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VIRTUAL-LIMB

HEALTHCARE IT

Virtual and augmented reality program that enables early rehabilitation for amputees.

TECHNOLOGY TYPE

Physical Therapy
Limb Amputation
Virtual Reality

STAGE OF DEVELOPMENT

- Working prototype developed.
- Deployable to Windows PC.
- Working towards clinical validation.

LEARN MORE

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TECHNOLOGY SUMMARY

There are over 185,000 lower limb amputations in the United States annually. A major obstacle for many new amputees is early ambulation, as surgical wounds delay prosthetic use for a minimum of ten days.

VirtualLimb enables amputees and their families to experience a virtual limb through augmented and virtual reality. The system serves three functions: speeds rehabilitation following surgery, facilitates physical therapy, and creates empathy among non-amputees. *VirtualLimb* is collaborative, allowing clinicians to drop objects into the amputee's virtual reality for tailored interactions. The amputees' movements are tracked via motion bands on their lost limbs, mimicking the use of a prosthetic and beginning essential early post-surgical rehab.

FEATURES AND BENEFITS

- Facilitates early rehabilitation before surgical wounds have healed.
- Tracks user's range of motion, providing data for future prosthetic design and therapy.
- Acts as an empathy machine, allowing non-amputees to experience the use of prosthetic limbs.

INVENTOR PROFILE

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