



Safe Technology Introduction

Pensacola, FL

September 8, 2020

Cece Doucette, MTPW



- ▶ Helped Ashland, MA become first-in-nation with [Best Practices for Mobile Devices](#), 2014
- ▶ Introduced [legislation](#) in MA & testified in NH
- ▶ Co-founder, [Wireless Education](#), educational non-profit
- ▶ Co-founder, [Massachusetts for Safe Technology](#)
- ▶ EMF Medical Conference [2019](#) and [2021](#)
- ▶ [Health in Buildings Roundtable Conference](#) @ NIH

The Legal Fine Print

▶ See the Fine Print

▶ Settings

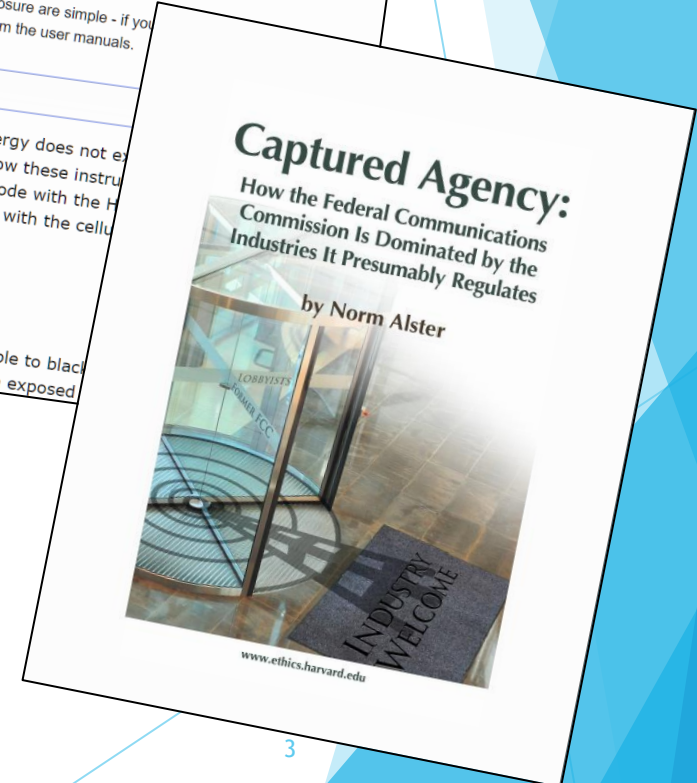
▶ General

▶ (About)

▶ Legal & Regulatory

▶ RF Exposure

▶ Captured Agency



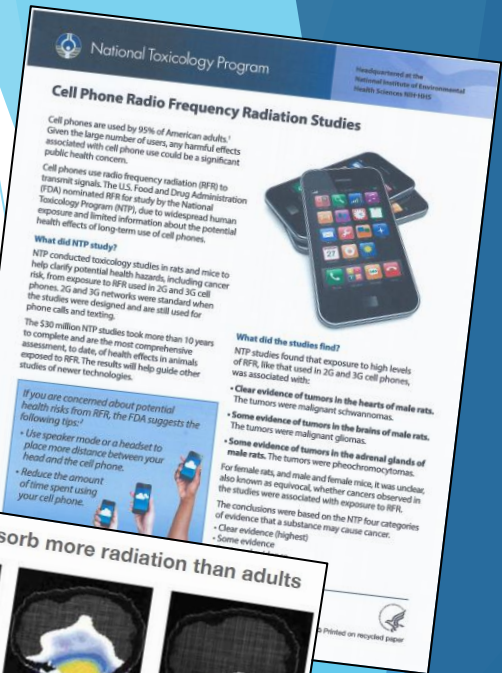
What is 5G?

- ▶ 5th Generation technology
- ▶ Enables faster entertainment downloads, smart cities, etc.
- ▶ Uses existing 3G, 4G wavelengths to penetrate buildings
- ▶ 5G is the addition of short millimeter waves, can't go through objects; clear-cutting trees
- ▶ Industry goal: millions of small cells at curb outside bedrooms in public access way, every 2-12 houses
- ▶ Thousands of 5G satellites in the sky
- ▶ Never tested for safety ([Congressional hearing](#))



