



ISTITUTO ITALIANO
DI TECNOLOGIA

TITLE

Human-machine interface system

INVENTORS

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DESCRIPTION

Leading the latest development in the Virtual Reality research field, IIT has developed HIRIS (Human Interactive Reliable Integrated System), a revolution in the human-computer interface, bringing endless possibility of interaction with machines due to its unique characteristics. In principle, the system can be associated to every electronic device to deploy a new way of communicating with them, thus providing a new experience on control by reducing the gap between humans and electronics.

The HIRIS system is a complete modular actuator/sensor network composed by several interconnectable units to provide a feedback (e.g. contact, vibration or thermal) over the user's skin and measure a desired parameter such as acceleration and position in space. Each unit can be directly attached over the user's skin via custom placeholders, thus letting the user configure the network of units according to his needs. The units can communicate with Desktop PC applications, Tablet, Console, Virtual reality ambient such as Desktop PC, Tablet, Console, Virtual reality ambient for specific applications. The HIRIS framework is highly competitive in the interaction field due to his several unique characteristics that can be summarized as follow:

- Modular feedbacks framework
- Actuator/Sensor Network
- Reconfigurable by user needs
- Reconfigurable to be adapted to different markets (gaming, sports, garments, etc.)



APPLICATIONS

The application fields of this device span from the home entertainment to the virtual reality, augmented reality and, in general, to any field in which a haptic feedback is required to the user.

KEYWORDS

haptic, human-machine interface

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Sistema di interfaccia per interazione uomo-macchina

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Applicants

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