

## DISCUSSION NOTES FOR SB 1188 AND 1767

### QUOTES OF INTEREST:

*“So SB 649 [the California “small cell” bill] is a triple-rip-off: Neighborhoods lose flexibility to address visual blight, taxpayers get shorted by limits on lease revenues and residents still pay the same high prices for their wireless services. At the same time, these providers still won’t serve many of California’s disadvantaged communities.”*

[The Sacramento Bee](#)

*“If you leave them [cities and neighborhoods] out or ignore them you will have problems, be they protests or other bottlenecks.”*

[Commissioner Cyburne](#)

*“SB 649 is billed as cutting through permitting red tape and improving cell phone service. But it will slash millions in existing revenue to cities. And it will eviscerate cities’ ability to bring high-speed Internet service to low-income neighborhoods.”*

[East Bay Times](#)

*“An audacious 5G power (pole) grab. Local governments must retain some authority to push back on proposed deployments.”*

[Los Angeles Times](#)

*“In short, this [Telecom power grab] is a regulatory play to a) remove all regulations b) allow the companies to take over the state utility wired networks, c) i.e.; have customer-funded networks handed over for private use for whatever they want and d) the FCC’s proposed rules will block any city or state actions.”*

Bruce Kushnick, “5G” Wireless Is the New Fiber Optic, Bait-and-Switch Scandal

<https://medium.com/@kushnickbruce/5g-wireless-is-the-new-fiber-optic-bait-and-switch-scandal-646246b8f34d>

*“Which future do you want for America? Super-fast Internet and corporate control of every aspect of your life, or good health and longevity?” [Health Impact News](#)*

*“History Shows 5G Is Just another ‘We Will Bring New Tech if You Get Rid of Regulations’ Scam.”*

Bruce Kushnick <https://medium.com/@kushnickbruce/5g-wireless-is-the-new-fiber-optic-bait-and-switch-scandal-646246b8f34d>

### OUR COALITION:

Maryland Coalition To Oppose Cell Towers in Neighborhoods is a coalition of groups and advocates that have recently come together to oppose SB 1188 and HB 1767. We all oppose allowing Telecom to

preempt our local zoning rights. The vast majority of us - but not all - also oppose wireless expansion, 5G, the Internet of Things, and “smart cities”. In addition, we all advocate **for** fiber to every home and business as ***fiber is safer, more reliable, faster, and far more energy efficient and cyber secure than wireless.***

## OVERVIEW

SB 1188 and its sister bill, HB 1767 would streamline the placement of cellular antennas in front of homes, preempting local zoning rights in approving or regulating the installations of 4G/5G *wireless “small cell” facilities* in front of homes, on our streets, and in communities throughout Maryland. For the most part, the public has no understanding of what “small cells” and 5G are, *or* that there are two bills in Maryland that are poised to remove our rights to weigh in on the placement of these unseemly “small cell” configurations.

While installing more wireless infrastructure may be a goal of the telecom industry, ***it is not a necessary public service***, and many of the people of Maryland don’t want it.

These bills are ***not*** about bringing broadband to underserved communities nor “filling in gaps in coverage”. These Bills are to enable the ***massive and fast build-out*** of 5G, intended to serve as the “backbone” infrastructure for the Internet of Things, “smart cities,” driverless cars, and whatever other applications the private sector dreams up. They are just one of many maneuvers Telecom is forging to rid themselves of all regulations. Telecom wants the benefits of a regulated utility, but none of the responsibilities.

The bottom line is that 5G (if Telecom ever actually delivers on it) will impact the people of Maryland ***so profoundly*** (and in our opinion, for the most part, adversely) that we must allow communities to decide for themselves what kind of future they want. ***We did not give our legislators the mandate to sell our rights to the wireless Telecom Industry so corporate profits can dictate our future.*** Communities themselves need to decide if the 5G future and all that it touted to bring, are worth the harms. That’s a choice each community needs to make for itself.

***Our homes. Our streets. Our communities. Our choice!!!***

## SOMETHING TO “TICK OFF” EVERYONE

There is something in these Bills to “tick off” everyone. Following is a “grab bag” of topics to choose from, each briefly summarized with supporting links.

## GRAB BAG OF TOPICS

(In no particular order)

### SMALL CELLS, THE REST OF THE STORY:

Telecom dubs these bulky and dangerous installations "*Small Wireless Facilities*". In fact, they often include a refrigerator-sized power supply box that houses equipment such as nickel cadmium or lithium ion batteries, computers, and noisy cooling fans (See image). There may also be boxes for a wireless smart meter, one or more *Remote Radio Units*, and an array of dangling and unseemly wires to adorn it. One or more "small cell" antennas, measuring 3-6 cubic feet, will be mounted atop the pole and complete the eyesore (The image shown here includes everything *but* the "small cells"!)



### BILLS ARE FAVORABLE TO INDUSTRY:

Municipalities will be flooded with "small cell" applications that will need to be reviewed and responded to in a hasty fashion. Rates for use of poles are capped and grossly lower than the going market rates. Telecom is making billions, yet our municipalities will have capped rates? We should be able to set the rates we want for antennas in our communities.

