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CANESTA, INC.

QUESTIONS AND ANSWERS FOR D:ALL THINGS DIGITAL, MAY 2009

1. Who is Canesta?

Canesta is the leader in enabling 3-D natural interfaces with low-cost 3-D sensor chips and technology.

2. What is Canesta showing at D?

Canesta is demonstrating today how televisions, media centers, and computers can offer a new dimension in interaction with natural interfaces that go beyond multi-touch. Specifically, the demonstration is of a gesture-controlled Hitachi TV which uses a small Canesta CMOS 3-D sensor, gesture recognition software, and understands a repertoire of user hand gestures - from up to 10 feet away - that provide remote control of the set, or navigate on-screen menus to access content and services.

3. How does the gesture-controlled TV show the potential of natural interfaces enabled by 3-D vision?

The TV is really the window into the entire media center. As more and more capabilities emerge for the “digital living room” -- from downloading movies to a TV, reading complex entertainment guides, seeing Internet Videos on that TV, controlling the Internet and many others -- a simple, natural way of controlling the environment is critical.

Similarly, the PC desktop metaphor has been evolving including, now, Multi-Touch gestural-based interfaces as popularized by Microsoft Windows 7®. 3-D vision enables such functionality to expand beyond the immediate plane of the screen to more free-form and natural interactions.

Moreover, as web-based experiences such as social networks and virtual communities evolve from 2-D, page-based experiences to fully immersive virtual spaces, natural 3-D interfaces will make them easier to use and broaden their appeal.

4. What are the other applications of natural interfaces enabled by 3-D vision?

Nearly all devices, including TV's, media centers, personal computers, cell phones, automobiles and many industrial and medical applications can benefit from the ability to be controlled with natural interfaces.

5. Will natural interfaces have as much impact on markets as multi-touch had on the iPhone®?

Yes, perhaps even more. Natural interfaces will revolutionize the landscape in the “digital living room”, much as the Apple® iPhone® did in its market. The payoff for manufacturers and

service providers will be new, must-have applications, significant revenue increases, and a greater market shares for the first movers. New interfaces such as those that were pioneered by the iPhone, have enabled their makers to literally “burst out of the crowd” of increasingly similar products in otherwise stagnant markets, as users have flocked to the new, gesture-based products. The result is that Apple has been able to dominate its product category, and command a premium over competitive devices with similar components and costs. This momentum, will carry over to televisions and media PCs, and will kick-start a new wave of innovation in the role of these devices in the digital home.

6. When are products that use Canesta's technology going to reach the market?

Some industrial applications will be introduced this year. Consumer applications are expected in late 2010.

7. Why is Canesta's 3-D “camera” better than alternatives?

Canesta is already the technology leader in the field, with over 50 filed and 40 granted patents, and makes the only sensor that operates from absolute darkness to bright sunlight, and with complete indifference to confusing backgrounds. Canesta's technology choice, CMOS, is highly preferred by OEM chip customers as it is widely available, inexpensive, and easily second-sourced.

8. Why can't a regular camera chip be used for these applications?

Regular camera chips are 2-D. True 3-D is critical to be able to accurately determine the location of an object in 3 dimensional space, discriminate between objects from one another (such as a photograph of a person and the real individual), and accurately recognize natural interfaces such as gestures.

9. Isn't the software more important than the chip for these interfaces?

The invention and availability of low-cost single chip 3-D image sensors is making mass-market natural interface applications possible. The universal foundation for 3-D natural interfaces is the sensor chip technology that can see in 3-D. Intelligent and creative software indeed creates much of the “magic” of the experience from the users' perspective and there will be many software applications developed by a variety of companies that are specialists in their particular fields. For example, Canesta has previously announced partnerships with GestureTek, SoftKinetic, and Edge3Technologies and expects many other small and larger players to become increasingly involved as Canesta's sensors become commonplace.

10. How did Canesta come up with the idea and technology for a low cost 3-D vision chip?

Canesta's founders wanted to solve the fundamental problem of enabling everyday devices with the ability to “see,” i.e. to follow objects in three dimensions in real time. But no solutions - from computer vision to other camera applications -- were efficient enough or had the potential to be low enough cost to become a universal solution. They therefore started from a blank sheet of paper to figure out how to use the most advanced chip technology to solve the problem.

11. In simple terms, how does Canesta's technology work?

True 3-D sensing involves determining the distance from the sensor to every important feature in the sensor's field of view, and then using that information to discriminate objects, individuals, movements, body parts, hand gestures, or just about any other feature – mimicking the process performed so effortlessly by human eyes and brains. When performed electronically, however, it gives ordinary devices an entirely new degree of perception that enables unprecedented interaction with the surrounding environment.

Canesta's core technology, called "time of flight", relates to the RADAR-like aspect of the tiny CMOS sensor chips. Individual distances to features in a scene are actually determined by the sensor calculating the time it takes a photon of infrared light to travel to that feature and back. Canesta's sensors do this in real time, for thousands of details, at rates over 60 frames per second.

12. What kind of intellectual property and patent portfolio does Canesta have?

Canesta holds a very broad patent portfolio for 3-D vision sensing with 40 granted patents and many more filed.

13. Is Canesta raising money?

Canesta's business plan is currently fully financed. Additional capital will enable Canesta to accelerate the timeframe in which it achieves its mission of making 3-D image sensors ubiquitous.

14. What are the basic facts about Canesta?

Canesta is based in Sunnyvale, CA, has offices in Tokyo and Detroit and has 57 employees and associates.

15. Where may I read the news story about Canesta's demonstration at the *D: All Things Digital Conference*?

Please see *Canesta Shows How 3-D Vision Technology Enables Natural Interfaces "Beyond Multi-touch"*, May 27, 2009, at www.roeder-johnson.com/RJDocs/Canesta-Demonstrates-Natural-3D-Interface-At-D.html.

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