

February 18, 2020

*From Idea to Market: Eatwell, Assistive Tableware for Persons with
Cognitive Impairments – Sha Yao*



ENGR110/210

Perspectives in Assistive Technology



David L. Jaffe, MS
Instructor

14

Years

Questions, Comments, Suggestions, or Concerns?



Please notify me of your comments, suggestions, and concerns so I can explain / address / correct them.

Attendance Sheet, Evaluation Form, and Meet with Dave Signup

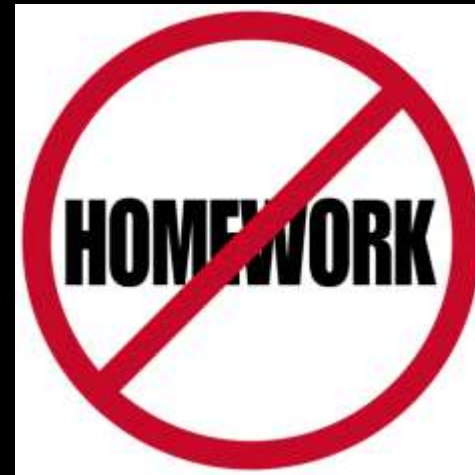


For all students:

- Attendance Sheet
- Meet with Dave signup

For everyone:

- Class Session Evaluation Form

A 'Class Session Evaluation Form' for 'Perspectives in Assistive Technology - 2020'. It includes sections for 'Are you an enrolled student?', 'Speaker's overall presentation', 'Presentation content', and 'Submit your comments, questions, and suggestions'. At the bottom, there are checkboxes for 'How much did you learn from today's lecture?' and 'How is your stress level?'.

Class Session Evaluation Form

An 'Enrolled Student Attendance List' for 'ENGR1100210' on 'January 7, 2020'. It is a table with columns for 'Student Name', 'Enrollment Number', and 'Attendance Status'.

Attendance List

A 'Sign Up to Meet with Dave' form. It includes the text 'Before class outside Thornton 110' and 'After class in Thornton 110'. There is a table with columns for 'Date & Time' and 'First Name, Last Name & Specific 15 minute time block'.

Meet with Dave Sign Up



Future Class Sessions



- ▶ Make up future class sessions now that you have to miss



Mid-term Evaluation Comments

“Constant Comment.”[®]



- ▶ Good comments, bad comments, how to evaluate?
- ▶ Conflicting comments on content and/or presentation
- ▶ There may be just one comment on an issue, either positive or negative
- ▶ Everyone has a different perspective, opinion, and level of understanding
- ▶ Not everyone is “right” due to emphasis, misunderstandings, bias, and subjectivity
- ▶ Some evaluators may pick up on a specific detail, not on your major point, so emphasize major points on a separate slide
- ▶ **Make you own honest judgment on comments that could be helpful**
- ▶ Same goes for your mid-term report markup
- ▶ What do the scores mean with respect to your grade?

Passengers' Signup for Field Trip to VAPA next Tuesday



Driver & Passenger Signup Sheet
VA Palo Alto Health Care System
 Tuesday, February 25th
 Departure Point and Time: Littlefield Center @ 4:30pm (unless otherwise arranged)

Driver's name, cell & email:	Dave Jaffe	650/892-4464	davejaffe@stanford.edu
Car make, model, color:	Black Honda Civic Si		
Passengers:	1. Name: _____	Cell: _____	
	2. Name: _____	Cell: _____	
	3. Name: _____	Cell: _____	
Driver's name, cell & email:	Kelsey Reed		
Car make, model, color:	Gray Toyota Camry Hybrid		
Passengers:	1. Name: _____	Cell: _____	
	2. Name: _____	Cell: _____	
	3. Name: _____	Cell: _____	
	4. Name: _____	Cell: _____	
Driver's name, cell & email:	Lois Manners		
Car make, model, color:	Orange Jeep		
Passengers:	1. Name: _____	Cell: _____	
	2. Name: _____	Cell: _____	
	3. Name: _____	Cell: _____	
Driver's name, cell & email:	_____		
Car make, model, color:	_____		
Passengers:	1. Name: _____	Cell: _____	
	2. Name: _____	Cell: _____	
	3. Name: _____	Cell: _____	
	4. Name: _____	Cell: _____	
	5. Name: _____	Cell: _____	

- ▶ Please sign up with a car pool driver. Unless otherwise arranged, the departure point from Stanford is the Littlefield Center.
- ▶ Let me know if you are biking, a solo driver, or driving with specific classmates so I can send you a map and directions.
- ▶ Please make your best effort to arrive at the Littlefield Center at 4:30pm promptly.