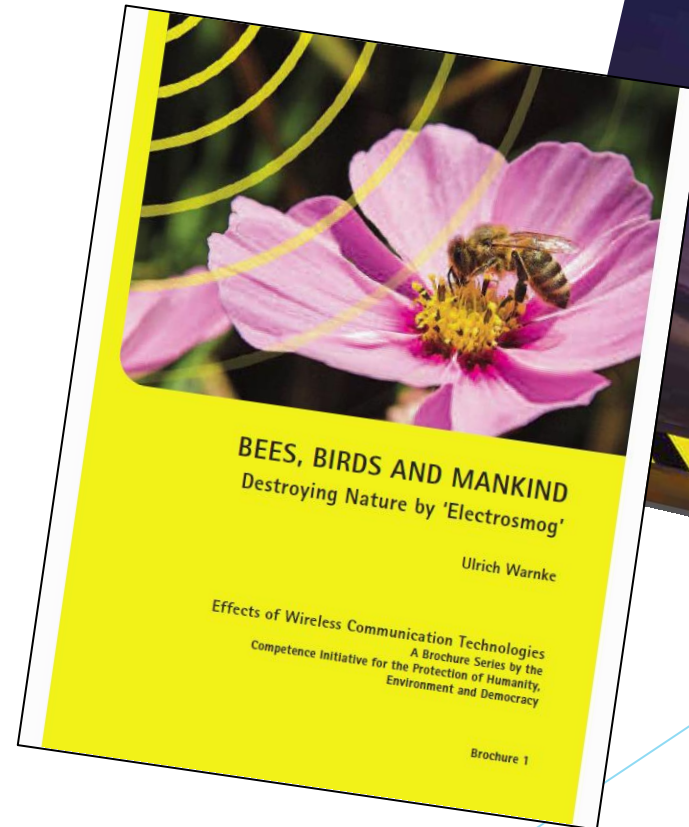
Science Overview

- ▶ Dr. Martin Pall's paper, "[5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field \(EMF\) Exposures and the Mechanism that Causes Them](#)"
 - ▶ Cancer, DNA mutation, infertility, neurological damage, cell death, oxidative stress, hormone disruption, excess calcium and signaling disruption
 - ▶ Microwave sickness: headaches, nose/ear bleeds, insomnia, pain, dizziness, anger, anxiety, depression, cognitive impairment, behavior issues, learning disabilities and more
- ▶ [Children](#) are especially vulnerable
- ▶ [WHO re-opening investigation](#)



