

RIGHT TO REPAIR TASK FORCE

FINAL REPORT

PURSUANT TO ACT 9 OF 2018 (SPECIAL SESSION)

January 15, 2019

I. Legislative History and Charge

Senate Bill 180, “An act relating to the Vermont Fair Repair Act” was introduced on January 3, 2018. The bill as introduced imposed requirements on “original equipment manufacturers” to make available to independent repair providers the same information and parts that the manufacturer makes available to its authorized repair providers. The House and Senate performed the majority of the work on the bill during the 2017–18 legislative biennium and ultimately passed a final version in the 2018 special session as House Bill 9, “An act relating to the fair repair of consumer electronic devices,” which was enacted into law as Act 6. This Act created the five-member Right to Repair Task Force, which was charged with engaging stakeholders, considering potential legislation, and submitting a report to the legislative committees of jurisdiction concerning the right to repair consumer electronic products:

(d) Powers and Duties. The Task Force shall review and consider the following issues relating to potential legislation designed to secure the right to repair consumer electronic products, including personal electronic devices such as cell phones, tablets, and computers:

- (1) the scope of products to include;*
- (2) economic costs and benefits, including economic development and workforce opportunities;*
- (3) effects on the cost and availability to consumers of new and used consumer electronic products in the marketplace, including diminished availability of refurbished products for secondary users;*
- (4) environmental and economic costs of electronic waste;*
- (5) legal issues, including intellectual property and trade secrets, potential for alignment or conflict with federal law, and litigation risks;*
- (6) privacy and security features in electronic products; and*
- (7) any other issues the Task Force considers relevant and necessary to accomplish its work.*

(e) Scope. Considering the time available for its review, the Task Force shall focus its work on consumer electronic products. However, the Task Force may consider issues concerning the right to repair products beyond consumer electronic products if in the scope of its work it determines such consideration to be necessary and appropriate.

* * *

(g) Report. On or before January 15, 2019, the Task Force shall submit a written report to the Senate Committee on Economic Development, Housing and General Affairs and the House Committee on Commerce and Economic Development with its findings and any recommendations for legislative action, including specific findings and recommendations concerning personal electronic devices such as cell phones, tablets, and computers.

II. Task Force Hearings and Witnesses

The Task Force held hearings on August 13, September 10, October 9, November 19, and December 11 of 2018. The Task Force took testimony from the following witnesses:

Andrew Kingman, Senior Managing Attorney, DLA Piper LLP (USA), Boston, MA

Daniel Brown, Government Reform Advocate, Vermont Public Interest Research Group

David Hall, Legislative Counsel, Office of Legislative Council

Earl Crane, Blockchain Intel LLC; Robert S. Strauss Center for International Security and Law

Gay Gordon-Byrne, Executive Director, The Repair Association

George Kerchner, Executive Director, The Rechargeable Battery Association, Washington, DC

George Slover, Senior Policy Counsel, Consumers Union, Washington, DC

Jamie Feehan, Primmer Piper Eggleston & Cramer PC, Security Innovation Center

Jeff Couture, Executive Director, Vermont Technology Alliance

Jordan Wires, Wires Computing

Josh Kelly, Electronics Waste Division, Department of Environmental Conservation

Kevin Callahan, Director, State Government Affairs, Northeast, Computing Technology Industry Association

Kit Walsh, Attorney, Electronic Frontier Foundation

Lisa Volpe McCabe, Director, State Legislative Affairs, CTIA, Washington, DC

Michael Warnecke, Chief Counsel, Tech Policy, Entertainment Software Association

Robin Ingenthron, CEO, Good Point Recycling

Sarah Pierce, Director, Government Relations, Association of Home Appliance Manufacturers

Sean Jordan, BioTek Instruments Inc.

Walter Alcorn, Consumer Technology Association

III. Issues and Task Force Responses

A. Response to Specific Issues Identified in Act 9

(d) Powers and Duties. The Task Force shall review and consider the following issues relating to potential legislation designed to secure the right to repair consumer electronic products, including personal electronic devices such as cell phones, tablets, and computers:

(1) The scope of products to include

The Task Force notes that the authorizing legislation was focused on personal consumer electronic products, and the Task Force largely focused its work on such products. Testimony largely concerned cell phones, personal computers, gaming consoles, and home appliances. However, some stakeholders testified on concerns about business-to-business dealings, and additional stakeholders expressed interest in testifying on issues beyond personal consumer electronic products.

