## Right to Repair

 Right to Repair is related to the idea of Right to Property; that you should be able to freely repair the devices that you own.

• Owners of such devices find it difficult to repair or modify their devices due to things such as undisclosed information, proprietary screws, planned obsolescence, unavailability of original parts, and legal protections among other methods as well.

 The Right to Repair movement has led to pushes for legislation that reduces the unnecessary complexity of repairs and aims to have manufacturers provide more materials that would help users or third-parties make their own repairs

## Right to Repair Helps The Environment

 Making it easier for consumers to repair their devices to last longer helps reduce tech waste, a problem due to the to toxic elements contained within tech

• This also has the added effect of consumers not needing to purchase new devices as often, potentially reducing the rate of harmful mining needed to create such products

 Withholding repair information or access for medical technology such as ventilators posed legitimate health and safety concerns amidst the COVID-19 pandemic

### Right to Repair Benefits The Consumers

 Getting repairs can often be cheaper than having to buy replacements and help consumers get more use out of their purchases

- For businesses, being able to repair the tools they rely on can help them operate more independently and save money both on proprietary repair costs and loss of sales caused by waiting for approved technicians
  - McDonalds/Taylor/Kytch
  - Farmers/John Deere Tractors

 This also provides opportunities for a variety of people to create third-party repair-focused businesses at various scales

#### Repairs and Mods Add New Features For Users

 Right to Repair may allow users to downgrade/revert their firmware which would enable jailbreaking for more control of and uses for their devices

- Game mods can range from completely changing how a game plays, unofficially fixing bugs and glitches, making games more accessible through cheat codes like infinite lives or adding netplay to old games so tournaments can still run during the pandemic
  - Note: Laws around modding games and game consoles were very interesting to research and more often have the hurdle of copyright to deal with

- Kytch is a third party device made for Taylor Ice Cream Machines that makes it easier to receive diagnostic information about the machines as well as change their settings
  - "...despite Kytch nearly doubling its prices over the past two years and adding a \$250 activation fee, it still saves the franchisee 'easily thousands of dollars a month.'
  - https://www.wired.com/story/they-hacked-mcdonalds-ice-cream-makers-started-cold-war/

# Repairs and Mods Allow For Learning And Lead To Innovation

 Studying and reverse engineering Taylor machines led to the creation of Frobot and Kytch, which provided functionalities the original devices did not have

- Mods of video games sometimes become their own standalone games or influence other games and modders may sometimes become developers as well, benefitted by their modding experience
  - Arma -> Day Z -> Day Z Battle Royale -> PUBG "->" Fortnite
  - Warcraft -> Dota -> MOBAs as a genre and an eSport. Interesting case of HotS

 Doing repairs or making modifications is a way for people to gain experience and comfortability working with tech

#### References

- <a href="https://earth.org/the-environmental-impact-of-broken-t">https://earth.org/the-environmental-impact-of-broken-t</a> echnology-and-the-right-to-repair-movement/
- https://www.cnn.com/2023/01/09/tech/deere-tractorsfarmer-repair/index.html
- https://www.forbes.com/sites/serenitygibbons/2021/10/21/how-companies-are-addressing-the-e-waste-problem/?sh=63869dd57c21
- https://news.yahoo.com/broken-tech-causing-mounting -environmental-160711558.html?guccounter=2
- https://www.vice.com/en/article/wxekgx/hospitals-nee d-to-repair-ventilators-manufacturers-are-making-thatimpossible
- <a href="https://www.wired.com/story/they-hacked-mcdonalds-ice-cream-makers-started-cold-war/">https://www.wired.com/story/they-hacked-mcdonalds-ice-cream-makers-started-cold-war/</a>\*
- https://gizmodo.com/california-right-to-repair-law-leav es-out-game-consoles-1850840167
- https://www.techspot.com/news/92001-us-copyright-o ffice-grants-right-repair-video-game.html

- https://gizmodo.com/nintendo-hacker-gary-bows er-soon-to-be-released-prison-1850344573
- https://www.ifixit.com/News/54317/section-120
  1-exemptions-for-2021-repair-consoles-medicaldevices
- https://www.wired.com/story/copyright-law-is-bricking-your-game-console-time-to-fix-that/
- https://mttlr.org/2012/11/gaming-mods-and-cop yright/
- https://kblroche.com/thinking-before-modding-p layers-dont-own-what-they-make-2656426399. html
- https://medium.com/@bblunderr/are-game-mods
  -unethical-8a25e4dc78c1
- Various Reddit Threads and Wikipedia Articles