ArecycleNOID. ARtGame

The Augmented Reality game in public space.

Alena Mesarosova

Facultad de Bellas Artes
Universitat Politecnica de Valencia
Valencia, Spain
mesarosova.alena@gmail.com

Manuel Ferrer Hernandez

Facultad de Bellas Artes
Universitat Politecnica de Valencia
Valencia, Spain
manusamoandbzika@gmail.com

Abstract—**The act of playing a game in the urban space is the main idea of this interactive intervention. We place an Augmented Reality game on the street, which for us is a representation of the public space. We understand a street as a free, social and cultural space, and not only a space of transit. Our aim is to return the ludic function to the street. We find ourselves in the "digital age"and everything "digital" usually happens behind the screen so we make use of the Augmented Reality technologies for Smartphones that allow us to move the action of a digital game to the street.**

Keywords- augmented reality game; augmented public space; art game; augmented urban space

THEORETICAL FRAMEWORK

We vindicate the importance of the act of playing in a public space and pay tribute to Huizinga´s *Homo Lundens* [1]. We create a unique "magic circle" within the game, which is no longer just an "Imaginarium" a sort of a virtual space, but creates a new form of augmented urban space.

Mixing the "virtual" with the "real" leads to a new form of physical space, an augmented urban space. Where virtual and physical elements do not represent two opposite elements , but create together a unique urban space [2].

By visualizing a geolocated digital content in the urban space we are moving into the augmented urban space, which has a capacity to acquire multiple dimensions, due to an intangible material property of the virtual elements. It is possible to locate several "layers" of digital content in the same physical space, which gives the user the possibility to choose a personalised urban space. We create a new type of physical space, the "Augmented Space" with a dynamic data overlaid [3].
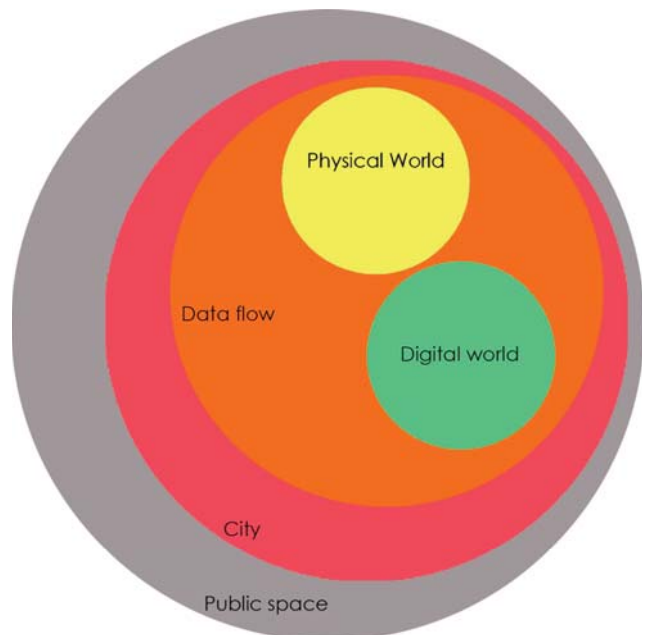

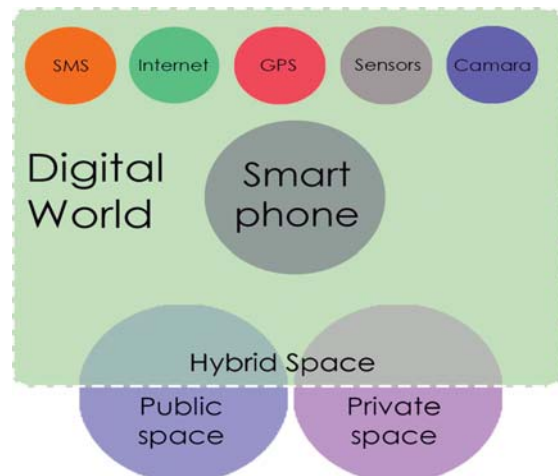
Figure 1. Hybrid public space.

Figure 2. Hybrid Augmented space.