The Task Force finds that right to repair legislation may raise common issues across many industries, but specific industries may raise specific concerns. For example, do personal consumer electronic products raise different safety, privacy, security, or economic concerns than appliances that are connected in the Internet of Things?

The Task Force does not make a specific recommendation concerning the scope of products to include in any right to repair legislation. In considering the appropriate scope, committees of jurisdiction will need additional information to fully understand if there are meaningful differences between different products.

(2) Economic costs and benefits, including economic development and workforce opportunities

The Task Force heard testimony from Vermont businesses, including an independent repair provider and a recycling business, that they could potentially add more jobs or have expanded business opportunities if right to repair legislation expanded the ability to perform repairs. For consumers, independent repair of products could be a more affordable option. However, these outcomes are hypothetical, and no employer submitted hard data on potential job growth or opportunity.

The Task Force did not hear testimony from existing authorized repair providers operating in Vermont, but committees of jurisdiction will need to understand the scope of authorized repair opportunities. It may be the case that, for some products, a sufficient number of authorized repair providers in Vermont provide opportunity for repairs, generate economic output, and provide jobs.

The Task Force recommends that any legislative action in this area be crafted to result in a net gain to the Vermont economy.

(3) Effects on the cost and availability to consumers of new and used consumer electronic products in the marketplace, including diminished availability of refurbished products for secondary users

The Task Force received testimony that threats arising from product safety and security concerns may adversely affect warranty coverage and may cause certain manufacturers to cease the sale or production of products in Vermont. However, the Task Force notes that right to repair legislation could increase competition for repair services, thereby lowering costs for consumers. The legislation could also increase the availability of affordable used products in the Vermont market.

The Task Force recommends that the committees of jurisdiction balance the potential costs and benefits of any legislation to achieve a net benefit for consumers.

(4) Environmental and economic costs of electronic waste

Vermont has a robust e-waste program, which is largely funded by manufacturers of the recycled electronic products. The Task Force received testimony suggesting that e-waste trends are favorable, and because used devices are valuable, they may be sold for reuse rather than wasted. However, the Task Force also received testimony that the life cycle of products is shorter today than in previous decades. The Task Force is cognizant of waste issues, but it seems Vermont is successfully keeping these products out of the landfill. The State itself also recycles extensively.

The Task Force recommends that the State continue to support this work and ensure that the e-waste program is fully funded.

(5) Legal issues, including intellectual property and trade secrets, potential for alignment or conflict with federal law, and litigation risks

Right to repair legislation in Vermont may pose legal risks, though the nature and scope of those risks will largely depend on how the legislation is drafted. The Task Force heard conflicting testimony from several attorneys concerning the potential legal issues arising in constitutional law and consumer protection.

The Task Force recommends that any legislation in this area should be crafted to protect intellectual property rights and avoid legal uncertainty.

(6) Privacy and security features in electronic products

The Task Force recognizes the importance of privacy and security in a global, connected environment. If the General Assembly does move forward with legislation, committees of jurisdiction should carefully consider privacy and security concerns, as well as product safety issues. The Task Force recognizes that there may be particular concerns about health and life

safety arising from certain consumer electronic products that have the potential to cause bodily injury.¹ However, the Task Force also notes right to repair legislation, and in particular, access to authorized parts, could enhance safety. In the current climate, unauthorized repair and aftermarket parts are being used and there are safety risks. Requiring manufacturers to supply adequate repair information and parts may improve consumer and product safety.

The Task Force recommends that if, pursuant to right to repair legislation, independent repair providers receive benefits currently conferred on authorized repair providers, they should also bear proportional responsibility to mitigate privacy, security, and safety concerns.

(7) Any other issues the Task Force considers relevant and necessary to accomplish its work

The Task Force was directed by its authorizing legislation to hold a total of five meetings, which unfortunately is not enough time to fully explore this matter. The Task Force has made progress in many areas, but cannot reasonably comment on all of the potential positive and negative consequences of potential right to repair legislation. A full exploration of this subject will require dedicated committee work and significant stakeholder participation.

