

# Platform Failures: Lessons for Strategic Management

By

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## ABSTRACT

Most internet business models today are positioned as platforms that connect two or more groups of users. From online social networking to electronic retail, we find that multi-sided platforms are penetrating consumers' lives more deeply with time. There has been significant amount of research around what it takes to establish a successful platform and the strategies to compete in a platform market. However, there is a significant research gap in a systematic analysis of the spectacular failures that platform markets have witnessed over the last couple of decades. This paper studies these failures and derives lessons from them, in order to add a unique and much needed perspective to the various platform success stories.

After conducting a comprehensive literature review to determine the various factors that are critical in determining a platform's success, this paper defines a systems model to analyze platforms. This model is then used as a base for analyzing failed platforms, picked from three different software niches – *Online Social Networks*, *Question & Answer Platforms* and *Instant Messengers*. The analysis of each platform concludes with isolated primary points of failure.

It is found that the root causes behind platform failure vary across market niches and timelines. For instance, the failure of an online social network in the early 90s (Myspace) is found to be different from the failure of such a platform today (Google Plus). A recurring theme across the analyzed failures was the need to focus on *Design and User Experience*, which has been identified as a new axis of differentiation in platform markets. User experience is found to evolve over time with changing consumer expectations. This underscores the need for platforms to keep in sync with evolving consumer needs. This, in turn, implies that platforms need to be agile to respond quickly to market shifts and should look to leverage community innovation by opening the platform. Lastly, envelopment has been identified as a potent strategy to compete in platform markets and to trounce well-ensconced competitors.

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## **1. Background & Motivation**

Economics defines a *market*, in its most basic form, as a medium that lets merchants and consumers transact with each other, usually involving an exchange price (Pindyck & Rubinfeld, 2013). Traditionally, businesses found value in becoming merchants and selling goods and services. The new wave of entrepreneurship, following the post-war economic liberalization in 1950s (Jones, 2005), identified an often ignored aspect of business – the market infrastructure itself. This led to the proliferation of *platforms*. In order to set the context, it is important to set the boundaries around what can be considered a platform. Platforms were first simply defined as products and services that bring together groups of users in two-sided networks (Eisenmann, Parker, & Alstyne, 2006). It is also important to distinguish between product and industry platforms, where the latter involves the establishment of foundational technology and exhibits network effects (Cusumano, 2010) and is the definition that this paper adopts. Since platforms have now evolved into connecting multiple parties, it is useful to define them as *multi-sided* platforms that create value by enabling interactions between at least two types of customers (Hagiu & Wright, 2011).

Literature is replete with extensive research around what makes platforms successful. While there is no dearth of such *principles*, *heuristics* and *success factors*, there is a significant gap in the study of failed platforms, in order to isolate and identify points of failure. Just as many platforms have gone on to become very successful, there are many more platforms that remained wannabes and perished away. Most *success recipes* come with the trappings of the halo effect (Rosenzweig, 2007) and it is difficult to disentangle oneself from it. Focusing on successes alone and not studying failures creates a skewed and misleading picture of what it takes to succeed (Krakovsky, 2004).

The motivation behind writing this paper is to fill this research gap. This paper will choose platforms from various software niches and then analyze them in order to arrive at the reason (or reasons) behind their failure. The paper would then take these various *points* of failure into consideration and attempt to weave them together through a common *thread* of failure. Doing so would lead to invaluable insights into the strategic management of platforms.

## **2. Research Statement**

For the purpose of this paper, platforms are defined as market enablers that facilitate transactions, economic or otherwise, attempt to get rid of market information asymmetry and either charge a fee for acting as a facilitator or leverage the transaction traffic to cross-sell. These market enablers often exhibit positive network effects, which have led many platforms to unassailable market leading positions. Specifically, internet based companies have taken advantage of these network effects to build successful platforms. Google used its search prowess to entice and build a network of users and has on-boarded them to an ecosystem of products, such as Gmail and Google Drive. Facebook has created an unmatched social network that keeps competitors at bay just because of its size. Amazon and EBay have created their respective marketplace platforms that connect a network of sellers with a network of buyers. Common across these examples, is the attempt by companies to develop *ecosystems* rather than just *platforms*. These *ecosystems* exhibit a number of *platforms*, often promoted by the same company, that exhibit a high degree of interoperability between each other. Companies build products that gel with the existing platform on offer, in order to leverage the existing customer base, if not expand it. Therefore, the stakes

involved in establishing a successful ecosystem are higher than ever and it behooves us to attempt to understand the platform failures within this microcosm.

In recent times, the internet industry has seen platforms deliver spectacular failures. Google failed with Buzz, Google+, Notebook and Wave. LinkedIn saw its Answers product fail miserably and rolled it back in 2012. Amazon sunk piles of cash in Askville, only to find investors questioning their judgment and eventually discontinuing the product. After struggling for years, Microsoft finally threw in the towel and discontinued the MSN messenger in 2014. These examples help us structure the following *research question*:

*What explains software platform failures, often despite the existence of strong and positive network effects, and is there a pattern or commonality across these points of failure?*

In order to proceed with the analysis, it is important to note that apart from network effects, there are a host of other factors responsible for the failure of a platform. While, in hindsight, it is easy to attribute a failure to such a factor, this paper will also attempt to build a systemic framework that captures the interaction and dependencies between such factors.

### **3. Adopted Methodology**

In order to analyze platform failures and derive management lessons from them, this paper is structured around the following four phases:

- a) Conduct a comprehensive review of the existing research on the success and failure of platforms. The objective of this literature review is to list the factors that have, so far, been identified as critical to a platform's success or failure. These factors will help this paper learn how it can extend the existing research, apart from informing its own analyses of platforms.
- b) Develop an analytical structure to identify the individual factors, isolated or intertwined together, responsible for making a platform a success or a failure.
- c) Analyze all platforms based on the analytical structure developed in the previous section. The analysis of each platform will end by tying together all the information related to the platform and then conclude as to what the primary sources of failure were. This will be an informed conjecture based on the analysis of all the factors involved and will not have ultimate definitive justification unless supported by hard data from the respective companies.
- d) Compile and tie together the points of failure identified across the platform analyses.

### **4. Literature Review**

This section will review literature related to the key factors behind running a successful platform. To open this section, it is worthwhile to note the three paradoxes in building successful platforms, as put forth by Ming Zeng, Chief Strategy Officer at Alibaba.com. These paradoxes illustrate three key decisions that potentially determine the success or failure of platforms. The *Control Paradox* postulates that in order to build a successful platform, its *openness* is critical, and this *openness* involves relinquishing some control over the platform. By sharing some degree of control with the ecosystem of compliments, the company loses some control over the platform's evolution. According to the *Weak Partner Paradox*, every platform, at some point, has to take the tough decision to either build a key complimentary product or service on its own or collaborate with a weak partner to render that product or service. The source of this paradox is that the

prospective strong partners would be in a better negotiating position and would squeeze the platform to get more value for themselves. Lastly, the *Killer App Paradox* states that in order for a platform to be widely adopted it has to provide general infrastructure services that can be utilized by different parties. However, providing general infrastructure services will only come after the platform has developed a strong vertical that attracts consumers (Zeng, 2015). Together, the three paradoxes provide a good summary of the challenges associated with establishing platform leadership.

Early research in platform leadership identified 4 distinct levers of platform leadership: (a) *Scope* – the degree to which a company innovates itself and leaves the rest to the market, (b) *Product Technology* – the degree of modularity in platform architecture, which determines whether third-parties become complementors or competitors, (c) *Relationships with External Complementors* – the nature of the relationship can be anywhere between collaborative to competitive, and (d) *Internal Organization* – the design of internal departments to avoid conflicting goals, to enable easy communication and innovation (Cusumano & Gawer, The Elements of Platform Leadership, 2002). Building upon this work, the authors also put forth two strategic options for new platform entrants. *Coring* is useful for companies starting platforms in markets, where none existed earlier, and involves solving an essential problem in the market. *Tipping*, on the other hand, is a useful strategic option for platforms facing competition. It involves building useful functionalities that cannot be imitated by competing platforms (Cusumano & Gawer, How Companies Become Platform Leaders, 2008). Needless to say, firms can also adopt both strategies at the same time.

Another study reformulates the principles laid out in the aforementioned papers and presents the three elements of a successful platform: (a) *Connection* – how easy it is for users to plug themselves into the platform, i.e. devising low multihoming costs for users to migrate to the platform, (b) *Gravity* – how well the platform is positioned to attract multiple parties (or *sides*) on to the platform, and (c) *Flow* – how well the platform plays a matchmaker’s role to foster exchange and lead to value creation, i.e. building superior user-experience for all parties and clearly presenting the platform’s value proposition (Bonchek & Choudary, 2013). It has also been found that consumer behavior changes unpredictably and responds to disruptive innovations, and therefore in order to maintain platform leadership it is absolutely critical for the platforms to be able to change themselves very rapidly (Simon, 2011). This clearly highlights the need of platforms to be *agile* enough to respond to the market quickly and *open* enough to incorporate community innovation.

