February 3, 2020

The Honorable Brian Taniguchi
415 South Beretania Street
Hawaii State Capitol, Room 219
Honolulu, HI 96813

RE: Exclude Motorcycles and Off-Highway Vehicles from SB 2496

Dear Senator Taniguchi:

The Motorcycle Industry Council (MIC) is a not-for-profit, national trade association representing more than 600 manufacturers, distributors, dealers and retailers of motorcycles, scooters, motorcycle parts, accessories and related goods, and allied trades. The Specialty Vehicle Institute of America (SVIA) is the national not-for-profit trade association representing manufacturers and distributors of all-terrain vehicles in the United States. The Recreational Off-Highway Vehicle Association (ROHVA) is a national industry organization representing manufacturers and distributors of recreational off-highway vehicles, also known as side-by-sides.

The member companies of MIC, ROHVA, and SVIA urge that SB 2496, which addresses the repair of digital electronic equipment, be amended to specifically exclude motorcycles and off-highway vehicles from the scope of its provisions.

Motor vehicles are appropriately excluded from this legislation, but your definition of motor vehicles used in the bill (which is common to many states' definitions of motor vehicles) specifically excludes motorcycles. In doing so, motorcycles and off-highway vehicles such as dirt bikes, all-terrain vehicles and recreational off-highway vehicles are thereby subject to the provisions of SB 2496.

The definition of motor vehicle in SB 2496 appears to be drawn from state legislation that deals specifically with motor vehicle "right to repair." Massachusetts was at the forefront of the motor vehicle right to repair issue and became the first and only state in the nation to enact such a law. The law has been used as a model for other states and for a national Memorandum of Understanding. Motorcycles are excluded from the Massachusetts law because they are different than automobiles in terms of the diagnostic connector standard mandated by motor vehicle right to repair laws and therefore cannot comply with provisions typically included in motor vehicle right to repair legislation. Massachusetts legislators recognized this difference and the need to exclude motorcycles. They did so by specifically excluding motorcycles from the definition of motor vehicle for purposes of the right to repair law (off-highway vehicles are also excluded from the law because it applies only to on-highway motor vehicles). The definition of motor vehicle in SB 2496 also includes only on-highway motor vehicles. However, by only excluding on-highway motor vehicles from the scope of the bill, this results in an unintended consequence of including off-highway vehicles in the bill.

We have serious safety concerns relating to the inherent danger of allowing non-factory trained technicians, untrained mechanics and owners to perform certain work on motorcycles and off-highway vehicles if they are captured under the legislation. For example, a manufacturer requires dealers to attend two technical training programs per year to instruct them on how to use the website and specialty tools and additional on-going training. This training is vital to ensure the correct repair of the product line and the safety of customers.

Therefore, we urge that the proposed definition of "motor vehicle" be amended as follows:

> 9. "Motor vehicle" means a vehicle designed for transporting an individual or property on a street or highway.

a. The term includes a:
(1) Self-propelled vehicle;
(2) Vehicle propelled by electric power obtained from overhead trolley wires, but not operated upon rails; ~~and~~
(3) Motorized bicycle~~.~~; and
(4) Off-highway vehicle.
b. The term does not include:
~~(1) A motorcycle;~~
~~(2) A recreational vehicle or an auto home equipped for habitation.~~

It would be inappropriate to include any type of motor vehicle, including motorcycles, off-highway vehicles, and recreational vehicles in the scope of a law designed to address consumer electronics and we respectfully request that you amend SB 2496 to exclude these vehicles, similarly to the exclusion provided for other motor vehicles.

Thank you very much for your consideration of these comments. Should you have any questions, please contact me at 703-416-0444 (x3202).

Sincerely,

Scott P. Schloegel
Senior Vice President, Government Relations

cc: Senate Commerce, Consumer Protection, and Health Committee Members
Senate Judiciary Committee Members

HAWTHORNE CAT

February 3, 2020

Senator Rosalyn H. Baker
Chair, Commerce, Consumer Protection, and Health
Via Electronic Mail – senbaker@capitol.hawaii.gov

Dear Chairman Baker :

Hawthorne Cat / Pacific Machinery Co. the Caterpillar Inc. dealer serving Hawaii for over 50 years, appreciates the opportunity to comment on SB 2496 which would allow for unfettered access to the software that governs safety, security and emissions technology on the products we sell.

Hawthorne Cat serves hundreds of customers in Hawaii spanning a wide variety of construction, agricultural, mining and power generation applications. We currently employ 125 at 6 locations in Hawaii.

Modern engines, vehicles, and equipment all contain microprocessors. As drafted, SB 2496's broad requirements would apply to virtually all off-highway engines, construction and farm equipment, locomotives, marine vessels, and stationary generators manufactured by Caterpillar and sold by Hawthorne Cat in Hawaii.

While not questioning the good intent of this proposal, we have several concerns including:

• Large and complex machinery, such as nonroad construction and farm equipment, should not be considered digital electronic equipment subject to SB 2496. "Right to Repair" initiatives like this legislation are rooted in concerns about access to service information for mass-produced consumer electronics. Unlike purchases of those types of products, nonroad and stationary equipment purchases are negotiated, business-to-business transactions. As such, we do not believe that SB 2496 is actually intended - much less suited - to cover such capital goods.

• Nonroad vehicles are manufactured with a complex and diverse supply chain, in which different companies often manufacture the engines, chassis, transmissions, bodies, and other assemblies that comprise the entire vehicle. Nonroad vehicle manufacturers do not control, or necessarily even have access to, service information for those major components. As a result, nonroad vehicle manufacturers cannot provide fully integrated service and repair information, as contemplated by SB 2496.

• The correct use of diagnostic tools and repair information requires highly trained and skilled personnel. Diagnosticians and mechanics must have proper training to maintain and repair sophisticated machinery, like construction and farm equipment. SB 2496 would permit untrained and unqualified individuals to

service such products, which would undermine equipment integrity, create significant potential safety concerns, and risk adverse impact on federally mandated emission control systems.

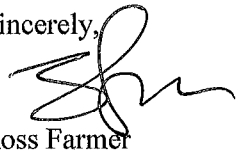
• Providing additional parties, such as independent service repair providers and equipment owners, access to electronic diagnostic and service information and tools would create new and unnecessary cybersecurity risks. More parties would be able to access those materials, including through network systems that may be less secure than those of manufacturers and authorized repair providers. More widespread and potentially less secure access would increase opportunities for hackers to improperly obtain - or even tamper with - such information.

• State-specific legislation in this area is unnecessarily complicated and burdensome. SB 2496 would force manufacturers to develop unique systems applicable only to products sold or leased in Hawaii. That result would be extraordinarily impractical and inefficient. Because manufacturers would have no way of identifying products that might require service in Hawaii, they would have to include service information on all products - the vast majority of which would never be needed in Hawaii.

For all of the above reasons, we join others in our industry in opposing SB 2496. While we oppose SB 2496, we believe that, at a minimum, the Bill should not apply to off-highway and stationary engines and equipment.

If you have any questions, please do not hesitate to contact Jim Halloran - Western Region Manager for Caterpillar Inc. - at 916-580-5467 or email at Halloran_James_P@cat.com.

Sincerely,



Ross Farmer
Corporate Machinery Sales Manager
Hawthorne Cat

February 6, 2020

TO: Senator Rosalyn H. Baker, Chair Commerce, Consumer Protection, and Health
Senator Stanley Chang, Vice Chair Commerce, Consumer Protection, and Health
Members of the Senate Committee on Commerce, Consumer Protection, and Health

FR: Kathryn P. Gunter, Director, State Government Affairs
Entertainment Software Association

RE: SB2496 RELATING TO THE MODEL STATE RIGHT-TO-REPAIR LAW. – OPPOSE
Requires original equipment manufacturers of digital electronic equipment to make documentation, parts and tools available to independent repair providers and owners for the purposes of diagnosis, maintenance, and repair on fair and reasonable terms.

Dear Chair Baker, Vice Chair Chang, and Members of the Senate Committee on Commerce, Consumer Protection, and Health:

On behalf of the Entertainment Software Association (ESA) and its members[1], we thank you for the opportunity to submit written testimony in opposition to SB2496, legislation that would create a "right to repair" mandate. The ESA is the U.S. trade association representing the publishers of computer and video games for play on consoles, personal computers, mobile devices, and the Internet.

The video game industry is a key economic sector that creates jobs, develops innovative technology, and keeps the United States competitive in the global marketplace. Last year, consumers in the United States spent more than $43 billion on games, hardware, and game-related services, and video game consoles are at the heart of this ecosystem.

We recognize that "right to repair" is an important public policy issue and appreciate the opportunity to provide the video game industry's perspective. Our member companies share the desire for customers to get their broken game consoles repaired quickly and at a modest cost. Software sales are what drive our industry, but no one buys games for a broken console. Our member companies

[1] ESA's members: 505 Games; Activision Blizzard, Inc.; Bandai Namco Entertainment Inc.; Bethesda Softworks, Bungie; Capcom USA, Inc.; CI Games; Deep Silver; Disney Interactive Studios, Inc.; Electronic Arts; Epic Games, Inc.; Focus Home Interactive; Gearbox Publishing; GungHo Online Entertainment American, Inc.; Intellivision Entertainment; Kalypso; Konami Digital Entertainment; Legends of Learning; Magic Leap; Marvelous USA, Inc; Microsoft Corporation; Natsume Inc.; NCSoft; Nexon America, Inc.; Nintendo of America Inc.; NVIDIA; Paracosma; Phosphor Studios; Rebellion; Riot Games; Sega of America; SixFoot; Sony Computer Entertainment of America; Square Enix, Inc.; Take-Two Interactive Software, Inc.; Tencent, Inc.; THQ Nordic; Ubisoft Entertainment, Inc.; Warner Bros. Interactive Entertainment Inc.; and Wizards of the Coast.

have a compelling financial incentive to help their customers get their consoles repaired as quickly and affordably as possible.

It is for that reason that all three major video game console makers—Microsoft, Nintendo, and Sony—are committed to providing consumers with repairs that are quick, reliable, and safe, and they offer a variety of options if a console needs to be repaired. Additionally, they all offer repair services beyond the warranty period to ensure that their consoles remain in good working order because their respective success depends on providing a reliable, versatile, and engaging platform on which to play video games and enjoy digital content.

Large-scale, high profile video games—what we in the industry call "Triple A" titles—take hundreds of artists, programmers, engineers, and other creative talent to bring to market. A new, original title can take two or more years to produce and cost as much as a Hollywood blockbuster.

These highly popular video games are prime targets for illegal copying and distribution. To preserve the incentive to create, the video game industry uses digital locks ("technological protection measures") to protect those games. These locks involve a two-part system of protected software and an authentication mechanism on the game console. The game console checks the game to ensure that it is a legitimate copy. If it is not, then the console will not play that game, unless the console has been unlawfully modified with its security features disabled. Central to this system is the console "firmware", the "nerve center" of the machine, and once third parties gain access to an unencrypted version of the firmware, and can modify it, the security features become vulnerable to potential tampering. All in all, a video game console's digital rights management systems are an effective deterrent against the use and play of illegally copied games.

ESA's concern with "right to repair" is not with displacing industry revenue from repair services, as repairs are not a source of revenue for the game industry. Instead, ESA's concern rests with permitting third parties, over which we have no control, from modifying the hardware and firmware in a way that could compromise the security features that are vital to providing a secure media environment for the playback of copyrighted games of various game publishers. We recognize that the vast majority of repair shops would not use the provided tools and documentation for any illegal purposes (e.g., removal of security features). However, at the rate at which knowledge is spread via social media and other online communication channels, it would only take a few bad actors to have a rapid and severely detrimental impact on the industry.

In October 2018, the Librarian of Congress, upon the recommendation of the Register of the U.S. Copyright Office, published a rule permitting consumers to repair motor vehicles and home appliances under a new, expanded, exemption to the Digital Millennium Copyright Act (DMCA), a law related to copyright that protects digital locks from circumvention. However, the Librarian and the Register specifically excluded video game consoles from the newest repair exemption. The Librarian of Congress' decision accords with another critical provision of the DMCA that is relevant to this proceeding: Section 1201(a)(2), which makes it illegal to traffic in devices designed to circumvent TPMs. This provision limits the extent to which any state actor may permit repair services to circumvent TPMs because no regulation can create a right to repair in a way that would purport to allow for the distribution of circumvention devices used to perform such repairs—a point the Copyright Office itself recognized.

The viability and success of the video game console business is dependent upon trustworthy and secure delivery platform. The industry's ability to protect copyrighted works and those of developers and game creators provides a tangible benefit to consumers as high quality content can continue to be offered at a reasonable price. ESA believes that "right to repair" legislation – or any actions that weaken copyrighted protections – open the floodgates of mass infringement and threatens the economic input that the video game industry provides to our nation.