B. Other Recommendations for Legislative Action

(g) The Task Force shall submit a written report ... with its findings and any recommendations for legislative action, including specific findings and recommendations concerning personal electronic devices such as cell phones, tablets, and computers.

(1) Workforce training, credentialing, and increasing authorized repair

The Task Force recommends that committees of jurisdiction explore how to increase the number, and geographic diversity, of authorized repair providers.

One possible opportunity that would be beneficial for consumers, repair providers, and potential job seekers, is to increase the availability of authorized repair in Vermont through workforce training or State-sponsored credentialing. For example, the State could explore opportunities for workforce training and repair with community, business, and educational partners such as ReSource or Habitat for Humanity ReStores, Vermont Technical College, and manufacturers themselves. The State may also explore collaboration or partnerships with manufacturers to increase the availability of technical repair and diagnostic information, e.g., through electronic subscriptions or at libraries.² Committees of jurisdiction might consider exploring product

¹ For example, the Task Force received testimony concerning the risk of fire and personal injury arising from the explosion, or “rapid disassembly,” of batteries used in consumer electronic products.

² For example, the Task Force received testimony that up to 90% of repairs to consumer electronic products involved repair or replacement of batteries or screens. The General Assembly may consider first focusing on mechanisms to address these discrete issues.

manufacturers' approaches to credentialing authorized repair providers and providing relevant education and training.

Additionally, the operations of the State itself may prove instructive. While there are certain products that the State will not repair in-house because of the difficulty or risk, State employees do perform a significant amount of repair work. In some respects, the State functions like an authorized repair center in the way it manages its own computer hardware and repair. State employees undergo trainings from manufacturers, which include safety and privacy training, as well as a certification process for obtaining manufacturer-specific credentials. The State complies with manufacturer-specified protocols for ensuring secure and successful repairs. The State also adds its own security features to prevent unauthorized access. Based on this model, the General Assembly may wish to explore State-sponsored training, credentialing, or licensing. Increasing geographic access to qualified independent repair could also save money for the State—its agencies could more readily repair, rather than replace, equipment, and particularly, electronic products that are over three years old.

(2) Growth in electronic products and e-waste

Right to repair legislation is designed to ensure the availability of information and parts for consumer electronic products. The reality today is that many consumer goods include some type of hardware, software, etc., and disposal of these goods may raise environmental concerns. As noted above, Vermont does a good job with e-waste, but considering the ever-expanding universe of electronic waste, the Task Force anticipates several questions: What is not included in the scope of the e-waste program that is therefore not getting good treatment? Does the program cover, or will it cover, dryers, refrigerators, toys, coffeemakers, or other appliances that incorporate electronic systems? Will the changes occurring as we move toward the Internet of Things bring more products under the e-waste program? If so, is the program sufficiently designed, operated, and funded to accommodate these products?

On a related note, the Task Force discussed whether there is benefit in implementing a survey at transfer stations to explore consumer motivation and behaviors concerning waste and disposal of electronic products. One possible approach could be to create a consumer survey online or at transfer stations to gain a better understanding of consumers' mentality concerning replacement or repair of products, generation of e-waste, and issues with product life cycles.³ While right to repair legislation may not directly address e-waste, it is clearly a related concern and should continue to receive careful attention from the General Assembly.

³ The Task Force recognizes that certain steps, such as the design and implementation of a consumer survey, could be executed administratively, without the need for legislative action.

(3) Access to authorized parts

The Task Force heard testimony that a significant barrier to quality repair of electronic products by consumers, independent repair providers, and the State itself, is obtaining authorized parts. The General Assembly may wish to consider the positive and negative effects of mechanisms that would incentivize, or mandate, that manufacturers who sell products in this State make authorized parts available to consumers who have purchased their products.⁴

⁴ For example, California Civil Code section 1793.03 requires manufacturers of certain products that are under warranty to make available service information and parts for a period of years.

Appendix A
Authorizing Legislation

No. 6. (Special Session) An act relating to the fair repair of consumer electronic devices.

(H.9)

It is hereby enacted by the General Assembly of the State of Vermont:

Sec. 1. FINDINGS

The General Assembly finds:

(1) The repair of modern electronic products, even for such minor repairs as replacing a battery or screen, often becomes difficult or impossible due to manufacturers' limitation of access to information or parts to effect those repairs.

