

The Impact of Wireless on the Newspaper Industry: *The New York Times as a Case in Point*

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Abstract

This paper focuses on the impact of wireless technologies on the newspaper industry in the United States. Using The New York Times as a case in point, the paper discusses how newspapers have embraced a new kind of product innovation driven by customer needs and defined by mobile technologies. The management of The Times rethought their paper's technology strategy and marketing strategy, and developed products and services which were in synch with their customers' needs. A new paradigm for content innovation is offered as newspapers continue to redefine their roles in the mobile value chain and assume the role formerly played by mobile content carriers who were initially in charge of mobile content provisioning. Challenges for newspaper organizations developing products and services on the mobile platform are described.

1. Introduction

In the 1990s, 'pure play' Internet companies as well as hybrid content/technology companies entered the content arena and challenged the methods by which media companies traditionally deliver content, reach customers, generate revenues, and indeed survive. One of the media industries that was directly affected by the rise of such Internet-based companies is the newspaper industry. Many of the print newspapers in the United States were established over 150 years ago and had always been at the forefront of distributing quality news from a source which could be trusted. These newspapers generated the majority of their revenues from classified advertisements and subscriptions [22]. Suddenly, the newspaper business had competition from online portals such as Yahoo! which provided instantaneous news updates and other information. Classified ads also began to move onto the online environment. For example, real estate companies began to develop their own websites to advertise properties. Yahoo!, Excite and later eBay.com and

Craigslist.com, offered users the ability to look for goods and services once exclusively found in print newspapers and to easily post classified advertisements in some cases without any fee [5]

While many in the industry saw the online environment as a threat to the newspaper business [8][18], others realized that such technological innovations were offering traditional newspapers both domestically and around the world the ability to extend their reach, attract new kinds of readers, retain mind share and generate new revenue streams [7][14]. But it was also important for newspapers to recognize that with the advent of such innovations, traditional newspapers might not be able to compete effectively if they continued to rely on traditional formats and aesthetics [3].

The newspaper industry in the United States initially addressed the challenges of online content by creating web-based versions of their products. Some of the products were simply recreations of the physical edition of the newspaper. Dubbed *shovelware*, *The Wall Street Journal* for example, recreated its print edition on the Web with columns and news articles placed exactly where they were in the physical space[22]. Others such as *The Chicago Tribune* created a new kind of newspaper which successfully exploited the characteristics of the online environment. From an organizational perspective, newspapers generally set up separate entities within the larger company framework which were devoted to developing the website and often hired so-called digital journalists who specialized in creating articles which took advantage of the Web's strength [22]

As newspapers such as *The Chicago Tribune* and *The New York Times* developed their online presences, they exemplified how innovation is viewed especially for industries whose core products and services are not technology, e.g., media and financial services. Scholars have suggested that much of the value creation in these industries happens incrementally rather than in a radical trajectory characterized by breakthrough

innovations. McGahan posits several different trajectories for industries undergoing such change and focuses on their key assets, that is the resources, brand capital and knowledge that historically defined the industry and the activities that are essential to the industry's survival. One of them, progressive change or progressive evolution, refers to an industry whose major assets and activities are not threatened. Change occurs in the context of the existing framework of the business [12]. This notion is also supported by Lyons et al. who suggest that innovation in such industries as banking is more evolutionary rather than revolutionary and is characterized by a steady pace of innovation over time [10]. In developing their online offerings, newspapers seem to fit the trajectory of progressive innovation as they have core assets, i.e, the news which is their core product and core activities, that is, distributing the print edition to their traditional readership while at the same time, developing a web presence which acted as a supplementary distribution method for the newspaper.

