AT THE CROSSROADS OF THEATRE AND TECHNOLOGY: THE EFFECT OF MOBILE TECHNOLOGY ON A CENTURY OLD PUBLICATION

by

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DEDICATION

Laughter is timeless.
Imagination has no age.
And dreams are forever.
—Walt Disney

This thesis is first and foremost dedicated to my parents, Joel and Lydia, who have always encouraged me to follow my dreams; to all of my extended family for their continued love and support; and to those we lost along the way, especially Father George, Buela and Tia Letty – I know you are together watching down on me.

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CHAPTER I

Introduction

The following research explores the emergence of interactive technologies and the consequent effects on the printed publication. Utilizing *Playbill* as a case study, the intent of this research is to show the positive effects of modernizing a brand with interactive technologies as a means to extend the reach and exposure of a company. In order for a 129 year old publication to sustain its position as the industry standard in the twenty first century, *Playbill* must adopt modern technologies and tap into a larger consumer market.

Playbill Company History

Playbill is the national magazine of the theatre and performing arts centers. It is published on a monthly basis and available as a subscription for home delivery. The majority of Playbill magazines, however, are received at the attendance of live performances, with each show having a customized cover, featuring a specific show and venue. While the general articles within the magazine change monthly, they remain consistent across all shows regardless of the featured show. Each Playbill magazine center spread contain cast list, song and scene list, cast and creative team biographies, and cast photos of the specific show. Since its inception, almost no change in the publication content, layout, or design has occurred.

Playbill, founded by Frank Vance Strauss, was first printed in 1884 for a single theatre on 21st Street. Since its initial release, *Playbill* has become the exclusive publication for nearly every Broadway and off-Broadway production. Circulation is

currently just below 4,000,000 making it competitive amongst other leading publications such as *Time* magazine. While *Playbill* has expanded to include radio and global shopping through its online retail store (see Illustration, p. 32), many opportunities to extend reach and brand awareness, particularly in mobile technology, still exist.

History of the Print Industry

Magazines, also known as periodicals, glossies, or serials, are printed publications generally released on a regular schedule and financed through advertising and pre-paid subscriptions. The first published magazine, *The Gentleman's Magazine*, was printed in 1731 in London. Printing, the process of reproducing text and images, dates back to before 220 A.D. in China and the 4th century in Egypt. Around 1450, Johannes Gutenberg introduced the first movable type system in Europe which allowed for a faster, more uniform printing method. As the centuries progressed many additional printing methods developed including offset printing, letterpress, inkjet, and today's digital print standards.

Rise of the Internet and Interactive Technologies

The Internet is a worldwide connection of individual networks utilizing a standard internet protocol suite (TCP/IP) to distribute content to billions of users spanning the entire globe. First developed in the 1960s for use within the United States government, the Internet has gone through a series of platform changes before evolving into its current state. Through funding by the National Science Foundation in the 1980s, several networking technologies developed which were then commercialized for public access through the 1990s.

Web 2.0 is a term that was coined in 1999, later popularized by Tim O'Reilly in 2004, to describe the change in how people used the technology provided by the Internet. While early websites distributed information in a static manner, Web 2.0 allowed users to interact and collaborate with each other in a digital environment. "You can visualize Web 2.0 as a set of principles and practices that tie together a veritable solar system of sites that demonstrate some or all of those principles" (O'Reilly, 2005). Included in the principles that O'Reilly explains, are the idea of harnessing collective intelligence, blogging and the wisdom of crowds, and rich user experiences. Web 2.0 intends to use the web as an applications platform, democratize the web through user generated content, and to share information via new methods of distribution (Strickland, 2007). Today's Internet is widely consumed by social media websites, such as Facebook, Twitter and YouTube, which feature many of the principles of Web 2.0. The shift from dial-up Internet connection to broadband and wi-fi Internet access amplified the speed of connectivity and increased accessibility of the web. In 2000, only 3% of American homes had high-speed Internet access, as of August 2013, that number climbed to 70% (Pew Research, 2013). The rapid growth and improvement of broadband Internet connection helped fuel the popularity of Web 2.0.

The Birth of Mobile Technology

As more people used the Internet in a social or personal manner, the need for instant connection at all times created a new industry – smartphones and tablets. While early personal digital assistants (PDA) were capable of accessing the internet, these

mobile devices were not built to handle the demand of Web 2.0. The release of the first generation iPhone on June 29, 2007 gave birth to a new class of PDAs: the smartphone.

"Today we're introducing three revolutionary products of this class. The first one is a widescreen iPod with touch controls. The second is a revolutionary mobile phone. And the third is a breakthrough Internet communications device...These are not three separate devices, this is one device and we are calling it iPhone.

Today Apple is going to reinvent the phone" (Jobs. Macworld 2007).

Three years after the initial release of iPhone, a similar, larger device referred to as a tablet – iPad – launched on April 3, 2010. Today, over a dozen companies continue to develop and release new smartphones and tablet computers annually (see Illustration, p. 42) as consumers rely on portable hardware more heavily than their desktop counterparts. A study conducted by the Media Behavior Institute showed that access to the internet via desktop computers had dropped 3% between 2011 and 2013, while smartphones rose 10% and tablets rose 6% (see Illustration, p 49).

In July 2008 Apple launched the App Store, a digital application distribution platform for iOS (the operating system that all iPhones, and iPads use) developed and maintained by Apple Inc. The App Store allows software developers to create specialized applications to run on all iOS based devices – iPhone, iPod Touch (a mobile device similar to iPhone without the added cellular connection) and iPad. Many companies have strategically integrated mobile applications into existing branding practices expanding their reach into markets previously untapped. Mobile applications, commonly referred to simply as apps, allow the consumer to customize a unique user experience of their own. It

is a basic concept: download the apps that you find interesting and delete the app at a later time if you no longer have a need for it. "The innovation in these applications is not that they let us do something new, but that they allow us to do what we already do better, more often, in more places, and more quickly" (Porter, 2013). As of 2013 over 900,000 individual apps are available for download via the App Store. In addition to Apple, other companies have also created platforms for the digital distribution of applications for their respective devices. The most prominent players are Google Play (formerly know as the Android Market), BlackBerry App World, and Windows Phone Store.

Mobile Technology Reinvents the Publishing Industry

For decades, magazines, newspapers, and other printed mediums were published through affiliations with large corporations and the completion of a tedious publication process, including editorial, design, sales and marketing, printing, binding and distribution stages. Recent new technologies have brought radical changes to the publishing industry. The most notable change is the digital tablet which allows publications to be available on demand to consumers completely eliminating the print, binding and distribution stages of the earlier years. With products such as the Amazon Kindle, Barnes and Noble Nook, Galaxy Tab and Apple iPad, tablets are a significant force in the market and changing the way publications end up in the hands of its consumers.

The first digital book reader, Kindle First Generation, was released by Amazon on November 19, 2007. The device featured a six-inch grayscale display with 250MB of internal memory to store approximately 200 non-illustrated titles. Having established the

e-reader market, Kindle continued to build hardware that featured accelerated processors, larger displays, and higher capacity internal memory storage as they gained consumers. Following in the success of Kindle, other manufacturers saw the growing interest in digital readers and launched devices to compete with the Kindle (see Illustration, p. 48). According to *BookStats*, a industry statistics model from The Association of American Publishers, eBooks have grown 45% since 2011 and now constitute 20% of the trade market (BookStats, 2013).

On January 27, 2010, Apple announced the iPad during a press conference at the Yerba Buena Center for the Arts in San Francisco, California. While Kindle had continued success as an e-reader, iPad expanded the market transforming the publishing industry yet again. Instead of releasing another digital reader, Apple launched the iPad as a mobile device for capturing photos and videos, playing music, accessing the Internet for tasks such as web-browsing and email, gaming, reference, navigation, and more. The iPad also has e-reader capabilities through Apple's own iBooks and Newsstand applications, additionally third party apps from Kindle, Nook and others can also be installed. Unlike the devices before iPad, new graphics capabilities allowed books to have a unique immersive experience by integrating full color photography and illustrations into the publications, as well as video footage, 3D interactive content, and audio features.

While there are several benefits in digital publication, especially from an environmental standpoint, this change from print to digital publication has also caused several esteemed companies to lose their place in the industry and in severe cases have ended production completely. Most notably, *Newsweek*, an American weekly news

magazine that was first published in 1933, ceased print production on December 31, 2012 after eighty years of publication.

