Accessible collaboration tools

How do you collaborate?

Related Files

- Summary Presentation (PDF Format; text alternatives available in-line below)
- Planning whiteboard photographs Morning | Afternoon

Digital Culture (Brazil)

- a place for NGOs to share their cultures through audio, video etc.
- sharing local culture
- all free open source

Digital Infrastructure (Brazil)

- open source system called GUIGO
- java open source platform for social networks
- produce knowledge collectively
- document editing
- upload files
- communication - audio, text
- share ideas - discussion lists, instant messaging

ScotiaBank

- development groups are distributed
- collaboration is very immature - using Jive
- currently using telephone networking
- using SharePoint
- social networking is not well adopted and they aren't using open source
- nothing is accessible in the frameworks currently
- they have the accessibility knowledge but the platform is not accessible
- video, chat, telecom solution doesn't exist in an enterprise solution

IBM

- internally they use Lotus Notes and collaboration tools
- distributed team around the world so collaboration is essential
- challenge: awareness about accessibility
- people build team rooms etc and don't take accessibility into account even though it is possible to do so
- raising awareness and ensuring people follow accessibility rules

Peer to peer University

- enabling learning outside institutions
- thinking about how people communicate
- wiki, blogs, voice, groups
- how does communicating effect how learning happens
- how to build communities quickly
- building on Open Source solutions

Cross disability tele collaboration tools (Greg)

Fluid

- mailing lists
- open philosophy - people are communicative
- use and IRC channel that is logged
- daily stand up meetings using Connect - web conferencing tool
- every day there is a dance of 'can you hear us'?
- screen sharing
- Open source has an established way of working - email list, bug tracker, source code repository.
- designers use skype, mailing list, irc also. One difference with design is that with development you can copy and paste code to talk about but with design there is equivalent.
- communicating visual ideas is very difficult
- skype screen sharing, ichat screen sharing including controlling the other computer but only works with apple machines
- pair programming with different tools - iChat, Skype, instant messaging

Gaps

- reliability
- sharing more then text

- openness - lack of open source solutions
- integration - all in one tools
- tele-collaboration - video, audio, screen sharing
  issues: captioning a presenter - difficult to caption visuals and interactions such as pointing at a particular part of a board
- techniques for handling multiple streams - audio, video, captions, chat
- collaboration tools need to identify people needs
- captioning while operating a collaboration tool
- presentation formats are inaccessible and need to be converted
- tools are needed for language translation
- mobile devices have power issues - how do you do text conversion etc on them?
- rich media and bandwidth issues
- how do we have QOS without discrimination
- need to make use of user preferences, mobile devices
- ability to turn down or turn up audio streams

Solutions

- looking at caption correcting by people that are present
- 'revoicing'
- timewarp - freezes a live recording and moves back in time. You can then catch up later
- live remote assistant - a single assistant could help many people instead of going to a lecture for a single question
- these could be plug in services
- could outsource to other countries
- ARIA live regions in collaboration tools
- Canvas and SVG
- shadow document - ARIA support
- longer term - exposing the accessibility APIs through javascript
- Google has a tool to take an SVG document and convert it to Flash
- touch and read & touch and explain
- caption synced speaker identification
- cross platform standard for accessibility
- the browser can map to the accessibility APIs

Priorities

- a common open source, accessible base - includes security
- build out modules from there
- leverage the open web - HTML 5 for consumptions and production

Exercise: Roadmap a project that we could build to solve our biggest issues

Problem Statement

Build accessible open collaboration tools that are interoperable, modular and adaptable and support multiple streams of media.

- interoperable
- modular
- adaptable
- secure & private
- "always on"
- degrades gracefully
- scales

The Vision

- all the tools we need and use but accessible - e.g., Breeze is a rich channel for communication, but has poor accessibility.
- simple to use
- annotations (including rich annotations & text alternatives)
- pacing and control of time
- captioning
- support for diversity - language, literacy, device and bandwidth
- user testing remotely
- simultaneous streams
- built in support for real people
- content - more then just text/audio/video
- space (tools) - open, web, desktop
- infrastructure - stable, secure, robust
- standards and governance

Features

- text chat including real time
- audio with enough resolution to be accessible
- video with enough resolution to be accessible
- text/ASL alternatives for audio, video and images
- modular architecture and interoperable
- secure and private
- degrades gracefully
- scales
- archive with error correction

Text

- chat
- real time chat
- annotations
- captioning
- language (density/complexity, internationalization)
- equivalents to audio/video
- multiple editors

Audio

- Quality
- signal to noise
- eliminate background noise
- frequency range
- frequency shifting
- QOS
- lag
- multi-stream
- spatial distributions of person speaking
- audio descriptions and support for multiple streams

Video

- resolution and frame-rate for signing, lip-reading, finger spelling
- bi-directional resolution and frame rate
- manage multi-streams

Cross cutting

- language
- ASL
- internationalization
- simplification
- equivalents to audio/video/text

Logistics

- turn-taking/hand-raising/cueing
- user identification (e.g. who is the ID of the person speaking)
- lag between modes
- focus & zooming modes
- common areas that support drifting in & hanging out
- voting
- private communication
- idea catcher
- multi-modal presentation
- pacing and control of time - e.g. being able to jump back in time, or to slow the progression of time
- notifications and errors
- setup assistance
- auto configuration & personal preferences

Technology

- shared accessibility API access - cross platform
- open down to the protocol level

Content, Space, & Infrastructure

- content includes (at least) text, audio & video
- space is the tools: open, Web, & desktop

- infrastructure: stable, secure, & robust

Roadmap