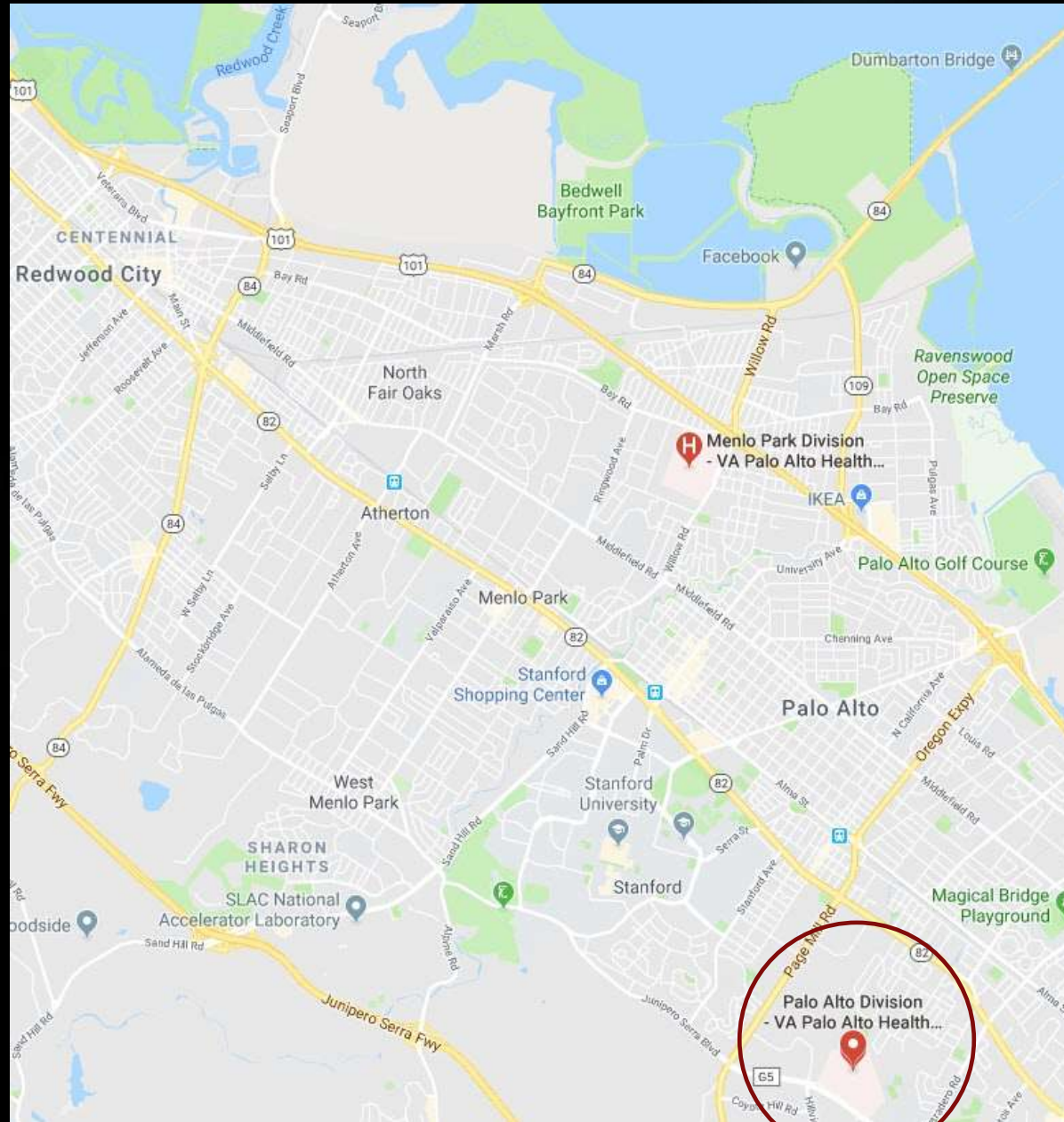
Pickup at Littlefield Center



VA Palo Alto

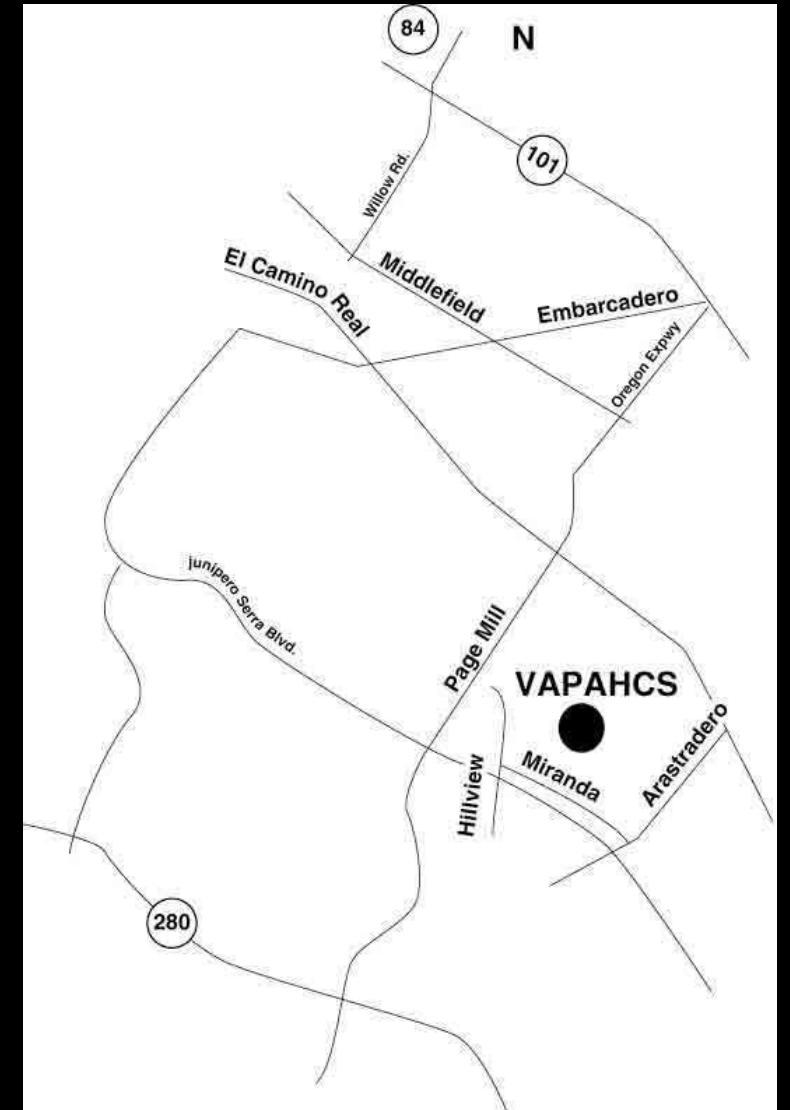
3801 Miranda Ave.
Spinal Cord Injury Service
Building 7 - Room E111

