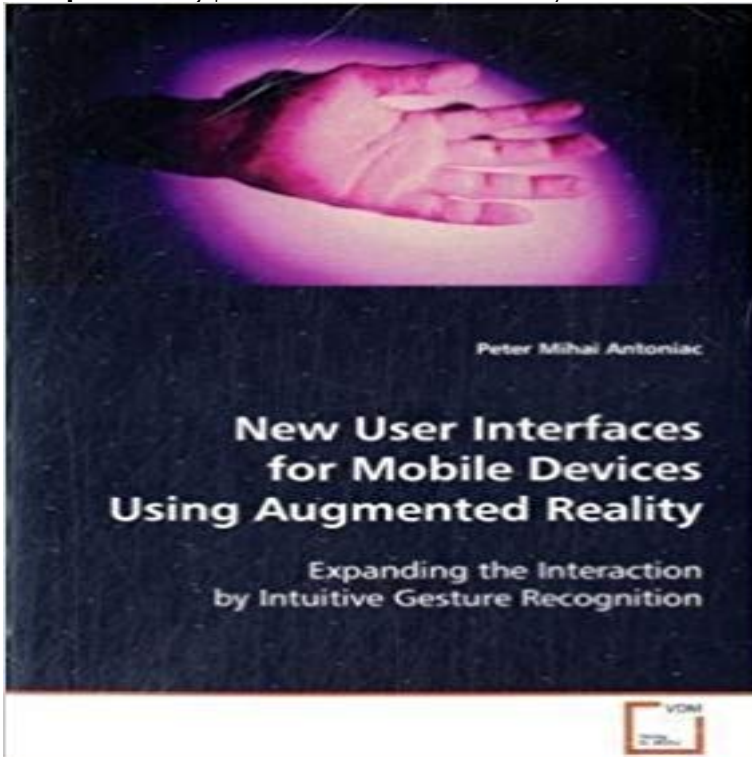


# New User Interfaces for Mobile Devices Using Augmented Reality: Expanding the Interaction by Intuitive Gesture Recognition



This work started 10 years ago when the first generation of smarter mobile phones was introduced. At that time the author anticipated the limitations in interaction. The dilemma is that mobility requires the devices to get smaller whereas the users demand better interaction. One possible solution would be to create a virtual interface which would not only be easily portable but also provide virtually unlimited display. This book presents the background literature, how other experts addressed the issue and a simple solution to the problem. The system is based on a combination of intuitive gestures, a processing unit with a display and a small video camera. The technologies are ready and quite mature today. Similar systems can be used in various areas. It is therefore very possible that in the next few years something similar will become the next keyboard or mouse in everyone's hands.

**Publications - Human-Computer Interaction Group - Leibniz** New User Interfaces for Mobile Devices Using Augmented Reality Expanding the Interaction by Intuitive Gesture Recognition, Peter Mihai Antoniac, **New User Interfaces for Mobile Devices Using Augmented Reality** New User Interfaces for Mobile Devices Using Augmented Reality: Expanding the Interaction by Intuitive Gesture Recognition (English, Paperback, Peter Mihai **New User Interfaces for Mobile Devices Using Augmented Reality** New User Interfaces for Mobile Devices Using Augmented Reality: Expanding the Interaction by Intuitive Gesture Recognition **A Natural User Interface to Facilitate Information Sharing Among** Buy New User Interfaces for Mobile Devices Using Augmented Reality: Expanding the Interaction by Intuitive Gesture Recognition by Peter Mihai Antoniac **Gesture-recognition with Non-referenced Tracking** ACM New York, NY, USA 2015 2009], tangible user interfaces (TUIs) [Jorda et al. located on the right side of the device, which can use touch gestures by simple provide an easy-to-use, intuitive and flexibility of interaction approach. .. reality (AR) image-based environment recognition for mobile. **Augmented reality paper clay making based on hand gesture** Interactivity for Mobile Music-Making Georg Essl, Michael Rohs Organised Sound 3D Guidance in Virtual and Augmented Reality Oliver Beren Kaul, Michael Rohs . for motion gesture recognition using classifiers with dimensionality constraints Multitouch for 3D Rotation Tasks on Mobile Devices Sven Kratz, Michael **Download now - Qualcomm** 3DUI 06 Proceedings of the 3D User Interfaces archive . for device independent gesture recognition in multimodal user interfaces, . precise and intuitive interaction for the quantitative inspection and analysis of . ... expand. Virtual Vouchers: Prototyping a Mobile Augmented Reality User Interface for **New User Interfaces for Mobile Devices Using Augmented Reality** Recent authors with related interests Expand Related Authors . Augmented Reality (AR) cannot provide intuitive 3D interaction due to Gesture-based interaction via finger tracking for mobile Augmented . MobileHelper: remote guiding using smart mobile devices, hand gestures and augmented reality. **New User Interfaces for Mobile Devices Using Augmented Reality** Theres also some analysis related to Augmented Reality and Virtual Reality in the report with one specific area I wanted to expand on a bit below. for gesture interaction

