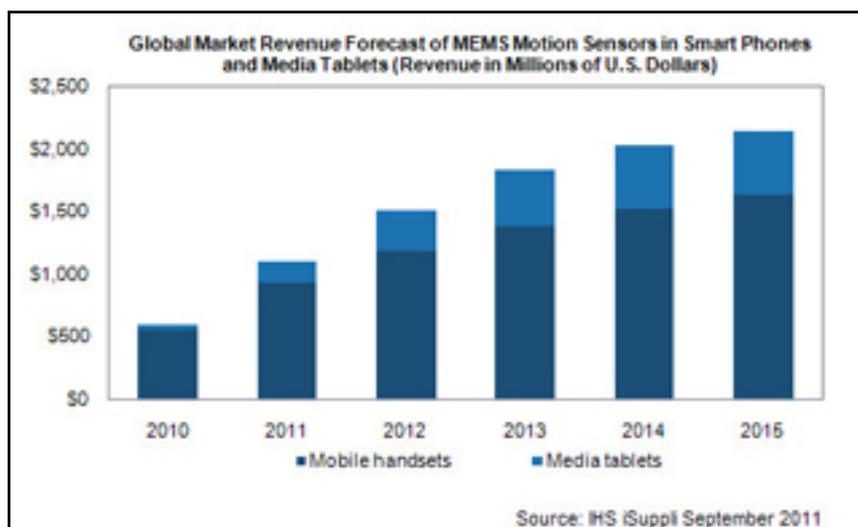


Motion Sensor Market for Smartphones and Tablets Set to Double by 2015

El Segundo, Calif., August 8, 2011—Sparked by Apple Inc.'s adoption of accelerometer technology in its iPhone and iPad lines, the market for motion sensor devices in smartphones and tablets is set to nearly double during the next five years, according to a new IHS iSuppli MEMS & Sensors Special Report from information and analysis provider IHS (NYSE: IHS).

Global revenue from motion sensor technology in smartphones and tablets will expand to \$2.1 billion in 2015, up from \$1.1 billion in 2011, as shown in the figure below. The motion sensor category consists of a range of products, including microelectromechanical system (MEMS) accelerometers, MEMS gyroscopes, electronic compasses—also known as 3-axis magnetometers - and MEMS pressure sensors.



“From the very first time consumers rotated their iPhones and watched with wonder as the display automatically switched to a vertical orientation, they have been hooked on the motion-sensing capabilities of their mobile electronics products,” said Jérémie Bouchaud, director and principal analyst for MEMS and sensors at IHS. “Because of this and other applications such as gaming and navigation, motion sensing has become a standard feature on smartphones and tablets, driving booming sales of MEMS sensors.”

MEMS in motion

Apple kicked off the market for motion sensors in smartphones in 2007 with the introduction of the accelerometer-equipped iPhone. The company further boosted the smartphone motion sensor market in 2010 with the addition of a compass and a 3-axis gyroscope to the iPhone 4 line. That same year also marked Apple's introduction of the iPad, which included the same motion sensor devices.

Following Apple's lead, other companies have made motion sensors standard features in their smartphones and tablets—the two fastest-growing mass-market electronics products on the market today.

Global smartphone shipments are set to soar to 1.03 billion units in 2015, up from 294 million in 2010. Meanwhile, media tablet shipments are expected to rise to 275.3 million units in 2015, up from 17.4 million in 2010.

Given this rapid growth, a total of 4 billion motion sensors will ship in smartphones and media tablets in 2015, up nearly fivefold from 864 million in 2010.

Motion sensors get smart

With the increasing variety of different types of sensors used in handsets and tablets, motion-based applications are becoming more elaborate, moving beyond screen rotation or map rotation.

The fusion of signals of the various sensors is enabling the much smoother, faster and more precise description of motion. This precision is suited to new applications, including augmented reality, gaming and motion-based web browsing.

Ultimately, signals from motion sensors will be fused with data from other sensors in smartphones and tablets, such as light sensors, cameras, microphones and global positioning systems. When combined with other sources of information, such as calendars, weather forecasts and traffic information, this sensor information can enable "context awareness," allowing handsets and tablets to determine automatically the context of how and where smartphones and tablets are being utilized. This will enable electronic devices to anticipate users' needs.

Sensors everywhere

Accelerometers and compasses already are nearly ubiquitous in smartphones, with 95 percent and 96 percent penetration, respectively, in 2011. Penetration also is increasing in feature phones.

In 2011, IHS estimates that 29 percent of smartphones will include a gyroscope, up from 13 percent in 2010.

Pressure sensors are emerging in the second half of 2011 and will experience growing demand in high-end smartphones starting in 2013 for use in indoor navigation applications.

In the media tablet space, the combination of accelerometers, gyroscopes and compasses is standard in 2011. Pressure sensors already have appeared in some tablets, notably the Motorola Xoom.

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Published on Electronic Component News (<http://www.ecnmag.com>)

Source URL (retrieved on 05/22/2013 - 8:30am):

<http://www.ecnmag.com/news/2011/09/motion-sensor-market-smartphones-and-tablets-set-double-2015>