

# 5G – An undeniable Risk

## A Forum for White Plains and Beyond

Canadians for Safe Technology  
Frank Clegg

Oct. 25, 2022

# Bio and Organization's Focus

**President of Microsoft Canada** – Most recent position

- 40+ years in the technology industry
- Focused on children's internet safety since 2004



**C4ST: Canadians for Safe Technology (CEO and Chairman)**

- Not-for-profit, volunteer-based, national coalition of **parents, citizens and experts**
- To **educate & inform Canadians** – dangers of exposures to radiation from wireless technology
- To work with **all levels of government** to create healthier communities for children and families from coast to coast to coast.



**Environmental Health Trust (Co-Chairman Business Advisory Group)**

The only nonprofit in the world today that both:

- Carries out research on controllable environmental health hazards, and
  - Works directly with local communities, teachers, parents & students as well as policy makers to understand & mitigate these hazards through research, education & advocacy.
- Please reference: <https://ehtrust.org/>



# Wired Solutions Should be Prioritized Over Wireless

Technology industry is not motivated to explore wired solutions

## Wired solutions vs. wireless:

- Consume up to ten times less energy<sup>1</sup>
- Are at least 100 times faster<sup>2</sup>
- Are more reliable and resilient
  - Wired phones work during a power outage (ice storm, hurricane).
  - Wireless cell networks are constantly upgraded whereas cable or fibre is laid once.

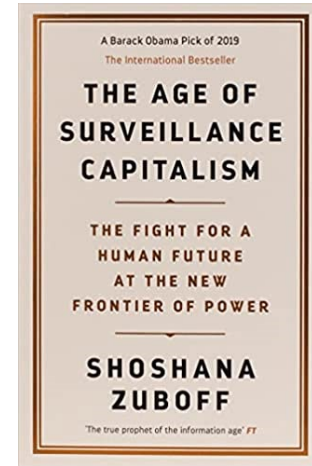
<sup>1</sup>Publisher: IEEE – “Energy consumption in wired and wireless access networks”

<sup>2</sup>Penn State University Press – “Let Them Eat Cellphones: Why Mobile Wireless is No Solution for Broadband”

# Wired Solutions Should be Prioritized Over Wireless

## Wired solutions vs. wireless:

- Protect security and privacy better
- Decrease the points of vulnerability
- Reduce risk to personal and business data



## Twelve Million Phones, One Dataset, Zero Privacy

New York Times [Privacy Project](#)

Analysis of a file that contains

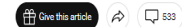
- more than 50 billion location pings
- from the phones of more than 12 million Americans
- as they moved through several major cities, including Washington, New York, San Francisco and Los Angeles
- originated from a location data company, using software slipped onto mobile phone apps
- track where you eat, visit, socialize, get medical treatment, etc.

Opinion | [THE PRIVACY PROJECT](#)

## Twelve Million Phones, One Dataset, Zero Privacy

By Stuart A. Thompson and Charlie Warzel

DEC. 19, 2019



EVERY MINUTE OF EVERY DAY, everywhere on the planet, dozens of companies — largely unregulated, little scrutinized — are logging the movements of tens of millions of people with mobile phones and storing the information in gigantic data files. The Times [Privacy Project](#) obtained one such file, by far the largest and most sensitive ever to be reviewed by journalists. It holds more than 50 billion location pings from the phones of more than 12 million Americans as they moved through several major cities,

# Wired Solutions Should be Prioritized Over Wireless

- A 5G base station is expected to consume roughly three times as much power as a 4G base station.<sup>1</sup>
- 5G technology satellite interference could result in a 30% reduction in weather forecast accuracy.<sup>2</sup>
- If the cloud was a country, it would be the fifth largest consumer of energy in the world.<sup>3</sup>
- Concerns are being raised about the cloud's energy consumption<sup>4,5</sup>
  - Impact on the environment
  - Potential risk to taxpayers with long term energy deals signed by governments

<sup>1</sup> IEEE Spectrum - 5G's Waveform Is a Battery Vampire

<sup>2</sup> Washington Post - Head of NOAA says 5G deployment could set weather forecasts back 40 years.

<sup>3</sup> <https://www.greenpeace.org/static/planet4-international-stateless/2012/04/e7c8ff21-howcleanisyourcloud.pdf>

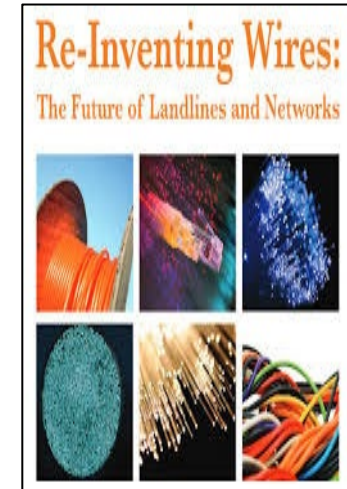
<sup>4</sup> IEEE Spectrum Cloud Computing's Coming Energy Crisis The cloud's electricity needs are growing unsustainably

<sup>5</sup> Bell Labs and the University of Melbourne – The Power of Wireless Cloud

# Wired Solutions Should be Prioritized Over Wireless

Timothy Schoechle, PhD

- Communications technology expert, international consultant in computer engineering and standardization
- Former faculty member of the University of Colorado, College of Engineering and Applied Science
- Senior Research Fellow, National Institute for Science, Law & Public Policy (NISLAPP)



*“Corporations will invariably seek the cheapest, quickest, and most profitable path, which has led to the current emphasis on wireless.”*

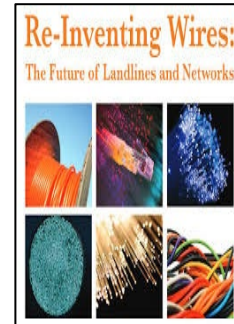
*“The public needs publicly-owned and controlled wired infrastructure that is inherently more future-proof, more reliable, more sustainable, more energy efficient, safer, and more essential to many other services.”*

[ReInventing-Wires-1-25-18.pdf \(electromagnetichealth.org\)](#)

# Examples of the Benefits of Fibre

*In Chattanooga, TN, a \$220 million investment has yielded \$865 million in economic growth*

*In Longmont, CO, a new municipal broadband system there provides access to fast, inexpensive \$49/month 1 Gigabit service*



## Canada

*The Connected Coast project:*

*<https://connectedcoast.ca/about/>*

*Backbone communication services to 139 rural and remote communities, along the BC Coast from Prince Rupert, south to Vancouver and around Vancouver Island.*

*The project is approximately 1/3<sup>rd</sup> complete with close to 1,000 kilometres of fibre-optic cable laid*



# Financial Considerations

## Insurance Industry Concerns

- In 2010, Lloyds compared the potential **risks from health damage claims to asbestos**
- In 2013, Swiss Re listed the “unforeseen consequences of electromagnetic fields” as **potentially having a high impact.**
- In 2019 Swiss Re update report states:
  - Current health concerns from electromagnetic fields are likely to increase.
  - Hackers can also exploit 5G speed and volume to acquire (or steal) more data faster.
  - Major concerns are possible privacy and security breaches and espionage.

## Revenue and Cost Concerns

- Pharmacy, chemical and automotive industries are required to prove products are not harmful before they are released to the market.
- There is no analysis of the full economic burden of wireless technology: health costs, lost productivity costs, cost of security breaches, ransomware, property damage from reduced weather forecasting ability