

# VTF 2006

VIA Technology Forum



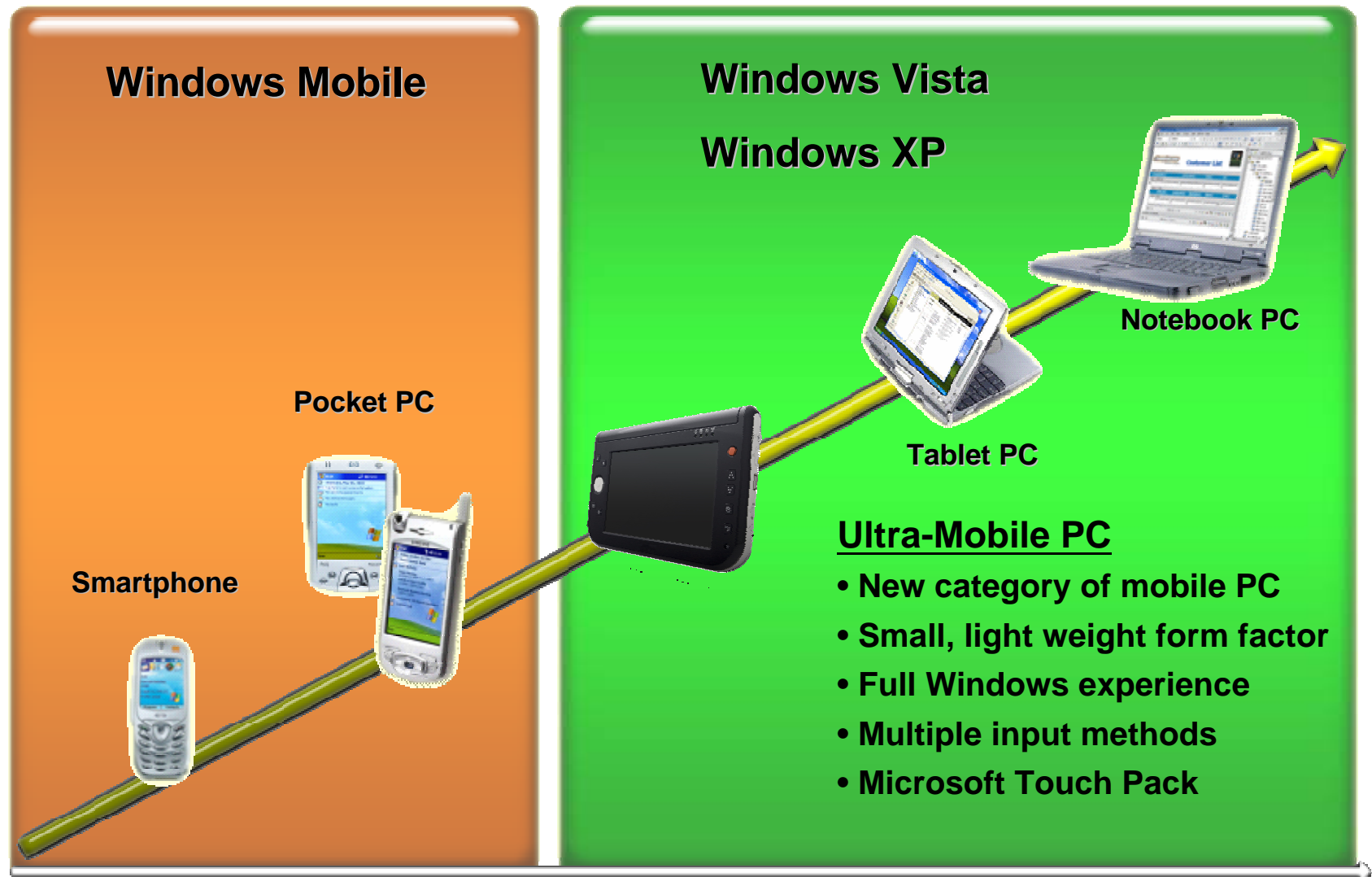
*Embracing  
Digital Intelligence*

## Ultra-Mobile PC Overview

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# UMPC and Microsoft Mobility Solutions



## UMPC goals and vision

- **Create a new class of lifestyle PCs**
  - Device-like, desirable, affordable
  - A full-power, full-fidelity **Windows** digital companion
    - App compat, developers, UX/UI, Windows API
- **Enable new scenarios for the PC**
  - More mobile, more natural interaction for on-the-go use, more natural fit into people's lives and activities
  - New software and peripheral opportunities

# UMPC Key Usages

## “Go Everywhere. Do Everything”

- **Communicate**
  - Email, IM, VOIP
- **Connect**
  - Full-functionality networking, full-fidelity internet
- **Entertain**
  - Music, videos, pictures
  - Games
- **Accomplish**
  - Full Windows PC functionality for common tasks
    - organization, location and navigation, data and document access and review