The ESA would gladly provide the Committee with any additional information they believe would be helpful in making an informed decision on this important issue.

Thank you for the opportunity to testify in OPPOSITION on this matter that is important to our members.

Sincerely,

Kathryn P. Gunter, Director, State Government Affairs
Entertainment Software Association

SB-2496
Submitted on: 2/4/2020 6:06:08 AM
Testimony for CPH on 2/6/2020 9:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Gay Gordon-Byrne	Testifying for The Repair Association Members	Support	No

Comments:

The Repair Association has collected 17 letters of support to submit. Each is a PDF or I can provide a .zip file . Please instruct on how to provide these for your use.
Ggbyrne@repair.org

February 4, 2020

Chairperson Rosalyn Baker
Vice-Chairperson Stanley Chang
Members, Senate Committee on Commerce, Consumer Protection and Health

Re: Electronics Manufacturers Opposition to Senate Bill 2496

Dear Chairperson Baker, Vice-Chairperson Chang and Members of the Senate Committee on Commerce, Consumer Protection and Health:

On behalf of the hundreds of manufacturers and businesses our organizations represent, we respectfully oppose Senate Bill 2496 (SB 2496) legislation which would mandate original equipment manufacturers (OEMs) of digital electronic equipment or a part of the equipment sold in Hawaii to provide independent repair providers with diagnostic and repair information, software, tools and parts.

Our organizations represent a broad spectrum of manufacturers of consumer electronics, home appliances, HVACR, security equipment, toys, lithium ion batteries, and other connected electronic products as well as companies that rely on the secure operation of these devices. All of these companies stand behind the quality of their products. Our members develop products and services for a wide range of commercial, government, and consumer users. Their customers depend on these products to operate safely, securely, and accurately, whether they are being used to support banking and commercial transactions, transmit and store sensitive personal data,

support industrial operations, medical applications, or securely offer and deliver entertainment and other services. As businesses, government agencies, and consumers continue to increase their reliance on connected devices to help deliver efficiency, convenience and services, it is important to remain vigilant and focused on mitigating the risks associated with the safe and secure operation of those products.

There are plenty of repair options for Hawaiian citizens and visitors. Go to any mall or shopping center in the state and you will find ample opportunities for consumers to have screens repaired and other minor fixes. In addition, several companies have built robust online businesses that enable consumers to access replacement parts and manuals.

SB 2496 mandates that OEMs treat any independent repair provider in much the same way as authorized network providers, but without any contractual protections, requirements, or restrictions, and in doing so, places consumers and their data at risk, undermines the business of Hawaii companies that are part of OEM-authorized networks, and stifles innovation by putting hard-earned intellectual property in the hands of hundreds, if not thousands, of new entities.

More than 20 state legislatures have already reviewed similar legislation and deemed them unworthy of passage as they have determined that legislating repair rules for manufacturers created more issues for consumers than answers.

For these reasons, we urge the Senate Committee on Commerce, Consumer Protection and Health against moving forward with this legislation.

SB 2496 harms consumer security

One of our chief concerns with this legislation is its potential to weaken the privacy and security features of various electronic products. The security of user information on these products is of the utmost importance to consumers that rely on them. Industrial equipment, home appliances, smartphones, computers, services, consumer electronics, and other connected devices are at risk of hacking, and weakening of the privacy and security protections of those products will increase risks to consumers. With access to technical information, criminals can more easily circumvent security protections, harming not only the product owner but also everyone who shares their network. In an era of sophisticated cyberattacks, we should not make it easier for criminals to hack security provisions.

Consumers, businesses of all sizes, public schools, hospitals, banks and industrial manufacturers all need reasonable assurance that those they trust to repair their connected products will do so safely, securely and correctly. State law should not

mandate that all manufacturers must provide a “how to” manual for any product and provide it to anyone who asks.

The current legislation requires OEMs to provide any owner or independent repairer with “any special documentation, tools, and parts needed to reset the lock or function when disabled in the course of diagnosis, maintenance, or repair of the equipment.

Ultimately, a connected system of tens of billions of products presents massive opportunities while posing unprecedented risks. The health of our collective privacy and our economy are intertwined with how we approach the security of this integrated system. SB 2496 does not take into the account the new paradigm of a connected world.

SB 2496 harms consumer safety

Manufacturers offer authorized repair networks to provide consumers with assurance that their products are serviced by properly trained and vetted repair professionals that have the necessary skills to safely and reliably repair electronic products.

Most consumer technology products are comprised of complex electronics which require specialized training and sophisticated test instruments to repair safely. Some types of repairs can be extremely detailed, complicated and dangerous to anyone without proper training. It is particularly important that products containing high-energy lithium ion batteries are repaired only by trained professionals who understand and mitigate the hazards associated with installing, removing or replacing these batteries.

Manufacturers want to ensure that their products are serviced by professionals who understand the intricacies of their products and have spent time procuring the knowledge necessary to safely repair them and return them to consumers without compromising those standards or undermining the safety and security of their products. Authorized repair networks not only include training requirements, but also but also have the technical skills and test instruments to verify that repair parts meet all necessary performance and safety specifications. Consumers can be protected by warranties or other means of recourse. The legislation provides no such protections for consumers, repair shops or manufacturers.

When an electronic product breaks, consumers have a variety of professional repair options, including using an OEM’s authorized repair network, which often include local repair service providers as well as mail-in, and even in-house repair options for some categories of products. Consumers may also choose to use one of many independent repair providers; although they do so without the quality assurance provided by using a manufacturer’s authorized network provider. The point is that the free market economy

provides a wide range of consumer choice for repair with varying levels of quality, price and convenience without mandates imposed by the legislation.

Manufacturers' authorized networks of repair facilities guarantee that repairs meet OEM performance and safety standards. If an OEM's brand and warranty are to stand behind repair work and assume product liability, it is only reasonable that the repair facility demonstrates competency and reliability. Without the training and other quality assurance requirements of authorized service providers and manufacturers would not be able to stand behind their work, warranties, technical support, ongoing training, and business support.

SB 2496 mandates the disclosure of protected proprietary information

Manufacturers make significant investments in the development of products and services, and the protection of intellectual property is a legitimate and important aspect of sustaining the health of the vibrant and innovative technology industry. However, SB 2496 puts at risk the intellectual property that manufacturers have developed.

Consumer electronics' on-board software (i.e., firmware) are key to the functioning and operation of the hardware it is embedded in, and helps protect against unauthorized access to other software and applications. That software is subject to copyright under federal law, and Section 1201 of the Digital Millennium Copyright Act, a related federal law, ensures that bad actors cannot tamper with the digital rights management that copyright owners use to protect this software. The problem is that making repairs to hardware components may require the circumvention of digital rights management and leave the software in an unprotected state – harming the copyright owners of the software.

Firmware controls many other product functions, and opening it up for repair purposes exposes other more sensitive functions, such as security features, to potential tampering. Given the scope of products covered and what must be provided under the legislation – including diagnostics, tools, parts, and updates to software – it is highly likely some of the information would be proprietary. Providing unauthorized repair facilities and individuals with access to proprietary information without the contractual safeguards currently in place between OEMs and authorized service providers places OEMs, suppliers, distributors and repair networks at risk.

SB 2496 fails to account for advancements in sustainability by electronic product manufacturers

This bill is partly based on an inaccurate assumption that the bill will aid in the reduction of electronic waste in the state of Hawaii. According to the Rochester Institute of Technology Golisano Institute of Sustainability, e-waste generation in the U.S. peaked in 2013-14 and is in a period of extended decline[1]. This trend is corroborated by the most recent data from the U.S. Environmental Protection Agency[2].

Electronic product manufacturers have developed robust policies and programs to ensure that they are continuously improving the sustainability of their products for their whole lifecycle, from design, to material sourcing, product performance, reuse and responsible end of life management.

This has led to continued innovation and the use of new technologies which provide consumers improved devices while simultaneously reducing the overall amount of e-waste generated – all under the existing product repair environment. And with new technologies like OLED and additional light-weighting across the electronics industry, additional declines in e-waste generation are expected to continue during the coming decades.

Repair and reuse are important elements of electronics manufacturers sustainability efforts. Not only is repair and reuse in the OEM's best interest so that consumers can continue to enjoy their products, but many OEMs are returning still-useful electronic products to active service to get the maximum benefits out of the resources used to make them. Additionally, under revised "green" procurement standards, federal agencies and other purchasers will be required to purchase computers that meet certain environmental performance criteria under the Electronic Product Environmental Assessment Tool (EPEAT) rating system. These existing policies and programs promote repair and reuse without the consumer safety, security or business concerns raised by the bills.

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[1] Rochester Institute of Technology Golisano Institute of Sustainability (July 2017). *Sustainable Materials Management for the Evolving Consumer Technology Ecosystem*. Accessed at: https://www.rit.edu/gis/ssil/docs/Sustainable%20Materials%20Management%20for%20the%20Evolving%20Consumer%20Technology%20Ecosystem.pdf

[2] Office of Resource Conservation Recovery, U.S. Environmental Protection Agency (December 2016). *Electronic Products Generation and Recycling in the United States, 2013 and 2014*. Accessed at https://www.epa.gov/sites/production/files/2016-12/documents/electronic_products_generation_and_recycling_2013_2014_11282016_508.pdf

Conclusion

Thank you for considering our perspective on this complicated issue. Our members bear a significant responsibility to the businesses, governments, and individual consumers that depend on us to protect the safety and security of their electronic products, as well as the sensitive data that they contain.

There is nothing in SB 2496 that makes independent repair shops accountable for the safe and secure repair of the products that they fix. In fact, it hurts consumers because it prohibits manufacturers from holding their authorized repairers accountable for training and expertise.

We are committed to working with you to promote digital privacy and security, while resisting unwarranted intervention in the marketplace with one-sized-fits-all mandates that hurt consumers. For those reasons, we oppose SB 2496.

Sincerely,

Air Conditioning, Heating and Refrigeration Institute (AHRI)
Association of Home Appliance Manufacturers (AHAM)
Computing Technology Industry Association (CompTIA)
Consumer Technology Association (CTA)
CTIA – The Wireless Association
Entertainment Software Association (ESA)
Information Technology Industry Council (ITI)
Internet Coalition
National Electronic Manufacturers Association
NetChoice
PRBA – The Rechargeable Battery Association
Security Industry Association (SIA)
Security Innovation Center
State Privacy and Security Coalition, Inc.
TechNet
Telecommunications Industry Association (TIA)
The Toy Association
Hawaii Technology Industry Association (WTIA)
Association of Hawaii Business (AWB)

CC: Members, Senate Committee on Commerce, Consumer Protection and Health

Consumer Technology Association™

1919 S. Eads St.
Arlington, VA 22202
703-907-7600
CTA.tech

February 4, 2020

Senator Rosalyn Baker
Chair, Senate Committee on Commerce, Consumer Protection, and Health
Hawaii State Capitol, Room 229
415 South Beretania St.
Honolulu, HI 96813

Re: CTA Comments on SB 2496 – Oppose

Dear Chair Baker, Vice Chair Chang, and Members of the Senate Committee on Commerce, Consumer Protection, and Health:

On behalf of the Consumer Technology Association (CTA), thank you for the opportunity to provide comments outlining our opposition to SB 2496. This bill would require manufacturers of electronic equipment to provide third parties with diagnostic and repair information, software, tools and parts.

CTA is the trade association representing the U.S. consumer technology industry. Eighty percent of CTA's more than 2,200 members companies are small businesses and startups; others are among the world's best-known manufacturing and retail brands. Our member companies have long been recognized for their commitment and leadership in innovation and sustainability.

While CTA is concerned with SB 2496 on several fronts, many of which are outlined in the industry coalition letter sent to this Committee, our comments here focus on the recycling and sustainability rationale for this legislation as articulated by some bill proponents. Some argue that this legislation will reduce landfilling of electronic waste in Hawaii. However, this argument is undercut by two important facts.

First, Hawaii already has a robust product stewardship program – paid for by manufacturers of electronic devices - which ensures the collection of electronic devices throughout the state. Note also that according to the U.S. EPA[1], electronics are now the fastest-declining part of the municipal solid waste stream. The most recent EPA data show that e-waste generation declined 8% annually.

Second, mobile devices continue to have value even at end of life and consumers frequently trade them in. According to CTA's biennial survey on how consumers handle their devices,

[1] https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/durable-goods-product-specific-data

only 2% of consumers report throwing their old mobile device in the trash while more than 10 times as many reported either trading in their old mobile device, selling it, giving it away, or recycling it.

Given the existing e-waste program in Hawaii and the fact that very few consumers actually throw their mobile devices in the trash, SB 2496 would not measurably decrease landfilling.

Making sure devices are kept out of the trash is an important priority for manufacturers, so repair and reuse are important elements of manufacturers' networks. Repair and reuse are even included as aspects of governmental green procurement standards. These existing programs and policies promote repair without the safety, security, or business concerns raised by SB 2496.

