



Monetizing the Keypad Real Estate on Mobile Devices



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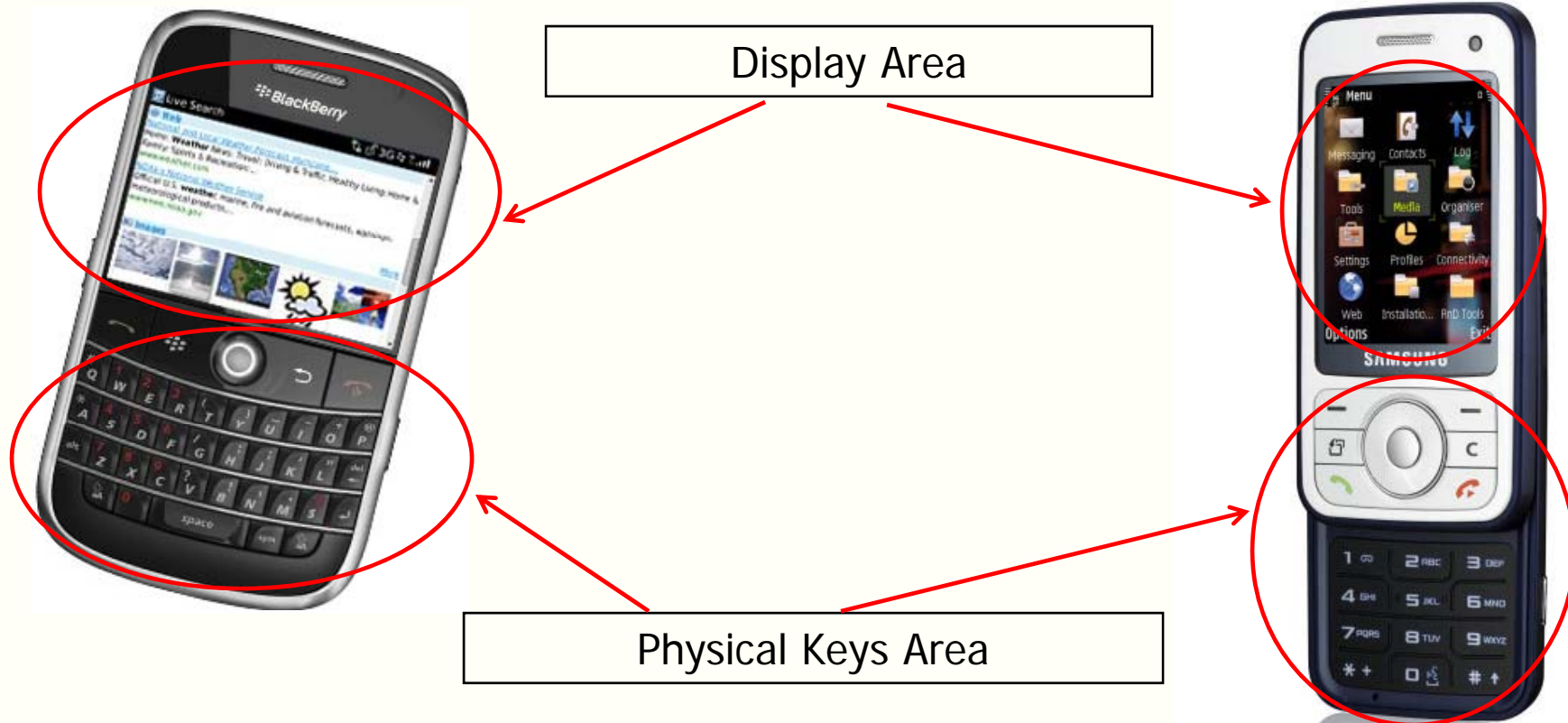
A real estate play

- The surface is developable real estate
 - It can be owned, used, bought, sold, leased, developed, monetized, etc
- The surface is perhaps the most valuable real estate in the world
 - At least 40% of the world's population interactively uses this real estate throughout every day
- 50% of the surface is highly under-utilized
 - Current keypad real estate
 - generates no direct revenue, and no revenue from the mobile Web or most mobile applications
 - is built with out-of-date keys that significantly limit the value of the display area, the phone's apps and services and the Web experience





Two types of mobile real estate on the vast majority of phones



On phones with no physical keypad, there is only the display real estate. These use on-screen keyboards that use up display real estate. Example: Do text entry on an iPhone. The on-screen qwerty takes up at least 50% of the display area, and the rest of the display is almost unusable.



