The 5G Trojan Horse – A Documentary by The Conscious Resistance

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The Conscious Resistance Network Presents:

The 5G Trojan Horse

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This 96 minute documentary will expose the truth behind the global "Race to 5G", the health, privacy, and local power concerns, and the corruption between the Big Wireless industry and the U.S. government.

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My name is Derrick Broze. For the past 8 years I have worked as an independent freelance investigative journalist in Houston, Texas. Since 2012 I have covered a wide range of topics, from indigenous resistance at Standing Rock, exposing government and corporate surveillance, and reporting from

important trials like Chelsea Manning's sentencing, and the Silk Road trial. Throughout this time, I have noticed that choosing to investigate certain topics, often results in being labeled a conspiracy theorist, or, at the very least, a proponent of less-than-credible journalism. One of these "forbidden" topics relates to potential harms caused by the use of cell phones and related digital technology.

Over the years I have seen articles discussing research on the dangers of radio frequency radiation and electromagnetic fields. Again, I noticed these studies never made mainstream newspapers, or headlines on the 24 hour cable news cycle. Even if the news had reported on this information, *would it have made a difference?*

I – like millions of people around the world – never gave a second thought to the possibility that cell phones or laptops could be causing harm to human health. We assume that the government agencies responsible for these fields have tested everything for safety. I started to wonder *Has this blind faith in authority been a huge mistake?*

My ignorance of these topics came to an end in September 2018 when I learned that the City of Houston had recently partnered with companies like Microsoft and Verizon to turn Houston into a "Smart City". This Smart City would use emerging 5g technology to power the so-called "Internet of Things", which In turn will allow for autonomous vehicles, robot assistant's, artificial intelligence, sensors in the street to moderate street lights and environmental warning systems, and many other futuristic technologies we have been promised.

At this time, I had little understanding of what exactly 5g was, but my preliminary research had shown me that there was an increasing amount of people raising questions about the potential health and privacy concerns. I also learned that there were lawsuits taking place across Texas and around the world, as the opposition pushed back against the federal

government and the wireless industry seizing power from towns, cities, and states.

On October 1st, 2018 Houston Mayor Sylvester Turner held a press event with officials from Verizon wireless. The Mayor and Verizon CEO Hans Vestberg were on location at a Houston couples home as they installed 5G equipment and helped the young couple become "the world's first 5g customer".

DB: *Mayor Turner, as far as moving forward with innovation and wanting to be the first, has anybody stopped to look at any studies related to potential health effects of increasing the amount of small cells in the city, as well as privacy concerns that the American Civil Liberties Union and others have put out concerns regarding the push towards smart cities?*

Houston Mayor Sylvester Turner: *you know, I haven't seen any recent studies on it. I mean the reality is that, umm, if you want to move things quicker, if you want to innovate, you've got an installation that, I mean, the infrastructure is critically important"*

DB: *is there any concern about the health effects of the increase in small cells?*

Hans Vestberg, CEO Verizon Wireless: *The studies that have been done over years, has not shown any effects or health effects on the radio signals and there's no difference. There are safety rules on all of it that is regulated by the regulators, how much power you can use.*

I was not satisfied with their answers. I did more research and the following week I attended Houston City Council to share what I had found with the Mayor and Council. (video) This visit to council was followed by another, and another, and another. These videos gained more than 900,000 thousand views via Youtube alone, leading dozens of activists from around the world to reach out and encourage me to keep going.

I was also featured on local news discussing the concerns around the 5g roll out. I confronted the Mayor of Houston for his close ties to the Wireless Industry and ignoring the concerns about 5g. The Mayor ran away from my questions at City Council and on 3 different occasions in public (1, 2, and 3). In fact, due to the response from the Mayor and the City, I ran a campaign for Mayor of Houston, calling for a moratorium on the installation of 5g towers until further studies.

Over the last year my research has involved interviewing health and privacy experts, and uncovering the truth about the Race to 5g. What I have learned is that the industry known as Big Wireless is colluding with the Federal Communications Commission to create a false demand for 5g technology, in total disregard to health and privacy concerns, all the while using the 5g rollout to strip away local power. I offer the conclusions of my research, in the hopes that it will encourage the public to question and oppose the promises of …. **The 5g Trojan Horse.**

Chapter 1: Understanding the Electromagnetic Spectrum

To have a discussion on 5g we first have to talk about Electromagnetic frequencies or EMFs. An emf is a measure of how many times the peak of a wave passes a particular point per second. It is measured in Hertz. This range of potential frequencies makes up what we call the electromagnetic spectrum.

The electromagnetic spectrum is divided into separate bands, and the electromagnetic waves within each frequency band are called by different names, including radio waves, microwaves, infrared, visible light, ultraviolet, X-rays, and gamma rays at the high-frequency (short wavelength) end.

Within those bands, gamma rays, X-rays, and high ultraviolet

are classified as ionizing radiation, meaning they have sufficient energy to ionize atoms, causing chemical reactions. Exposure to these rays can be a health hazard, causing radiation sickness, DNA damage and cancer. Radiation from visible light and lower wavelength are called nonionizing radiation because they apparently cannot cause these effects. We will revisit the science around ionizing and non-ionizing radiation in a moment.

What is 5g?

Devices like Cellphones, Wifi, and Bluetooth all operate on the microwaves band of the spectrum. When it comes to cellphones, a new generation of cellular standards has appeared approximately every ten years since 1G systems were introduced in 1979 and the early to mid-1980s. Each generation is characterized by new frequency bands, higher data rates and non–backward compatible transmission technology.

The 2nd Generation, or 2g, featured cell phones with texting and pictures. The 3rd generation came about around 2000, with the introduction of phones with some internet, video, and images. The 4th Generation came around 2009 with the introduction of smart phones with instant streaming of video, as well as the use of apps.

As we move into 2020, the shift to the 5th generation, or 5g, has begun. In addition to being promoted as the solution to 4k movie downloads, the new technology is expected to herald the beginning of Smart Cities, where driverless cars, traffic lights, pollution sensors, smart phones and countless other smart devices interact in what is known as "The Internet of Things." The IoT is a fancy way to say that we will be surrounded by hundreds of thousands of interconnected devices and sensors which are gathering mass amounts of data that will be used to show you advertising and monitor your habits, and other uses that we can't even predict yet.

The switch from 4g to 5g is a change unlike those of previous generations. One notable difference is that 5G technology uses much higher frequencies, ranging from 10-300 GHZ. 5g is using millimeter waves which do not travel far and are easily blocked by trees, buildings, and walls. The 5 G rollout means the installation of hundreds of thousands of new cell sites, towers, and additions to existing infrastructure. Cities like Houston, Atlanta, Boston, Chicago, Denver, San Diego, New York City, and Washington D.C. are already deploying 5g for residential and commercial uses.

Let's examine some of the concerns surrounding 5g and electromagnetic fields in general.

Chapter 2: The Concerns Around EMF's and 5g

As I mentioned earlier, over the years I have come across articles claiming that cell phones were giving people cancer or making people sick. I did not pay too much attention at first, but when I finally decided to investigate the topic I realized there was ample evidence that the technology we are so hurriedly surrounding ourselves with might be putting our lives at risk in more ways than one.

