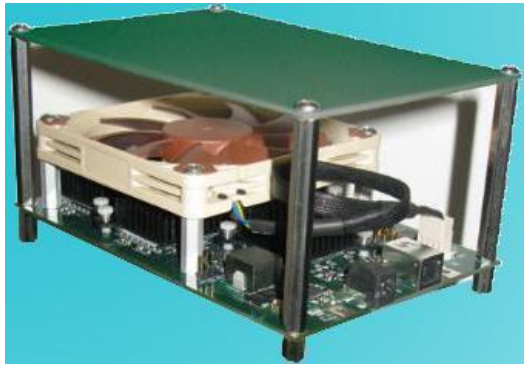
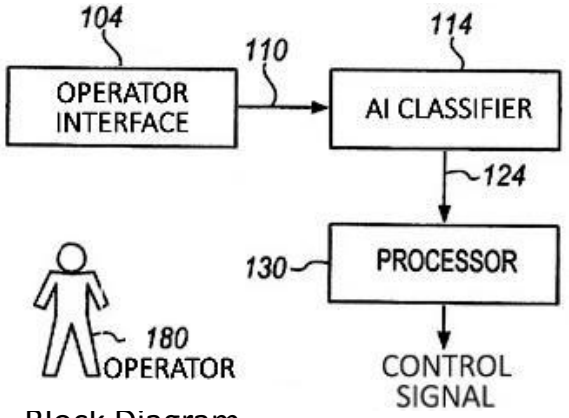
Hands-Free Control Interface



Operator Interface
1.6THz Array



Block Diagram

Operational Capabilities

Novel system provides control signals without any physical connection to the operator. This is uniquely different from a brain-computer interface, which needs electrical connections.

- Performance is measured by accuracy: the fraction of correct vs total operator control efforts.
- System must be used by a trained operator.
- System can be made small/light enough to be fully portable.
- Interfacing is with a computer or a device to be controlled.

Technical Approach

- An operator's focused mental effort acts through the Operator Interface to produce unique output patterns. The patterns are decoded by AI Classifier software to produce control signals.
- Current systems are not responsive enough and take too long to produce correct control signals.
- These issues will be overcome by reducing dimensionality of the Interface output, improvements in AI classification software and in the interface hardware.
- Real-time machine learning can adapt to a specific user.

Development

- The Principle Investigator is Scott A. Wilber, serial entrepreneur, 12 issued patents, multiple published peer-reviewed papers.
- Our system has testable Interface hardware and functional prototype real-time (rapid) machine learning software.
- Significant development of software and hardware systems is required for broad deployment and commercial use.

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