50% of the surface real estate is allocated to physical keys



Note: Phones with physical keys will be approximately 90+% of the 1.4 billion phones projected to be shipped in 2009



The keypad real estate is highly under-utilized

- The keys generate essentially no revenue from or for

- app developers
- web companies

consequently, operators/carriers make far (hundreds of millions of dollars) less than they could, without charging subscribers a dime more

- Most of the keys are single-purpose keys (labeled at the time of production) for entering text and numbers

- the majority of use of these devices is trending from numeric and text entry to “command” entry – the whole point of 3G and 4G networks is to move beyond dialing numbers, SMS and email

- See our white paper on “The Changing Face of User Input on Mobile Devices” available at www.slideshare.net and www.yuvee.com



A per-Operator \$500M+ revenue opportunity that is currently being missed

- An operator with 40M subscribers can expect an increase in revenue of \$500M, based on
 - click-through revenue from sponsored links
 - an industry-reviewed and verified financial model
- This should not be a surprise since 50% of the surface area of the phone is going from non-revenue generating to revenue generating



Parsing the keypad real estate



- D-Pad and Soft keys
- 15% of surface real estate
 - Used for
 - moving the cursor
 - navigating menus
 - "OK" click
 - Accessing and entering app "commands"

- QWERTY or Numeric keypad
- 35% of surface real estate
 - Used for
 - Entering telephone numbers
 - Entering limited text





The directional-pad and soft keys



- These keys have become increasingly complex and real estate intensive because
 - The text and numeric keys are useless for much of what phones offer to users (applications, features such as camera and video, services, browser commands, etc)
 - The soft keys around the d-Pad have to make up for the uselessness of the main keypad
 - The soft keys provide the user with access to app and system commands using on-screen menus and task bars (that use valuable display real estate)





The text and numeric keys



- Permanently labeled at the time of production with letters and numbers
- That means 30% of the surface area of the phone is dedicated to two niche purposes
 - entering telephone numbers
 - entering limited text
- These are niche purposes because of the growth in use of mobile apps and the mobile Web which require “command” entry in addition to text and numeric entry
 - see our white paper “The Changing Face of User Input on Mobile Devices” at slideshare.net





The problem

- 50% of phone real estate - some of the most valuable real estate on the globe
 - does NOT generate revenue from Web or Apps
 - when Web and Apps are the future of mobile
 - decreases the value of the display real estate
 - inhibits the user experience



The opportunity

- Use the keypad real estate to
 - generate revenue from the Web and Apps
 - add new value to the display area real estate
 - create an entirely better user experience



How?

- Two steps
 - 1) Make the keypad dynamically relevant to the context
 - with a single, simple pattern of use, and
 - with simple app developer rules (SDK)
 - 2) Simplify the d-pad's soft keys



What might that look like?

WWW.NEOKEYS.COM

Web mode.



(Or any other Website Playlist).



- The keys have NO labels
- The gray bars above the keys are displays
- The keypad shows the user exactly what the user needs for the mode/function/app that is active on the phone
- The d-pad is very simple because everything happens on the keypad
- The main display real estate value is maximized because it is used exclusively for high value "eyeball" content, not on-screen menus
- In this example, the dynamic keypad displays website names



When you take the labeling off the keys, the pattern of use makes or breaks the user experience

WWW.NEOKEYS.COM

Web mode.