I started by trying to understand the concerns around EMFs in general. I went through hundreds of studies, including those from official government sources and others funded independently. I found studies like "International and National Expert Group Evaluations: Biological/Health Effects of Radiofrequency Fields", which examined six decades worth of research into the effects of in vitro and in vivo exposures of animals and humans or their cells to RF fields.

"Data reported in peer-reviewed scientific publications were contradictory: some indicated effects while others did not," the researchers write. Still, in the end, the expert groups suggested a *"reduction in exposure levels,*

precautionary approach, and further research." So I continued digging.

I came across studies discussing extremely low frequency electromagnetic fields and their effect on DNA. The researchers concluded that cells exposed to ELFs *"presented an increase of the number of cells with high damaged DNA as compared with non-exposed cells."* I found studies examining a potential association between nocturnal mobile phone use and mental health, suicidal feelings, and self-injury in adolescents. I also found an interesting one discussing the excitability of the brain being induced by radiofrequencies. The study stated that *"These results suggest that low-intensity RF fields can modulate the excitability of hippocampal tissue in vitro in the absence of gross thermal effects. The changes in excitability may be consistent with reported behavioural effects of RF fields."*

A 2004 study found *"an increased risk of acoustic neuroma [tumors] associated with mobile phone use of at least 10 years' duration."*

I also found studies that were inconclusive, which found *"No conclusive evidence of an association between use of mobile and cordless phones and a meningioma brain tumor".* The study discovered *"An indication of increased risk"* but was not "*supported by statistically significant increasing risk*", ultimately calling for further studies.

A study by Kaiser Permanente examined rates of miscarriages for women near cell towers. The study of hundreds of pregnant women in the San Francisco Area found that those who were more exposed to the type of radiation produced by cell phones, wireless networks and power lines – radiation that grows more common everyday – were nearly three times as likely to miscarry. The Kaiser Permanente study did not show definitively what was causing the higher rate of pregnancy loss, nor did it isolate the potential impact of cell phones

or other producers of EMFs. However, the authors said the results underscore the need for more research into the potential dangers.

During my investigation I came across the name of Dr. Martin Pall, a Professor Emeritus of Biochemistry and Basic Medical Sciences at Washington State University. Pall is a published and widely cited scientist on the biological effects of electromagnetic fields, an expert in how wireless radiation impacts the electrical systems in our bodies.

He has published 7 studies showing sensitivity to electromagnetic fields exists in what is known as the voltage sensor, in each cell of the body. A study by Pall published in the journal of Environmental Health found this sensitivity in human cells in response to wi-fi exposure. He calls this effect an important threat to human health. According to Dr. Pall, there are at least 15 different ways EMFs harm humans, including :

1) Changes in brain structure and function, changes in various types of psychological responses and changes in behavior.
2) At least eight different endocrine (hormonal) effects.
3) Cardiac effects influencing the electrical control of the heart
4) Chromosome breaks and other changes in chromosome structure.
5) Histological changes in the testes.
6) Cell death
7) Lowered male fertility including lowered sperm quality and function and also lowered female fertility (less studied).
8) Cellular DNA damage including single strand breaks and double strand breaks in cellular DNA
9) Cancer which is likely to involve these DNA changes but also increased rates of tumor promotion-like events.
10) Cataract formation
11) Breakdown of the blood-brain barrier.
12) Melatonin depletion and sleep disruption.

In 2016 Dr. Pall released another study on EMFs [in the journal of chemical neuroanatomy].He writes:

"18 more recent epidemiological studies, provide substantial evidence that microwave EMFs from cell/mobile phone base stations, excessive cell/mobile phone usage and from wireless smart meters can each produce similar patterns of neuropsychiatric effects. Lesser evidence from 6 additional studies suggests that short wave, radio station, occupational and digital TV antenna exposures may produce similar neuropsychiatric effects. Among the more commonly reported changes are sleep disturbance/insomnia, headache, depression/depressive symptoms, fatigue/tiredness, dysesthesia, concentration/attention dysfunction, memory changes, dizziness, irritability, loss of appetite/body weight, restlessness/anxiety, nausea, skin burning/tingling/dermographism and EEG changes."

He concludes that *"extensive epidemiological studies performed over the past 50 years" "all collectively show that various non-thermal microwave EMF exposures produce diverse neuropsychiatric effects"*. Pall also notes that the effects of EMF's were documented 49 years ago in the U.S. Office of Naval Medical Research report, published in 1971.

Despite the breadth of his work, Dr. Pall has largely been pushed to the fringes of society. To be fair, his work has been criticized by other scientists who have accused him of bias and cherry picking studies to support his claims. In 2018, I asked Dr. Martin Pall why his research has been ignored or pushed out of the mainstream conversation.

Dr. Martin Pall: We quit funding, we quit funding the studies of this sort back between 1986 and 1999. We've done almost nothing since then. So basically the US government's been pushing these technologies, at the same time doing absolutely nothing, well almost absolutely nothing, to protect us.

The debate around the safety of cellphones and other devices that emit EMFs grew a little more heated in early November 2018 when the National Toxicology Program released data concluding there is clear evidence radio-frequency radiation (RFR) can cause brain and heart tumors in male lab rats. The $30 million study took more than ten years to complete as researchers examined the effects of prolonged exposure to high levels of RFR, specifically the type of radiation emitted via 2G and 3G cellular networks.

The researchers write:

"There was also some evidence of tumors in the brain and adrenal gland of exposed male rats. For female rats, and male and female mice, the evidence was equivocal as to whether cancers observed were associated with exposure to RFR."

The NTP caution that the results should not be applied to humans and the FDA and other government agencies also said that they do not support the conclusions and they do not apply to 5g. [John Bucher, Ph.D.,] A senior scientist with the NTP said, *"The exposures used in the studies cannot be compared directly to the exposure that humans experience when using a cell phone. In our studies, rats and mice received radio frequency radiation across their whole bodies."* The NTP stated that, "*The lowest exposure level used in the studies was equal to the maximum local tissue exposure currently allowed for cell phone users."*

The NTP seems to suggest the only way to avoid the health concerns is to avoid using a cell phone. In a health advisory, the NTP recommends those concerned about the potential health risks from RFR should, *"Use speaker mode or a headset to place more distance between your head and the cell phone,"* or *"reduce the amount of time spent using your cell phone."*

Ronald Melnick PhD, a researcher and scientist [Former senior

toxicologist, US Environmental Toxicology Program] who designed the exposure systems used in the study, disagrees with the FDA and the FCC.

Melnick notes that, *"Dr. Shuren neglects to note that the International Agency for Research on Cancer (IARC), a part of the World Health Organization, classified radio-frequency radiation from wireless devices as a "possible human carcinogen" based largely on findings of increased risks of gliomas and Schwann cell tumors in the brain near the ear in humans after long term use of cellphones."* The IARC designation of cell phones as a possible carcinogen has been highly controversial since it was first issued in 2011.

[In an opinion piece published by The Hill,] Melnick also stated that, *"Simply claiming that conclusions about human risk cannot be drawn from animal studies runs counter to standard practices of evaluating human cancer risks by public health agencies including the U.S. EPA, NTP, IARC and even the FDA. Every chemical known to cause cancer in humans is also carcinogenic in animals when adequately tested."*

In an interview with Josh Del Sol of Take Back Your Power, Melnick elaborated on the problems he sees with the U.S. regulatory agencies.