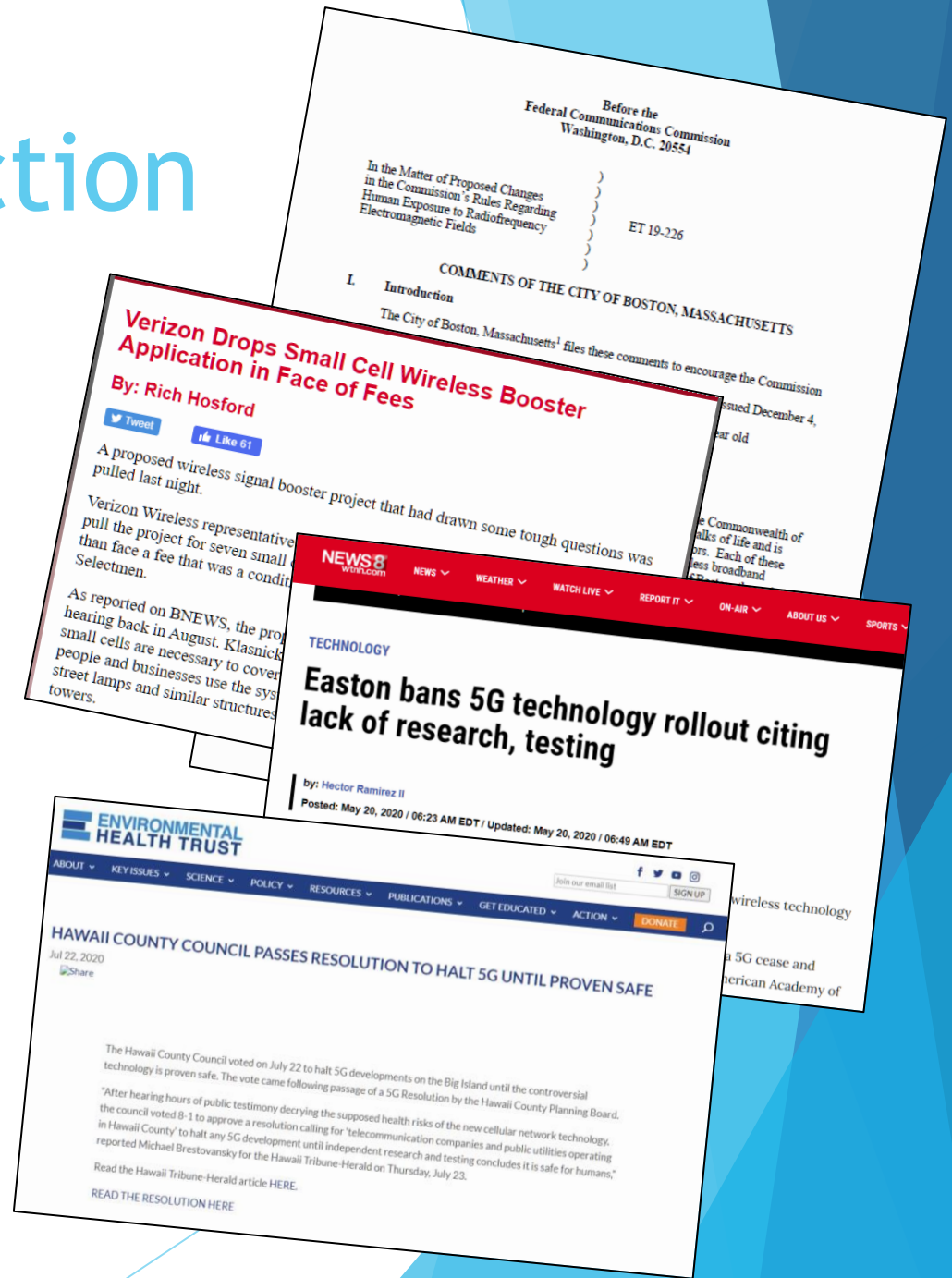
Science: Planetary Impact

- ▶ Pollinators
- ▶ Birds
- ▶ Energy consumption
 - Mineral extraction
 - Data warehouses
 - Networks
 - Personal devices
 - Streaming
 - Send/receive
 - Charging
 - Continuous app updates



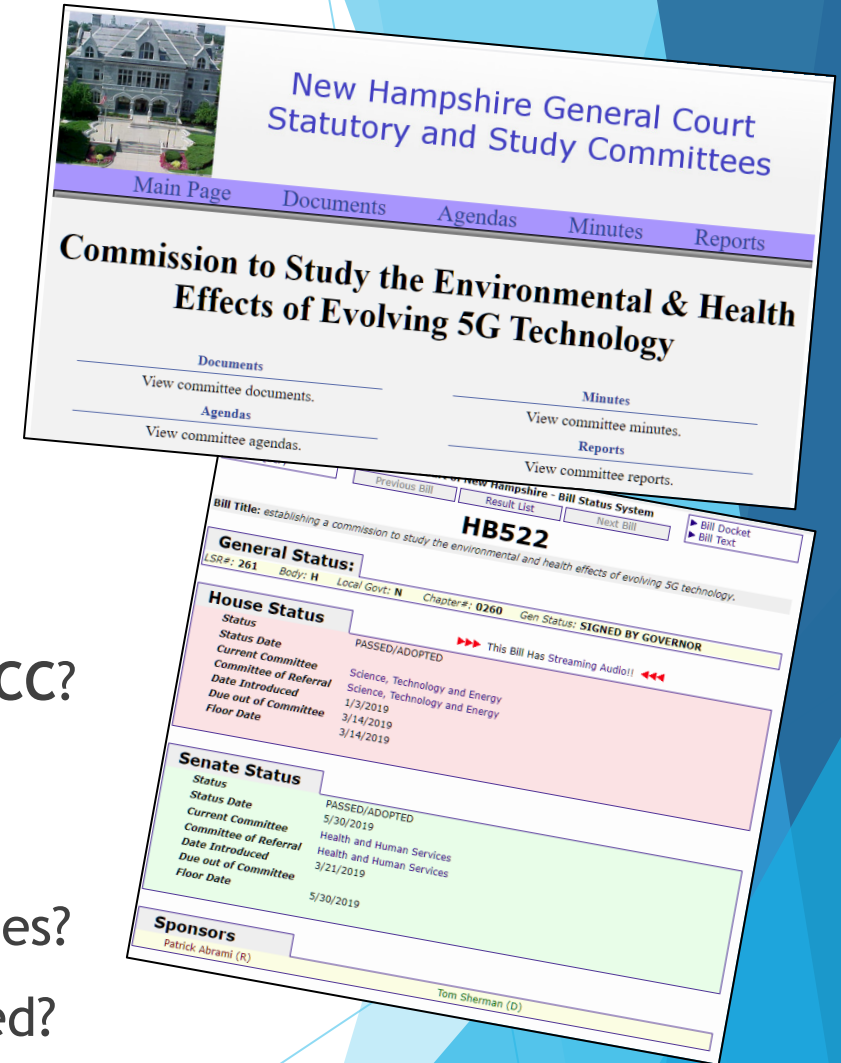
Public Servants Taking Action

- ▶ [City of Boston files with FCC](#)
- ▶ [Shelburne](#), MA 1,500' setback in bylaw
- ▶ [Burlington, MA Small Cell Policy](#)
 - ▶ National example with [5GCrisis.com](#)
- ▶ [Easton, CT](#) bans 5G
- ▶ [Hawaii County](#) bans 5G
- ▶ [Bermuda](#) temporary 5G moratorium