### WILL SMALL CELL FACILITIES HELP "BRIDGE THE DIGITAL DIVIDE"?

Nope. In order for wireless "small cell" facilities to function, they need fiber to the pole. Although all areas by now *should* have fiber as we've paid for it in rate increases years ago, much of rural America still does not have fiber. So in order to "bridge the digital divide", Telecom would have to lay out billions of dollars for fiber, an expenditure they are not likely to do in the near future.

## **OUR SAFETY SHOULD BE NUMBER 1:**

Traffic safety should be a number-one priority. Yet, SB-1188 and HB-1767 place transmitter deployment speed and industry “ROI” above Marylanders’ safety. We know, especially when not sited with appropriate precautions or in safe locations, poles are susceptible to falling and causing damage and power outages during winds and storms. The windstorm this past weekend, which took down numerous poles in the area, underscores this issue. Also, poles –



particularly those with extensive equipment attached, poles that are of large girth, or double poles – are eye sores and can diminish property values and deter local commerce and tourism. Nevertheless, the Bills ignore the need for thorough and transparent reviews.

## **NO GAP IN COVERAGE:**

Many Telecom providers claim there is a need for a “small cell” facility due to cell phone coverage gaps. Let’s see. In this video from Santa Rosa a call was made from each site slated to receive a wireless “small cell” facility: “Can you hear me now?” the caller asked. “Loud and clear” was the reply. Apparently, gap in coverage was not the reason for the Santa Rosa deployment of “small cells”. Please start the video at the 7:55 mark: [https://www.youtube.com/watch?time\\_continue=142&v=je5JYITfM6k](https://www.youtube.com/watch?time_continue=142&v=je5JYITfM6k)

## **PROPERTY VALUES DECLINING NEAR CELL TOWERS:**

Many people do not want to live next to a cell phone tower, or a “small cell facility,” with good reason. There is a large body of science showing adverse health effects from radiofrequency microwave radiation emitted from these towers. The following articles, videos, and studies deal with declining property values around cell tower installations.

<https://www.emfanalysis.com/property-values-declining-cell-towers/>

## **LIABILITY DAMAGE WILL BE SHIFTED TO STATE:**

Who will be held liable in the event of harm from a wireless “small cell” facility? The State or the City could be assuming financial liability risk for future injury, fire, loss of health, and property devaluation due to the close proximity of cell antennas to homes, workplaces and schools.

*“In this letter dated July 19, 2017, the Law Office of Harry Lehmann explains how the State of California faces liability for damage sustained by Senate Bill 649 (the ALEC replica of SB 1188 and HB 1767) because the Bill shifts liability from the Telecom industry to the State. He documents in detail the science*

*indicating serious harm – including DNA impacts and cancer- from microwave radiation.”*

<https://ehtrust.org/law-letter-small-cell-bill-will-shift-liability-reasonably-result-bankruptcy-california-sb649/>

Multiple underwriters, including Lloyd’s of London, refuse to cover injury or damage from electromagnetic radiation (EMF).

Lloyd’s of London writes:

*“The Electromagnetic Fields Exclusion ... **is applied across the market as standard.**”*

The exclusion includes: *“Bodily injury, property damage, or personal and advertising injury...provided that such injury or damage results from or is contributed to by the pathological properties of electromagnetic radiation.”* CFC Underwriting, UK agent for Lloyd’s of London

## **FIRES, HURRICANES AND DISASTER RELIEF – WILL CELL TOWERS SERVE US?**

Cell towers just don’t hold up under disaster conditions. They failed in the fires in California as well as the hurricanes in Puerto Rico and Texas. “In this video, in the public record, at a Piedmont, CA City Council meeting, a Crown Castle/Verizon representative tells the truth. Residents with copper, Legacy landline received the reverse-911 warnings to evacuate. The Wireless alerts failed to get through.”

[https://www.youtube.com/watch?v=6bh0SvkBcTo&feature=em-upload\\_ownerphones received the reverse-911 warnings to evacuate.](https://www.youtube.com/watch?v=6bh0SvkBcTo&feature=em-upload_ownerphones+received+the+reverse-911+warnings+to+evacuate.)

I believe the following article was published 10 days after Hurricane Maria, and still 86% of cell sites were not operating.

*“The lack of communications has significantly hampered the relief efforts as well as people's ability to contact loved ones back home.”*

<http://www.prnewswire.com/news-releases/presently-over-86-of-cell-sites-in-puerto-rico-are-still-not-operating-in-aftermath-of-hurricane-maria-300530074.html>

Texas suffered as well. *“Wireless networks along the Texas coast suffered outages as a result of Hurricane Harvey, federal regulators said, leaving customers in some counties with limited or no cellphone service.”*

<https://www.wsj.com/articles/cell-networks-suffer-outages-in-harveys-wake-1503792185>

## **HEALTH:**

*“5G is being developed and implemented without adequate evaluation of the effect of this technology on human health after long term exposure to these frequencies. Peer-reviewed research studies have found adverse effects from the electromagnetic frequencies currently in use and that will be in use for this new technology.”*

[Environmental Health Trust](#)



190 leading scientists signed an Appeal calling for a [moratorium on 5G](#). The scientists stated that Microwave Frequencies used for all wireless devices and infrastructures are "...proven to be harmful to humans and the environment." Health effects include increased cancer risk, DNA damage, reproductive harms, Microwave Sickness, neurological disorders, sleep disturbance, and immune and cardiovascular disorders. The scientists conclude that there is already an existing "*pan-epidemic*".