There is ample literature related to setting up a new platform. There are two, in particular, that tackle some critical decisions that platforms have to take early into their life. When establishing any multi-sided platform, every company has to solve a *chicken & egg* problem. For example, in case of a marketplace, buyers won’t come to the platform if there aren’t enough sellers and sellers won’t come to the platform unless it has a good base of potential buyers. A study proposes a staged solution to this problem. It is suggested that the platform itself can choose to play the role of one side of the platform and attract the other. Later, when the other side reaches critical mass, the platform itself can relinquish that role (Eisenmann & Hagiu, A Staged Solution to the Catch-22, 2007). Another important issue that needs to be tackled is the strategy in opening the platform. When an established platform decides to open itself up, it also has to decide whether it wants to develop some key complements itself or not. The entry of the platform itself into the market for complements can potentially dissuade third-party developers from joining the

platform. This problem is solved to some extent by strong intellectual property rights, but it remains a key decision that the company has to mull over.

Turning to platform competition, there are three studies that need to be highlighted. First, it has been argued that in platform markets where the core technology effects the network value significantly, the inferior or wannabe platform can look to collaborate with the dominant platform, which is ready to accommodate a new entrant (Mantena & Saha, 2012). The argument rests on the thesis that collaboration is possible between platforms with a significant difference in their value and that the closer two competitors are matched, lower the chance of fruitful cooperation. There is some evidence of this observation in the present online social networking market, where Myspace, arguably inferior, considers itself as complementary to Facebook, while Google Plus, more close matched, competes head on with Facebook.

The second interesting thesis is that when platforms try to establish themselves as market facilitators, they should position their ecosystems uniquely, highlight their competitive advantages to address market competition, and not focus exclusively on building the biggest network (Hagiu & Boudreau, Platform Rules: Multi-Sided Platforms as Regulators, 2010). Lastly, making a platform stay competitive requires a subtle balance between the need to expand the platform's portfolio of products & services and the need to attract more third-parties (Cennamo & Santolo, 2013). This observation reiterates the *Control Paradox* that was discussed earlier in this section and also underscores the importance of opening up the platform to embrace third-party value creation.

There are three other key research elements of platform markets that need to be discussed. First, a study has tried to correlate platform engagement with network effects and has found that when network activity is overall low, an increase in network activity increases individual platform engagement, whereas when network activity is overall high, more network activity doesn't necessarily lead to more individual platform engagement (Ceccagnoli, Forman, Huang, & Wu, 2014). This study emphasizes the need to increase multihoming costs for users so that they don't migrate to other platforms as their platform engagement gives them less value. With respect to platform pricing, the common heuristic is to subsidize the side that has high cross-side network effects and attracts the other side more. It is postulated that instead of thinking about pricing in terms of just the strength of cross-side network effects, it is also important to incorporate the often-present negative same-side network effects as well (Goos, Cayseele, & Willekens, 2013).

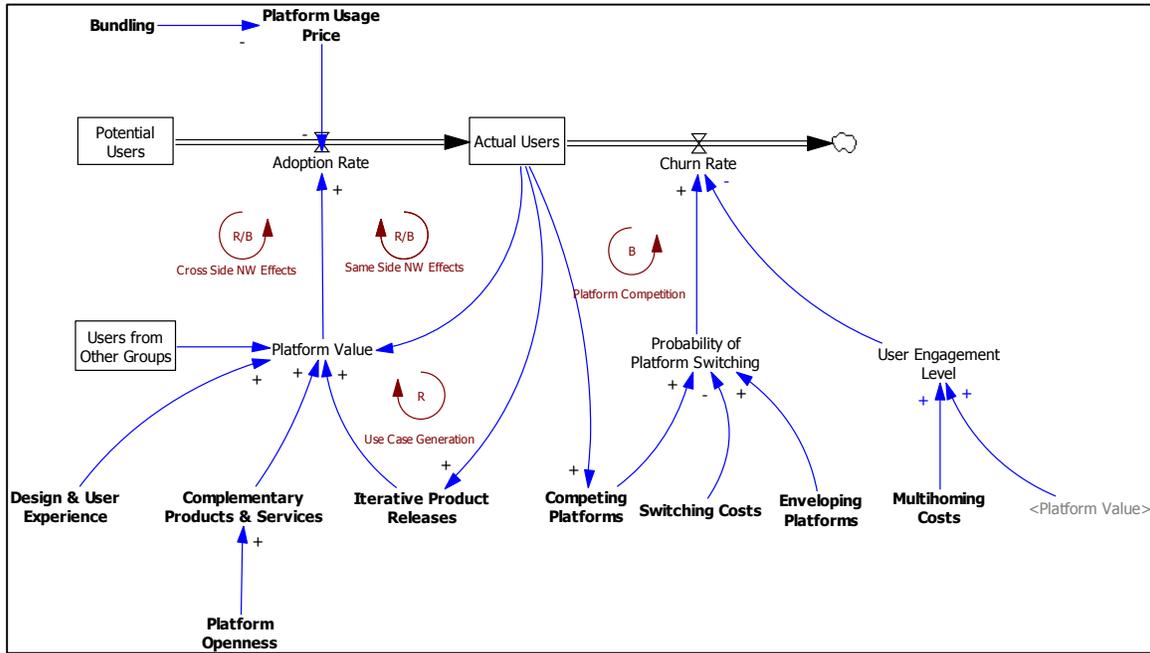
Lastly, it is important to note the work done around platform envelopment. In platform markets where switching costs are high, it is very difficult for new entrants to gain a foothold. A common strategy employed by wannabe platform leaders is to innovate and offer disruptive functionalities. Another viable strategic choice is to *envelop* the competing platforms and offer services which are over and above what is presently being offered by competitors. This also gives the new entrant the opportunity to exploit economies of scale and price competitively through product bundling (Parker, Allstyn, & Eisenmann, 2011).

## **5. Analytical Structure for Platforms**

In order to proceed with the analysis of platforms, it is necessary to define an analytical structure for platforms. This paper adopts a systems approach and looks at the platform *ecosystem* and then identifies the individual factors that lead to platform success or failure. Some of these factors are

under the control of management, while some are not and fall into the realm of market variables. This system dynamics model is illustrated in *Figure 1* and its elements are discussed thereafter.

*Figure 1: Systems Model of Platform Performance*



**5.1 Stocks:** The boxed variables indicate stocks and represent the number of users who fall into a particular bucket at any point in time. In *Figure 1*, we have the following stocks:

**5.1.1 Potential Users:** This is the market potential or the hypothetical total number of users who can join the network. This number includes people who could be using a rival or competing platform; they're considered potential candidates for switching to the platform under consideration.

**5.1.2 Actual Users:** This is the total number of people using the platform at any given time.

**5.1.3 Users from Other Groups:** This stock represents the users from other *sides*. Other *sides* are essentially the other groups that a multi-sided platform connects its users with. For example, individuals on Facebook are connected with advertisers and companies (i.e. the other *sides*).

**5.2 Flows:** There are two flows depicted in *Figure 1*. Adoption Rate is the rate at which people adopt the platform per unit of time. As shown in the figure, the rate of adoption is influenced by various factors, all of which have been identified separately. Churn rate is the rate at which users abandon the network. Abandonment, again, is a rate which is influenced by multiple factors. All the factors affecting both these rates are discussed later in *Section 5.5*.

**5.3 Causality Arrows:** A causality arrow from one variable 'a' to variable 'b' indicates that variable 'b' is a function of or takes variable 'a' as input. The polarity on the arrow indicates the nature or sign of correlation between the variables. For example, an arrow starting from *Switching Costs* and pointing to *Probability of Platform Switching*, with negative polarity, indicates that greater the multihoming cost, lower is the probability that a user switches platforms (i.e. both these factors are negatively correlated).

**5.4 Loops:** The power of systems modelling is demonstrated in the fact that the illustration uncovers four explicit causal loops in the system. Each of these loops is discussed in detail below:

**5.4.1 Same-Side Network Effects:** This loop represents the effect that the existing number of users on a platform has on the probability that a new user (in the same user group) joins the network. If the same-side network effect is positive, the platform value increases as the actual number of users increases. For example, the value of Facebook to a user increases as more of his or her relatives, acquaintances and other people join the network, thus leading to a higher adoption rate and which in turn leads to more users. This cycle is reversed, when the same-side network effect is negative. For example, the value of Facebook to some advertisers decreases as more advertisers join the network and crowd the market. Therefore, the platform value for some advertisers decreases as the actual number of advertisers increases, thus leading to a lower adoption rate. The positive cycle is referred to as *reinforcing* and the negative cycle is referred to as *balancing* (Sterman, 2000).

**5.4.2 Cross-Side Network Effects:** Cross-side network effects capture the effect of the number of users on one side of the platform on the probability that a user joins the other side of the platform. Just as with same-side network effects, the cross-side network effects could be both positive (example: greater the number of sellers on amazon, greater chances that a person would join amazon as a buyer) or negative (example: greater the number of advertisers on Facebook, lower is the probability that a user would want to join the network). The cross-side network effect could therefore be either *reinforcing* or *balancing*.

**5.4.3 Use Case Generation:** As the number of users on the platform increases, so does the number of use-cases or different ways in which users want to utilize the platform. If these use-cases are catered to, there'll be multiple iterative platform releases, which will further increase the value of the platform, which in turn will increase the adoption rate and finally lead to more users.