Josh Del Sol, Take Back Your Power: *Approximately 30 million dollars was invested to see if cell phones cause cancer at levels at or below the allowable levels right and in rats and the answer is that there was a significant increase in schwannomas of the heart and gliomas in the brain and then they dropped it, they just dropped it. So I guess I want to ask the question, like why do you think, now we're getting into speculation here, and we know that Harvard Ethics Department has written about the FCC's being controlled by industry but the FDA? We've heard in other conversations various things about them but like what's actually going on and how significant of a thing is this. The study was done, it*

showed cancer, and then they just dropped it. Help us to frame this here.

Dr. Ronald Melnick: *Well, I can't tell you why they decided as such all I can say is that they decided at this point, or as far as I know, not to do anything about this. This information was actually available in 2016 when the NTP released some of the partial findings because of the potential impact of these findings on the general population. The tumors in the heart and tumors in the brain were known in 2016. If you know, it could be that, they don't want people to think that their cell phones pose a cancer hazard, maybe they have other reasons and I can't say whether or not the industry is having an influence that is certainly a possibility but seems to me that from a public health perspective what you want to do is understand the risk, quantify it, and do something about it, promote precautionary principles.*

Even more recently, an August 2019 investigation by the Chicago Tribune found that currently available models of cell phones are already exceeding the safety limits set by the FCC. This means that the cell phones being used by millions of Americans are exposing them to dangerous levels of radiation.

There is clearly sufficient evidence to warrant a mass warning to consumer of electronic devices, yet we are met with silence from health professionals and mainstream corporate media. Regarding the dangers of 5g, Dr. Melnick suggests caution.

"5G is an emerging technology that hasn't really been defined yet. From what we currently understand, it likely differs dramatically from what we studied. Consequently, I believe that new wireless technologies, including 5G, should be adequately tested before their implementation leads to unacceptable levels of human exposures and increased health risks."

Additionally, hundreds of scientists from around the world

have signed the "5g Appeal", a statement calling on a moratorium on 5g.

"We the undersigned, scientists and doctors, recommend a moratorium on the roll-out of the fifth generation, 5G, for telecommunication until potential hazards for human health and the environment have been fully investigated by scientists independent from industry. 5G will substantially increase exposure to radiofrequency electromagnetic fields (RF-EMF) on top of the 2G, 3G, 4G, Wi-Fi, etc. for telecommunications already in place. RF-EMF has been proven to be harmful for humans and the environment."

At a May 2018 United Nations hearing, Claire Edwards, [a United Nations Editor and Trainer in Intercultural Writing from 1999 to 2017,] warns the UN Secretary-General António Guterres about the dangers of 5G. Edwards is a co-organizer of a second appeal to Stop 5G, called the International Appeal to Stop 5G on Earth and in Space (www.5gspaceappeal.org), which as of December 2019, had 186,352 signatories from 208 nations and territories. At the hearing she told Guterres that recently installed wifi equipment could cause harm to UN employees.

Claire Edwards: *"Since December 2015, the staff here at the Vienna International Centre have been exposed to off-the-scale electromagnetic radiation from WiFi and mobile phone boosters installed on very low ceilings throughout the buildings. Current public exposure levels are at least one quintillion times (that's 18 zeros) above natural background radiation according to Professor Olle Johansson of the Karolinska Institute in Sweden.*

The highly dangerous biological effects of EMFs have been documented by thousands of studies since 1932 indicating that we may be facing a global health catastrophe orders of magnitude worse than those caused by tobacco and asbestos.

Mr. Secretary-General, on the basis of the Precautionary Principle, I urge you to have these EMF-emitting devices removed immediately and to call a halt to any rollout of 5G at UN duty stations, because 5g is designed to deliver concentrated and focused electromagnetic radiation in excess of 100 times current levels, in the same way as do directed energy weapons".

Guterres claimed he was ignorant to the dangers of the technology.

Groups like Physicians for Safe Technology have also called for caution and common sense on 5g. Doctors have begun speaking out about the concerns of surrounding ourselves with hundreds of thousands of new cell towers and small cells in the interest of 5g. [In October 2018, Sharon Goldberg, a medical practitioner for 21 years, testified in front of the Michigan House Energy Policy Committee (:13 to 1:58,)]

Thus far, there have only been a few politicians brave enough to speak out about this issue. Former Michigan State Senator Patrick Colbeck recently spoke out against the unprecedented roll out this new, untested technology (4:04-5:30)

In April 2019, New York Congressman Thomas Suozzi sent a letter to the FCC seeking answers about the technology.

"Small cell towers are being installed in residential neighborhoods in close proximity to houses throughout my district. I have heard instances of these antennas being installed on light poles directly outside the window of a young child's bedroom. Rightly so, my constituents are worried that should this technology be proven hazardous in the future, the health of their families and value of their properties would be at serious risk."

New Jersey Congressman Andy Kim also sent a letter, noting that:

"Current regulations governing radiofrequency (RF) safety were put in place in 1996 and have not yet been reassessed for newer generation technologies. Despite the close proximity to sensitive areas where these high-band cells will be installed, little research has been conducted to examine 5G safety."

Most damning of all, Senator Richard Blumenthal of Connecticut exposed that Big Wireless and the FCC have failed to do adequate independent studies into the effects of emerging 5g technology. At a Senate Commerce committee hearing, Blumenthal questioned industry reps about the absence of this research. (2:38-3:44, 4:35-4:44)

Richard Blumenthal: *"If you go to the FDA website, there basically is a cursory and superficial citation to existing scientific data saying ''he FDA has urged the cell phone industry to take a number of steps, including support additional research on possible biological effects of radio frequency fields for the type of signals emitted by cell phones.'*

So my question for you: How much money has the industry committed to supporting additional independent research—I stress independent—research? Is that independent research ongoing? Has any been completed? Where can consumers look for it? And we're talking about research on the biological effects of this new technology."

Brad Gillen, Executive Director of the CTIA: *"There are no industry backed studies to my knowledge right now."*

At the end of the exchange, Blumenthal concluded, *"So there really is no research ongoing. We're kind of flying blind here, as far as health and safety is concerned."*

As more health professionals, politicians, and scientists speak out against the dangers of 5g and EMFs, the cellular industry and some in the mainstream media have begun pushing back. In March 2019, William Broad of the New York Times wrote

a piece promoting the idea that those who are concerned about the health effects of 5g are simply falling prey to Russian propaganda designed to make America lose the "race to 5g". His article, "Your 5G Phone Won't Hurt You. But Russia Wants You to Think Otherwise.", sought to place the blame for concern around 5g on the shoulders of America's favorite boogeyman – The Russians.

Interestingly, Broad failed to mention that in April 2019 the Times announced a partnership with Verizon to showcase a "5g journalism lab". This seems to be a new trend for corporate media as the Washington Post announced a similar deal with ATT in November 2019. Questions regarding potential conflicts of interest have not been addressed.

Dr. Devra Davis, PhD, President of the Environmental Health Trust, responded to Broad's claim by noting that *"by relegating concerns about 5G to a Russian ploy, he misses altogether the fact that the purportedly independent international authorities on which he relies that declare 5G to be safe are an exclusive club of industry-loyal scientists. China, Russia, Poland, Italy and several other European countries allow up to hundreds of times less wireless radiation into the environment from microwave antennas than does the U.S.."*

Davis went even further, comparing the treatment of those who raise awareness about the public impact of radio frequency microwave radiation to that of those scientists in the 1950s and 60s who attempted to ring alarm bells about the dangers of tobacco.

