7b.042.SBU - Immersive Data Visualization

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Project Start: 6/1/2018	End Date: 5/30/2019	Project Budget: $40,000	Spent: $15,000

Project Summary:

In this project, we developed a framework for the immersive visualization of healthcare demographics collected by Softheon. Softheon generates comprehensive real-time analytics of member demographics, geographic, transactional, and financial data of health plans, State-Based Marketplaces, and third-party administrators. Utilizing Stony Brook University Reality Deck's large screen real estate, we developed a platform for Softheon to visualize their analysis in giga-pixel resolution. Using our platform, data visualizations can be interactively placed anywhere within the four-walled tiled-display facility and thus, the immersive, 360^{o} horizontal field-of-view workspace will allow users to experience a natural focus + context exploration of the data, in a collaborative environment.

Details of Progress/Achievements:

We developed a framework in Unity3D that can take as input the Softheon analytics data and render the required graph visualizations. Additionally, we developed a plug-in that can render Softheon's dashboard webpage and interact with it.

PROJECT DELIVERABLES

Deliverable	Achievements	Remaining To Do
1. Develop an application that can render data visualizations in the Reality Deck	90% complete	1. Add additional data visualizations such as those available in D3.js
2. Develop a plug-in that can render webpages	70% complete	2. Add cursor and keyboard interaction for the webpages 3. Design interactivity with the webpages using gestures
3. Develop a framework for remote collaboration with the data shown in the Reality Deck using a head-mounted display device	Planned before April 2019	3. Design a framework that can integrate the visualizations on the Reality Deck in an HMD-based VR environment.