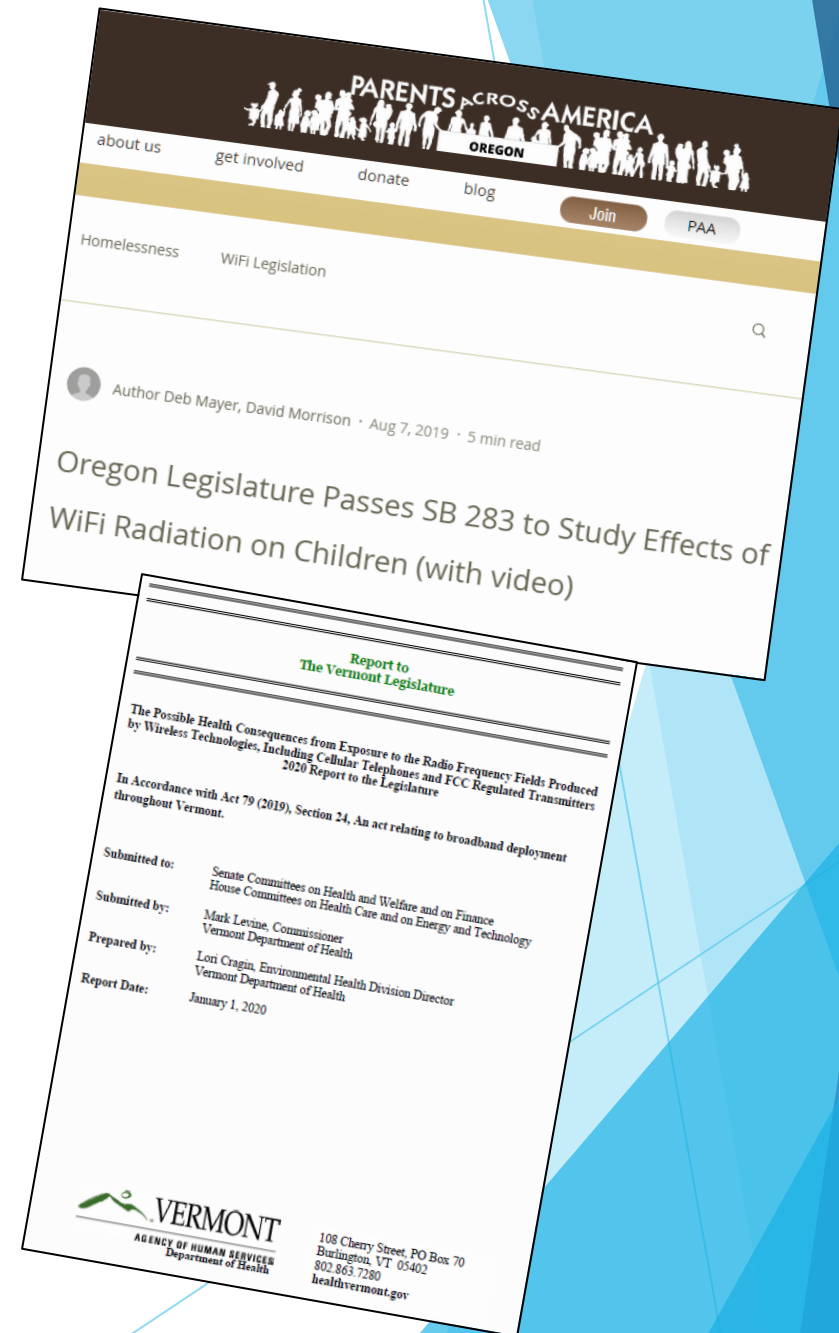
National Policy Solutions

- ▶ NH Rep. Patrick Abrami -- very pointed questions:
 - ▶ Why has the **insurance industry** put in RF exclusions?
 - ▶ Why does legal **fine print** say keep distance from the body?
 - ▶ Why are 1,000s of peer-reviewed **studies ignored by FCC?**
 - ▶ Why do FCC exposure limits not account for the non-thermal, non-ionizing, **biological effects?**
 - ▶ Why are **US limits 100 times higher** than other countries?
 - ▶ Why is the **cumulative effect** of increasing EMFs ignored?
- ▶ New Hampshire law in less than a year, commission well underway



National Policy Solutions

- Oregon Senator Anderson, retired public health nurse
 - Emergency law in less than a year
 - Public Health Authority to investigate non-industry peer-reviewed scientific literature
 - Report back on impact, especially for school children
- Vermont Department of Health Report, Dartmouth investigates
- AK, CA, HI, IL, LA, MA, MT, NY, RI



