

SAP LIQUID STUDIO FOR LEONARDO APPLICATION: VIRTUAL BIONICS

Better rehab through gamification and analytics

Function: Health and Wellness | Process: Life Sciences | Industry: Products

Application Overview

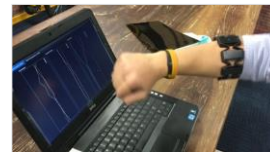
Virtual Bionics is a patient rehabilitation application built using the power of SAP Leonardo to support physiotherapy to eliminate phantom limb pain leveraging virtual reality. This application also captures data during rehab sessions to increase the accuracy and accelerate the process of bionic prosthesis creation.

The application accelerates the process of re-educating the patient's brain on teaching that a given limb is not there anymore to eliminate the phantom pain. An arm band reads electric muscle impulses from an upper portion of the limb and recreates the limb virtually to the patient to accelerate the brain's understanding of the lost limb.

Using advanced analytics on top of the captured data enables the application to more quickly and precisely determine the electrical impulses

Solution

This SAP Cloud Platform-based solution supports persons with physical disabilities through the process of adjusting to a new prosthesis by using wearables combined with virtual reality. This solution supports rehabilitation by easement of patient phantom limb pain and providing analytics data to help increase accuracy on measuring, analyzing and detecting electric muscular signs for prosthesis creation.



Business Value

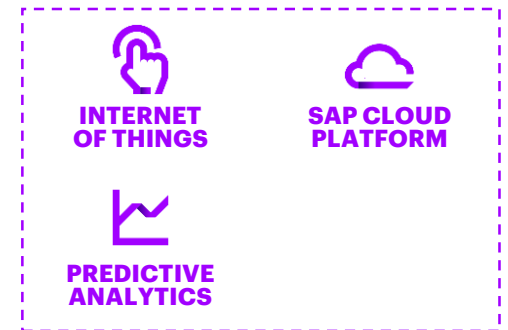
- Accelerates physiotherapy efforts to ease the patient's phantom limb pain.
- Helps increase accuracy in measuring, analyzing and detecting electric muscular signs for prosthesis creation.
- Promotes psychological development and self-esteem through gamification.
- Is a scalable platform with real-time analytics.

Features

- Immerses the user in virtual reality using Oculus Rift or HoloLens.
- Provides a dashboard with digital signals that helps physical therapists diagnose and treat disorders such as phantom limb pain.
- Performs in-memory data real-time processing.

Technologies in Use

- SAP Cloud Platform
- SAP Leonardo IoT Services
- SAP Leonardo Predictive Analytics
- Unity 3D Virtual Reality Engine



[Click here](#) to watch the video.