"Scientists who showed the harmful impacts of tobacco found themselves struggling for serious attention and financial support," [Davis wrote].

Dr. Devra Davis: *"For health impacts from wireless radiation, a similar pattern is emerging. Each time a U.S. government*

agency produced positive findings, research on health impacts was defunded. The Office of Naval Research, the National Institute of Occupational Safety and Health, the Department of Health, Education and Welfare, and the Environmental Protection Agency all once had vibrant research programs documenting dangers of wireless radiation. All found their programs scrapped, reflecting pressure from those who sought to suppress this work."

Ironically, one of the sources for an extensive amount of research on the health effects of EMFs comes from Russia and Ukraine. In fact, a review paper of Russian and Ukrainian science discusses research on the effect of EMFs in the former Soviet Union during the 1950's, 60's, and 70's.

[The report states that,] *"In epidemiological studies of the population of Ukraine, a connection was established between leukemia in children and cancer in adults, and exposure to EMF at industrial frequencies. Specific injuries under radiowave exposure are development of cataracts, instability in leukocyte make-up of peripheral blood, and vegeto-vascular disorder."*

Additionally, on March 3, 2011 the Russia radiation watchdog committee [members of the Russian National Committee on Non-Ionizing Radiation Protection (RNCNIRP)] approved a resolution on the effects of non-ionizing radiation emitted by cell phones. According to U.S. government agencies, cell phones and EMFs are non-ionizing, meaning they do not have the power to alter atoms in the human body. Because of this, and the assumption that heat alone cannot cause health problems, the public is told that non-ionizing means safe. The resolution by the committee says otherwise.

[The committee states that] *"urgent measures must be taken because of the inability of children to recognize the harm from the mobile phone use and that a mobile phone itself can be considered as an uncontrolled source of harmful exposure."*

The Russian committee called for requiring health information regarding exposure to EMFs on the phone itself, as well as setting limits for children and teens using cell phones and laptops. As of 2019, no U.S. regulatory body has adopted similar measures.

Regarding this debate around ionizing and non-ionizing radiation, I asked Dr. Martin Pall why some researchers claim non-ionizing radiation is safe, and others warn of harm.

Dr. Martin Pall (18:25-19:54): *When thinking about radiation you're talking about the individual photons that make it up and the fact is that the individual photons that make up non-ionizing radiation, particularly you know in the microwave and lower frequency ranges, don't have enough energy to influence the chemistry of our bodies. That's true. They don't, but we're not talking about the individual photons. It's the fields as a whole and those fields as a whole put forces on a structure called the voltage sensor that controls these voltage-gated calcium channels and that structure is extraordinarily sensitive to these fields and that's why you get activation of the voltage-gated calcium channels, and why you get excessive calcium in the cell. So, we know why the system works and we know why it's so extraordinarily sensitive. And the industry has been claiming that these fields are not strong enough to do anything but the reason the industry is wrong is because this structure is extraordinarily sensitive to the forces of the EMF's. So this comes straight out of the physics and this is where this is where the physics background that I have has been very valuable, in addition an understanding of biology.*

By studying the evidence, it becomes abundantly clear that – despite the attacks from mainstream news and promises from Big Wireless – there are a great deal of reasons to be concerned about health issues related to cell phones, laptops, smart devices, and 5g. To be fair, there are, of course, scientists and researchers who say that the claims of health problems

associated with EMFs are exaggerated and unfounded.

The proponents of EMFs claim the opposition is cherry-picking evidence to make their case. However, even if one takes only a cursory look at the information we have just presented to you, it should be easy enough to see that rolling out a new untested technology is not smart science. At the very least, we must encourage public officials to exercise the precautionary principle and do further testing before rolling out 5g.

Smart City or Surveillance City?

Cancer and other health issues are not the only concerns being raised by critics of 5g and The Internet of Things. There are a growing number of professionals, government agencies, civil rights attorneys, and activists asking important questions about the digital future.

In April 2018, the American Civil Liberties Union released a guide detailing important questions that should be asked by city officials seeking to join the "Smart City evolution. [The guide, "How to Prevent Smart Cities from Turning to Surveillance Cities", was written by Matt Cagle, an attorney with the American Civil Liberties Union of Northern California.] In the course of my research I spoke with the author about his biggest concerns associated with 5g.

Matt Cagle, ACLU: (1:50-3:12): *When we talk about smart city technology or the Internet of Things in the government context, that what we're really talking about is you know electronics that are maybe small and cheap that can be placed around the city and that essentially can be designed to collect information, whether it's visual information or audio information or information about say whether a parking space is occupied. But before any smart city technology is acquired or deployed, it's really important that a city working with*

its community determine whether that technology is actually smart for the city to do.

Why do we ask why do we say that? Well, that's because you know smart city technology can be a wolf in sheep's clothing. It can be another way for the government to amass information that it may not have wanted to collect for law enforcement purposes but that might be vulnerable to that sort of use later or that they may not have wanted to collect for immigration purposes but that could potentially be vulnerable to that later. And again, this technology is often going to be collected by companies that have developed it. So it's really important for the city and the community to be on the same page about who's going to own this data as we go forward with this project, who's going to be able to sell this data, and at the end of the day are communities in control of these technologies.

There already exist a few examples of what a Smart City will resemble. In places like San Diego, activists are already fighting against privacy invasions via environmentally friendly smart streetlights that are always listening. In South Korea the Smart City vision is advancing quite quickly. (Video 1:27-2:18)

Let's look at another example of a smart city.

Quayside is a planned smart city that has been in the works since 2016. Located on 12 acres of waterfront property southeast of downtown Toronto, Canada, Quayside represents a joint effort by the Canadian government agency, Waterfront Toronto, and Sidewalk Labs, which is owned by Google's parent company Alphabet. Sidewalk Labs claims Quayside will solve traffic congestion, rising home prices and environmental pollution. There are even plans for housing developments and a school within the smart city.

Unfortunately, residents of Quayside will be using a

centralized identity management system through which they access public services such as library cards and health care. This means their data will be highly centralized, leaving it open to access by hackers and law enforcement. In fact, Quayside has consistently faced pushback due to a failure to build-in the necessary privacy protections.

At least two officials involved in the project have resigned. Saadia Muzaffar resigned from Waterfront Toronto in protest after the board showed "apathy and a lack of leadership regarding shaky public trust."

In October 2018, Ann Cavoukian, one of Canada's leading privacy experts and Ontario's former privacy commissioner, became the latest person to resign from the project. Cavoukian was brought on by Sidewalk Toronto as a consultant to help install a "privacy by design" framework. She was initially told that all data collected from residents would be deleted and rendered unidentifiable. She later learned that third parties would have access to identifiable information gathered at Quayside.

"I imagined us creating a Smart City of Privacy, as opposed to a Smart City of Surveillance," she wrote in her resignation letter. *"I have to resign because you committed to embedding privacy by design into every aspect of your operation."*

The fears around Quayside grew in late October 2019, when The Globe and Mail reported that previously unseen documents from Sidewalk Labs detailed how people living in a Sidewalk community would interact with and have access to the space around them. This experience in the proposed smart cities largely depends on how much data you're willing to share, which could be used to reward or punish people for their behavior.

