

Exploring Computer, Tablet and Mobile Device Reuse in 2020

AT3 Reuse Community of Practice

April 8, 2020

Today's Webinar



We Need Your Feedback

At the end of this webinar, please complete the survey to provide us with feedback.

The link to the survey will be available at the end of this webinar session.

Thanks to Our Contributors

We approached people to explore this topic at a most inconvenient time. In spite of the distractions of planning for continuity of operations during the virus pandemic, and often working from home, many were generous in responding to our questions.

We did not make the further imposition of asking them to prepare slides and speak under the circumstances. We thank them for their generosity in sharing their time, solutions and issues.

- Arizona: Clayton Guffey, AZTAP; Robert Morales, Achieve/RefurbIT
- AT3 Team
- Florida: Tim McCann, FFAST
- Georgia: Alexis Kennedy, iCanConnect; Randy Lewis, FODAC
- New Hampshire: Dr. Therese Willkomm, ATinNH (from Tips blog)
- Ohio: Eric Rathburn, AT of Ohio
- Pennsylvania: Sandy McNally

About Your Presenters

Carolyn Phillips

Director, Tools for Life



Liz Persaud

Program and Outreach
Manager



Trish Redmon

Special Projects
Consultant



Learning Objectives

1. To identify factors that changed regarding devices that provide access to telecommunications and the internet.
2. To learn how these factors affected the device needs and preferences of AT Act Program customers.
3. To understand some factors that may mitigate against the refurbishing of computers, tablets and cell phones
4. To identify alternative or integrative strategies to facilitate the fulfillment of customer needs for these devices.

Access to Computers and Internet

The Digital Divide was a big issue a decade ago. Many steps have been taken to “level the playing field” and to provide access to lower income families and individuals with disabilities.

AT Act reuse programs played a big part in that initiative.

How successful have we been?



Internet Access in 2008

In 2008, only 19.1% of U.S. **adults** had access to the Internet.

1. Options for access were limited to:
 - Desktop or laptop computer and
 - Dedicated Internet Service Providers (ISP) in areas with service
2. Affordability was a big issue.
 - Computers were expensive.
 - ISP services were an add-on expense.
3. Computer reuse was a key strategy for attempting to close the gap for people with disabilities: AT Act programs reused **24,941** devices in the Computer category in the decade 2008-2017. (CATADA)

10 Years Later – A New World

By 2019, daily Internet usage by adults was reported at 90%* and was accompanied by dramatic changes in the array of devices available and in consumer preferences. 40.61% of Internet traffic originated from mobile devices.

1. Options for access expanded:

- Less expensive desktops and more laptops, tablets and mobile phones expanded device choices for Internet access.
- Subsidized cell phones made access affordable for low-income users (Life Assistance Program). (Note 1)
- Internet service was included with cell phone service for many.

2. Customer preferences changed:

- Messaging, information searches, and entertainment moved to mobile devices, primarily cell phones. (Note 2)
- Tablets gained favor as a lighter, full-fledged mobile option.

But, the Digital Divide Remains

- About 15% of U.S. households with school-aged children do not have high-speed internet access at home, according to a Pew Research Center analysis of 2015 U.S. Census Bureau Data. And rural communities continue to lag behind in broadband access. (TIME, 3/15/2020)
- **This means that the accessibility gap is affecting students disproportionately.**
- Cell phone access to the internet does not provide the working tool needed by students for online education.
- “This crisis [coronavirus pandemic] will expose hard truths about the scope for the digital divide,” FCC Commissioner Jessica Rosenworcel said in a statement, calling on the Commission to support a nationwide loan program for Wi-Fi hotspots to combat what many have dubbed “the homework gap.”

