aaidd
American Association on Intellectual and Developmental Disabilities

ANCOR
American Network of Community Options and Resources
SHAPING POLICY • SHARING SOLUTIONS • STRENGTHENING COMMUNITY

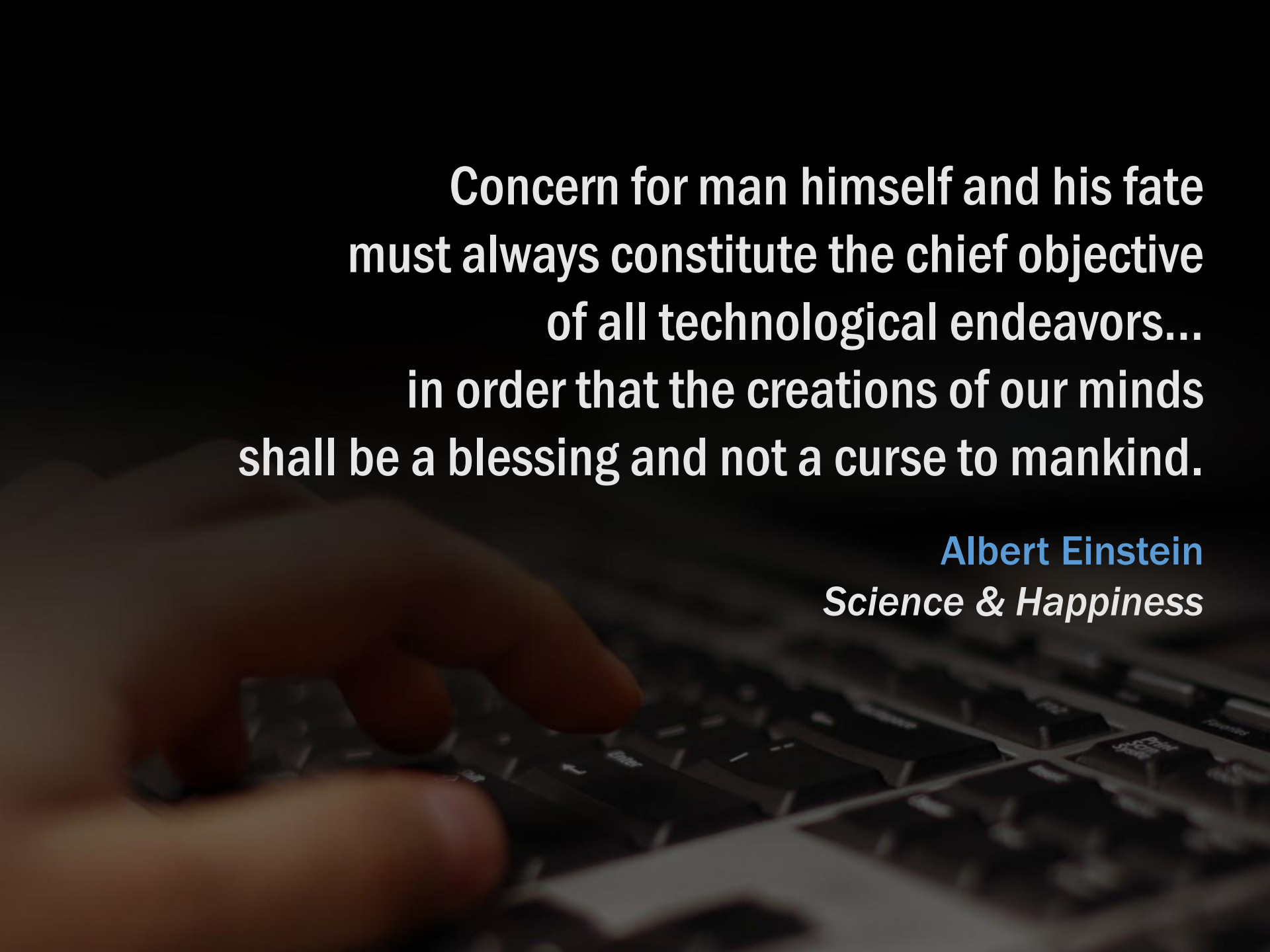
Putting Technology in the Hands, Home or Community of People with IDD to Improve Their Quality of Life

Tuesday, October 21st, 2014

Steven E. Stock
AbleLink Technologies
Colorado Springs, CO

ABLELINK TECHNOLOGIES

Sandy Henry
Sengistix, LLC
Mendota Heights, MN

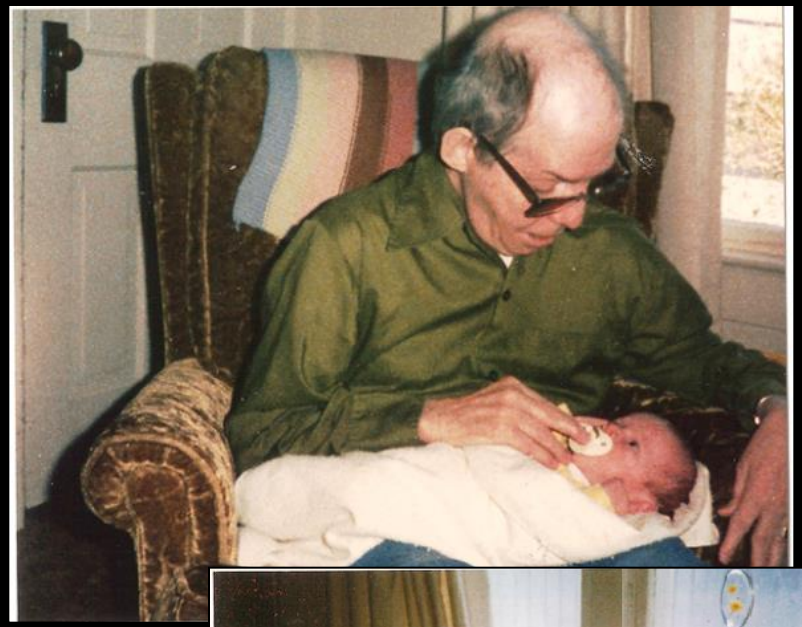

Concern for man himself and his fate
must always constitute the chief objective
of all technological endeavors...
in order that the creations of our minds
shall be a blessing and not a curse to mankind.
Albert Einstein
Science & Happiness

Background

- Began Research Specifically on Using Technology for Individuals with Cognitive Disabilities in 1991
- AbleLink Technologies founded in 1997
- AbleLink's Mission:
  Research, Develop, and Deliver Cognitive Technology addressing the Specific Needs of Individuals with Cognitive Disabilities

Francis Gauthier

1929-1994



ABLELINK TECHNOLOGIES

AbleLink's Cognitive Technology Research and Development

Small Business Innovation Research Funding – ED, NIH, DARPA

- 60+ Phase I Concept Validation Studies Completed, 3 more in progress (6 months – 1 year)
- 20+ Phase II Development Projects Completed, 1 in progress (2 year projects)

- 30+ peer-reviewed journal articles and book chapters on technology for persons with cognitive disabilities
- 15+ commercially available cognitive support technologies (computer access, personal scheduling, accessible email, simplified web-browsing, task prompting as well as other products for independent living)

AbleLink's Cognitive Technology Research and Development

Collaboration with Universities and Other Disability Organizations

- partnered on DRRP on Technology and Intellectual Disability
- partnered with RERC on Advancing Cognitive Technologies
- partnered with Westchester Institute for Human Development's Center on Health, Disability and Technology
- partnered with CU and WIHD on two Joseph P. Kennedy, Jr. Foundation Technology Projects

KU THE UNIVERSITY OF KANSAS

The Joseph P. Kennedy, Jr. Foundation

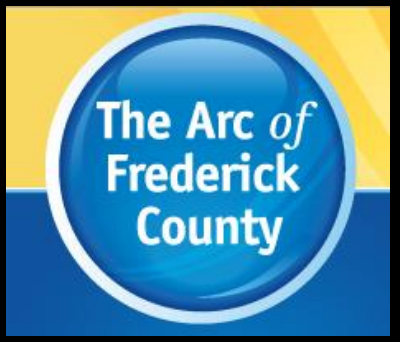
UCCS UNIVERSITY OF COLORADO AT COLORADO SPRINGS

WIHD

CQL The Council on Quality and Leadership

SYRACUSE UNIVERSITY

Increasingly Service Agencies and Organizations Are Using Technology to Improve Programs & Services

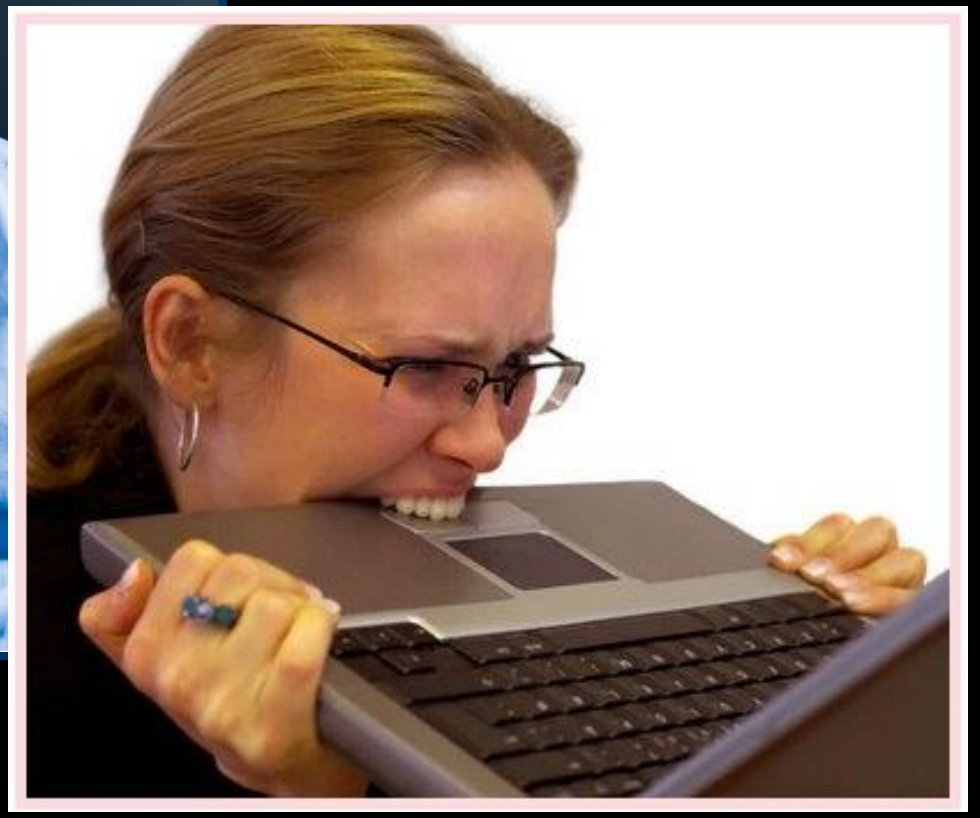


The Basic Purpose of Technology

the application
of scientific advances
to benefit humanity

(The Franklin Institute - http://fi.edu.franklin.glossary.html)