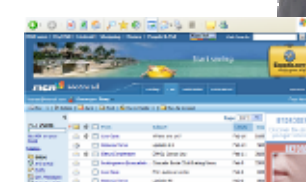
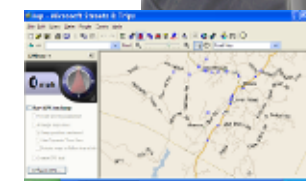
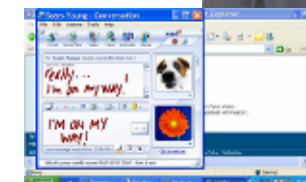
# UMPC 2006 Hardware Characteristics

- **Runs Windows XP Tablet Edition**
  - Supports Windows Vista for 2007
- **Seven-inch diagonal (or smaller) display**
  - Minimum 800x480 resolution
  - Higher resolutions possible
- **Under 2 pounds**
- **4 wire Resistive digitizer (touch screen)**
- **Touch, stylus, and thumb-based interaction controls**
- **802.11 B/G wireless, Bluetooth**
- **~1Ghz-class low-voltage CPU and integrated graphics**
  - VIA C7-M
  - 1.8" or 2.5" hard drive
- **USB 2.0**
  - OEM-specific I/O: built-in VGA connector, SD/CF slot, wired Ethernet, docking connector
- **Other OEM-specific features:**
  - Camera, mic array, built-in GPS receiver, digital TV tuner, fingerprint reader, display stand, hold switch
- **Example Peripherals:**
  - Folding keyboard, Folio w/keyboard, Docking Station, Mini-Docking Station, DVD Dock, Auto Mount, Extended Battery



# UMPC 2006 Experience

- **Program Launcher** – Provide a full-screen launch application that is touch optimized with some extensibility to OEMs and enthusiasts.
- **Brilliant Black WMP Skin** – Provide a new media player skin optimized for a 7" screen and touch
- 
- **Dialkeys** – Provide a licensed version of dialkeys with QWERTY based skin implementation and skin layouts for all 9 languages
- **Optimized UI** – Optimized the Windows UI settings making navigation with touch easier – wider scroll regions, enlarged minimize / maximize buttons, several others
- **Sudoku Game** – Provide a new game that highlights casual gaming, touch and handwriting recognition
- **Community Site** – Create a new community based web site that promotes information sharing, technical articles, team blogs, etc. that is hosted by Microsoft
- **UMPC Tutorials**- Web based and downloadable tutorials localized in 9 languages



# UMPC Interaction Example

## System behavior related basic function buttons

- Power on/off button\* (Sliding button highly recommended)
- SAS button\*
- Direct media button\*\*
- Hold button\*\* (Sliding buttons recommended)
- Wireless on/off button\*\*\*

## UMPC Touch Pack related buttons

- UMPC Program Launcher button\*\*
- Text Input Panel (TIP) button\*\*

## UMPC navigation related buttons

- Point control\*\*
- Right and left mouse click\*\*
- 4 way directional buttons\*\* (Up, down, left and right. Up & down can be scroll type)
- Enter button\*\*
- PageUp and PageDown buttons\*\*