More than fifteen states in recent years have examined repair legislation like SB 2496. All of them, including Vermont which did an extensive study process through last year, declined to pass any repair legislation. For the reasons above and other reasons articulated at last week's hearing we urge opposition to SB 2496.

Thank you again for the opportunity to outline our concerns with this legislation. If you have any questions, please do not hesitate to contact me at walcorn@cta.tech.

Sincerely,

Walter Alcorn
Vice President, Environmental Affairs and Industry Sustainability
Consumer Technology Association

U.S. PIRG
Standing Up
To Powerful Interests

Feb. 5, 2020

Memorandum of Support for Right to Repair / Fair Repair Legislation SB 2496.

On behalf of U.S. PIRG and our members in Hawaii, we are writing to express our support for Right to Repair legislation to require fair access to parts, tools, service information and repair software. We believe this legislation is a common-sense step to cut consumer costs and decrease waste.

Manufacturers are using their power in the marketplace to make things harder to repair, and as a result we generate way too much waste. Electronic waste is the fastest growing waste stream on the planet and our ability to process waste is not keeping up.“Right to Repair” laws are an important tool to slow the creation of waste by bringing more competition to the repair marketplace and allowing consumers to keep their stuff in use and out of the trash. Here are some of the additional reasons we support Right to Repair:

- **More choices for consumers.** Many people don’t live close to an outlet for the original manufacturer -- whether that’s the Apple store to replace a battery or the John Deere Dealership to fix a tractor. Consumers should have more repair choices, which are currently stifled by big corporate manufacturers.
- **Less waste.** According to our joint report “Recharge Repair,”Americans dispose of some 141 million cell phones each year. Many of those devices could be used again, but simple repairs can become impossible without the proper tools and information.
- **Greater availability of affordable used devices.** Many people can’t afford the latest gadgets. If we extended the life of tablets, laptops and other electronics, it would allow more consumers more access to these important technologies.
- **STEM education.** How can we train the next generation of engineers if we block people from having basic information about how the technology in our lives works? Repair teaches people about technology, and inspires and empowers a new generation of entrepreneurs and inventors.
- **More opportunities for small business.** More access to repair parts, tools and information means more opportunities for local small businesses to grow or new businesses to start. Employees would gain valuable STEM skills as well.

We urge you to make sure that your state passes Digital Fair Repair this session.

Sincerely,

Nathan Proctor, National Right to Repair Campaign Director, U.S. PIRG

Testimony of
Lisa McCabe
CTIA
Opposition to Hawaii Senate Bill 2496
Before the Senate Committee on Commerce, Consumer Protection, and Health

February 5, 2020

Chair Baker, Vice Chair Chang and members of the Committee, on behalf of CTIA, the trade association for the wireless communications industry, thank you for the opportunity to submit this testimony in opposition to SB 2496. CTIA's members include wireless service providers, infrastructure providers, suppliers and manufacturers.

The marketplace already provides a wide range of consumer choice for repair with varying levels of quality, price and convenience without the mandates imposed by state legislation.

This legislation would harm the marketplace by weakening the relationship that manufacturers have with authorized repair facilities and provides no protection or quality assurance for consumers.

For example, manufacturers have relationships with authorized repair providers. These providers – which include local small businesses – have received the appropriate training from manufacturers and have the qualifications to help ensure that repairs are done properly and safely.

Manufacturers want to make certain the repair providers they work with understand the numerous components of the electronic products being repaired. Their authorization to perform repairs ensures that the changes made to the devices are compatible with current technology and the networks on which they operate.

Manufacturers also prize consumer brand loyalty and have gone to extraordinary lengths to establish that the devices they produce are of the highest quality. Authorized repair ensures those products maintain that high quality and guarantees that repairs meet the manufacturer's standards.

In addition to authorized repair providers, manufacturers may offer walk-in repair options at retail as well as mail-in services. Insurance providers may also offer repair options, including authorized third party remote technicians that will travel to the consumer to perform repairs. Moreover, consumers can currently avail themselves of numerous independent repair

alternatives although manufacturers cannot guarantee the quality assurance of independent repair providers.

To further address the repair marketplace, CTIA recently launched two programs related to repair, the Wireless Industry Service Excellence (WISE) Technician Certification Program and the WISE Authorized Service Provider (ASP) Certification Program.

The WISE technician program educates and tests wireless device repair technicians on industry-recognized standards, certifying those that meet the highest standards for service quality and technical skill. The first certification of its kind, WISE-certified device repair technicians provide consumers with a predictable, high-quality repair experience.[1]

The WISE ASP program creates a network of certified retail locations, helping consumers identify qualified providers that meet the highest standards for service quality and wireless device repair.[2]

Both programs were created by CTIA's Reverse Logistics and Service Quality Working Groups, which convene members representing the entire reverse logistics community to address the wireless industry's challenges and develop requirements for industry-recognized standards in repair and refurbishment of wireless devices.

CTIA is also concerned that this legislation would have a number of unintended consequences for the security and operation of electronic devices. Legislation mandating the sharing of important and proprietary information regarding how electronic products operate, specific schematic diagrams and service code descriptions could weaken cybersecurity on devices and potentially harm the security of devices and the networks themselves.

Cyber criminals could more easily circumvent security protections, harming not only product owners but also everyone who shares their network. In an era of sophisticated cyberattacks, we should not make it easier for cyber criminals to hack security protections.

In addition, even if an independent repair provider is provided the technical information mandated under this bill, without specific training on reassembling a device, the provider could unintentionally cause antenna performance problems, stress on the device's frame, heat buildup or degradation of water tightness.

For these reasons, CTIA respectfully asks that you not move this legislation.

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[1] https://www.ctia.org/news/ctia-launches-technician-certification-program

[2] https://www.ctia.org/news/ctia-launches-retail-certification-program-for-wireless-device-repair

LATE

TESTIMONY REGARDING SB 2496

being heard by the Senate Committee on Commerce, Consumer Protection & Health on Thursday, February 6, 2020 at 9:30 AM in Room 229

Aloha Chair Baker, Vice Chair Chang, and Members of the Committee:

Thank you for the opportunity to provide testimony regarding SB 2496 which would require digital equipment manufacturers to make documentation, parts, and tools available to independent repair providers and owners to support their ability to make repairs to this equipment. Because of the specific nature of the equipment that Tesla manufactures and installs, we are strongly opposed to this bill given the serious safety issues implicated. We enumerate our concerns below.

Tesla's mission is to accelerate the world's transition to sustainable energy through the deployment of electric vehicles and sustainable energy products, like storage and solar energy systems. Based on the definitions in this bill, Tesla's current understanding is that while Tesla vehicles would be exempt from the bill's requirements, our energy products, which appear to meet the definition of "digital electronic equipment" would be subject to this measure's provisions.

Given the nature of the products Tesla manufactures and installs, all of which involve high voltage systems that interact with the utility distribution or transmission system, Tesla is very concerned that this bill will create significant safety issues if untrained customers and third parties are allowed, and, pursuant this bill, effectively encouraged, to provide repair services.

Tesla takes the issue of safety extremely seriously. This is reflected in the design of our energy systems which, among other things, is intended to limit the ability of customers to access internal components given the risks involved when working with high voltage systems. It is also reflected in the extensive training we provide to our own employees and certified channel partners, non-Tesla installers that are authorized by Tesla to market and install Tesla systems. Simply providing "documentation" as this bill would require, is insufficient to ensure that customers and independent repair providers are performing any maintenance or repairs correctly. The training Tesla provides to our employees and certified installers is essential to ensure that any repairs are done with minimal risk to the customer, the individual performing any repair or installation work, as well as to the structures on which this equipment is deployed.

It is also critically important that any repairs do not undermine the operational and safety requirements necessary under the interconnection agreement which governs the interaction of this equipment with the electric grid. This is a critical point. Unlike typical consumer electronics, like laptops or cellphones, battery energy storage systems and solar photovoltaic systems, like those deployed by Tesla, can have an impact on the reliability and safety of the electric grid. Said another way, their operation has implications that extend beyond the customer premise and can impact the electrical system more broadly. Therefore, battery storage and solar providers must go through an interconnection process

with utilities to ensure the safe interconnection and operation of this equipment at customers' homes and businesses.

Tesla is deeply committed to ensuring that customers that choose to deploy a Tesla product get the most out of their solutions regardless of whether the system was directly purchased from and installed by Tesla, or whether it was purchased and installed via a certified channel partner. To that end, we do provide all necessary materials including, parts, documentation, etc. to support the ability of certified channel partners to service systems they have deployed. Additionally, all our systems are subject to a robust warranty that guarantees the operation of the equipment for ten or more years.

For all the forgoing reasons, Tesla opposes SB2496. At a minimum, we ask that an exemption be provided to high voltage equipment generally given the significant safety issues involved.

Thank you for the opportunity to submit this testimony.

Microsoft Corporation
One Microsoft Way
Redmond, WA 98052-6399

Tel 425 882 8080
Fax 425 706 7329
www.microsoft.com

LATE

Microsoft

February 5, 2020

Senator Rosalyn H. Baker, Chair
Committee on Commerce, Consumer Protection, and Health

Re: SB 2496 Relating to the Model State Right-To-Repair Law
Hearing: Thursday, February 6, 2020 at 9:30 a.m.
Conference Room: 229

Dear Chair Baker and Members of the Senate Committee on Commerce, Consumer Protection, and Health:

On behalf of Microsoft, I am writing to urge you to oppose SB 2496, relating to the Model State Right-To-Repair Law. Consumers already have many options to repair their electronics, and the proposed legislation poses significant safety, security and reliability risks and undermines legitimate business interests. This is a very complex issue, which is being assessed at the federal level. Any state action to address this issue would be premature.

Insufficient Grounds for Enactment
Consumers have many options to repair their electronics. Microsoft provides consumers with high quality, safe and convenient repair options at cost. Microsoft does not restrict third party repairs.

Safety and Reliability Risks
Most consumer electronics use lithium ion batteries, which are small and powerful but may pose serious safety risks. These safety risks increase if unauthorized and untrained individuals install potentially defective or counterfeit batteries.

Security Risks
The unauthorized repair of device components may result in the disabling of key hardware security features or impede the update of firmware that is important for device security or system integrity. Unauthorized repair provides the opportunity for data transfer and introduction of malware, raising cyber-security and potential tampering concerns for the devices and the organizational networks to which they connect. There are no standards for independent repair that would minimize these potential security risks.

Business Risks
Hardware device protections help protect copyrights to software products. Unlimited access to diagnostic and proprietary hardware tools increases potential for antipiracy control circumvention.

SB 2496 Does Not Address the Complexity of the Issue

The US Federal Trade Commission held a workshop in July to assess whether federal regulation is warranted to address product repair issues. Any state legislation on this issue would be premature due to potential FTC action. Similar bills have been introduced in 20 US states. No bill has been enacted due to the complexity of the issue. Enactment of repair legislation may pose legal issues, including possible Commerce Clause, First Amendment, and Takings Clause claims.

For these reasons, we urge you to oppose SB 2496. Thank you for considering Microsoft's position on SB 2496. Please feel free to contact me for more information.

Sincerely,

Jonathan Noble
Director, State and Local Government Affairs
Microsoft

Testimony in opposition to SB 2496

"Requires original equipment manufacturers of digital electronic equipment to make documentation, parts, and tools available to independent repair providers and owners"

Consumer Protection & Health (CPH) Committee

February 6, 2020, 9:30 a.m.

- Chairwoman Baker and Members of the CPH Committee - Thank you for the opportunity to present to you today on SB 2496 – Regarding Digital and Electronic Equipment Repair.

- My name is Andrew Lindstrom, and I represent American Machinery, an agriculture and construction dealership with five locations in Hawaii. We employ 60 people in the state.

- American Machinery opposes the passage of SB 2496 for the following reasons:

1. Our dealership strives to bring our customers value in all we do. To do so, we spend significant capital each and every year to ensure our technicians have the latest safety and technology training.

2. While John Deere equipment has become more sophisticated, **Deere supports the customer's right to repair** and has built advanced diagnostic capabilities into equipment that are available to the owner, dealers, or others. And for those customers who require even greater diagnostic capabilities, John Deere provides subscription access to "Customer Service Advisor" – a specialized diagnostic tool similar to the tools we use to support our customers.

3. Customers should be able to expect the same level of information across manufacturing brands. It is an appropriate solution that makes so-called "Right to Repair" legislation unnecessary. That is why manufacturers of tractors, combines and construction equipment such as John Deere have made an industry commitment to make available by model year 2021, the

tools customers need to navigate onboard technology. In the near future, end users will have access to on-board diagnostics tools via in-cab display or wireless interface, electronic diagnostic service tools and training on how to use both. Manufacturers and dealers will also make available manuals, product guides, and product service information.