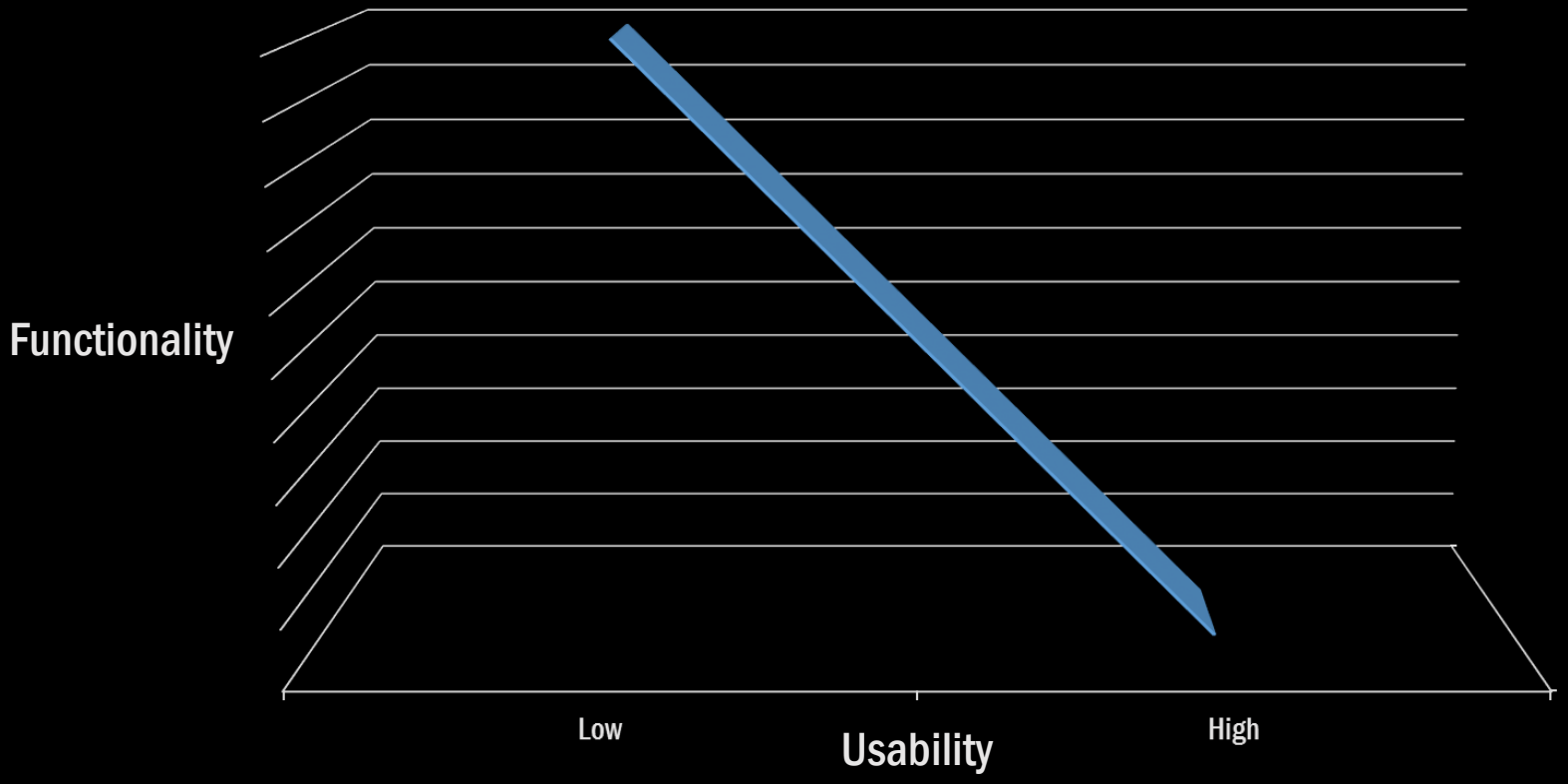
ABLELINK TECHNOLOGIES



ABLELINK
TECHNOLOGIES

Technology Paradox

Functionality versus Usability



"...the same technology that simplifies life by providing more functionality ... also complicates life by making it hard to learn. This paradox of technology is often used by people as an excuse for poor design..."
Donald A. Norman - The Design of Everyday Things, 1988 (pp. 30-31)

ABLELINK TECHNOLOGIES

Technology Paradox

Example: Microwave Ovens

Technology Paradox

Example: Mobile Phones

ABLELINK TECHNOLOGIES

Applied Cognitive Technologies

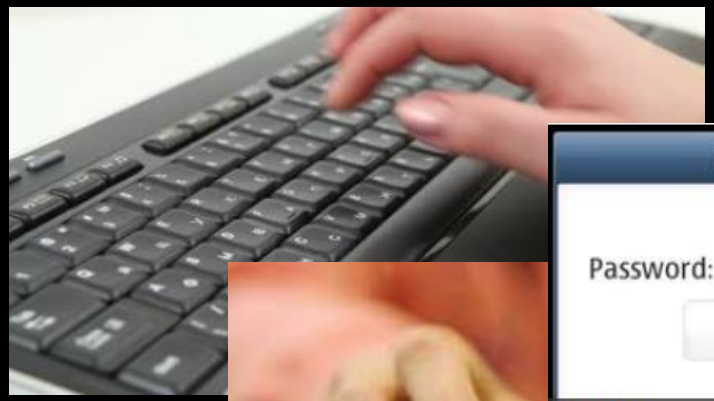
Technologies for Individuals With Cognitive Disabilities

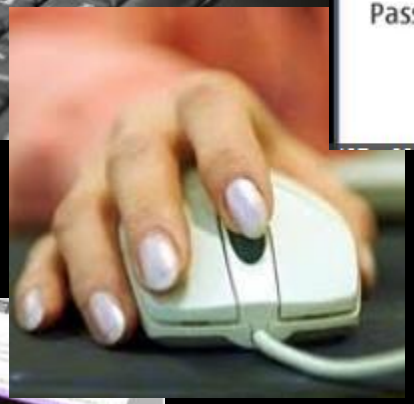
Hands:

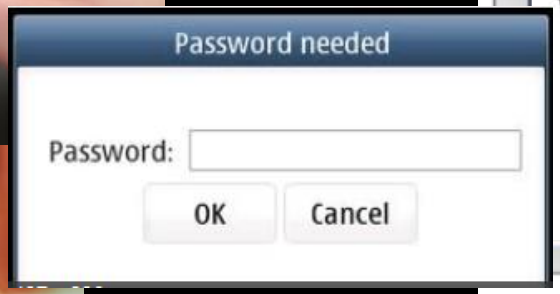
- Endeavor Desktop (Windows)
- It's My Future!
- My Health, My Choice, My Responsibility
- Everyday Cooking
- Living Safely
- Intro to Voter Education

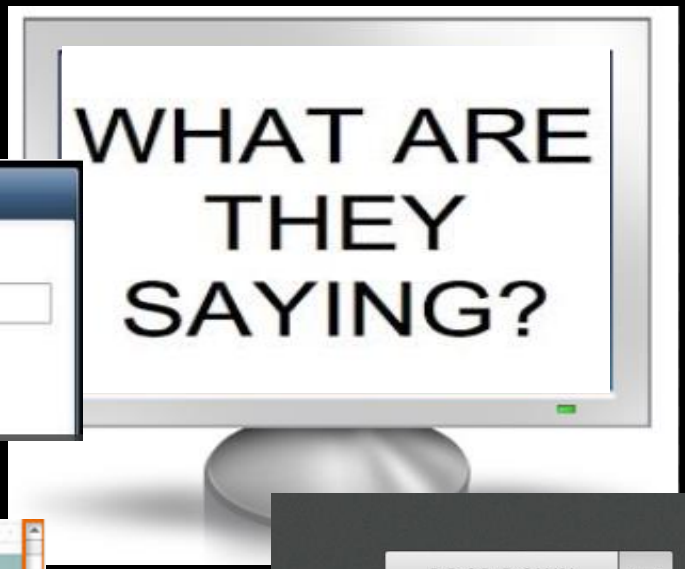
ABLELINK TECHNOLOGIES

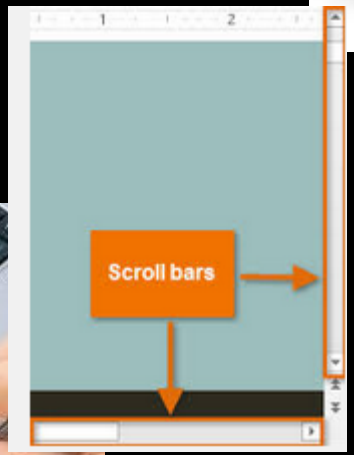
Access Barriers for Cognitive Disability