Statement of the Problem

As new digital technologies have emerged at an ever increasing rate, companies need to adopt new platforms and practices to remain leaders in their respective markets. With specific attention on the printed publication, companies such as *Playbill* can utilize modern technology, Web 2.0, the Internet, social media, and mobile devices to sustain relevance and continue to prosper in the twenty first century. *Playbill* continues to be the premier news source for Broadway, however current statistics indicate a loss in market share and brand equity as younger companies offer expanded content through new avenues. The creation of an app has the potential to revive the *Playbill* brand and deliver a more relevant brand experience for a new generation of more technically savvy theatre goers. The app itself will contain all of the elements of the traditional magazine including Broadway news, current productions, cast and crew credits, song lists and more. Additionally, due to the digital medium, the app will be capable of sharing media such as photo galleries, video clips, sound bytes, and interviews. Other features will include the ability to purchase paperless tickets to shows, maps to theatres and nearby hotels and restaurants, links to other *Playbill* outlets such as the *Playbill Store* and *Playbill Radio*, as well as integration with social media giants Facebook, Twitter, and YouTube. For the Broadway fan, a night at the theatre is a joyful activity that happens outside of the home far from the office desktop. A mobile platform is the perfect solution for *Playbill*, and will allow its audience to take the theatre with them while on-the-go.

The printed edition of *Playbill* will continue to be in production and distributed through live performances. Many theatre-goers may opt to skip the printed issue if they have previously downloaded the app. Today, many companies are choosing to be more sustainable through "green initiatives", which include a reduction in printed materials. While printed editions of *Playbill* are highly valuable to collectors and avid fans, the app version of *Playbill* will cater to those patrons interested in promoting a sustainable lifestyle. The digital publication of *Playbill* will help reduce paper usage, printing and transportation costs, and help deter the excessive waste along the streets of local theatres created by discarded printed copies of *Playbills*.

To view an animated prototype of the *Playbill* application online visit http://adrianahurtado.com/thesis.html.

CHAPTER II

Playbill, Broadway, and Technology

Project Overview

Playbill magazine has been the exclusive source for all Broadway theatre and performing arts center news for nearly 130 years, but due to recent emerging interactive technologies, has missed opportunities to continue expanding their market reach.

Competitors such as Broadway.com have a strong presence in the theatre community, sharing information through a well-coordinated website and a mobile application. The research presented shows how new technologies can be incorporated to an established publication, revitalize brand equity, and sustain relevance in the modern era.

Preliminary Research

Before any changes can be applied to a company, preliminary research is conducted to determine how and why the change should be developed and implemented. The process of completing preliminary research guides the creation process, helps shape outcomes, and analyzes the results to determine effectiveness. Strategies employed in this research included completing a Competitor Brand Audit (CBA) to visually compare the strengths and weaknesses among the competitors. "An in-depth competitive user experience analysis can provide a holistic view of the competitive landscape" (Ginsburg, p. 93). Also completed, was a study of the company demographics to analyze who reads *Playbill* and to determine the target market audience. Together with the CBA and company demographics results, a SWOT Analysis – Strengths, Weaknesses,

Competitors Brand Audit

In 1994, 110 years after the initial 1884 printed publication, *Playbill* established a web presence at www.playbill.com. Since the initial launch, several competitors, including The Broadway League (broadwayleague.com), Broadway.com, and BroadwayWorld.com have become earnest competitors to *Playbill*, accumulating a large portion of Playbill.com's initial digital market. Alexa Internet, Inc., a subsidiary company of Amazon.com, collects data on internet browsing behavior, analyzes the data, and reports on web traffic and global rankings for over 30 million websites. Web traffic statistics found on alexa.com indicate that while Playbill.com has maintained their foothold, both Broadway.com and BroadwayWorld.com have seen an increase in traffic. Today, Playbill.com ranks at 26,534 in global popularity, compared to Broadway.com at 24,364 and BroadwayWorld.com at 15,648 (see Illustration, p. 41).

The Broadway League (TBL) is the National Association for the Broadway

Theatre Industry with a primary purpose to focus on services, research, professional
development, and education. The information provided by TBL is highly respected
among theatre professionals, but of little use to patrons of the theatre. TBL provides
information about current Broadway shows and touring productions at
www.broadway.org, however a lack of branding and advertisement have minimized the
amount of web traffic to the site.

Broadway.com is maintained by Key Brand Entertainment, Inc. (KBE) and provides extensive information about the theatre with a thoughtfully designed website and accompanying tablet application. In addition to Broadway.com, KBE's assets include

Broadway Across America (BAA), the premier Broadway theatre touring company.

While *Playbill* has a strong presence on Broadway and in New York City, Broadway.com has claimed a large market across America through its affiliation with BAA.

BroadwayWorld.com (BW) is a vast site offering information not only on Broadway, but also includes television, movies, music, fashion, arts, comedy, and various other areas. BW's broad catalogue of offerings feels at times overwhelming and lacks focus or structure, however it has the highest web traffic of the sites surveyed and remains a favorite amongst consumers.

After determining who the key competitors were, an audit of current apps pertaining to Broadway and theatre news was conducted (see Illustration, p. 38-39). Each app was critiqued on a series of items: navigation, user interface, information/content, visual design, and whether or not the app ran natively on both smartphones and tablets.

While BW is the most favorable website amongst consumers, their mobile app has some clear weaknesses when compared to the proposed *Playbill* app. The user interface is difficult to navigate with icons that are far to small to be recognizable and change from screen to screen. Also, it is difficult to understand how to use the app from the first landing page. Other issues are skewed graphics that do not fit to the display and resolution of the device, and distractions by misplaced advertisements.

Another app that was explored was Broadway.org, published by TBL. From the first page, the user interface is straight forward and information is available quickly. An improved graphic design could help unify the icons and improve branding awareness.

Overall the app is successful at sharing information quickly and accurately. The app,

iBroadway, along with the companion website iBroadway.net, have multiple design flaws that need to be addressed. First, advertisements that have no relationship to the content, disrupt the flow of the application and take up a signification amount of screen real estate. Toolbars and icons are difficult to decipher and become lost behind additional graphics and ads. iBroadway.net is currently live, however the links are non-functional and lorem ipsum, or placeholder text, is being used in place of accurate information.

TheaterMania was founded in 1999, with the intentions of connecting the theatre industry with a mass consumer audience. Their website, TheaterMania.com, and mobile application, have a clean layout and easy navigation. Coordinating visuals and graphics between the website and app help establish continuity of the brand. Currently the largest disadvantage of the mobile app is the lack of features that are available on the website, primarily no audio/video content or photos are available. Another opportunity for TheaterMania would be to release an update of their app to run on tablets.

Mobile Device Analysis

A mobile device is a small, hand-held computer containing an operating system (OS) used to access the Internet, playback and capture media, and run applications. The most popular mobile devices are smartphones, tablets, mp3 players, and mobile gaming consoles such as the Nintendo 3DS.

A StatCounter Global Stats study showed that Apple continues to hold a strong lead in market share percentage for the top mobile devices in North America (see Illustration, p. 42). Apple also has the highest market share in the United State for top mobile operating systems. Steadily gaining ground however is the Google Android OS

which has more than tripled its market share percentage in the last five years (see Illustration, p. 43). In order for a company to reach the broadest target audience, apps should be designed and released for both Apple iOS and Google Android devices.

Initially the *Playbill* app will be designed for the iOS platform. Apple maintains the iOS Human Interface Guidelines (HIG), a software development documents which sets guidelines and principles to help developers design a unified user interface and user experience across multiple applications and devices. Today, Apple has four display sizes across the entire line of current generation mobile devices (see Illustration, p. 46). Furthermore, according to statistics presented by Apple CEO Tim Cook at the 2013 Worldwide Developers Conference (WWDC), 93% of Apple mobile devices are running the latest version of iOS. In comparison, Android currently offers 114 individual phones and tablets of various screen sizes, and just 33% of the devices are on the latest OS, Jelly Bean (see Illustration, p. 47). The fragmentation of Android devices, in addition to the division of OS across devices, deter developers from starting their app on the platform.

Results of Preliminary Research

Together the Competitors Brand Audit, Competitors Analysis, and Mobile Device Analysis, helped identify the leading competitors in the market place, as well as the platform types most used by these competitors. This information was crucial in determining how companies prefer to deliver content. A website remains the standard platform, however, most companies are now choosing to integrate mobile applications into their business strategy, rather than relying solely on a stand alone website. Data

collected from the Media Behavior Institute also indicated a rise in mobile devices used for accessing the Internet over the past three years (see Illustration, p. 49).

