Google Accessibility Group

Accessibility in the Cloud

Boldy venture forth, ye brave explorers!

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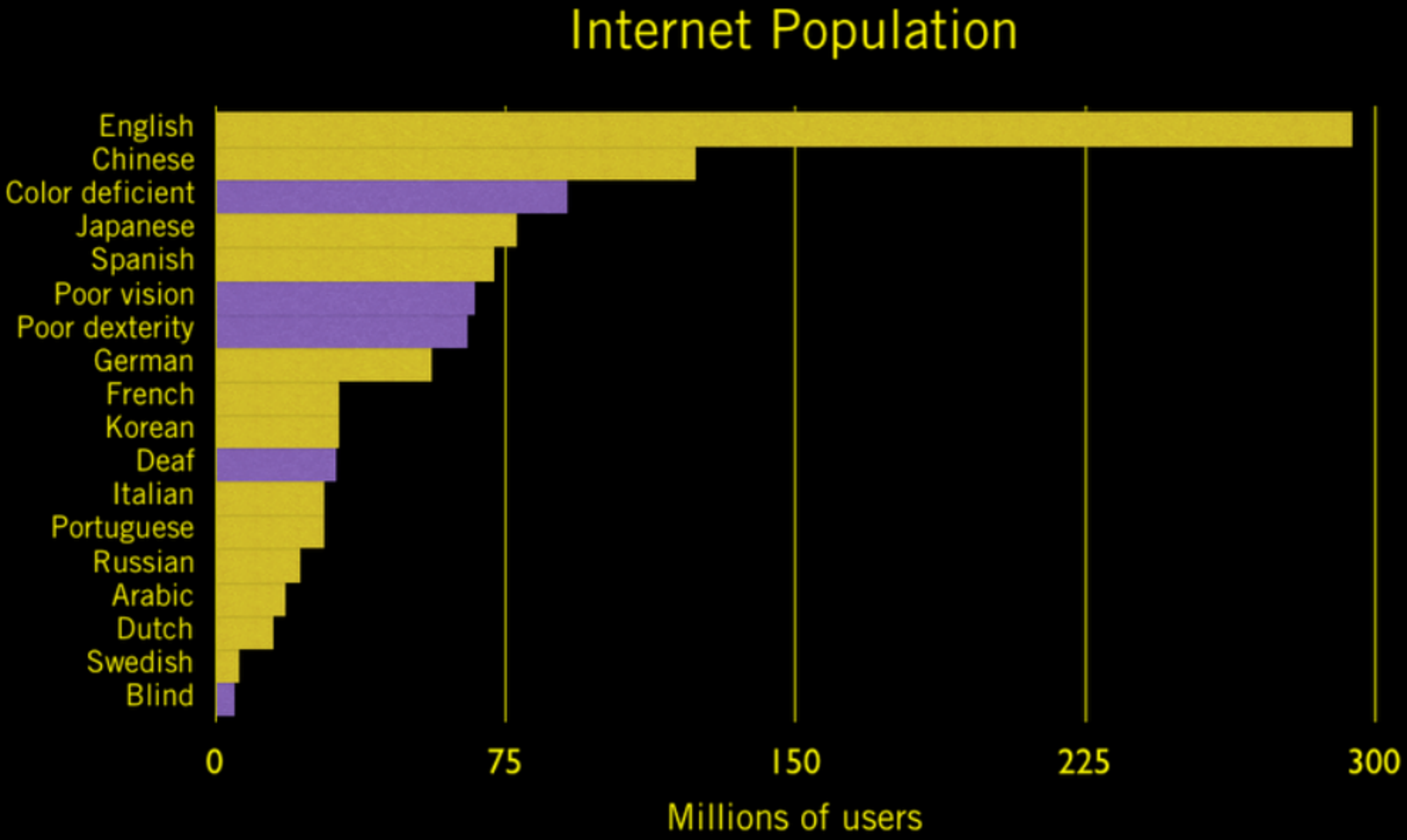
http://google.com/Accessibility

Who am I?

- PM/SWE, part of a Dev team dedicated to Access Engineering
- With Google for the past 4 years
- Education
  - MS in Computer Science (Chalmers Uni. of Tech., Sweden)
  - PhD in Computer Science (University of Washington, Seattle)
- Research on Education and Technology for the visually impaired
- Project work includes:
  - Client-side: Toolbar, Desktop Search, Chrome
  - Web Apps: Gmail, Apps, Blogger, Maps, Transit, …

Why? Users!