**5.4.4 Platform Competition:** Greater the number of active users, more explicit is the market opportunity. Hence, it'll lead to higher number of competitors. Higher number of competitors will lead to a higher probability that users find a more compelling value proposition & switch platforms, which in turn increases the churn rate or the rate at which current users stop using the platform.

**5.5 Identified Critical Factors:** The systems model represents the adoption of a platform by a user essentially as a purchase decision, where a user weighs the price of using the platform on one hand and the value rendered by the platform on the other. *Bundling* refers to the act of vending multiple products together. This strategy is commonly employed to increase the value proposition of a platform in order to increase adoption. For instance, Google bundled email (Gmail) and instant messaging (Google Talk) together so that users could message their contacts within their email inboxes, and hence increased its value proposition. The *Platform Usage Price* is the price paid by the consumers for using the platform. This price could either be a one-time payment or based on a subscription model. In many cases, the platform could be freemium, i.e. basic features would be free, but in order to use more customized features, users would have to pay a fee. The platform could also be completely free for users and the company could be making money from adjacent monetization streams, such as advertisements.

*Design & User Experience* refers to the overall platform design & architecture and how well it empathizes with the users and their use-cases. For the purpose of this paper, design and user-

experience refer to the usability of the platform and the ease with which parties can interact with each other. In light of the fact that most platforms are now free, design and user-experience have become a new axis of differentiation. There is ample evidence to suggest that a platform's user-experience plays a very critical role in determining whether users actually adopt it or not (Chitale & Gupta, 2011).

*Platform Openness* refers to the degree to which the platform allows other companies in the ecosystem to develop applications that boost the value of the platform. This strategy was employed by Facebook, which allowed third-party developers to build applications on its platform. This led to an explosion in the value of the platform for users, as more and more of them flocked to the platform, just so that they could use those applications. Extending this argument, it can also be said that the more open a platform is, greater the likelihood that a large number of applications will be built on top of the platform, i.e. third-party developers would flock to the platform and develop applications, expecting the large number of users to help them make more money. This argument, however, needs further testing, considering the failure of the Windows Mobile operating system. In the absence of platform openness, it falls upon the company to develop applications that boost platform value. Sometimes, companies might choose not to do so (as in the case of Google Plus).

As the number of users of a platform increases, so does the number of use-cases demanded by the users. A truly dynamic platform would then respond to these market needs by constantly developing and launching new features & functionalities, apart from slashing down the not-so-popular ones. This characteristic of *Iterative Product Releases* shows how agile a company is and to what degree can the platform keep up with the market (and the competition).

Competing platforms would continuously innovate or copy in order to stay relevant and get a slice of the market opportunity. Thus, a user has multiple choices when he or she decides to join a platform. If the *Multihoming Cost* is low, a user can use multiple platforms at the same time. The competing platforms could also try to envelop use-cases. *Envelopment* can be one of the three kinds – a) Envelopment of Complements, b) Envelopment of Weak Substitutes and c) Envelopment of Unrelated Platforms (Parker, Allstyn, & Eisenmann, 2011). An enveloping platform presents a greater value proposition before the user.

Lastly, the *Switching Cost* represents the cost borne by the user when he or she decides to switch to using a different platform. A high switching cost can create an artificial entry barrier for new firms, as users find it difficult to switch to new platforms. Depending upon the core technology and the degree of industry standardization, the platform may or may not be able to control the switching costs associated with the usage of the platform.

## **6. Platform Analyses**

Within the context of the framework defined in the previous section, all platforms will be analyzed by collecting as much data as possible. The paper would examine each of the critical factors outlined earlier and determine how the platform under consideration fared in that respect.

**6.1 Choice of Platforms:** The choice of platforms was influenced by the author's interest areas as well as the availability of relevant data. The chosen platforms are spread across three categories – (a) *Online Social Networking Platforms:* Google Plus, Orkut, Myspace and Friendster, (b) *Question and Answer Platforms:* Google Answers, Facebook Questions and LinkedIn Answers,

and (c) *Instant Messengers*: MSN Messenger and Yahoo Messenger. All of these platforms have either been outright failures and have been shut down or they were laggards, unable to compete with the market leaders. Some of these platforms, such as Myspace, at one point, were able to muster significant amount of traction in the market and later declined. Whereas, some others, such as LinkedIn Answers, weren't even able to gain a foothold in the market.

**6.2 Point vs. Points of Failure:** A platform could have failed due to one single isolated reason or it could have failed due to multiple reasons – some scattered, while some interrelated. This poses a challenge, as there is a tendency to ascribe a failure to a particular reason and draw a causal relationship. The analysis in this paper, however, will steer clear of this approach and present all possible reasons of platform failure. Compiling these reasons across all the platforms will prove useful in identifying commonalities (if present) across failures.

## **7. Online Social Networking Platforms**

Social networking sites can be defined as web applications that allow users to build their own profiles, maintain a list of people they are connected to through the same platform and view other users' profiles and connections (Boyd & Ellison, 2007). This definition is loose enough to encompass the various forms and functions that social networking websites serve today. The importance of these platforms is reflected in the observation that most online user behavior is increasingly acquiring a social nature (Cole, 2014). Right from commerce to looking for jobs, people are turning towards social networks, which help them articulate their needs better and perform the function of an intermediary that gets rid of the information symmetry in the market.

With this context, it should be pointed out that these networks are invaluable sources of user information, which can be used to develop customized recommendations for users; thus leading to better monetization for the internet companies. In the following sections, this paper analyzes three failed social networks and Google+, which cannot quite be called a failure even though its number of active users is less than a quarter of that of Facebook; but, evokes extreme interest from the point of view of platform competition and product positioning in a complex portfolio.

**7.1 Google+:** Google, the world's largest search engine, servicing 62.3% of global search queries (Net Market Share, 2015), relies heavily on user context in order to serve the most appropriate search results as well as to present the most relevant advertisements to users. Better search results will help grow the user base and targeted advertisements, which are more likely to be clicked, will help monetize the platform better. More information about the user (such as user background, demography, interests, etc.), therefore, is a critical component for Google to develop new products (within its ecosystem) or to improve the user-experience of existing ones.

Apart from capturing user information through search queries, visited webpages and emails, Google realized that most data that users were willing to share about themselves had a social dimension to it. In this respect, the company has been an early mover in launching social applications, understandably within the Google ecosystem. However, despite repeated efforts and rather isolated successes in launching email and video sharing platforms, as the following analysis shows, the company hasn't been successful in launching social media platforms.

Table 1: History of Google's Social Networking Initiatives

Timeline	Platform	In-house or Acquired
2003	Blogger	Acquisition
2003	Friendster	Offer of Acquisition
2004	Orkut	Product Launch
2004	Gmail	Product Launch
2005	Dodgeball	Acquisition
2005	Google Talk	Product Launch
2006	Google Talk in Gmail	Product Launch
2006	Writely	Acquisition
2006	Picasa	Product Launch
2006	Youtube	Acquisition
2007	Google Docs	Product Launch
2007	Feedburner	Acquisition
2007	Postini	Acquisition
2007	Zingku	Acquisition
2007	Jaiku	Acquisition
2007	OpenSocial	Product Launch
2008	Google Friend Connect	Product Launch
2008	Google Lively	Product Launch
2008	Search Wiki	Product Launch
2009	Google Latitude	Product Launch
2009	Google Voice	Product Launch
2009	Google Wave	Product Launch
2010	Aardvark	Acquisition
2010	Google Buzz	Product Launch
2011	Google+	Product Launch
2012	Google Drive	Product Launch
2013	Waze	Acquisition
2013	Google Hangouts	Product Launch

Source: Compiled from (Google Corporate Website, 2014), (Sniderman, 2010), (McCracken, 2011) and (Sloane, 2014).

An analysis of Google's efforts towards developing a social platform shows that they have tried to grow both organically as well as through acquisitions. In 2003, Google acquired Blogger, a popular blogging platform, and made a \$30 million offer of acquisition to Friendster. The latter didn't materialize as Friendster decided to raise more money from venture capitalists instead of selling out (Arrington, The Friendster Tell-All Story, 2006). Orkut (a homegrown Google product) was able to gain significant traction, but its user base was tilted towards Brazil and India (DeAmicis, 2014) and eventually waned away competing with Facebook (launched in 2004). In 2004, Google launched Gmail, which went on to be wildly successful, and followed it up in 2005 by acquiring Dodgeball, a location based social networking platform, and later turned the platform into what came to be known as Google Latitude. Latitude's launch was mired with privacy concerns (Claburn, 2009) and the platform was finally shut down in 2013. Google's next attempt at social networking was the popular and successful Google Talk client, which was later fused into the Gmail web application. Amongst all of Google's initiatives, the only platform that was successful at enabling daily social media interactions was YouTube, which was a \$1.65

billion acquisition (Arrington, Google Has Acquired Youtube, 2006). Furthermore, Google's in-house attempts at social networking had been largely unsuccessful. Both Wave and Buzz were built around Gmail and intended to bring social activities to a user's email inbox. It was understandable from Google's point of view to try to launch social applications that fit well within its successful email ecosystem. However, users disagreed and Google realized the need to launch a standalone social networking application and the ever-rising and strongly positive same-side network effects of Facebook. This led to the launch of Google+ in 2011. The network, when launched, was described as a social layer across Google's various products and services (Bosker, 2012).

