

Hill-Rom

Development of Augmented Reality App to demonstrate spatial sensor data in a hospital environment



Hill-Rom is a leading worldwide manufacturer and provider of hospital beds. We developed an augmented reality app to help them to demonstrate how spatial sensor data from hospital bed mattresses could be used for quickly and easily monitoring patients.

Challenge ↵

Hill-Rom wanted to investigate novel visualisation methods for spatially-dependent hospital bed data. They were particularly interested in using augmented reality to view spatial pressure and moisture data from mattress sensors.

Their aim was to demonstrate how novel visualisation techniques can be used to make sense of complex data sets in a clinical environment.

Approach ↵

Sagentia developed an augmented reality application to run on an iPad that demonstrated how this technology could work. By presenting the information in an app, nurses would be able to quickly and easily check patients eg for signs of pressure sores.

We used image processing to detect specific bed images, overcoming the technical challenges of superimposing 2D contour map data on a three dimensional patient and of maintaining the link between that 2D map and the patient regardless of the viewing perspective.

We also designed an interface to view the Braden Scale for bed sore risk and used the Unity-generate 3D model to display pressure data on a patient model.

Benefit ↵

Hill-Rom is now taking the app to Voice of the Customer trials with healthcare professionals.



“The Sagentia team was adept at understanding our technical needs and use cases. Their project management was sincerely the best that I have ever experienced, which enabled their technical skills to shine in a final product that has exceeded our expectations with customers.”

Eric Agdeppa Executive Director Innovation, Hill-Rom