Schools Solutions

- Hosted expert panel in Shrewsbury, MA: [Questioning the Safety of Our Children's Exposure to Wireless Radiation in School](#)
- [New York Times](#): Silicon Valley execs banning screens from their children
- [Maryland](#) first public health agency to recommend hard-wiring in schools
- U.S. Collaborative for High Performance Schools [low-EMF best practices](#)
- [Safety recommendations](#) for study at home
- Wireless Education's [Schools & Families](#) on-line course



Pensacola Municipal Solutions

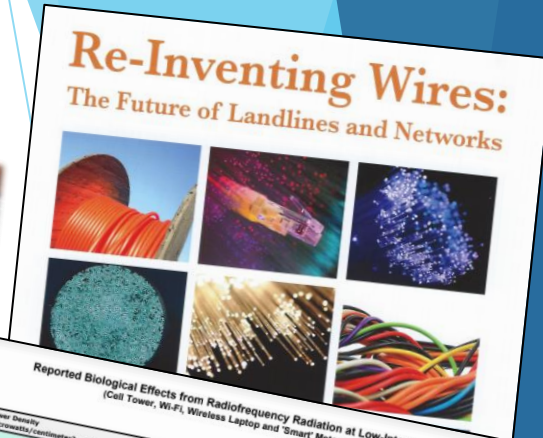
- Differentiate industry priorities vs. public's

- Reinventing Wires: The Future of Landlines and Networks

- Measure vs. biological effects

- ALARA, As Low As Reasonably Achievable (CDC)

- Building Biology Institute levels



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RADIOFREQUENCY / MICROWAVE EXPOSURE GUIDELINES
(High Frequency Electromagnetic Waves)

1> BUILDING BIOLOGY PRECAUTIONARY GUIDELINES (SBM-2015) For Sleeping Areas

Power density	No Concern	Slight Concern	Severe Concern	Extreme Concern
microWatts per square meter $\mu\text{W}/\text{m}^2$	< 0.1	0.1 - 10	10 - 1000	> 1000
microWatts per square cm $\mu\text{W}/\text{cm}^2$	< 0.000,01	0.000,01 - 0.001	0.001 - 0.1	> 0.1
milliWatts per square meter mW/m^2	< 0.000,1	0.000,1 - 0.01	0.01 - 1	> 1
Signal strength Volts per meter V/m	< 0.006,14	0.006,14 - 0.061,4	0.061,4 - 0.614	> 0.614

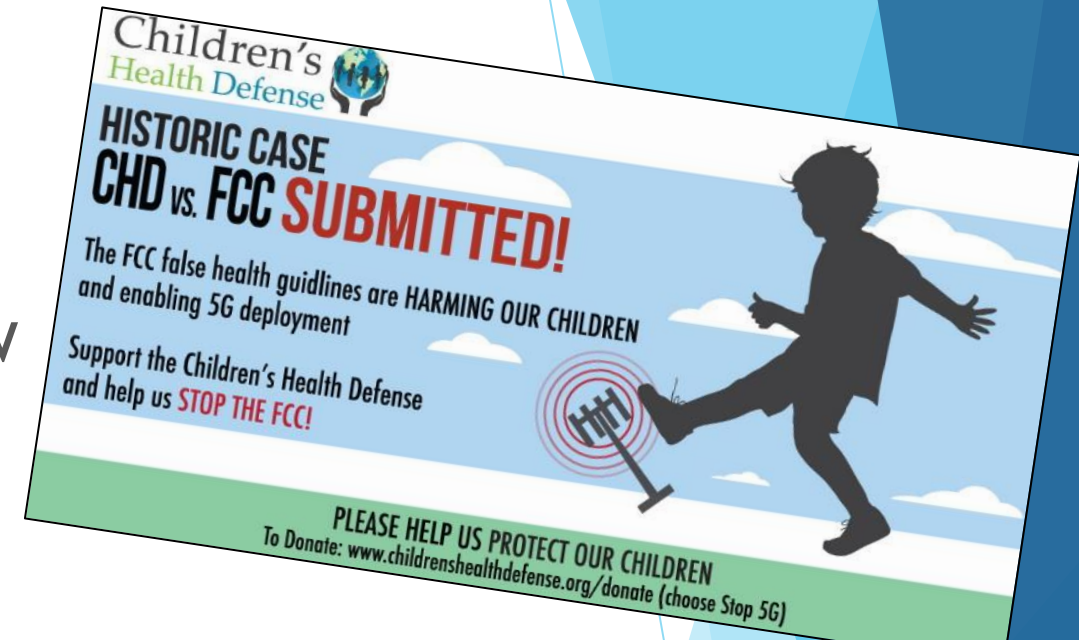
2> BIOINITIATIVE REPORT PRECAUTIONARY GUIDELINES (2007 - 2012) www.biointitiative.org/
Dr. Martin Blank - Columbia University
Biologically Based Precautionary Levels 1,000 $\mu\text{W}/\text{m}^2$ or 0.1 $\mu\text{W}/\text{cm}^2$

Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and "Smart" Meter RF Intensities)

Power Density (microWatts/cm ² or $\mu\text{W}/\text{cm}^2$)	Reported Biological Effects	Reference
As low as (30 ⁻¹⁵) or 100 femtoWatts/cm ²	Super-low intensity RF effects at MR resonant frequencies resulted in changes in genes; problems with chromatin conformation (DNA)	Belyaev, 1997
5 pWatts/cm ² (10 ⁻¹⁵)	Changed growth rates in yeast cells	
0.1 nanoWatts/cm ² (10 ⁻¹⁰) or 100 pWatts/cm ²	Super-low intensity RF effects at MR resonant frequencies resulted in changes in genes; problems with chromatin conformation (DNA) interactions comparable to base stations	Grundler, 1992
0.00014 uW/cm ²	Chronic exposure to mobile phone pulsed RF significantly reduced sperm count	Belyaev, 1997
0.0005 uW/cm ²	RF decreased cell proliferation at 900 MHz GSM 217 Hz for 30 min exposure	Velichkov, 1999
0.0008 - 0.0128 uW/cm ²	Fatigue, depressive tendency, sleeping disorders, concentration difficulties, cardio-vascular problems reported with exposure to GSM 900/1800 MHz cell phone signal at base station near exposures	Bates, 2006
0.001 - 0.02 uW/cm ²	In children and adolescents (8-17 yrs) short-term exposure caused headaches, irritation, concentration difficulties reported problems	Thomson, 2010
0.001 to 0.05 uW/cm ²	In children and adolescents (8-17 yrs) short-term exposure caused headaches, irritation, concentration difficulties reported problems	Thomson, 2010
0.005 uW/cm ²	In adults (20-60 yrs) chronic exposure caused sleep disturbances, (but not significantly increased across the levels subsequently decreased); higher levels of depressive and non-depressive, dose-dependent, produced chronic physiological stress in rats even after 1.5 years	Mohler, 2010
0.005 - 0.04 uW/cm ²	Adults exposed to short-term cell phone radiation reported headaches, concentration difficulties (differences not significant, but elevated)	Thomson, 2010
0.008 - 0.01 uW/cm ²	Chronic exposure to base station RF (whole-body) in humans showed increased stress hormones, depressive levels subsequently decreased; higher levels of depressive and non-depressive, dose-dependent, produced chronic physiological stress in rats even after 1.5 years	Mohler, 2010
0.01 - 0.11 uW/cm ²	RF from cell towers caused fatigue, headaches, sleeping problems	Buchner, 2012
	Stress problems, mood, disrupted immune function	Navarro, 2003
	Reproduction/fertility effects	
	Chronic damage/ROS/DNA damage/DNA repair failure	Brain tumors and blood-brain barrier
	Disrupted calcium metabolism	Depression, neuron firing rate, EEG, memory, learning, behavior
		Cancer (other than brain), cell proliferation
		Cancer: heart muscle, blood pressure, vascular effects

Legal Solutions

- ▶ Supreme Court upheld right-to-know
- ▶ Fay School ADA: Court recognizes non-thermal biological effects
- ▶ Class-action lawsuit against Apple
- ▶ FCC being sued:
 - ▶ Environmental Health Trust
 - ▶ Children's Health Defense
 - ▶ IRREGULATORS v. FCC



verizon Verizon New York 2017 Financial Annual Report
Excerpt: Revenues, Expenses and Profits

Item (a)	Total (b)	Nonregulated (c)	New York Local Service (d)	Access (e)
7 Total Operating Revenues	4,988,070,423	1,546,004,819	1,077,981,833	2,362,073,771
Operating Expenses				
Plant Specific	2,444,033,095	1,087,065,833	817,810,103	\$459,187,359
Plant Non-specific	440,183,010	55,415,741	247,758,805	\$137,010,463
Corporate Operations	2,917,804,192	287,290,568	1,768,187,616	852,425,990
Total Operating Expenses	7,570,159,192	1,645,861,973	4,022,090,869	2,010,246,463
Net Operating Revenues	(2,582,088,769)	(172,946)	(2,944,089,032)	351,827,317

Corporate Operations SCANDAL (points to Corporate Operations row)

Wireless Scandal (points to Access column)