**7.1.1 Strategic Positioning:** Google's vast portfolio of products had largely been a disparate and often unrelated set of products, some grown in-house and some acquired. This portfolio organization changed dramatically in March 2012, when Google decided to roll out a single-sign-on feature, under which all of Google's products and services would be available to users through just one account (Paul, 2012). This meant that a user could access Gmail and YouTube through the same account. Of course, embedded within this initiative was the very tactical roll-out of Google Plus on top of all other Google products and services. At one point, Google let users *Plus One* (similar to a Facebook *Like*) the search results on Google search pages to help the engine learn more about their preferences (Google Official Blog, 2011). This initiative, however, had to be rolled back due to SEO hacks that could artificially make a search result more relevant (Garrido, 2012). Later on, Google also got rid of comments on YouTube videos and only allowed comments through Google Plus accounts. Again, this forced integration of Google Plus backfired and led to massive online protests and roll-back petitions (Murray-Morris, 2014).

First, from Google's point of view, it makes perfect sense to have a single data stream to capture user information and it would also be extremely helpful to have all user information associated with a single account, rather than multiple accounts, which would then have to be reconciled and merged. Second, it is a good idea to have a social layer across various Google applications to let users interact and share data. The strategic positioning of Google Plus is the catch-all layer that connects a user to the vast ecosystem of Google applications. However, as it is evident from the instances mentioned in the previous paragraph, users don't always welcome the integration of Google Plus, which sometimes can be perceived as *forced*.

**7.1.2 Network Effects:** As with all other social media networks, Google Plus exhibits strong and positive same-side network effects for individual users. The utility of the platform increases as more and more people (and thence, more people in an individual's network) join the platform. The cross-side network effects are also strong and positive between individuals and corporates, which maintain social identities and engage with their consumers online. However, the same cannot be said for advertisers. While the cross-side network effects of individual users is positive for advertisers, a greater number of advertisers effects the number of individual users negatively. Also, greater number of advertisers spells greater amount of competition for advertisements served and hence the same-side network effects for advertisers is negative.

**7.1.3 Competing Platforms:** The online social networking market is replete with web applications. However, the market exhibits different axes of localization. There are *geographically* localized networks, such as RenRen in China and Nexopia in Canada. Applications are also *use-case* localized such as LinkedIn for professional networking and Instagram for picture sharing. This paper defines a *full-service online social networking website*

as one which allows users to conduct daily social interactions, such as multi-channel communication and content sharing. Within this context, Google Plus has only one major competitor – Facebook.

Boasting close to 1.4 billion Monthly Active Users, Facebook is the world’s largest and most frequented social media website. Started in 2004, as a college-oriented social networking website, Facebook has now grown into a mammoth, with its American users spending close to 40 minutes every day engaging with the website (Constine, American Users Spend An Average Of 40 Minutes Per Day On Facebook, 2014). Facebook sprung to life right around the time Google was rooting for Orkut. However, Orkut and other networks, such as Myspace, couldn’t keep up with the competition and waned away. The following table summarizes the growth in Facebook’s user base vis-à-vis Google Plus.

*Table 2: User Base Growth – Google Plus and Facebook*

Year	Facebook		Google Plus	
	Monthly Active Users (millions)	% Growth	Monthly Active Users (millions)	% Growth
2009	360	--	--	--
2010	608	+69%	--	--
2011	845	+39%	150	--
2012	1056	+25%	223	+49%
2013	1228	+16%	359	+61%
2014	1393	+13%	--	--

*Source: Facebook data adapted from (Statista, 2015) and Google Plus data compiled from (Wolford, 2011) and (Lora, 2014).*

As the data shows, Facebook, by the sheer number of its active users, exhibits very strong and positive same-side network effects for its individual users. Furthermore, it is now commonplace for corporates to develop social identities over Facebook to interact with their consumers. These factors have on one hand created a momentum for Facebook’s adoption and on another, it has increased the cost of switching networks (to Google Plus for instance).

While Google Plus was launched in 2011 and Facebook had a 7 year head start, Google did have the advantage of a previously existing and large user base scattered across all its products and services. Google indeed leveraged this by bringing together its entire user base under the same umbrella by requiring a single account for all its products. Google Plus accounts are now created by default for everyone creating an account on Google. This strategy has been incredibly successful in increasing the overall number of users on the platform, but the number of active users on Google Plus, exclusively, is still only a quarter of those on Facebook.

**7.1.4 Enveloping Platforms:** Of all the platforms in the *full-service online social networking* market, Google Plus stands as the one, which offers a vast set of functionalities matched by no other platform. It’s plethora of services includes instant messaging, content sharing, video chatting, advertising, calendar, email and even a collaboration suite. There is no platform present today, which can match up to Google when it comes to the sheer number of features and functionalities offered. It is safe to note here that Google is the platform that envelops many complementary products and services that can accompany a social networking website. For more perspective on the envelopment practiced by Google Plus, see *Section 7.1.10*, which provides a detailed description of its features and functionalities.

**7.1.5 Multihoming & Switching Costs:** The multihoming cost associated for a social networking platform can be high when it is difficult for the user to simultaneously use multiple platforms. Google Plus has a high multihoming cost as it is difficult to replicate shared information or media content at a different platform, such as Facebook. Similarly, the more functionalities a social network provides and the more traction those functionalities receive, the more the switching cost. This paper defines the elements of the cost associated with switching a social network as the following:

- a) The cost of reproducing the network.
- b) The cost of losing archived communication and content.
- c) The cost of switching to and learning a different interface experience.
- d) The cost of abandoning applications unique to the incumbent platform.

Considering the aforementioned costs, it can be concluded that the switching cost associated with online social networks is very high. This goes to show that once a user adopts a network such as Google Plus and is able to experience the aforementioned costs, the user will be unlikely to switch to a competitor. The present reality, however, is that social networking users experience these costs when using Facebook, and are found to be *unwilling* or perhaps *unable* to switch to an alternate platform, such as Google Plus.

**7.1.6 Platform Openness:** Google needs to be credited in taking the first steps to developing standards in the social media applications market. Google & Myspace came together to develop and launch the OpenSocial public specification for hosting partially trusted or third-party applications on a social media platform in 2007 (Arrington, Details Revealed: Google OpenSocial To Launch Thursday, 2007). This specification was well placed according to the strategy of allowing applications on top of social media platforms. However, Google Plus, couldn't benefit from it, since, till date it hasn't opened its platform. Facebook, on the other hand, also came up with the OpenGraph protocol in 2007 (Arrington, Facebook Launches Facebook Platform; They are the Anti-MySpace, 2007) and by allowing third-parties to develop applications running on Facebook, catapulted its user base. Facebook, further capitalized on this strategy by launching the same platform for mobile applications (Crook, 2013). Despite abundant evidence of runaway success, Google Plus, is yet to open its platform to application developers.

**7.1.7 Complementary Products & Services:** As it has been discussed earlier, a Google Plus user gets to use the plethora of Google products and services. However, there are countless community applications, such as those on Facebook that users don't find on Google Plus, simply because of its closed platform. Furthermore, since these applications cannot be developed in-house on a continuous basis, they will remain absent from Google Plus till the platform remains closed.

**7.1.8 Product Bundling:** Google has done extraordinarily well in bundling multiple products and multiplying the platform's value proposition. The infusion of Hangouts into Google Plus is one such initiative. Google also integrated Picasa into Google Plus and also significantly improved the picture editing and management suite for users.

**7.1.9 Platform Usage Price:** A Google Plus user, today, remains the subsidy-side and doesn't have to pay anything to Google for using Google Plus. This changes, of course, when the user overruns his or her data storage limit on the bundled Google Drive account. Corporations, on the

other hand, remain the revenue-side and need to pay for developing company pages. Marketers and advertisers too have to pay Google for reaching target audience. The advertising monetization model remains the same as Google AdWords.

**7.1.10 Design & User Experience:** It is not possible to comment on the design and user experience of a platform without looking at it as a whole rather than in isolation. Here, the paper focuses on the user-interaction aspect of Google Plus' design. User-interaction can be broadly divided into six mutually exclusive and cumulatively exhaustive *experience* buckets.

(a) Activity Stream: This element represents how a user is presented with information from all the other users he or she is connected to or information from other parties, such as advertisers, on the platform. This experience is critical from the point of view that online social networks are now also a venue for content consumption than just communicating with network connections.

(b) User Profiles: This feature enables the user is able to compose and present his or her image through information on a web-page. Users are very conscious about their social identity and the profile webpage is a reflection of this identity. The ease in organizing and presenting this information is therefore also a key user experience element.

(c) Communication: Networks have to enable users to talk to other users on the platform. This experience can be rendered through various means. Over the years, communication on online social networks has evolved from static messages or posts on webpages to instant messages and even video chats. Lately, keeping in line with the shift in internet traffic to mobile devices, platforms allow users to communicate with any user in their mobile's address books (Ex: WhatsApp).

(d) Publishing Data: Another critical experience is how users publish and share information about themselves or anything else with other users on the platform. This experience is tied very closely with concerns for privacy. While sharing a piece of information, a user needs to be able to control the exposure of that information. The form of the published data could be one of webpages or plain text or images and videos. The need to provide flexibility in the form of data also presents an envelopment opportunity for platforms, which are in the information creation and data storage businesses.