Although the document, known internally as the "yellow book," was designed as a pitch book for the company, and

predates Sidewalk's formal agreements with the City of Toronto, it does provide a vision of what the Google sister company would like to do.

Specifically, the document details how Sidewalk will require tax and financing authority to finance and provide services, including the ability to impose, capture and reinvest property taxes." The company would also create and control its public services, including charter schools, special transit systems and a private road infrastructure.

The document also describes reputation-based tools that sound disturbingly similar to the social credit system we have seen in tv shows like Black Mirror and those unfolding in modern China. These tools would lead to a "new currency for community co-operation," effectively establishing a social credit system. Sidewalk could use these tools to "hold people or businesses accountable" while rewarding good behavior with easier access to loans and public services.

In response to the document leaks, Sidewalk spokesperson Keerthana Rang said, *"The ideas contained in this 2016 internal paper represent the result of a wide-ranging brainstorming process very early in the company's history."*

Perhaps due in part to the push back against privacy invasions, in November 2019 Sidewalk Labs released a 482-page Digital Innovation Appendix stating that none of Quayside's systems will incorporate facial recognition, and that Sidewalk Labs won't sell personal information or use it for advertising. Sidewalk Labs says it will require explicit consent to share personal information with third parties.

For the moment, future residents of Quayside will have their data protected, but these types of systems are already being put into place in China. Under the expansion of China's Sesame Credit System, more than a million people were denied the right to fly. Chinese citizens already live under constant

surveillance with CCTV's and facial recognition a part of daily life.

The U.S. is not far behind China. The U.S. government is also expanding their facial recognition capabilities, with the FBI maintaining a massive secret database of "face prints". The 5g roll out, the growth of Artificial Intelligence, and the push towards a Smart City future will only increase the potential for abuses of privacy. As we move ever closer to the Smart City future, privacy – and the liberty that comes with privacy – are under extreme threat.

A Threat to Local Control

In September 2018, the FCC passed a new rule putting the federal government in complete control of the 5G rollout. Although the original 1996 Telecommunications Act was the first power grab by the federal government, the September 2018 rule made it so that cities and towns had little ability to regulate or avoid the installation of so-called "Small Cells".. Under the new rule, phone companies can be charged no more than $270 to install each small-cell antenna. Additionally, local authorities would have 60 days to review the proposed wireless infrastructure.

Localities are already limited in deciding where the equipment can be located. The new rule also continued the tradition of forbidding localities from opposing the equipment on health grounds. The only acceptable claim is based on aesthetics. Basically, if you think the tower looks ugly, they will turn into a palm tree for you.

The Republicans on the FCC stated that limiting the fees that cities can charge localities will free up capital for them to invest in local infrastructure. Democrat Jessica Rosenworcel was the lone dissenter, calling the rule "extraordinary federal overreach".

"I do not believe the law permits Washington to run roughshod over state and local authority like this and I worry the litigation that follows will only slow our 5G future," Jessica Rosenworcel, FCC Commissioner stated.

Rosenworcel was correct about litigation to follow. In fact, in the weeks after the October 2018 rule, two dozen cities and counties filed lawsuits against the Federal Communications Commission. The governments argued that the rule hinders their ability to manage how phone companies use public property.

The mayors of Los Angeles and Philadelphia opposed the rule and accused the FCC of overriding local authority to regulate the new technology. Los Angeles Mayor Eric Garcetti sent a letter to the FCC stating that the rules would override previous agreements established by local authorities and Verizon and AT&T.

Sascha Meinrath, the Palmer Chair in Telecommunications for Pennsylvania State University, stated that he believed preventing local government from collecting fees is *"Anti-competitive"* and simply a part of Telecom history *"that happens again and again and again."*

The matter was only made worse when, in April 2019, President Trump issued an executive order stating that local and state bodies must now approve new 5G infrastructure within 90 days. The Trump administration also initiated a cap on the fees local governments can charge telecom companies wanting to install 5G technology. (video 4:17-5:12)

The push back against the usurpation of local power by the federal government and the telecom lobby can be seen clearly in the town of Danville, California. Back in March 2019, the Danville Town Council voted four to one to block a permit for a 5g small cell wireless installation by Verizon. During the meeting, Danville Mayor Robert Storer stated that the vote was an effort to stand up to the federal government and telecom

companies, like Verizon. The Danville Town Council's decision to deny the land use-permit for the small cell opens the town to possible lawsuits from Verizon.

(video 4:55-5:12, 6:06-6:28, 6:41-7:17)

"We've lost local control, and this says: 'You know what? We are sick of this and we're not going to just sit here and be bulled over.' We say no; we play our cards out. We've been in lawsuits before," Mayor Robert Storer said during the council meeting.

Danville city attorney Robert Ewing reiterated that cities cannot fight the small cells or 5g rollout based on health concerns, stating that, *"While potential health concerns are a huge concern, if that was the basis on which you were making a decision I would be fairly confident to tell you that you would lose, because that's about as clear as the law can get."*

Similar resolutions are passing in towns across the world, either outright banning 5g or requiring more testing before implementation. Between the FCC rules, and the Presidential Executive Order, the U.S. federal government is working with the Big Wireless Lobby to force 5g down the throats of cities and states around the country. Together, in an incestuous corporate-state relationship, they are slowly taking away choice and consent from local bodies. Most worrisome is the thought that the 5g rollout and the subsequent theft of local power, might be setting a precedent for a future where cities and towns have no say in what happens in their own communities, and instead are forced to go along with the agenda of the federal government and their corporate buddies.

A Danger to the Environment

As we examine the impact of 5g, EMFs, and radio frequency radiation on human health, we must also take a moment to consider the impacts on the environment. One of the more

recent concerns is how the rolling out of 5g might negatively impact our ability to forecast the weather and accurately predict storms.

In the spring of 2019, NASA and the NOAA said 5G antennas using similar frequencies used by satellites to gather critical water vapor data, could compromise forecasts and science. The FCC and Big Telecom companies are seeking to expand cellular service into frequency bands such as 24 GHz, which falls near the frequency used for weather forecasting, at about 23.8 GHz. The Federal Communications Commission, which licenses the wireless spectrum for 5G in the United States, says the fears are exaggerated.

In March 2019, Secretary of Commerce Wilbur Ross, who oversees NOAA, and NASA Administrator Jim Bridenstine sent a letter asking the FCC to postpone the auction of the 5g frequency bands. Instead, the FCC went ahead with the auction, selling frequency to both T-Mobile and AT&T. In May 2019, Neil Jacobs, NOAA's acting administrator, testified to Congress that an internal study had found 5G-related interference could cost NOAA 77% of the water vapor data it collects at 23.8 GHz, and could degrade weather forecasts by up to 30%, essentially back to 1980 levels. Due to these concerns, NASA and NOAA were seeking a sizable buffer zone between the frequency bands used for weather and those used for 5g. This buffer is measured in units of decibel watts.