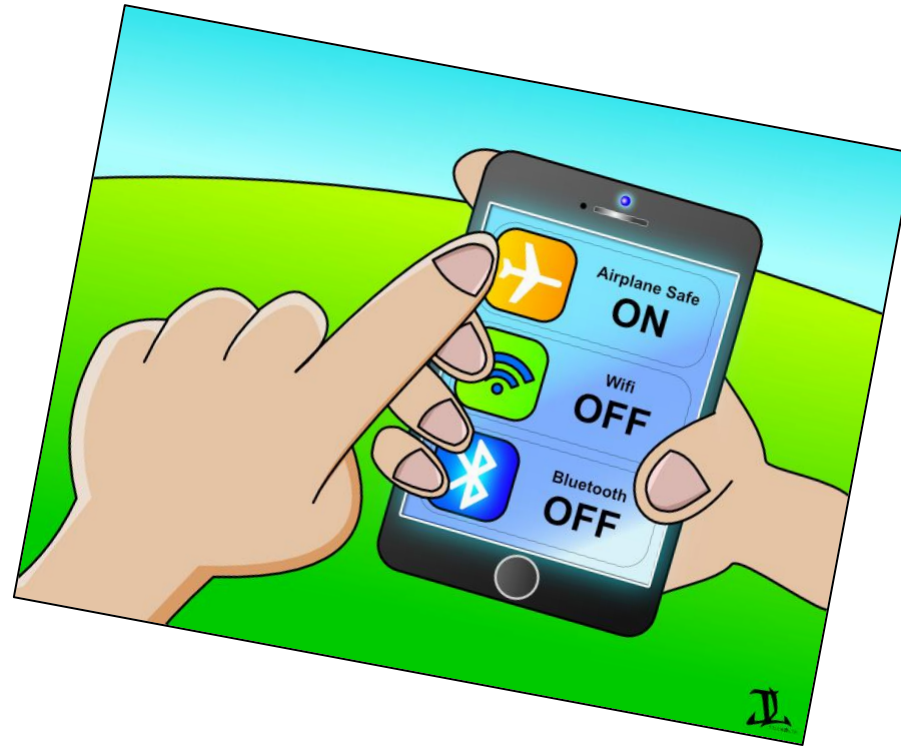
Billions for Broadband (points to Plant Specific row)

FCC ACCOUNTING SCANDAL (points to Net Operating Revenues row)

TAX DODGE (points to Net Operating Revenues row)

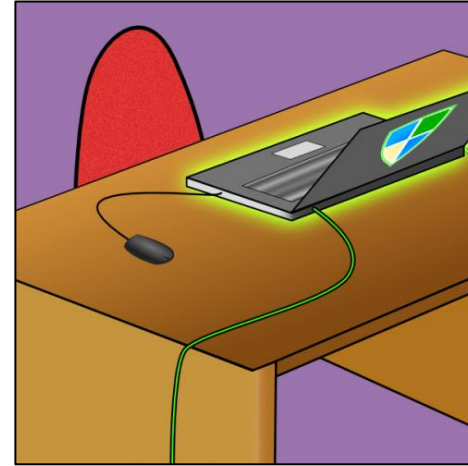
Safe Tech Solutions: Personal Level

- ▶ *All devices off*
- ▶ Airplane mode
 - ▶ Cellular Off
 - ▶ Data Off
 - ▶ Wi-Fi Off
 - ▶ Bluetooth Off
 - ▶ Hotspot Off
- ▶ Second-hand radiation: people & pets