While the need for *Playbill* to address new technology and develop an app became apparent, the following questions presented themselves:

- 1.) How should the app look and feel?
- 2.) What content should be available for users?
- 3.) Is the app solely a digital version of the printed publication?
- 4.) How is the app different than the website?
- 5.) Why develop an app rather than create a mobile version of the website?

To address these questions, proven creative methodologies were deployed to achieve the most viable solutions.

CHAPTER III

Methodology

SWOT Analysis

An important strategic planning tool, SWOT analysis – also known as the SWOT Matrix – is a method of evaluating the Strengths, Weaknesses, Opportunities, and Threats that face a product, place, person, or industry that is used when starting a project or business venture. The objective of a SWOT analysis is to find characteristics of the project which give the company an advantage and should remain in place, as well as elements that are currently not being addressed or underutilized (see Illustration, p. 52). A well structured SWOT analysis can "provide managers with a critical view of the organization's internal and external environments and help them evaluate the firm's fulfillment of it's basic mission" (Boone, p. 46).

Results acquired from a SWOT analysis provide useful information to help a project find its competitive advantage. For example, one weakness of the current print only edition of *Playbill* is the limitation of custom information for each show during touring productions. From this weakness arose an opportunity for *Playbill*: the digital medium of a mobile application allows for immediate updates delivered directly to the audience. The SWOT analysis also uncovered key opportunities for *Playbill* including the ability to capitalize on brand name and recognition that the publication has maintained for over 125 years and the ability to bridge the generation gap amongst theatre patrons.

Visual Brief

Another method used to analyze the current state of *Playbill* and the competitive market was a Visual Brief (VB). The purpose of a VB is to convert verbal items into a visual context to create an understanding of the target audience the project is working within (see Illustration, p. 53). The visual brief "is quite literally a collage that paints a picture of the world we'd like to design in" (Duffy, 2009). The VB, which is easily understood by both the designer and client, helps to focus the conversation, visualize the brand's key attributes and maintain a unified vision across all brand touch points (i.e., printed materials, website, and mobile app). The results from the VB illustrate *Playbill* as a company that is very rich in tradition, but also one that maintains a vibrant youth.

Demographics Survey

Theatre stakeholders (i.e., patrons, casts and creative team members, producers, directors, donors, etc.) have an important role to play in bringing a Broadway show to life. Recent statistics display the results of these dedicated individuals: in the 2011 – 2012 season, Broadway theatres accumulated an attendance of more than 12.33 million with a gross profit of over 1.14 billion dollars (see Illustration, p. 54). A demographic survey showed the type of patrons expected to attend Broadway shows and read *Playbill* magazine (see Illustration, p. 55-57). The most revealing piece of data showed that nearly half of all tickets – 47% – were purchased online months before the show. This data also indicates that *Playbill* has an opportunity to tap into online revenue by allowing patrons to purchase tickets via the mobile application. Tickets could then be retrieved directly on a personal device and used as paperless entry into theatres and

performance venues. Research also showed the market alignment between individuals who currently use smartphones and of those who read *Playbill* and attend Broadway productions. This correlation between theater patrons and smartphone users demonstrates the potential financial opportunities with *Playbills* adoption of mobile app technology.

Historical Survey

As the founder of its industry, *Playbill* has an advantage over its competitors due to its longevity in the market and already accumulated audience. A historical survey was conducted to trace the roots of *Playbill* and to view the evolution of the brands visual identity over the past 129 years (see Illustration, p. 60-61). Since the mid-1950s, *Playbill* established a vivid yellow as the primary color used for brand identity. Also noted was that the *Playbill* logo is secondary to the predominant imagery of the featured production. Both of these attributes were implemented in the design of the *Playbill* app.

Digital Sketches and Iterative Design Approach

Iterative design is a methodology based on the process of prototyping, testing, analyzing, and refining a product. Used in the communication design discipline, this process can ensure the successful outcome of a given project by determining weaknesses and allowing adjustments in the early stages of development. Designers begin with loose pencil sketches to quickly capture multiple ideas in a short time frame. The most viable ideas progress into digital roughs, followed by storyboarding, and finally comped prototypes. In developing the *Playbill* app, digital sketches allowed the designer to explore user interface and navigation options, as well as to strategize the distribution of content within the app (see Illustration, p. 70-72).

The results collected from the preliminary research, together with the aforementioned methodologies, provided valuable insight into the development of the *Playbill* application.

CHAPTER IV

Outcomes

Designing Playbill for the Next Generation

Utilizing the methods described in Chapter III, information was accumulated, which helped guide the initial design of both variations of the *Playbill* app: iPhone and iPad. Brand elements such as the long established brand identity—existing logo and corporate color palette—were integrated into both versions of the application. The apps provide the latest information for Broadway, Off-Broadway, and National Tours of Broadway productions, as well as access to other *Playbill* outlets including the *Playbill Club*, *Playbill Vault*, *Playbill Memory Bank*, and the *Playbill Store*. Multimedia galleries showcase audio and video from performances, interviews, behind-the-scenes coverage and special presentations including the Tony Awards. Additionally, a Keynote presentation was built to present an animated prototype of the app.

Brand Identity and Color Palette

Playbill has been an iconic presence in New York and Broadway for decades, as well as the industry flag-bearer for Broadway and off-Broadway theatre. To maintain brand identity minor changes were implemented when designing the icon and color palette for the application. Due to the existing brand equity—immediate recognition and longevity—of the Playbill logo, transforming the trademark itself into the application icon was the most logical progression (see Illustration, p. 63). The use of a slab-serif font in all caps set within a yellow masthead has been the established trademark for Playbill for several decades. The icon retains elements of the original logo to be instantly

recognizable and also maintains legibility within the standards of the Human Interface Guidelines (see Illustration, p. 65-66).

The tritone color palette that was established for the *Playbill* application incorporates the traditional yellow that has been standard to the company, as well as black and a new accent tone named Tony Gold (see Illustration, p. 67). Together these three hues provide a foundation for the navigation icons, highlight and accent colors, and typography within the application. While the color palette is minimal, the app is accentuated with a variety of colors from photos and other content.

iPhone Application

The primary result of the research was to integrate interactive technologies into the *Playbill* brand specifically through a mobile application. Data acquired from The Playbill Reader (see Illustration, p. 55-56) and statistics from the Pew Research Center's Internet & American Life Project (see Illustration, p. 58) indicate the parallel demographics between Broadway patrons and iPhone users. The development of a *Playbill* mobile application will allow the theatre-goer access to information about individual shows, theatres, and news pertaining to Broadway within a moments notice. A site map (see Illustration, p. 68) and preliminary sketches (see Illustration, p. 69-71) were used to determine the content of the app and help develop the user experience (UX). UX is defined as a person's perceptions and responses that result from the use of a product. "Every app should have a pay off: information, delight, a completed task, a sense of satisfaction" (Clark, p.17). If an app does not meet the needs of the consumers and stimulate a satisfactory UX, it serves no benefits to the developer. An app needs to be

thoughtfully developed to create value to the user, and provide a positive return to the developer and/or company.

The *Playbill* app starts with a home screen which allows users to quickly access the show they are interested by selecting the poster for the specific production (see Illustration, p. 72). Most theatre patrons search for information by show title before looking for actors or theatre locations. A search bar is accessible above the navigation bar via the magnify glass icon. This will allow users to type in search terms such as show title, actor, theatre, or genre to quickly access available pages rather than using the built-in navigation. The top third of the main window features current productions, highlighting shows that have garnered popularity and won recent awards. Below the featured section is a navigation bar that lets the user see shows from three categories: Broadway, Off-Broadway, and National Tours. More in depth information is available within each individual show, as well as through the sidebar menu (see Illustration, p. 73) and additional windows via the tab bar.