While the progressive trajectory of innovation and the overall concept of incremental innovation appears to reflect how newspapers innovated in light of the incorporation of the Internet and web-based technologies, e.g., browsers etc, it does not account for the substantive changes occurring as a result of the development of mobile technologies. Though this industry did not change radically and engage in 'creative destruction'[15], the introduction of the mobile platform has been a 'disruptive catalyst for change'[2]. Clearly, the newspaper industry has been forced to make a major shift in how it innovates. Though it has been able to preserve its core assets, it has had to restructure its relationships to its customers and offer an entirely new set of activities. Thus, instead of using the technological platform of the World Wide Web to present in effect, a re-creation of the print newspaper format enhanced by hypertext links and clever ways of navigating the information, newspapers using the mobile platform have had to rethink their array of products and services to fit the constraints of the new medium. Indeed, the characteristics which have always defined the physical newspaper, e.g., format, content in the form of discrete articles, and aesthetics may not apply on the mobile platform. Moreover, reader behavior has changed as people using mobile devices often access the newspaper while 'on-the-go' and focus on bits of information rather than an in-depth perusal of the entire contents of the paper.

This paper focuses on how newspapers have embraced a new kind of product innovation driven by customer needs and defined by mobile technologies. Through an analysis of data from field research conducted in November 2008 at the offices of *The New York Times* with employees who are directly engaged in developing mobile products and services [21], the

paper describes how the nature of innovation has changed for this newspaper and suggests some possible implications for managers of media and non-technology companies who are incorporating mobile technologies into their cadre of businesses.

The paper is composed of three sections. The first one focuses on how the nature of content innovation has evolved on the mobile platform. The second part will present a case study on *The New York Times*, a well established newspaper in the United States, which has worldwide brand recognition and which has been a leader in successfully using the mobile platform. The final section will offer some lessons learned and conclusions based on the case study.

2. Innovation on the mobile platform

During the mid-1990s, the Internet emerged as a robust technological platform and managers in such diverse industries such as media, healthcare, and financial services recognized that technology-enabled innovation was now an essential part of their company's strategy [1]. It also became increasingly clear that this type of innovation is highly complex and multifaceted in nature and involves a variety of levers including strategic alliances, new product development, instilling an enabling culture, moving closer to the market and accessing innovative capabilities wherever they may exist [4].

While newspapers began to embrace technological innovations such as the Web to develop and distribute their products, content innovation on the mobile platform in the United States was stagnant largely due to the stranglehold that the mobile service carriers had on the kind of content that is distributed, and the devices that they allowed customers to purchase for accessing this content. Initially, voice services constituted the major source of revenue on the mobile. As voice services became more of a utility and customers began to buy carriers' services based on the price and coverage, mobile carriers realized that they needed another source of revenue. Content provisioning became a central part of the carriers' business strategy as they sought to control the types of content that their customers had on their devices and become the intermediary to major content providers.

At this stage, major content providers were still focused on developing digital content for the Internet and did not see the value of developing content for the platform. Unlike the Internet, where content providers could develop content for one or two major formats, the mobile environment was complex with a vast array of devices as well as competing technological standards [23]. Moreover, it was unclear as to how large content companies would benefit financially from creating such content. As a result, most content providers engaged in some experimental projects on

the mobile platform.[20]. Another major issue confronting content providers was how to optimally monetize their content for distribution on the mobile platform. In the United States where the expectation of obtaining ‘free information’ on the Internet was ported to the mobile platform, the question remained as to how much users were willing to pay for ‘valued’ content even games. Moreover, if microcontent such as headlines, sports scores and stock quotes were transferred to mobile devices without being authorized by the content provider, not only would revenue be lost but content providers would be reluctant to develop more complex content offerings for users.

As the mobile platform matured, the roles of the important actors in the mobile value network began to change with content providers, carriers, and hardware/device manufacturers repositioning themselves[17]. Mobile operators formed more equitable partnerships with major content carriers and also allowed smaller organizations to develop content for use on their devices and networks. A sub-industry of content integrators emerged which adapted content for legacy phones and created new content such as ring tones and pictures specifically designed for mobile devices [20]. In addition to the more open environment for creating content, there was now a more stable technological infrastructure which could support complex content offerings and a plethora of devices which allowed users to do more with their phones than just receive and make phone calls [23]. The result was a possibly new paradigm for the mobile platform which was more porous and networked in nature and characterized by continual interaction between content providers, handset manufacturers, other device manufacturers, e.g., Palm, HP, and most importantly, users. In addition, content integrators/infomediaries who provide technical and content-related services to both content providers and carriers as well create their own portfolios of content were important constituents in the paradigm [23]. [Figure 1].

