Tracery:
Enabling Informal Mixed-mode Expression on the Web

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Outline:

Architectural Sketching:
- Sketchbooks
- Design
- Overdrawing

The Web:
- Web-based text
- Web-based graphics

Tracery:
- Applet
- Deployment paradigms

Questions:
Architectural Sketchbooks

Text + Graphics

- Comments & Observations
- Location-specific notes
- Recording & data capture

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Design Drawing

- Ideation/Cognition
- Gesture/Immediacy
- A-/Synchronous
- Impression
- Abstraction
- Recording

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Overdrawing & Tracing

Done by many players for many reasons:

- Design Exploration (self)
- Mentoring (teachers)
- Feedback (anyone)
- Shared cognition (colleagues)
- Comparison (anyone)
Web-based Content Creation:

- HTTP delivers graphics fine
- HTML enables image display
- HTML & JS provide input:
  - Text (text & textarea input types)
  - Selection (checkboxes & radio buttons)
  - Upload of files from local file system
  - AJAX delivers key-stroke level dynamics
- Server-side CGIs & scripts process & store the input.
- HTML 5 will include more

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Current SOTA for text online:

AJAX: Google Docs

Authoring interface:
- sophisticated
- multi-author
- synch or asynch

Web interface
- live threaded document
- Real time update

http://wave.google.com/
Current SOTA for graphics online:

HTML 5: Canvas/Javascript

Drawing interface:
• sophisticated, standalone

Web interface
• standalone + upload

http://mugtug.com/sketchpad/
Current SOTA for graphics online:

Offline Authorship

Drawing interface:
• varies

Web interface
• upload, tag, browse
• comment

Note scanned page from hand-drawn sketchbook and text-based comments…

http://www.flickr.com
Current SOTA for graphics online:

Clients & Servers:

Drawing interface:
- varies

Web interface
- capture, post & playback
- comment

http://www.sketchcast.com/

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Current SOTA for graphics online:

**SketchCrawl.com:**

- **Drawing interface:**
  - varies (mostly analog)

- **Web interface**
  - scan & upload
  - text comments

http://www.sketchcrawl.com/forum/
Limitations current models:

- File uploads are awkward
- Coupled client-server systems require special servers.
- No simple tools that integrate smoothly with existing server systems.
- Site paradigms for graphic “conversation” are limited.
The result? Interactive text online

- Commerce & entertainment: shopping carts, reservations, iTunes
- Bulletin Boards: Craig’s list, eBay, etc.
- File-sharing sites: music, photos, videos

Q: What’s missing? Informal graphical exchanges
What designers need:

- Freehand sketching for immediacy.
- Personal Sketchbooks containing text and related graphics.
- Shared drawing environments for persuasion and collaboration.
- History – old drawings as well as new.
- Overdrawing
- Different website paradigms
Tracery

Two Parts:

- Browser applet for online drawing.
- PHP scripts for building websites
In the browser...

- Java applet
- Displays graphic like an `<img>` tag.
- On mouse-over, displays “Click for markup panel.”
- On click, presents drawing interface
- When done, saves to server
Drawing & Comment Window

Tracery 1.0
Sketch on and/or type your comments about the image.
Click 'Done' to post the drawing and text to the server.

Your name?

Include background image

Tracery: A project of
Drawing & Comment Window

Seed image in background, tracing layer in foreground, shown full size

variable-size line weight and color palettes

Drawing layer control

Two HTML text fields

“Submit” button

Toggle display of original

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When Done...

- Graphic is flattened, with or without the background, & formatted as a .png.
- Applet composes an http multipart POST containing text and image, and sends to server.
- Markup window is closed and browser is re-directed to a specified URL.
On the server...

- Process standard http POST with existing tools (CGI, PHP, etc.)
- Store image
- Process text input as needed: (add to database, append to file, etc.)

- Experimenting with alternative “narrative models”
Website design issues:

- The Present: What’s on top?
- The Past: What do you want to see?
- Website paradigms: Is it a BBS?
Present as ...

- Original
- Most recent
- Selectable
History as ...

- Family tree
- Edit list
- Timeline
Website paradigms:

- **Sketchbook/Journal**
  personal, serialized, cumulative

- **Collaborative Sketchpad**
  progresses, shared, re-entrant

- **Prompt & Response**
  One prompt, many responses

- **CoQuilt**
  Community creation
Tracery:

- Demo

http://quicksilver.be.washington.edu/java/Tracery
Questions for the future

- Applet affordances?
  - Draw-in-place? Vector graphics?
  - Pan & zoom?
  - RT co-drawing? (white board)
  - Show/hide text area(s)?
  - Integrate better with html forms?
  - Color-match comments with drawing color?
  - Reconstruct in JS for canvas and HTML 5?

- Add’l deployment paradigms?
  - Homework submission and feedback?
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