

Saving Your Landline May Save Your Life!

AT&T is poised to remove your landlines for you by 2020

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Do landlines seem obsolete? Do you even have a landline? As it turns out most people do have one and depend on it for many or most of their home phone calls, requesting emergency response or when their electric power goes out. Although more people are using cell phones and Voice Over Internet Protocols (VOIP) to communicate via the Internet, the latest CDC study from 2014 shows that in most states, including California, the majority still have landlines. According to the CDC, 57% of Californians indeed still have a traditional landline and 7% have only a landline for communication, especially in rural areas. (4) Plain old telephone service through copper wires (POTS as the industry calls it) has been and continues to be the safest, most private, most reliable, and cheapest way to keep us all connected at home, internationally, and in emergencies. While Americans have enjoyed universal access to traditional telephone service at an affordable rate for almost a century, this may not be the case for much longer if AB 2395 were to pass. This incredible sophisticated system of communication, which was developed from the early 1900's and has served all of us well in emergencies and daily life, is now in jeopardy of demise. AT&T is leading the charge here and in other states. (6)

“Some fiber-based and VoIP systems won't work with medical alert devices, fax machines or home alarms” (27)

AB 2395 – Telecommunications: Replacement of Public Switched Telephone Network

A new California bill AB 2395 backed by AT&T and introduced February 2016 is poised to remove regulated landlines (switched telephone network services) to deregulated Internet Protocol (IP) enabled services and networks by 2020. IP or VOIP uses a phone service over the Internet for communications. AT&T state that only 6% of Californians have only a landline for telephone service, and each year there are more people who give up their landline as they use their cell phone as their primary number. The bill states energy will also be saved using fiber optics. “Rather than modernizing phone service, this bill would take us back to the dark days when consumers were totally at the mercy of AT&T,” said The Utility Reform Network (TURN) executive director Mark Toney. “It will eliminate the most basic consumer protections, regardless of the enormous impact abandoning copper could have on emergency services and vital communications.”

Don't Cut the Cord: Landline as a Lifeline

Those opposing the bill note that landlines are important as a back up for emergencies and power outages, to transmit faxes, and for businesses using landlines. Moreover, the voice quality of landlines is superior compared to the Internet phone service. If the bill

were to pass, then the options include VOIP, which require a computer with Internet access or a router/modem that provides phone, internet, cable access....or a cell phone. All of these services, of course, are provided by AT&T, Comcast, and several others. If people have only Internet or cell tower phone service and lose power, then they will need to have back-up generators or batteries in order to communicate. The cell towers also need back up generators or batteries in case of a power outage or other cause of failure.

Other concerns specific to AB 2395 include compromised service and cost to rural populations, and lack of affordability to disabled and low-income people. Those opposing the bill, so far, include the California Public Utilities Commission, Communications Workers of America, AARP, California Labor Federation, California Alliance of Retired Americans, and Mendocino County Board of Supervisors. TURN also opposes this and states "AT&T's bill degrades 911, puts public safety, small businesses, and rural customers at risk."

"Everyday we receive calls where we get a (cell) tower address, and that's all." Carl Hall, chief of technology, Alpharetta Public Safety Department. (20)

911 Wasn't Built for Cell Phones

First responders are also concerned as the call-tracing software used by firefighters, ambulance services, and police, works only on landlines. This accuracy insures the most rapid response for medical or other emergencies. In order to locate someone with a cell phone in an emergency cell tower, triangulation is required and it doesn't give you exact location. "If you don't quite get the right information for where the pizza shop is [to pick up a pizza], no one dies. For 911, people die," says Roger Hixson, technical director of the National Emergency Number Association (NENA) (21). After a major Alaskan power outage in March 2016, the Anchorage police advised residents "Don't cut the cord." (22)

Rural Residents Depend on Landline Service

Those from rural communities who are largely dependent on landlines for regular phone service and emergency services are very worried. Although AT&T states they will make sure everyone has phone service, there are no assurances as to service or quality in the current state of the bill. The bill gives residents one year to get VOIP after 2020 if they do not already have it by 2020. The cord will then be cut. The Rural County Representatives of California wrote a letter to the author of the bill, on April 11, 2016 stating, "Unfortunately, modern communications systems are either non-existent, unreliable, or cost-prohibitive in many of our member counties. Subsequently, traditional landline phone service remains the backbone and only reliable two-way communication mode. (3)

"Its now easier than ever for victims to reach 911, but harder than ever for first responders to reach them." David Shoar, President Florida Sheriffs Association.