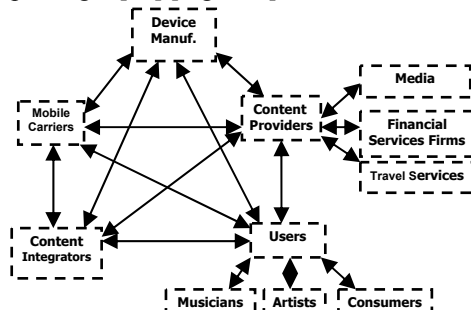


Figure 1 – Networked Model of Innovation

The mobile platform was clearly one way that newspapers could be successful because they could leverage their assets which include in addition to their content, their marketing skills, editorial skills, local knowledge and brand name [6]. Even as early as 2000,

when wireless access was not ubiquitous, some newspapers began to experiment with the mobile platform. Newspapers began to develop their own technological applications and/or partner with service providers who specialized in offering services for media companies who want to use the mobile platform [13]. Local newspapers such as *The Atlanta Journal Constitution* launched Access Atlanta Anywhere which sent local content to Palm Pilots and other mobile devices to users who could customize how they received local news, sports, weather and other information [9]. Various other models for accessing a newspaper on the mobile platform emerged such as Sweden’s *Dagens Nyheter* which launched what it called a newspaper telephone which enabled users to access the newspaper’s website directly from their cell phones [19]. Overall, newspapers now began to redefine their roles in the mobile platform value chain. In order to illustrate how the nature of innovation has changed for newspapers as a result of the incorporation of the mobile platform, a case study on *The New York Times*, will be presented in the next section.

3. *The New York Times*: A Case Study

The New York Times launched its online newspaper in July 1995 with a special publication devoted to the Pope’s visit to New York City and then put the entire website up in January 1996. At the time, the management of *The New York Times* did recognize that while there was still a need for quality newspaper reporting and a meaningful news presence, there were different competencies needed for developing online newspaper offerings such as the journalistic skills needed to create an online article. Because of the potential reach of the online offering and other competing news offerings, *The New York Times* would also need to reassess its current markets and also distribute in markets that traditionally were not part of its normal domain.

Perhaps most importantly, customer behavior was changing. Unlike readers of print newspapers, the statistics at *The New York Times* showed at least initially that readers accessed the online paper only 3 or 4 times a week instead of every day and might read only headlines before going onto the next website. In addition, while users had been accustomed to accessing information without paying for it, the management considered charging for its content.[16]. Though these issues were important, the fundamental nature of the newspaper did not change, i.e., its format, aesthetics, and in fact, in 2007, *The New York Times* offered its subscription readers an electronic version of the newspaper which completely recreated the print edition: *The New York Times* electronic reader.

Many of the issues raised by the management of *The New York Times* with regard to its web-based product came up again with the launch of the mobile edition in September 2006. The mobile launch itself was relatively short from conception to implementation due to the fact that in rethinking its overall digital strategy, the newspaper had developed a customized print content management system which stores the data of *The New York Times*, e.g., articles, movie reviews etc. This internal database in turn provides content feeds which can be repurposed for the Internet and for various mobile devices. Initially, there was an effort to put major sections of the newspaper such as news articles, sports news and editorials on the mobile site; later on other types of information such as blogs, weather, stocks and real estate were added.

As *The New York Times* rolled out the mobile edition of the newspaper, it was evident that the management of the newspaper had rethought its technology strategy and its role in the mobile content value chain. Moreover, there was a concerted effort to innovate by co-creating with *The New York Times*'s customers and with mobile technology partners and to design the newspaper's products and services on the mobile platform for a differentiated market. All of these efforts were evidence of a major shift in how the newspaper innovated, sustained its brand and maintained its competitive advantage on the mobile platform.