(2) Manufacturers may limit access to only those customers who are under warranty; may refuse access for owners of older models; and may refuse to stock or sell parts at fair and reasonable prices. Consequently, consumers are often left with few options other than to buy new.

(3) Modern repairs involve electronics. Repairing those electronics requires information, parts, firmware access, and tooling specifications from the product designers.

(4) The knowledge and tools to repair and refurbish consumer electronic products should be distributed as widely and freely as the products themselves. In contrast to centralized manufacturing, reuse must be broadly distributed to achieve economies of scale.

(5) Many manufacturers have made commitments to sustainability, repair, and reuse, and the innovation economy of Vermont and the United States has had many positive economic and environmental impacts. Legislation that further promotes extending the lifespan of consumer electronic products can create jobs and benefit the environment.

(6) As demonstrated by Massachusetts's experience with a right to repair initiative concerning automobiles in 2014, which resulted in a compromise between manufacturers and independent repair providers to adopt a voluntary nationwide approach for providing diagnostic codes and repair data available in a common format by the 2018 model year, legislative action to secure a right to repair can achieve positive benefits for manufacturers, independent businesses, and consumers.

Sec. 2. RIGHT TO REPAIR TASK FORCE; REPORT

(a) Creation. There is created the Right to Repair Task Force.

(b) Membership. The Task Force shall be composed of the following five members:

(1) one current member of the House of Representatives, appointed by the Speaker of the House;

(2) one current member of the Senate, appointed by the Committee on Committees;

(3) the Attorney General or designee;

(4) the Secretary of Commerce and Community Development or designee; and

(5) the Secretary of Digital Services or designee.

(c) Stakeholder engagement. The Task Force shall solicit testimony and participation in its work from representatives of relevant stakeholders, including authorized and independent repair providers, and business and consumer groups with an interest in consumer electronic products.

(d) Powers and duties. The Task Force shall review and consider the following issues relating to potential legislation designed to secure the right to repair consumer electronic products, including personal electronic devices such as cell phones, tablets, and computers:

(1) the scope of products to include;

(2) economic costs and benefits, including economic development and workforce opportunities;

(3) effects on the cost and availability to consumers of new and used consumer electronic products in the marketplace, including diminished availability of refurbished products for secondary users;

(4) environmental and economic costs of electronic waste;

(5) legal issues, including intellectual property and trade secrets, potential for alignment or conflict with federal law, and litigation risks;

(6) privacy and security features in electronic products; and

(7) any other issues the Task Force considers relevant and necessary to accomplish its work.

(e) Scope. Considering the time available for its review, the Task Force shall focus its work on consumer electronic products. However, the Task Force may consider issues concerning the

right to repair products beyond consumer electronic products if in the scope of its work it determines such consideration to be necessary and appropriate.

(f) Assistance. The Task Force shall have the administrative, legal, and fiscal assistance of the Office of Legislative Council and the Joint Fiscal Office. Relevant agencies and departments within State government shall provide their technical and other expertise upon request of the Task Force.

(g) Report. On or before January 15, 2019, the Task Force shall submit a written report to the Senate Committee on Economic Development, Housing and General Affairs and the House Committee on Commerce and Economic Development with its findings and any recommendations for legislative action, including specific findings and recommendations concerning personal electronic devices such as cell phones, tablets, and computers.

(h) Meetings.

(1) The Office of Legislative Council shall call the first meeting of the Task Force to occur on or before August 15, 2018.

(2) The legislative members of the Task Force shall serve as co-chairs.

(3) A majority of the membership shall constitute a quorum.

(4) The Task Force shall cease to exist on January 15, 2019.

(i) Compensation and reimbursement. For attendance at meetings during adjournment of the General Assembly, a legislative member of the Task Force serving in his or her capacity as a legislator shall be entitled to per diem compensation and reimbursement of expenses pursuant to 2 V.S.A. § 406 for not more than five meetings. These payments shall be made from monies appropriated to the General Assembly.

Sec. 3. EFFECTIVE DATE

This act shall take effect on July 1, 2018.