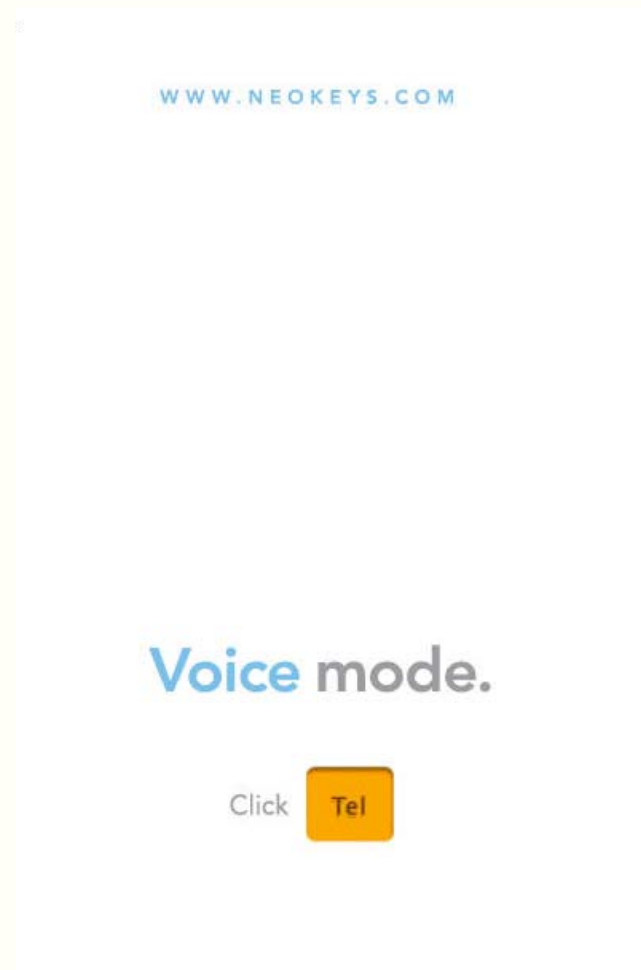
(Or any other Website Playlist).



- There is a simple pattern of use for every mode/function/app
 - 1) Choose the mode/function/app from the right hand column (it scrolls)
 - 2) The left column and middle twelve keys automatically re-map to give the user what he/she needs ("what you see is what you need")



Example: Tel



- Start with the basics:
The user always has access to the standard telephone keypad by selecting "Tel" from the right hand column
- The user gets multiple left column "Tel" keys that give direct access to advanced telephone services



Example: Camera

WWW.NEOKEYS.COM

Photo mode.



- In this example, the user has selected "Cam"
- The user gets multiple left column "Nav" keys that give direct access to camera commands
- The default set of 12 camera commands is automatically put on the middle 12 keys, giving instant immersive use of the camera with visually-cued, one-click access to
 - Snap pic
 - Auto focus
 - Zoom +
 - Zoom -
 - Etc



Example: The Mobile Web

WWW.NEOKEYS.COM

Web mode.

Click 

(Or any other Website Playlist).



- In this example, the user has selected "Video Sites"
- The user gets multiple left column "Nav" keys that give direct access to video websites, in sets of 12
- The default set of 12 is automatically put on the middle 12 keys, giving the user one-click access to
 - Youtube
 - Veoh
 - Bliptv
 - JibJab
 - Jumpcut
 - Etc



Example: Anything the device can do

WWW.NEOKEYS.COM

Anything mode.

NeoKeys lets you enjoy your mobility in a virtually unlimited number of modes. All you have to do is scroll and click. It's the world in the palm of your hand.



- In this example, the keypad is in "MP3" mode, giving the user access to MP3 controls
- The right hand column in shown extended down as the user would see on the right hand "Launch" key displays if the user scrolled down, giving the user
 - view of everything the device offers
 - one-click access to it all
 - Instant, immersive use of whatever the user chooses



Leasing the keypad real estate

- Keypad keys can be leased to
 - Websites, companies, apps, third party service providers
 - who want a direct, branded, one-click channel to mobile users, and
 - the ability to optimize 100% of the surface of the phone for their context to maximize their user experience
 - Leased at no charge to the user
 - Leased for time-period based rent, or at a click-through fee to the lessee
- Result
 - Keypad real estate is monetized
 - Operator gets substantial new revenue, without charging the subscriber a dime more
 - Subscribers get immersive everything at lower cost
 - Lessees get direct access to users, and a better product to offer



Example: Website sponsored links



- The dynamic keypad creates an unlimited ad inventory for website sponsored links offering
 - branded, one-click access keys for websites
 - organized by categories (website playlists) with titles that are analogous to search terms in web search engines (in this example: "Video Sites")
 - unlimited website playlist terms (scrolling right hand and left hand columns, each with a unique set of middle 12 keys)
- Revenue opportunity: The same revenue potential as Google's sponsored links generate, except that this system works on small screen, small real estate devices
 - see our white paper "The incredible shrinking search result page" on www.yuvee.com and www.slideshare.net
- This is just the revenue opportunity this real estate usage system opens for the mobile Web



