



Haptic User Interfaces With Visually Impaired Children

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Projects with haptics and visually impaired children

- NUH 2001-2003
 - Basic haptic user interface research.
- PROAGENTS 2003-2005
 - Virtual environment for free learning.
- MUKLA 2004-2006
 - Low cost force feedback devices
- MICOLE 2004-2007
 - Collaboration between visually impaired and sighted in virtual environment.



PHANTOM

- Manufactured by SensAble
- Accurate
- 3D
- Not much tested with visually Impaired
- Prices at reasonable level





Testing

- We had to develop special testing methods.
 - Visually impaired needed special guidance.
 - Children couldn't be tested same way as adults.
 - Shorter attention span.
 - Nervousness.
 - Physical needs.
- Interviews with the children and the parents were important.
 - Children may not have proper output skills to tell the answer.
 - Careful design of the questions is very important.



Results

- Information about basic usability of PHANToM with visually impaired children.
- Guidelines for design.
- Guidelines for user testing.
- Agent architecture prototype for multimodal applications.
- Satisfied users.



The End

Thank you for your interest!

*Haptic Demo 13:30-14:30
at MMIG labs.*