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**CANESTA SHOWS HOW 3-D VISION TECHNOLOGY ENABLES NATURAL INTERFACES "BEYOND MULTI-TOUCH"**

**Attendees of the "D" Conference will See the "User as the Remote", as Computers, TVs, Media Centers and Other Everyday Devices Gain New Means to Interact with Us**

**CARLSBAD, CA, MAY 27, 2009** - 3-D Sensor chip leader Canesta, with co-developers Hitachi and GestureTek, is demonstrating this week how our televisions, media centers, and computers can offer us a new dimension in interaction with natural interfaces that go beyond multi-touch, when enabled by the company's low-cost, 3-D vision technology, assisted by appropriate, application-specific middleware.

The demo utilizes a prototype gesture-controlled television system jointly developed by Hitachi and Canesta, with software contributions by Hitachi and GestureTek. On stage at the Wall Street Journal's celebrated *D: All Things Digital* conference in Carlsbad, CA, Canesta - accompanied by its co-developers - will show attendees how a user can control key features of the set, as well as navigate onscreen menus, with natural hand gestures from across the room. No touchscreen, remote, wireless controller, or other physical device is required; the user *is* the remote.

The capability comes from giving devices such as the Hitachi TV the ability to "see" in three dimensions and in real time. For this purpose, Canesta has developed a low-cost, 3-D "camera" chip that lends itself to being integrated into media centers, televisions, PCs - or just about any other device - as easily as conventional video camera chips are today.

The single CMOS sensor chip outputs a continuous stream of 3-D "frames" that contain depth maps - the distance to resolvable features in view of the sensor - that can be interpreted by software as gestures, obstacles, faces, individuals - depending upon the application. And one important application is providing input to everyday devices - our PCs, TVs, media centers, or even "smart" home nodes - from a distance, without the need for touching anything. In other words: "with the wave of a hand."

"Once a device can see reliably in three dimensions, natural interfaces that work by interpreting human behavior become possible," says Jim Spare, Canesta president and CEO. "An application goes from being *reactive* to the touch of a keyboard, mouse, or multi-touch surface to *proactively* observing its local environment." This offers creative OEMs a wealth of opportunities to differentiate their future products, he believes, and one has only to look at Apple's iPhone® to see the business model.

"In the same way that multi-touch on the iPhone made it simpler and more fun for users to access their device's capabilities, we believe gestural interfaces have the potential to provide a dramatically improved user experience for other applications - particularly those that involve choosing how to be entertained, selecting among content, or controlling one's home or local environment," he says.

But gesture control may be just the tip of the iceberg, some experts believe.

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"A robust, low-cost 3-D discrimination capability as only Canesta has been able to deliver will spur new levels of functionality," forecasts Tim Bjarin of Creative Strategies, Inc. "I can imagine applications in media delivery, computing, immersive role playing, security, robotics, medical, and automotive - to name a few - that will become technically and commercially feasible - particularly at consumer price levels - when you can deliver a continuous stream of 3-D data for a small bill-of-materials cost. Today's demonstration is just the beginning."

And although one cannot underrate the importance of application software, and middleware that can turn raw 3-D "feeds" into interpretable events, the common denominator in most, if not all of these applications will likely be Canesta's low-cost, CMOS-based 3-D sensor technology, predicts Spare.

"Canesta is already the technology leader in the field, with over 50 filed and 40 granted patents, and makes the only 3-D sensor that operates from absolute darkness to bright sunlight, with complete indifference to confusing backgrounds," he explains. "And our technology platform, CMOS, is highly preferred by OEM chip customers for its wide availability and low cost." Spare believes that the company is in an enviable position, and Bjarin concurs.

"Canesta's enabling technology may be the catalyst that fundamentally changes the relationship between our devices and us," predicts Bjarin, "As we are seeing today, Canesta has already enabled interfaces that go *beyond* multi-touch, which itself is still largely unexplored. It will be interesting to see how the various OEM's now scramble to apply 3-D sensing to gain competitive advantages over one another."

The Wall Street Journal's D Conference - brainchild of digital omnivores Walt Mossberg and Kara Swisher - attracts the top players in, and observers of, digital technology from around the world for a 3-day conversation about "All Things Digital". Now in its seventh year, it is considered to be the most prestigious and influential gathering of its kind.

For additional information about this story, please see Canesta's *Press Questions & Answers* at [Canesta-Demonstrates-Natural-3D-Interface-At-D-Q-and-A.html](http://www.canesta.com/Canesta-Demonstrates-Natural-3D-Interface-At-D-Q-and-A.html).

### **About Canesta**

Canesta is the inventor of revolutionary, low-cost electronic perception technology that enables ordinary electronic devices in consumer, security, industrial, medical, automotive, factory automation, entertainment, military, and many other applications, to perceive and react to objects or individuals in real time. When given true, fine-grained 3-dimensional depth perception with Canesta's unique CanestaVision™ electronic perception chips and software, such products can gain functionality and ease of use not possible in an era when such devices were blind.

Numerous applications are under active development by Canesta's OEM customers and partners, including building automation, security, robotics, automotive, and others.

Canesta was founded in April 1999, and is located in San Jose, CA. The company has 40 granted patents and counts multiple Fortune 100 companies as its customers.

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Additional background information is available at [www.roeder-johnson.com](http://www.roeder-johnson.com).