Date Governor signed bill: June 22, 2018

Appendix B

Minutes for Task Force Hearings

August 13, 2018 - Minutes

I. Welcome and Introductions

Introduction of members of the Task Force: Senator Christopher Pearson; Representative Matthew Hill; Christopher Curtis, Chief, Public Protection Division, Attorney General's Office; Nick Grimley, Director of Entrepreneurship & Tech Commercialization, Agency of Commerce and Community Development; Shawn Potter, IT Manager, Agency of Digital Services

Introduction of audience members

II. Testimony

The Task Force first heard from David Hall, an attorney with the Vermont Office of Legislative Counsel, concerning the charge to the Task Force. Members of the audience inquired into the Task Force's proposed process, and specifically requested a walk-through of the Findings in the authorizing legislation. Mr. Hall walked through the Findings section.

The Task Force next took testimony from Gay Gordon-Byrne, Executive Director, The Repair Association, who discussed her background, the background of the Association, and her perspective on the current state of the consumer electronic repair market and why right to repair legislation is necessary to allow consumers to repair their devices.

The Task Force next took testimony from Jordan Waters of Wires Computing in Burlington, VT, a small business that performs repairs on consumer electronic devices. Mr. Waters discussed the scope of his business and the challenges of performing repairs given his limited access to information and to authorized repair parts.

The Task Force next requested additional public comments; none were offered.

The Task Force next discussed its interest in issues and witness testimony for future meetings. The Task Force expressed interest in receiving testimony from Vermont's waste management authorities, additional repair shops, Vermont consumers, and industry stakeholders. The Task Force raised questions about the implications of a right to repair, including questions about firmware, encryption, software, and possible risks to privacy rights. The Task Force requested additional information on the Magnusson Moss Warranty Act, and the Massachusetts experience with legislation concerning automobiles and the right to repair.

September 10, 2018 - Minutes

I. Public Comment; Discussion

No public comments were offered at this time. The Task Force discussed generally the scope of its work, and specifically, whether to expand the scope beyond consumer electronic devices. The Task Force determined to continue to consider the question.

II. Witness Testimony

The Task Force first heard from Michael Warnecke, Chief Counsel, Tech Policy, Entertainment Software Association. Mr. Warnecke discussed generally the video gaming industry and risks that right to repair legislation may pose to the security of game consoles. Mr. Warnecke testified that allowing independent repair of game consoles may result in piracy, harming both console manufacturers and game developers due to decreased revenue.

The Task Force next heard from Josh Kelly, Electronics Waste Division, Department of Environmental Conservation, Agency of Natural Resources. Mr. Kelly outlined the scope and duties of Vermont's e-waste program under its authorizing legislation, what types of products are included, which manufacturers are required to participate in funding and operation, and the extent to which the program successfully diverts waste from landfills.

The Task Force next heard from Robin Ingenthron, CEO, Good Point Recycling. Mr. Ingenthron discussed his background and the history of his business, the Magnusson Moss Warranty Act, and the economic importance to consumers and Vermont of being able to repair consumer products.

The Task Force next heard from Daniel Brown, Government Reform Associate, Vermont Public Interest Research Group. Mr. Brown testified in support of right to repair legislation, citing consumer difficulty in attempting to repair their products without requisite information and parts.

The Task Force next heard testimony from David Hall, Legislative Counsel, concerning a memorandum he prepared, which addressed the history of the Massachusetts automobile repair legislation; the Magnusson Moss Warranty Act; right to repair initiatives in other states; and, potential legal issues raised by right to repair legislation.

III. Task Force Discussion

Following witness testimony, the Task Force discussed possible approaches the State could take to facilitate consumer repair and to encourage manufacturers to enhance consumers' ability to make repairs, including tax credits, disclosure rules, end-user incentives, and other State involvement. The Task Force requested further testimony concerning the Magnusson-Moss Warranty Act, potential legal issues, and other stakeholder perspectives.

October 9, 2018 - Minutes

I. Opening; Memo Review

After opening the hearing, the Task Force heard testimony from David Hall, Legislative Counsel, concerning memoranda prepared and submitted to the Task Force on Sept. 10 and Oct. 9, including additional information concerning warranty provisions under state and federal law and potential legal issues.