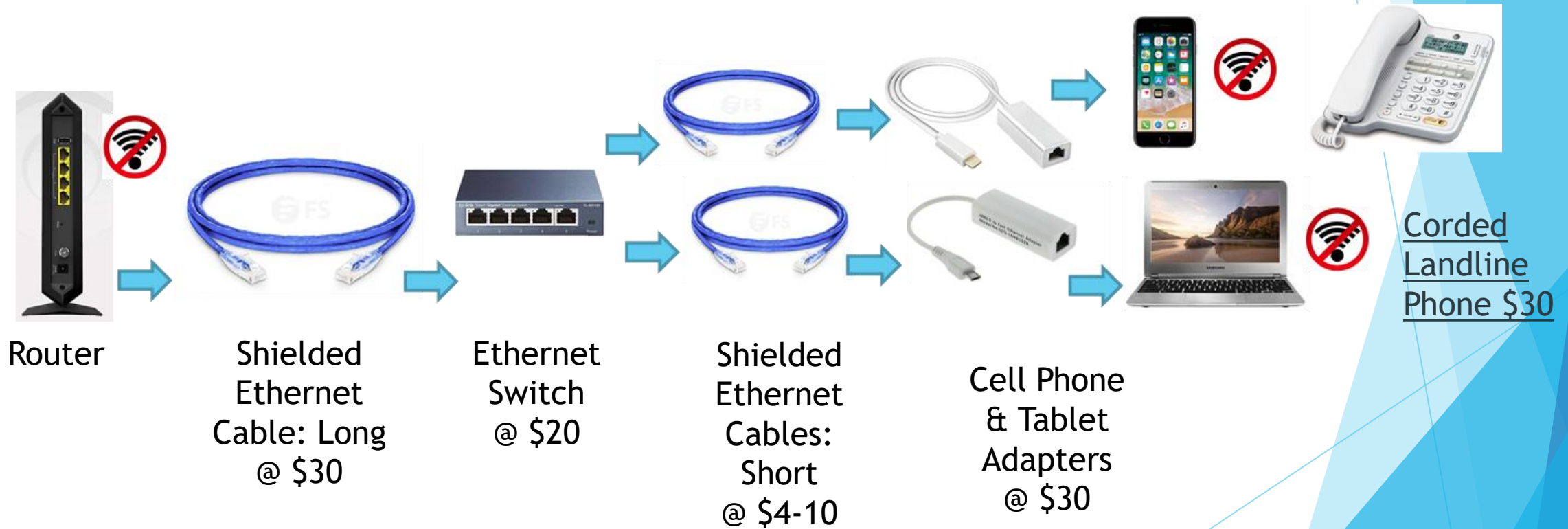


Safe Tech Solutions: Personal Level

- ▶ Safe technology is easier than we think: hard-wire
 - ▶ Router
 - ▶ Shielded Ethernet cables
 - ▶ Ethernet switch
 - ▶ Adapters



Safe Tech Solutions: Personal Level



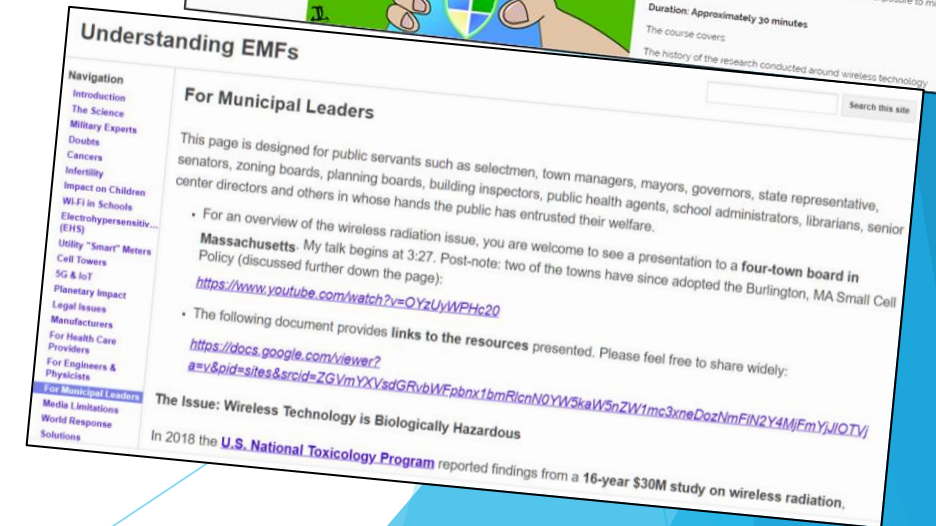
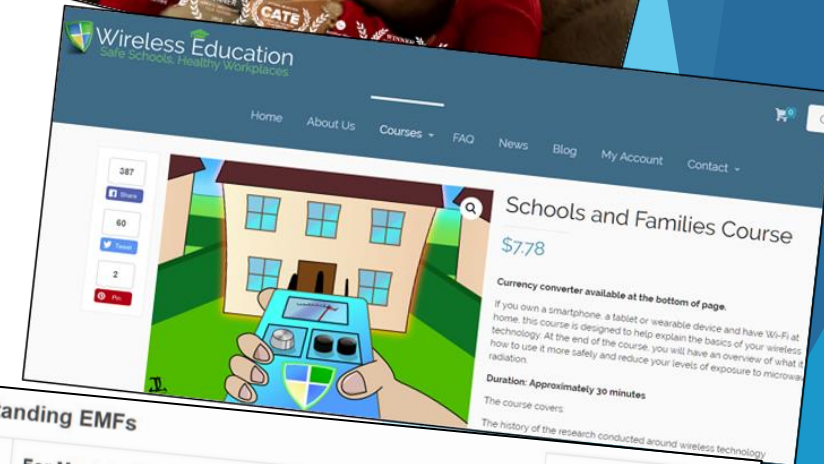
Safe Tech Solutions: Personal Level

- ▶ Turn off antennas in device Settings
- ▶ Measure
 - ▶ Borrow Acoustimeter
- ▶ Professional Help:
Building Biologists



Next Steps

- ▶ More in-depth presentation?
- ▶ Educate yourself and others
 - ▶ Watch award-winning film Generation Zapped
 - ▶ Take the Schools & Families Course with the non-profit Wireless Education
 - ▶ See Understanding EMFs



Thank You!

- ▶ [Massachusetts for Safe Technology](#)
- ▶ MA4SafeTech@gmail.com
- ▶ WirelessEducation.org