Tapping on an individual show poster takes the user to unique pages customized for each production. This includes a show overview, synopsis, cast and creative team biographies, list of scenes and musical numbers, maps to venues, and more (see Illustration, p. 74-76). Extending beyond the information in the printed publication of *Playbill*, several media options are available from the gallery tab of each show including photo galleries, video clips, interviews, and sound bytes (see Illustration, p. 77). These features are only available through cellular or wifi access and do not store directly within the app or on the device. By storing data on a central server, the same database of content

would be accessible from both mobile application and website. This would lower the cost of maintenance, create continuity between both mobile application and website, and have the most up-to-date information available to users without the need for frequent downloads of new versions of the app. Samples of tracks from the original broadway cast recordings of select productions are accessible within the app, and available for purchase through the iTunes Store. Affiliations with Ticketmaster and other national ticket box offices could potentially be integrated to allow for the purchase of show tickets directly from the *Playbill* app. The paperless tickets could then be used for entry to theatres and performance venues. The addition of e-commerce through iTunes purchases, tickets, and the Playbill Store for memorabilia, create an added value in having a mobile application and can positively increase revenue for *Playbill*.

Also integrated into the app were connections to social media outlets—Facebook, Twitter, and YouTube—with the option for the user to sign into the respective applications with their personal user login information (see Illustration, p.79). Participation in social media networks builds a richer, more connected experience in which users are 50% more likely to be engaged (Pew Research, 2013). Social media affords companies the opportunity to use other consumers as spokesperson for their products. Reviews by peers, rather than a selected awards panel committee, intrigue users and provide free advertisement. Users can also post links to articles and videos related to the shows or actors, potentially increasing value to the current production.

iPad Application

A secondary version of the app was designed specifically for larger display devices such as iPad and iPad mini (see Illustration, p. 82-86). Any iPhone app can run natively on iPad and will be automatically upscaled to the larger display, however there are many disadvantages to this method. In addition to a larger display, iPads also have a larger keyboard, multiple panes—the use of split screens within applications—and additional multi-touch gestures that are not available on iPhones or iPods. App designers have the opportunity to take advantage of these key features to create a unique, and more enjoyable user experience by developing specifically for iPad. While both versions of the application distribute the same information, it is important to have features and layout options that take advantage of the different user interface options. The home screen (see Illustration, p. 82) of the *Playbill* app for iPad is almost identical to the iPhone version, with the exception that more content is viewable in a single screen before scrolling. Rather than swiping to reveal the sidebar, in the iPad application a drop down menu floats above the underlying content (see Illustration, p. 83). Another change implemented in the iPad version was to encapsulate each show on a single page that can scroll vertically to accommodate any length of content.

Prototyping With Keynote

Keynote is a presentation software initially used by Steve Jobs in presentations by Apple at Macworld and other events. The program was first sold publicly in 2003 as a direct competitor to existing presentation software, most notably Microsoft PowerPoint. While the software is primarily used for public presentations through the use of slides,

graphics and tables, many features released in version Keynote 4.0 provided additional tools to create unique animations, as well as integration of audio and video.

The typical application to design and program an iOS app is Xcode, available as a free download from the Mac App Store and bundled with the iOS Dev SDK. While there are may advantages to using Xcode, an app should not be developed in the coding stage until final approval from the client. Utilizing prototyping tools such as Keynote, designers are able to present a mock simulation to showcase the potential look and feel of an app. Keynote allows the client to immerse themselves in a user experience similar to the final implementation of a completed app running native on a mobile device. Another benefit of Keynote prototyping is the ability to run basic user-testing to find UX problems before moving on to a more expensive programming phase. Additionally, a foundation in computer science programming languages such as Objective C is necessary to use Xcode. By taking advantage of the simplicity of Keynote, designers are able to produce quick edits and expedite the client approval process without the specialized skills of a programmer. Designers are also able to develop an interactive storyboard, which facilitates more efficient and streamlined programming and editing.

CHAPTER V

Conclusion

This thesis, At The Crossroads of Theatre and Technology: The Effect of Mobile Technology on a Century Old Publication, documented the process used to design and implement a mobile application for Playbill. Preliminary research strategies included a competitive brand audit, competitors analysis, demographic survey, SWOT analysis, visual brief and a historical survey. The research also revealed the importance of incorporating new interactive technologies in order for traditional printed publications to remain profitable and relevant. The development of an iOS application for Playbill will extend the reach of Playbill to a broader audience including a new, younger generation as well as expand revenue opportunities and market share. The intent of this research was to allow Playbill to bridge the gap between the long-held print traditions of the theatre and the rapidly evolving world of technology. Finally, the app has the potential to provide upto-date information, audio/video media, tickets, and more to a larger target audience. This same target audience has become accustomed to—and shown to prefer—the convenience of having immediate access at their fingertips.

This summer Apple introduced the successor to the iOS 6 platform at the Worldwide Developers Conference. iOS 7 takes the most dramatic step forward thus far with a new sleek, redefined user interface. The simplicity of the UI creates a more unified, enjoyable user experience across all applications. All developers will be updating their apps to run on the new operating system, as well as incorporating some of the new application programming interface options (APIs) available for added functionality. APIs

are used by multiple programming languages to specify how certain software components interact with each other. Apps should be updated regularly by their respective developers to maintain optimal performance, create new content to keep users immersed in the experience, and build community within an application or through the use of a website extension of the brand. It is important for *Playbill* to provide the latest information and additional content to the app frequently so that consumers will continue to use the app and not rely on the competitors.

The Broadway stage has not changed dramatically since the early days of live theatre, however, interactive technologies are evolving at a rapid pace and represent a strategic market advantage to those companies that are early adopters of mobile application technologies.

Future Research

While developing the *Playbill* application, several questions surfaced:

- 1.) What additional enhancements could be incorporated into the app to benefit the user?
- 2.) Will alpha and beta tests be conducted to survey user experience?
- 3.) Does the app work easily and efficiently?
- 4.) Are users satisfied with the content?
- 5.) Is *Playbill*'s market share increasing?
- 6.) Are more consumers utilizing *Playbill* rather than relying on the competitors?
- 7.) Will *Playbill* see an increase in revenue?
- 8.) How much of that revenue is directly a result of the mobile application?

- 9.) What other interactive technologies can *Playbill* employ to increase consumer loyalty and satisfaction?
- 10.) What additional features can be implemented to encourage consumer participation and increase social interactivity amongst the application users?
- 11.) What elements of the *Playbill* app can be integrated into *Playbill*.com to update the company web presence?
- 12.) Will other companies, specifically publication-based brands, be inspired by *Playbill* to create their own applications?
- 13.) What features of the *Playbill* app would apply to other companies in the print industry?

The following illustration documents the preliminary research, creation process and presents concepts and interactive technology solutions for *Playbill*.

APPENDIX SECTION

ILLUSTRATION

PLAYBILL

THE NATIONAL MAGAZINE OF THE THEATRE AND PERFORMING ARTS CENTERS

PRESENTATION OF CONCEPTS FOR INTERACTIVE TECHNOLOGIES

INTRODUCTION

"I regard the theatre as the greatest of all art forms, the most immediate way in which a human being can share with another the sense of what it is to be a human being."

- OSCAR WILDE

Introduction

The intent of this presentation is to explore the emergence of interactive technologies and the consequent effects on the printed publication. Utilizing *Playbill* as a case study, the research shows the positive effects of modernizing a brand with interactive technologies as a means to extend the reach and exposure of a company. In order too maintain their leading position as an industry standard, *Playbill* must adapt new practices and tap into a larger consumer market to expand readership. The creative process included preliminary research, methodologies, and outcomes resulting in the following illustration.

Company History

Playbill is the national magazine of the theatre and performing arts centers. It is published on a monthly basis and available as a subscription for home delivery. The majority of Playbill magazines however are recieved at the attendance of live performances. Each stage show has a customized Playbill with unique covers showcasing the specific show and theatre location. While the general articles within the magazine change monthly they remain consistent across all shows regardless of cover. Each Playbill magazine center spreads contain cast list, song and scene list, cast and creative team biographies and cast photos of the specific show.

Playbill was first printed in 1884 for a single theatre on 21st Street. Since its initial release *Playbill* is now the exclusive publication for nearly every Broadway and off-Broadway production. Circulation is currently just below 4,000,000 making it competitive amongst other leading publications such as *Time* magazine.

Company Timeline

Other Media Outlets

1884	1 st Playbill Publication
1994	Playbill Online WWW.PLAYBILL.COM the latest news, media, and happenings in the theatre
2000	Playbill Store PLAYBILLSTORE.COM online e-commerce site for official show merchandise
2006	Playbill Records American record label for Broadway
2007	Playbill Radio 24-hour-a-day Broadway music station
2011	Playbill Vault PLAYBILLVAULT.COM comprehensive database of Broadway history
2012	Playbill Memory Bank PLAYBILLMB.COM social media outlet for fans of the theatre
2013	Playbill EDU PLAYBILLEDU.COM database of US and Canadian performing arts schools

Source: Wikipedia

http://en.wikipedia.org/wiki/playbill

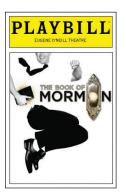
PRELIMINARY RESEARCH

"You've gotta be original, because if you're like someone else, what do they need you for?"