4. However, to the extent the owner has the right to lawfully repair his or her equipment, John Deere **recommends against unauthorized modification of the embedded software code.** Providing access to the source code would not only undermine manufacturers' innovation and intellectual property rights, it would risk data privacy and allow unauthorized and illegal tampering of safety and emissions requirements for the equipment. Modifications also create unknown liability issues for the individuals modifying the code, dealers who subsequently trade-in modified equipment for resale, as well as subsequent owners of modified equipment.

5. Modified software on heavy-duty equipment can create an unsafe environment for those operating the equipment.

6. I would also like to highlight the fact that an off-road sector coalition has been established because of this very serious issue. To our knowledge, it is the largest off-road coalition for any state issue, which signifies the seriousness of the issue. Coalition members represent such sectors as:

    a. Marine manufactures & dealers
    b. Snowmobiles
    c. Portable generators
    d. Power tools
    e. Remanufactured products
    f. Off-highway recreational vehicles
    g. Equipment lenders
    h. Off-road motorcycle industry, and even

i. Major customers organizations such as the National Association of Landscape Professionals
j. The reason these organizations oppose this legislation is because of the very significant public safety and environmental concerns I have raised in my comments. I believe that your Committee has also received a letter of opposition to SB 2496 from the Coalition.

- In closing, Right to Repair is a complicated, yet important, issue. We believe the best solutions can be achieved when all parties talk together and allow the marketplace to shape the most appropriate solutions. The best solutions are not likely to come via legislative mandates. For these reasons, we oppose SB 2496.

- Thank you for your consideration of our opposition against SB 2496.

- Questions

LATE

Hawaii SB2496: RELATING TO THE MODEL STATE RIGHT-TO-REPAIR LAW

Position:
CNH Industrial (CNHI), manufacturers of Case construction equipment, Case IH and New Holland brands of farm equipment joins Allied Machinery Corp., Hawaii dealer of construction and farm equipment, in opposition to Hawaii SB 2496 which seeks to make diagnostic and repair information, including repair technical updates and embedded software updates and corrections, available to any independent repair provider in the State.

Background:
Digital Equipment Repair legislation was born out of the consumer electronics industry where consumers typically don't face potential costly risks associated with repair of consumer electronic products;

CNHI and Allied Machinery Co. respects the long-standing tradition of equipment owners repairing their equipment and choosing their service providers. We work closely to insure consumers in Hawaii have access to highly trained, well equipped technical and repair personnel, who are supported by significant investment in repair parts, facilities and systems.

SB 2496 is a consumer electronics bill that captures farm and construction equipment within. The issue of "Fair Repair" touches a number of critical topics ranging from environmental regulation, consumer safety, consumer training, dealer and manufacturer liability, to ultimate accountability that the customer's machine is operating in the manner and capability it was designed to. SB 2496 addresses none of these critical topics.

SB 2496 fails to anticipate execution and future technology of heavy-duty equipment:

- The "how and when" and realities of implementing diagnostics capability to consumers in an efficient and cost effective manner;
- The fast advancing technology impacting heavy-duty equipment:
    - remote – dealer direct to machine – diagnostics;
    - "smart tractors" that provide sensing and control to-and-from trailing implements;
    - autonomous tractors soon to be realized in the marketplace;

SB 2496 Over-reaches the intent of the bill:

- It is an over-reach to mandate the "release of diagnostic repair tools incorporating the same diagnostic, repair and remote communications capability that such manufacturer makes available to the "repair or engineering personnel employed by such manufacturer". Engineering personnel possess programming capabilities that allow for testing program code. This presents a clear opportunity for infringement of U.S. copyright law as well as dangerous machine manipulation.

- Access to information that would allow changes to a machine's data-management systems must be carefully controlled to ensure machine functionality, safety, and emissions compliance, and to preserve product warranties.

- SB 2496 implies that manufacturers would be required to sell parts directly to consumers. This requirement infringes on existing contractual relationships with dealers.

Industry is best equipped to solve the issue:

- Over the last 12-months of research on the topic of "right-to-repair" we have been told by farmers, Farm Bureau representatives, state legislators, construction contractors and third party repair operations that:
    - Owners want to diagnose an equipment issue;
    - Owners want access to service manuals and;
    - Owners want to self-determine how to implement service for their equipment;

- The farm equipment industry has a long history of solving issues without legislative interference. The ultimate diagnostic solution must be efficient for farm producers and construction contractors e.g.:
    - Sensible standardization – where very little exists now;
    - Cost effective;
    - Scalable and executable in terms of access and ease of use;
    - Training and documentation;
    - Liability, licensing and warranty;
    - Third party re-seller commercial arrangements;
    - Third-party software commercial arrangements;

- Industry is best served to satisfy this need and recently announced an industry wide commitment to provide electronic diagnostics to machine owners starting with model year 2021.

We very much appreciate your consideration and we welcome the opportunity to create a solution that meets the needs of Hawaii farmers and construction contractors..

Please feel free to call upon us if we may provide input.

Sincerely,

George Whitaker

George Whitaker
State Government Affairs
CNH Industrial America LLC
Racine, WI 53404
Office: 262-636-6004
Email: george.whitaker@cnhind.com

Jeff Freyerisen

Jeff Feyerisen
Allied Machinery Corp.
94-168 Leoole Street
Waipahu, HI 98797
Office: (808) 671-0541

CNH Industrial America (CNHI)

CNHI is a global manufacturer of Case IH and New Holland brands of agricultural equipment, and, Case and New Holland brands of construction equipment. Our brands are sold and serviced by dealers in all 50 states and over 160 countries around the globe.

Allied Machiner Co:

Allied Machinery Co. was established in 1979 and has business location on the islands of Oahu, Hilo, Maui and Kauai

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February 6, 2020

The Honorable Rosalyn Baker
Hawaii State Capitol, Room 230
415 South Beretania Street
Honolulu, HI 96813

SENT VIA ELECTRONIC DELIVERY

Re: Opposition to S.B. 2496

Dear Chairwoman Baker and Senate Commerce, Consumer Protection, and Health Committee Members:

As the leading trade association representing the manufacturers of medical imaging equipment and radiopharmaceuticals, the Medical Imaging & Technology Alliance (MITA) opposes S.B. 2496 in its current form and requests a clear exemption for medical devices.

Original equipment manufacturers (OEMs) and their authorized repair providers are regulated by the Food and Drug Administration (FDA) and must adhere to set quality, safety, and regulatory standards, including 21 CFR 820, when performing maintenance and repair. Independent repair providers are not held to the same standards as OEM and authorized repair providers to perform the same maintenance and repair activities. If enacted in its current form, S.B. 2496 would require OEMs of medical devices to provide unregulated repair providers and owners of digital electronic products with diagnostic and repair information. This legislation would affect a wide range of sophisticated, medically essential equipment under the classification and oversight of the FDA, including but not limited to magnetic resonance imaging, ultrasound, computed tomography, x-ray, and PET systems.

****

Medical Device Servicing
Servicing a medical device is a complex and often difficult activity that poses a range of serious risks to patients and operators if performed improperly. For this reason, satisfactory quality and regulatory performance of servicing activities is dependent on more than possession of proper materials. Suitable training, adherence to a quality system, and compliance with regulatory requirements set by the FDA are essential to proper device servicing.

Not only do manufacturers invest significant resources into the manufacture and design of medical devices, they also invest heavily in development of servicing tools, training and protocols. These proprietary resources are not necessary for the successful servicing of devices. In many cases, one manufacturer may service another manufacturer's device, doing so based on

their own know-how and reverse engineering efforts. Many non-OEM servicers also already make this kind of investment in their own proprietary servicing tools, training and protocols. All independent servicing organizations need to accept the responsibility to ensure the return of the device to safe and effective operation and can do so by adopting appropriate quality systems and developing their own servicing protocols, tools, and training.

Medical imaging device servicing requires the highest level of technical and procedural training. This training needs to be regularly updated to reflect knowledge of the latest products, including software and hardware, and a deep understanding of and adherence to current best practices. Operating within a quality system ensures that devices consistently meet applicable requirements and specifications.

FDA Regulation

Currently, only OEMs are held to high regulatory requirements by the FDA, including 21 CFR 820. Non-OEM entities are not held to the same consistent quality, safety, and regulatory requirements as are OEMs. In the last year, the FDA has engaged with a variety of stakeholders on medical device servicing through the creation of Collaborative Communities with OEMS and servicers. In December 2018, the FDA published a white paper on medical device servicing and remanufacturing and collected input from medical device servicing stakeholders via a comment period and a public workshop. An FDA guidance on remanufacturing of medical devices is expected in early 2020.

Congress and the FDA has also recently reviewed and shown concern on medical device servicing and the lack of equivalent regulation among OEM and non-OEM repair providers. Given the ongoing consideration at the federal level, MITA believes that a patchwork of state laws would directly conflict with the critical need for consistency in medical device servicing

Exemption Language

MITA recommends that if S.B. 2496 advances, an amended version of the legislation include suggested language in Section 5 that exempts medical devices:

- "Nothing in this chapter applies to manufacturers or distributors of a medical device as defined in the federal Food, Drug, and Cosmetic act (21 U.S.C. Sec. 301 et seq.) or a digital electronic product or software found in a medical setting including diagnostic, monitoring, or control equipment or any product or service that they offer."

Conclusion

The MITA position is that all entities engaged in servicing medical devices should be held to consistent minimum quality, safety, and regulatory requirements. Independent service organizations requesting access to repair materials are no exception. It is unfortunate that these discrepancies currently exist and that operators and patients are not guaranteed an equivalent level of quality, safety, and regulation regardless of who services a medical device. For these reasons, we believe that medical devices should be exempted from S.B. 2496.

****

If you have any questions, please contact Holly Grosholz at 703-841-3228 or by email at holly.grosholz@medicalimaging.org.

Sincerely,

Patrick Hope
Executive Director, MITA

cc: Members of the Senate Committee on Commerce, Consumer Protection, and Health

Senator Stanley Chang
Senator Clarence Nishihara
Senator Russell Ruderman
Senator Laura Thielen
Senator Glenn Wakai
Senator Kurt Fevella

SB-2496
Submitted on: 2/5/2020 4:31:30 AM
Testimony for CPH on 2/6/2020 9:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
James Crum	Testifying for Geeks for Good and Tinyville Farm	Support	No

Comments:

TESTIMONY

COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH
February 6, 2020 at 9:30am
Hawaii State Capitol, Room 229

Thank you Chair Baker, Vice Chair Chang and members of the Committee on Commerce, Consumer Protection, and Health for holding this hearing on SB 2496.

My name is Jim Crum and I am the founder and owner of Geeks for Good in Paauilo, Hawaii as well as founder and owner of Tinyville Farm in Laupahoehoe, Hawaii, both on the Island of Hawaii.

I am writing to support Right to Repair, SB 2496, because it is critical to businesses like mine and consumers in rural and remote places like Hawaii. We need to be empowered to repair items that we own that are essential to our way of life.

I founded Geeks for Good® in 2006 on the mainland to focus on providing low cost and high quality tech support and maintenance for small businesses and nonprofits, and to empower customers to perform their own repairs. In 2010 I moved to Hawaii and brought this business with me to Paauilo, Hawaii. However, I have been providing computer support as an employee in businesses and for hundreds of customers in companies I've owned since the late 1980s. In that time, my companies and I have fixed thousands of servers, PCs, printers, switches, routers, tablets, phones and other hardware. My customers have included many small businesses, with a strong focus on nonprofits, schools and health services.

I have often had trouble getting quality tech support, documentation, and specialized parts from hardware manufacturers over the years. Recently, I have seen a real move toward a model of manufacturers pushing replacement rather

than repair, with some keeping a very tight reign on special tools or parts that are only available from the manufacturer directly at what seem to me to be inflated prices for both parts and labor. As a result, it's getting harder and harder for me to fix machines and empower my customers to repair theirs because of what the manufacturers have started to do -- block access to parts, tools, certain updates, and sometimes needed diagnostics and schematics. SB 2496 addresses this problem.

Some manufacturers have also made it impossible for me to perform legitimate repairs because of certification requirements that mandate a physical address and not a P.O. Box. Quite often I am not able to provide this in the rural communities I serve. Therefore I have had customers that are forced to replace instead of repair their computer hardware because the only authorized repair option of going back to the manufacturer's facilities (none of which exist on the Big Island) was prohibitively expensive and time consuming.

