



DESIGNING SYSTEMS FOR REMAINING 15% POPULATION.

Making the applications work for people
with disabilities

My journey & contribution

- Discovering Screen readers
- Book famine
- 4 track player
- Developing open source and free screen reader



How many persons can benefit from accessible technologies?

- 1.2 billion: Estimated number of people with disabilities in the world
- In United States alone, there are 74.6 million people with disabilities (Health, United States).
- In Great Britain, there are 11 million people with disabilities according to Family Resources Survey 2010/11.

- Approximately one in four (27%) have a visual difficulty or impairment.
- One in four (26%) have a dexterity difficulty or impairment.
- One in five (21%) have a hearing difficulty or impairment.
- One in five (20%) have a cognitive difficulty or impairment and
- Very few (4%) have a speech difficulty or impairment.
- In total 60% working age people could benefit.
- Out of which 22% are persons with disabilities.
- So, 38% persons without disabilities benefit from accessible technologies.

Forrester (2003)



How can we contribute?

Design software with accessibility in mind:

- Multisensory
- Programmatically Access
- Device Independent Input
- Enough contrast
- Consistent Navigation
- Simple interface



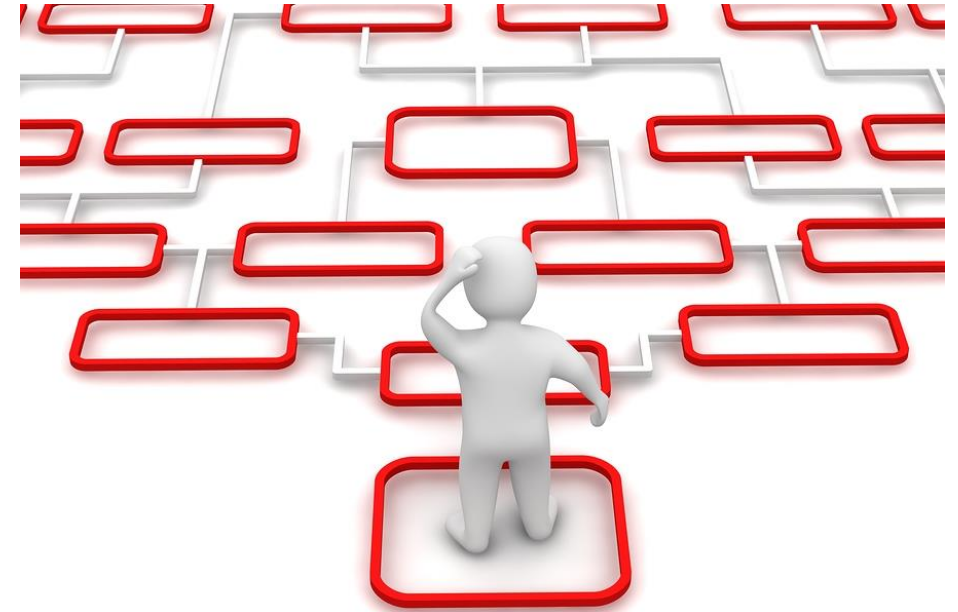
Multisensory

- Text Alternative for images
- Caption / Subtitles / Transcript
- Audio alternatives for video
- Resizeability
- Contrast



Programmatic Access

- For web: using HTML structures as intended
- For desktop” using standard controls
- For Mobile: standard controls
- For custom controls: using accessibility API
- Test Automation



Device Independent Input

- Keyboard usage
- Touch screen
- Complex input such as Calendar



Consistent Navigation

- **For web:** all the pages have consistent menu options
- **For Mobile apps:** consistent placement of tabs



Simple interface

- Well-spaced UI controls
- Good gap between UI controls
- Simple language



What organizations could do?

- Support projects that build accessible infrastructure
- Engage with persons with disabilities for testing and user feedback
- Non-Visual Desktop Access(NVDA)
- Touche: Braille Display



Accessibility as insurance



Key Take Away

- Intention matters
- Leverage available Resources



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