II. Witness Testimony

The Task Force heard from George Slover, Senior Policy Counsel, Consumers Union, Washington, D.C., who discussed potential legal issues raised by Mr. Hall and testified that the right to repair legislation would not raise significant constitutional concerns.

The Task Force next heard from Jeff Couture, Executive Director, Vermont Technology Alliance. Mr. Couture testified on the concerns that member businesses in the Alliance have with right to repair legislation, including the need to ensure protection of intellectual property rights; potential safety issues; difficulty with providing information in compatible formats; and threats to Vermont's image as anti-business.

The Task Force next heard from Kevin Callahan, Director, State Government Affairs, Northeast, Computing Technology Industry Association. Mr. Callahan testified on the concerns of the Association with right to repair legislation, including the risk of bypassing security features; intellectual property protection; impacts on authorized dealer relationships and business-to-business agreements; and privacy and security issues, particularly with respect to the need for consistency between federal and state regulatory schemes.

The Task Force next heard testimony from Sarah Pierce, Director, Government Relations, Association of Home Appliance Manufacturers. Ms. Pierce testified on the concerns of the Association, including safety concerns posed both by repair providers repairing products in the home and safety of the products themselves; cybersecurity issues; warranty issues with non-OEM parts used in repair; energy efficiency and lifecycle issues arising if products are improperly repaired; and, reputational risks for OEMs in the event independent repairs are inadequate.

III. Discussion; Public Comment

During and after testimony, the Task Force raised issues concerning whether right to repair could have positive business impacts on Vermont and its reputation; the existence and availability of certifications and trainings for independent repair providers; , the life cycle of products; and the nature and scope of franchise relationships between manufacturers and authorized dealers. Gaye

Gordon-Byrne offered public comment and observations on the nature and effects of franchise dealer relationships, and the effects on independent repair providers.

The Task Force discussed additional issues including: whether to hear additional testimony from stakeholders that represent interests beyond consumer electronic devices; whether to seek additional testimony concerning the requirements and opportunities to become an authorized dealer; whether the right to repair legislation raises a market issue that should have a market-based solution; and, possible alternative solutions such as encouraging greater access to repair, additional environmental regulations, disclosure requirements, or regulation of manufacturer-dealer relationships.

November 19, 2018 – Minutes

I. Stakeholder Testimony

After opening the hearing, the Task Force took testimony from Earl Crane, Blockchain Intel LLC; Robert S. Strauss Center for International Security and Law. Dr. Crane testified on the potential adverse consequences of right to repair legislation, including accountability and integrity issues, chilling effects on security and collaboration, and safety and security concerns arising from the connected ecosystem of electronic devices. The Task Force raised questions whether these concerns are already present, and how the State could increase access to authorized repair to ensure security and safety.

The Task Force next heard testimony from Andrew Kingman, Senior Managing Attorney, DLA Piper LLP (USA), Boston, MA. Mr. Kingman addressed concerns with right to repair legislation, including the security threats raised by expanding the scope of consumers and repair providers to whom the legislation would make sensitive information available. The Task Force raised questions about whether this problem currently exists and whether it would be exacerbated by legislation.

The Task Force next heard testimony from Walter Acorn, Consumer Technology Association. Mr. Acorn testified concerning certain facets of the consumer electronic markets, including: dematerialization~ the amount e-waste is decreasing; protecting the brand identity of manufactures; companies are increasingly competing on longevity and durability of products; and that manufacturers are generally supporting products longer.

The Task Force next heard from Lisa Volpe McCabe, Director, State Legislative Affairs, CTIA, Washington, D.C. Ms. McCabe testified concerning cybersecurity for the internet of things, stressing the potential harms arising from extensive interconnectedness of devices; and she testified on the increasing value of used phones and other devices that results in less e-waste.

The Task Force next heard from George Kerchner, Executive Director, The Rechargeable Battery Association, Washington, DC. Mr. Kerchner presented information and examples of batteries, components, and the safety risks of certain types of batteries and repairs.

The Task Force next heard from Kit Walsh, Attorney, Electronic Frontier Foundation. Attorney Walsh testified on legal issues concerning intellectual property, including copyright law, trade secrets, patents, and trademarks, and opined that right to repair legislation should not raise legal concerns in these areas.