California Public Utilities Commission (CPUC) Opposes AB 2395

The CPUC, who has a fundamental duty to provide safe and reliable utility service

embodied in PU Code § 451, opposes this bill. The CPUC division analysis states the bill would undermine the California and federal commitment to universal service, negatively impact public safety, and undermines the CPUC authority over safe and reliable services, as it would essentially deregulate phone lines. A CPUC memorandum dated March 17, 2016 states “The adoption of this bill would leave thousands of Californians, predominantly rural customers, without access to landline telephone service, and hence access to 9-1-1 and other necessary communications.” In addition, the CPUC states the bill is not necessary to promote IP services as infrastructure is already being upgraded. (29)

Digital Devices Use a Surprising Amount of Energy

With regards to energy costs some studies suggest that the electrical needs of digital devices towers over traditional devices. Energy consumption has risen dramatically as digital data is created, used, and transmitted. A study by Digital Power Group in 2013 found that the average iPhone used more electricity than a medium sized energy star rated refrigerator. (7,8) Although criticized for its overestimation, there is still a significant and growing energy demand from digital devices and cell tower transmitters that are always powered on. Although the fiber optic transmission, perhaps, may reduce energy costs, this is not the whole story. Is the use of digital phones themselves taken into account, as well as the servers and cell towers required to power them and transmit a tidal wave of data? Energy costs may be much more if the total system costs are taken into account.

According to TURN, “Masked as an environmental bill, the real intent and effect of the legislation would be to allow telephone companies to abandon basic landline telephone service and force customers to subscribe to services that may not be affordable, offer reliable service, or function during power outages. The bill would leave millions of residential and small business customers without the safety net – for essential telecommunications services and jeopardize the public health and safety of Californians.”

Security and Privacy Concerns with Fiber Optic Technologies

At first, fiber optic networks were believed to be one of the most secure infrastructure options. Industry experts now believe that fiber is almost as easy to tap as copper and is virtually undetectable with today’s technology. “And, tapping into fiber no longer requires a submarine or a multimillion-dollar project funded by government agencies. The required equipment has become relatively inexpensive and commonplace, and an experienced hacker can easily pull off a successful attack.” (11)

Privacy and Hackability of Wireless Devices

Removing landlines pushes us further into the wireless era, which is certainly convenient, but has its downsides. These are becoming more and more apparent with time. Not everyone is enthusiastic about the switch. In a “60 Minutes Overtime” episode from April 16, 2016 mobile security experts showed how strangers could hack the phone in your pocket, not to mention computers. (24)

Security issues have not been addressed with current wireless technology. According to tech experts, cordless phones, iPhones, smart meters, and a host of other wireless devices face hacking risks. Encryption can help, but is expensive and not foolproof. Wireless routers in your home are susceptible to phish attacks and unwanted ads via the Internet. Large service providers may not be able to easily find or fix the problem, and home visits may be difficult to schedule. Ted Harrington, marketing head of Independent Security Evaluators of Baltimore explains why router hacking could turn into a big problem based on a new study of wireless routers and hacking risks. "What's notable about this is that if you compromise the router, then you're inside the firewall. You can pick credit card numbers out of emails, confidential documents, passwords, photos, just about anything," he said. (13)

"The adoption of this bill would leave thousands of Californians, predominantly rural customers, without access to landline telephone service, and hence access to 9-1-1 and other necessary communications." CPUC

Wireless Communications and Public Health

There has been exponential worldwide expansion and dependence on wireless communication networks and infrastructure including cell phones, cell towers, wireless routers, medical devices, and utility smart meters throughout our homes and communities. Scientists, physicians, and the public are increasingly concerned about the long-term impact on public health due to this relentless rising exposure of the population to wireless radiation.

More cell phone towers will be built to provide wireless service. AB57 (2105) passed the California legislature clearing the way for fast tracking cell towers. This is problematic from a public health standpoint as the Telecommunications Act of 1996 states that environmental or human health concerns cannot be taken into consideration in placement of cell towers despite the fact that many studies demonstrate adverse effects of cell tower radiation on humans and birds.

In May 2015, an International Scientist Appeal signed by more than 200 published scientists who study electromagnetic frequency (EMF) was sent to the World Health Organization to ask that they "initiate an assessment of alternatives to current exposure standards and practices that could substantially lower human exposures to non-ionizing radiation." (82)

The scientific community has unexpectedly demonstrated adverse biological and clinical effects from wireless EMF at or below our current approved exposure standards, including single and double stranded DNA breaks, creation of reactive oxygen species, immune dysfunction, cognitive processing effects, stress protein synthesis in the brain, altered brain development, sleep and memory disturbances, ADHD, sperm dysfunction, brain tumors, abnormal animal behavior, and bee colony collapse. (31-94)

A major problem is the long latency period of years to decades to study and identify

adverse health effects such as brain cancer and neurodegenerative damage. Another important consideration is that children's brains are developmentally immature until adolescence, their skulls are thinner, and the brain is considerably more vulnerable to toxin exposure. (23,24)