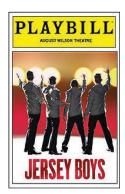
- BERNADETTE PETERS

Company Overview

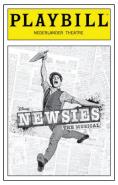
Current Printed Playbills





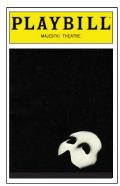


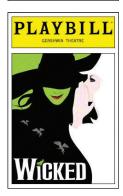












Company Overview

Playbill Inside Spreads



| The second section | The section | The second sec

Cast and Creative Team Overview

Headshots and Musical Numbers







Cast Biographies







2nd Featured Article

Company Overview

Playbill Ads

Advertisements for Playbill Radio and Playbill Vault currently running in select *Playbill* publications.

PLAYBILL RADIO TO GO Bette Midler David Hyde Pierce Kerry Butler Raúl Esparza Jeff Bowen & Hunter Bell Patti LuPone Cheyenne Jackson James Earl Jones John Kander Mel Brooks .Nathan Lane Lin-Manuel Miranda Kelli O'Hara Dolly Parton Susan Stroman Marian Seldes Marc Shaiman Martin Short Sutton Foster Charles Strouse Betty Buckley Free podcast interviews with your favorite Broadway names. Visit PlaybillRadio.com/podcasts



Primary Competition



www.broadwayleague.com





www.ibdb.com



www.broadway.com

Competitors Mobile Apps



(L to R) I Love NY Theater, Broadway World, IBDB, iBroadway, TheaterMania

Source: iTunes App Store www.itunes.com/appstore

Competitors Tablet Apps









(Clockwise) I Love NY Theater, Broadway World, Broadway.com, IBDB

Source: iTunes App Store www.itunes.com/appstore

Competitors Websites



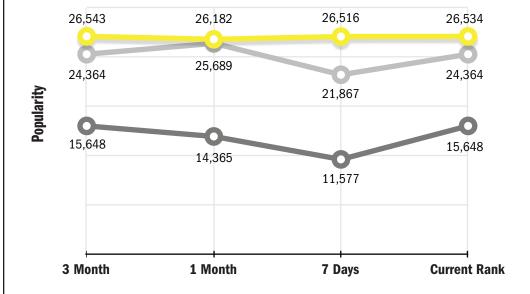
Competitors Analysis

Website Global Traffic Rank

Alexa Traffic Rank

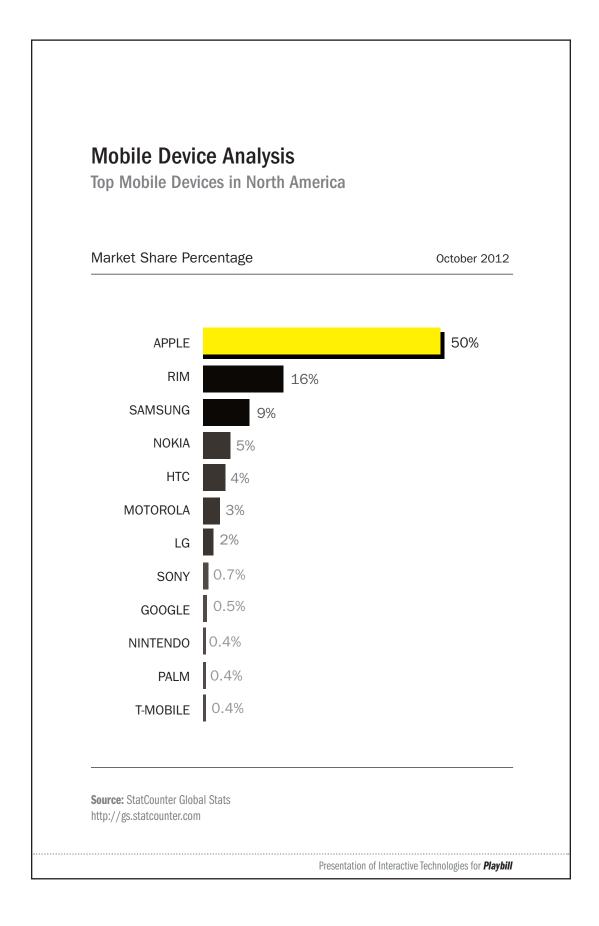
2013

Lower number indicates higher popularity.



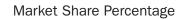
- Playbill.com
- Broadway.com
- BroadwayWorld.com

Source: Alexa - The Web Information Company http://www.alexa.com

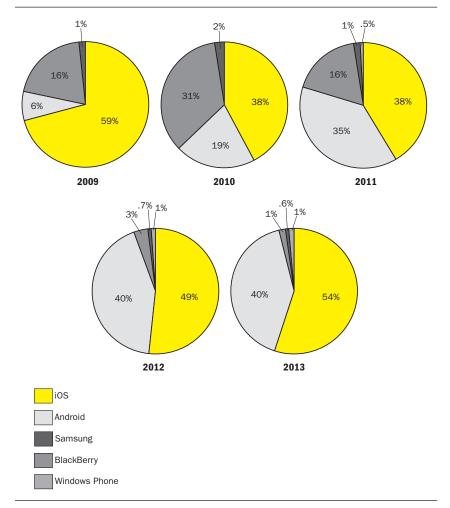




Top Mobile Operating Systems in the United States



2009 - 2013



Source: StatCounter Global Stats http://gs.statcounter.com

Mobile Device Analysis

Devices and Operating Systems

The collected data shows that while Apple continues to maintain the lead in the industry, strong competitors continue to gain market share. In order to reach the widest consumer market and target audience, all apps should be designed and released for both the iOS and Android platforms.

The app will initially be designed and released for the iOS platform. Apple has developers adhere to strict guidelines to maintain a standard similiarity within all third-party applications. Additionally, Apple has only four display sizes across the entire line of current generation mobile devices.

Following the iOS app, a second launch will release the app to run on Android devices. Android fragmentation – the concern that an excessive amount of diverging variants of the Android platform make app development more expensive and time consuming— is a serious issue for developers. Currently, 114 unique phones and tablets ranging from 2" to 10" displays are available from Android.com.

Mobile Device Analysis

Utilizing Screen Space

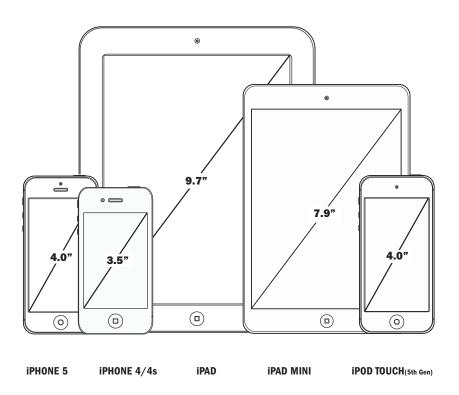
As the mobile device industry continues to innovate and competitors vie for the top position, new hardware continually hits the market. One key result is the multitude of display sizes created by the various devices. Screen size and resolution must be addressed when designing any application.