As mentioned before, the newspaper had invested considerable resources into the development of a back office content management system which would serve as the basis for all of its launches on technology platforms. A centralized internal Research and Development organization had been set up to develop and manage this content management system and to keep abreast of new technologies and new products and services. However, much of the efforts of this organization are devoted to traditional web development; therefore in order to implement a technology strategy for the mobile platform, a small organization specifically devoted to working on mobile applications was formed which works both with the internal organization as well as external technology organizations. While this organizational structure is not unlike other non-technology companies which chose to set up internal organizations devoted to R&D [22], what is new is that the mobile product development team and the internal R&D group are providing technology services which until now were the exclusive domain of mobile carriers. For example, one in-house application enables users to optimize their experience with the mobile version of *The New York Times* instead of trying to download the entire website front page. Thus, if a user goes to *The New York Times* website www.nytimes.com and tries to download the

application onto his or her phone, the system recognizes that the user is doing this and automatically redirects the user to the mobile website.

In addition to developing in-house applications, the mobile product team works with external device partners to develop the client application for the particular vendor's mobile device. Thus, the team partnered with Apple to develop *The New York Times* application for the iPhone and has developed applications specifically designed for the Blackberry including a Blackberry icon for the Blackberry home screen. *The New York Times* team also has adapted content to a wide variety of legacy phones and has fine-tuned these applications so that if for example, a user's phone does not support video clips, the links to the video clips will not appear.

Another aspect of *The New York Times* technology strategy for the mobile platform is to leverage the interaction between the mobile platform and the Internet application. For example, one of the most successful sections on the mobile site is real estate because the listings incorporate the mobile application as well as the print edition of the newspaper and the web-based edition of the paper. Thus, sellers can purchase a short code that appears with their listing in the print edition and buyers can then use the short code to send a text message to the newspaper from their phones and receive a text message back that leads to the full listing on their mobile phone. A buyer can also search for a property using a mobile device and click on the property listing to call a realtor.

The New York Times has a worldwide audience both in print and on the Internet. However, the mobile product portfolio was largely designed and marketed to a very specific segment of the New York City market. This market is largely made up of employees of large companies in New York City who get Blackberries and other high-end mobile devices, e.g., iPhones from their companies and use them to browse the mobile site. Such companies are able to offer their employees these services because mobile carriers such as Verizon and T-Mobile have begun to offer unlimited data plans as part of their services. Thus along with using technology strategically, *The New York Times* innovated by implementing a marketing strategy that went after a specific segment of customers in a crowded mobile information marketplace.

The New York Times also rethought how to present its product in the mobile environment. Indeed, in designing the newspaper offerings for the mobile environment, there has been a conscious effort to create a mobile 'experience' and to be aware of the changing behavior and needs of its customers instead of just offering news articles on various topics in a standard format, e.g. columned news articles where

aesthetics, style and article placement are important. Users of mobile sites do read news stories, editorials, and movie reviews but they do so while they are ‘on-the-go’ and may only have the opportunity to glance at headlines. Rather than engage in in-depth reading, such users may be at a bus stop where they need to ‘kill time’ and download *The New York Times* mobile site so that they can quickly get an update on the news of the day or read a movie review before boarding the bus or turning their attention to another task. For example, one of the biggest user days for *The New York Times* mobile site was the recent Presidential election. *The New York Times* provided special election coverage throughout the day for mobile device users and even had small electoral voting maps which plotted the results. Instead of sitting down at a laptop to peruse the results, users who were not in their offices or homes could check in periodically for updates.

While the content used for the mobile site is fed from the centralized content management system, the experience on the mobile device and in fact the content itself may be altered depending on the mobile device. For example, if a phone does not have the capability of displaying pictures in the right proportions and the original headline which was developed for the print edition does not make sense without the picture, *The New York Times* system will provide an alternative headline for that particular device.

The decision was made by *The New York Times* mobile product development team to optimize the user experience on each mobile device rather than create a site that only works with the most basic devices, e.g., those without full HTML browsing capabilities. With its ability to manipulate texts in order to adopt content to the restricted space of most mobile devices, the mobile product development team has exhibited a different set of skills than the print journalists or even web-based journalists. It is clear that in developing its flagship product for the mobile platform, the newspaper was conscious of the need to be ‘bits driven’ rather than to necessarily preserve the integrity of the news story as it was first developed for the print edition.