In one example, a customer was not comfortable with getting a reasonably priced repair from a technician that was not authorized by Apple, so due to the constraints I mentioned earlier, the technician was not eligible to become authorized regardless of his ability to fix Apple devices. So not only did this cost them thousands of wasted dollars, it then presented us with the need to dispose of this hardware responsibly. In my experience, this is easier said than done, especially as our transfer stations take less and less in general, and specifically from people that want to dispose of these potentially hazardous material responsibly. On one occasion, we paid a company on island to dispose of a truckload of unrepairable technology. Within a few days, we learned that some of this equipment had been just dumped in a vacant lot. That meant that we had to talk to some angry neighbors, apologize, clean up, and then pay another company to dispose of it again. The saddest part is that there is so much technology on island that is thrown away when it could have been used again if we had access to what we needed to repair it.

This also affects me in another realm, as I recently became a farmer. I have found that some manufacturers of the equipment I rely upon will not provide me with the diagnostics or other tools that I need to fix my equipment myself when it fails. That means I may have to wait for the dealership to come to my farm and fix my equipment, which could often take days. This is not a viable option for a rural farmer like me who deals with unpredictable climates and has to hit critical planting and harvesting windows. As a farmer, I am now forced to look for equipment that I am allowed to repair myself, although it may be more expensive and less reliable. Sometimes, even "not available to ship to Hawaii."

Passing this bill would help my company and others like it in Hawaii, help businesses and consumers cut costs and do their own repairs if they are so inclined, and help us keep equipment from becoming electronic waste. As I've seen in my move to Hawaii from the mainland, and even in a move from Oahu to

the Big Island, this issue has become even more critical in rural and remote locations. My customers and I are tired of being forced to replace rather than repair, especially as Repair is a crucial fourth R to be added to Reduce, Reuse, Recycle. So that we may be sustainable as a community, a state, a country, and a planet, I hope you will stand up for Repair by advancing SB 2496. I'd be happy to answer any questions you might have.

Mahalo,

Jim Crum
Owner and Founder, Geeks for Good
Owner and Founder, Tinyville Farm

(808) 339-1488 (mobile)

Hawaii Senate Bill 2496
Hawaii House Consumer Protection & Commerce Committee
February 6, 2020

LATE

Joani Woelfel
President& CEO, Far West Equipment Dealers Association

Honorable Chairwoman and members of the committee, my name is Joani Woelfel and I am providing testimony opposing Senate Bill 2496 on behalf of equipment dealers. Far West Equipment Dealers Association represents agricultural, industrial, material handling, hardware, lumber, outdoor power and rental equipment dealers in Arizona, California, Colorado, Hawaii, Nevada, Utah and Wyoming. This comprises nearly 300 equipment dealerships that employ thousands of individuals across seven states whose contributions serve to enhance a healthy economy.

"Right to Repair" legislation as represented in this and other similar bills can be misleading. To be clear, we are not suggesting this is the intent of the bill's sponsors. We are simply providing a perspective that these bills have been introduced in state legislatures across the country for the past several years. Of the more than 23 bills introduced, *NONE HAVE PASSED*.

It's important to emphasize the distinct difference between "right-to-repair" and modifying embedded software code that regulates safety, security and emissions controls as this bill proposes.

Equipment dealers support the rights of their customers to diagnose and repair their equipment. Dealers and manufacturers already make many of these tools and diagnostics available to customers, consistent with an industry commitment to provide them by January 2021 in lieu of legislation such as SB 2496 now before this committee.

Recently, the American Farm Bureau Federation acknowledged its efforts to work with dealers and manufacturers to provide these tools and information toward a resolution that "doesn't entail any specific legislation," according to reports quoting R.J. Karney, director of congressional relations for the American Farm Bureau Federation. (Lincoln Journal Star, Feb. 3, 2020).

Dealers and manufacturers host demonstrations of these tools and diagnostics across the country to help educate lawmakers on ways the equipment industry empowers customers to repair their equipment. FWEDA will gladly facilitate these demonstrations for members of this committee and any legislators who are interested in learning about how the equipment industry supports its customers.

We oppose “Right-to-Repair” legislation such as SB 2496 that would allow many inexperienced and unqualified individuals the ability to “reset” embedded source code, effectively “legalizing” tampering with equipment safety, security and emissions features.

Modern machinery is equipped with Engine Control Units (ECUs) and Diesel Exhaust Fluid (DEF) systems programmed to comply with state and federal safety and emissions standards. Proponents of this legislation demand access to this embedded software code, arguing that equipment owners should be able to manipulate machinery as they see fit.

Access to embedded software code enables users to alter engine performance and emissions controls outside the standards, *contrary to The Clean Air Act***:**

- Motor vehicle engines and off-road vehicles and engines must meet Clean Air Act standards, which apply to cars, trucks, buses, recreational vehicles and engines, generators, farm and construction machines, lawn and garden equipment, marine engines and locomotives.
- It is a violation of the Clean Air Act to manufacture, sell or install a part for a motor vehicle that bypasses, defeats, or renders inoperative any emission control device.
- The Clean Air Act prohibits anyone from tampering with an emission control device on a motor vehicle by removing it or making it inoperable prior to or after the sale or delivery to the buyer.

The EPA recently announced its “National Compliance Initiative: Stopping Aftermarket Defeat Devices for Vehicles and Engines,” which “will focus on stopping the manufacture, sale, and installation of defeat devices on vehicles and engines used on public roads as well as on nonroad vehicles and engines.”

It’s important to note the NCI objectives specifically address alterations this legislation seeks to permit: *“**Illegally-modified vehicles and engines** contribute substantial excess pollution that harms public health and impedes efforts by the EPA, tribes, states, and local agencies to plan for and attain air quality standards*.”

Modifying embedded software can also create unsafe operating conditions related to horsepower and performance, potentially endangering the public. These modifications not only create liability for an individual who changes the codes, they also jeopardize dealers who unknowingly accept trade-ins of modified equipment for resale, as well as the subsequent owners of this equipment.

Altering horsepower and emissions by other means including reprogramming software and the ECU causes extreme risk to the original customer, the secondary customer and the dealer. Reprogramming the ECU can accomplish the same result as installing a chip, but sometimes

extends beyond the 20-percent change. Through reprogramming, users can also bypass emissions controls that are required by federal law to be installed and working on modern engines. Companies that are regularly reprogramming ECUs through pirated software save the original settings so they can reprogram it back if the customer has a major failure and doesn't want to jeopardize the warranty coverage, or if the customer wants to trade it in.

Those who perform this service and the customer recognize the risks created (legal and component failure) so they commonly save the OEM settings for this reason. Unfortunately, the secondary customer and the dealer take on 100 percent of the risk once the machine is traded in because they don't know whether a machine has been chipped or reprogrammed.

If that customer has a major failure after unknowingly purchasing a tractor that's been modified, they are many times faced with a large, unexpected repair bill. Successful dealerships stand behind the products they sell and service. Even if a dealer unknowingly sold a tractor that had been modified, and it consequently had a major failure shortly after selling it, the dealer assumes the risk of major repair expense to protect their reputation.

The real burden of equipment alterations is ultimately borne by consumers. If it is determined that a tractor has been chipped or reprogrammed to increase horsepower or bypass emissions, the manufacturer warranty could be voided. Passage of these bills could also prompt manufacturers to reassess extending equipment warranties.

Engine components, transmissions and final drives can fail if they aren't engineered to accept high levels of horsepower or torque. Estimates for repairing a 9.0-liter engine can reach $40,000; a final drive failure is roughly a $15,000 repair; and an IVT Transmission repair is estimated at $50,000. Subsequent issues caused by these failures can drive these costs even higher. Unfortunately, it's typically the dealer or the secondary customer who bears the brunt of these costly failures. Additionally, all machines are engineered with an expected life-cycle. During the engineering process, the horsepower created by the engine is matched by the drivetrain and all other components of the machine, so if parts are pushed beyond their capability, life-cycle diminishes.

For all these reasons we urge legislators to reject SB 2496 and similar bills.

As equipment dealers, we want to emphasize the industry commitment to supporting a customer's right to repair:

"To the extent not already available, the maintenance, diagnostic and repair information listed below will be made available to end users through authorized agricultural dealers at fair and reasonable terms, beginning with tractors and combines put into service on or after January 1, 2021. End users will also be able to purchase or lease diagnostic tools through authorized agricultural dealers. Certain information and tools may be available earlier."

Agricultural dealers are committed to provide access to:

- Manuals (Operator, Parts, Service)
- Product Guides
- Product Service Demonstrations, Training, Seminars or Clinics
- Fleet Management Information
- On-Board Diagnostics via diagnostics port or wireless interface
- Electronic Field Diagnostic Service Tools and training on how to use them
- Other publications with information on service, parts, operation and safety

Thank you for the opportunity to provide this testimony.

Joani Woelfel
President & CEO
Far West Equipment Dealers Association

LATE

February 6, 2020

The Honorable Rosalyn H. Baker, Chair
The Honorable Stanley Chang, Vice Chair
Committee on Commerce, Consumer Protection, and Health
Hawaii Senate
Honolulu, HI

Re: Right to Repair – SB 2496

Dear Senator Baker and Senator Chang:

Consumer Reports[1] supports your committee's favorable consideration of efforts to better ensure that consumers have the choice to fix their own electronic equipment, if they can, or to have it fixed by a repair servicer of their choosing, including servicers independent of the manufacturer. We are pleased you are holding a hearing on SB 2496, which would secure this right for consumers and independent servicers.

Our organization has long supported this "right to repair." And we have incorporated this principle into the Digital Standard, a set of best practices which we use to evaluate the privacy and security of software, digital platforms and services, and internet-connected products, as well as to help influence the design of these products.[2] It is important to safeguard and maintain consumers' ability to exercise their full rights of ownership over the products they purchase, including the right to repair them, and the right to resell them, even as technology evolves.[3]

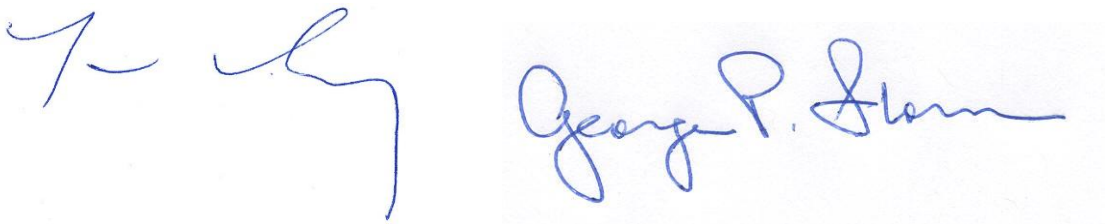
Unfortunately, it's often difficult for consumers to make simple repairs on their expensive devices – even simple repairs such as changing a smartphone battery or replacing a

[1] Consumer Reports is an independent, nonprofit member organization that works side by side with consumers for truth, transparency, and fairness in the marketplace. We use our rigorous research, consumer insights, journalism, and policy expertise to inform purchase decisions, improve the products and services that businesses deliver, and drive regulatory and fair competitive practices.
[2] The Digital Standard, https://www.thedigitalstandard.org/.
[3] E.g., Comments of Consumers Union to U.S. Copyright Office, Software-Enabled Consumer Products Study (March 18, 2016), http://consumersunion.org/research/comments-to-the-u-s-copyright-office-regarding-software-enabled-consumer-products/.

cracked screen.[4] Not only are electronics frequently designed in a way to intentionally prevent easy repair, but manufacturers are clamping down on access to the diagnostic and repair tools and the replacement parts needed to fix consumer electronic products. Some manufacturers even put digital locks on devices to block third-party repair. These tactics force consumers to rely on the manufacturer, or the manufacturer's chosen servicer, to fix these products. The manufacturer is then free to charge whatever it wishes, or even to refuse to repair the product and force the consumer to throw away the product and buy a new one.

We look forward to working with your Committee and others to secure an effective right to repair for consumers.

Sincerely,



Maureen Mahoney
Policy Analyst
Consumer Reports

George Slover
Senior Policy Counsel
Consumer Reports

[4] Bree Fowler, *iPhone Slowing Down? It Might be Time to Replace Your Battery*, Consumer Reports (Dec. 28, 2017), https://www.consumerreports.org/smartphones/iPhone-slowing-down-it-might-be-time-to-replace-your-battery/; Becky Worley and Sarah Messer, *Cracked iPhone Screen Help Guide: How 5 Repair Options Stack Up*, ABCNews.com (May 1, 2017), http://abcnews.go.com/Business/cracked-iphone-screen-guide-repair-options-stack/story?id=47089610.

