Singapore Inside Out London 2015 in VR

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ABSTRACT
Singapore: Inside Out 2015 is an international creative showcase featuring a collection of multisensorial experiences designed by the country’s creative talents. After making its successful debut in Beijing, the travelling showcase stops at Brick Lane Yard here in London from 24 to 28 June for its stint in the capital, before heading to New York in September and a homecoming finale in Singapore in November 2015 (Singapore Inside Out 2015). This Virtual Reality Experience enables users to relive this unique festival.

Keywords: creative, festival, virtual reality.

Index Terms: I.3.7 [Computer Graphics]: Three-Dimensional Graphics and Realism—Virtual Reality

1 INTRODUCTION
An energetic, cross-disciplinary showcase of contemporary creative disciplines featuring architecture, food, fashion, film, music, literature, design and the visual arts, this celebration of creativity and collaboration that spans three continents will inspire you to revisit existing preconceptions and discover new perspectives of Singapore and its creative landscape.

Having captured seven 360 spherical videos at this event in London itself, I set out to develop all these 360 spherical videos together in one 360 Virtual Reality (VR) Android mobile app, complete with visual interactions via line of sight for directions, graphics, audio and perhaps even transitions. This is to also show a way of providing diegetic means of how these (gaze) interactions will work between and within each 360 videos.

2 THEORY
The development process would be as follow:
1. Using Unity3D with the Google Cardboard SDK and CSharp scripting
2. Mapping 360 videos inside Unity3D
3. Importing them into Unity3D and using scripting components from within Unity3D to add gaze interactions to navigate between the different 360 videos and other forms of interactions.

2.1 The Process
Launched as an Android apk to your mobile phone, the final “Singapore Inside Out 2015 (London)” interactive VR (Virtual Reality) mobile app enables a viewer to be transported to Brick Lane Yard where the original traveling showcase was last held. Using your line of sight, one can look all around each 360 video to relive the experience of being there, as well as find designated buttons for gaze interaction to be activated. In total, there are about over a dozen interactive features to gaze at.

3 DISCUSSION
From choosing between VR and Cardboard mode, transition between different 360 videos, displaying credits and graphics to the simple back function, just looking at a certain point inside the 360 video to activate these functions alone took almost more than half of the total development time period. Part of it was the consideration for the duration, the number of seconds we had to set for the gaze to take effect. As each 360 video cannot be previewed from inside the spherical object, aligning these buttons in the right positions while working in Unity has proved to be tedious and painstaking. In addition, the scripted components did not work all the time during all of the testings, and also differed when used between the PC and the Mac. But the most difficult challenge had to be actually scripting in CSharp.

4 CONCLUSION
In spite of all these challenges both creatively and technically the app was finally completed, and now for all to experience and relive the festival experience in VR!

REFERENCES
www.sgiolondon.com

Design for VR Interactivity

Options for VR Mode