Many developers create a single universal app designed for only one display size and use prebuilt algorithms in the OS to allow the app to function on various hardware devices. This not only looks poor from a design standpoint, it is also a massive under utilization of the features and benefits of the larger, high resolution displays of select devices.

iOS Device Analysis

Screen Comparison

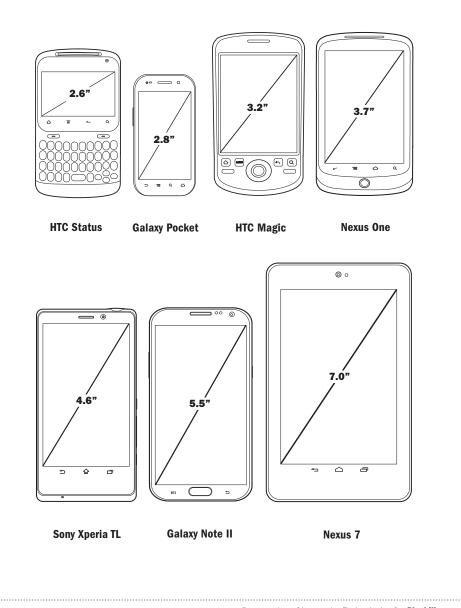
Complete lineup of current generation Apple mobile devices:

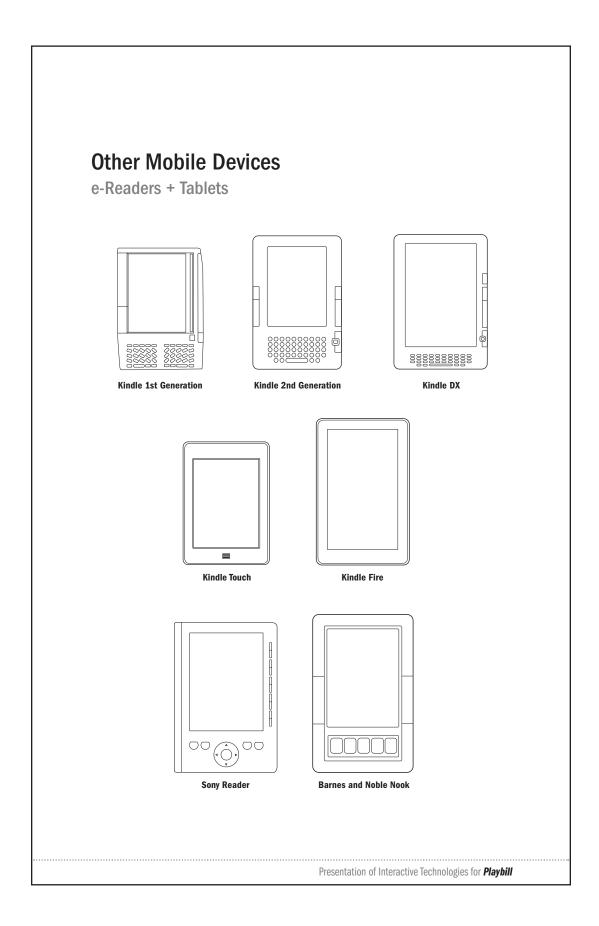


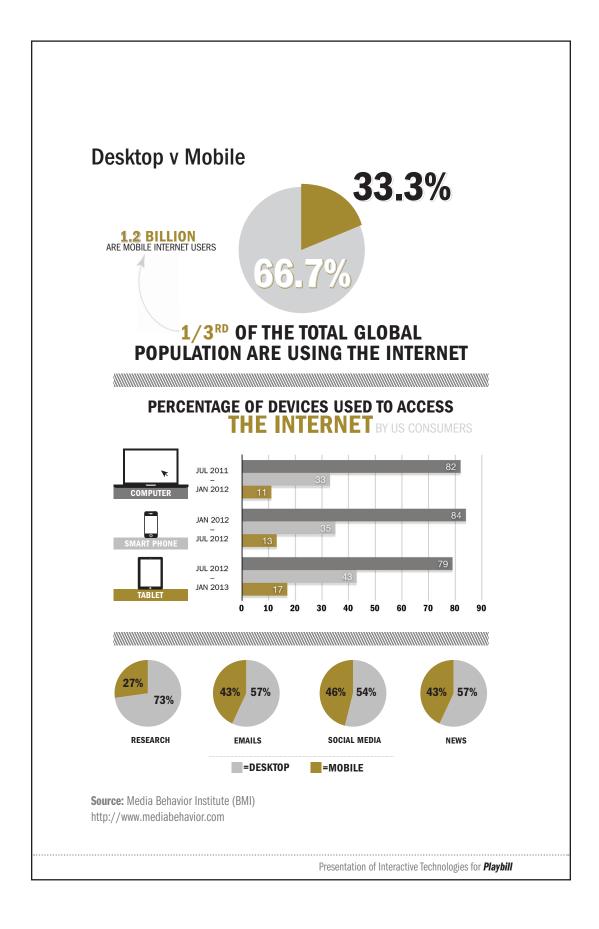
Android Device Analysis

Screen Comparison

A total of 114 phones and tablets are currently available on android.com Sample of available Android devices:







METHODOLOGY

"Different and new is relatively easy. Doing something that's genuinely better is very hard."

- JONATHAN IVE

Methodologies

Utilizing the SWOT method to analyze a company provides insight into both the positive and negative aspects of a brand. By keeping signature attributes that the brand has established, and incorporating new features, a company strengthens its power in the market. In addition to the SWOT analysis, various images were gathered to form a visual brief. Other data collected included a historical brand analysis and demographic survey to find the target audience.

SWOT Analysis

STRENGTHS

- Playbill already has a large audience who subscribe to publication.
- The information provided by Playbill is highly respected and regarded as one of the leading sources of all theatre news.
- · Playbill is already known and recognized by its exisiting logo.
- The theatre, Broadway and New York City are a very popular topic amongst many generations and diverse populations.

WEAKNESSES

- Playbill has been behind in adapting interactive technologies slowly losing its place as the top provider of Broadway news.
- Playbill.com is too broad in scope with a poor UI/UX design causing confusion and discord
- Playbill doesn't have a strong mission statement or personality across its multiple platforms.
- By utilizing a printed only publication, Playbill is limited on customizing information for each show on touring productions.

OPPORTUNITIES

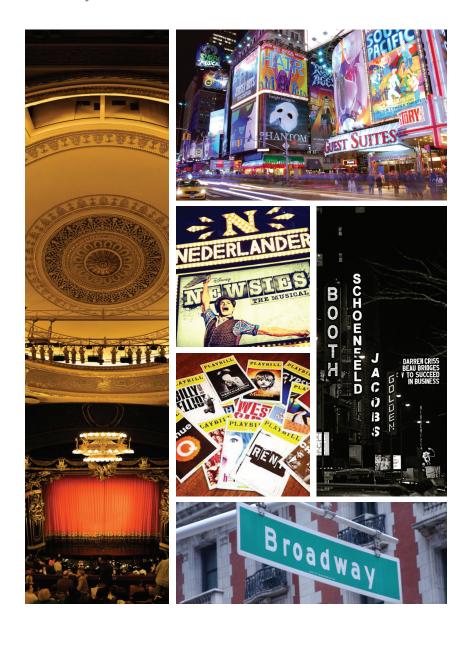
- Capitalize on brand name, recognition and trust that the publication has maintained for over 125 years.
- Empower older generation of theatregoers to embrace new technology.
- Bridge generation gap and encourage the younger audience to gain an appreciation of theatre.
- Promote theatre, Broadway and New York City to a wider, diverse community through use of interactive technologies.

THREATS

- Competitors vving for leading position in theatre news and resources.
- Broadway.com and its accompaning mobile application is a very popular source of all theatre news.
- Broadway.com is affiliated with Broadway Across America, the largest national Broadway touring production company.
- People regard Playbill as a print only publication not as a digital source of information.

Visual Brief Sample

Broadway + NYC



Broadway Facts

2011 - 2012 Season Highlights

- Attendance 12.33 million
- Gross Profit \$1.14 billion
- Broadway attendance topped those of the top 10 professional New York and New Jersey sports team combined: METS, YANKEES, RANGERS, ISLANDERS, KNICKS, LIBERTY, GIANTS, JETS, DEVILS AND THE NETS
- Contributed over \$11 billion to the economy of NYC, supports over 86,000 local jobs
- 4.7 million tickets were bought by tourists who consider Broadway to be a primary reason for visiting NYC

Source: The Broadway League Research Department www.broadwayleague.com

Who Reads Playbill



\$132,240s
AVERAGE ANNUAL INCOME PER HOUSEHOLD

74% OWN TWO OR MORE VEHICLES

Source: The Playbill Reader *Playbill*. Volume 124, Number 10. October 2008.

Who Reads Playbill



\$476,3153
MEDIAN VALUE OF RESIDENCE OWNED

PROFESSIONAL MANAGERIAL & EXECUTIVE POSITIONS

Source: The Playbill Reader *Playbill*. Volume 124, Number 10. October 2008.

Who Goes To Broadway

63 4% BROADWAY TICKETS WERE PURCHASED BY TOURISTS

THE AVERAGE BROADWAY-TOURIST DAYS
IN N.Y.C.