Dynamic keypad real estate maximizes app developer interest

- Dynamic keypad real estate with a simple set of coding rules (SDK) gives app developers entirely new opportunities
- They can offer easier and immersive apps (versus the 2-5 minute usage apps available from the iPhone App Store)
 - App developer gets to optimize 100% of the surface real estate to create the optimal, immersive user experience
 - Full set of app commands (in sets of 12) on keypad
 - Full upper screen dedicated to “eyeball” graphics and content
 - No on-screen menus, task bars, pop-up UI
- Immersive apps increase usage for the operator, driving new revenue



Projected quantitative benefits

- User
 - Increased Web, apps and data service usage (see Operator/Carrier)
 - Text Entry – 64% fewer keystrokes, 60% less time
- Operator/Carrier
 - Subscriber Data ARPU = 200% increase
 - Customer support costs = 20% decrease
 - New click-through, content-side revenue
 - Annual new revenue to operator = \$500,000,000+

(based on an operator with a 40M subscriber base – ask for supporting spreadsheet calculations)
(see the “Sponsored Links” slide below)
- Device Manufacturer
 - 5% market share increase and increase in share price



Dynamic keypad real estate creates a global phone

- No labeling at time of manufacture for specific language markets
 - Creates a global phone
 - this keypad design specifically excludes any labeling on the keys at the time of manufacture
 - Instead, the keypad is dynamically set to the full language of the user's choice (or anything else: app commands, photos, icons, graphics, video, ...) to appear right on the keypad displays, including a full set of text entry controls (home, end, del, arrows, etc)
 - Further, to the extent text entry is the selected application, text can be entered natively in any language at the selection of the user
 - Contact us (or visit www.neokeys.com) for demos for any full and complete text entry in any language (alphabet, characters, character sets, punctuation, emoticons, etc)



A net lower cost device

- Net lower cost mobile device
 - one production run creates global inventory
 - reduced cost of printing on keys
 - simpler d-Pad keys and construction
 - display costs reduce as production ramps up
 - Same cost reduction curve for any consumer electronics components
 - Example: cameras in phones are now in 85%+ of phones shipped, with many cameras being high mega-pixel, video-capable
- Insignificant power consumption change
 - iPhones have one large display, drawing more power than this design



Better real estate design is more exciting

- Dynamic keypad real estate creates the most exciting experience of any mobile device on the market
 - Dynamic, back-lit displays in the key pad
 - The beauty, ease and power of real buttons with dynamic displays
 - One keypad, infinite modes, one pattern of use
 - Superior main display user experience
 - user interface menus do not appear on or interfere with the critical eyeball experience on the main display since their functionality is moved to the keypad



Improves any form factor



Laptops

Flip



Slider or
Candy Bar





Consumers readily adopt advances in user interface real estate

Examples
iPhone multi-touch
iPod clickwheel
Nintendo Wii game controller
PC Mice



Dynamic keypad with a single pattern of use creates benefits throughout the value chain

▪ **Users benefit**

- 100% of the surface real estate is optimized to create the ultimate immersive user experience of apps, Web, services, features and functions

▪ **Sponsors (websites/apps) benefit**

- Enhanced channel for voice to be heard on the device (far better than pop-up ads, banner ads, paid links, icons, etc.)

▪ **Operators benefit**

- ROI for mobile Web alone is based on click through revenue along the lines of a Google business model
- Increased subscriber satisfaction
- Decreased subscriber help-desk costs



www.neokeys.com

- Additional information
- Videos
- White papers, press releases, ...
- Translated in 8 languages
- Patent information



Old v. New

Underutilized v. Optimized

Old and Static

Non-revenue generating for Web and Apps



New and Dynamic
Revenue generating for Web and Apps





Related white papers

- Related “White Paper” Slide Decks
 - The Changing Face of User Input on Mobile Devices
 - Compound versus Elemental Devices – New Mobile Device Market Strategies
 - The Incredible Shrinking Search Results Page

- Download these from
 - Links from www.yuvee.com
 - www.slideshare.net
 - Tim Higginson’s profile on www.linkedin.com



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- Contact us for
 - More information on this and related issues
 - Other advisory services



About Yuvee

- Yuvee
 - develops and licenses advanced user interfaces and related device designs that make the mobile Internet and advanced mobile apps/data services effortless and immersive
 - provides advisory services in multiple areas relating to mobile and converged devices including
 - differentiated, physical and graphical user interface design
 - mobile and converged device design
 - innovation management processes (“IMP”) optimization
- Contact
 - Tim Higginson at (847) 962-1623 or info@yuvee.com
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