Development

ARecycleNOID game is designed for use in this new type of hybrid augmented urban space. The interface of our game consists of two elements, the physical one and the virtual one "Fig.3". It is only possible to perform the game in the augmented space .

The digital base of the game consists of an application for mobile devices with the simple breakout game logics, including a dynamic object affected by the physics and the gravity of the real world. The visualisation of a digital part of the game is conditioned by the presence of physical elements in the real world, which in this case is represented by the urban equipment located in the city of Valencia and its surroundings.

For the physical interface we have chosen the green containers for glass recycling. The green bins represent a common urban element, which can be found in every street in almost every neighborhood of the city. This permits us to expanding the ludic public space functions to any street, creating a multi-location of the same augmented space.
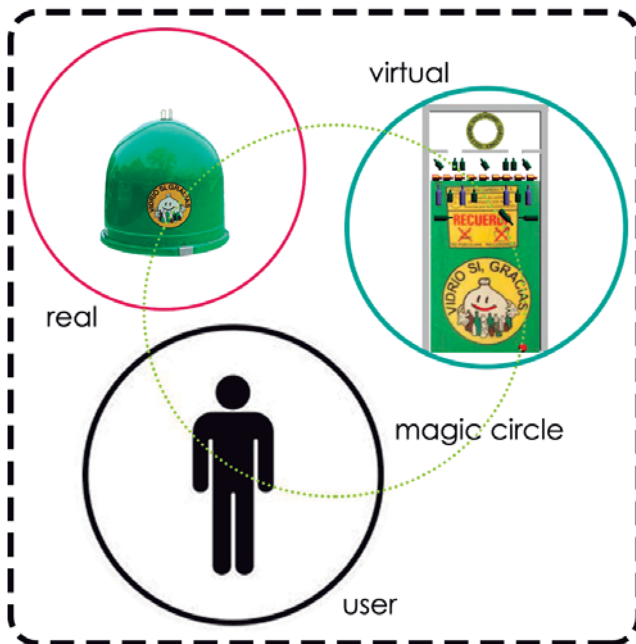
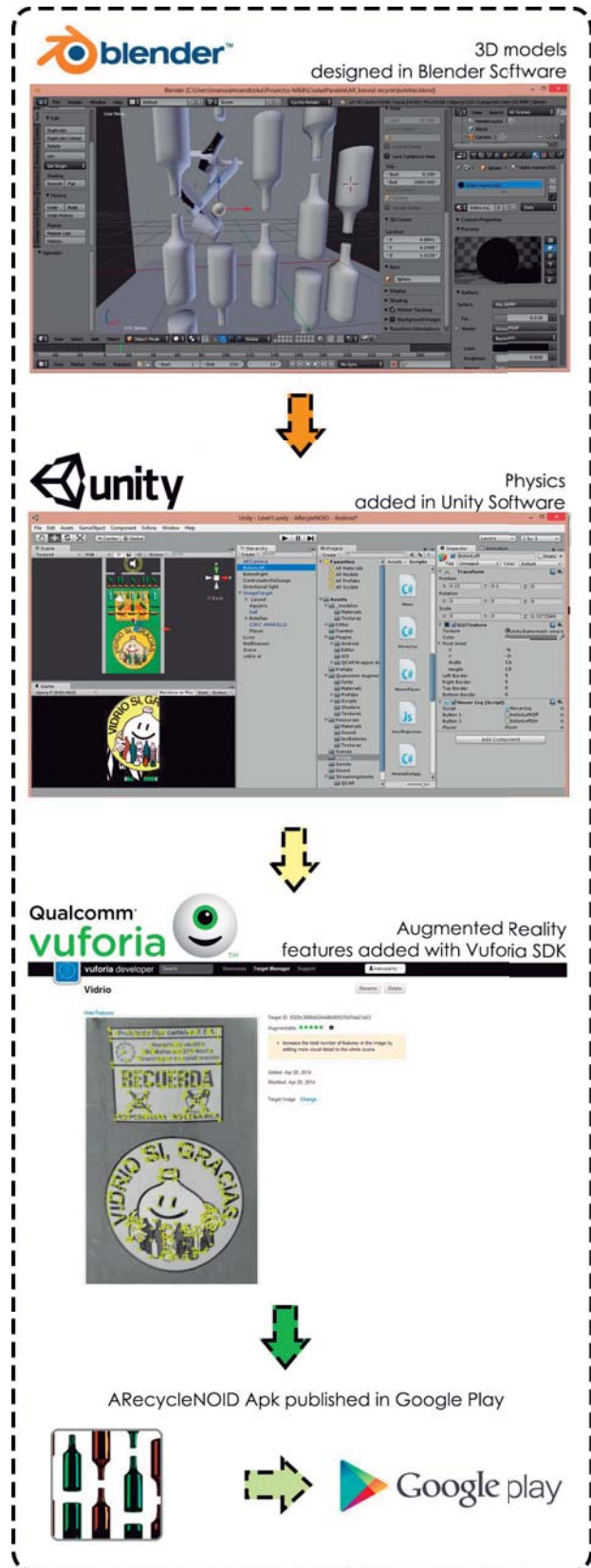