CURRENTLY IN CPH

SB2496

January 23, 2020

LATE

The Honorable Lorraine Inouye
The Honorable Brian Taniguchi
The Honorable Gilbert Keith-Agaran
The Honorable Karl Rhoads
The Honorable Rosalyn Baker
The Honorable Les Ihara, Jr.
The Honorable Kaiali'i Kahele
The Honorable Dru Mamo Kanuha
The Honorable Jarett Keohokalole
The Honorable Clarence Nishihara
The Honorable Gil Riviere
The Honorable Laura Thielen

Via Electronic Mail:
seninouye@capitol.hawaii.gov
sentaniguchi@capitol.hawaii.gov
senkeithagaran@capitol.hawaii.gov
senrhoads@capitol.hawaii.gov
senbaker@capitol.hawaii.gov
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sennishihara@capitol.hawaii.gov
senriviere@capitol.hawaii.gov
senthielen@capitol.hawaii.gov

Dear Hon. Inouye, Hon. Taniguchi, Hon. Keith-Agaran, Hon. Rhoads, Hon. Baker, Hon. Ihara, Hon. Kahele, Honorable Kanuha, Hon. Keohokalole, Hon. Nishihara, Hon. Riviere, Hon. Thielen:

Our coalition is unified in opposition to SB 2496 which would allow for unfettered access to the software that governs safety, security and, in the case of engine-powered products, emissions technology on many products manufactured and sold by coalition members. The proposed legislation serves special interests and does not meet the needs of the general public. Furthermore, if enacted, such legislation could pose serious safety, security and environmental risks.

Our industries and customers have a shared desire to minimize downtime and maximize productivity. That is part of the reason why our broad coalition has invested so much capital in cutting-edge proprietary innovations that incorporate the latest technology, training and support for end users.

Proponents of so-called "Right to Repair" legislation are advocating unfettered access to the software that governs safety and emissions features incorporated into products sold by coalition members. Giving access to the source code will undermine manufacturers' innovation and intellectual property rights, increase the risk of tampering that runs afoul of applicable Federal safety, security and emission requirements, and pose potential risks due to damage from modifications by untrained individuals. Modifications also create product safety and performance issues, which can lead to claims against the original equipment manufacturers (OEMs). In addition, the proposed legislation puts dealers who subsequently trade-in or refurbish modified equipment for resale, as well as subsequent owners--*who may not even know their equipment is modified*--at risk.

Our coalition members do not believe that proprietary software, developed specifically for the safe operation of equipment that meets strict government regulations, should be used to "legalize" tampering. In 2019, twenty-three (23) states rejected so called "Right to Repair" legislation because of these substantial concerns. We urge you not to take up SB 2496 for consideration, and if it is, we ask you to vote NO. Doing so will protect your constituents from risky equipment modifications that may circumvent safety and environmental regulations and create security risks. You can find more information on the website www.illegaltampering.com.

Sincerely,

Associated Equipment Distributors
Association of Equipment Manufacturers
Deep Southern Equipment Dealers Association
Diesel Technology Forum
Equipment Dealers Association
Equipment Leasing and Financing Association
Far West Equipment Dealers Association
International Snowmobile Manufacturers Association
Iowa-Nebraska Equipment Dealers Association
IPC
Midwest-Southeastern Equipment Dealers Association
Montana Equipment Dealers Association
Motorcycle Industry Council
National Association of Landscape Professionals
National Hispanic Landscape Alliance
National Marine Distributors Association
National Marine Manufacturers Association
Northeast Equipment Dealers Association
Outdoor Power Equipment Institute
Outdoor Power Equipment and Engine Service Association
Pioneer Equipment Dealers Association
Portable Generator Manufacturers Association
Power Tool Institute
Professional Grounds Management Society
Recreational Off-Highway Vehicle Association
Specialty Vehicle Institute of America
The Rechargeable Battery Association
Truck & Engine Manufacturers Association
Remanufacturing Industries Council
United Equipment Dealers Association
Western Equipment Dealers Association


AEM
Association of
Equipment Manufacturers


EquipmentDealers
ASSOCIATION


AED
Associated Equipment Distributors


Truck & Engine
Manufacturers
Association


PGMA
Portable Generator Manufacturers' Association


THE RECHARGEABLE
PRBA
BATTERY ASSOCIATION


National
Hispanic
Landscape
Alliance


PGMS


IPC


pti
power tool institute, inc.


NMMA
National Marine Manufacturers Association


OPEI
Outdoor Power
Equipment Institute


DIESEL
TECHNOLOGY FORUM


ELFA
EQUIPMENT LEASING AND FINANCE ASSOCIATION
EQUIPPING BUSINESS FOR SUCCESS


ISMA
International
Snowmobile
Manufacturers
Association


REMANUFACTURING
INDUSTRIES COUNCIL


EST 1946
FARWEST
EQUIPMENT DEALERS ASSOCIATION


IOWA-NEBRASKA
EQUIPMENT
DEALERS
ASSOCIATION


Midwest-SouthEastern
EQUIPMENT DEALERS
ASSOCIATION


UNITED
Equipment
Dealers
Association


DEEP SOUTHERN
EQUIPMENT DEALERS ASSOCIATION


MEDA
Montana Equipment
Dealers Association


Northeast
Equipment
Dealers
Association


PIONEER EQUIPMENT
DEALERS ASSOCIATION


WESTERN
Equipment Dealers Association


ROHVA


SVIA
Specialty Vehicle Institute of America


MOTORCYCL
INDUSTRY
COUNCIL


NATIONAL
ASSOCIATION OF
LANDSCAPE
PROFESSIONALS


OPEESA
POWERING DISTRIBUTOR SUCCESS


NMDA
NATIONAL MARINE DISTRIBUTORS ASSOCIATION
YOUR LINK TO THE SUPPLY CHAIN

SB-2496
Submitted on: 2/3/2020 7:19:23 AM
Testimony for CPH on 2/6/2020 9:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Patrick Karjala	Individual	Support	No

Comments:

Dear Honorable Chair Baker and Committee Members, I am writing today in SUPPORT of SB 2496: Relating to the Model State Right-To-Repair Law.

Companies have been moving ever more towards a model of preventing users from being able to repair and sustain their own devices, often while they are still usable if repaired, in favor of replacement to the benefit of the financial situation of the company that sold the original device. It is imperative that we maintain the right for the final buyer and owner of a device to be able to repair that device at their own leisure without being prevented from doing so.

A good analogy is if a car company sold you a car, and then told you that you could not change the oil yourself, or replace the battery, because they will not allow you to reset the software on the car that says the oil or battery have been changed. Said company will also try to tell you that it is dangerous to change your own oil or replace the battery, so they prevent you from doing so for your own safety. Yet people change their own oil in their own driveways or garages without mishap, or replace their own car battery, and have done so for decades. It is disingenous to try to pose this as an extreme danger to the end user--while there is some danger present, it is analogous to striking a match to light a candle.

Please enact this legislation so that the final owners of devices may maintain and repair them!

Respectfully,

Patrick Karjala, MS

Honolulu, HI 96817

SB-2496
Submitted on: 2/4/2020 3:15:39 PM
Testimony for CPH on 2/6/2020 9:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
KATHERINE ROSEGUO	Individual	Support	No

Comments:

People should be able to repair their own appliances at a reasonable price and keep it out of the landfill

Re: Testimony in SUPPORT of SB 2496 – Right to Repair Legislation

Dear members of the Committee,

I support Senate Bill 2496 because I believe it will empower local residents to look into repairing electronic equipment, encourage the opening of independently-owned repair stores, and establish Hawaii as a leader of the self-sufficient Right-to-Repair movement.

There is no question in my mind that you will receive a number of testimonies from various companies who will tell you that consumer safety is at risk if you allow this bill to pass. I urge you to focus on the consumers, or in my case, what happened when I had a failed graphics card in my mid-2010 27” iMac --- Apple diagnosed it, but refused to service my broken computer due to its age.

With nothing to lose, I decided I should open the computer up with the help of a family member and attempt to repair the graphics card.

We bought the tools needed, opened it up, removed the faulty graphics card, and based on some advice from a Youtube video, we baked it. Yes, we baked the graphics card in the oven.

Did it work?

Sadly, no, but we shared a great laugh and learning experience.

The point of my letter is to stress that people will be tempted to take their electronics apart and fix it themselves when they have no option for repair --- the price of a repair may be too expensive or the age of their electronic device may be too old to be serviced by the manufacturer.

By supporting SB2496 and allowing independent repair shops to have access to schematics and parts, you will encourage the growth of local businesses that can service older electronic devices at a cheaper price than the original manufacturer.

I wish I could have found a repair store locally to fix that iMac.

Sincerely,

Erica L.

SB-2496
Submitted on: 2/4/2020 5:22:44 PM
Testimony for CPH on 2/6/2020 9:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Jerry Shi	Individual	Support	Yes

Comments:

Thank you senator Taniguchi, Inouye, Keith-Agaran, Rhoads, Baker, Ihara, K. Kahele, Kanuha, J.Keohokalole, Nishihara, Riviere, L. Thielen and the members of the senate for holding this public hearing on this bill.

My name is Jerry Shi I'm a member of the public that is in strong support of the SB2496 right to repair bill.

I'm a member of the public, immigrated to the islands back in the early 90s, always been helping my aunts, uncles and neighbors fix what they needed. I remember some of the audio equipment that I worked on for my uncles, especially some 1970s pioneer speakers, they publish or even include the service manual in with the product, that shows how to disassemble the device safely, and a list of parts used.

As of now, most of them are either in a PDF format or only provides you a quick start guide, forget about diagrams or even parts list. Before, when I want to buy a part to fix the equipment I paid one or two thousand dollars for I would need to call up the company and even if they didn't have the part still in stock they would direct me to somebody who has it. As of now 2020, my mom have an iPhone 7 that I gave her when I upgraded to a iPhone XS a year ago, now the touch ID on it started to not work, so I thought oh hey that's not to hard just order it online and I can have it up and running, long story short, Apple has done something and many other companies are starting to do is they change the chip so I can't just use the chip from last year or the phone won't register the chip because it was not configured with Apple only diagnostic tool.

Now if I contact apple they won't sell me the chip nor the tool, if I become an Apple authorized service provider (pay apple for the exam fee and turn in my application with a business plan and all the necessary documents) they still will not sell the chip or tools to me, if i go to the original manufacture of the chip they will say we are not allowed to sell the chip to anybody but Apple.

There been some progress with some computer manufactures like Dell and HP, they have partner portals where you can order parts and often find service manuals for their devices.

I have been hearing a lot opposition from the motor vehicles industry and various other industries outside of Hawaii, they should honestly take a look at this bill because if they had read the exclusions in paragraph 5 it clearly points out this chapter does not apply to motor vehicle manufacture, manufacturer of motor vehicle equipment, or vehicle dealers.

Again, I'm a member of the public not a business not a lobbyist, think of all the time that you call that tech savvy kid in the family to help you fix things around the house, well times change and technologies evolve, after world war two many of the nissei had either repair shops and mechanic shops around the country to earn a living for their family. Fast forward 70 years, we are the new generation trying to earn a living for our families in this high cost economy.

I thank you for your time.

Jerry Shi

LATE

SB-2496
Submitted on: 2/5/2020 11:31:11 AM
Testimony for CPH on 2/6/2020 9:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
MJ Nale	Individual	Support	Yes

Comments:

4 February 2020

RE SB2496 "Relating To The Model State Right-To-Repair Law"

Dear Senators;

As a resident of Hawaii, and an electronics consumer, I fully support SB2496.

Repair extends the life of a product. Repairing a device can prevent data loss. Such as family photos, financial data, phone numbers, etc.

Reasonable repair saves the consumer money.

A repaired device is one less piece of electronic opala.

I remember family describing the pride my Grandfather felt, owning a Ford Model A. And the work and love he put into maintaining the vehicle. One of my Uncles passed that on to me, and taught me how to disassemble a car. And how to repair, and put it back together. As good as or better than before.

Of course back in the day there were thick manuals and a plethora of parts available. Strangely, today there are still thick manuals and parts. Due in part to open and fair business competition.

But elsewhere repairable 20th Century products transformed into the 21 Century solid state circuit mire of 'you can't touch that.' Proprietary electronic hardware, firmware, and software permeates small through large products available to consumers. And when that closed system part breaks, the consumer choice is stark. Get an expensive repair from a sole source OEM or buy a new product from said manufacturer.

SB2496 is a remedy for consumer problems created by repair unfriendly companies.

"When a repair is needed, a customer should have confidence the repair is done right. We believe the safest and most reliable repair is one handled by a trained technician using genuine parts that have been properly engineered and rigorously tested."
Jeff Williams, Apple COO

"That [repair] cost is very close to the cost of buying a new computer. In terms of fixing it in-store? No."
Apple Employee
https://www.cbc.ca/news/thenational/complete-control-apple-accused-of-overpricing-restricting-device-repairs-1.4859099

"Apple often overestimates the cost of repairs to its products and threatens third-party shops who are willing to fix them for a fraction of the price ... Customers who enter an Apple Store with a seemingly minor hardware problem, such as a flickering screen, are often faced with a large bill because they are told they need to replace major parts of the device. ... CBC News used a hidden camera to verify reports that Apple customers are often told their malfunctioning computers are not worth fixing, even when minor repairs could remedy the problem."
CBC (Canadian Broadcasting Corporation) News Investigation

When a consumer has an issue that needs resolving, whether it be repairing a product or seeking a service, the best situation is having multiple choices for a remedy.