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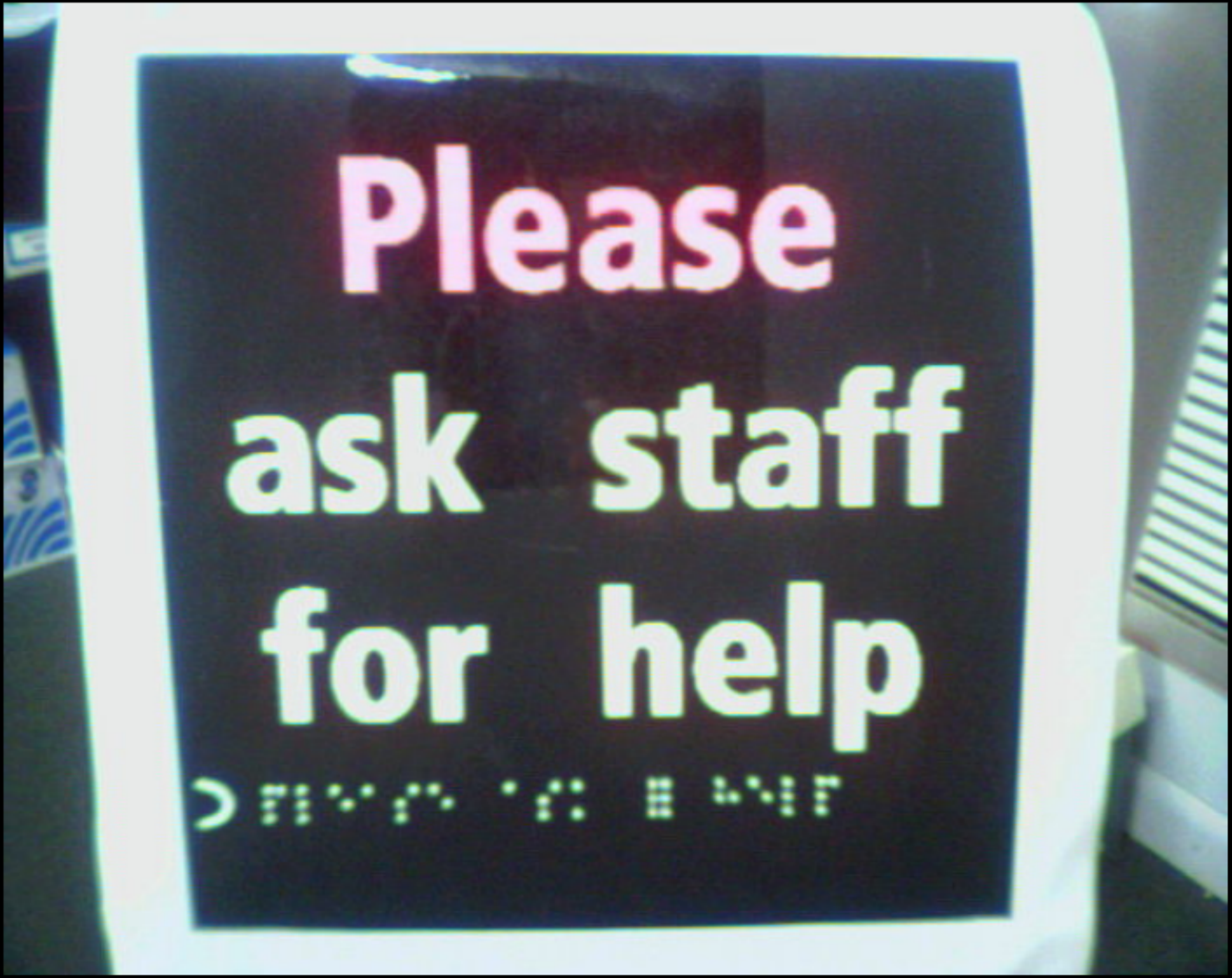
The Web as a Platform



FAIL!

The Web as a Platform

- Platform layers are changing
  1. Low-level support framework (TTS, fonts, themes)
  2. JavaScript APIs
  3. Web Applications (GWS, Gmail, Docs)
- Graceful Degradation vs. Progressive Enhancement
- The Web has the distributed data
  - Universal Access Engineering makes it available through any channel
- Personalization and user goals are key
  - Every level in the stack is customizable
  - APIs provides the muscle
  - User is less dependent on the applications

Designing for Access Workflows

- Focus on workflows, rather than UI components
  - Most common tasks need to be optimized
  - Tab/arrow navigation often too slow
  - Enumerating workflows often highlight common roadblocks
  - Workflows drill down to component-level access
- Designing your product for optimized workflows
  1. Optimize workflows with keyboard and AT support
  2. Expose a public page-level API, addressable from JS
  3. Provide a clean DOM, with non-obfuscated hooks
- Document and empower the curious user!

Supporting the brave explorers

- Exploration in the document model Web
  - Web 1.0: Headings, links, frames to build cognitive model
  - AT optimized for quick access to key element types
  - Users have developed personalized techniques for exploration
- Need support for exploration in Web 2.0
  - Web 2.0: application mode and non-document structure
  - Sighted users rely on visual cues learned from the desktop
  - Answer: contextual, on-demand exploration aids?
  - Community can work together to build familiarity

Example: Google Reader Access

- Extremely keyboard friendly
  - Access keyboard shortcut through '?' or Reader Help Center
  - Navigate items with 'j' and 'k'
  - Keyboard bindings available for starring, sharing, commenting, etc
- Delivers screen reader augmentation
  - Follow link 'click here for ARIA enhanced Google Reader'
  - Screen reader support in ARIA-enabled browsers
- Applies magnification lens for low-vision users
  - Follows keyboard navigation
  - Provides customization through '-' and '='
- Zero impact on latency!

Conclusion

Collaboration and openness benefit everyone

Customization is key
Configure once, work everywhere

Focus on workflows, then widgets

Develop solutions with little or no latency impact

Thank you!

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Q & A

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