**List of 155 Reviews on Non-thermal Effects of Microwave/Intermediate Frequency EMFs by Martin L. Pall** Oct. 12th, 2017 | "Emily" | ElectromagneticHealth.org

"Among the scientific reviews documenting these various non-thermal health effects are 155 that follow. Each of these reviews cites at least a dozen primary literature citations showing non-thermal effects, with many citing 100 or more going up to the 3rd reference which cites over 1000 such citations."

<http://electromagnetichealth.org/electromagnetic-health-blog/153-reviews/>

**Irradiated: A Comprehensive Compilation and Analysis of the Literature on Radiofrequency Fields and the Negative Biological Impacts of Non- ionizing Electromagnetic Fields (particularly radiofrequency fields) on Biological Organisms.**

415 pages of history, facts, studies, politics etc. on the health effects of radio frequency radiation

<https://wirelessaction.files.wordpress.com/2017/04/irradiated.pdf>

<http://www.emfsa.co.za/projects-initiatives/irradiated-excellent-resource/>

**MILLIMETER WAVE FREQUENCIES AND PHASED ARRAYS:**

5G will make use of MMW frequencies, never before used for public Internet and Telecommunications technology. These frequencies don't travel well though most building materials, and get absorbed by rain humans and wildlife, which is one of the reasons 5G will require over a million new cell sites.

*"Since little research has been conducted on the health consequences from long-term exposure to MMWs [millimeter waves], widespread deployment of 5G or 5th generation wireless infrastructure constitutes a massive experiment that may have adverse impacts on the public's health."* Joel Moskowitz Ph.D.

*"MMWs can transmit large amounts of data over short distances. The transmissions can be directed into narrow beams that travel by line-of-sight and can move data at high rates....The signals are blocked by buildings, and foliage can absorb much of their energy. Also, the waves can be reflected by metallic surfaces. Although antennas can be as small as a few millimeters, 'small cell' antenna arrays may consist of dozens or even hundreds of antenna elements."* Joel Moskowitz Ph.D.

These "antenna arrays" Dr. Moskowitz mentions are called "phased arrays" and are exceedingly powerful.

<http://www.saferemr.com/2017/08/5g-wireless-technology-millimeter-wave.html>

*"This work [link directly below] was presented to the Environmental Health Trust Israel Institute for Advanced Study...in January of this year [2017]. Please share it with those who are concerned about 5G and the lack of safety testing as this clearly indicates there are problematic biological impacts of this*

radiation. For example If persons already have precancerous cells in the skin, this could accelerate growth. This could also affect bacterial proliferation.”

<https://www.scribd.com/document/357562814/Sar-Skinrad>

## DO “SMALL CELLS” CONSTITUTE A VIOLATION OF ADA RIGHTS?

Putting wireless “small cell” facilities that emit radiofrequency/microwave radiation in front of the homes of people that have already developed microwave sickness is violating their rights under the American Disabilities Act (ADA). ADA requires that people who suffer from a disability be protected and accommodated. Forcing these levels of microwave radiation into their homes is like putting sugar in the drinking water of people with diabetes. It is akin to criminal assault and trespass. Furthermore, these towers prevent many people from using their public rights-of-way.

## DATA THE NEW OIL

5G will be the backbone infrastructure of the Internet of Things, Smart Cities and driverless cars, which will enable and be dependent on **massive**, 24/7 data collection on us all.

*“Personal data is to the tech world what oil is to the fossil fuel industry. That’s why companies like Amazon and Facebook plan to dig deeper than we ever imagined.”*

*“Our laptops, tablets, smartphones, and wearables see a lot of our lives – but not quite everything. For Silicon Valley, however, anything less than total knowledge of its users represents lost revenue. Any unmonitored moment is a missed opportunity.”*

[Silicon Valley siphons our data like oil. But the deepest drilling has just begun](#)

**Report: Without safeguards, Internet and IoT may create surveillance states in near future** Bradley Barth | SC Media

*“A catastrophic worldwide cyberattack, the emergence of an IoT-enabled surveillance state, and the weakening of encryption were among the chief security and privacy fears expressed by experts who were polled for a sweeping new report about the internet and its future impact on mankind.”*

<https://www.scmagazine.com/report-without-safeguards-internet-and-iot-may-create-surveillance-states-in-near-future/article/689534/>