If I want a Doctor, and I don't want Kaiser, I could go to Straub, or Queens, or a number of other medical facilities.

If I need a Dentist, there are dozens in the phone book.

My car needs repair, and I'm dissatisfied with my current dealer? I can go to another competing dealer. Or a nearby service station.

But, for example, if I want an Apple product fixed and the warranty has expired? It's go to the sole source, Apple. Historically it's a tossup over whether to bother or not

In late 2019 I took an out of warranty Apple iPhone to be serviced, Apple charged $49. They opted to give me a brand new refurbished device, instead of repairing the old device. Well that old device was not exactly old.

In December 2018 an Apple iPhone was taken in for servicing. Apple charged $29 for the repair. Which consisted of a refurbished iPhone replacement, instead repairing the old device. This was the same model iPhone as in 2019. Talk about product quality, or lack thereof.

Before the above servicing, I needed to repair an Apple computer. The estimated repair cost for this device was ... large.

To answer the likely question, I did not dispose of the device, I repaired it myself. The repair consisted of opening the device and replacing a $5 battery. Compare that to a $2900 computer repair or $3300 for a new Apple computer. Ironically, back in the day, Apple had detailed online documentation covering how to fix their computers. But, no more. Funny about that.

Am I still an Apple customer? Reluctantly, since 1977. Back then the technological marvel that was the Apple II, could be opened without special tools. And virtually everything in the case was upgradeable or replaceable or repairable. Due in part to copious documentation and parts provided by Apple and other vendors.

Again, today, not so much.

Today, I am locked into a specific Apple computer, because it fills a specific need. A computer that is marginally documented and well nigh unrepairable due to the way it is constructed. When the Apple coverage expires, repair becomes a toss-up once again.

Fortunately there are concepts known as capitalism and competition. Instead of all Apple devices, I have multiple non-Apple computers and multiple non-Apple devices. All repairable, through local licensed third party businesses, or by myself. And strangely to anti-repair lobbyists, no explosions or fires or injuries or deaths or cybercrimes have occurred. Got to love business competition.

Unless you are a virtual monopoly.

I am familiar with Apple products and use Apple as a repair example. But it is not the only company out there that engages in belittling consumer choice. Or provides the illusion of choice.

Before I continue, let's acknowledge the catalyst or source of each and every one of the products sold by anti-repair companies.

NASA Makes Dozens of Patents Available in Public Domain to Benefit U.S. Industry
https://www.nasa.gov/press-release/nasa-makes-dozens-of-patents-available-in-public-domain-to-benefit-us-industry
"This patents release is the latest in NASA's long tradition of extending the benefits of its research and development into the public sector, where it may enhance the economy and quality of life for more Americans."

National Aeronautics and Space Act of 1958, As Amended
"It is the continuing responsibility of the Federal Government to ensure the full use of the results of the Nation's Federal investment in research and development. To this end the Federal Government shall strive where appropriate to transfer federal owned or originated technology to State and local governments ***and to the private sector****."*
https://history.nasa.gov/spaceact-legishistory.pdf

Imagine if NASA had the same closed door policy of today's anti-repair companies. Where would virtually all these companies be?

Non-existent.

Imagine Hawaii's economy with a closed door policy.

"ESA's concern with "right to repair" is not with displacing industry revenue from repair services, as repairs are not a source of revenue for the game industry"
Kathryn P. Gunter, 28 January 2020, Entertainment Software Association
Testimony against HB1884

House Bill 1884 passed 8 to 0, on 30 January 2020.

"Definition of revenue: the total income produced by a given source"
https://www.merriam-webster.com/dictionary/revenue

"You can receive income in the form of money, property, or services"
IRS (Internal Revenue Service
What is Taxable and Nontaxable Income?
https://www.irs.gov/pub/irs-drop/rr-07-19.pdf

Sony PS4 Repair – *"The cost is $150 plus shipping"*
https://community.playstation.com/content/pdc/us/en_US/pdc-communities/support/Consoles-Peripherals.topic.html/service_repair_cost-67CJ.html

Microsoft Xbox One Repair – *"Generally repairs about $100 after warranty ends"*
Smwutches, Xbox Ambassador
https://answers.microsoft.com/en-us/xbox/forum/all/xbox-one-repair-costlifespan/a8ca614d-417e-40d9-ac87-e1bd6b52fb37

Nintendo devices – *"Factory Service Repair may also be available for a fee for systems where the manufacturer's warranty or repair warranty has expired"*
Nintento Factory Service Repair – Terms & Conditions
https://www.nintendo.com/consumer/repair/repairTerms.jsp

Senators on this committee will be hearing very interesting testimony from anti-repair lobbyists. Please allow me to informally dissect some of their common arguments.

Excuse the familiarity and lack of polish.

Some 21st Century technology manufacturers express pleas that mere mortals can't handle or understand their electronics. That without expert, highly priced OEM sole source experts, third party businesses or consumers may injure or maim themselves. And destroy the product.

Or worse, to those anti-repair companies, individuals repairing Their Own Devices or third party businesses could steal intellectual property and use it nefariously.

In other words, the likely opposition to SB2496 infers Hawaii residents are backward, stupid, and thieves.

Shibai.

"We have learned that increased enforcement combined with public education have proven to be an effective method to reduce distracted driving and, more importantly, save lives."
Jade Butay, Hawaii Department of Transportation Director, 2019.

Do people do idiotic things? Certainly. There's an Internet site called the Darwin Awards. Devoted to people "who accidentally remove themselves" from the gene pool.

As Lawmakers can you legislate Stupid? No. Can you mitigate it? Certainly. The mandatory use of seat belts comes to mind. And yes there was OEM (Original Equipment Manufacturer) opposition to that law across the country.

Does SB2496 open the doors to unmitigated stupidity? While anti-repair proponents subtly push that opinion, the real answer is absolutely not.

Hawaii residents have been 'tinkering' with products They Own since ... well since before Statehood. Back then there were no manufacturing facilities in the Territory of Hawaii. It was self repair or do without.

Hence, the need to repair products. Hence, the need for parts and manuals.

according to Suzanne B. Schwartz, the FDA's associate director for science and strategic partnerships.

Simple steps

In the meantime, ensuring that devices are updated regularly, that all patches are applied as soon as possible, recruiting experts in the security field, and layering security solutions can help protect systems and medical devices, even hackers do manage to exploit a particular vulnerability. As the use of the connected medical devices continues to expand, the battle between hackers and device security is only just beginning.

Julie Cole, VPNpro.com
Image Credit: Photo_Concepts / iStock

TOPICS

AWS responsible for two thirds of Amazon's profit

Amazon's cloud business continues to gather momentum, CFO Olsavsky says.

ITProPortal

first place. With customisation also possible, the design requirements for all medical devices can be ably met by both manufacturers and malware protectors.

Siemens Healthineers has recently spoken out on the dangers of malware and ransomware in the medical environment, and how medical practitioners need to be ready to meet this threat. Siemens has become a leader in diagnostics and medical equipment and has recognised that system security can be compromised by vulnerable medical devices. Thus, the company has worked closely with McAfee in order to craft a suitable solution.

And the Siemens Ultrasound System Security is the result of this collaboration, providing an antivirus solution that is powerful and highly flexible. And the RapidLab1200, also developed via a partnership between the two organisations, uses McAfee whitelisting to secure the device, preventing any unauthorised applications that may do damage from running on medical devices.

Pooling resources

This early partnership is indicative of the fact that safeguarding medical devices will require a joint effort from the provider organisations and device manufacturers. There is no silver bullet nor easy answer at this point in time, rather medical experts in both the hardware and software departments will need to pool their resources over a period of time.

However, the good news is that many companies and organisations in the healthcare environment are beginning to get on top of the problem. At least, this is the case according to Adam Gale, president of KLAS Research, whose organisation recently authored a major benchmarking report. "Many providers have the basic building blocks for a general security program in place and are making progress, although it is difficult and time-consuming, toward developing a mature program. We also are seeing some manufacturers being more proactive and accountable," Gale observed, suggesting that clinical partners can begin to solve the malware issue in the foreseeable future.

Another influence on securing healthcare devices from virus influences will be the legislative environment created by governance. In this regard, government oversight will play a critical role in improving security, and in this area, there is definitely room for improvement. When CHIME spoke to manufacturers of devices on the subject of government regulation, several noted that regulations from the US Food and Drug Administration (FDA) actually hinder security by making certain necessary changes legally impossible.

The FDA has already implemented measures in an attempt to improve the situation, with a memorandum of agreement having been inked between the organisation and the Department of Homeland Security. This is intended to secure a framework, which will enhance coordination and information sharing about potential medical device vulnerabilities,

company systems. And this will become an ever-increasing threat as the Internet of Medial Things becomes prominent, and health devices are connected to the Internet.

Increasing problems

Indeed, this is already becoming an issue. A survey conducted by the College of Healthcare Information Management Executives (CHIME) discovered that nearly 20 per cent of provider organisations had experienced their devices being subjected to malware or ransomware in the past 18 months. This is more than a major annoyance; such incidents threaten network security and even continuity of care.

So securing medical devices should be a priority for all organisations in the healthcare industry. Yet this can be difficult to achieve, with the level of systems knowledge on such devices less prevalent than for other more conventional computing equipment. Safeguarding these devices often requires support, particularly as the risk grows exponentially due to the increasing levels of interconnectedness.

When dealing with security breaches, the reality is that manufacturers of medical devices are often to blame. Indeed, a study conducted by CHIME found that 96 per cent of providers pointed to manufacturer errors as being central to data breaches and device-related security issues. This may be a sobering reality, but no matter how much healthcare providers may be reassured that devices are secure, they need to start out from a point of assuming that they are, in fact, vulnerable.

Active partnerships

Yet even the possession of this knowledge may not be enough to form active partnerships with device manufacturers, as many healthcare organisations already find that their existing IT resources are stretched. In the CHIME study, 76 per cent of providers concluded that their resources were "insufficient and too strained to adequately secure medical devices."

Nonetheless, there is some room for optimism. This may be a relatively new field, but already established security companies are coming forward to assist with eliminating malware from medical devices. McAfee is one of the big names involved, and the esteemed company is already working closely with medical device manufacturers in an attempt to thwart attacks and comply with an increasingly strict regulatory environment.

With this in mind, devices are now being produced with a variety of different security measures built-in. These can include application control, whitelisting, anti-virus and anti-malware protection, device security management, advanced data protection, and encryption. Aside from this, device manufacturers are working on ensuring that device management is more streamlined, providing less potential for ransomware and malware to be installed in the

Medical device manufacturers against healthcare malware and ransomware

By Julie Cole April 17, 2019

Dealing with cybersecurity in the contemporary healthcare environment is undoubtedly challenging.

(Image credit: Image Credit: Photo_Concepts / iStock)

Dealing with cybersecurity in the contemporary healthcare environment is undoubtedly challenging, and some aspects of this can even be overlooked by those familiar with the field. One such issue is the dangers of medical devices being hacked and used to penetrate

Despite FDA guidance issued in 2009 to hospitals and manufacturers—encouraging them to work together and stressing that eliminating security risks does not always require regulatory review—many manufacturers interpret the fine print in other ways and don't offer updates, Fu says. And such reporting is not required unless a patient is harmed."

os security xp

→

Beware the Rings of Pluto

Hundreds Rally For Their Right To Not Vaccinate Their Children

Propelled By Spread of Misinformation About Vaccines, Measles Outbreak Hits 'Completely Avoidable' 25-Year-High in the US

Alone In A Crowded Milky Way

44 US States Still Allow 'Religious Exemptions' For Vaccines

Tree Planting 'Has Mind-Blowing Potential' To Tackle Climate Crisis

Submission: Computer Viruses Are "Rampant" on Medical Devices in Hospitals

Amazon Founder Jeff Bezos Calls For Governments To End Patent Wars

This discussion has been archived. No new comments can be posted.

Malware Is 'Rampant' On Medical Devices In Hospitals • **134 More Login**

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- 4 Informative
- 3 Interesting
- 2 Funny
- 1

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MdM (Score:4, Interesting)

by Anonymous Coward on Wednesday October 17, 2012 @12:56PM (#41683809)

Nickname:

Malware Is 'Rampant' On Medical Devices In Hospitals

Posted by Soulskill on Wednesday October 17, 2012 @12:52PM from the physician-heal-thine-pc dept.

Dupple sends this quote from MIT's Technology Review:
"Computerized hospital equipment is increasingly vulnerable to malware infections, according to participants in a recent government panel. These infections can clog patient-monitoring equipment and other software systems, at times rendering the devices temporarily inoperable. While no injuries have been reported, the malware problem at hospitals is clearly rising nationwide, says Kevin Fu, a leading expert on medical-device security and a computer scientist at the University of Michigan and the University of Massachusetts, Amherst, who took part in the panel discussion. [He said], 'Conventional malware is rampant in hospitals because of medical devices using unpatched operating systems. There's little recourse for hospitals when a manufacturer refuses to allow OS updates or security patches.' ...

and IP checks, the applications are capable of detecting when they're under review, triggering a special "safe mode".