[Google Map](#)



Directions to VA

- ▶ From Littlefield, take Palm Dr toward El Camino Real
- ▶ Turn right on El Camino Real (going south)
- ▶ Turn right onto Page Mill Road
- ▶ Turn left onto Foothill Expressway
- ▶ Turn left at light on Hillview
- ▶ Make an immediate right onto Miranda Ave.
- ▶ Road curves to the left and parallels Foothill Expressway
- ▶ Turn left into VA grounds at the American flag
- ▶ Park in the large lot on the right
- ▶ Enter north entrance of Building 7
- ▶ Make your way to Room E-111 - the first room on the right after entering the building
- ▶ Lost or late? - call Dave at 650/892-4464



Flying in?



Helicopter landing pad

Torn down RR&D



Destination
- Building 7

Park in this lot

Main entrance



BUILDING LEGEND

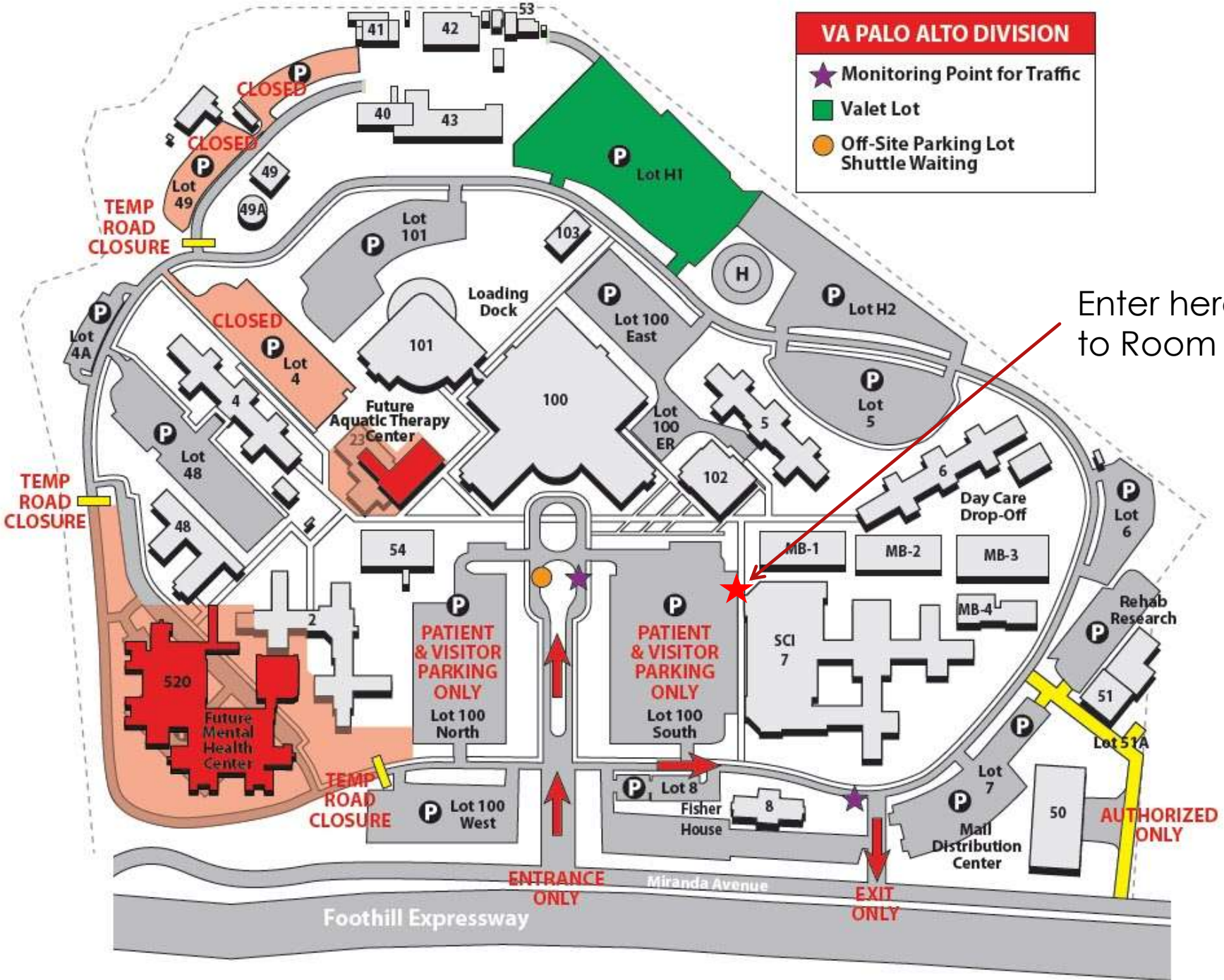
- | | |
|------------------------------------|------------------------------|
| 4 Research | 105 Learning Center |
| 5 Primary Care Clinics | 500 Future Polytrauma Center |
| 6 Laboratory & Administration | 520 Mental Health Center |
| 7 Spinal Cord Injury Center | 530 Wellness Center |
| 8 Fisher House | MB1 Compensation and Pension |
| 9 Defenders Lodge | MB2 Polytrauma |
| 50 Warehouse | MB3 Administration / AFGE |
| 51 Specialized Research Center | MB4 Research Annex |
| 54 Research | PS1 Parking Structure 1 |
| 100 Hospital | PS2 Parking Structure 2 |
| 101 Administration | T6B Whistle Stop |
| 102 Diagnostics & Radiology Center | T6 Research |