(e) Maintaining Connections: This functionality allows users to maintain one or more lists of users they are connected to on the platform. While, traditionally, platforms have let users create dynamic lists of contacts. Google Plus' implementation of connections as *circles*, as we shall see later, has been markedly different.

(f) Privacy Controls: Perhaps the most critical piece of user-experience on any social network is the ease with which users can control the privacy of their social identity as well the information that they share on the network. This experience is supposed to be a layer over all the other five experience buckets. Whether it is building user profiles or communicating or publishing data, privacy is a key concern for users.

*Figures 2 to 7* illustrate all the aforementioned interaction elements on Google Plus. While a detailed analysis follows, it is important to note here that these design elements are to some degree influenced by what the present consumer expectations are with respect to the usability of an online social network.

Figure 2: Activity Stream on Google Plus

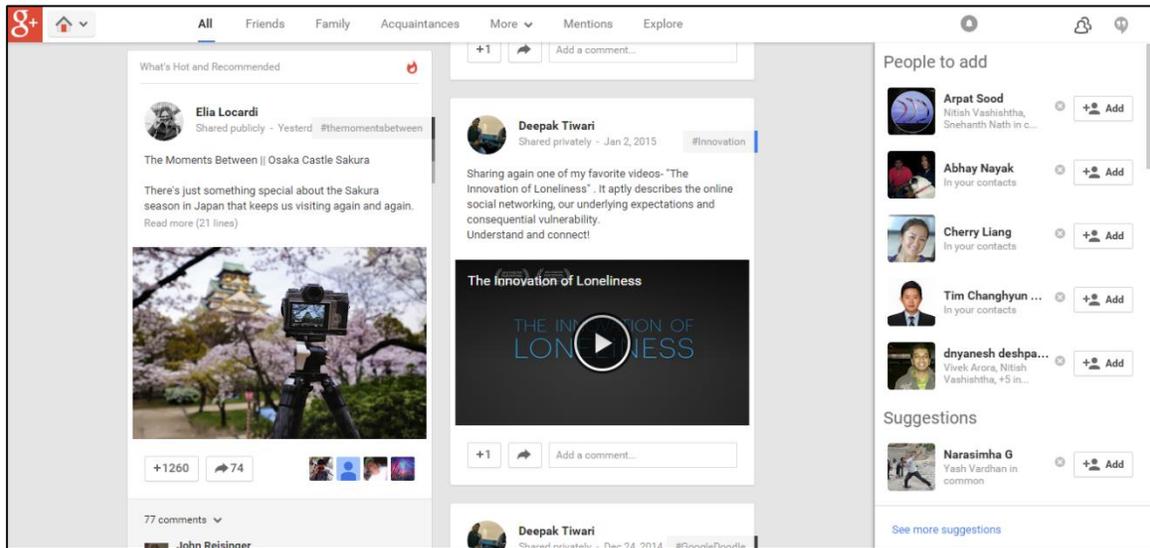


Figure 3: User Profiles on Google Plus

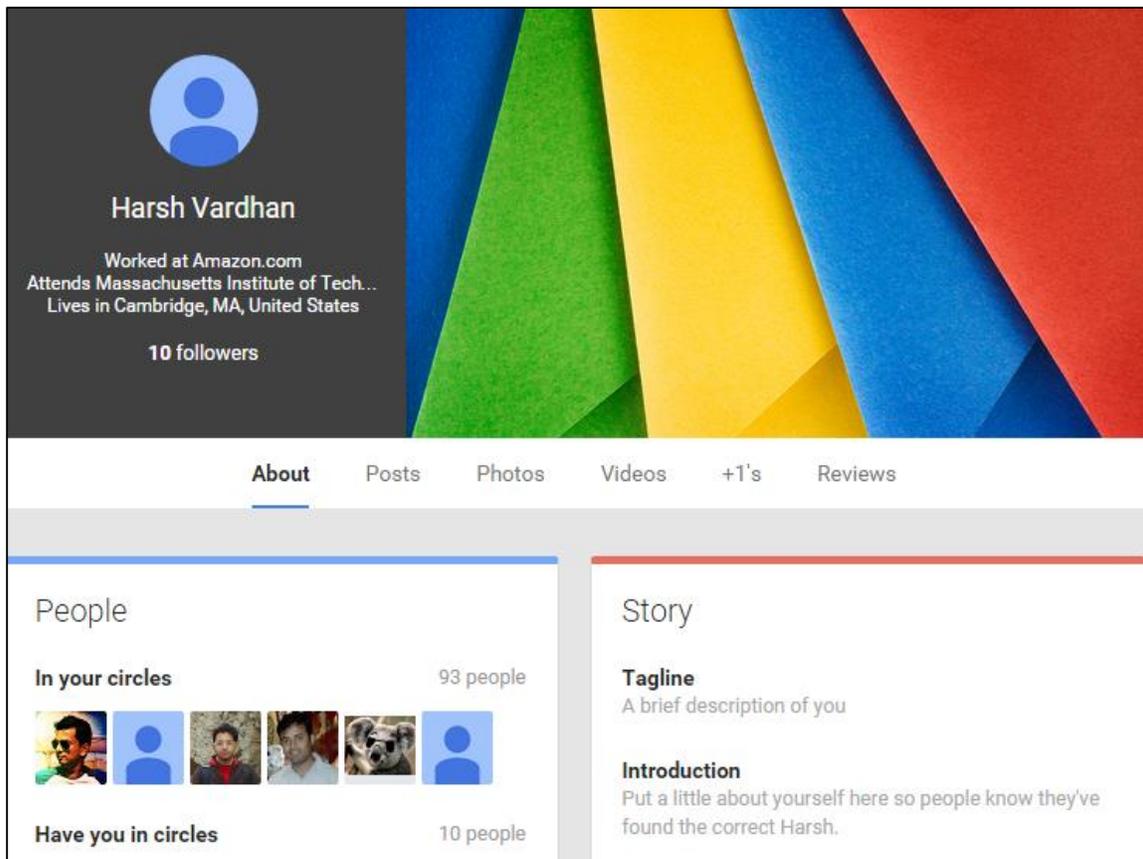


Figure 4: Data Publishing on Google Plus

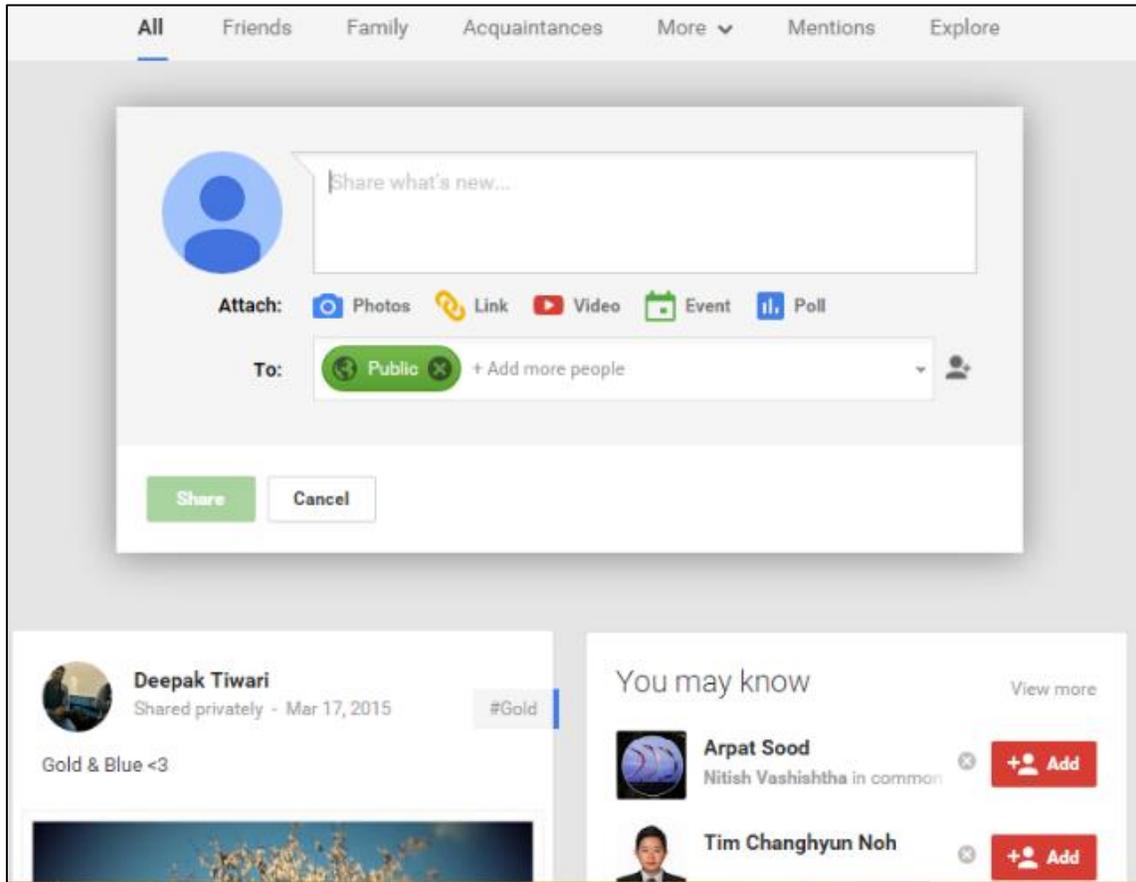


Figure 5: User Communication on Google Plus

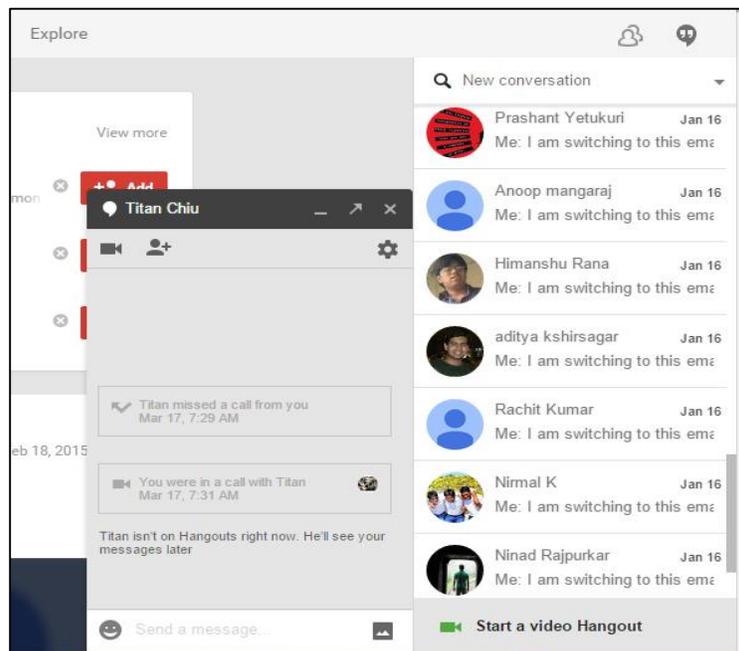


Figure 6: Maintaining Connections on Google Plus

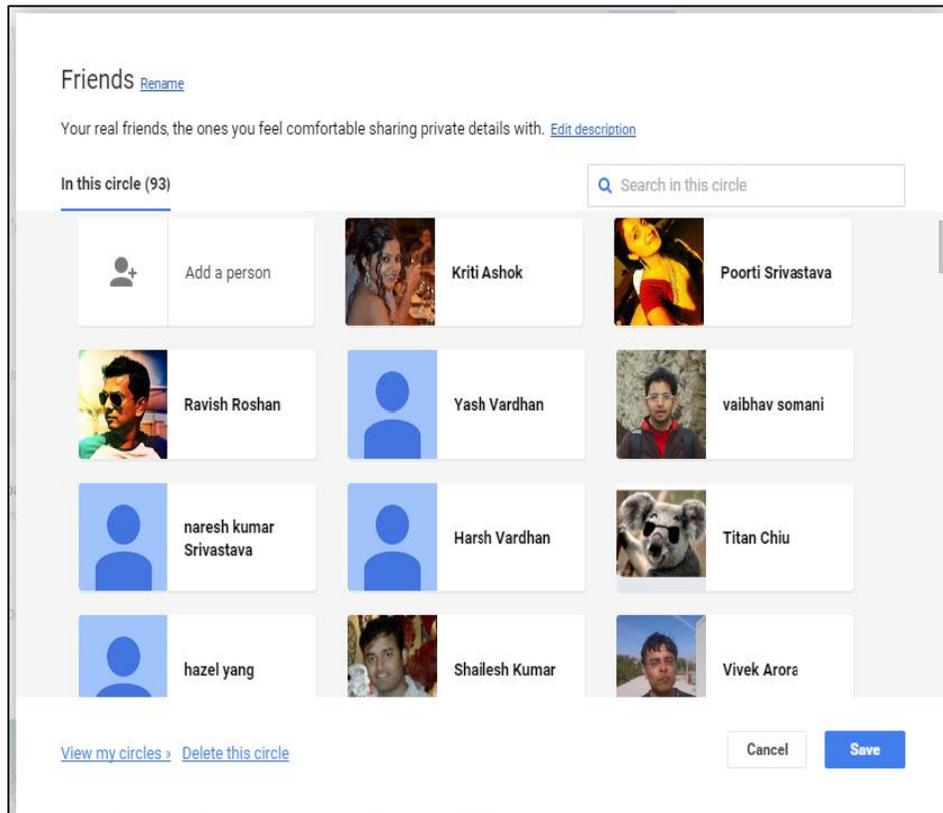
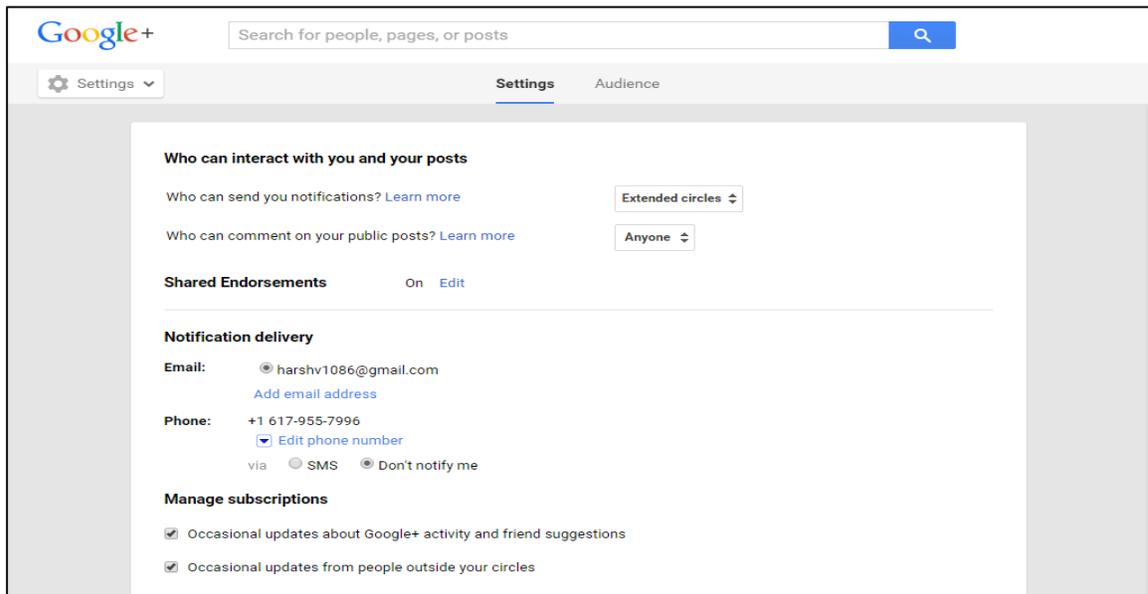


Figure 7: Privacy Control on Google Plus



The activity stream is readable in the two column layout and each element is summarized for quick consumption. User information is not directly accessible from profile webpages and instead a visiting user has to navigate to the *About* section. The profile page of a user instead presents on

the activities of the use, such as shared media. This is in line with activity oriented user-experience. In publishing information, Google presents its users an option to leverage their collaboration suite (Google Drive). This is also where the power of Google as an *ecosystem* comes into play. While users can leverage their YouTube accounts for videos, they can also use Picasa for images and Google calendar for events. All tools well inside the Google *ecosystem*. Google Plus users can use Hangouts, another Google product, for instant messaging and webcam chats. The way users Google allows users to maintain connections is markedly different from other social networks. Unlike other networks, where users can simply add other users to a connections list, Google Plus allows users to add their connections in multiple *circles*; where each circle represents a unique network. For instance, this experience allows users to consolidate all their connections from graduate school in one circle, while they can separately organize their family members in another circle. Google Plus also allow users to manage all their settings from one webpage and the ease of controlling privacy is comparable with that of Facebook.

The aforementioned user experience is also found to be seamless across the mobile version of the Google Plus application. While there has been much debate on whether Google Plus' experience is better than Facebook or not (Lancet, 2013), some have come to the conclusion that while Facebook is for casual interactions, Google Plus is relatively more serious (Dachis, 2013).

**7.1.11 Iterative Product Releases:** As the following table shows, Google has been very consistent with a high rate of product releases for its Google+ platform. This high agility is not surprising as Google has always been scrambling to keep up with Facebook and to create value for the platform to give users a good reason to switch to Google Plus.

Table 3: Google+ Platform Releases (2011 - Q2 2014)

Year	Number of Platform Releases
2011	7
2012	14
2013	14
January – June 2014	2

Source: Compiled from release notes found at (Google+ Platform Website, 2014).

**7.1.12 Points of Failure:** Taking stock of all the factors discussed in previous sub-sections, it is clear that Google has done very well in terms of building the design and user experience of Google Plus. They have also done very well in packaging the platform and increasing its value proposition with complementary products. Therefore, the lack of active users on the platform has been surprising. In recent times, the debate on whether Google Plus can compete with Facebook has transformed into a debate on whether Google Plus is dead (Grandoni, 2014) or whether Google Plus is aimless and going nowhere (Parkinson, 2014).

