# Using Free Software to Bridge the Digital Divide

Ryan Fukunaga
Free Geek Toronto

# About Free Geek Toronto

Our mission is to use unwanted electronics / computers to increase access to technology, offer employment and training opportunities, and reduce the environmental impact of technology.

FREE GEEK

TORONTO

# About Free Geek movement

- Started in 2000 with one guy in Portland, OR refurbishing computers in his garage.

- Since then, there are independent Free Geeks operating across North America including Vancouver, Chicago, Minneapolis, and Arkansas.


FREE GEEK

# Digital Divide – what is it?

A digital divide is any uneven distribution in the access to, use of, or impact of Information and Communication Technologies (ICT) between any number of distinct groups. These groups may be defined based on social, geographical, or geopolitical criteria, or otherwise.

Source: https://en.wikipedia.org/wiki/Digital_divide

# Aspects of Digital Divide

- The digital divide isn't a binary problem – think beyond either people having access or not

- There are levels and it becomes more about **how** *inclusive*

- Move away from thinking of the divide and more about inclusion

# Digital Inclusion

- In 2017, the Government of Ontario defines digital inclusion as

  "the aim of interventions which seek to increase access, remove barriers, develop skills and empower people who might be otherwise marginalized and excluded from the design and use of digital technologies."

# Digital Inclusion

1) affordable, robust broadband internet service;

2) **internet-enabled devices that meet the needs of the user;**

3) **access to digital literacy training;**

4) **quality technical support; and**

5) applications and online content designed to enable and encourage self-sufficiency, participation and collaboration.

Source: https://www.digitalinclusion.org/definitions/

# Free Geek Toronto

- Reducing the environmental impact of electronic waste through reuse and recycling

- Increasing access to technology through the sales of affordable  devices

- Promoting the use of Free and Open Source Software

- Providing technical education, training, and job skills development

# Using E-Waste

About 50,000 tonnes (~110,000,000 lbs) are collected in Ontario

Source:
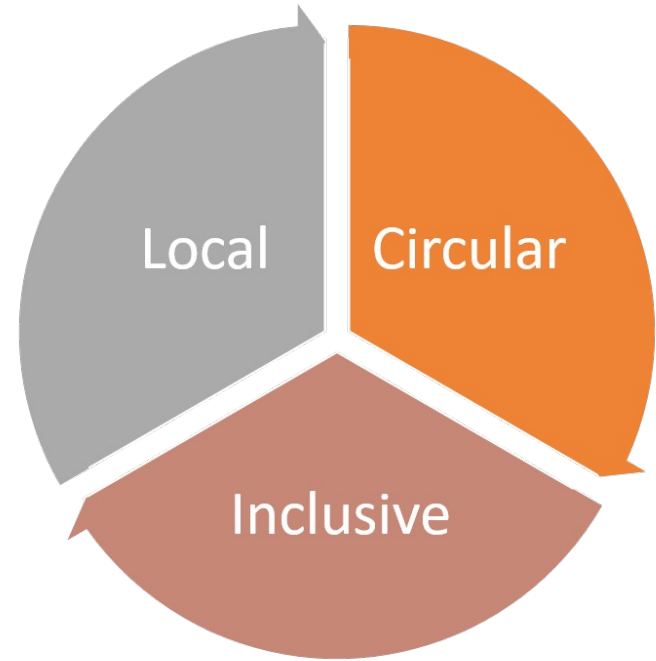https://ontarioelectronicstewardship.ca/who-we-are/annual-report/

Free Geek Toronto collects about 29 tonnes (~64,000 lbs) annually

# Refurbishment

- In-demand skill
- Long-term employment
- Educational Opportunities

# Reuse

Min. Specs:
Core2 Duo, 4 GB RAM,
80 GB HDD

Avg. Specs:
2$^{nd}$ Gen i5, 4 GB RAM,
320 GB HDD

Prioritize ease of use over almost everything else

# Why FOSS?

- Financial

- No Planned Obsolescence

- Better Performance

- Multitude of Application

- Flexibility

# FOSS in a FOSS-less World

- Champion Free and Open Source Software
  - We support the freedom to select what suits their needs
- Install as much FOSS on computer regardless of OS
  - LibreOffice, VLC, Firefox
- GNU/Linux OS: *Linux Mint 19.3 Cinnamon*
- Use FOSS applications in almost every aspect of the organization

# Challenges

- Is there a large enough market for GNU/Linux computers?
- Lack of awareness
    - Will customers accept it?
- Digital Literacy Requirements
- Technical Support
- Outside training options are limited
    - Digital literacy training usually emphasis employment skills

# Market

- Free Geek Toronto "sells" about 18 computers per month
  - About 60% are running Mint
    - Who buys these computers?
      - Budget shoppers
      - Low income people
      - Hobbyist / Tech Professionals
  - More sales overall, Mint sales remains the same
- Is that the cap?

# Awareness

android

Conversation starter

Chromebook

*"A more full featured Chromebook"*

# Digital Literacy Support

Customer Service

- Be welcoming

- Be honest

- Spend time answering everyone's questions

- Be available for help afterwards

- Avoid technical jargon

# Selecting Distribution

- Low barrier to access
- Ease of doing daily tasks, including interacting with non-free software
    - Installing Chrome
- Mint had many of these features we were looking for
    - Also other organizations were also using it

# Training

- Give equal opportunity for staff and volunteers to participate in a capacity that helps both the organization and individuals grow

- Offer practical, hands-on workshops
    - Basic computer literacy skills (using and accessing the Internet)
    - Introduction to Using Free and Open Source Software
    - Installing an Operating System (Linux distributions)
    - Basic Computer Maintenance and Repair

# Technical Support

- Currently, our technical support is informal beyond our warranty support
- Slowly building up this aspect of our operations
- Try to connect people to with online community
    - Digital literacy is a challenge

# Do It With Others

- Relationship building is key
- Can't do everything

# Do It With Others

Toronto Free-Net
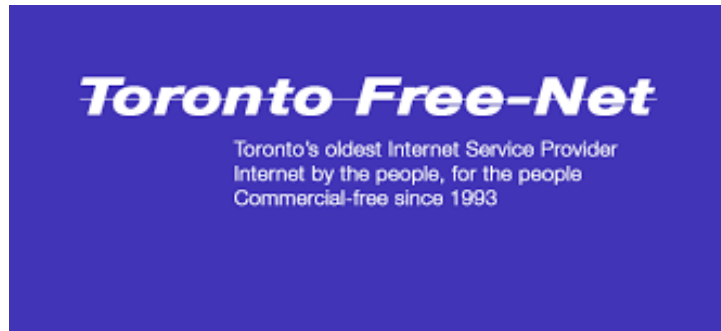
Toronto Mesh
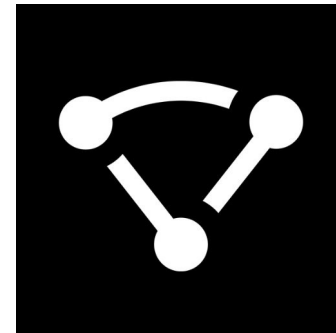
# Do It With Others

- Run desktop disassembly workshops and discuss software freedom with almost 400 people

- Learning circles teaching GNU/Linux

# Free the Future

- Build Community
- Learn / Teach
- Offer Opportunities
- Fun / Positive Attitude

*Right to Repair*

Questions?