VA PALO ALTO DIVISION

- ★ Monitoring Point for Traffic
- Valet Lot
- Off-Site Parking Lot Shuttle Waiting



Enter here & proceed to Room E111

Upcoming class sessions



- ▶ Thu, Feb 20th - Assistive Technology Faire
- ▶ Tue, Feb 25th - Field Trip to VA Palo Alto Spinal Cord Injury and Brain Injury Services
- ▶ Thu, Feb 27th - Designing Exoskeleton and Prosthetic Limbs that Enhance Human Performance

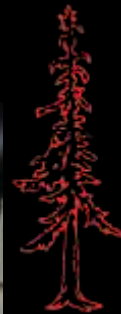


Assistive Technology Faire

- ▶ Ten vendors of products and services
- ▶ Please help arrange chairs & tables
- ▶ Check out all vendors
- ▶ Report on the coolest thing you saw



Field Trip to the VAPA



Top Employment Choices



- 14 Other
- 6 Google
- 3 Apple
- 2 Microsoft
- 1 SpaceX
- 1 Tesla
- 0 FaceBook
- 0 Oath
- 0 Twitter

Write-ins:
IDEO
No idea



Mid-term Reports Due Today



- ▶ Please note that a **longer** report is not necessarily better. I would much rather read a **shorter, concise, and well-written** report than a longer, poorly written report with grammatical and spelling errors.
- ▶ If your team needs additional time to complete, proofread, and refine your report, you can **request a one-day extension**.

Discussion Topic Preferences



- 33 - Assistive Robotics - Robotic technology benefitting people with disabilities and older adults
- 28 - In the News
- 24 - ~~Ten Commandments of Making - Adam Savage's Maker Faire video~~
- 23 - ~~Ethical / Moral Dilemmas Related to Disability~~
- 22 - ~~Product Pricing~~
- 21 - **Overview of Accessibility - How this design feature relates to products, with many examples**
- 21 - The Upside of Failure - Learning from prototypes that didn't work
- 16 - ~~Vintage Assistive Technology - Products and devices from the past~~
- 16 - Video Theatre - Watch and discuss videos of new products and prototypes
- 14 - Who is Disabled? - Making a determination with limited information
- 10 - Innovative Marketing Metrics - How we use words to measure and advertise
- 7 - Famous people with disabilities - Focus on TV characters



Overview of Accessibility



A11y

What is Accessibility?



Accessibility is a:

- ▶ Property
- ▶ Design concept
- ▶ Design specification
- ▶ Design consideration
- ▶ Design goal
- ▶ Product feature



What is Accessibility?



That enables people:

- ▶ Individuals with disabilities:
 - ▶ Sensory
 - ▶ Physical
 - ▶ Cognitive
 - ▶ Neurological
- ▶ Older adults
- ▶ Kids
- ▶ Everyone