Unfortunately, in late November 2019, at a meeting of the International Telecommunication Union, international regulators agreed to a buffer of 33 decibel watts until 1 September 2027, and a 39 decibel watts limit after that. The goal was to allow 5G companies to start building networks now, and to add more protection for weather forecasting once the companies have established their networks. Eric Allaix, a meteorologist and head of World Meteorological Organization (WMO), called the idea of having eight years of lax regulation "of grave concern" to weather forecasters.

Once again, regulators chose policies that benefit Big Wireless and fail to protect the planet and the people.

The 5g expansion not only poses a threat to human health, privacy, and weather forecasting, but an increasing amount of research indicates that surrounding ourselves with an unprecedented amount of digital devices is creating a new form of pollution, known as a digital or "electrosmog".

n the report, Bees, Birds, and Mankind, German researchers discuss the effects of this electric smog. *"The consequences of this development have also been predicted by the critics for many decades and can now no longer be ignored. Bees and other insects disappear, birds avoid certain areas and are disoriented in other locations,"* the researchers write.

In September 2008, a co-author of the report [Dr. Ulrich Warnke, one of the authors of that report, also presented his findings to the Radiation Research Trust at the Royal Society in London. He] stated that, *"an unprecedented dense mesh of artificial magnetic, electrical and electromagnetic fields are disrupting nature on a massive scale, causing birds and bees to lose their bearings, fail to reproduce and die."*

A review of studies from around the world show that concerns around the electrosmog are rising. One study Electromagnetic pollution from phone masts. Effects on wildlife reviewed the impact of radiofrequency radiation from wireless telecommunications on wildlife. The researchers note that phone towers located in the living areas of some species are continuously irradiatiating wildlife, causing a reduction of their natural defenses, deterioration of their health, and problems in reproduction. The researchers conclude that *"microwave and radiofrequency pollution constitutes a potential cause for the decline of animal populations and deterioration of health of plants living near phone masts. To measure these effects urgent specific studies are necessary."*

Studies are also beginning to look at the impact of RFR on trees. A 2016 study *[*Radiofrequency radiation injures trees around mobile phone base stations]

attempted to verify whether there is a connection between unusual tree damage and radiofrequency exposure. The researchers conducted a long-term field monitoring study in two German cities. They observed and took photos of unusual or inexplicable tree damage, along with measurements of electromagnetic radiation. A statistical analysis showed that electromagnetic radiation from cell phone towers is harmful for trees. The researchers note that, *"These results are consistent with the fact that damage afflicted on trees by mobile phone towers usually start on one side, extending to the whole tree over time."*

A 2010 study looked at the decline in Aspen trees in Colorado since 2004. This study suggested that the RF exposure may have strong adverse effects on growth rate, and may be an underlying factor in aspen decline. Additionally, there are concerns that thousands of trees will be cut down or trimmed to ensure the 5g frequencies operate efficiently.

Another area of growing concern relates to the fear that the massive increase in exposure to RFR could be one of the causes for bee colony collapse disorder, which has wreaked havoc on the global honeybee population.

In a 2017 study,[Disturbing Honeybees' Behavior with Electromagnetic Waves: a Methodology,] researcher Daniel Favre of Switzerland claims that his article describes an experiment on bees, which clearly shows the adverse effects of electromagnetic fields on their behavior. [Favre states that,] *"The experiment should be reproduced by other researchers so that the danger of manmade electromagnetism (for bees, nature and thus humans) ultimately appears evident to anyone."*

In a study on tadpoles [Mobile Phone Mast Effects on Common Frog Tadpoles,] researchers exposed eggs and tadpoles to electromagnetic radiation from cell phone antennas for two months, from the egg phase until an advanced phase of tadpole and found low coordination of movements, an inconsistent growth pattern, and a high mortality rate. The authors conclude, *"these results indicate that radiation emitted by phone masts in a real situation may affect the development and may cause an increase in mortality of exposed tadpoles. This research may have huge implications for the natural world, which is now exposed to high microwave radiation levels from a multitude of phone masts."*

These concerns are not being promoted on the corporate media nightly news or 24 hour news cycles, but to those willing to do the homework, it becomes clear. There is ample evidence of negative impacts as a result of RFR associated with cell phones wifi, and likely, 5g. In fact, in 2018 the European Commission['s Scientific Committee on Health, Environmental and Emerging Risks] released a statement on emerging health and environmental issues which clearly outlined the need for more independent research.

Under section 4.4 Pote*ntial effects on wildlife of increases in electromagnetic radiation, the report states that "How exposure to electromagnetic fields could affect humans remains a controversial area, and studies have not yielded clear evidence of the impact on mammals, birds or insects. The lack of clear evidence to inform the development of exposure guidelines to* ***5G technology leaves open the possibility of unintended biological consequences. "***

These unintended consequences have the potential to affect human life, as well as insects, birds, plants, and trees.

Chapter 3 : The Big Wireless-5g Takeover

As I continued my research and began presenting it to the Houston City Council and fellow Houstonians, I noticed there was often a reluctance to believe what I was claiming. Several times I was asked something along the lines of, *"How could something so dangerous be allowed on the market? Doesn't the government regulate this technology?"*

Once again, the trust of the authorities made people feel like they were safe from harm. Unfortunately, the research shows otherwise. But how could this happen? How can the U.S. government allow potentially hazardous products to be sold and used by millions of people?

To understand this, we need to go back to 1996. That year the Telecommunications Act was passed as an effort to update the law around communications technology as the internet was beginning to come into mass public use. The Act was also seen as a way to limit the growing AT&T monopoly. Unfortunately, it was the beginning of further consolidation of telecommunications companies and a huge step towards eroding local power.

The 1996 act prohibits local jurisdictions from considering perceived health effects when taking an action on a proposed facility, such as towers or small cells. Instead, cities and towns could only regulate cell sites based on the aesthetics and location of the devices. [Section 332(c)(7)(B)(iv) of] The Telecommunications Act of 1996 states:

"No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities ***on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions."***

Essentially, as long as the facilities comply with the standards set by the FCC, they cannot be subjected to

environmental or health regulations. But what happens if those federal standards set by the FCC in 1996 are not adequate? As we will get into shortly, there are studies which show health effects even at the levels allowed by the 1996 Telecommunications Act, not to mention the fact that the standards are over two decades old and based on outdated technology.

Not only was the Telecom Act designed to protect the profits of the Big Wireless companies, but somewhere along the way the FCC and the Telecoms developed an incestuous relationship that has overtaken the voices and concerns of the American people.

A 2015 expose [, the Harvard Edmund J. Safra Center for Ethics published an expose] by investigative journalist Norm Alster shows the financial ties between the US Federal communications Commission (FCC) and the telecoms industry and how, as a result, the wireless industry bought unfettered access to—and power over—a major US regulatory agency.

The report ["Captured Agency: How the Federal Communications Commission is Dominated by the Industries it Presumably Regulates",] details how the FCC, an independent government agency created in 1934 to regulate interstate communications by radio, television, wire, satellite and cable, has become a captured agency with Big Wireless leaders filling the government seats in a revolving door fashion similar to other federal agencies.

Regarding the passing of the 1996 Telecom Act, Alster writes that *"late lobbying won the wireless industry enormous concessions from lawmakers, many of them major recipients of industry hard and soft dollar contributions. Congressional staffers who helped lobbyists write the new law did not go unrewarded. Thirteen of fifteen staffers later became lobbyists themselves."*

Alster states that direct lobbying by industry is *"just one of*

many worms in a rotting apple". The report says the FCC is involved in a network of powerful moneyed interests with limitless access and a variety of ways to shape policy. Alster believes the worst part is that the wireless industry has been allowed to grow unchecked and virtually unregulated, with fundamental questions on public health routinely ignored.