Not just secondary students

- Nearly 20 million Americans — most of them rural residents — have no access to broadband internet, and another 100 million Americans have no broadband internet subscription, the federal government estimates. (TIME/AP, 3/24/2020)
- Many depend on public libraries and restaurants for access.
- One-third of those living on tribal lands do not have access to the internet at all. (FCC)

A Crisis Highlights the Problem



Daniel Sabol, an 8th grader in the Northshore School District, Bothell, Washington, after the school district closed classes on March 9, 2020, and transitioned temporarily to online learning. *Courtesy Amy Amirault*

In response to the COVID-19 pandemic, Comcast offered 2 months free access to new low-income customers for its Internet Essentials with no initial fees. It also increased the speed of those connections permanently, and offered free hotspots to nonsubscribers. (Comcast Press Release, 3/12/2020)

Charter Communications also offered free broadband and WiFi to new subscribers. (Houston Chronicle, 3/15/2020)

But, not all students will have computers at home to use that internet access, and not all schools will have computers to lend for home schooling.

How did changes impact reuse?

- In 2008, 28 programs reported reuse in the computer category, but only 11 of those reported more than 50 devices.
- In 2018, 33 programs reported computer reuse, with only 10 reporting more than 50 devices.
- That sounds stable, even growing slightly, but the number of programs engaged in computer reuse is misleading. The total number of devices reported in 2018 was 40.7% fewer (a decline from 2,705 to 1,603). (CATADA, 2020) [Note: This number is complicated by the fact that devices are reported by primary category of use, so some computers may be reported in Vision, Speech, or Learning and Cognition.]

Preferences followed trends

- As computers proliferated, so did a huge array of apps for specific purposes, many that would prove useful to people with disabilities.
- While portability (laptops and tablets) became preferences for many, the portability factor was essential for many apps for people with disabilities.
- For a time, laptops and tablets were very expensive before they passed the peak on the innovation curve.



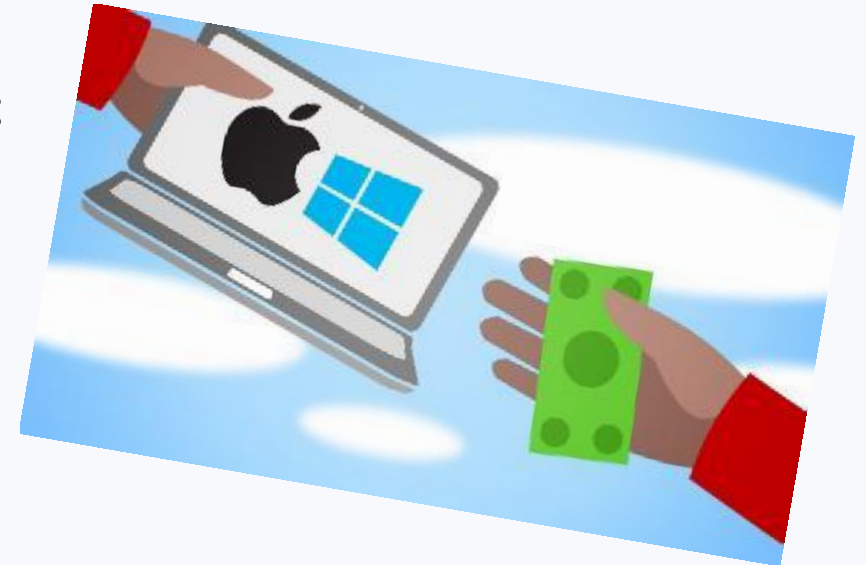
Sustainability Tips: How Reuse Programs Responded to the Challenges

- Although challenges to computer and cell phone reuse are greater than ever, we will explore the reuse landscape through successful programs and their tips for efficient, sustainable operations.
- And, we should keep in mind that computer-based devices are often reported in other categories if the primary use makes that appropriate: Speech, Vision, Learning....

Challenge: Acquiring Devices for Reuse -Marketplace Options Reduced Donations

Consumers have new options to profit from their old computers:

1. Sell computer to individuals for cash: Craig's List, eBay
2. Sell to online sites for cash (e.g., Gadget Salvation, Mac of All Trades), gift cards (Amazon) or store cards (Apple)
3. Trade in to major manufacturers (Apple, HP, Dell, Lenova, etc.) through online sites for new device.
4. Trade in through major electronics retailers (Best Buy, Staples, etc.) for new device.