**Predicting the Top 2018 Security Threats and Privacy Wars** Sue Smith | Newsfactor Network

*“Forcepoint foresees that ‘privacy wars’ are about to erupt, and with good reason. As businesses and government entities collect and mine more and more of our personal data, tensions are brewing between individual rights and security for all.”*

This article gives four predictions:

1. We will see “a broad and polarizing privacy debate, not just within governments, but between ordinary people.”

2. A data aggregator will be breached in 2018 using a known attack method.
  3. Attackers will target vulnerabilities in systems, which implement blockchain technology.
  4. In 2018, the Internet of Things (IoT) will become a target for mass disruption.
- [https://www.newsfactor.com/story.xhtml?story\\_id=110003SMTOE0&full\\_skip=1](https://www.newsfactor.com/story.xhtml?story_id=110003SMTOE0&full_skip=1)  
Should the choice to enable this kind of data mining belong to government or to the people?

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## TELECOM POWER GRAB – WHAT’S GOING ON IN OTHER BRANCHES OF THE GOVERNMENT?

*“...the [Telecom] industry is waging a war for those poles, at all levels. Big Telecom and its allies in the White House have quietly carried out a campaign to secure rapid and cheap access to those poles, at taxpayer expense. Here in California [and now in Maryland], state legislators recently advanced a bill...that would allow wireless service providers to install their equipment on public street poles at below-market rates — and to do so nearly wherever and whenever they choose — all in the name of “streamlining” local permit approvals... At the federal level, Trump administration appointees to the Federal Communications Commission have publicly cheered these proposals, while releasing their own draft regulations to carry out additional industry-friendly rules nationally.”*

San Jose Mayor Sam Liccardo | OpEd, New York Times

<https://www.nytimes.com/2017/10/03/opinion/wireless-verizon-telephone-poles.html?smid=fb-share>

The wireless Telecom industry is pushing for legislation to remove “barriers” and speed the deployment of 5G and other wireless technologies **at all levels of our government simultaneously**.

At the Federal level there are **over 60 Bills pushing wireless**. About **22 states have been saddled with Telecom “small cell” bills**. And at the FCC, there are so many pro industry actions that it’s difficult to keep track of them all. But here is a link that’s relatively up-to-date on the push to wireless in our Nation.  
<http://whatis5g.info/government-actions/>

Interestingly, San Jose Mayor Sam Liccardo recently quit the FCC Broadband Advisory Board (BDAC) saying, *“The group [BDAC] seems to be working for the interests of the telecom industry and not the public.”* Ya think??

<https://www.eastbaytimes.com/2018/01/25/san-jose-mayor-sam-liccardo-quits-fcc-broadband-advisory-board/>

## NO BUSINESS CASE:

5G is being escorted in with much fanfare and hype, but is there a business case for it? According to Bloomberg Technology, it “may not be worth it”:



*“Carriers are all looking at 5G for fixed wireless broadband, [vs. mobile] even though the technology isn’t particularly well suited to that application.... That’s largely because it is almost impossible to identify any other real revenue opportunities for the technology.”*

*“...it’s not clear that 5G will translate into more revenue until perhaps five or 10 years from now, Sharma said. New applications like the Internet of Things -- using wireless connectivity to let machines on the factory floor talk to each other, and for autonomous cars on the freeway to talk to light signals -- may take years to materialize, and may not pay that much.*

*After all, many of these applications can be handled by Wi-Fi networks, while others -- like driverless cars - would likely use onboard communications rather than cellular for safety reasons....”*

<https://www.bloomberg.com/news/articles/2017-12-18/upgrade-to-5g-costs-200-billion-a-year-and-may-not-be-worth-it>

According to a [Deloitte study](#), in order to build 5G, there will need to be a \$130-\$150 billion dollar investment in fiber to the poles over the next 5-7 years. How and if this will be financed is not yet clear.

One way they will cut costs is to do away with fiber to the home, which is a bit more costly than just to the pole. This is definitely not good news for us as we are still awaiting the fiber to the home we have already paid for in our rates. But fiber to the pole is cheaper, so we may end up waiting still longer.

*“With the router in the house being probably less than an ONT [Outside Network Terminal] and router combination today and losing the wiring in the house and losing the drop, we expect there to be a significant cost reduction.”*

<https://medium.com/@kushnickbruce/5g-wireless-is-the-new-fiber-optic-bait-and-switch-scandal-646246b8f34d>

**“Wireless Is Cheaper Because Most of the Expenses are Paid for by the Wireline Utility — and Local Phone Customers.”**

*“Based on Verizon’s ability to use the [“Title II”, FTTP networks](#) for wireless and claim that they are part of the state utility, of course wireless is cheaper, though this fact doesn’t get discussed in the cost models or profit margins.”*

<https://medium.com/@kushnickbruce/5g-wireless-is-the-new-fiber-optic-bait-and-switch-scandal-646246b8f34d>

Nor is it clear how Telecom will make money from the next generation technologies.

