

Daichi's Painting: Brushing Up Painting Skills with BrushDevice

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Objective



In the real world...

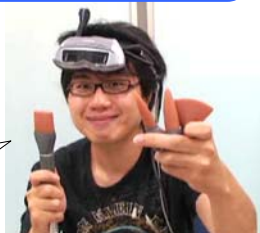


Our purpose

Develop a painting system that imitates painting **in the real world**

+ Requirements

- Intuitive device
- Direct operation
- Painting on real objects

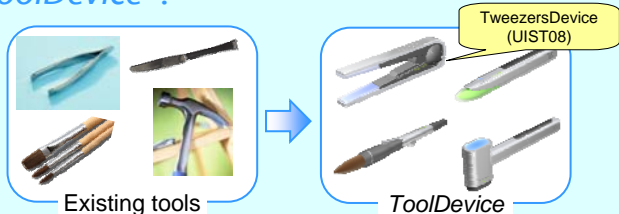


I can paint in a similar way to the real world!

What's

ToolDevice*?

- A **set** of interactive devices
- Uses a **metaphor of existing tools**



Advantages

- Guides users to the correct operation
- Provides intuitive operation

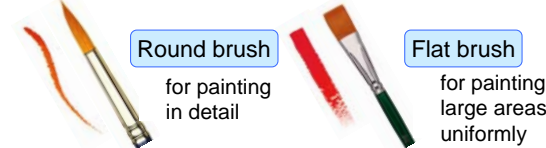
BrushDevice: a kind of ToolDevice

+ Concept

- Imitates the shape of a paintbrush familiar to many people
- Realizes subtle expressions in virtual reality as well as in the real world

+ Real paint brush characteristics

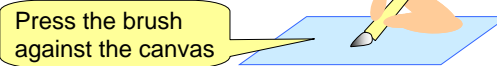
(1) Brush shape
Most paintbrushes fall into two categories:



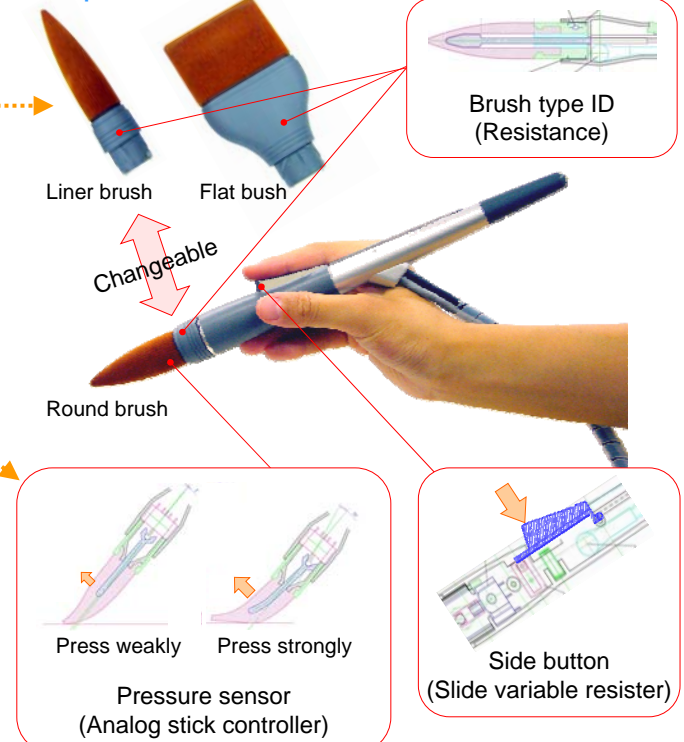
(2) Brush stroke
Stroke weight, opacity, or smoothness etc.



When users want to change the stroke weight...



+ Implementation



Application: Painting on real ceramics

+ Instruction

- ① Change/Select the brush type
- ② Pick a color & add water
- ③ Mix colors
- ④ Paint



- ③ Mix colors
- ④ Paint



Demonstrating now!

Wet enough
A puddle appears at the stroke end

Not wet enough
The stroke lacks smoothness

+ Examples



* A. Uesaka et al. TweezersDevice: A device facilitating pick and move manipulation in spatial works. Adjunct Proc. UIST 2008, pp. 55 - 56.