service availability dates have been announced. Here is what it will and will not do, how it works, and what you need to do to prepare for it.



How Do You Rate?

Our IT Assessment Team can identify your capacity to deliver and explain how you compare to best practices on:

- Reliability
- Staffing Levels
- Costs
- Customer Service

For a free copy of “What To Assess and Why”, Email: assessment@tmcconsulting.ca.

Run ?

Grow ?

Transform ?

Gartner's 2018 Tech Trends By Lee-Ann Dittrich

Gartner calls the entwining of people, devices, content and services the intelligent digital mesh. My favourite example is Honda's ‘Safe Swarm’ technology where vehicle to vehicle communications will allow safer merging, congestion and hazard information broadcast and even cooperative merging where other cars will make way for a new entrant to the roadway. Here are Gartner's top ten strategic technology trends for 2018.



Before You're Hit by a Bus By Ellen Koskinen-Dodgson

Here's the question—if you didn't show up for work (hit by a bus or whatever) and your infrastructure suffered a massive failure, what would happen? The magical best case is that there's someone at work who knows exactly what you know and can do what's needed to fix everything. The worst case is that there's a wealth of critical information stored in your head and your company can't fix the outage for days or more. Here's the minimum that you need.



False News Risks *By Peter Aggus*

Last month we looked at Social Media risks. If you felt safe because you avoid social media—think again. It turns out that you can have an analytics profile loaded with data about you and your business even if you have never signed up for a social media account. Even worse – the profile data may be untrue, posted by a competitor to gain advantage. This is the world of ‘false news’. Here are our recommendations about how to protect yourself.



Safety

Lots of people and businesses feel ‘safe’ and unexposed because they choose to not have a social media profile. However, it is becoming clear that not creating one does not mean that you do not have one, because the analytics companies create dummy profiles for people, companies and products where they perceive an interest from their clients.

If you or your products are visible on the internet, then it is worthwhile for analytics companies to collect and file data so they are ready to react to a future demand for information.

Play on Words

‘User data’ vs. ‘data about a user’ - you will have come across these similar sounding terms if you are following the ‘Congress vs. Mark Zuckerberg’ show. He promises to protect ‘user data’ but avoids the term of interest, ‘data about a user’.

The first is what ‘you’ provide—the second is what ‘they’ find out.

Remember that ‘they’ is not just Facebook. It is all those ‘free’ services that finance their operation by selling ‘information’. If you still have doubts that information has value, just look at

Not on Social Media?



You’re Still Not Safe

Facebook’s net worth and think where it came from.

The Dark Side

The data that you provide is, presumably, accurate but a significant part of the other data is based on opinions and may be factually incorrect. It is easy to post an opinion and to find people who will support it, right or not. Enter the alleged eastern-block ‘hackers’.

Users of this analytics data have no way of verifying its accuracy—so they often take the view that a ‘fact’ supported by more users than an opposite ‘fact’ is assumed to be the correct version. These analytics are often used by other online tools like YouTube—it is how they create ‘recommendations’, or ‘things you

might like’. It is also why viewers of articles positive to Trump were exposed to false news articles negative to Clinton—hence the alleged interference.

Correcting Data

You can, and should, make sure that all the ‘user data’ that you have supplied is correct. You cannot do the same about the inferred ‘data about users’, though you can take steps to find and address it.

Look for your name, or product, or company, checking with multiple search engines. This will expose most of the sources used by the web scraping tools of the analytics firms.

If you find wrong opinions, you can counter-post corrections. If they are badly wrong, you can request the web site owner to remove them—which will, in time, correct the analytics errors.

It is a tedious but vital process to protect your good name and should become a standard part of your business processes.

This article is reproduced from the April 2018 edition of *TMC’s Advisor*

©2018 TMC IT and Telecom Consulting Inc.

Peter, as an engineer & technology management consultant, has developed innovative & cost-effective solutions for clients in many industries.