After considering all the factors that lead to platform success or failure, *this paper concludes that the present failure-like state of Google Plus can be attributed to a) strong same-side network effects that its primary competitor Facebook enjoys and b) a closed platform that has really constricted the growth of complimentary applications and community innovation.*

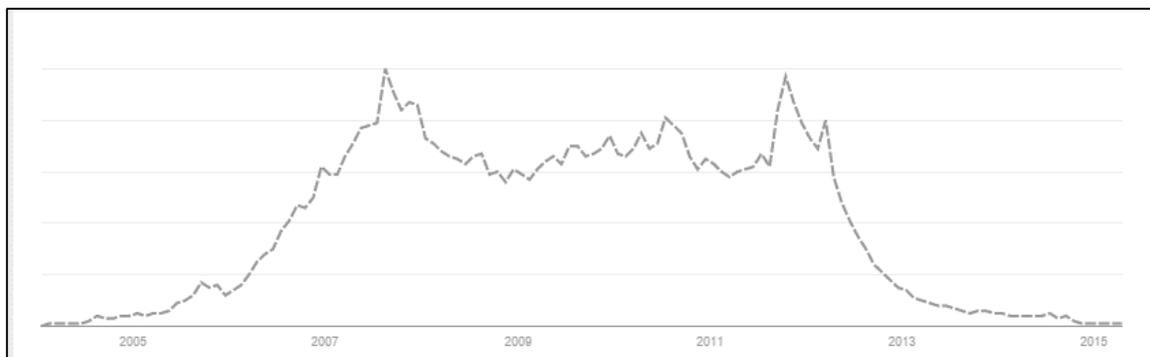
**7.2 Orkut:** One of Google's most talked about and most imitated corporate human resource policies is the *20% Policy*, which allows its employees to spend one out of 5 days every week working on their own projects (Google Official Blog, 2006). This initiative led to the

development of many popular and money-minting Google products, such as Gmail and AdSense (Mims, 2013). Orkut was also the result of this very policy, which was developed by and named after Google engineer Orkut Büyükkökten. Orkut was launched quickly following the launch of Myspace and was itself followed by the launch of Facebook. Google capitalized on the opportunity to create a presence in the online social networking space and transformed this side-project into a mainstream Google product. This transformation was not smooth, riddled with compatibility and positioning issues and as the following analysis shows eventually led to the demise of Orkut in September 2014 (Golgher, 2014).

**7.2.1 Strategic Positioning:** Orkut was Google’s first foray into developing an in-house social networking platform. However, the level of integration that the platform had with the rest of the Google ecosystem was too low. In order to use Orkut, users had to create a separate account. It wasn’t until much later that the application was fused with Google accounts. The platform’s positioning was even more confusing for users as Google Plus was launched in 2011 and both platforms started to co-exist. For some time, it was difficult to judge whether Google wanted both platforms to co-exist or if Google Plus was going to replace Orkut for good (Perez, 2012). It didn’t help that Orkut also came up with a standalone android mobile application (Chatterjee, 2009).

**7.2.2 Network Effects:** Orkut enjoyed positive same-side network effects. However, these network effects never came to be very strong and eventually waned away with time, as Orkut failed to create a strong value proposition for its users to be compelled to stick to it. The lasting damage to its positive same-side network effects was delivered by Facebook, with its slick design & user interface and many other functionalities.

Figure 8: Interest in Orkut – Worldwide Trend (Google Trends, 2015)



Despite losing ground to Facebook in the US pretty soon, Orkut was still leading in India and Brazil in the beginning. However, Facebook overtook Orkut in India in 2010 (Radwanick, Facebook Captures Top Spot among Social Networking Sites in India, 2010) and in Brazil in 2012 (Radwanick, Facebook Blasts into Top Position in Brazilian Social Networking Market Following Year of Tremendous Growth, 2012).

**7.2.3 Competing Platforms:** Soon after its launch, Orkut was very successful in putting Friendster to rout. At the time, it competed mainly with Myspace and Facebook. Myspace was a formidable competitor, but it was also overtaken by Facebook, as early as 2008, in terms of worldwide unique visitors (Arrington, Facebook No Longer The Second Largest Social Network, 2008). None of its competing platforms had the might that Orkut had, with Google standing

behind it. However, as things turned out later, Google did a poor job in integrating the platform into its existing suite of products and there was no seamless access to applications.

**7.2.4 Enveloping Platforms:** During Orkut's period of existence, none of the platforms that co-existed can be considered as following an envelopment strategy. While there were indeed niches, such as LinkedIn being relevant to professional networking, there wasn't much effort into enveloping tertiary services into social media platforms (contrary to what happened later with Google Plus). Myspace did focus on media and entertainment (Hess, 2012), but it did not lead to enveloping anything related to social media. The focus of competing platforms was improving the social networking experience, rather than expanding the sub-products offered within the platform.

**7.2.5 Multihoming & Switching Costs:** Considering the different elements of the multihoming and switching costs for social networking platforms put forth in *Section 7.1.5*, we find that Orkut users faced the same costs. However, these encumbering costs were more than overcome by the higher platform value proposition presented forth by Facebook and Myspace.

**7.2.6 Platform Openness:** With the exception of allowing third parties to develop customized background themes, Orkut always remained a closed platform. Google decided not to make the platform open, even as Facebook opened itself up to third-party developers. This decision, obviously plagued Orkut's growth, but surprisingly Google has stuck with this decision, even today with Google Plus. This goes to indicate that Google might be struggling with internal technical or intellectual property or organizational hurdles to implement an open platform.

**7.2.7 Complementary Products & Services:** The initial set of features and functionalities on Orkut made the platform very simple and easy to use. But, as Google tried to improve it and started adding new complementary features or sub-products – for example, allowing users to integrate Google Talk into their Orkut accounts – it was increasingly becoming more difficult for users to understand and operate the website (Chitu, Orkut's New Conversational Interface, 2009). Google also put its foot down and decided that Orkut would not be open for advertising. This was good news for users, who then would not be inundated with advertisements, but it also meant that a significant source of information (consumer product preferences) was missing from the platform. This decision regarding advertising was eventually reversed in 2009 (Johnson M. , 2009).

One auxiliary feature that set Orkut apart from its competitors was that it allowed users to create communities and interests groups. This feature was widely popular and heavily used. However, it ran into trouble as there were multiple counts of misuse of community-based features (due to lack of community monitoring and moderation), both in India (Times News, 2006) and Brazil (Nicaretta, 2006), Orkut's biggest user bases (Peterson, 2011).

**7.2.8 Product Bundling:** Google's efforts in bundling Orkut with the host of other products it had in its portfolio can best be termed as poor and too little & too late to matter. To Google's credit, it did learn from its mistake and made this bundling strategy work perfectly well with Google Plus.

**7.2.9 Platform Usage Price:** Users didn't have to pay anything to use Orkut. There was no monetization stream till 2009 (when advertisements were implemented) and the platform was Google's subsidy to users for letting it learn more about their preferences and gather more data to use in other monetized activities, such as search engine advertisements.

**7.2.10 Design & User Experience:** Popular opinion deems Orkut’s website design and user-experience as the single biggest culprit, responsible for diluting Orkut’s same-side network effects and effecting platform switching to Facebook (Stoler, 2014), (Shreshtha, 2014).

A good example of the lack of foresight in designing features is evidenced by the *Trustworthy-Cool-Sexy* feature, which allowed a user’s connections to rate him or her on a scale of one to three for how trustworthy, cool and sexy they thought a person was.

Figure 9: Orkut's Friend Rating Feature



This theme of features is set to fail when designing a platform to be used by multiple user-segments, and not just the young and tech-savvy one. A testament to the need to get rid of these features, unilaterally focused on a single user segment, is the fact that Facebook got rid of the ambiguous *Poke* feature (which allowed users to notify other users, not in their network, that they were interested in talking to them) in 2014 (Murphy, 2014).

Google was very much aware of Orkut’s design shortcomings being a major hurdle and therefore, the website design went through several iterations (Orkut Team, 2009) as Google tried its best to come up with a user-interface that could match-up with the kind of interface Facebook provided. In this respect, the long line of customizable website themes was Orkut’s only saving grace and the company did put in a lot of development effort into launching it exclusively for the platform’s biggest markets – Brazil, India and Pakistan (Rajagopal, 2010). *Figures 10 and 11* illustrate two of those themes.

Figure 10: Customizable Orkut Theme (A)



Source: <http://www.techbrave.com/2008/06/latest-orkut-themes-for-download/>

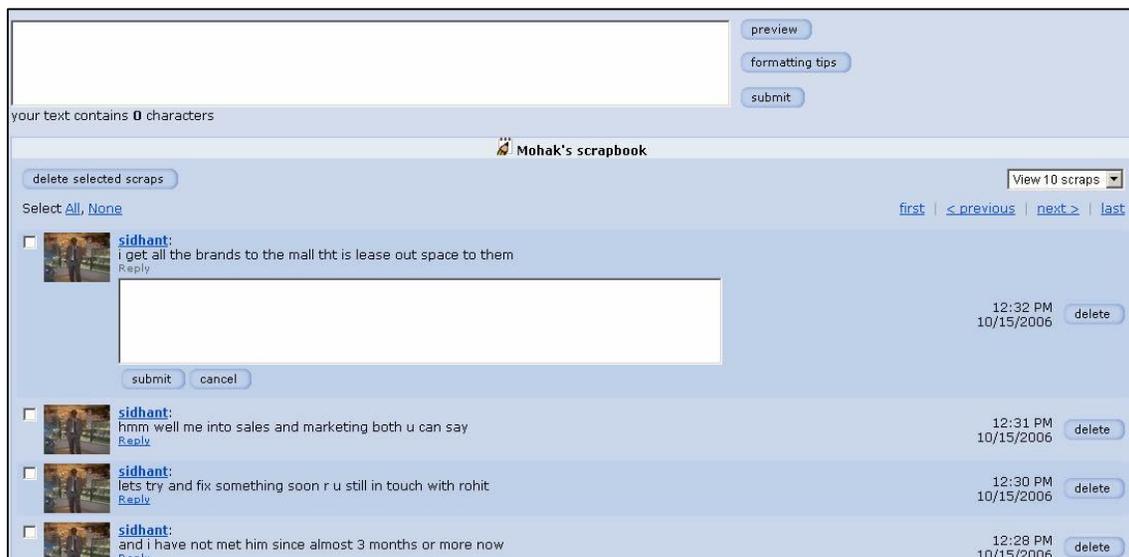
Figure 11: Customizable Orkut Theme (B)



Source: <http://www.techbrave.com/2008/06/latest-orkut-themes-for-download/>

Privacy was another big user-experience issue that Orkut couldn't solve in time before its users migrated away. Communication between users was only allowed through webpages called *Scrapbooks*, which were publicly visible to everyone by default. Apart from privacy, security also arose as a big issue, since Orkut started infecting user machines with viruses (Porter, 2006). *Figure 12* below illustrates an Orkut user's scrapbook.