*“Carriers are plotting their strategies and densifying their networks as they prepare for the highly anticipated arrival of 5G. But how they’ll actually make money from next-generation technologies and services is about as clear as the air in New Delhi.”*

<https://www.fiercewireless.com/wireless/editor-s-corner-if-they-build-5g-money-will-come-right>

A BROKEN BACKBONE? 5G is intended to be the 'backbone infrastructure' for the IoT. This article explores whether 5G is even feasible.

[http://host.madison.com/business/investment/markets-and-stocks/is-this-a-setback-for-the-internet-of-things/article\\_99adb1db-2fbb-5c70-9d5c-b91111cf3267.html](http://host.madison.com/business/investment/markets-and-stocks/is-this-a-setback-for-the-internet-of-things/article_99adb1db-2fbb-5c70-9d5c-b91111cf3267.html)

## **JOB LOSS:**

We are told that these Bills and 5G “small cells” will bring jobs to Maryland and boost the economy, but many studies are coming down on the other side of this debate.

*“While industrial robots have already displaced hundreds of thousands of jobs in the US since 1990, they are about to take over millions more from human hands in the next decade, said a renowned US economist.”* [Robots set to displace millions of US jobs: Economist](#)

Please also see the following:

**Robots will destroy our jobs – and we're not ready for it** Dan Shewan | The Guardian

*“Two-thirds of Americans believe robots will soon perform most of the work done by humans but 80% also believe their jobs will be unaffected. Time to think again.”*

<https://www.theguardian.com/technology/2017/jan/11/robots-jobs-employees-artificial-intelligence>

**Study: Robots set to displace millions of U.S. workers by 2025** Christopher Matthews | AXIOS.

*“Acemoglu and Restrepo say that if automation proceeds at predicted rates, millions of jobs could be lost while wage growth is reduced by up to 2.6% between 2015 and 2025.”*

<https://www.axios.com/study-robots-set-to-displace-millions-of-u-s-workers-by-2025-2332265144.html>

## **ENERGY DRAIN:**

Armed with the astronomical amount of data that will be generated from 5G-enabled IoT, Smart Cities, and driverless cars, our government and industry expect we will be better equipped to save energy. But what they fail to include in their analyses is the **mega energy footprint** of the IoT itself. ***It is not at all clear that the IoT will ever succeed in offsetting its own fast growing and unbounded energy consumption.***

*“IoT devices are expected to be low-power devices, but the number of IoT devices that Cisco predicts, 50 billion by 2020, is an order of magnitude larger than the number of smartphones and tablets in use today. If the energy consumed by these devices and the networks and data centers to which they are connected is considered, energy consumption by IoT will impactfully increase the rate of energy consumption growth”. Stephen Max Patterson, Network World*

<https://www.networkworld.com/article/3187891/internet-of-things/4-reasons-ciscos-iot-forecast-is-right-and-2-why-its-wrong.html>

*“We have a tsunami of data approaching. Everything, which can be is being digitalised. It is a perfect storm. 5G is coming, IP [internet protocol] traffic is much higher than estimated, and all cars and*

*machines, robots and artificial intelligence are being digitalised, producing huge amounts of data which is stored in data centres.” Anders Andrae | The Guardian*  
[https://www.theguardian.com/environment/2017/dec/11/tsunami-of-data-could-consume-fifth-global-electricity-by-2025?CMP=share\\_btn\\_fb](https://www.theguardian.com/environment/2017/dec/11/tsunami-of-data-could-consume-fifth-global-electricity-by-2025?CMP=share_btn_fb)

Please also see, <http://whatis5g.info/energy-consumption/>

### **WILDLIFE - “Our egos are writing checks that the ecosystem can’t cash.” Patricia Burke**

Growing electromagnetic radiation from our digital world – though imperceptible to humans – is wreaking havoc on the natural world. We do not yet know to what degree and in what ways this deluge of frequencies and modulations – carrying mega amounts of data through our atmosphere – is affecting each being on the planet. But what *is* increasingly clear is that wireless expansion is not sustainable.

If we then add 5G MMW frequencies and the massive densification of our infrastructure to the current stew of modulated frequencies, the future for wildlife looks bleak.

A 2014 letter to the CTIA, from the US Department of Interior states that the FCC standards for cell phone radiation are outmoded and do not adequately protect wildlife. The FCC standards were set in 1996, and though a docket was opened in 2013 to consider the decades of new science, the FCC has yet to review the standards. (For more please see the following section, FCC’s outdated Radiofrequency/microwave radiation Guidelines)  
<http://www.saferemr.com/2014/03/dept-of-interior-attacks-fcc-regarding.html>

### **Bees, Birds and Mankind – Destroying nature by “electrosmog” Ulrich Warnke**

*“In this paper, he [Ulrich] shows how wise and sensitive nature was about using electrical and magnetic fields in the creation of life. But he can for this reason also convincingly criticize the present foolish and irresponsible interference in nature’s house-keeping. It is clear from his paper that the powers that be in politics, the economy and science are in the process of destroying what nature has built up over millions of years.”*

[https://www.researchgate.net/publication/241538484\\_BEES\\_BIRDS\\_AND\\_MANKIND](https://www.researchgate.net/publication/241538484_BEES_BIRDS_AND_MANKIND)