Figure 3. Hybrid user interface


Figure 4. Work process.

Figure 5. Test playground.

CONCLUSIONS

We are searching for a new ways to use the public space as a ludic space by overlaying virtual layers of information upon the real world. ARecycleNOID produces a user experience that enhances the level of interaction between the user and the public space, both in the physical space and the digital space.

With this augmented reality game we intend to make visible the hybridization of urban spaces that affects cities of today.
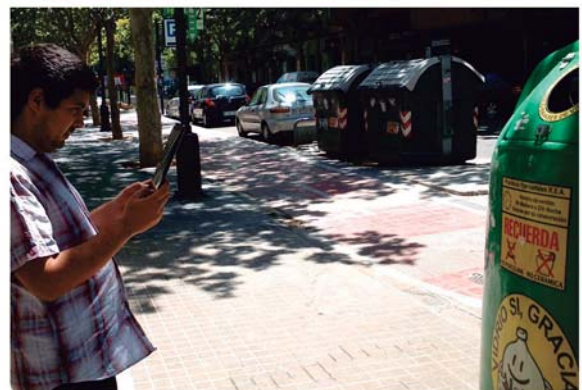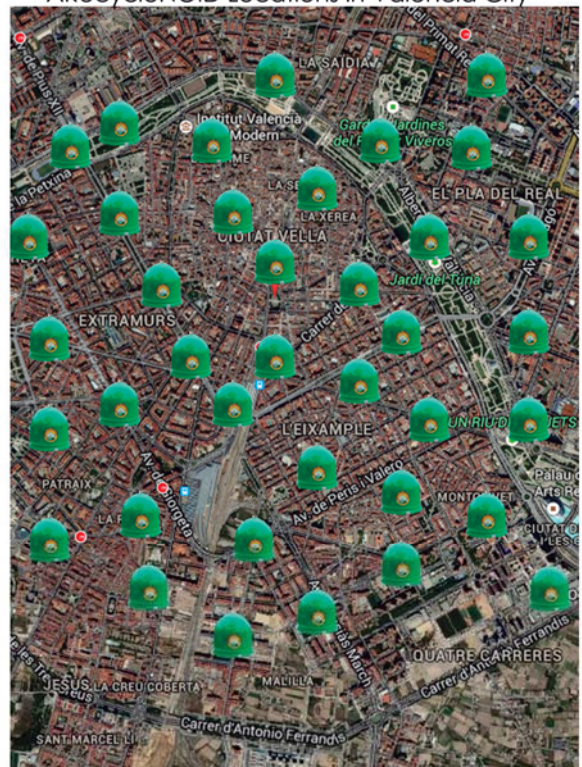
Figure 6. ArecycleNOID in Valencia

Figure 7. ArecycleNOID Apk user interface.

REFERENCES

[1] J. Huizinga, Homo ludens, 3rd ed. Madrid: Alianza, 2012.

[2] A. Aurigi and F. De Cindio, Augmented urban spaces articulating the physical and electron city. Aldershot, Hampshire, England; Burlington, VT: Ashgate, 2008.

[3] L. Manovich, "The poetics of augmented space," Visual Communication, vol. 5, no. 2, pp. 219–240, 2006.