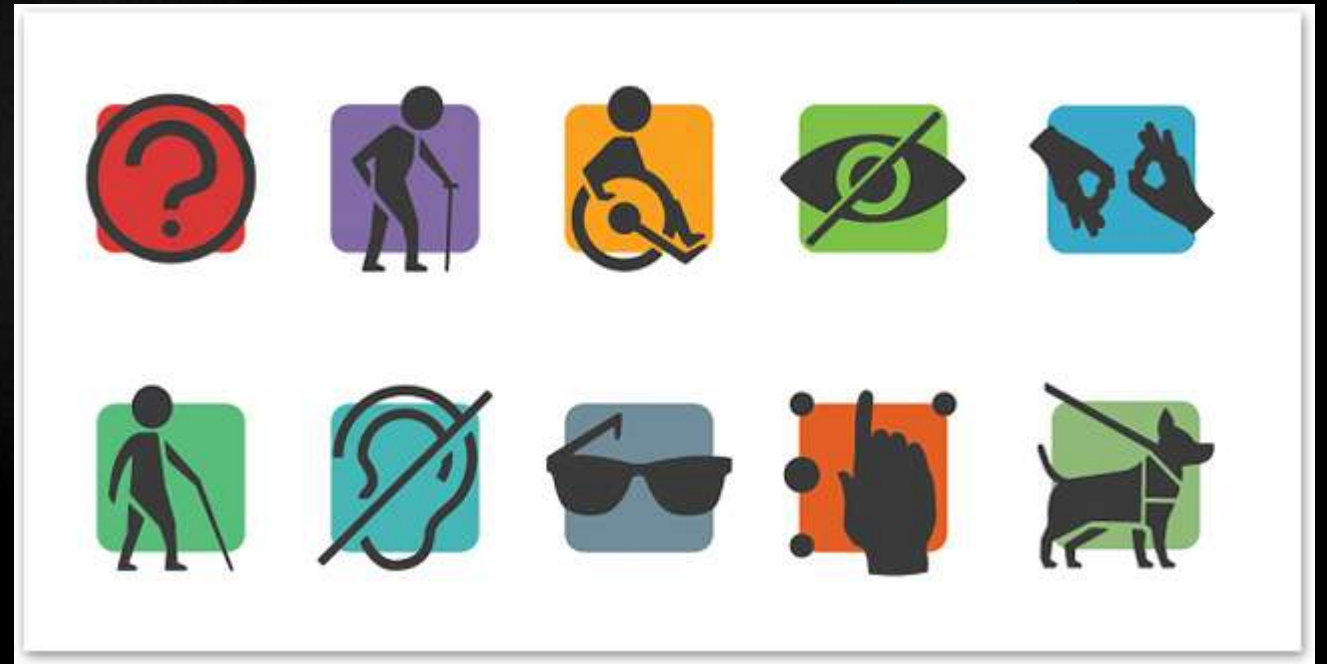


What is Accessibility?



To better interact through:

- ▶ Sight
- ▶ Sound
- ▶ Touch
- ▶ Smell
- ▶ Mobility
- ▶ Understanding
- ▶ Communication
- ▶ Manipulation
- ▶ Teaching / learning

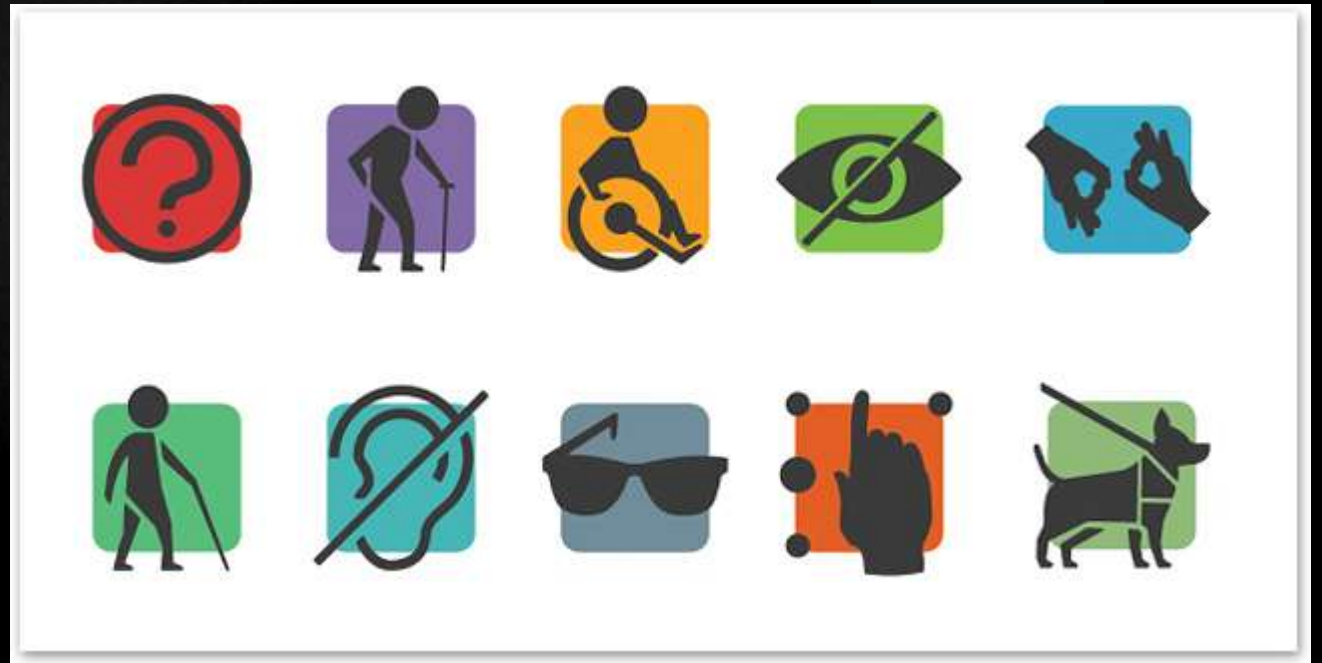


What is Accessibility?