Once the reviewing process is over, the C2 server sends additional resources to the app, enabling it to run on "extended" capabilities. The zip files that are downloaded are giving extra functionality to the apps, with the most notable example being pornographic content players. This ensures that the app will stay on the device for longer, at least in most cases. In the background however, the app is loading the "CoreLocation" framework which is basically helping in the tracking of the user. In addition to this, the malware apps also initialize the CoreMotion framework and use the accelerometer to profile the user.

Source: Zimperium Blog

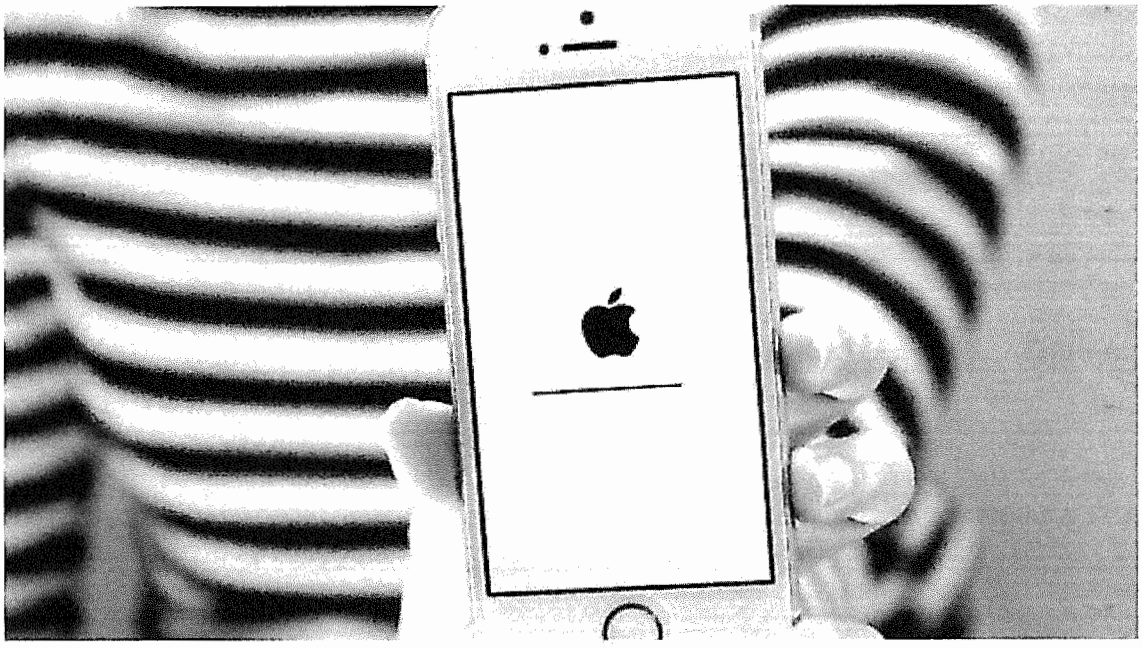
From then on, the apps dynamically load more than 400 private iOS frameworks, acting as full-fledged Trojans. Their action includes the spying of accounts, biometric data, cellular information, and even the backups of the user. This goes to show how important it is to use a mobile security application on your device. Apps can potentially transform fundamentally after they have been reviewed, so monitoring their activity at all times is crucially important if you want to stay safe.

Hackers "Break Into" Smart Buildings to Launch DDoS Attacks

Hackers are using a PoC exploit on well-known vulnerabilities to take over smart building access control systems made by "Nortek Security and Control".

Twenty Malware Apps Managed to Infiltrate the Apple App Store

By **Bill Toulas** - February 5, 2020



- **Zimperium discovered twenty Trojans in the Apple App Store and helped with their removal.**
- **The apps featured an in-built system to help them detect when they were being reviewed.**
- **Once they were free to act, they downloaded porn players and engage in loading hundreds of private iOS frameworks.**

Thanks to Apple's rigorous checking procedures, the discovery of malicious apps that managed to infiltrate the App Store is a rare occurrence. Still, this doesn't mean that crooks are giving up or don't try new methods to circumvent the App Store reviewing process. Zimperium's zLabs unveiled that they have discovered twenty malicious apps that were uploaded by different developers, but were using similar discovery evasion techniques. The main trick in their sleeve was to hide malicious code in their core and to keep it dormant until the reviewing process is over.

The mobile security firm has only revealed the IDs of five of the apps, but they assure that Apple has been informed of the full list and removed all twenty of the apps by September 2019. The five apps that were published are the following:

- com.cxq.shijiemingzhu – id1227696557
- com.huatec.Bungee – id1471964427
- HAN.Handwriting – id1472712181
- com.huangqin.drink – id1475262538
- com.lifeline.HeYiJiaYong – id1475305024

The functionality and user interface of these apps are pretty simplistic, and their main goal isn't to provide many features to the user anyway. Using timestamp verifications, hardcoded date checking

UNREMOVABLE

Malwarebytes researchers said they couldn't confirm that Unimax was the party that added the malware to the devices.

This might be another case where malware was added to devices by third-parties involved in a smartphone's supply chain -- while the devices travel from the phone maker to a buyer.

Malwarebytes said that while the device "is not a bad phone," the presence of the two malware-infected apps make the smartphone worthless and even dangerous to its users.

Making matters worse, the two malicious apps are unremovable.

While users could disable and uninstall the Wireless Update app, this would result in the phone missing out critical security updates for its firmware components -- which effectively makes the app unremovable, at least if you want to keep your device up to date.

On the other hand, the Settings app is unremovable in the real meaning of the word, as there is no way to remove the app, and even if you did, you wouldn't be able to manage your phone afterward.

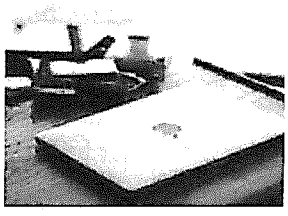
Malwarebytes says it informed Assurance Wireless of its findings but never heard back from the company.

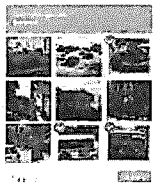
In a statement to ZDNet, Assurance Wireless said they "are aware of this issue and are in touch with the device manufacturer Unimax to understand the root cause, however, after our initial testing we do not believe the applications described in the media are malware."

Article updated with comment from Assurance Wireless.

The most dangerous iOS, Android malware and... (/pictures/these-are-the-ios-android-malware-families-most-likely-to-hit-your-handset-in-2019/)

SEE FULL GALLERY (/pictures/these-are-the-ios-android-malware-families-most-likely-to-hit-your-handset-in-2019/)




and it's a malicious firmware component created by a Chinese company of the same name.

Adups provides the component as a firmware-over-the-air (FOTA) update system to various smartphone makers and firmware vendors.

The component is supposed to allow firmware vendors a way to update their code, but in 2017 the Kryptowire team discovered that Adups (the company) also had the ability to ship updates to users' phones, bypassing smartphone vendors and users alike.

Malwarebytes says that this component was currently in use on UMX devices, and was being used to install apps without the user's knowledge. By who remains unclear.

"From the moment you log into the mobile device [the UMX U686CL], Wireless Update starts auto-installing apps," the Malwarebytes team said. "To repeat: There is no user consent collected to do so, no buttons to click to accept the installs, it
just installs apps on its own.

"While the apps it installs are initially clean and free of malware, it's
important to note that these apps are added to the device with zero notification or permission required from the user. This opens the potential for malware to unknowingly be installed in a future update to any of the apps added by Wireless Update at any time."

DROPPER LEADS TO ADWARE

But Malwarebytes said there is a second dangerous component included on these phones. Researchers said they also found suspicious code in the phone's Settings app.

The app, Malwarebytes says, was tainted with what appeared to be a strain of heavily-obfuscated malware, believed to be of Chinese origin, due to the heavy use of Chinese characters as variable names.

Security researchers said this malware was coded to work as a dropper for a second-stage malware payload, a well-known adware strain known as HiddenAds
(https://blog.malwarebytes.com/detections/android-trojan-hiddenads/).

"Although we have yet to reproduce the dropping of additional malware ourselves, our users have reported that indeed a variant of HiddenAds suddenly installs on their UMX mobile device," Malwarebytes said.

(https://www.techrepublic.com/resource-library/whitepapers/a-winning-strategy-for-cybersecurity-free-pdf/)

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Low-end smartphones sold to Americans with low-income via a government-subsidized program contain unremovable malware, security firm Malware bytes said today in a report.

The smartphone model is Unimax (UMX) U686CL, a low-end Android-based smartphone made in China and sold by Assurance Wireless (https://www.assurancewireless.com/), a cell phone service provider part of the Virgin Mobile group.

The telco sells cell phones part of Lifeline (https://en.wikipedia.org/wiki/Lifeline_(FCC_program)), a government program that subsidizes phone service for low-income Americans.

"In late 2019, we saw several complaints in our support system from users with a government-issued phone reporting that some of its pre-installed apps were malicious," Malwarebytes said in a report published today.

The company said it purchased a UMX U686CL smartphone and analyzed it to confirm the reports it was receiving.

ADUPS BACKDOOR

For starters, Malwarebytes said it found that one of the phone's components, an app named Wireless Update, contained the Adups malware.

The Adups malware (https://www.kryptowire.com/kryptowire-discovers-mobile-phone-firmware-transmitted-personally-identifiable-information-pii-without-user-consent-disclosure/#) was discovered in 2017 by Kryptowire,

MUST READ: This crafty malware makes you retype your passwords so it can steal them

Unremovable malware found preinstalled on low-end smartphone sold in the US

Malwarebytes said it found malware pre-installed on Unimax U673c handsets, sold by Assurance Wireless (Virgin Mobile) in the US.

By Catalin Cimpanu for Zero Day | January 9, 2020 -- 16:31 GMT (08:31 PST) | Topic: Security

SPECIAL FEATURE

One refrain of the anti-repair lobby is 'the device will explode.' I humbly suggest that Senators ask for concrete objective statistics of these explosions, as related to repair of electronic devices. And not immediately accept the 'might explode' scare tactics spread across hearings in the United States.

For example, anti-repair proponents use exploding cell phones as an example of why people should not repair devices They Own.

Shibai.

Are there record numbers of individuals who have died or were seriously injured **repairing electronic devices**? The anti-repair proponents will say yes. But let's see what's in the statistics gathered by the Hawaii State Department of Health and others.

Here is an example of questionable OEM product quality:

Samsung finally figures out why its phones kept exploding
https://nypost.com/2017/01/20/samsung-finally-figures-out-why-its-phones-kept-exploding/
"Samsung finally has solved the mystery of its exploding-phone disaster last fall: The batteries didn't fit right."

Translation: 'Poorly manufactured products can result in injuries to consumers.'

Other exploding devices can be traced to flawed products. Not electronic repairs.

If OEMs are concerned about consumer injuries, then OEMs can reduce injuries by manufacturing better quality products. Quality products have less need for repairs. Saving consumer lives and money.

Perhaps Hawaii should consider Legislation.

But for the sake of discussion, suppose an electronic device spontaneously exploded. As presented in popular fiction, one result is fire.

How many fire injuries in a year are there in Hawaii?

Certainly every Senator has knowledge of a family member or friend or associate who has successfully repaired a device.

And Senators likely know about locals who attempted to repair a device, and have failed to fix it, because of arbitrary roadblocks companies now put up.

SB2496 will remedy this OEM created issue.

Anti-repair lobbyists typically downplay the effect of electronic trash. The claim is 'the amount of electronic waste is decreasing.'

Let me translate that: 'The amount of electronic waste is NOT zero, and does end up in the dump. But Senators don't look behind that curtain. Meanwhile we lobbyists drink bottled water and will be gone tomorrow.'

"Home electronics are exempted from the ban and can be disposed of with regular household refuse or bulky collection."
E-waste (Electronic Waste)
https://www.opala.org/solid_waste/eWaste.html

Repairable but broken consumer electronics get tossed into our trash sites. Eventually toxic chemicals filter into our water supply. When you've lived here long enough, you know there is ONE water source on Oahu. While these toxins will not cause immediate harm, it will over time.

And Hawaii residents have the longest lifespan in the United States.

SB2496 can reduce this generational hazard.

"All we want are the facts"
Joe Friday, Dragnet (1951-2004).

When those against SB2496 testify, listen closely and read between the lines. You will pick up the mantras, 'you don't know what you're doing,' 'you will injure yourself,' 'only we know what to do,' 'only we can properly guide you.'

Let's look at this backhand slap at our intelligence, shall we?