## Convenience buttons

- Volume control\*\*
- Mute\*\*\*
- Transport control\*\*\*
- MIC on/off\*\*\*\*



## UMPC setup related buttons

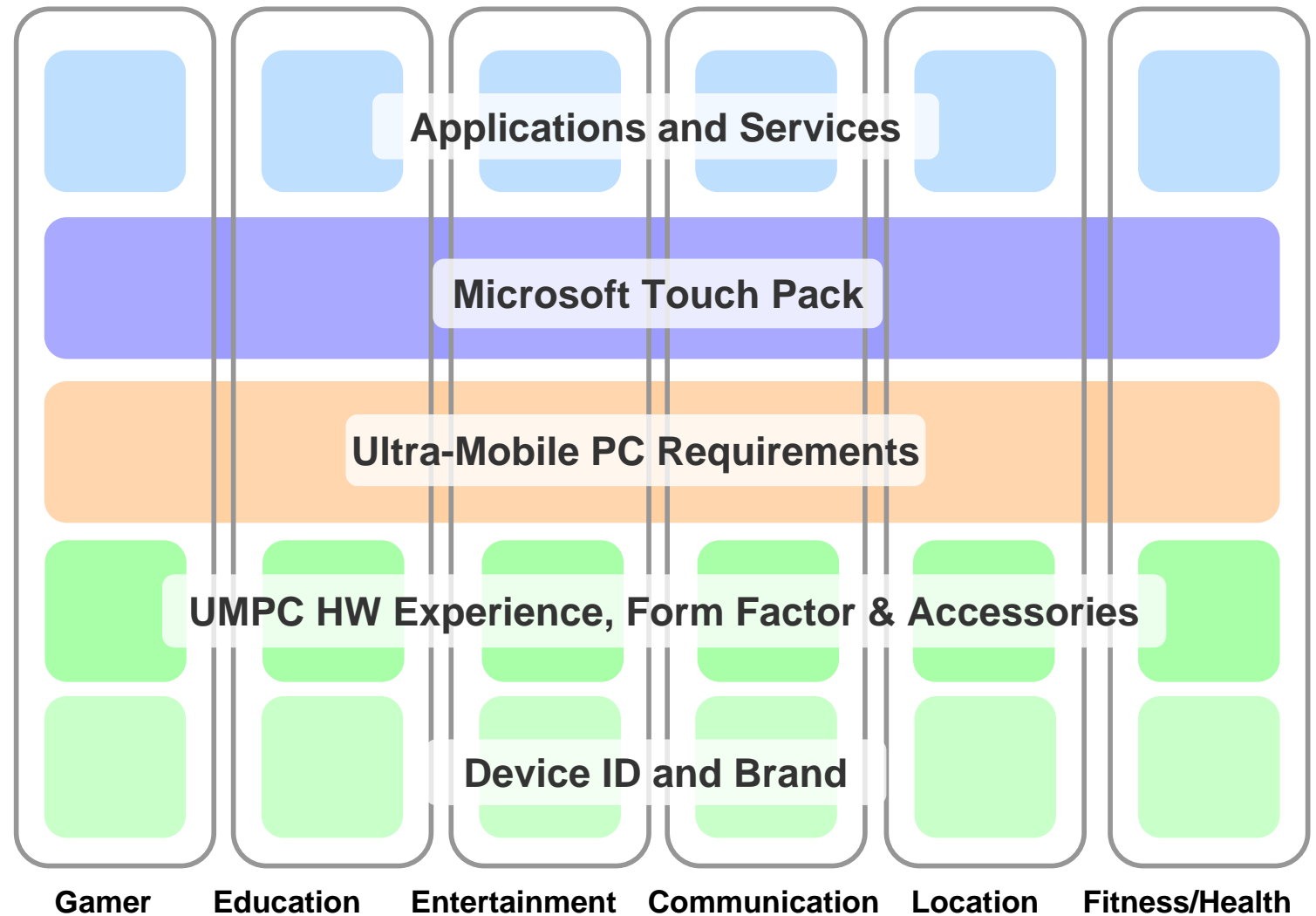
- “Mobility Center” or “quick setup” button\*\* (Display resolution toggle panel can be under this function)
- Display resolution toggle buttons\*\*\*

\* Required

\*\* Highly desired

\*\*\* Nice to have or use with caution

# UMPC 2007 = Platform Architecture





# UMPC 2007- Hardware Characteristics

- **~1Ghz-class low-voltage CPU and integrated graphics**
  - CPU and chipsets to be optimized for Vista
  - Maintain Mhz, reduce power requirements
  - DX9.L supported
  - Possible passive cooling
  - Smaller footprint, lower power, higher integration
- **Connectivity**
  - Integrated WWAN solutions for “always connected” experience
- **Display**
  - LED-backlit
    - Lower power, more efficient scaling of brightness, no inverter
  - 1024x600 7” designs expected
- **Digitizer**
  - Possible integrated touch panels with LCD for reduced thickness
- **Storage**
  - 100% solid-state possible
- **I/O**
  - SD/SDIO, CF
- **Dimensions**
  - Reduce Z-axis- 18-20mm thickness possible
  - Reduce weight to <700grams

# Interaction constraints

- **Display Area**
  - Small display area and high resolution
    - UMPC Display emulator  
<http://msdn.microsoft.com/mobility/tabletpc/umpc/umpcbета/default.aspx>
- **Touch Interaction**
  - Majority of Windows software not optimized for touch
- **No built-in keyboard or mouse**
  - Common interactions such as hover, context menus and modifier keys difficult to access
  - Text input
- **Mobile environments reduce user focus**
  - Many common scenarios must address reduce attention of user and shorter duration of usage
- **Design guidelines available shortly from MSDN**

# WHQL /Logo Requirements

- **Windows Logo Program 3.0**
  - **UMPC are a new category in Vista**
    - **Ultra mobile-** *A mobile system that weighs less than 2.5 pounds or 1.134 Kgs in the standard configuration and has a 7-inch-or-smaller screen size.*
    - Ultramobile PCs may ship with an XPDM driver until June 30, 2007
    - <http://www.microsoft.com/whdc/winlogo/hwrequirements.mspx#a>
- **Windows Hardware Requirements**
  - Touch OPK
  - <http://www.microsoft.com/whdc/winlogo/hwrequirements.mspx>
- **Mobile PC Platform Design - Overview**
  - <http://www.microsoft.com/whdc/system/platform/mobilepc/default.mspx#>
- **Microsoft site**
  - <http://microsoft.com/umpc>
- **Community site**
  - <http://origamiproject.com>

# UMPC Call to Action

- **Design for**
  - Low power
  - Low cost
  - Consumer market
    - UX/UI Design Guidelines available soon
- **Consider**
  - Key scenarios
  - New and emerging technologies
  - Consumer electronics industry trend
- **Factor in**
  - Interaction methods
  - Clear value added and differentiated brand messages
- **Build**
  - A great end-to-end product for Windows Vista

**Thank you!**

**Microsoft®**

*Your potential. Our passion.™*

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