Sumi-Nagashi: Adding Corporeality to Digital Painting

“Sumi-Nagashi” is a digital interpretation of an original and traditional Japanese art. A user will experience this streaming installation literally and physically by using Proactive Desk, a newly developed desk-style force feedback device. Dynamic haptic control of changes of color and form, will arouse new inspiration in painters.

Virtual Feeling from Digital Colors
- Inertia Power
  - Virtual weight depends on the brightness of the painted color (ex. Light color has light weight.)
- Color Friction
  - Friction depends on contrast and changes of colors (ex. Striped area has large frictions. Edge of color has resistance.)
- Flow Resistance
  - Resistance from virtual water’s streaming.

Functions
- Painting Function
  - Simple digital painting functions are available. (ex. put and smudge colors, stamp characters)
- Streaming & Haptic Function
  - The digital canvas imitates the flow of water. The colors are floating and flowing on the canvas. The user can feel the streaming visually and physically.

Hardware
- Digital Canvas
  - The “Proactive Desk” generates two dimensional forces that act upon a paintbrush-like device. A mechanism that produces real forces is completely concealed underneath. This means that the user can operate the paintbrush to draw pictures much like operating an ordinary graphics tablet.

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