Through an enhanced hardware and / or software user interface:

- ▶ Alternate ways
- ▶ Augmented ways
- ▶ Customized ways
- ▶ Preferred ways



What is Accessibility?

For these purposes:

- ▶ Education
- ▶ Vocation
- ▶ Recreation
- ▶ Daily living

Little Things Do Make A Difference

Little Things Do Make A Difference

Little Things Do Make A Difference

Little Things Do Make A Difference



The Goal of Accessibility



The ultimate goal of the accessibility movement is to ensure that everyone - regardless of ability or disability - has an **equal chance to participate in society**. In the face of constant technological change, this becomes more difficult but also extremely necessary. The only way to allow people with disabilities to **engage fully** in the activities that interest them is to give them access to all the possibilities open to everyone else, including those offered by twenty first century technology.

Accessible Technology in the 21st Century

- The Future

Examples of Devices that Provide Accessibility



Building Access

- ▶ Door Opener
- ▶ Ramps
- ▶ Workspaces
- ▶ Signage
- ▶ ATMs



Computer Accessibility



As the computer age continues, more and more technology is being created to make computers and the internet accessible for people of all ability levels.

For **visually impaired users**, programs offer **audio description** or **screen reading**, while **monitor settings** can be modified to make visual reading easier or **braille embossers** can be added as **alternative output devices**.



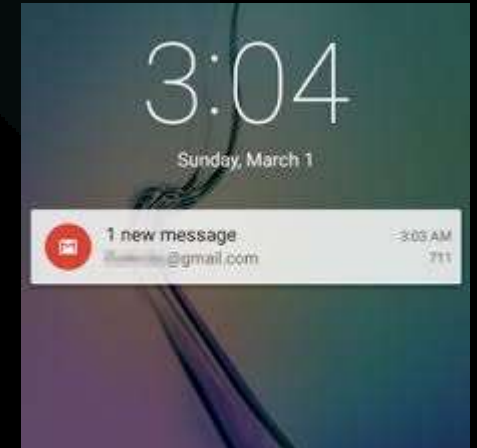
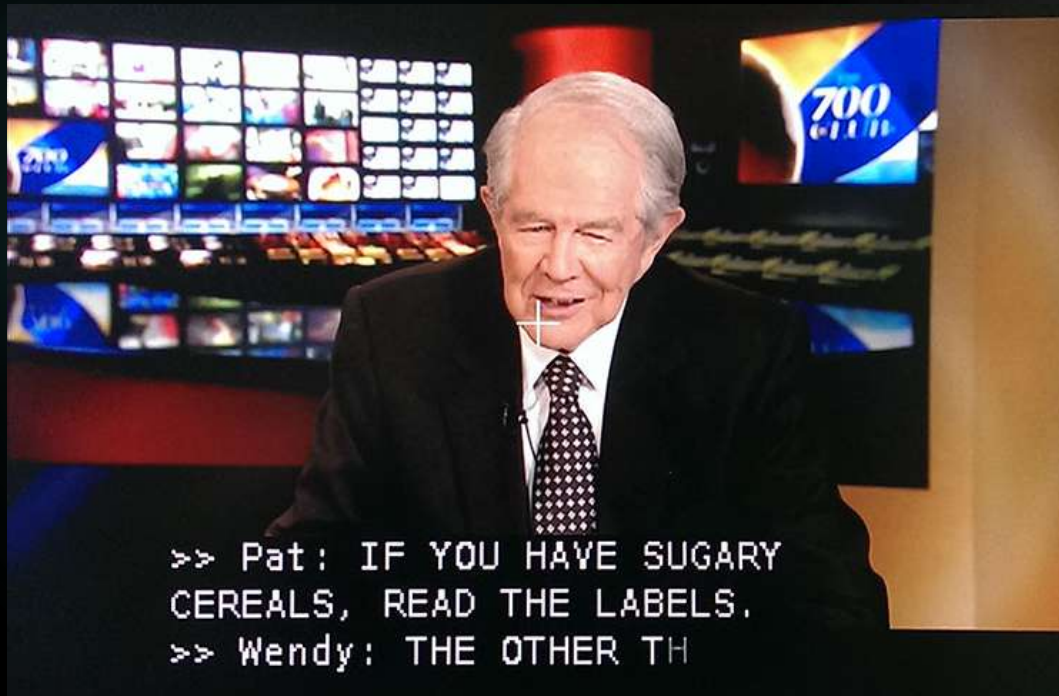
Accessible Technology in the 21st Century

- Introduction

Computer Accessibility



For individuals with hearing difficulties, **captioning** and **visual notifications** instead of sound can offer more freedom in using a computer.



Accessible Technology in the 21st Century

- Introduction

Computer Accessibility



Adaptive keyboards and mice allow **people with motor disabilities** to get their input into a computer, while **speech recognition** is software that allows control of a computer by voice.



Accessible Technology in the 21st Century

- Introduction

Computer Accessibility



For those with **cognitive disabilities**, programs can be set up to **read text aloud while it is displayed**.