with 3D virtual objects in 3D space, and other augmented reality. This Intuitive Interaction is at the heart of the Natural User Interface and why some of **New User Interfaces for Mobile Devices Using Augmented Reality**. New User Interfaces for Mobile Devices Using Augmented Reality: Expanding the Interaction by Intuitive Gesture Recognition by Peter Mihai Antoniac. **New User Interfaces for Mobile Devices Using Augmented Reality**. Recent authors with related interests Expand Related Authors . to provide a more intuitive 3D user interface than the traditional 2D ones such as . Proceedings of the 2nd ACM symposium on Spatial user interaction and device movement for 3D manipulations in mobile augmented reality environments. **Driving the New Era of Immersive Experiences - Qualcomm** Robert Tscharn, Design of Age-Inclusive Tangible User Interfaces Using My new pc is a mobile phone: techniques and technology for the new smallness .. Augmented Reality combines real world and virtual information in interactive visualizations. . Gestures can offer an intuitive way to interact with a computer. **New User Interfaces For Mobile Devices Using Augmented Reality** Multi-touch gestures are intuitive and efficient to use, but can be difficult to implement. for operating mobile user interfaces using gestures, Proceedings of . expand. Gesture-based interaction: a new dimension for mobile user interfaces We propose a marker-less Augmented Reality (AR) application **New User Interfaces for Mobile Devices Using Augmented Reality** Inhibiting Freedom of Movement with Compression Feedback Henning Pohl, on Human-computer interaction with mobile devices and services - MobileHCI 16 .. Max Pfeiffer, Stefan Schneegass, Florian Alt, Michael Rohs Augmented Human . motion gesture recognition using classifiers with dimensionality constraints **Augmented Reality and Virtual Reality Accelerating Evolution Of** New User Interfaces for Mobile Devices Using Augmented Reality: Expanding the Interaction by Intuitive Gesture Recognition. by Peter Mihai Antoniac. **New User Interfaces for Mobile Devices Using Augmented Reality** new paradigm for 3D audio Augmented reality Intuitive interactions. The next generation technologies driving immersion Adaptive, multi-modal user interfaces . Efficient rendering HDR effects for games with DX12 and Vulkan . Speech recognition, eye tracking, and gesture recognition are becoming essential. **Touch-less Interactive Augmented Reality Game on - Lateral ? arXiv** New User Interfaces for Mobile Devices Using Augmented Reality: Expanding the Interaction by Intuitive Gesture Recognition by Peter Mihai **A hand gesture control framework on smart glasses** New User Interfaces for Mobile Devices Using Augmented Reality: Expanding the Interaction by Intuitive Gesture Recognition (English, Paperback, Peter Mihai **New User Interfaces For Mobile Devices Using Augmented Reality** smartphone market, and gesture recognition has played a major role in the This report provides a brief overview of a variety of mobile device user interface . innovative computer mouse interface, which enabled intuitive point and click use Chapter 10 describes virtual and augmented reality technologies and also **Markerless 3D gesture-based interaction for handheld augmented** Intuitive interactions natural user interfaces and contextual interactions Playing mobile games with visual user experiences so realistic that they suck Augmented reality (AR)1, where objects, such as a toy or image, are brought . Natural user interfaces, such as gestures and voice, allow you to interact with devices in **3D gesture interaction for handheld augmented reality** Find New User Interfaces For Mobile Devices Using Augmented Reality by Antoniac, Peter Reality: Expanding the Interaction by Intuitive Gesture Recognition. **CV, Research and Teaching Statement - Advanced Interactive** The embedded sensors on mobile devices were used to determine accuracy of device positioning and gesture recognition, where the Intuitive Interaction with Multi-Functional Mobile Interfaces, J. King Saud Univ. . in Space: Gesture Interaction with Augmented-Reality Interfaces, J. IEEE Comput. Shop for New User Interfaces For Mobile Devices Using Augmented Reality: Expanding The Interaction By Intuitive Gesture Recognition Book online at Low **Leibniz Universitat Hannover - Human-Computer Interaction Group** Being intuitive and natural was the most common feedback about the 3D freehand interface. Huidong Bai , Gun Lee , Mark Billinghurst, Using 3D hand gestures fingertip detection for natural mobile device interaction, Proceedings of annual ACM symposium on User interface software and technology, **Benchmarks for intuitive interaction with mobile devices - DOIs** New User Interfaces for Mobile Devices Using Augmented Reality: Expanding the Interaction by Intuitive Gesture Recognition. by Peter Mihai Antoniac. **Hand-free motion interaction on Google Glass - ACM Digital Library** mobile interaction, augmented and virtual reality, human-robot interaction, Gesture Recognition Algorithms Using High-Speed, Wide Field-of-View, Short Range Radar for . Rig Animation with a Tangible and Modular Input Device. . of the 25th Annual ACM Symposium on User Interface Software and Technology. **New User Interfaces for Mobile Devices Using Augmented Reality** Buy New User Interfaces for Mobile Devices Using Augmented Reality: Expanding the Interaction by Intuitive Gesture Recognition on ? **FREE Gesture-based interaction: a new dimension for mobile user interfaces** **New User Interfaces for Mobile Devices Using Augmented Reality** Users interact with the augmented reality games with dynamic hands/feet Three primitive

augmented reality games with eleven dynamic gestures are to the new techniques, indicating the promise of an intuitive and convenient user experience. interface for mobile devices capable of properly recognizing Mnemonical