



The

Natural User Interface Group

An overview of the Natural User Interface Group and our processes.

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What is a Natural User Interface?

Natural

organic, unthinking, as if prompted by instinct

User Interface

the points at which users interact with systems

Natural User Interface is an emerging paradigm shift in man-machine interaction which focuses on human abilities such as touch, voice and vision as well as higher level cognitive processes such as creativity and exploration.

Through its definition we aim to solidify a baseline perspective upon which humans experiences the natural world and thus optimize interaction between digital and physical objects.

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- Alessandro Valli

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What is the NUI Group?

We are an open source research community that creates & shares interaction techniques that benefit designers & developers throughout the world.

We offer a collaborative environment for people interested in learning and developing modern HCI methods and concepts.

Our mission is to openly discover and distribute NUI knowledge.

Over 12,000 members

Average ~140,000 visitors a month

Over 70,000 discussion posts

700,000+ downloads

Over 12 million pages served

Technological Adoption



Community Core Vision

The screenshot displays the Community Core Vision software interface, which is used for object tracking in a camera feed. The interface is divided into several sections:

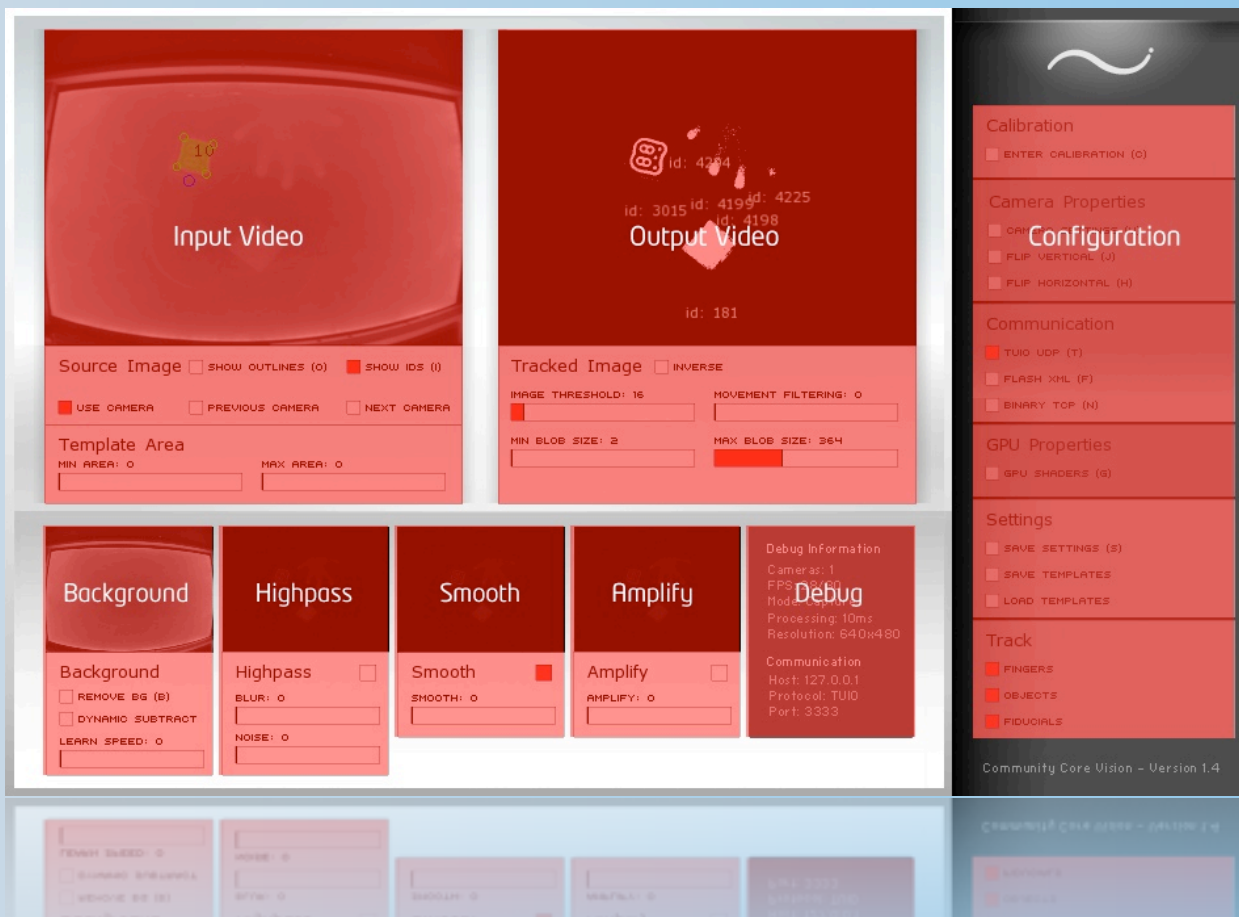
- Source Image:** Shows a camera feed with a green bounding box around a tracked object (ID: 10) and a blue circle below it. Below the image are controls for "SHOW OUTLINES (O)", "SHOW IDS (I)", "USE CAMERA", "PREVIOUS CAMERA", and "NEXT CAMERA".
- Tracked Image:** Shows a binary image of the tracked object with its ID (181) and other IDs (3015, 4199, 4225, 4198). Below the image are controls for "IMAGE THRESHOLD: 16", "MOVEMENT FILTERING: 0", "MIN BLOB SIZE: 2", and "MAX BLOB SIZE: 364".
- Template Area:** Contains input fields for "MIN AREA: 0" and "MAX AREA: 0".
- Background:** Includes a small camera feed and controls for "REMOVE BG (B)", "DYNAMIC SUBTRACT", and "LEARN SPEED: 0".
- Highpass:** Includes a small camera feed and controls for "BLUR: 0" and "NOISE: 0".
- Smooth:** Includes a small camera feed and a control for "SMOOTH: 0".
- Amplify:** Includes a small camera feed and a control for "AMPLIFY: 0".
- Debug Information:** Displays system information: "Cameras: 1", "FPS: 28/30", "Mode: Capture", "Processing: 10ms", "Resolution: 640x480".
- Communication:** Displays network information: "Host: 127.0.0.1", "Protocol: TUIO", "Port: 3333".