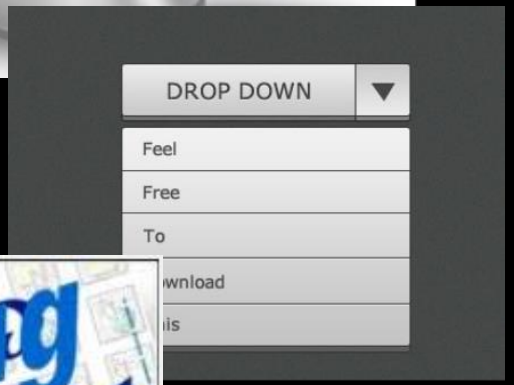












ABLELINK TECHNOLOGIES

Barriers to Access Begin at the Operating System

Cognitively Accessible Operating System

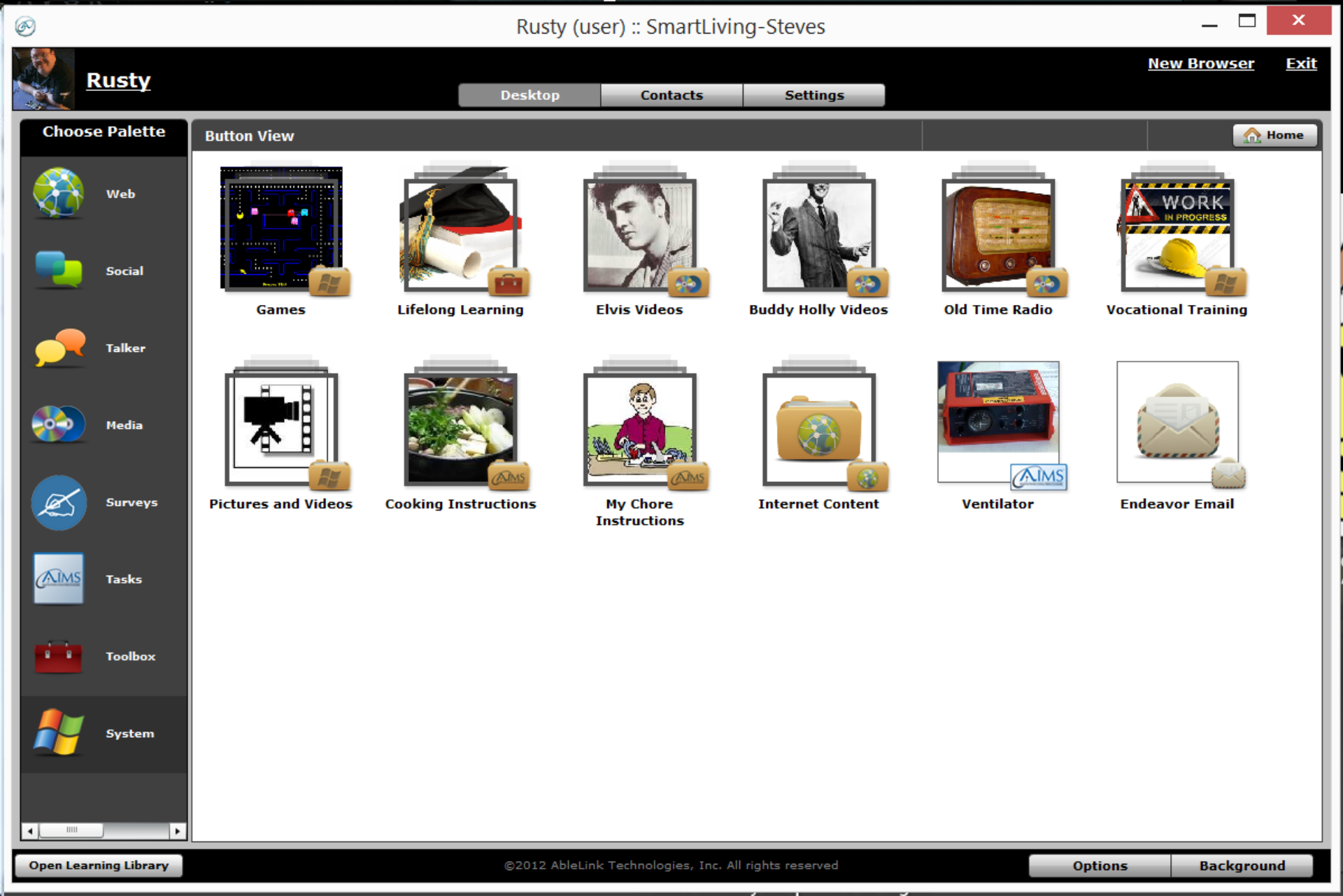
Endeavor Desktop

Cognitively Accessible Windows or Macintosh Computing Environment

ABLELINK TECHNOLOGIES

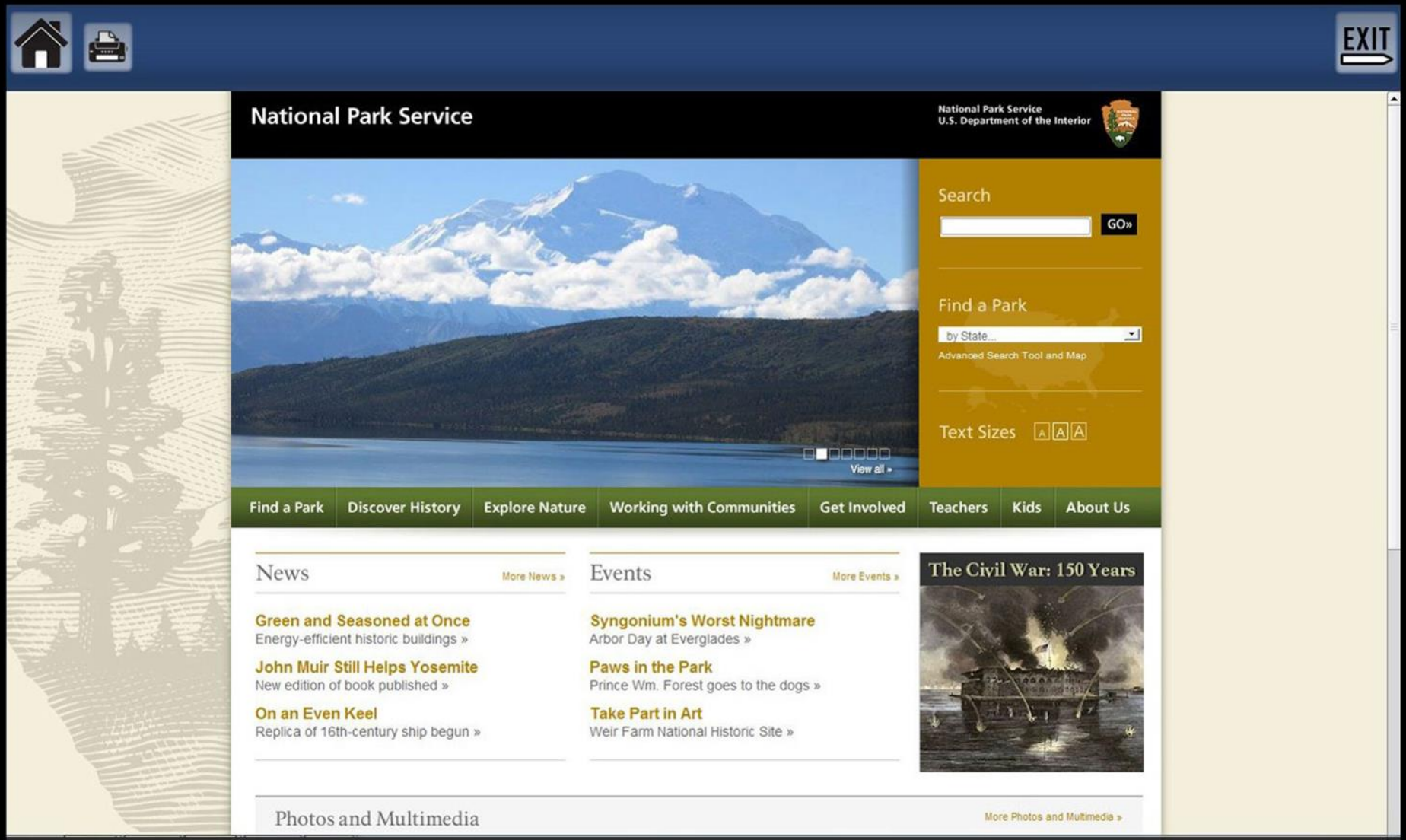
Endeavor Desktop

Admin: User/Desktop Mgmt.



Endeavor Desktop

Web Trek simplified web browser



ABLELINK TECHNOLOGIES

Endeavor Desktop

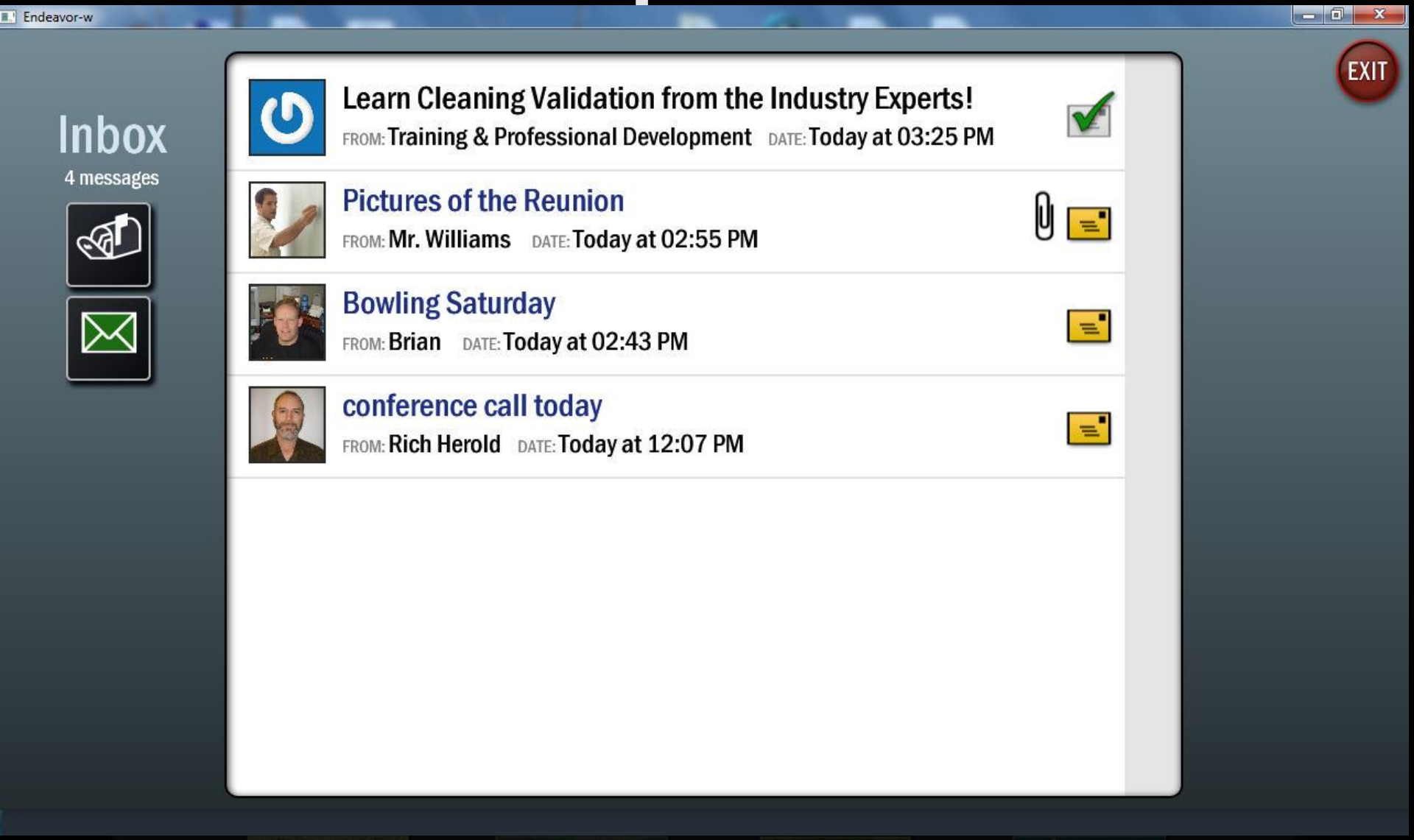
Simplified Video Player

Endeavor Desktop

Video Player Test Session

Endeavor Desktop

Simplified Email Program



ABLELINK TECHNOLOGIES

Jake's Endeavor Email Story

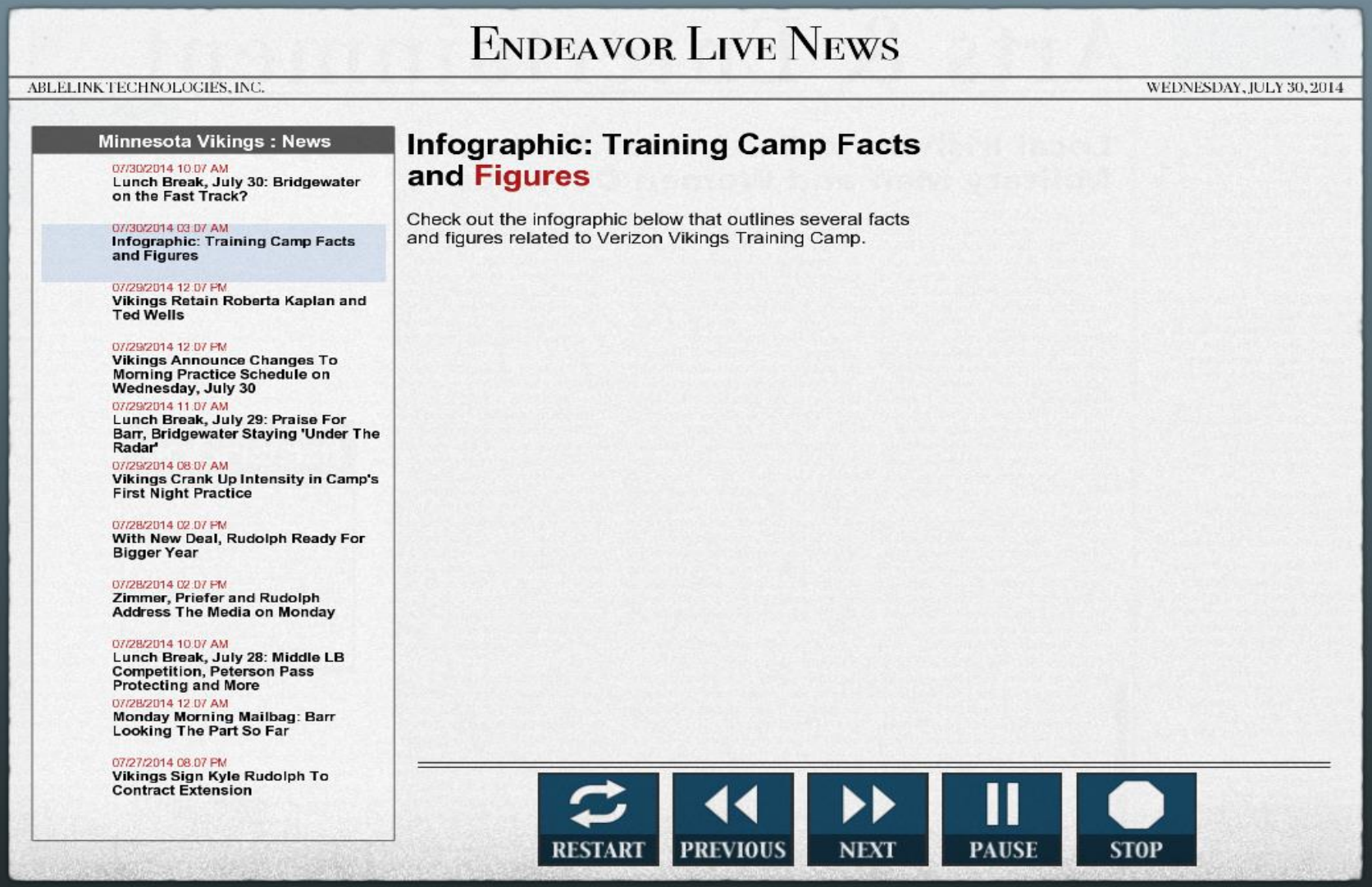
"A resident who has a very hard time expressing himself and verbalizing his feelings started using audio email through Endeavor, and his social skills have begun to blossom. He was hesitant at first to give it a try. For several weeks his mom would send him emails and he would listen to them, but wouldn't respond. Eventually staff was able to walk him through the process and he began by deciding ahead of time with staff's assistance what he wanted to say in his email. H would send the email message by repeating after the staff what he would like to say. Once he got over the hump of sending the first couple of messages, he began doing them on his own. Slowly, staff stopped sitting with him and after a couple of weeks he began sending emails completely independently.

This same resident had never said 'I love you' to his mom. One day, he was sending emails in the dining room and staff was around the corner in the kitchen. The staff person overheard him signing off from his email by saying, "I love you, mom." This was a new development for him. Within 24 hours, his mom called the staff in tears to express just how much that sentiment from him touched her. She continued to go on about how much his communication skills had improved over the short time since he had begun emailing with her."