Hmmm. . . So, how do you get devices to refurbish?

Tips for Acquiring Computers

Successful programs build relationships to ensure an ongoing supply of devices for refurbishing:

- ✓ With businesses, to receive devices when large upgrades take place;
- ✓ With hospitals or schools when major replacements occur;
- ✓ With government agencies and nonprofit organizations; and,
- ✓ With supporters for individual donations.
- ✓ Sometimes devices that are not too old can be reclaimed through a partnership with an electronics recycler (if they watch for devices that can be reused before being recycled.)

Dedicated Program: iCanConnect

iCanConnect, the National Deaf-Blind Equipment Distribution Program, is a program mandated by Section 105 of the Twenty-First Century Communications and Video Accessibility Act (CVAA) that provides funding of up to \$10 million annually for the distribution of communications equipment to low-income individuals who are deafblind.

- iCanConnect offers new devices to qualified individuals. Each state and territory receives a funding allocation. 13 AT Act programs are the designated administrators of state programs.
- The life expectancy of a device is five years before replacement. In rare cases, a device may become available within its useful life.
- Sandy McNally, Pennsylvania, pointed out two issues: (1) Clients expect new devices, and (2) the FCC objects to having the devices go into the general reuse pool.

Challenge: Expense of Refurbishing

Facilities, staff and supplies are needed to refurbish properly computers and related devices.

1. Facilities: Sanitization area, work area, storage areas
2. Safe, properly equipped working environment
3. Qualified technicians
4. Physical and software tools
5. Replacement parts for repairs
6. Licensing for operating systems



Challenge: Legalities of Computer Reuse

Major issues:

1. Removing personally identifiable data from hard drives with software tools.
2. Replacing operating systems without violating copyright laws by replacing only what is licensed.
 - The most common solution is to become a certified reseller.
3. Safe, legal disposal at end of life through a certified recycler.

✓ **Tip: Create policies and procedures to address the risk and liability involved in computer reuse. Train staff and volunteers and ensure that they adhere to policies.**



Tips for Offsetting Expenses: Partnerships

1. Reduce the expense for refurbishing staff through partnerships:

- Partner with a school for free or reduced-cost repair services.

AT Ohio is fortunate to be based in an engineering school, but you could partner with a local technical college with an A+ certification training program.

- Partner with an agency or nonprofit or service organization to provide techs.

RefurbIT (AZ) hopes to partner with Vocational Rehab to create an A+ training program for VR clients.

- Partner with a business for qualified volunteer techs.
- Recruit qualified individuals who want to donate services.

2. Generate revenue through fee-for-service offerings:

- Set fees for refurbished computers, based on applicant need or device value.
 - Many programs do this, with various approaches to setting fees. FODAC (GA) fees range from \$50 to \$250 depending on computer configuration. Desktops now have little value.
 - [RefurbIT](#) (AZ) goes one step beyond and sells devices to the general public to generate revenue for the program.
- Offer computer repair services.
 - This too, is not unusual, if the staff has the capacity. This is often limited to qualifying clients (e.g., Paraquad in MO), but could be open to the public.
- Offer data destruction service to individuals selling or trading their devices.
 - RefurbIT offers this service to the public.

Tips for Offsetting Expenses: Recycling Revenue and Extension of Services

3. Recycle devices at the end of useful life through an electronics recycler for revenue.

- Every program needs a contract with a Federal EPA-registered Universal Waste Consumer Electronics Destination Recycling facility to dispose of computers or remaining parts at end of life. Sometimes this becomes an expense. It can, if structured carefully, become a source of revenue for scrap metal.
- One program occasionally gets a reusable computer for the program from other client recycling.
- Some recyclers now offer data destruction services for devices or paper. The reuse program may arrange to extend these services to customers for modest fees, then sell shredded documents to a paper recycler.