Unfortunately, the situation goes beyond corrupted government agencies and into defaming those who speak out against potential harms caused by wireless technology.

During the 1990's, Biochemist Jerry Phillips was hired by cellphone giant Motorola to study the effects of the RF Radiation emitted by cell phones. Phillips and his colleagues looked at the effects of different RF signals on rats, and on cells in a dish. Phillips say the relationship between him, and his employer was initially cordial, but soured once he submitted research data to Motorola which found harmful effects to the DNA structure as a result of exposure to radio-frequency radiation. The negative results were not to Motorola's liking, and they began putting pressure on him.

Public Exposure documentary (33:05-33:40; 34:35-35; 35:06-35:30)

In another example of industry attempting to influence research, we have Dr. Henry Lai, the University of Washington, and fellow researcher, Narendra Singh. The researchers were looking at the effects of nonionizing radiation—the same type of radiation emitted by cell phones—on the DNA of rats. They used a level of radiation considered safe by FCC standards and found that the DNA in the brain cells of the rats was damaged—or broken—by exposure to radiation.

After publishing the research in 1995, Dr. Lai would later learn of a full-scale effort to discredit the experiments. Lai and Singh caused controversy when they publicly complained about restrictions placed on their research by their funders,

the Wireless Technology Research (WTR) program. In response to this public action, the head of the Wireless Technology Research sent a memo asking then-university president Richard McCormick to fire Lai and Singh. McCormick refused, but the message was clear. Get rid of anyone who makes our products look bad. In a leaked internal Motorola memo executives claimed to have succeed in "War-Gaming " the Lai-Singh experiments.

"This shocked me," [Lai says,] *"the letter trying to discredit me, the 'war games' memo. As a scientist doing research, I was not expecting to be involved in a political situation. It opened my eyes on how games are played in the world of business. You don't bite the hand that feeds you. The pressure is very impressive."*

Think about that. An international corporation trying to exert pressure on scientists who are drawing conclusions which prove their product could cause harm to public health. Even further, Dr. Lai's experiments showed negative health consequences at levels considered "safe" by the FCC.

The Captured Agency report makes it clear that this type of corruption takes place because of "the free flow of executive leadership between the FCC and the industries it presumably oversees". For example, at the time of the report's release, the Chairman of the FCC was Tom Wheeler, a man with deep ties to the Big Wireless industry. In 2013, Wheeler was nominated as FCC chairman by former President Obama after raising more than $700,000 for his presidential campaigns. Wheeler lead the two most powerful industry lobbying groups: The National Cable & Telecommunications Association (NCTA) and the Cellular Telecommunications & Internet Association, or, the CTIA.

The current chairman of the FCC could also be seen as another example of a "captured agency" in action. Ajit Pai, a lawyer and current chairman of the FCC, served as Associate General Counsel at Verizon Communications Inc. between 2001 and 2003,

where he handled competition and regulatory matters. Pai was appointed to the FCC by Barack Obama in 2012 and then made FCC Chairman by Donald Trump in January 2017.

FCC Commissioner Brendan Carr is another example of a government official working closely with industry and maintaining relationships which clearly present conflicts of interest. Carr is credited with accelerating the 5G build out. Prior to joining the FCC, Carr worked as an attorney at Wiley Rein where his clients were Verizon, AT&T, Centurylink, CTIA, the wireless association and the USTA, the telecom lobby. The Wiley Rein law firm is a hot bed of activity for former government officials and industry regulars. One of the founders of the law firm is Richard Wiley, himself a Former FCC Chairman.

On September 30, 2019, Commissioner Carr and other officials were in Houston to discuss the future of 5g. I asked Commissioner Carr about the concerns regarding his connections with the wireless industry. I also asked him about the Captured Agency report released by Harvard's School of Ethics. Unfortunately, Mr Carr had no interest in addressing these questions. (video 1:49-3:08)

The following day I was able to question Commissioner Carr for a second time and once again he avoided my questions. (video :38-2:07)

Much of this revolving door relationship between industry and government can be traced to the CTIA, the Cellular Telecommunications & Internet Association.

Established in 1984, the CTIA claims to represent the U.S. wireless communications industry, from carriers and equipment manufacturers. The CTIA "advocates for legislative and regulatory policies at federal, state, and local levels that foster the continued innovation, investment and increasing economic impact of America's wireless industry. CTIA is active

on a wide range of issues including spectrum policy, wireless infrastructure, and the Internet of Things, among others." They also host events on topics ranging from cybersecurity to 5G.

The CTIA's Board of Directors includes the presidents, CEOs and other senior officials of Verizon, Sprint, T Mobile, Nokia, Erricson, Intel, General Motors, Tracfone, EZ Texting and others.

Brad Gillen, the current Executive Vice President of the CTIA, was formerly a Legal Advisor to a former FCC Commissioner and served in other senior policy roles at the FCC and with DISH Network. Mr. Gillen was also a partner at Wilkinson Barker Knauer, LLP, a law firm stacked with former employees of the FCC, the National Telecommunications and Information Administration (NTIA), the Federal Trade Commission (FTC) and other state government positions

The CTIA's current President and CEO is Meredith Attwell Baker. Baker has spent the last two decades bouncing between lobbying for Big Wireless and working for the government. From 1998 to 2000, Baker worked as Director of Congressional Affairs at the CTIA. Afterwards, she worked for the U.S. government as an FCC Commissionner between July 2009 to June 2011. She then went back to the CTIA where she is now President and CEO, in charge of promoting the so-called Race to 5g.

So, what exactly is the race to 5g?

If you have paid attention to any media or visited a cell phone store recently, you have likely heard the buzz about 5g, and more specifically, the Race to 5g.

Geopolitically speaking, the Race to 5g describes the ongoing rift between the U.S. and China, a kind of digital Cold War where the two superpowers race to implement the next generation of cellular technology because of its potential for

massive profit and massive data collection. The American media and President Trump have stated that Chinese company Huawei could use their 5g infrastructure to spy on Americans. Trump has called on federal officials and American companies to abandon Huawei equipment. This fear of Chinese spying using 5g equipment completely ignores the reality that the U.S. government has the same exact opportunity to pressure American companies to spy on the private data of Americans.

The Race to 5g could also be described as a clever marketing concept designed to sell consumers an upgrade they did not know they wanted or needed. (Not to mention, an upgrade that has sparked lawsuits, and has many health and privacy concerns.) As part of the ongoing Race to 5G, telecom companies are promoting 5g as the solution for faster downloads and high-definition movie streaming. It's not immediately clear if the public is demanding faster downloads, but the Telecoms, global governments, and the tech industry are pushing the shift towards 5g. While it is true that 5g has the potential to spur on innovation in the fields of medicine, manufacturing, entertainment, and other industries – there has not been a truly organic call for this emerging technology.