ABLELINK TECHNOLOGIES

Endeavor Desktop

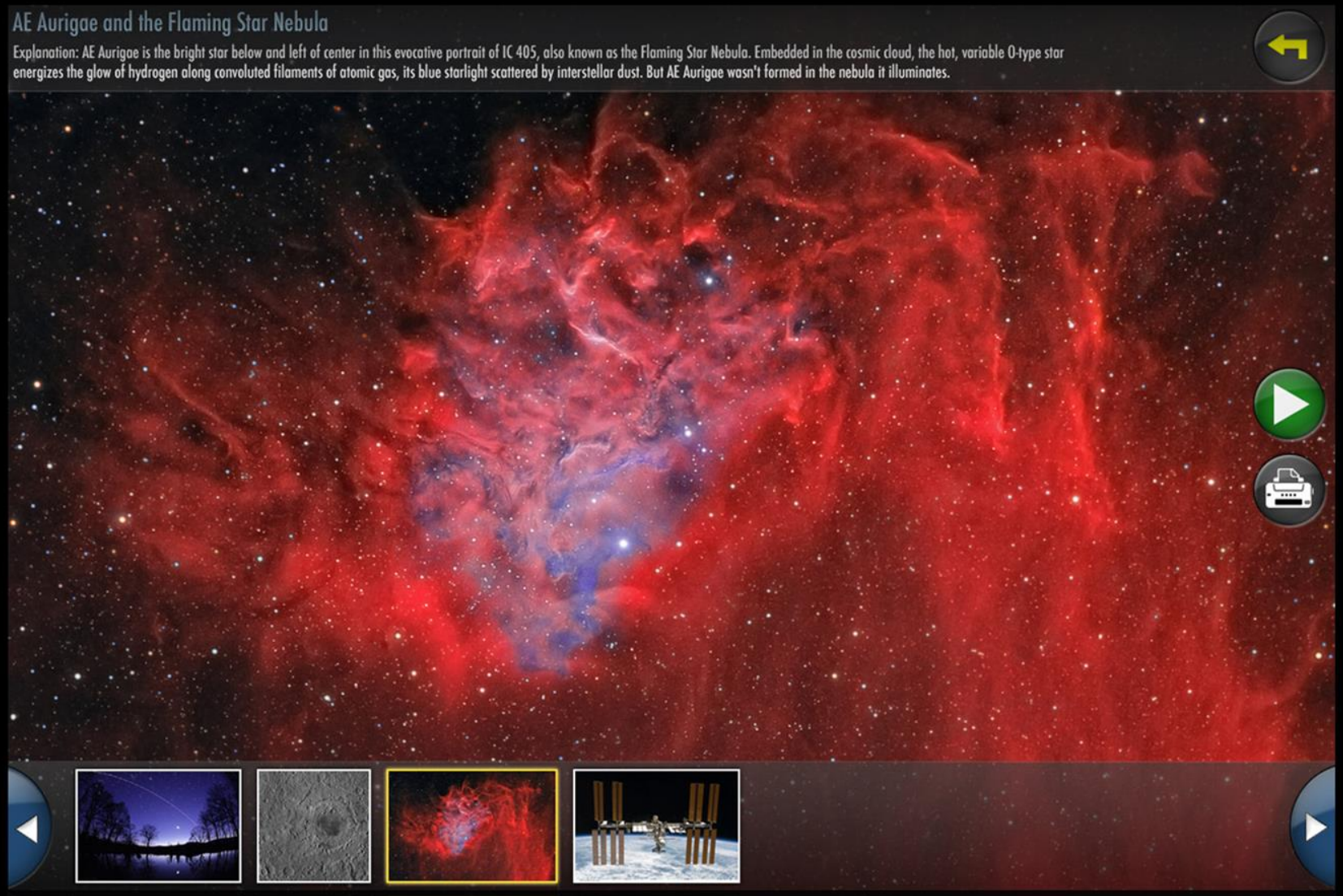
RSS News Feed Reader



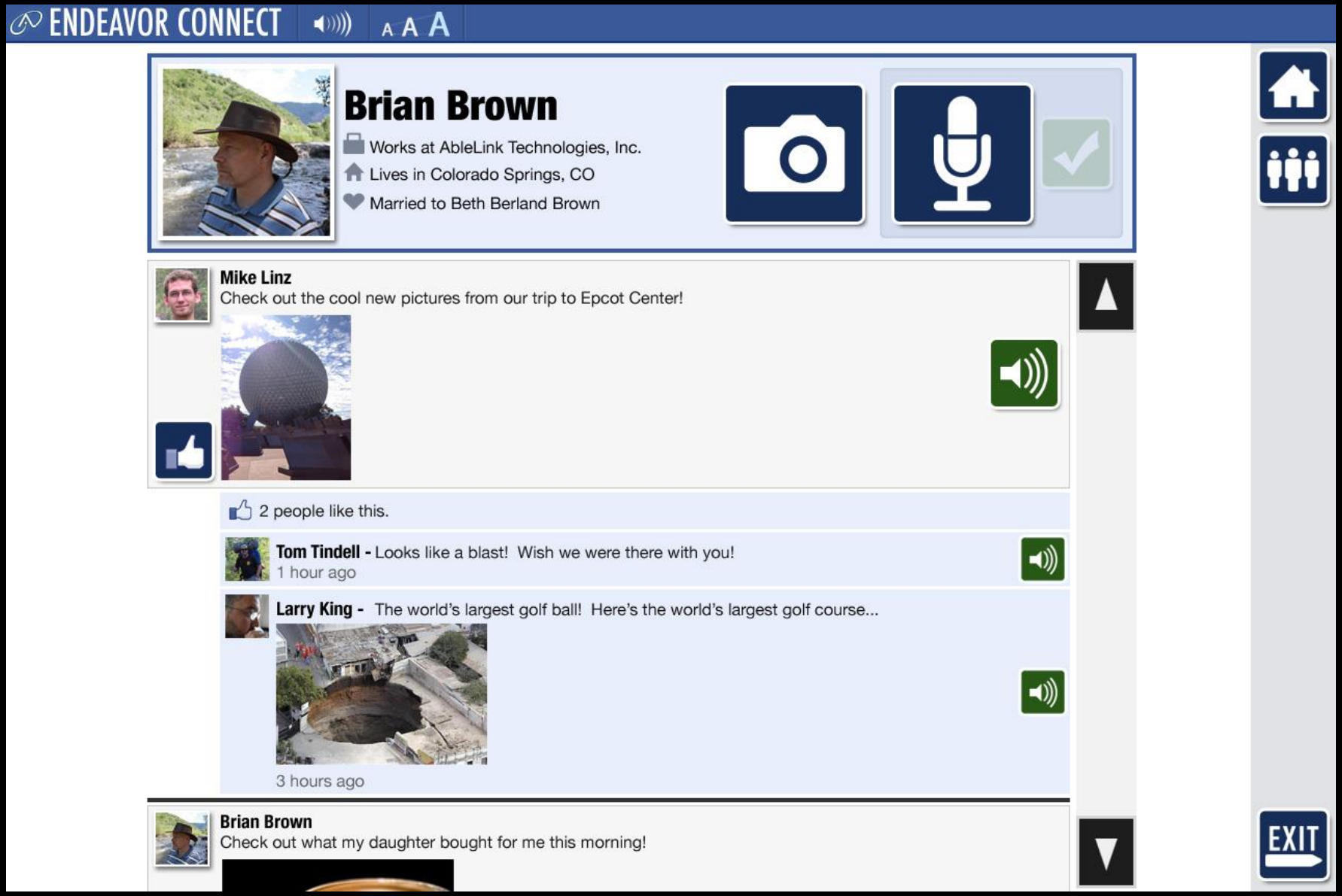
ABLELINK TECHNOLOGIES

Endeavor Desktop

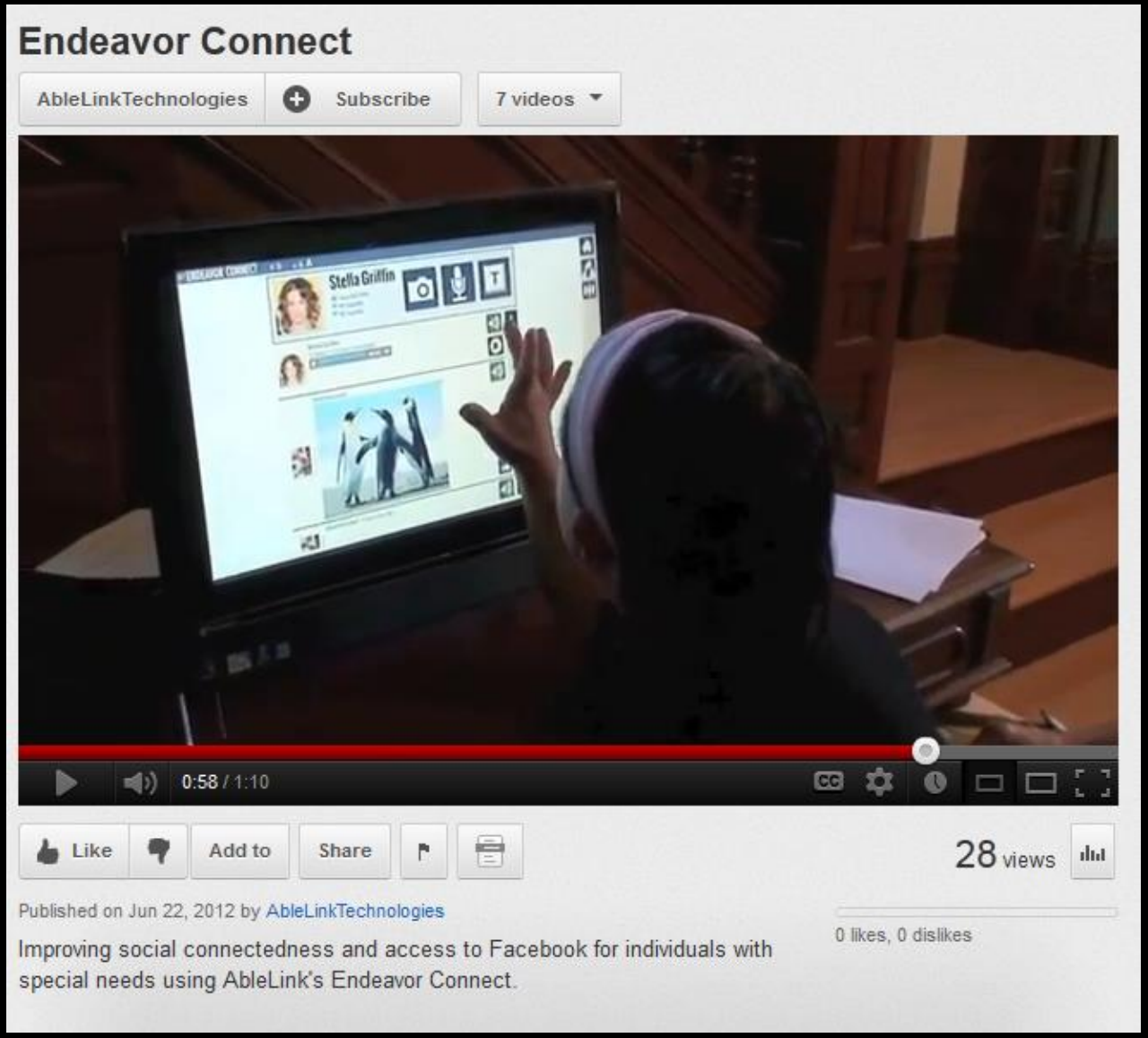
RSS Picture Feed Reader



ABLELINK TECHNOLOGIES



Endeavor Connect: Cognitive access to Facebook



Easier Access to Facebook-Testing Session

Endeavor Desktop

Step-by-Step Task Prompting

ABLELINK TECHNOLOGIES

Tina's Target Story

"Tina is a transition student who had been working at Target for a few months. With the help of a job coach, she had learned how to do each of the nine separate tasks that comprise her warehouse support job. However, even though she new *how* to do her work tasks, she routinely forgot to complete one or more on any given day. About a month before her annual meeting, we were informed that she was in danger of losing her job due to the missed work tasks. We consulted with AbleLink and they suggested the audio prompting system called Pocket Coach. Tina caught on quickly and three weeks later at her staffing she repeated each of the nine audio prompts word for word and announced "I don't need my Pocket Coach anymore! Her boss was so pleased with her progress that instead of letting her go he gave her a raise!!"

ABLELINK TECHNOLOGIES

Where do you start?

