



# The Tablet Era Begins: Calling for Innovation

A tablet is more versatile than a smartphone, which is primarily a mobile device for outside the home.

Although tablets have long existed in the industry in some shape or form, the tablet opportunity took the market by storm in 2010, largely thanks to Apple's success with the iPad. IDC forecasts that 44.6 million tablets will ship in 2011, with 70.8 million units forecast to ship in 2012. This market opportunity arises from the affordability and availability of processing power, advances in touch-screen computing, ubiquitous wireless connectivity, alternative operating systems, and the growth of Internet-based content and service opportunities.

While there are many types of tablets, from media phones to industrial tablets, the consumer, multimedia slate device for use at home or on-the-go has particularly ignited the industry's imagination. The types of consumers targeted for such tablets are those who are willing to spend, need mobility, and have a nearly insatiable appetite for staying connected to the information, people, and entertainment important to them. With hundreds of tablets bludgeoning their way into the market, device manufacturers will attempt to differentiate their products by building many different kinds of tablets, with varying types of I/O, screen sizes, weight/battery tradeoffs, market-specific usages, content services, and so on.

A tablet is more versatile than a smartphone, which is primarily a mobile device for outside the home. By contrast, a consumer may frequently use a tablet in the home, whether for browsing, e-mail, and other communication while sitting on the couch, watching TV, or as a family organizer, recipe or photo viewer that remains docked in the kitchen or living room. Some may indeed take the device with them in a car, to a café, on a train, or in-flight, not necessarily to replace their existing mobile phones or notebooks, but as a convenient device for light entertainment and location-based services. Combined with Voice over IP (VoIP), Video Telephony, and other communication technologies, such a device could also be used as a media phone, extending its usage to the enterprise.

**Sunita Shenoy**  
Segment Marketing  
Manager, Software  
and Services Group,  
Intel Corporation

Current usages of tablets largely fall into the following categories:



The nascent market for tablets presents the developer ecosystem with an enormous opportunity. Summaries of some usage categories with room for innovative applications and services follow.

## Table of Contents

<b>Gaming</b> .....	2
<b>Social and Communication</b> .....	2
<b>Location-Based Content and Services</b> .....	3
<b>Sensor-Aware Usages</b> .....	3
<b>Conclusion</b> .....	3

## Gaming

Tablets readily become great for gaming, for the casual and multi-player gamer alike. A rich, immersive visual world and innovative input methods can differentiate the gaming experience as developers take advantage of tablets' large, bright screens. The form factor of these devices leads to the expectation that users play games not through a standard keyboard or mouse but by interacting directly with the game through natural interfaces. Besides touch gestures, additional sensors such as accelerometers, gyroscopes, or pressure sensors can add dimensions to the experience, allowing gamers to use the entire device as input.

## Social and Communication

Advances in communications technology have long revolutionized how people use computers. Beyond basic connectivity and support for various applications and communication clients, the rise of brush-by computing, particularly for social usages, have led to the expectation that tablets are "always on, always connected" (AOAC). VoIP has enabled a significant increase in the frequency of long-distance communication at very low costs. Developers may innovate usages that integrate or extend content or services as desired in the marketplace. Possibilities include, for example, two-way (or more) video and audio communication and the ability for the user to instantly review content on a social network while he or she views, reads, or listens to that content on the tablet.

## Location-Based Content and Services

Location-based services comprise information and content related to the geographical position of a mobile device, using GPS, 3G, and Wi-Fi access point information to provide location.

Such services have grown rapidly in this increasingly mobile world, with over 95.7 million users in 2009 resulting in over USD 2 billion in revenue.<sup>1</sup>

Applications developed for personal navigation systems, smartphones, and in-vehicle infotainment devices using location-based content are also desired on tablets. Common examples include:

- Services that identify the location of nearby tourist attractions, restaurants, and shopping, and provide navigation directions to these locations
- Entertainment and magazine publishers may recommend premium digital content based on the device's active location or a profile of the user

More interesting examples, however, involve "mashing up" location-based services with other applications. For example, an application might integrate location and time zone into incoming VoIP or instant messenger sessions. Or, an online video player may recommend location specific content.

## Sensor-Aware Usages

In addition to location sensors, there are a number of soft and hard sensors included on devices today, such as Multitouch, Temperature, Pressure, Ambient Light, Network Availability, Noise Level, Camera, Compass, Orientation, and Vibration, to name but a few. Sensors allow users to maximize the usability of the tablet beyond content viewing, allowing interaction with and control of nearby connected devices. The mobile device ecosystem is still in the nascent stages of sensor usage. Sample scenarios include:

- Using touch and gestures to interact with applications such as eReaders and music albums flicking pages, virtual keyboard, etc.
- Using the tablet as a remote control for augmented reality games
- Using location, compass, and orientation data for mobile augmented-reality applications<sup>2</sup>
- Wirelessly display a movie from the tablet on a TV
- Remote, wireless control of media playback on PC, TV/CE
- Automatically detect nearby consumer devices such as car audio systems and synchronize music library across devices

## Conclusion

This paper explored a few types of usages and scenarios for which innovation in applications and services are possible. The era of tablets and other smart mobile devices has just begun, and the consumer's appetite for rich content, innovative applications, and a compelling user experience will grow appreciably.

Developers—the canvas for creativity and innovation is yours!

For more information about MeeGo, visit [www.meegozone.com](http://www.meegozone.com) [www.meego.com](http://www.meego.com)

<sup>1</sup> <http://mashable.com/2009/07/12/location-based-services/>

<sup>2</sup> Examples: [http://www.maclife.com/article/feature/top\\_10\\_accelerometer\\_apps](http://www.maclife.com/article/feature/top_10_accelerometer_apps)

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. UNLESS OTHERWISE AGREED IN WRITING BY INTEL, THE INTEL PRODUCTS ARE NOT DESIGNED NOR INTENDED FOR ANY APPLICATION IN WHICH THE FAILURE OF THE INTEL PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined." Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request. Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order. Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or by visiting Intel's Web site at [www.intel.com](http://www.intel.com).

Copyright © 2011 Intel Corporation. All rights reserved. Intel, the Intel logo, and Intel Atom are trademarks of Intel Corporation in the U.S. and other countries.

\*Other names and brands may be claimed as the property of others.

0511/SPS/HBD/PDF

♻️ Please Recycle

325083-001US