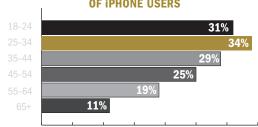
PURCHASED TICKETS
ONLINE
MONTHS BEFORE SHOW

Source: The Broadway League Research Department www.broadwayleague.com

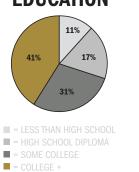
Who Uses iPhone



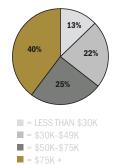




EDUCATION



ANNUAL INCOME



Source: Pew Research Center's Internet & American Life Project www.pewinternet.org

Summary of Results

Data collected from both The Broadway League Research Department and The Broadway Reader shows that the average Broadway theatregoers are sophisticated middle-class adults. Primarily tourists, these individuals plan trips to New York City specifically to watch Broadway productions and in turn help contribute to the economy of the city.

Statistics collected from Pew Research Center show that iPhone user demographics parallel those of the *Playbill* target audience. The highest percentage of iPhone users are middle-aged, college-educated professionals in the uppermiddle class.

Historical Survey

Playbill Logos Past + Present



circa 1935



circa 1950



circa 1958



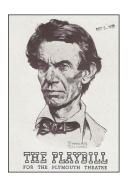
circa 1973



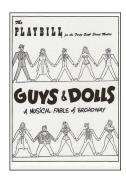
circa 1975 - present

Historical Survey

Playbill Covers

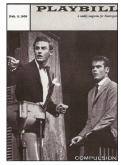




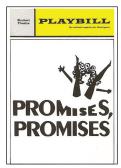














OUTCOMES: DESIGNING PLAYBILL FOR THE NEXT GENERATION OF THEATRE LOVERS

"Obviously, the average teenager doesn't know about Broadway or doesn't get a chance to see a Broadway show, so we're bringing Broadway to them."

- JERRY HERMAN

Transforming Exisiting Logo

Application Icon







Playbill App Icon

iOS Home Screen



Application Icon Requirements iOS Human Interface Guidelines (HIG) **IPHONE HOME SCREEN** RETINA DISPLAY 114 x 114 PIXELS **STANDARD RESOLUTION** 57 x 57 PIXELS **IPAD HOME SCREEN** STANDARD RESOLUTION 72 x 72 PIXELS RETINA DISPLAY 144 x 144 PIXELS **SETTINGS + SPOTLIGHT STANDARD RESOLUTION** 29 x 29 PIXELS **RETINA DISPLAY** 58 x 58 PIXELS Presentation of Interactive Technologies for *Playbill*