Technology Pilot Project

Smart Living | Technology Pilot Project

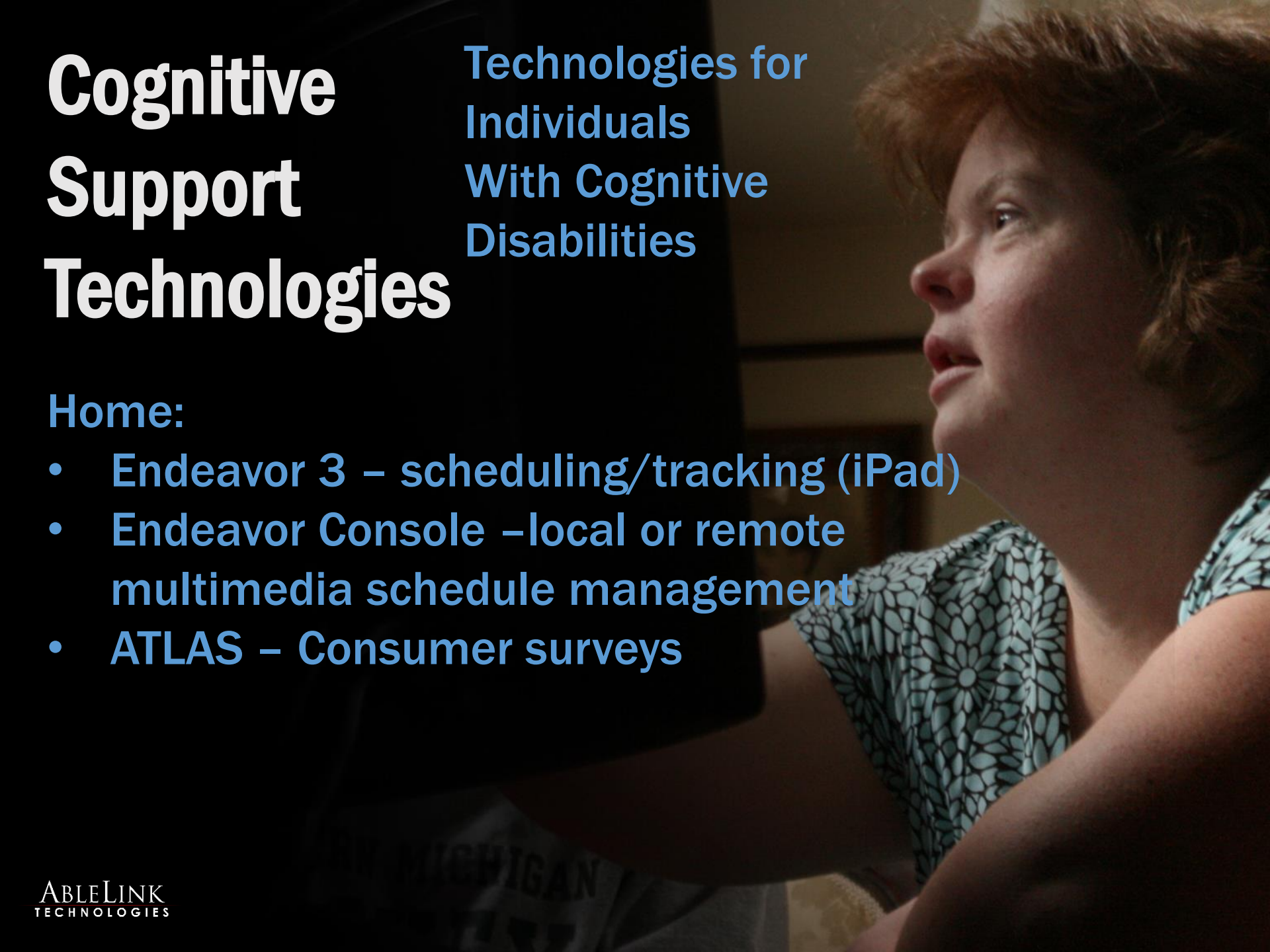
The Smart Living Technology Pilot Project provides your agency a complete turnkey Smart Living Technology Laboratory for three months. During this project, AbleLink staff will guide your team to explore the full potential of person-centered technology. You will experience first hand the power of Smart Living Technology for enhancing quality of life for the people you serve, while improving efficiency of services and reducing agency costs.

Smart Living Technology Pilot Project Summary

- Complete 3-month technology immersion
- Personalized on-site installation and training by AbleLink staff
- Full range of AbleLink's person-centered Smart Living Technologies available for duration of project
- Learning Library provided for 24/7 web-based training and technical support
- Customized *Smart Living Technology Implementation Roadmap* detailing next steps for your organization

Cognitive Support Technologies

Technologies for Individuals With Cognitive Disabilities



Home:

- Endeavor 3 – scheduling/tracking (iPad)
- Endeavor Console –local or remote multimedia schedule management
- ATLAS – Consumer surveys

ABLELINK TECHNOLOGIES

Evolution of Mobile Cognitive Support Technologies

Pocket Coach: Pre-PDA "PDA" for individuals with intellectual disabilities, providing step-by-step verbal task prompting.

1993
Concept Prototype

1995
R&D Prototype

1995
Original Dedicated Hardware

2000 - 2010
1st Smart Phone Implementation

ABLELINK TECHNOLOGIES

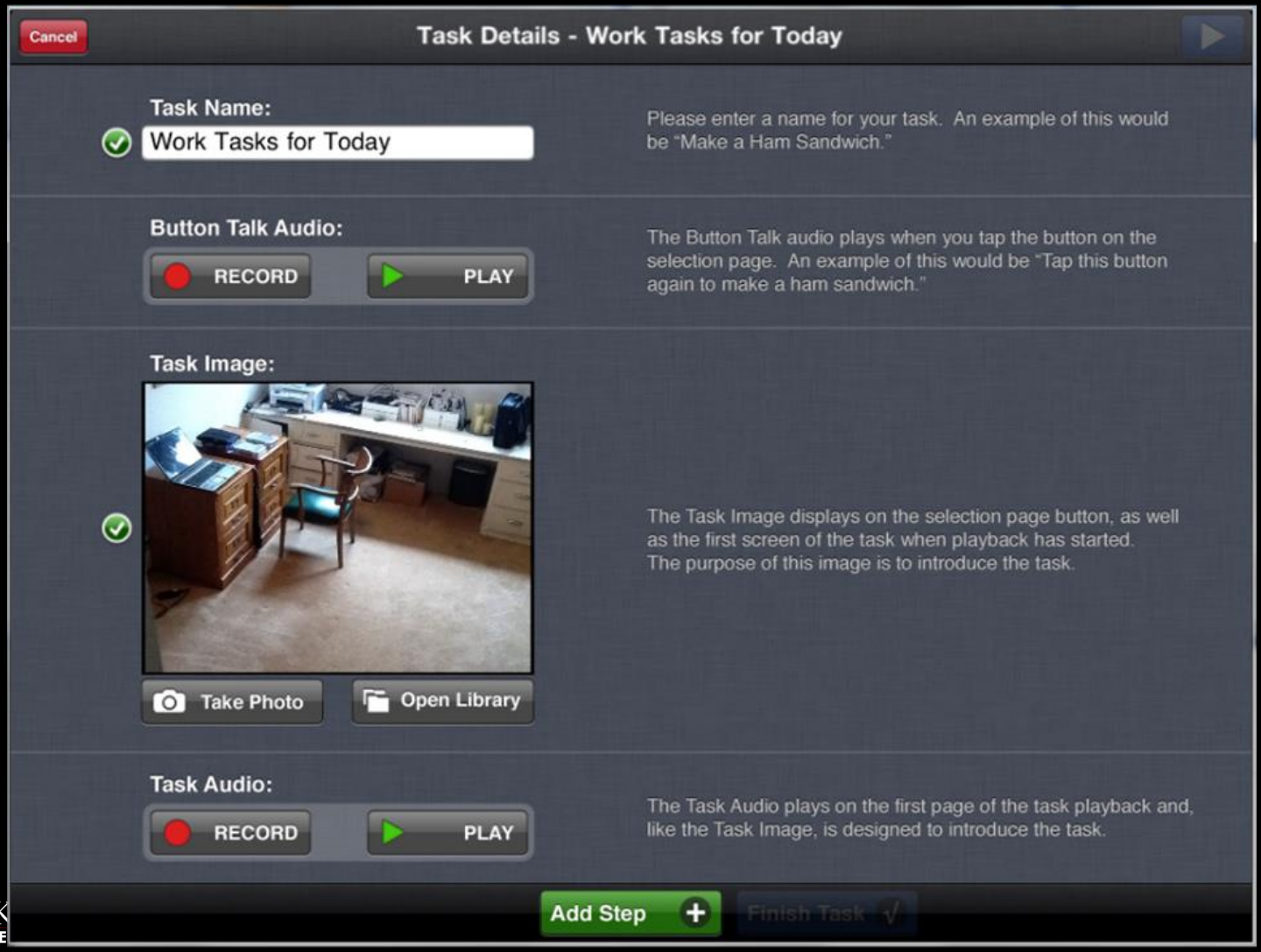
Visual Prompting – Tablets and the Cloud

Visual Impact: Task prompting using the latest tablet devices with cloud supported delivery of content and notifications

ABLELINK TECHNOLOGIES

Visual Prompting – Tablets and the Cloud

Visual Impact: Using the iPad digital picture/video camera and voice recorder to create step-by-step multimedia instruction sets ("Tasks")



ABLELINK TECHNOLOGIES

Visual Prompting – Tablets and the Cloud

Visual Impact: Using the iPad digital picture/video camera and voice recorder to create step-by-step multimedia instruction sets ("Tasks")

ABILITY BEYOND DISABILITY
Roses for Autism

VISUAL IMPACT 10:56 PM OCTOBER 31

Roses for Autism - Story of the Farm

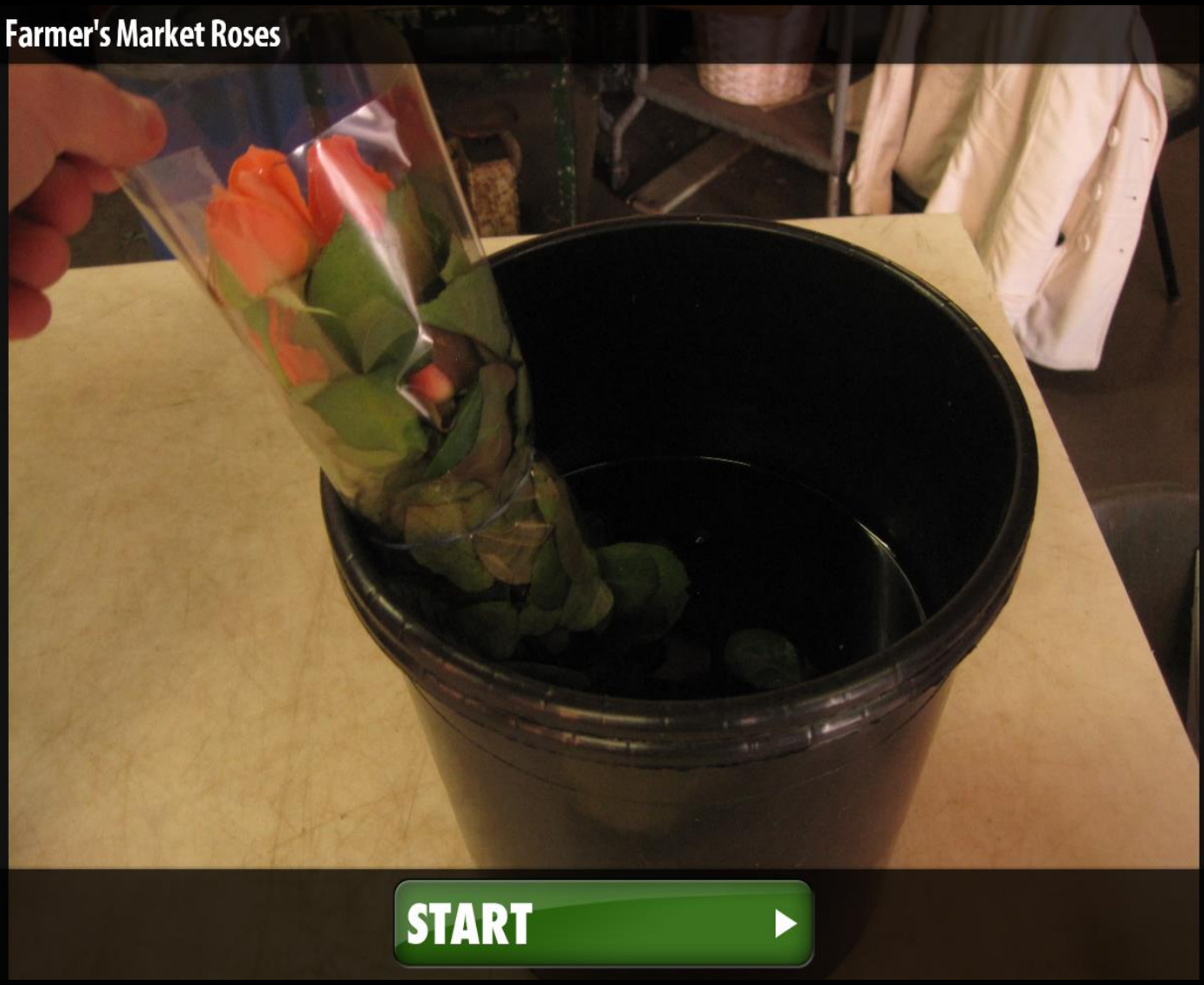
Packaging Farmer's Market Roses

Weeding Roses

EXIT

ABLELINK TECHNOLOGIES

Packaging Farmer's Market Roses



ABLELINK TECHNOLOGIES

Prepare your work space

GET READY!

