AVTK - UI toolkit of OpenAV

Harry van Haaren

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Introduction

• Harry van Haaren
• OpenAV developer
• Coding Custom User Interfaces - OK
• Coding Custom Plugin UIs - lots to learn!
• Toolkits
  • GTK
  • NTK
  • AVTK
  (Ardour)
  (Non tools)
  (Fabla2 ... )
So Why AVTK?

• Audio Visual Tool Kit
• Creation of “multi media” widgets
• Interaction designed for power users
• Opportunity to improve UX in plugins
• Issue of embedding “general purpose” toolkits
Figure: Fabla2, powered by AVTK
AVTK - Details

• PUGL Window / Embedding
• Cairo Anti-Aliased vector drawing
• C++ API Not ideal - more later

• Simple easy code
• draw() gets cairo_t*
• handle() gets PuglEvent*
• value() for the widgets state
AVTK - More Details

- “Canvas” style layout
- Containers like Group List ScrollArea
- Common value() interactions provided
AVTK - Themes

- “Developer” themes
- Themes for multiple widgets
- Widgets map theme colours
- Compiled in JSON strings (TODO)
AVTK - Power User Interface?

- Right click toggle default value
- Scroll operates most widgets
- Scroll wheel + Ctrl ”select”
- Context used extensively
- Example: Load Audio Sample — Load Save File
AVTK - Tester

- Records and playback stream of PuglEvent
- Useful in a range of situations:
  - Debugging code
  - Unit tests
  - Tutorials
  - Users send logged events widget `value()` verification available **in the interface!**
- JSON serialized format
AVTK - Demos

- Widget
- Tester
- Fabla2
AVTK - Future

- If a serious effort:
  - C re-write for ABI stability
  - Easier to create language bindings
  - Gains vs time needed
  - Should OpenAV do this - priorities?

- Useful to others right now?
  - Probably not
  - Depends on expectation
  - API **not** stable (yet?)
Thanks for your time

Questions?