

Android

design

WHAT

Our primary goal was to find an effective interaction method for mobile devices equipped with multi-touch screens. We designed interaction techniques usable for generic interaction in 3D environments while providing all 6 degrees of freedom (DoF). Our interest falls onto two application types: interactive geometry software (IGS) and Android and iOS applications that enable interaction with 3D objects.

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KOW

By analyzing works of other researchers as well as examining available applications, mostly on mobile devices.

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6 Hancock et al. ustom 1 (3F) 3F horizontal drag left / right ★1F horizontal drag 3F vertical drag X1F vertical drag - 3F pinch forward / back 2F pinch 2F vertical drag pitch 3F vertical drag 2F horizontal drag 3F horizontal drag yaw 🗙 2F drag 2F circle Fiorella et al. custom 2 (2F) 6 DoF 2F horizontal drag left / right 2F horizontal drag 2F vertical drag 🗸 2F vertical drag up / dow 2F pinch N/A 👗 forward / bac 1F vertical drag 1F vertical drag 1F horizontal drag 1F horizontal drag 🧲 yaw N/A 🔀 2F circle



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Fight

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Up 1

down

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ON THE SCREENS OF MOBILE DEVICES

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take it slow RESLUTS

Many, even when provided with multi-touch intuitive and highly efficient interaction methods, prefer the use of a single finger. The use of 3 fingers is being highly condemned by the vast majority, but overall the technique has been highly rated and proved 100% sufficient.

> Interaction rating: 3F - 76%; 2F - 92% Tablet suitability rating: 3F - 87%; 2F - 87%

> > CCS 3D

This interaftive geometry software application lets users construct cube cross sections in a 3D environment. The application runs under Android and requires a multi-touch screen. On this prototype application, the various methods were tested.



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