1/3/2021

The Honorable Members of the Legislature/Committee
State Capitol
900 Court St NE
Salem, OR, 97301

Chair Holvey and Members of the Committee

My name is Andrew Free and I am a Software Engineer. I am speaking here today to express my support for HB 2698. I have been a resident in OR for my whole life and have worked around electronics and computers from multiple angles over the years. I repaired devices under Apple at three different companies that operated as authorized repair centers for about 7 years. I have worked on software security in a professional capacity as well as a hobby and have been following the information security industry for over a decade. What I have seen over the years has made me more and more passionate about the need for reform in regards to how we manage our own electronics from a longevity perspective and security perspective.

Consumer safety.

At this hearing and others, you will be told by manufacturers and industry lobbyists that digital right to repair bills such as HB 2698 are a risk to public safety if we start allowing people to repair their own devices. Having repaired thousands of devices this argument has no basis in reality. Lithium ion batteries are frequently mentioned. In reality these batteries are surprisingly resilient even when pushed beyond their expected use. The risks that do exist are extremely limited, they do not explode. While working as a tech there were many hundreds of times when the procedures Apple provides would fail and we had to physically bend the battery cell to continue the removal process. Not once did they explode or even catch fire. I can't think of a single example where someone I know (even outside of my work) was harmed by the batteries in consumer electronics. These batteries are extremely safe to work on and I was even able to teach my dad who has zero electronics experience how to replace his own.

E-Waste

E-Waste is also an important topic. I will bring up Apple again as that is where my experience is. They put on the image of being a green company and caring about the environment like many do but they make no effort to fix components in almost any major failure. I'm sure many of you have experienced or know someone who has experienced this. A phone or laptop that is only a few years old suddenly doesn't turn on or run properly any more and you are told you need to replace the device completely. As we reduce the size of electronics this will only continue to get worse for consumers. In many of these cases the components that fail cost a handful of cents or dollars but because there is no monetary incentive to fix these things or provide a method for the user to do so, the consumer is left footing the bill for a new machine. Components with rare and precious metals are left go the land fill or have minerals extracted which is not very efficient. Being green doesn't just mean inefficiently recycling components, "reuse" comes before "recycle" and many companies make no effort to allow consumers to have this option. There is even a case where a recycling center was fixing and reselling devices to give them a new life and Apple sued them.

Security

Having worked on breaking security on my own devices for educational purposes, writing code relating to the security of systems professionally, and following the industry as a whole for over a decade. I'm very confident that providing basic internal tools and specs that would help individuals fix their own devices is no security threat at all. In fact it would help improve security on devices that companies no longer want to support anymore. Devices like network connected appliances that are connected straight to your home network. Bad actors and those with malicious intent have their own tools that work far beyond the scope of what internal diagnostic tools would provide. This is another argument that has no basis in reality and is used more as a scare tactic.

I hope you will consider my experience around these topics when listening to arguments brought against this bill and when voting on it.

Sincerely,

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