Cellular As a Disrupter *By Bill Tracey*

5G cellular has promised Gigabit/sec speeds for all users for some time and it is now 'coming soon'. Demonstration systems are showing what the technology can do, and it is impressive. Even better, some service availability dates have been announced in the US so Canada won't be too far behind. Here is what 5G cellular will and will not do, how it works, and what you need to do to prepare for it.



Who Needs It?

Most millennials will want 5G as will anyone or anything with an appetite for data or a need for low latency (think decision making processes that are time critical like braking a car). At last we will have the network to support car-to-car and car-to-road communications and all the benefits that brings.

Further, think Virtual Reality and the Internet of Things, particularly uses that move, like cars, transit, pedestrians, drones and remote controlled everything (like surgery).

The Problems

We have not so far seen any demonstrations that 5G technology can replace 4G for use with hand-held devices. That may come, but millimeter frequencies do not penetrate well so 5G phones in bags or pockets are unlikely to work.

This means that 5G will be an overlay to serve heavy bandwidth users and new applications and that 4G will remain as the 'everywhere' backbone service. 5G deployment will be expensive given the very large number of base stations needed, so 5G will likely be restricted to heavy use corridors and areas.



The Technology

Millimetre wavelengths behave more like light than lower frequency radio, which means they don't penetrate buildings or go round corners well so lots more base stations will be needed.

The need for line-of sight suggests urban environments may well need base stations on about a 100m grid—a density 10 times that of 4G.

Current demonstrations focus on 'Wireless-To-The-Premises' (WTTx—last mile broadband) and back-haul for mobile platforms like cars, trains and busses—where external antennae can be used.

This suggests that a 2-tier network development is likely rather than 5G to hand-held devices. Your future portable device is likely to link to a

mobile hotspot using WiFi technology then on to 5G cellular.

Verizon promises 5G internet and AT&T promises 5G hotspots in some cities this year. Sprint and T-Mobile say 2019.

Meanwhile in Canada

Bell and Nokia are working on a pilot in Ontario and Telus is doing the same in Vancouver with Huawei. Data rates up to 30 Gbps have been demonstrated in a controlled environment.

Canada has announced (for 2020) the release of new spectrum in the millimetre band (28 GHz, 37-40 GHz and 64-71 GHz). This is 20 times the current 4G spectrum. No service dates have been identified.

How To Prepare

4G phones that can roam onto WiFi systems exist and will likely become more standard. Go for them if you have a choice. Defer purchase of WiFi cellular hotspots or data sticks for computers until options with 5G come out in a couple of years.

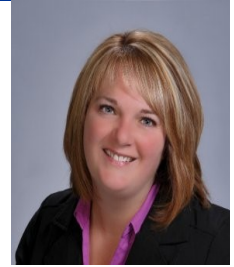
This article is reproduced from the April 2018 edition of [TMC's Advisor](#)

©2018 TMC IT and Telecom Consulting Inc.

Bill Tracey is a radio systems Design Engineer and consultant with over 25 years of experience with all types of radio systems. He is a trusted advisor to post-secondary, municipal, emergency services clients.

Gartner's 2018 Tech Trends *By Lee-Ann Dittrich*

Gartner calls the entwining of people, devices, content and services the intelligent digital mesh. My favourite example is Honda's 'Safe Swarm' technology where vehicle to vehicle communications will allow safer merging, congestion and hazard information broadcast and even cooperative merging where other cars will make way for a new entrant to the roadway. Here are Gartner's top ten strategic technology trends for 2018.



Intelligent Digital Mesh

Gartner has identified ten trends that hold the highest disruptive potential over the next five years.

Intelligent

1. AI will be a huge disruptor but it's still on the horizon. 41% of organizations are piloting or adopting AI programs, while the rest are working on their AI strategy. By 2020, 30% of CIOs will have it as a top five investment priority.
2. Augmented analytics will automate data preparation and insight discovery as AI is incorporated into applications and services.
3. Intelligent Things—for example, a robotic vacuum with a vision function, would need minimal intervention. Later, swarms of things would work cooperatively.