Application Icon Requirements

Maintain Recognition At All Sizes

iPHONE HOME SCREEN

STANDARD RESOLUTION 57 x 57 PIXELS



RETINA DISPLAY 114 x 114 PIXELS

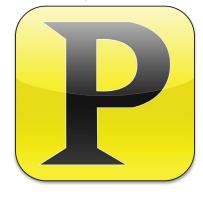


IPAD HOME SCREEN

STANDARD RESOLUTION 72 x 72 PIXELS



RETINA DISPLAY 144 x 144 PIXELS



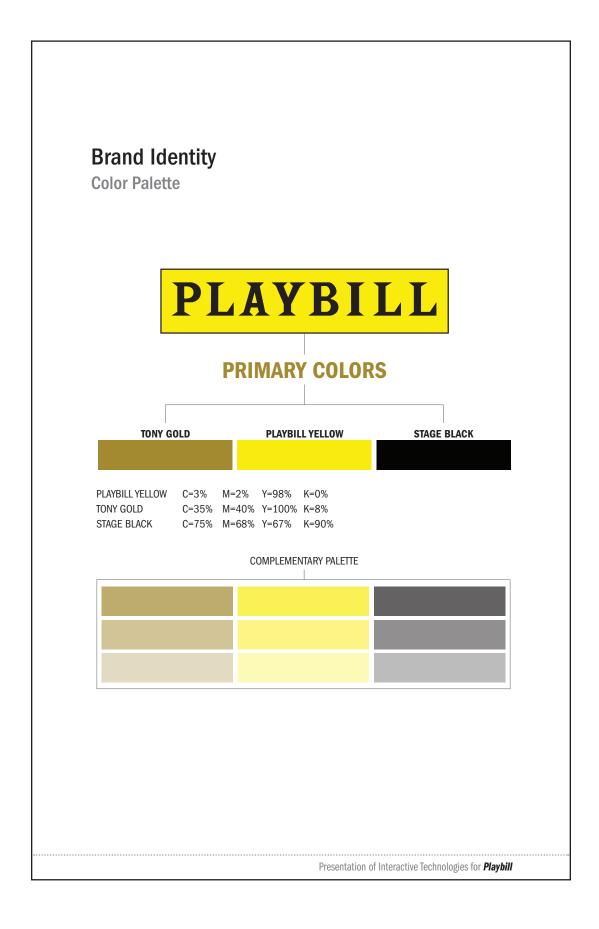
SETTINGS + SPOTLIGHT

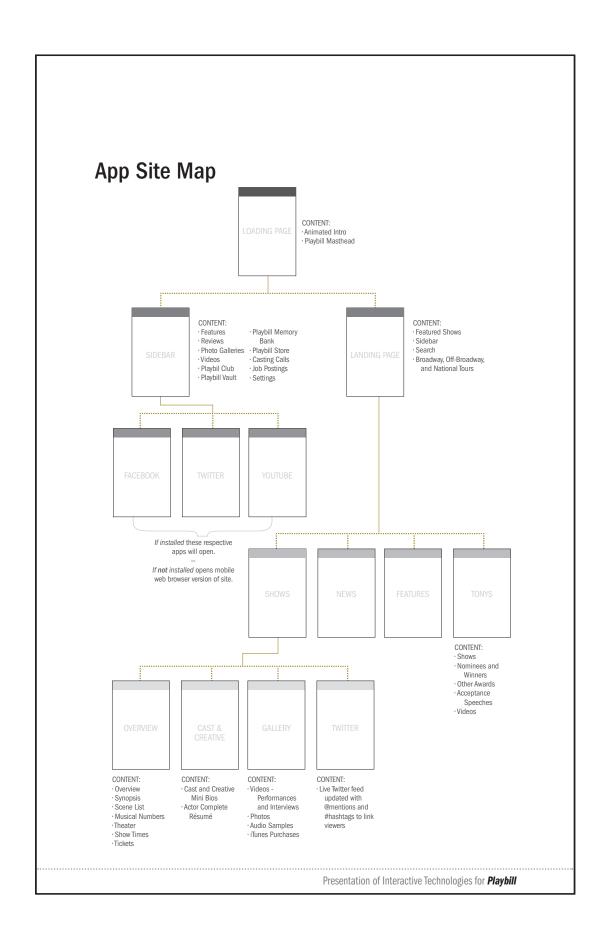
STANDARD RESOLUTION 29 x 29 PIXELS

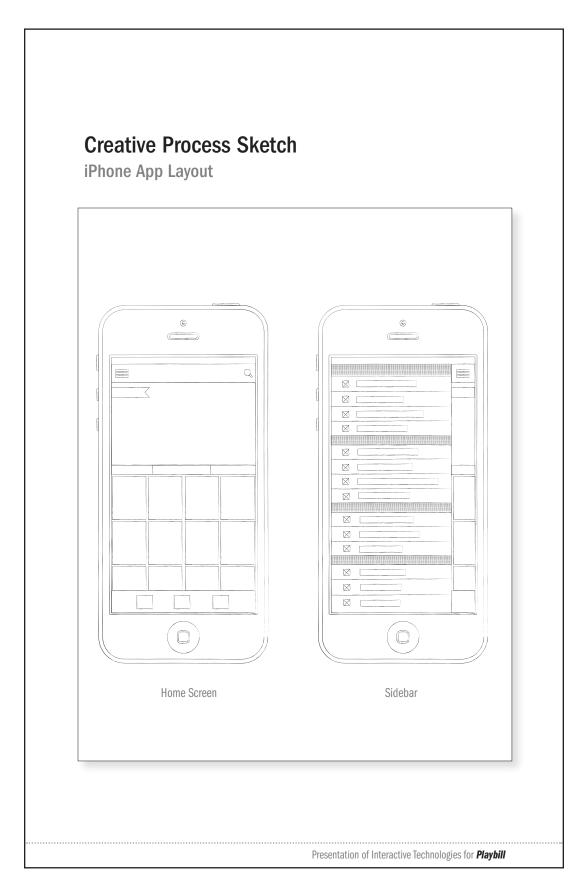


RETINA DISPLAY 58 x 58 PIXELS



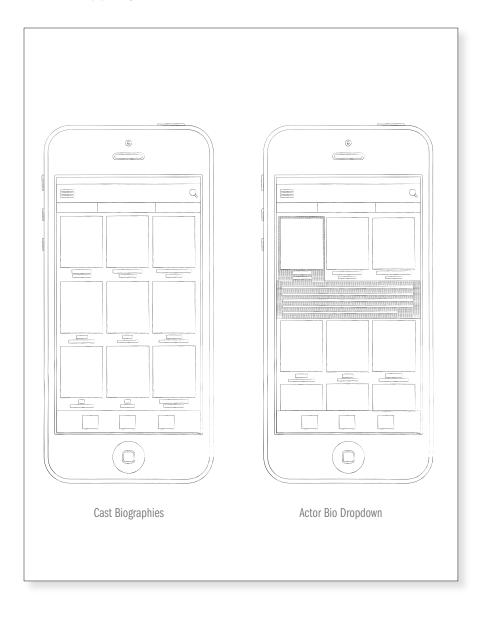






Creative Process Sketch

iPhone App Layout



Creative Process Sketch

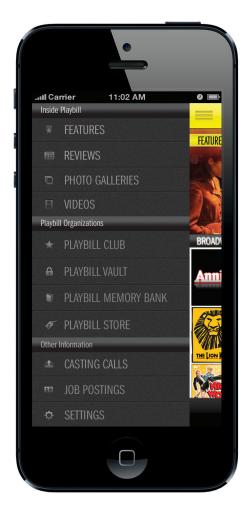
iPhone App Layout



Landing Page

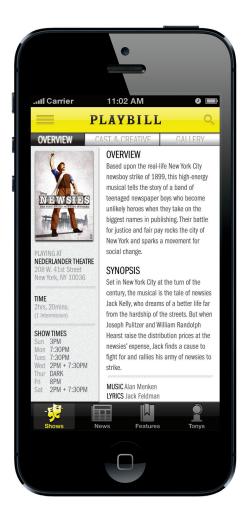


Sidebar

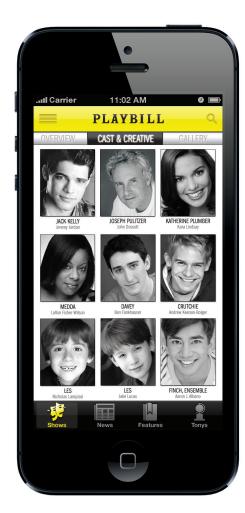


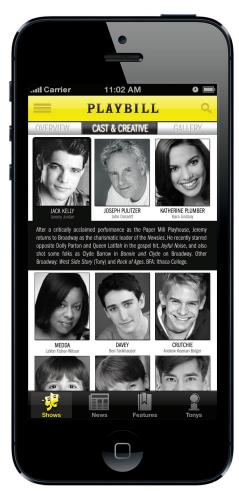


Show Overview



Cast & Creative Team Bios





Actor Résumé



Multimedia Gallery



Tony Awards

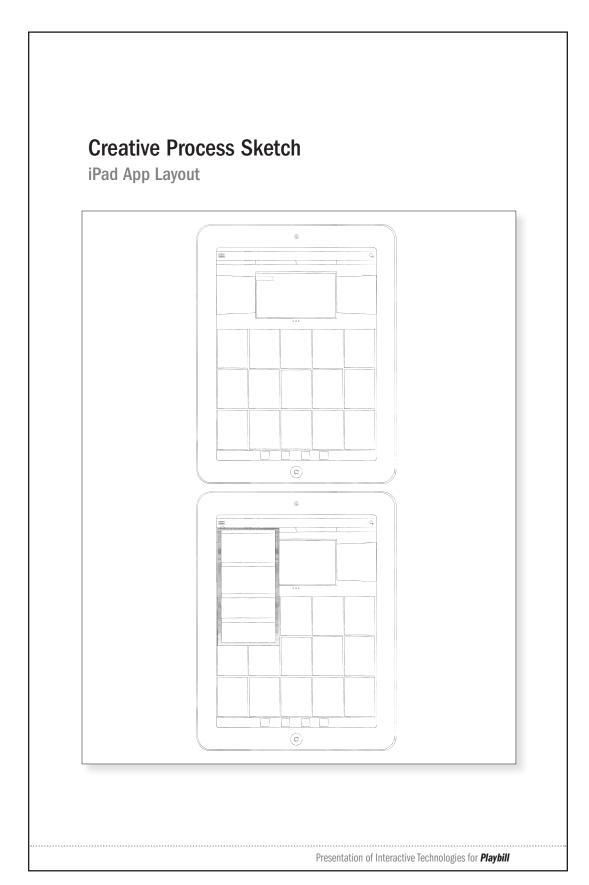


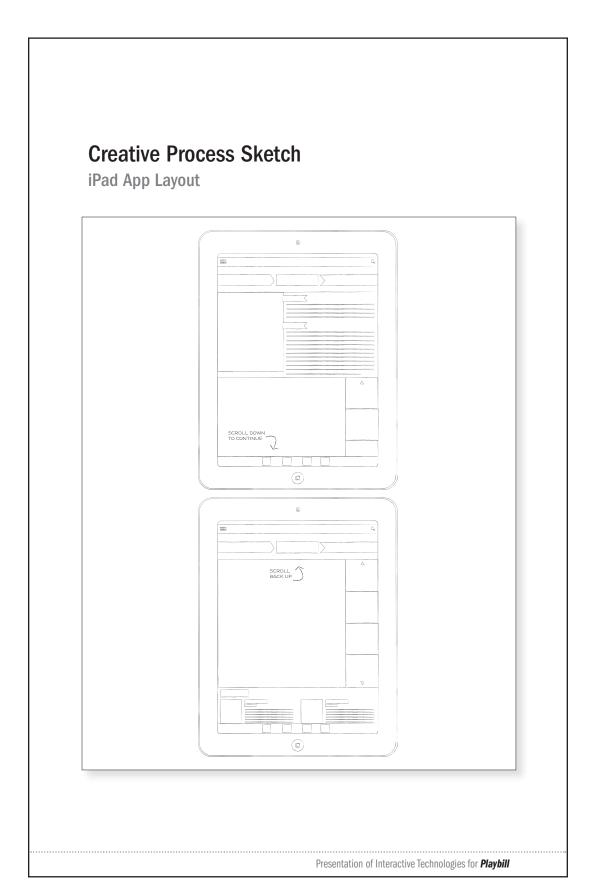
Social Media Integration



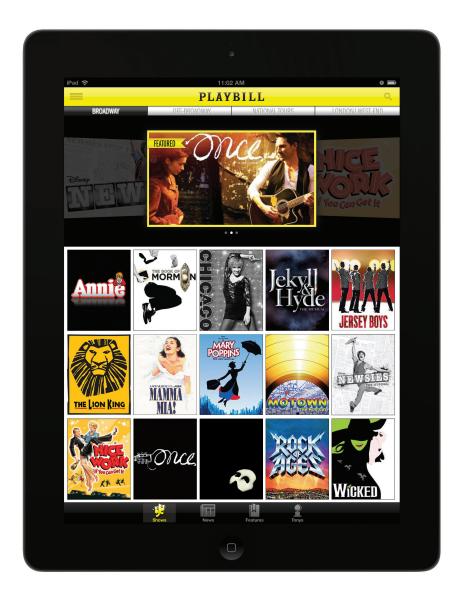


Facebook Twitter





Landing Page



Sort Menu



Show Overview



Photos



Cast Bios + Media



Keynote Prototype

App Simulator

Keynote is a presentation software initially used by Steve Jobs in presentations by Apple at Macworld and other events. While the software is primarily used for public presentations through the use of slides, graphics and tables, many features released in the latest version provided tools to create unique animations, as well as integration of audio and video.

Utilizing the simplicity of Keynote, a mock simulation was created to showcase the potential look and feel of the app. Keynote allows the client to experience an application in a manner extremely similar to the final implementation.

To view an animated prototype of the *Playbill* app visit http://adrianahurtado.com/thesis.html.

APPENDIX SECTION

LINK TO ANIMATED APP PROTOTYPE

To view an animated prototype of the *Playbill* app visit http://adrianahurtado.com/thesis.html

(Quicktime available for download at apple.com/quicktime)

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