Accessible Technology in the 21st Century

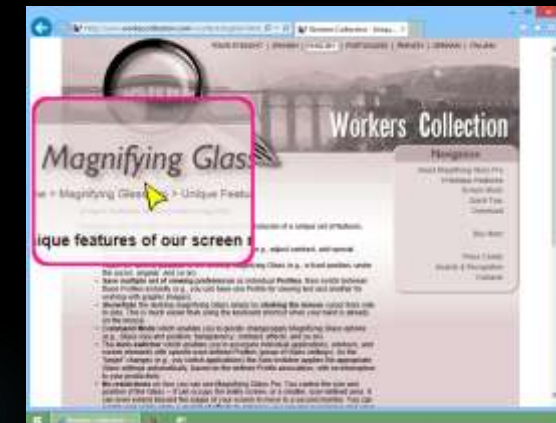
- Introduction

Examples of Devices that Provide Accessibility

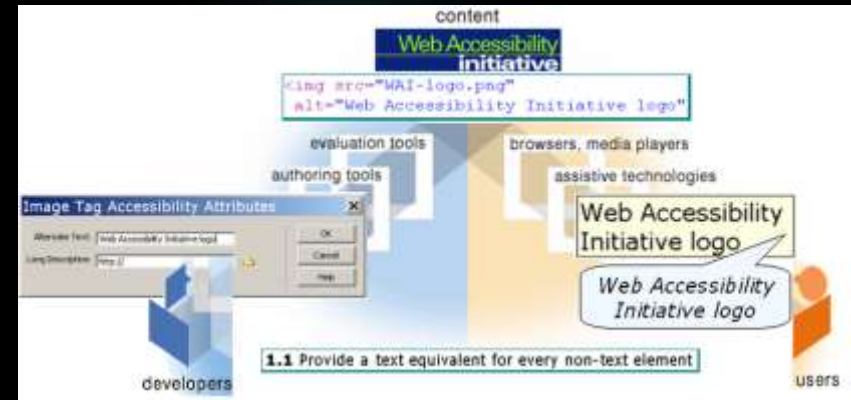


Computer Access

- ▶ Alternative Mouse
- ▶ Alternative Keyboard
- ▶ Screen Readers
- ▶ Voice Recognition
- ▶ Screen Magnifiers
- ▶ Braille Displays
- ▶ Captioned videos



Accessible Webpages



WCAG Guidelines (1 of 2)

- ▶ Provide equivalent alternatives to auditory and visual content
- ▶ Don't rely on color alone
- ▶ Use markup and style sheets and do so properly
- ▶ Clarify natural language usage
- ▶ Create tables that transform gracefully
- ▶ Ensure that pages featuring new technologies transform gracefully
- ▶ Ensure user control of time-sensitive content changes

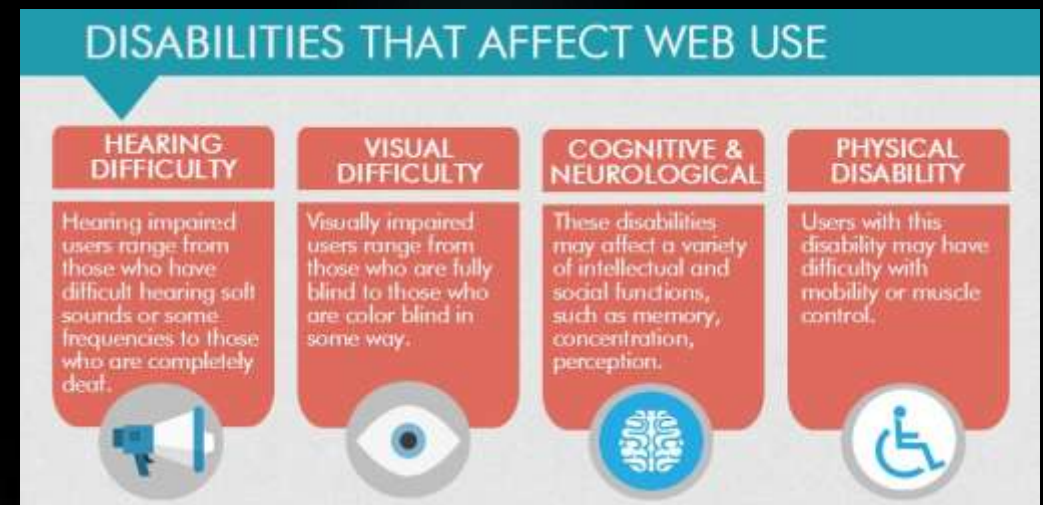


Accessible Technology in the 21st Century
• Website Accessibility

Accessible Webpages

WCAG Guidelines (2 of 2)

- ▶ Ensure direct accessibility of embedded user interfaces
- ▶ Design for device-independence
- ▶ Use interim solutions
- ▶ Use W3C technologies and guidelines
- ▶ Provide context and orientation information
- ▶ Provide clear navigation mechanisms
- ▶ Ensure that documents are clear and simple



In Summary



Accessibility is the design goal, feature, or criteria that allows people of differing abilities to **share common resources**.