### **FCC’S OUTDATED RADIOFREQUENCY/MICROWAVE RADIATION GUIDELINES:**

*“Fact: There Are No Safety Standards”*

*“Currently there are no national or international ‘standards’ for safe levels of the radiation emitted by wireless or microwave devices. Instead, the US government adopted ‘guidelines’ developed by industry based on decades old research. Guidelines have a much lower certainty than a ‘standard’ as proper long term safety testing was not done to ensure the public was protected from all possible harm.”*

Environmental Health Trust (For more in depth coverage of the FCC RF guidelines, please see <https://ehtrust.org/policy/fcc-safety-standards/>)

## WHY FIBER IS BETTER THAN WIRELESS - *Fast, Safe, Reliable, Cyber Secure, Energy Efficient*

Internet and Telecommunications data can be transmitted either through wires or wirelessly. ***Wired communications are faster, safer, more reliable, and far more cyber secure and energy efficient than wireless.*** So in the best of all worlds, we would rely on wired transmissions for the vast majority of our Internet and Telecommunications use, and reserve wireless for short on-the-go calls or text messages. Unfortunately, Telecom is not designing infrastructure with that in mind, they are doing what is cheapest and most profitable for them.

*“The history of U.S. communication infrastructure increasingly supports the proposition that it is unrealistic to expect private monopolies, duopolies, or triopolies—regulated or unregulated—to make the long-term investments necessary to build the enduring and sustainable public broadband information highway that the country needs. Corporations will invariably seek the cheapest, quickest, and most profitable path, which has led to the current emphasis on wireless.”* Dr. Timothy Schoechle, *Re-Inventing Wires: The Future of Landlines and Networks*

<http://electromagnetichealth.org/wp-content/uploads/2018/01/ReInventing-Wires-1-25-18.pdf>

Susan Crawford unpacks some of the obstacles preventing our adoption of, and access to, fiber. “...fed up with federal apathy and sick of being held back by lousy internet access controlled by local cable monopolies, scrappy cities around the US are working hard to find ways to get cheap, world-class fiber-optic connectivity. It’s always been an uphill climb, as the ‘incumbents’—giant carriers like Comcast, Verizon, and AT&T—are constantly working behind the scenes to block competition. (Recently, Comcast spent nearly \$1 million opposing a municipal-fiber vote in Fort Collins, Colorado.

<https://www.wired.com/story/koch-brothers-are-cities-new-obstacle-to-building-broadband/>

## OUR KIDS ARE PAYING FOR 5G WITH THEIR LIVES!!

*“When interaction becomes a strange and unfamiliar thing, then we will have changed who and what we are as a species.”* David Byrne | MIT Review

[https://www.technologyreview.com/s/608580/eliminating-the-human/?utm\\_campaign=add\\_this&utm\\_source=facebook&utm\\_medium=post](https://www.technologyreview.com/s/608580/eliminating-the-human/?utm_campaign=add_this&utm_source=facebook&utm_medium=post)

Research on our current technology is showing [profound effects](#) on our brains and humanity. Suicide, loneliness, and depression are reaching epidemic proportions. Professor [Jean Twenge](#) from San Diego State University says “young people are on the brink of the worst mental health crisis in decades.”

*“What are the cumulative impacts on people, society and the environment? What may come next if this culture is left unchecked, to its end trajectory, and is that what we want? \*Stare Into The Lights My Pretties\* investigates these questions with an urge to return to the real physical world, to form a critical view of technological escalation driven by rapacious and pervasive corporate interest”. Quote from promotional for the documentary, *Stare into the Lights My Little Pretties**

<https://www.youtube.com/watch?v=P2b9TjaDmbk>  
<https://www.youtube.com/watch?v=Q5qJjNM2Kx0&w=740&h=447>

Rates of affected people will likely increase as every object takes up residence in the Cloud and we are corralled into a tech-infested world. Do we really want to engage with technology everywhere we turn?

People will fill up however much bandwidth Telecom provides us with. Technologies have been designed to keep us engaged and we are vulnerable to succumbing to more if available. But regardless, WE, the people – our communities - need to be the ones to decide – not Telecom.

***Our homes. Our streets. Our communities. Our choice!!***

### **5G WILL LEAD TO A HUGE INCREASE IN E-WASTE:**

What will happen when the Internet of Things produces orders of magnitude more e-waste than what we are already generating? According to a [report from Electronics Take Back Coalition](#), in 2010, we disposed of 142,000 computers and over 416,000 mobile devices in the US **every day**. 5G will enable every “thing” to join the ranks of e-waste: machines and appliances, sensors and surveillance cameras peppered throughout our cities, robots, driverless cars, augmented reality, and so forth. And the demise of each IoT “thing” will be hastened yet further by cyber vulnerabilities not able to be patched, planned obsolescence, or the pursuit of newer, sleeker, or cooler gadgets, devices and “things.” Where will all this e-waste go, and can our earth “digest” this amount of toxic waste?