On the right side of the interface, there is a vertical sidebar with the following sections:

- Calibration:** Includes a "WAVE" icon and a checkbox for "ENTER CALIBRATION (C)".
- Camera Properties:** Includes checkboxes for "CAMERA SETTINGS (V)", "FLIP VERTICAL (J)", and "FLIP HORIZONTAL (H)".
- Communication:** Includes checkboxes for "TUIO UDP (T)", "FLASH XML (F)", and "BINARY TOP (N)".
- GPU Properties:** Includes a checkbox for "GPU SHADERS (G)".
- Settings:** Includes checkboxes for "SAVE SETTINGS (S)", "SAVE TEMPLATES", and "LOAD TEMPLATES".
- Track:** Includes checkboxes for "FINGERS", "OBJECTS", and "FIDUCIALS".

At the bottom of the sidebar, it says "Community Core Vision - Version 1.4".

Community Core Vision - Design



Inspiration

- Douglas Engelbart - The Mother of All Demos
- Richard A. Bolt - Put-That-There Demo
- Myron Krueger - Video Place
- Pierre Wellner - Digital Desk
- Alessandro Valli - Natural Interaction
- Jeff Han/Philip Davidson - NYU FTIR
- MS Research
- Science Fiction

Open Communities

- Clearly state your target audience and mission statement/cause.
- Encourage contributions with rewards such as contests, internships and mentoring programs.
- Actively showcase the results of contributions highlighting specific contributors.
- Enabled Communications on all available levels (Chat, Forums, Mailing lists etc..)
- Learn how to identify negative people and peacefully de-fuse them before they interfere with community goals. (Visa versa)

- Contributors come and go on their own schedule.
- Paint a vivid picture for new community members using concept designs offering example projects.
- Do not expect the community to produce results, instead consider it a dance in between the vision and steps it takes to get there.
- Distributed problem solving is not a science... the most important step is setting up the proper environment.
- Have clear leadership and political infrastructure.
- Open communities are delicate when dealing with commercial ventures (nobody wants to work for free)

It comes down to trust: in order to get great developers you must earn their trust by becoming as transparent as possible.

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Why should I entrust this organization with my passion?