RESTART

NEXT

STOP

ABLELINK TECHNOLOGIES

1. Make sure area is dry

RESTART

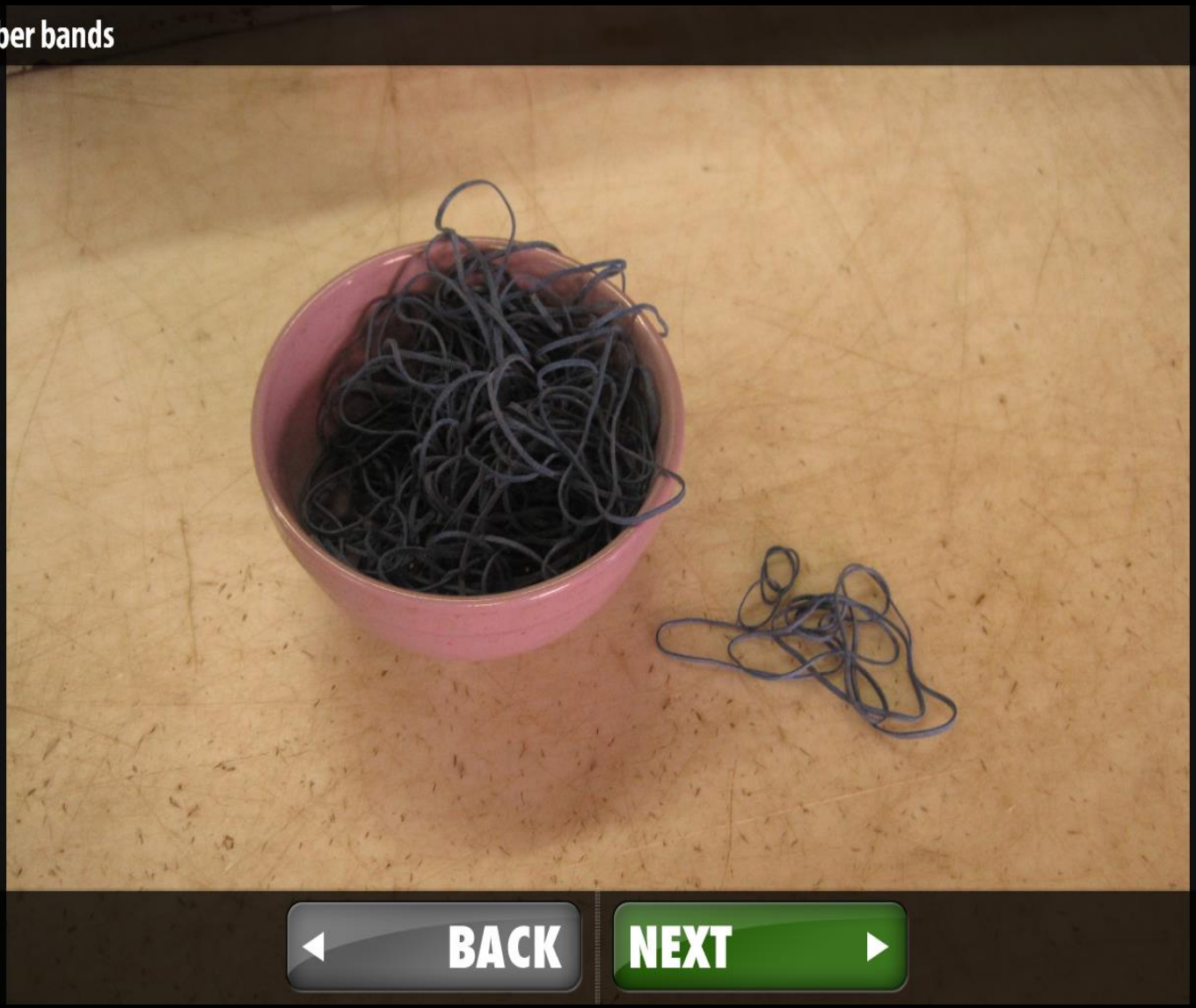
BACK

NEXT

STOP

ABLELINK TECHNOLOGIES

2. Get rubber bands



RESTART

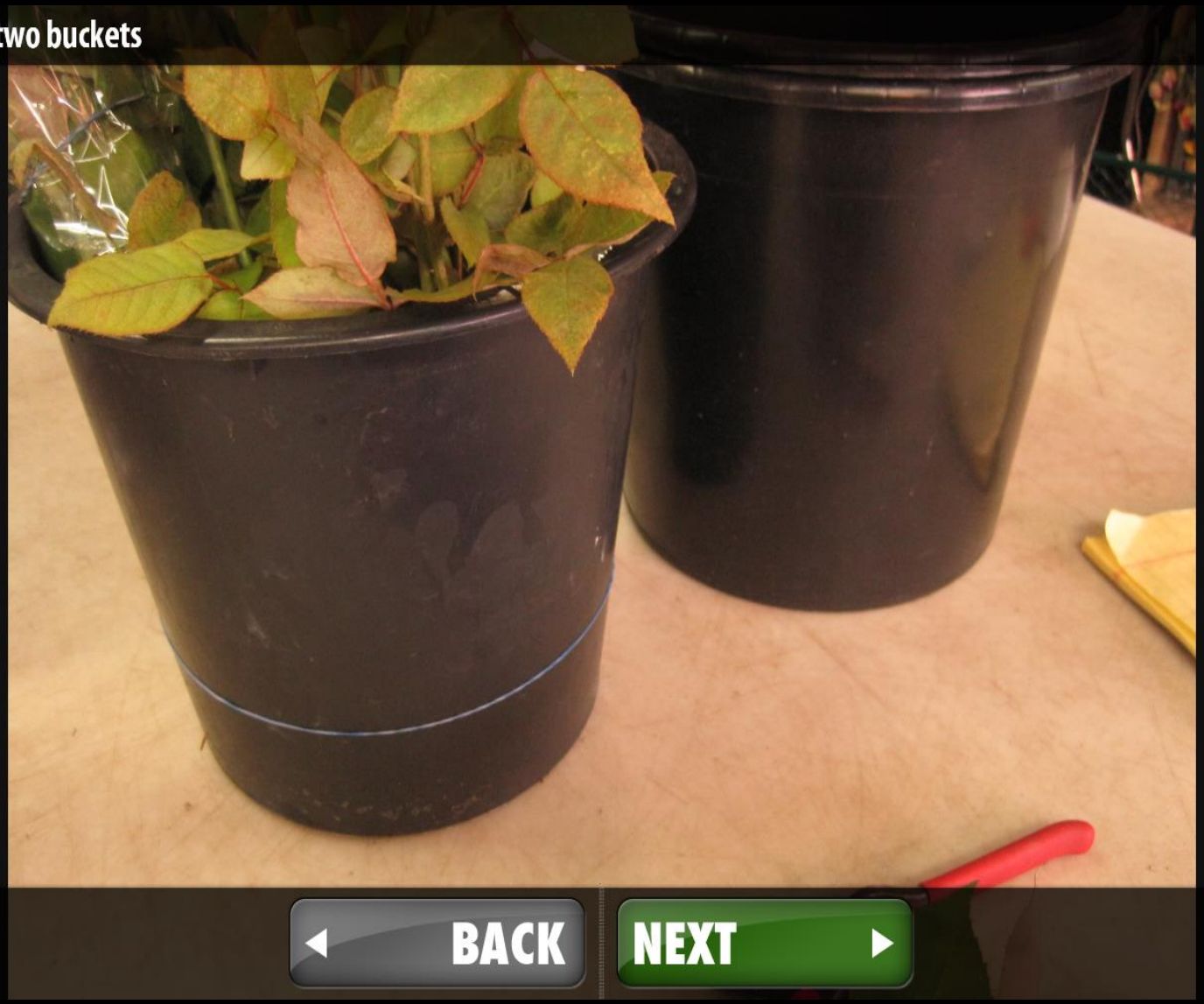
BACK

NEXT

STOP

ABLELINK TECHNOLOGIES

3. Collect two buckets

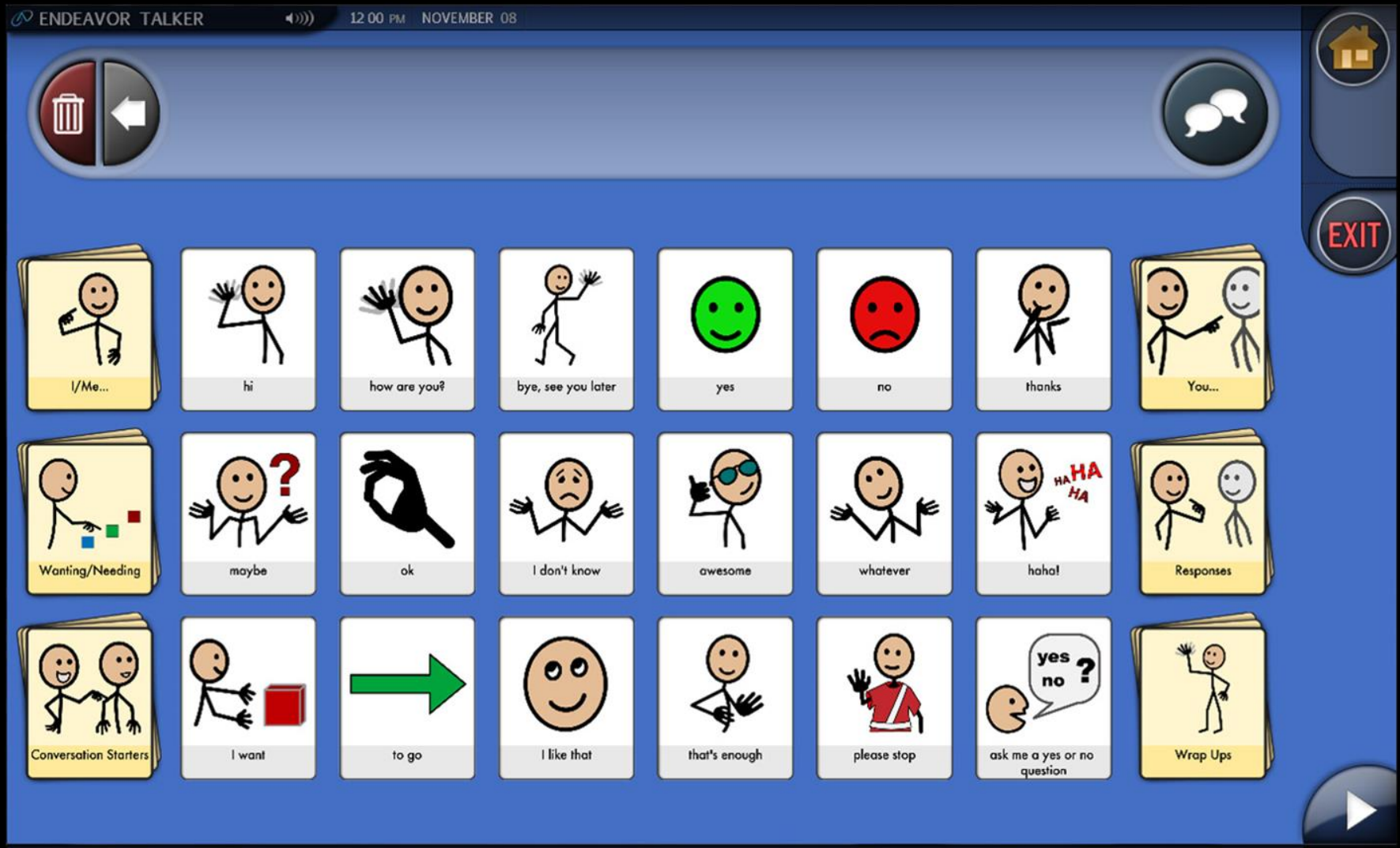


BACK NEXT

RESTART STOP

ABLELINK TECHNOLOGIES

Endeavor Talker: Communication System

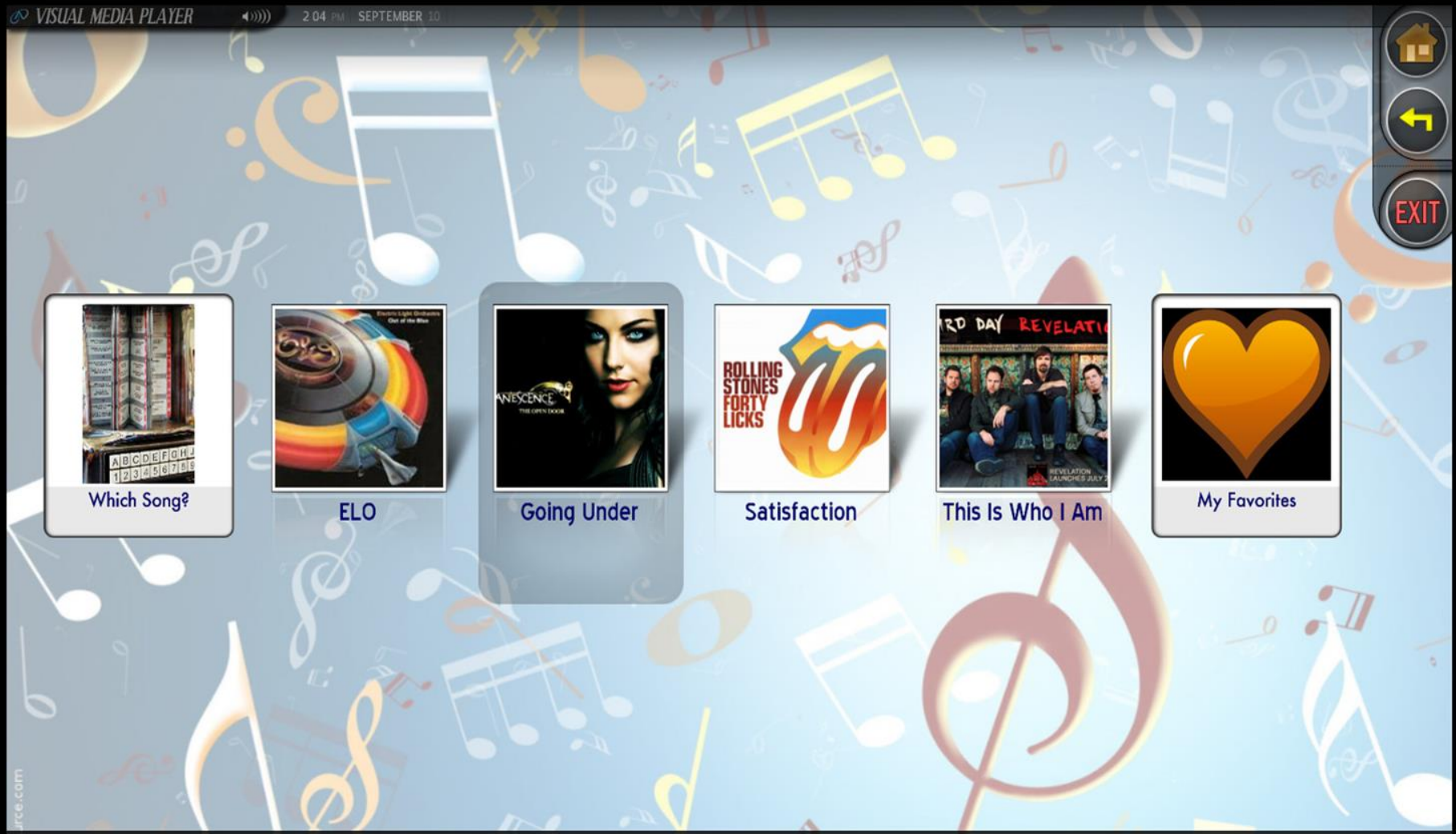


ABLELINK TECHNOLOGIES

Endeavor Talker: Communication System

ABLELINK TECHNOLOGIES

Endeavor Talker: Communication System



Chantelle's Talker Story

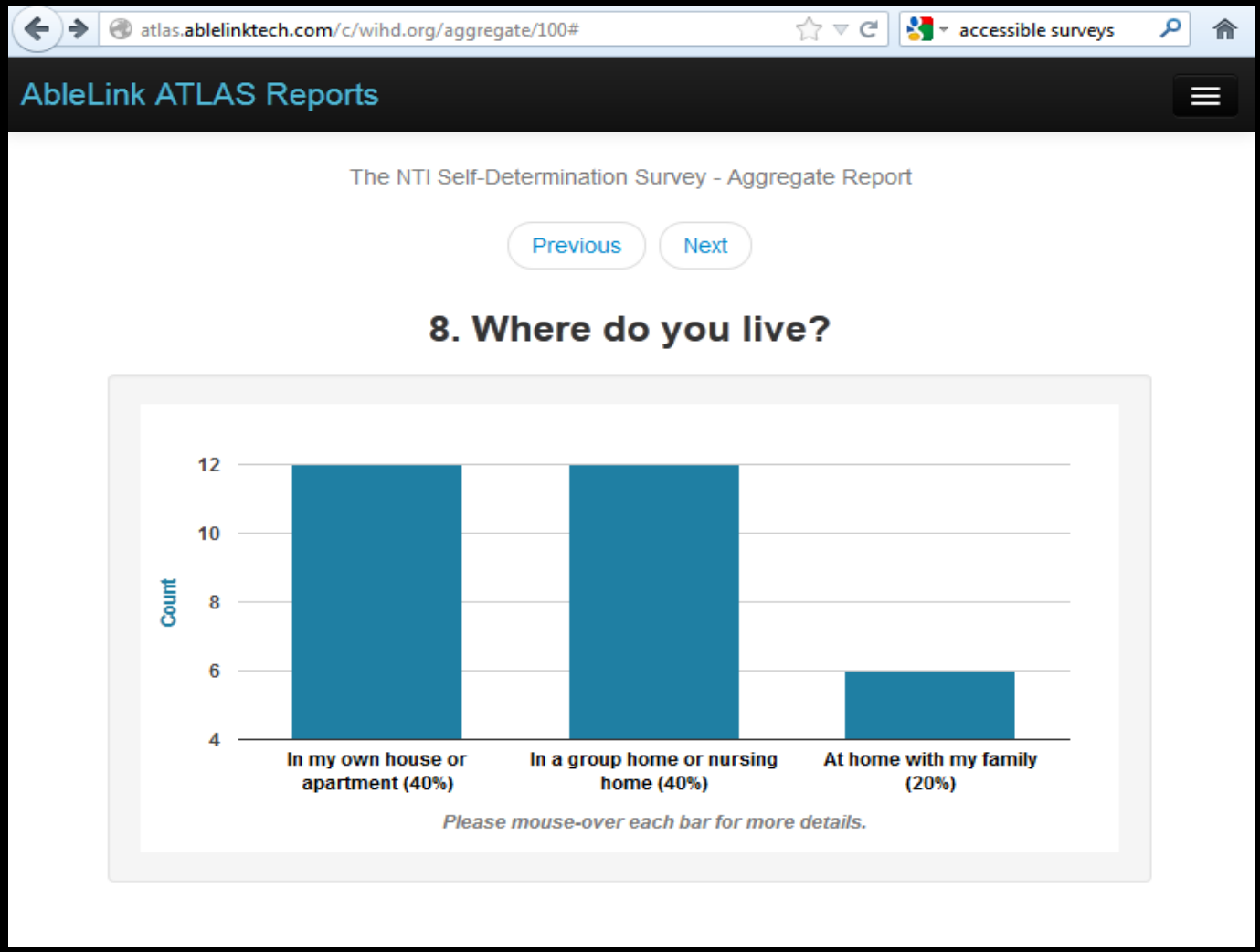
Chantelle, who has autism, was 8 when we first got the Endeavor Talker program. As her mom my goal was simply to get her to use it to order a hamburger from her favorite fast food restaurant. At first she became easily distracted but eventually she began to get more motivated by being able to play her favorite music videos after practicing with the Talker program. She has since come a long way. Recently we were traveling to a conference together on her first airplane trip. As we got to our seats and began organizing our things she insisted on digging her tablet computer out of her back pack. I wasn't sure what she was doing, but she got it out, opened Talker, navigated down a few levels and tapped the button to say "THIS IS COOL!" It was really one of those 'wow' moments…

Accessible Testing – ATLAS for iPad and Android Tablets

Self-directed, survey tools , such as consumer satisfaction surveys, using multi-modal presentation and accessible design can increase independence and reduce staff time interviewing and entering/ aggregating data.