*“Last year, we ‘smart’ humans threw away 44.7 million metric tonnes of things with a plug or battery – everything from refrigerators and television sets to solar panels and mobile phones. To put that in more visual terms, imagine 1.23 million 18-wheel trucks filled to capacity with e-waste – enough trucks to line up bumper-to-bumper from New York to Bangkok and back.”* Melissa Breyer

<https://www.treehugger.com/environmental-policy/staggering-e-waste-numbers-revealed-grim-new-report.html>

For more on e-waste, please see, <http://whatis5g.info/e-waste/>

### **DEATH KNELL FOR CYBER SECURITY:**

With the arrival of the IoT and billions of new Internet-connected machines, appliances, sensors, “things,” robots, and devices, etc. - all enabled and supported by 5G - cyber security has become a near impossibility.

Cyber security expert, Bruce Schneier, writes:



*“With the advent of the Internet of Things and cyber-physical systems in general, we’ve given the Internet [hands and feet](#): the ability to directly affect the physical world. What used to be attacks against data and information have become attacks against flesh, steel, and concrete.”*

Restated: *“Give the Internet hands and feet, and it will have the ability to punch and kick.”*

Schneier goes on to say:

*“Today’s threats include hackers crashing airplanes by hacking into computer networks, and remotely disabling cars, either when they’re turned off and parked or while they’re speeding down the highway. We’re worried about manipulated counts from electronic voting machines, frozen water pipes through hacked thermostats, and remote murder through hacked medical devices. The possibilities are pretty literally endless. The Internet of Things will allow for attacks we can’t even imagine.”*

[The Internet of Things Will Turn Large-Scale Hacks into Real World Disasters](#)

**Cyber-attacks are a top three risk to society, alongside natural disaster and extreme weather** | Danny Palmer

*“Nations’ reliance on the internet and connected services means the potential damage from cyber-attacks is one of the biggest risks facing the world today, according to a report from the World Economic Forum (WEF).”*

<http://www.zdnet.com/article/cyber-attacks-are-a-top-three-risk-to-society-alongside-natural-disaster-and-extreme-weather/>

*“A catastrophic worldwide cyberattack, the emergence of an IoT-enabled surveillance state, and the weakening of encryption were among the chief security and privacy fears expressed by experts who were polled for a sweeping new report about the internet and its future impact on mankind.”* Bradley Barth

<https://www.scmagazine.com/report-without-safeguards-internet-and-iot-may-create-surveillance-states-in-near-future/article/689534/>

*Should our government, encouraged by Telecom, mandate the forced exposure of the public to these kinds of dangers? Shouldn’t this be something communities choose to gamble with? Or not?*

## THE SO-CALLED “RACE” TO 5G:

World governments and industries are enmeshed in a battle: Who will win the "race to 5G"? Yet we on the ground want none of it at all - just our health, privacy, safety, and humanity.

<https://www.nytimes.com/2018/03/06/technology/companies-countries-battling-5g.html>

Should we allow the people of Maryland to be the casualties in a “battle” they don’t really know or care about?

### **GOVERNOR BROWN VETOES SB 649, CALIFORNIA’S ALEC “SMALL CELL” BILL:**

After much public outcry, Governor Brown vetoed California’s “small cell” bill. I included the following letters and editorials as I thought they might be useful in helping you decide if indeed these Bills would be in the best interest of the people of Maryland.

#### **Veto Message of Governor Brown**

“To the members of the California State Senate: I am returning Senate Bill 649 without my signature....”

[https://ruraleconomytechnology.files.wordpress.com/2017/10/sb\\_649\\_veto\\_message\\_2017.pdf](https://ruraleconomytechnology.files.wordpress.com/2017/10/sb_649_veto_message_2017.pdf)

**Open Letter to California about SB-649: You’re being Played by ALEC & AT&T Et Al.** Sept. 10th, 2017 | Bruce Kushnick | Huffington Post

“The California legislature is considering an industry-sponsored bill that claims it will bring a fabulous wireless tech future, 5G, that would replace the wires to the home and deliver cable, phone, broadband and internet services. But there’s a catch; the phone companies want the State to remove and preempt city and state laws, among other favors....”

<http://www.huffingtonpost.com/entry/59b591a2e4b0c50640cd6877>

**Major newspaper editorials oppose 5G "small cell" antenna bills** July 21<sup>st</sup>, 2017 | Electromagnetic Radiation Safety.

Series of editorials assembled by Joel Moskowitz that oppose the 5G "small cell" antenna bills proposed by the wireless telecommunications industry.

<http://www.saferemr.com/2017/07/major-newspaper-editorials-oppose-5g.html>

**List of Letters from Experts and Organizations Opposing SB 649 (The California ALEC “Small Cell” Bill):**

<http://whatis5g.info/infrastructure/2017/08/letters-opposing-sb-649-and-small-cells/> and

<https://ehtrust.org/small-cells-mini-cell-towers-health-letters-scientists-health-risk-5g/>

**Editorial: Gov. Brown, veto the bill that lets rich telecoms use public property practically free** Sept. 25th, 2017 | Mercury News Editorial Board | Mercury News

“The California Legislature wants to give telecom companies a nice big gift: at least \$30 million a year, and perhaps billions of dollars in savings at the direct expense of cities that both rely on the money and use their current leverage to negotiate improved coverage for poor neighborhoods.”