Digital

4. Digital Twins (see [March issue](#)), are complex models of things that can be 'what-iffed' to predict responses to new stimuli. This can even be applied to non-things such as a person to offer biometrics to doctors.



5. Major improvements in edge computing will support Intelligent Things and reduce bandwidth and latency to the cloud.
6. Conversational platforms will become the primary goal for the design of user interfaces. Think descendant of Siri and how much easier it will be to discuss your business (and personal) problems with your computer.
7. Immersive Experiences includes Augmented and Virtual Reality, AR and VR. For AR, think of a virtual display overlaid on a mechanic's view of a broken engine to help troubleshoot the problem. For VR, think of 'Star Trek, The Next Generation' and their recreational use of the Holo-deck.

Mesh

8. Blockchain maturity, while some years off, will go far beyond Bitcoin. It will become shared, decentralized and highly secure data storage systems that will be independent of applications and participants.
9. 'Event Driven' will become the design goal of business applications. For example, a combination of events, such as the completion of a purchase order, will trigger further events and analysis, further automating business processes.
10. 'Continuous Adaptive Risk and Trust' (CARTA), allows for real-time, risk and trust-based decision making with adaptive responses in digital business processes. This is much easier said than done, but the goal of integrating adaptive security responses into DevOps is a must to respond to the evolving global threat environment.

This article is reproduced from the April 2018 edition of [TMC's Advisor](#)

©2018 TMC IT and Telecom Consulting Inc.

Lee-Ann is a researcher and business analyst that oversees benchmarking studies.

Before You're Hit by a Bus By Ellen Koskinen-Dodgson

Here's the question—if you didn't show up for work (hit by a bus or whatever) and your infrastructure suffered a massive failure, what would happen? The magical best case is that there's someone at work who knows exactly what you know and can do what's needed to fix everything. The worst case is that there's a wealth of critical information stored in your head and your company can't fix the outage for days or more. Here's the minimum that you need.



Lofty Goals

IT professionals accept a new job as an IT Manager with the optimistic goal that they will help their organization transform into a digital paragon. They envision following ITIL guidelines and becoming an industry leader in all IT processes with the associated recognition and appreciation. Somehow, that never happens.

Enter Reality

You have a great plan to meet with user departments to understand their needs and priorities, then update the IT Strategy, then build a roadmap for change. You start your round of introductions but get flooded with requests for fixes and minor improvements.

Departments buy systems and let you know with an "Oh, by the way..."

Fighting Fires

Day after day flies by and you're much too hands-on—but you have no choice, fire fighting is always a top priority. Clearly in the Run-Grow-Transform continuum, you aimed for 'Transform' and reality forced you into



'Run'. You're 'keeping the lights on' and stretched thin doing that.

If Nothing Else

Before another day goes by, sketch out the minimum set of information that your department would need if you or another critical team member were unavailable. Ask other staff what information that they would need to know.

Examples of this information could include:

- Network map showing locations, and connectivity of all devices and services.

- Document programs, versions and updates including default settings. This can also ensure licencing and update compliance.
- Configuration for each device
- History of all configuration changes for each device to allow a roll-back to a previous configuration if a change has caused a problem

Even Better

Full documentation is always best as the person tasked with fixing the IT problem may need more information such as how to access the rooftop in Building X.

The Best

Add in a good business continuity plan including understudies for all vital staff. Test the plan to assess how your staff cope.

Invest in an audit. The recommended changes and funding requirements are best received by management when delivered by an outside expert.

This article is reproduced from the April 2018 edition of **TMC's Advisor**

©2018 TMC IT and Telecom Consulting Inc.

Ellen Koskinen-Dodgson is President and Managing Partner of TMC IT and Telecom Consulting Inc. She is an IT and Telecommunications Management Consultant, electrical engineer, author, speaker, media resource and Expert Witness.