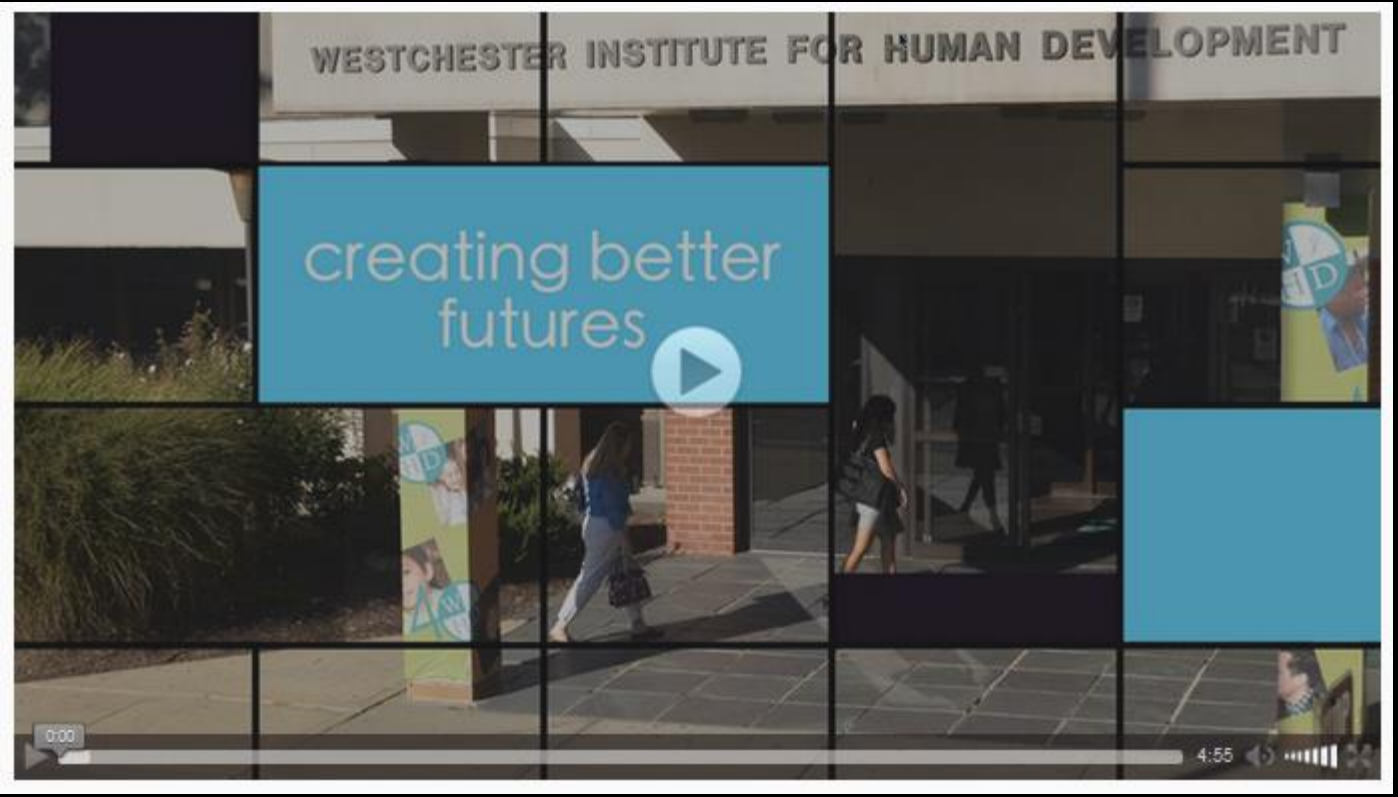
ABLELINK TECHNOLOGIES

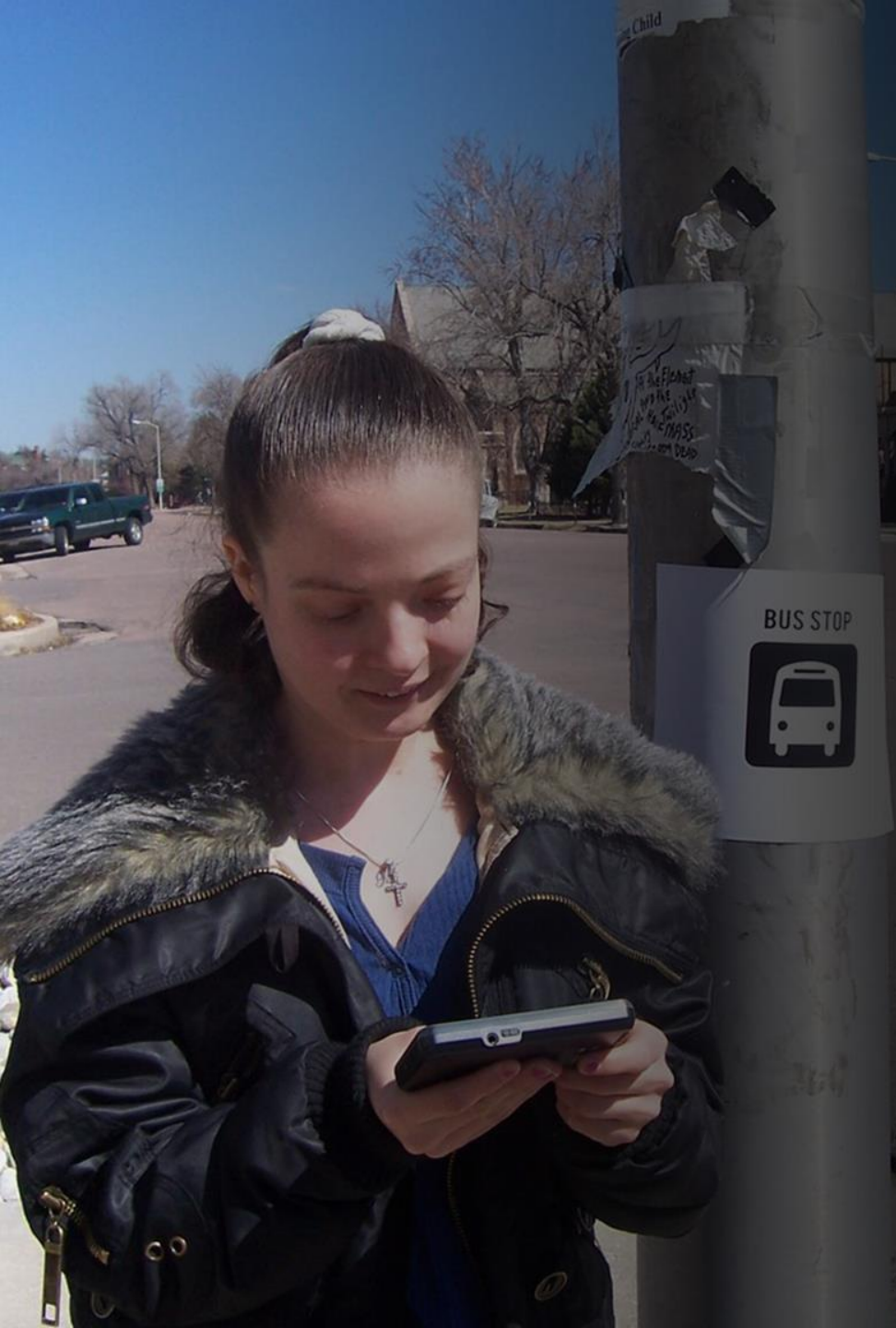
Accessible Testing – ATLAS for iPad and Android Tablets



ABLELINK TECHNOLOGIES

Example: Health Care Visit Satisfaction Survey





Cognitive Support Technology

Community:

- Wayfinder
- Community Sidekick
- Location tracking
- Vocational Supports

AbleLink TECHNOLOGIES

Cognitive Technologies for Community Access

- **WayFinder:** An accessible Smart Phone program for providing multimedia prompts to individuals with cognitive disabilities for navigating public transit systems.
- **Community Sidekick:** "Peace of Mind" Technology for Community Travelers

Cognitive Technologies for Community Access

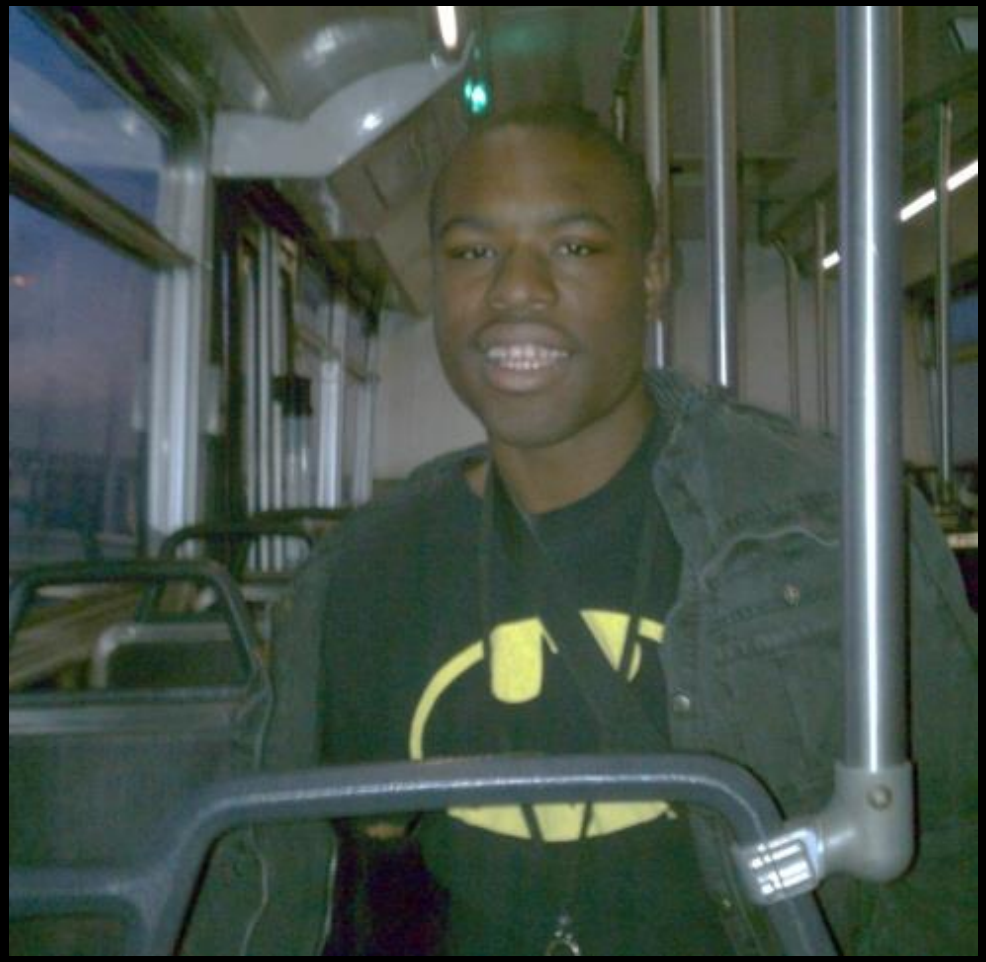
ABLELINK TECHNOLOGIES

Location-aware and GPS Applications – WayFinder

Location-aware and GPS Applications – WayFinder

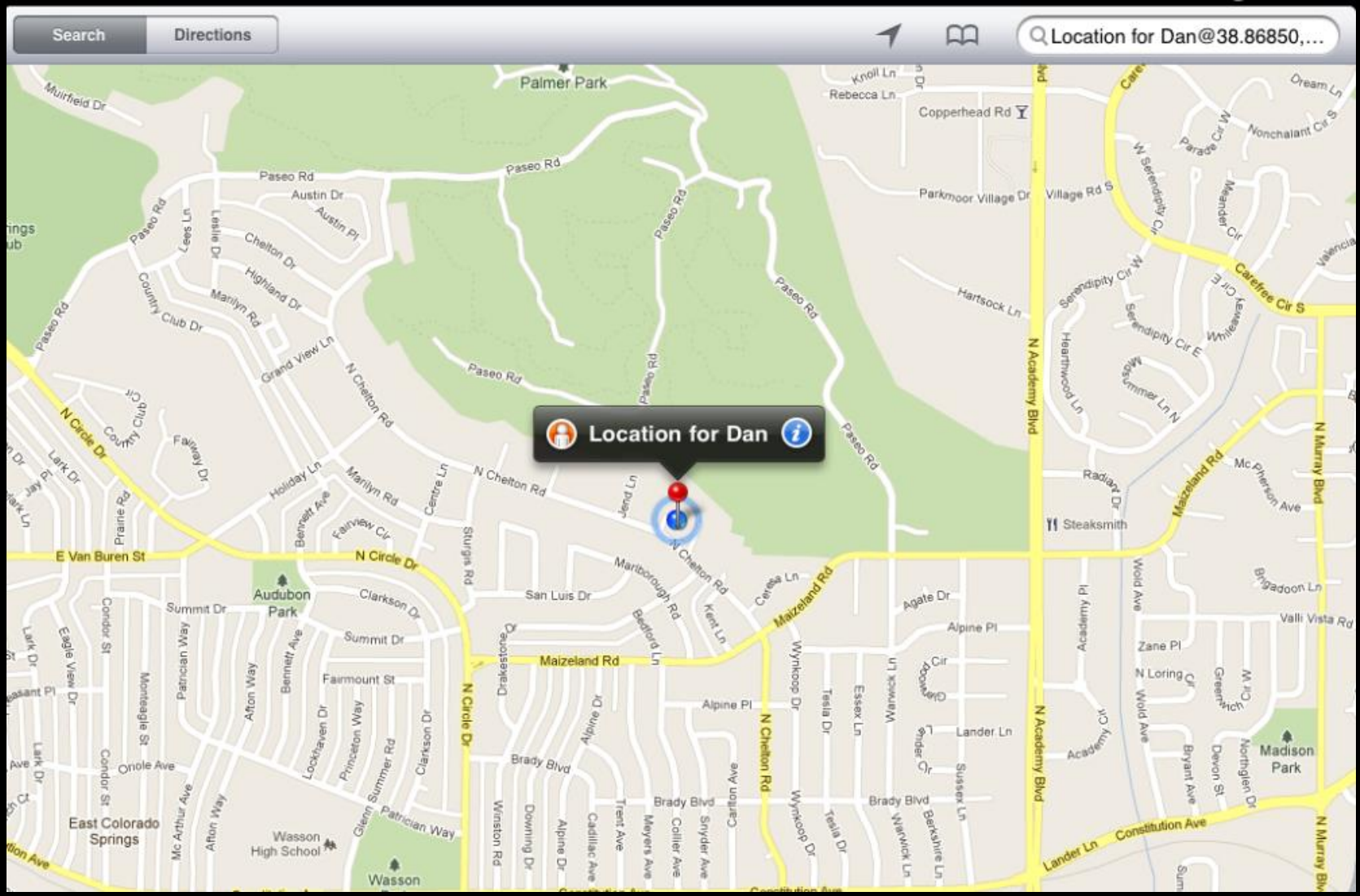
"The STP program is wildly successful. We trained two groups of ten individuals in the first year of collaborations with our governmental partners. The first group increased their public rides by 110% and the second group increased their rides by 84%."

Location-aware and GPS Applications – WayFinder



ARCA
Opening Doors.

Location-aware and GPS Applications – Community Sidekick



ABLELINK
TECHNOLOGIES

AbleLink Technologies

618 North Nevada Avenue
Colorado Springs, CO 80903
719-592-0347
www.ablelinktech.com
info@ablelinktech.com