In addition to the news stories, The New York Times lists a set of services on its mobile site which include sports alerts, weather updates, and breaking news alerts. Users can send SMS messages to The New York Times asking for breaking news alerts, to get the latest weather, headlines from any section of the newspaper or the latest sports scores. Offering these services again represents a shift from a more traditionally based view of newspaper readership and toward being in synch with the current behavior of Times customers who in some ways view *The New*

York Times as a utility/service instead of a product where they engage in indepth reading and reflection.

While *The New York Times* mobile product development team has experimented with various business models, the team believes that revenue generation on the mobile site will be for the most part generated through advertisements. On most devices, advertisements appear in the form of banners at the top of the site or in smaller boxed spots on the page. *The New York Times* has an integrated sales force which sells advertisement on the print, web, and mobile platforms and often will sell a package that involves all three media.

4. Discussion and Initial Conclusions

The case study of *The New York Times* presented above indicates that the newspaper has embraced the mobile platform and has done so by accessing a variety of levers of innovation. These included redefining the paper’s technology strategy, exploiting the current organizational structure and extant resources along with incorporating a new organizational entity, and changing its position in the mobile value chain. As described above, The New York Times developed a substantive technology strategy which consisted of creating applications for the mobile platform both in-house and accessing innovative capabilities from partners outside of the newspaper’s organizational boundaries in the mobile technology arena. It rethought its marketing strategy and developed products and services for the local mobile user population and their particular set of mobile devices. The paper recalibrated its offerings to be in synch with its users’ behavior which was markedly different than the behavior customers engaged in while reading the physical print newspaper.

In pioneering these new strategies, *The New York Times* clearly signaled that it was not beholden to the mobile service carriers who had been in charge of content provisioning. Rather, it was assuming the roles formerly played by these carriers and other content integrators and partnering with technology experts to develop optimal products and services. This new paradigm of content innovation on the mobile platform in which major content providers such as The New York Times play a central role promises to offer users a rich content experience (Figure 2).

For *The New York Times*, the mobile platform continues to present several challenges. The mobile product development team believes that the newspaper’s brand name which signifies a source of trusted journalism to its readers will continue to be a significant draw for their mobile device users.

Nevertheless, the mobile information arena is full of alternative news sources and other non-news

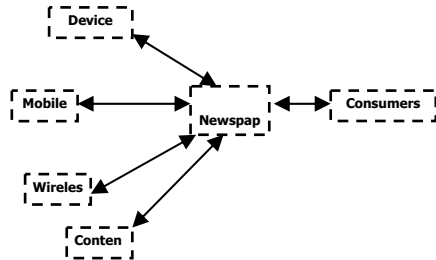


Figure 2 – New paradigm of content innovation

distractions such as blogs and games which can potentially draw away the audience that *The New York Times* has carefully cultivated through its targeted application development. Moreover, in its efforts to design its product to fit the needs of these users and their devices, in some sense it has deconstructed its product, *The New York Times* print edition into bits and fragments, which may dilute the brand that has sustained the newspaper throughout its history.

The newspaper's mobile product development team has been grappling with how to design the product not only for its business users but also for those who would like to access a well-styled site which has an emphasis on aesthetics rather than just on delivering a set of headlines that are hyperlinked to articles. They are trying to elevate the user experience to be more appealing and more web-like. The move toward creating a more aesthetically pleasing mobile experience is tempered by the knowledge that devices have to improve their ability to deliver such an application and that there is a cost associated with continually changing the products and services. Finally, the newspaper along with other content providers is dealing with the issue of mobile standards. Unlike in Europe, where GSM is widely used, in the United States, there are a plethora of mobile platforms and operating systems all competing for market share [11]. which makes it difficult for content providers since they have to develop applications for all of these platforms.

While the challenges remain, newspapers like *The New York Times* have through their use of technology, understanding of their customers, and ability to access innovative capabilities in the larger networked business environment, changed the nature of content innovation on the mobile platform.

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