Computer Reuse through Exchange

- Exchange programs promote reuse while avoiding many of the challenges of refurbishing. (They have their own special challenges.)
- In 2019, 10 AT Act Programs reported computer reuse through Exchange, but computers are rarely seen when browsing through the Exchange sites. More often, the offerings consist of peripherals and software.

Exchange Programs Hurt by New Options

- **The new options open to consumers mean that Exchange programs rarely see computers listed:**
 - Clayton Guffey, who manages AZTAP's Exchange program, does not accept computers. He refers the rare potential donor to programs that refurbish.
 - He reports that no one donates cell phones because so many options exist to sell them. In fact, the program sells its own mobile phones for revenue when they upgrade.

Mobile Phone Reuse

Even more difficult than computer donations is the acquisition of cell phones for reuse. Why?

1. Every provider offers trade-in incentives to retain customers.
2. Every manufacturer offers trade-in credits to retain customers.
3. Individuals can use a number of online sites (e.g., SellCell.com) to sell mobile phones for cash, the newer the more valuable.

An EPA study showed that only 11% of e-waste is made up of mobile phones, which means that 90% of them are ending up in landfills or resting in drawers or closets unused. {Tech Republic}

Challenges of Reusing Cell Phones

- The data removal issue is similar to computers, and there are tools.
- Reuse involves a wide range of manufacturers and models and not many options for repair of phones.
- As noted previously, competition from manufacturers and service providers for trade-in devices limits donations.

Tips: Promote Cell Phone Reuse to Acquire Devices and to Generate Revenue

Encourage donors to locate unused phones at home and donate to a good cause. (Most of us have one or more stashed somewhere.)

1. Refurbish newer phones for reuse/reassignment for modest fees.
2. Sell donated phones to general public or to an online site (e.g., SellCell.com) generate revenue. Phones 2 years old or newer are worth up to \$175 each at re-sell value, depending on the brand and model. (See online sites for values.)
3. Use end-of-life recycling as an opportunity to generate some revenue: Even old phones are worth \$1 to \$2 each for recycling because of the rare metals in the device that can be reclaimed.

Reuse of Other Digital Devices

- Lives are now filled with digital devices used for many purposes as our homes become “smart”: to control our television or sound system, to manage environmental controls and lighting, to monitor the security of the entrances and property, to retrieve information for us, and many other tasks.
- Common among these are voice-controlled devices.
- Some of these are candidate devices for reuse and re-purposing for specific needs.
- Dr. Therese Willkomm, director of the New Hampshire AT Act program and a legendary creator of tools from everyday items, offered a suggestion in the AT3 blog. We could not have imagined how apropos this would become later.

Special Reuse Case for Cell Phone & Alexa: Combat Social Isolation During Virus

Idea from Therese Willkomm, ATinNH, from AT3 blog: Connect with a Loved One

“Take out that old backup phone, add a line to your cell plan, and plug the phone in under their bed or somewhere,” Dr. Willkomm writes.

Video visit: Dr. Willkomm recommends Echo Show (\$90 new on Amazon) because your loved one does not need to touch it or do anything to receive the video call. For face-to-face visits, both parties can use an Echo Show or you can drop in using the Alexa app on your smartphone or tablet. Both parties will need to download the Alexa app to their smartphones. The Alexa app allows users to select which of their contacts to permit to “drop-in.” Read *How to Set Up and Use Drop-In on Amazon Echo Devices*.

Voice-only drop-in using an Echo Dot (\$50) is another way to talk to a person without their having to touch or answer a device (like an intercom). Learn more about free voice and video calls using Alexa devices from [PC Magazine](#).

Reuse in the Time of COVID

Would you like to share additional suggestions with us?

Webinar Survey Link

Please follow this link for a survey and to provide feedback of today's webinar.

<https://www.surveymonkey.com/r/KQZ26YD>

Questions?



Thank You



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