It seems much of the hype around the 5g roll out is coming from the CTIA itself. Yes, the Cellular Telecommunications & Internet Association, the organization created to lobby explicitly for the Wireless Industry. *The CTIA is Big Wireless.*

(video "April 19, 2018 The CTIA Race to 5G Summit")

One of the ways the CTIA has spread enthusiasm for *the Race to 5g* is by working with city officials. The CTIA has been honoring City Mayors who have worked to erode local authority regarding the 5g roll out. The 5G Wireless Champion Awards "honor the state and local officials" who "bring next-generation 5G networks" into communities and "remove barriers to the deployment of next-generation wireless infrastructure".

In 2018, the CTIA gave out 3 “5g Wireless Champion Awards” to mayors across the United States, including Houston’s Mayor Sylvester Turner.

As I mentioned earlier, it was the Mayors response to my questions about 5g which encouraged me to look deeper. I found out that in July 2018, Mayor Turner stood side by side with Verizon Wireless officials to announce plans to roll out 5g technology in Houston. The Mayor said 5G will turn Houston into a “smart city”, with better control of traffic flow, money-saving smart street lights, and driverless cars. By September 2018 , Turner was awarded the “5g Wireless Champion Award” by the CTIA. The CTIA stated that, *“Under Mayor Turner’s leadership, Houston has streamlined the permitting process by not requiring a license or attachment agreement for new poles or small cells, and completes review ahead of deadlines. “*

Despite my efforts at emailing the Mayor and City Council about the concerns, and visiting city council many times, I continued to be met with silence. When I decided to run for Mayor, making 5g a central part of my campaign, I finally had the opportunity to call out the Mayor to his face, in front of the people of Houston.

(Houston Mayoral Debate 2:53-3:40)

During the campaign, I attempted to question Mayor Turner again. He laughed in my face and dodged my questions while a member of his staff attempted to knock my camera out of my hands. (1:03-1:49)

Sylvester Turner and Mayor’s like him are a problem, but they are a symptom of a bigger battle. The CTIA uses the 5g Wireless Champion Awards and other local programs to convince Mayors and local officials to support the 5g agenda. This allows the agenda adopted by the federal government and Big Wireless to be filtered down to the state and local level.

Despite a number of lawsuits from cities and states; objections from scientists and health professionals; concerns from citizens, politicians, and journalists – the CTIA, the FCC, and Donald Trump continue to push the 5g agenda forward. As I discovered in my research, there are health and privacy concerns around cell phones, bluetooth, WiFi, laptops, and other digital devices. The research shows we should limit our exposure to these devices and find ways to protect our privacy.

We should also recognize that the major difference between the 5g Smart Grid and the current technology, is that once 5g rolls out you will not be able to avoid it. You can choose not to use a cell phone, or not install wifi in your home, but once the 5g network is complete, you will be surrounded by hundreds of thousands of sensors, small cells, and other infrastructure. Once I understood this, I realized I had to know what I can do to protect myself, my family, and friends.

Chapter 4: Solutions

The reality is that we are already living in the electro, digital smog. The public has excitedly purchased the latest upgrades to their digital technology of choice. From smart phones, to laptops, doorbell cameras, public wi-fi networks, home assistants, smart houses, and the early stages of 5g – we are inundated with digital technology which emit various levels of radiofrequency radiation. Bit by bit, device by device, we are being exposed to an increasing level of radiation, and this cumulative effect has the potential to cause a great amount of harm to the public.

Collectively, each of these devices form a digital panopticon where private companies, law enforcement, governments, and hackers can literally trace your movements from the moment you wake up and interact with your phone, throughout your entire day as you move through public spaces and visit your work,

family, and friends. If the public doesn't wake up to these dangers and quickly organize a massive, global effort to push back against 5g, the Smart City future seems inevitable.

So, what would this push back look like and what can we do as individuals?

First, the opposition would need to involve ending the relationship between Big Wireless execs and government officials, as well as an honest discussion about the established dangers posed by our digital world. Organizing political opposition should take place at all levels, but I highly encourage everyone to start getting involved in their local communities and asking about the dangers presented in this documentary. You can join a group that might be talking about 5g, privacy, health or the environment, and let them know about these concerns. If there isn't a group already, you can start one. Pass out flyers at community festivals, farmers markets, concerts, and political events. You can host educational events at community centers and show this documentary. If your neighborhood has a Homeowners Association or similar group you can attempt to fight against the installation of new small cells in your neighborhood. Some activists and concerned homeowners have even filed lawsuits in an attempt to stop the 5g rollout.

When it comes to solutions for protecting yourself in the meantime, remember that the National Toxicology Program's ten-year study recommends those concerned about the potential health risks from RFR should, *"Use speaker mode or a headset to place more distance between your head and the cell phone,"* or *"reduce the amount of time spent using your cell phone."*

Simply put, limiting your use of and exposure to these devices is the best solution available. I would recommend turning your phone on airplane mode when not using it, or simply turn it off when not in use. I know, it is a scary thought, but we

will survive. I would also stop using bluetooth headphones and stop using bluetooth while driving in your vehicle. There are also companies producing products which are supposed to be able to block or absorb the EMF's emitted by our devices. Do your research and see what works for you.

Probably one of the most important steps to take is to stop falling asleep with your phone or next to your laptop. I also started unplugging my wi-fi at night to protect myself from unnecessary exposure while I am sleeping. The exposure to these devices and the RFR they emit has the potential to disturb your sleep and create stress. This can cause an overall decline in the body's ability to heal and repair at night.

When it comes to your home or office I recommend rewiring as much as possible using ethernet cables for your desktop or laptop. This will allow you to remove wi-fi if you choose and drastically decrease your exposure. There are even options available to use ethernet connections on your cellphone. When I interviewed Dr. Martin Pall he mentioned the possibility of using graphite paint in your home as an option to block or absorb EMFs. There are also similar concerns regarding the smart meters which have been rolled out around the U.S. Do some research and find out if you can opt out of a smart meter in favor of an analog meter.

Remember what I said about the difference between 5g and previous technologies?

Once it's rolled out, you will not be able to avoid it while in public. No matter what you do in your house, your car, or with your own phone, if 5g is everywhere there will be no way to opt-out. I have seen researchers working on devices that could protect you in public by either repelling or absorbing the EMFs, and others have suggested clothing that can defend you, but for the moment none of these seem adequate to protect you from the coming 5g Smart Grid.

As we have shown, there are numerous valid reasons to oppose the 5g roll out. Whether it's concerns about health, privacy, local power, or the environment, the government and the wireless industry need to answer our questions. Another thing, where has the media been during all of this? If I could dig up this information and gather these sources with my limited skills and time, why didn't the corporate media identify and report on the concerns about 5g? Why did The New York Times and other compliant media outlets insinuate that opponents of 5g are simply victims of Russian disinformation? Instead of listening to the researchers speaking up and the people pushing back, the media stood silent.

So all this begs the question: *would consumers be so quick to embrace cell phones, Wi-Fi, and 5g, if the wireless industry and their partners in government hadn't silenced critics and corrupted the science? If the public knew this information, would that change their minds? Does it change yours?*

The cold hard truth is that we have willingly accepted this technology. Yes, we have been lied to by people we believed we could trust, but at the end of the day, the power lies in our hands. We decide if we still choose to surround ourselves with devices that threaten our privacy and health. We must take responsibility for our actions and remember to be skeptical of promises of convenience and utopia. As the saying goes, if it sounds too good to be true, it probably is.

Thanks for watching.