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H2i Corporate Overview

Introduction

H2i creates intelligent human interfaces. The company's unique value proposal is to provide technology that can turn nearly any surface into an action-oriented human interface, and to embed intelligence into various types of automotive devices, home appliances, and consumer electronics equipment to create innovative applications.

The H2i product and service offer is based on its Whaptics® Touchless Touch technology, which enables H2i to provide customers with simple and ergonomic interfaces, and to create entirely new applications for flexible, product designs with and extremely modern flavor. H2i interfaces can be used with many different types of surface materials and can detect environmental conditions to adapt accordingly, such as detecting daylight and temperature. Whaptics technology embeds intelligence into mechanism-free interfaces, offering customers many options to create new product designs.

Company overview

H2i was created in 2002 and has focused nearly all of its R & D efforts on developing and refining its Whaptics technology, initially protected by multiple patents filed in 2005 and 2006. An ongoing patent program at H2i generates new patents on a regular basis, protecting the company's intellectual property related to innovation in optical, electronic and software technologies. With mature technology in-hand, the company began its true commercial activity starting in 2006 and has grown consistently since that time.

H2i designs and develops touchless human interfaces based on Whaptics. These infrared-based interfaces can be used on hi-tech devices and equipment of all kinds. Users do not have to actually touch the surface of the object in question, as they would with resistive and capacitive interfaces. Instead, Whaptics detects finger position in space for proximity and gesture detection, or in an x-y plane, enabling Whaptics to be used with many types of materials, such as stainless steel, wood and glass, effectively merging cutting edge design with a new and ergonomic interface potential.

The company's mission is to provide hi-tech interface solutions at a low cost that is suitable for the mass-market production of consumer and household electronic devices. All H2i solutions are based on readily-available off-the-shelf components, ensuring both low costs for high-volume production and client independence over time. H2i is differentiated from its competitors, customers' own in-house solutions, and competing technologies because Whaptics technology gives final products the advantage of a hi-tech look and feel with the benefit of prices that are adapted to large volumes, without locking customers into a single-supplier situation.

2011 marks a milestone year for H2i. At this time, several hundred thousand Whatpics-based interfaces have been sold, the production process has ramped-up and expanded, and the company has obtained ISO 9001 certification. Industry-leading manufacturers are now shipping products with Whaptics inside. Renowned designer Philippe Starck is both an investor in H2i and a member of the board of directors, alongside Henri Seydoux, CEO of Parrot.

Target markets and business model

The main markets for H2i are automotive applications, home appliances, and lighting, as well as devices for use in hazardous, wet, and sanitary environments, with a flexible business model based on technology licensing and OEM sales.

Technology overview

Whaptics technology works like a close-range optical radar system that detects the position of a person's hand or finger in the touchless interface area. Electronic components include infra-red light emitting diodes and receivers, an optical lens (if needed), and an embedded circuit-board with a microprocessor to process the signal. Reflected light is analyzed to determine the appropriate action specific to the interface.

Two technology options: surface-skim and pass-through

Depending on the surface and application, Whaptics Touchless Touch offers two models:

- **Whaptics 1** surface detection technology: the detector unit precisely scans the surface area of the interface from a position on the side of the area, accurately detecting the x-y position of a hand or finger.
- **Whaptics 2** pass-through detection technology: the detector unit is mounted beneath the surface in order to scan the area on the other side.

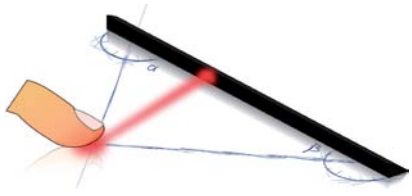

Figure 1 – Surface detection on nearly any surface, from chrome to glass to leather

Figure 2 – Pass-through detection, proximity sensing

In both cases, the H2i Whaptics Touchless Touch® system offers manufacturers the unique ability to create interactive human interfaces in a nearly unlimited number of environments, including harsh and wet applications, direct sunlight, and on nearly any type of material, even in thin air.

Whaptics Touchless Touch enables the creation of mechanism-free buttons, keypads, keyboards, switches, sliders and dials of all kinds *without* requiring people to actually touch or press anything physically. The H2i solution adds a touch of modern elegance to any product design.

Sample products

Whaptics Touchless Touch is currently used in a number of products in various markets:

Appliances

Automotive

Wellness

Whaptics Experience

Management team

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CTO: Philippe Plantier
COO: Julien Sylvestre

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