Increasing Wireless Communications and Electrohypersensitivity

A new category of medical illness is now being discussed in the medical literature called electrohypersensitivity (EHS). An increasing number of people in all walks of life report suffering from exposure to electromagnetic fields. Non-specific neurological and dermatologic symptoms, including headaches, occur at levels below current safety guidelines. Even students have reported symptoms once Wi-Fi was installed in schools. (103) In Sweden, electrohypersensitivity is a fully recognized functional impairment. (101)

Some people develop similar symptoms of sleeplessness, fatigue, and headache symptoms after a nearby cell tower or home smart meter is installed. So far, studies have been mixed and no pathophysiologic mechanism has been identified. Researchers, however, at Louisiana State University, in 2011, studied a self reported EMF sensitive physician and found "In a double-blinded EMF provocation procedure specifically designed to minimize unintentional sensory cues, the subject developed temporal pain, headache, muscle twitching, and skipped heartbeats within 100 s after initiation of EMF exposure ($p < .05$)." They concluded, "EMF hypersensitivity can occur as a bona fide environmentally inducible neurological syndrome." (102)

Organizations Concerned About Wireless Technology and Public Health

WHO – The World Health Organization, in 2011, designated radiofrequency electromagnetic fields used in wireless communications, including cell phones, to be a Group 2B carcinogen. (95)

European Parliament – Resolution 1815 – In a 2011 report "Potential Dangers of Electromagnetic Fields and Their Effect on the Environment." The Council of Europe issued a call to European governments to "take all reasonable measures" to reduce exposure to electromagnetic fields "particularly the exposure to children and young people who seem to be most at risk. (26)

AAP – The American Academy of Pediatrics, in 2013, in a letter to the FCC has asked for reassessment of exposure to radiofrequency electromagnetic fields limits and policies that protect children's health and well-being throughout their lifetimes and reflect current use patterns. (96)

Insurance Companies – In a 2013 Emerging Risk Report, Zurich based insurance company called Swiss Re, the second-largest reinsurer in the world and the insurer of the World Trade Center, listed electromagnetic fields in the highest category of casualty risk due to "unforeseen consequences" beyond 10 years. (97)

U.S. Department of Interior – On February 7, 2014, the U.S. Department of Interior stated in a letter to the National Telecommunications and Information Administration that “The second significant issue associated with communication towers involves impacts from non-ionizing electromagnetic radiation emitted by these structures. Radiation studies – have documented nest and site abandonment, plumage deterioration, locomotion problems, reduced survivorship, and death – from cellular phone towers in the 900 and 1800 MHz frequency ranges – However, the electromagnetic radiation standards used by the Federal Communications Commission (FCC) continue to be based on thermal heating, a criterion now nearly 30 years out of date and inapplicable today.” (98)

California Medical Association – In 2014, the CMA adopted Resolution 107-14, which stated that the CMA supports efforts to reevaluate microwave safety exposure levels associated with wireless communication devices and that the CMA supports efforts to implement new safety exposure limits for wireless devices to levels that do not cause human or environmental harm based on scientific research.

International Policy Actions on Wireless EMF

France – In 2015, France passed a broad policy on wireless technology that includes a ban on Wi-Fi in nurseries and kindergarten, requires that Wi-Fi be turned off when not in use in schools, requires cell antennae location information to be readily available and includes antennae EMF monitoring and compliance. (99)

Israel – In 2013, Israeli Ministry Of Education issued guidelines to limit Wi-Fi in schools. In 2016, the City of Haifa, Israel ordered all schools to disconnect wireless and install wired internet instead. (100)

Canada – Parliament Standing Committee on Health recommended practical advice on how to reduce exposure to EMF radiation after holding extensive public hearings, in June 2015, and called for more research. (16)

Spain – Several municipalities have passed resolutions to urge removal of Wi-Fi in schools and public places (16)

Italy – Parliament voted to enact the precautionary principle and reduce wireless exposures whenever possible. (16)

Germany – The German Federal Office for Radiation Protection advises reducing exposure to EMF as much as possible, and in Frankfurt all wireless networks are banned in schools. (16)

Austria – The Public Health Department of Salzburg recommends not using WLAN or DECT in schools. In 2016, the Vienna Medical Association updated new cell phone safety guidelines. (15)

Taiwan – In 2015, the government updated their Protection of Children and Youths Welfare and Rights Act to include a complete ban on children under the age of two from using electronic devices such as iPads, televisions, and Smartphones. (16)

Several states in the U.S. have already started the landline shut down (Michigan, Kentucky, Wisconsin, Ohio), but their residents are not happy and are fighting back. There remain several attributes of landlines that cannot be served by Internet providers. Landlines work even when the power goes out; they are compatible with medical monitoring devices, such as pacemakers, that transmit the data to medical centers. They can also reliably pinpoint your exact location when you call 911. These are not optional services that we should abandon. Valid health and safety reasons argue for preservation of the landline for all of us, regardless of age. It will be important to follow AB 2395 as it goes through the various committees.

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