

TUI (formerly TouchAll)

A Multi-Touch, Gestures, and fiducials Framework for ActionScript 3.0

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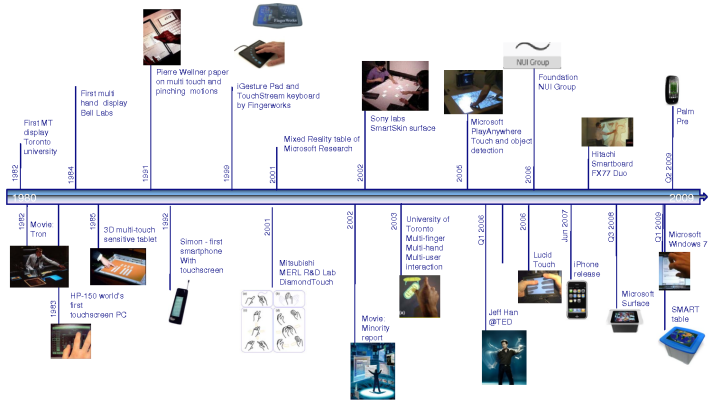
Videos: <https://goo.gl/eZ90NI>
Source code: <https://goo.gl/Ue2ICZ>

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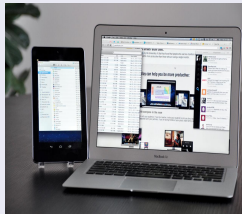
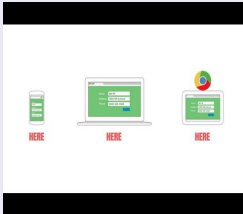
Multi-touch Brief History ...



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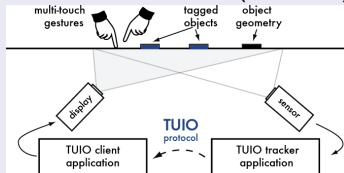
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The Future is Interface Integration!



Building an Optic Touch-table

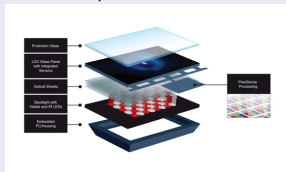
1 Build Touch-table (MTMini)



<https://goo.gl/RvtIIv>

<https://goo.gl/3F06jB>

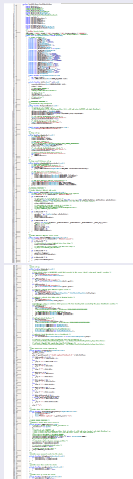
2 Add display to multi-touch table (See through LCD Screen)



<https://goo.gl/RtLLIr>

Why TUI?

Before TUI



After TUI



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TUI requirements



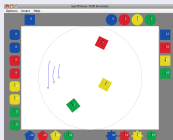
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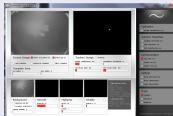
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<https://goo.gl/Yjs2hy>



<https://goo.gl/eDPr9z>

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TUI architecture

Touch All API

Functions to, stage setup, tuio connections,
gestures, multi-touch, and fiducials
widgets for specific fiducial ids

tuio as3 library

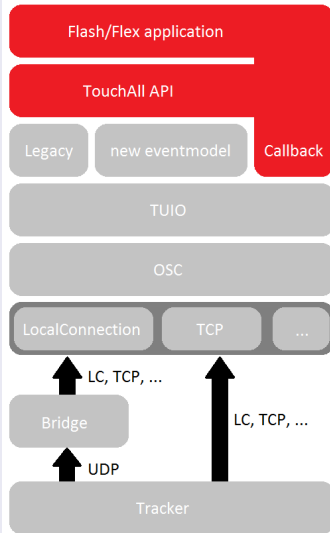
Blob, cursor, object/fiducial events
LocalConnection, TCP, and UDP sockets
OSC and Tuio Protocols

Flex SDK

Gesture, Mouse, and
Keyboard events
Flash/AS3 libraries

AIR 2.* SDK

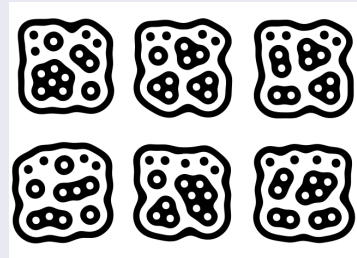
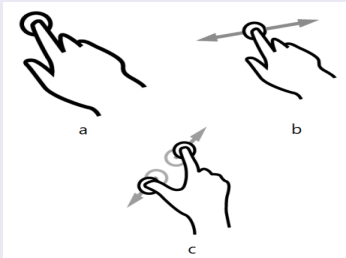
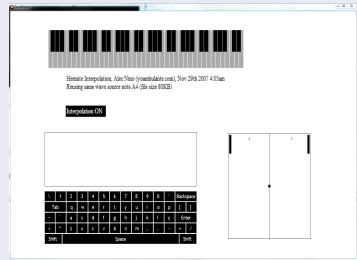
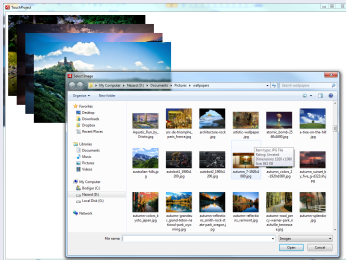
Stage additional
setup options
UDP support



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TUI Demos



Conclusions

- The time required in developing applications for multi-touch devices can be shortened using TUI.
- TUI allows to use fiducials and multi-touch through UDP, TCP, flash LocalConnection all in once.
- ActionbScript-based non-free software alternatives exist, but not with native fiducial support.

Future work

- Development of tools that allow device emulation, for multi-touch, multi-mouse pointer, and platform independent application testing.
- Include in the TUI more native widgets for specific fiducials.
- Include in the TUI support for 3D object loading and gesture based manipulation.
- Integrate the TUI as a module of an 2D/3D Action-Script 3.0 game engine.

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Questions, Comments, Observations,
Twitter twitts, Facebook like's/posts/comments???