Powered Exoskeleton

A wearable mobile machine controlled by a pilot to amplify their strength and reduce the exertion (Metabolic Equivalent of Task (MET)) required to complete physical tasks.

Goals

Proof of concept for a powered exoskeleton control system using proximity and position rather than force to control operation.

Scope

Creating of a lower extremity exoskeleton suit to demonstrate functionality in a finite set of specific movements. Scope limited to perception and control systems, excluding structural and actuation systems (handled by others).

Suit maintains a “bubble” around user, increasing the precision of the suit, reducing metabolic load to pilot, and augmenting the pilot’s strength.