HAND INTERACTIONS IN WONDERBOOK

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London Studio
London Studio is a Sony Computer Entertainment first-party game development studio which focuses on the casual/family genre. It also specialises in designing games to use a camera as their input device.

Augmented Reality
Augmented Reality (AR) is a branch of computer science which focuses on augmenting computer generated graphics and content with the live feed of the camera viewing the real world.

London Studio has a history of creating AR video games and providing Natural User Interfaces where players interact with the game using bodily motions and gestures.

Wonderbook and Book of Spells
The latest product of London Studio is a novel technology named Wonderbook, which is an Augmented Reality book. The tagline ‘one book, a thousand stories’ is used to illustrate the point that only one physical book is needed to interact with many different stories and games rendered on screen.

Hand Interactions
In order to create a more magical sense of wonder in players, we created a system which allows for hand interactions with the book while making the hand visible over the virtual contents of the game.

In order to enhance the experience of interacting with a virtual pop-up book, we created a set of algorithms which are able to identify which parts of the image belong to the player’s skin and to use those regions to prevent the augmented content being overlaid. This results in a display which looks more natural, resembling what you would expect when using a normal book.

The resulting system has also been used to provide further interactions with the virtual book, such as when players are asked to rub virtual dust off the book by using their hands. The knowledge of where the player’s hands are makes such interactions feasible and creates a Natural User Interface which further enhances the experience of Wonderbook.

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