<http://www.mercurynews.com/2017/09/25/editorial-gov-brown-veto-the-bill-that-lets-rich-telecoms-use-public-property-practically-free/>

**Gov. Brown VETO SB 649** RADIO AD from the California Alliance for Safer Technology regarding SB 649 “Governor Brown, Governor Brown...We know you’re in there.... We just want you to know there’s a way to end this without anyone getting hurt....”

[https://www.youtube.com/watch?v=71\\_hqCyDTB8&feature=share](https://www.youtube.com/watch?v=71_hqCyDTB8&feature=share)

**Tell Gov. Brown: Veto Irresponsible Wireless Bill** Sept. 2017 | Environmental Working Group  
"Use this form to join EWG Action Fund and urge Gov. Brown to stand up for the rights of local communities and VETO SB 649."

[http://action.ewg.org/p/dia/action4/common/public/?action\\_KEY=2352&tag=201709CA5GVeto&track=ACTION\\_CA5GVetoC4](http://action.ewg.org/p/dia/action4/common/public/?action_KEY=2352&tag=201709CA5GVeto&track=ACTION_CA5GVetoC4)

**No on SB 649 - SB 649 is Bad for Your Community: Corporate Interests vs. Good Governance** Sept. 2017 | League of California Cities

"The League, and over 215 cities, are OPPOSED to SB 649 (as amended June 20) related to the permitting of wireless and small cell telecommunications facilities. Mayors of six of California's largest cities have sent Sen. Hueso a letter opposing the measure."

<https://www.cacities.org/SB649>

**Health Advocates Urge Governor to Veto 5G Cell Tower Bill** Sept. 19th, 2017 | Suzanne Potter | Public News Service

"SACRAMENTO, Calif. – A bill that would lead to the proliferation of refrigerator-sized 5G cell tower boxes across the state is now on Gov. Jerry Brown's desk - and health advocates are pressing for a veto."

<http://www.publicnewsservice.org/2017-09-19/health-issues/health-advocates-urge-governor-to-veto-5g-cell-tower-bill/a59478-1>

**California: 5G Opponents Launch Statewide Media Campaign** Sept. 18th, 2017 | Christian Hargrave | Toward Better Health

"'Trying to eliminate local control over the placement of powerful wireless antennas shows that the industry is fully aware of the public health problems associated with wireless radiation,' said Reinette Senum, a City Council member and former Mayor of Nevada City. 'If there was nothing to worry about, why would they be so opposed to any local control?'"

[http://mieuxprevenir.blogspot.nl/2017/09/california-5g-opponents-launch.htmlutm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed:+TowardsBetterHealth+\(Towards+Better+Health\)](http://mieuxprevenir.blogspot.nl/2017/09/california-5g-opponents-launch.htmlutm_source=feedburner&utm_medium=email&utm_campaign=Feed:+TowardsBetterHealth+(Towards+Better+Health))

## IN CONCLUSION

There are so many areas that 5G and its attendant platforms will adversely impact the people of Maryland. Please do not sell out to industry and give away our rights to health, privacy, safety, humanity and choice.

***We do not want cell towers near our homes and in our neighborhoods!  
Maryland legislators should not allow Telecom to bypass local zoning regulations or discretionary review. Please give an unfavorable report on SB 1188 and HB 1767***

*“When you are standing at the edge of a cliff, progress is pausing to reflect, and then choosing a better path forward.”* Quote inspired by Marti Kheel

#### **SB 1188 and HB 1767 UNPACKED...A BIT:**

Except where the Bills provide exclusions, they pre-empt local authority in the rights-of-way to regulate:

- 1) the attachment of antennas to government poles and the pole- or ground-mounting of related equipment, to be used as “small wireless facilities;”
- 2) the suspension of aerial lines between poles and attachment of antennas upon those lines and the pole- or ground-mounting of related equipment, also to be used as “small wireless facilities;” and
- 3) the installation of new poles in the rights-of-way, and the attachment of antennas and pole- or ground-mounting of related equipment, to be used as “small wireless facilities.”

Keep in mind, for the pre-empted category of **public right-of-way**, once installed, despite the “collocation” provisions in the Bills, each site becomes an opportunity for expansion under the Spectrum Act. That Act permits eligible facilities in a public right-of-way to be increased in height by 10 feet, increased in width by 6 feet (think antennas), and for the equipment to be expanded, too. If you want to see how the height extension could be accomplished on an existing pole, go to today’s Tower Committee agenda regular [application](#) application, and look at the pipe extension.

Kate Kheel

Researcher and Advocate

Creator of [www.whatis5g.info](http://www.whatis5g.info)

Maryland Coalition to Oppose Cell Towers in Neighborhoods

<https://mdcoalition4safeneighborhoods.blogspot.com>