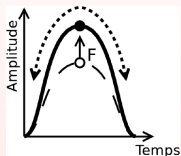


# Information display by dragged haptic bumps

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- informations by a guidance
- bumps when sliding over an axis
- 150 bumps by serie
- PHANToM Desktop
- blindfolded users



## Goals

- testing direction and amplitude discrimination
- testing an immediate utilisability

## 2 experiments

- direction discrimination
- direction and amplitude discrimination

## Results summary

- two and four directions bump are easily discriminable (1.5% and 1% of errors)
- three times more errors on directions when using several amplitudes
- hard to discriminate two different amplitude bumps (5.67% of errors)
- very hard to discriminate three different amplitude bumps (20% of errors)

## future works

- tests with visually impaired people
- tests with other interaction techniques
- tester this interaction technique in an haptic electronic circuits software