

## HotSpot Episode 58: Gestured-Controlled Music

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This week on WDD's HotSpot, brought to you by [Memory Protection Devices](#) [1]:

**Read:** [Stanford Engineers Design Video Game Controller that Senses Emotions](#) [2]

- [Atelier Haute Communicatio](#) [3]n and [Sunpartner Technologies](#) [4] have united to offer a communication instrument with [Perpetual Power Reserve](#) [5], using the revolutionary Wysips Crystal technology: the MERIDIIST INFINITE by TAG Heuer. The Wysips Crystal is a transparent photovoltaic component placed between the phone's sapphire crystal glass and the LCD screen. It uses a thin layer of photovoltaic cells and an array of micro-lenses that make the component invisible to the naked eye. The photovoltaic cells charge automatically when exposed to light, whether sunlight or artificial, and power the battery.
- Experts at [Newcastle University](#) [6] are investigating Google Glass as an assistive aid to help people with Parkinson's retain their independence for longer. Initial studies by the team focused on the acceptability of Glass. They are now working on the next stage of the project, using the technology to provide discreet prompts linked to key behaviors typical of Parkinson's, such as reminding the individual to speak up or to swallow to prevent drooling. Glass can also be used as a personal reminder for things such as medication and appointments. The team will also be exploring how the motion sensors in Glass can be used to support people with 'freezing', a behavior caused by motor blocking a common symptom of Parkinson's.
- Musician Imogen Heap has developed [MIDI gloves](#) [7] that help her gesturally interact with her computer, making the music experience more exciting. Each gesture-control glove contains a WiFi-enabled x-IMU board, developed by x-IO Technologies. They contain an accelerometer, a magnetometer, and a gyroscope, which work together with a series of motion sensors incorporated into the fingers of each glove. The sensors track the degree of bend and the spread of the fingers. Heap's latest version of the gloves feature e-textile technology, where sensors and wiring are integrated into fabric. She is now exploring how to make further use of electronically conducting textiles to reduce the number of hard components in the gloves.
- [Stanford University](#) [8] is designing a game controller that taps into players' emotions by gauging their brain activity. Corey McCall, a doctoral candidate at Stanford, popped the back panel off an Xbox 360 controller and replaced it with a 3D printed plastic module packed with sensors. Small metal pads on the controller's surface measure the user's heart rate, blood flow, and both the rate of breath and how deeply the user is breathing. Another light-operated sensor gives a second heart rate measurement, and accelerometers measure how frantically the person is shaking the controller.

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Published on Wireless Design & Development (<http://www.wirelessdesignmag.com>)

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So if a dozen ravenous zombies just aren't doing it for you any more, the controller picks up on your boredom, and adapts the game to peak your interest.

For more information visit [memoryprotectiondevices.com](http://memoryprotectiondevices.com) [1].

*Do you have story ideas? Comment below or email [wdd\\_web@advantagemedia.com](mailto:wdd_web@advantagemedia.com) we'll cover them in an upcoming episode.*

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