'World's Smallest' 3D Sensor Is Ready to Go Anywhere

When we look back at this year's CES, we may remember it as the year of the sensor. Wearable and embeddable sensor technology will be everywhere, and right there at the heart of at least some of it will be PrimeSense. The Israeli-based company created the 3D environmental mapping tech behind Microsoft's Kinect [1] motion sensor for the Xbox 360 [2] and, at CES 2013 [3] in Las Vegas, PrimeSense will unveil what it calls the "World's Smallest" 3D sensor: the Capri.

As thin as a pencil and no larger than a stick of gum, Capri could herald a new era in 3D-sensing-capable products and services. As PrimeSense sees it, the Capri is small enough to go virtually anywhere: from house-cleaning robots to laptops, and from computer screens to tiny smartphones. Company execs describe it as "giving sight" to all of these devices.

PrimeSense's 3D sensor technology works by first bathing the area in front of it in a sophisticated, near- infra-red light mesh. This creates a grid that a second sensor can read. The algorithm uses the information to get a complete, live, fully 3D picture of the room -- including people and objects in it. (In Kinect, Microsoft added its own gesture-recognition software.)

While using many of the same 3D sensing technologies found in Kinect, Capri is 10 times smaller, includes a new system on a chip (SoC) and, PrimeSense representatives told me, features more powerful algorithms. The new reference design (PrimeSense is a fabless company that does not actually build the sensors) is even, according to company representatives, more affordable, a key attribute that could make it more attractive to consumer electronics manufacturers looking to add 3D motion control and interaction to their products.

At CES 2013, PrimeSense and its partners will demonstrate the tiny Capri inside a wide variety of consumer products and applications including 3D gesture-recognition signage from CoVii, real-time shopper behavior analytics from ShopPerception, a 3D interior design application from Matterport.

If you're not buying all that embedded 3D sensing technology can do for you, then check out PrimeSense's promo video. Not only does it weave 3D sensor technology throughout, but it also tells a tender (well not always so tender -- the guy breaks his arm, after all) love story. It's a clever mix of cheesy, cute and informative. Note how the Capri 3D sensor technology is never visible. That's because it's small enough to fit in any of those devices and, perhaps, smart enough to help spark a little romance.

Where can you imagine embedded 3D sensor technology changing your life?

Read More [4]

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