In Summary



Examples of shared common resources are:

- ▶ buildings
- ▶ transportation systems
- ▶ consumer products including computers and software
- ▶ institutions such as schools, banks, government facilities, voting places
- ▶ facilities such as parks, playgrounds
- ▶ information systems such as books and the internet

In Summary

In many instances, the use of an assistive technology device can provide needed access to an otherwise inaccessible resource.



Thursday



Assistive Technology Faire

10 Vendors of products, projects, and services



Today



From Idea to Market: Eatwell, Assistive Tableware for Persons with Cognitive Impairments

Sha Yao

Sha Design

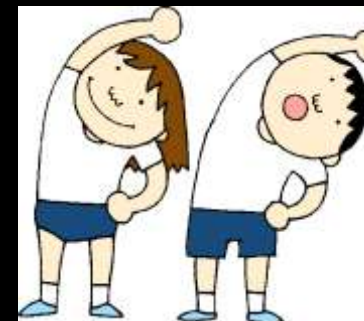
Short Break



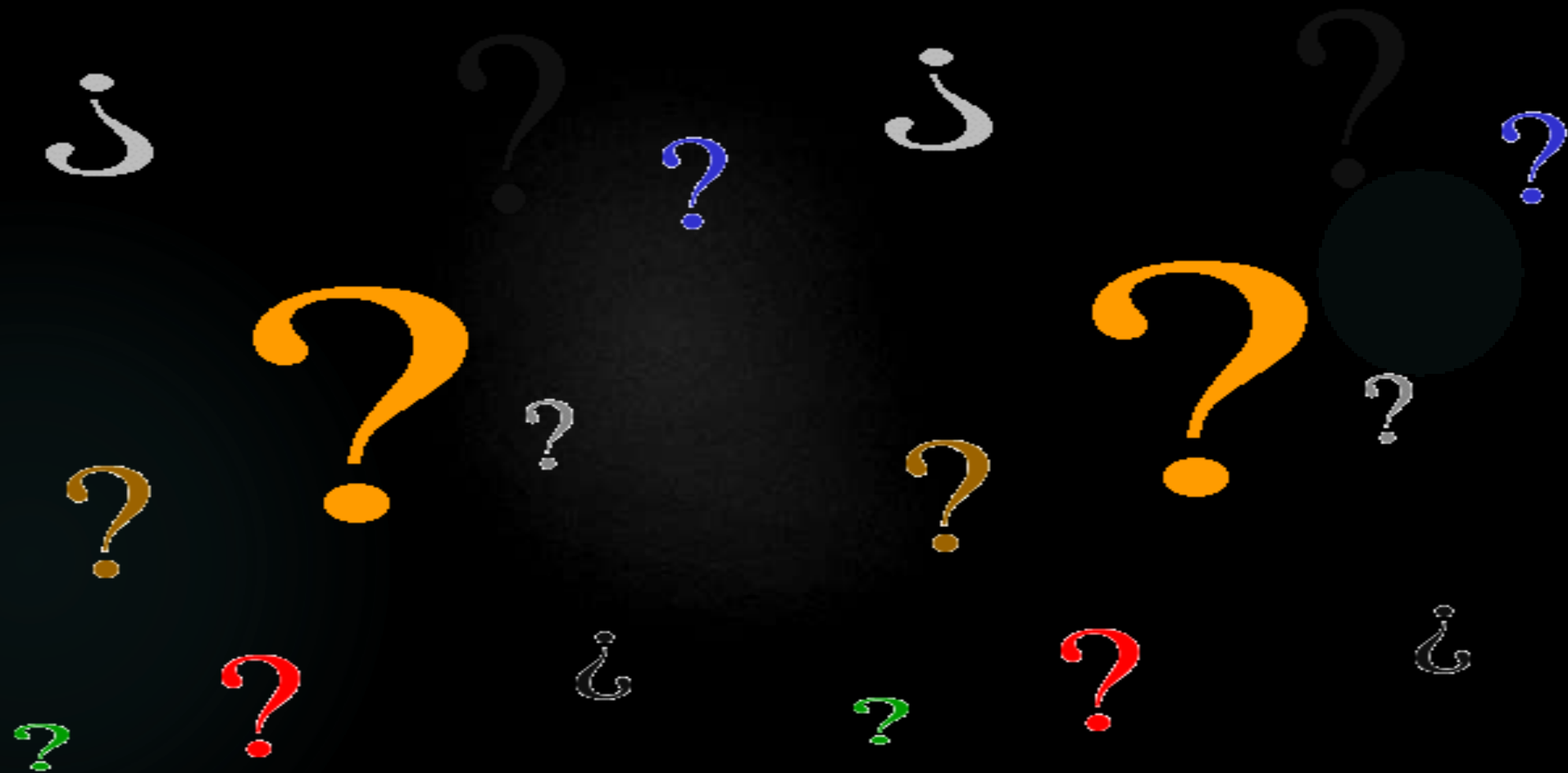
Break Activities



- ▶ Sign attendance sheet
- ▶ Grab a cookie
- ▶ Stand up and stretch
- ▶ Take a bio-break
- ▶ Text message, web-surf, email
- ▶ Talk with classmates
- ▶ Reflect on what was presented in class



Questions?



Adjourn



class dismissed



Laptops Galore



Time for Questions?



End the class

