Project 1: CoMediAnnotate: towards more usable multimedia content annotation by adapting the UI

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1 Context
- Team
- Annotation tools: current problems, proposed solutions

2 Achievements
- Improvement of an annotation tool (SSI)
- Design and Prototyping of a new UI
- Integration of input devices into OpenInterface

3 To Do
- Finalize our (OpenInterface) components
- Produce more pipeline prototypes towards usability testing
- Port CoMediAnnotate into the MediaCycle framework
Annotated Team

UI designer ↔ input devices integrator

UI developer

annotation core integrator

UI developer ↔ interviewed expert user

Christian

Sema

Emirhan

Ceren

Dominik

Ismail
Annotation tools: current problems

- Scale: number and/or length of media elements in the database
- Reusability: isolated tools, rather than toolboxes/frameworks
- Genericity: different tools, different media, different languages...
- Accessibility: local media databases, rather than client/server apps
- Multimedia: better file formats support
- Interactivity: generally WIMP
- Workflow: lack of support of the full annotation workflow
Annotation tools: proposed solutions

- **Interactivity:** a single visual user interface that allows:
  1. to monitor signal feeds while recording datasets,
  2. optionally to add annotations while recording,
  3. to edit or correct annotations;
  4. a more natural, usable, pleasurable user interface (pen and touch).

- **Workflow:**
  1. one administrator prepares (design of a template and choice of coders);
  2. several coders record;
  3. several coders annotate;
  4. the administrator analyses results (coder agreement...).
Outline

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Timeline-based Annotation Tools: SSI wins

A detailed comparison in 3 tables is on the wiki:

1. development (quantitative)
2. context, usage (quantitative)
3. eNTERFACE participants feedback (qualitative)

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Timeline-based Annotation Tools: why SSI?

- close contact with its developers (also project participants)
- core separated from UI
- lightweight GUI:
  1. simple to understand
  2. easy to replace
- toolkit first aimed at multimodal signals annotation, towards adaptive multimodal interfaces by training

More info:
http://mm-werkstatt.informatik.uni-augsburg.de/ssi.html
Integration of SSI into OpenInterface

More info: http://www.openinterface.org
UI design proposal
UI design proposal (annotated)

Fixed Play Zone

Past Events

Future Events

Audio Track: Waveform

Video Track: Keyframes

Sensor Tracks: Frames sliding right-to-left
UI prototype in Processing
Integration of input devices into OpenInterface

- Previously available:
  - Wii Remote
  - 3D mice

- In progress:
  - multitouch devices, with two options available:
    - WM_TOUCH high-level events from Windows 7 using MT4j
    - cross-platform low-level HID using GenericHID
  - jog wheels (also reusing GenericHID)
  - pens
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Finalize our (OpenInterface) components

- Input modalities, towards:
  - finger-based navigation / annotation
  - pen-based annotation
  - manual navigation using jog wheels
- “On-demand” gesture recognition and raw device event filtering
- Granularized SSI core components
- Our timeline-based multitrack audio/video visual user interface
Produce more pipeline prototypes towards usability testing

Mice

Pen+Touch

3D Mice

Keyboards

Jog Wheels

Multitouch screen
Port CoMediAnnotate into the MediaCycle framework

More info:
http://www.numediart.org/projects/08-3-multimediacycle
Thanks for your attention, once again!

We stayed okay! ™ →

← ...and liked the social events!