Figure 12: Orkut Scrapbook



Source: <https://mohak.wordpress.com/2006/10/20/orkut-improves-user-interface-a-quick-take/>

**7.2.11 Iterative Product Releases:** Orkut always played a fast-follower to Facebook. Unfortunately, the strategy didn't work in the online social media networking market. In fact, Marissa Mayer, then at Google, admitted that Orkut's failure in the US was a result of very slow reaction speeds after a few short, but strong growth spurts (Siegler, 2010). This lack of agility in reacting to the market and lack of foresight in the vision for the platform led to a severe directional and leadership void at Orkut.

**7.2.12 Points of Failure:** *After analyzing all the aforementioned factors, it can be concluded that the failure of Orkut was primarily a result of (a) confused product positioning, (b) closed platform, (c) poor product design, and (d) lack of agility or iterative product releases.*

Google learnt a lot from Orkut's failures and the company has done really well in making sure that the same mistakes are not repeated or are overcome with Google Plus. Perhaps, the security and privacy blunders with Orkut are the reason behind Google's very strict identity policy with Google Plus. It seems that the only reason Orkut wasn't discontinued earlier was the significant user base it had acquired in Brazil and India. In fact, Google had been quick to restrict the development of the platform to just Brazil (Zmoginski, 2008), the platform's biggest market, rather than developing it in a globally distributed manner. This in itself was an indicator of how invested Google was in Orkut as its main social media offering.

**7.3 Myspace:** Launched in July 2003, Myspace preceded both Orkut and Facebook (CrunchBase Company Profile, 2015). The very first online social network to find mega success in the US, Myspace was able to acquire a 1 million strong user-base within 1 month of its official launch in January 2004 (Stenovec, Myspace History: A Timeline Of The Social Network's Biggest Moments, 2011). Taking a cue from the early success of Friendster (discussed in the next section), Chris DeWolfe and Tom Anderson launched the website together with a team, mostly drawn from eUniverse, an internet marketing company. Leaving Orkut behind and primarily drawing from the 18-24 years old user segment, Myspace rose to become the world's biggest online social network from 2005 to 2008 (Arrington, Facebook No Longer The Second Largest Social Network, 2008). Looking to maintain its growth frenzy, Myspace offered to acquire the then up & coming Facebook, but scrapped the idea considering Mark Zuckerberg's \$75 million quote as too exorbitant (Carlson, 2010). The same year also saw Myspace, which had by then become a very attractive digital media acquisition target, purchased by Rupert Murdoch's News Corporation for \$580 million (Siklos, 2005).

Myspace reigned the online social media networking market till 2008, but in April 2008, Facebook, on a steady rise, caught up and eventually left Myspace behind. From the point of view of running a nimble technology firm, without interference from a conglomerate owner, it is very interesting to study – (a) Myspace's internal reaction to Facebook, and (b) the growth strategies adopted by Myspace from 2008 to its eventual sale to Specific Media and Justin Timberlake (as individual investor) in June 2011 for a meager \$35 million (Vascellaro, Steel, & Adams, 2011). Despite good intentions, News Corporation was not able to maintain a hands-off policy with Myspace and a relocation (from Santa Monica to Beverly Hills) and a management shuffle were followed by attrition of key employees. News Corp., only looking to grow its portfolio of web-based companies, had no experience running a firm like Myspace, but it also wanted to do everything to get value out of its investment. While the reasons behind Myspace's eventual demise are discussed later, it is important to note what Rupert Murdoch, chairman and chief executive of News Corporation, said about the acquisition – *“we screwed up in every way*

*possible, learned lots of valuable expensive lessons”* (Rupert Murdoch on Twitter, 2012<sup>1</sup>). After selling off the website for \$35 million, Rupert Murdoch, remarked in News Corporation’s October 2011 shareholder meeting that – *“We bought it for \$600 million. We could have sold it for \$6 billion a month later”* (Barnett, 2012). Sean Percival, former VP of Online Marketing at Myspace, has lamented about the corporate policies creeping in, from legal procedures to financial approvals, to slow down the pace of the company (Dredge, 2015).

Apart from the post-acquisition integration troubles, thanks to Myspace’s loose privacy & security policies and a pop-music hub image and culture, it also faced legal action from the Department of Justice for enabling and providing access to child pornography over the platform. The case was widely publicized leading to the popular public perception that Myspace was not child-friendly. This was quickly followed by the migration of an entire user-segment away from the platform, apart from also driving away advertisers (Gillette, 2011). Another fallout of loose privacy and security policies was the ever increasing amount of malware, phishing and hacking attempts on the website that further eroded Myspace’s user base (Gehl, 2012).

**7.3.1 Strategic Positioning:** Myspace’s progeny was a response to the popularity of social networking as evidenced by the early success of Friendster. However, after its acquisition, the platform relegated into a marketing platform at News Corporation’s disposal. The platform was originally positioned as an early mover in the social networking space. This changed later as the website later became an advertising platform. The transition was not smooth and its eventual failure has lent credence to the thesis that social networking platforms cannot be positioned as advertising platforms. Apart from this inevitable tweak, Myspace persistently stuck to a portal strategy and positioned itself as the place to go for users looking to find music, connect with their favorite artists and follow them for regular updates. This strategy cornered Myspace in a niche that was open to envelopment.

**7.3.2 Network Effects:** The platform enjoyed strong and positive same-side network effects. However, as we shall see in *Section 7.3.10*, it can be argued that this feedback loop was overwhelmed and outstripped by the strongly negative cross-side network effects between the number of advertisers (and thence advertisements) and the number of individual users. This claim assumes that negative network effects could be the manifestation of the frustration of users with advertisement heavy webpages, which ultimately increased the probability of platform switching.

**7.3.3 Competing Platforms:** After the rise of Friendster, all big & small companies had realized the value of a social network – both from the point of view of collecting user information and a deeper insight into consumer behavior, as well as from the vantage point of advertisement revenue. Myspace, an early mover, witnessed the swift rise of Orkut & Facebook, its primary competitors. While the geographic expansion of Myspace was limited, Orkut & Facebook capitalized on international markets, their prior global presence (in Orkut’s case) and found success in selling a one-size-fits-all, or rather a one-user-experience-fits-all platform across the world.

**7.3.4 Enveloping Platforms:** While Myspace focused on music & entertainment, Facebook and Orkut offered general social networking applications. Orkut, backed by Google, was the primary

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<sup>1</sup> *The tweet can be accessed at <https://twitter.com/rupertmurdoch/status/157719858904174592>*

envelopment threat that also offered instant messaging and online communities. Myspace did try to keep up with new innovations launched by its competitors, but it became very difficult for the firm to react swiftly to its market environment after its acquisition.

**7.3.5 Multihoming & Switching Costs:** Initially, the platform switching cost for users was very high. However, the rise of other social media platforms and a rise in their user bases also made sure that the switching costs depreciated. This was a result of the ease in replicating networks on a different platform and the ease in controlling the user-interface of rival platforms, such as Facebook and Orkut. Lower switching costs translated into greater user churn as users migrated away to other platforms.

**7.3.6 Platform Openness:** According to Shawn Gold, former head of marketing and content at Myspace, the company built everything in-house. Myspace did join Google in developing the OpenSocial platform's specifications (Ostrow, 2007), but this platform couldn't compete with Facebook's OpenGraph platform. Third party applications did eventually come in and by 2008 there were around 1000 approved developer applications (Riley, 2008), but it was too little and too late as Facebook had grown too big by then and enjoyed enormous positive same-side network effects.

**7.3.7 Complementary Products & Services:** Myspace never looked to develop complementary products. Myspace's features that exclusively focus on music and entertainment can, in a way, be considered complementary to social networking. However, after Myspace's re-launch, post its sale by News Corp., the platform is focusing exclusively on music. CEO Mike Jones, said in 2011, that Myspace, with its new positioning, was now complementary to Facebook, and not competing with it anymore (Steel, 2011). The threat of envelopment, therefore, looms before Myspace now more than ever.

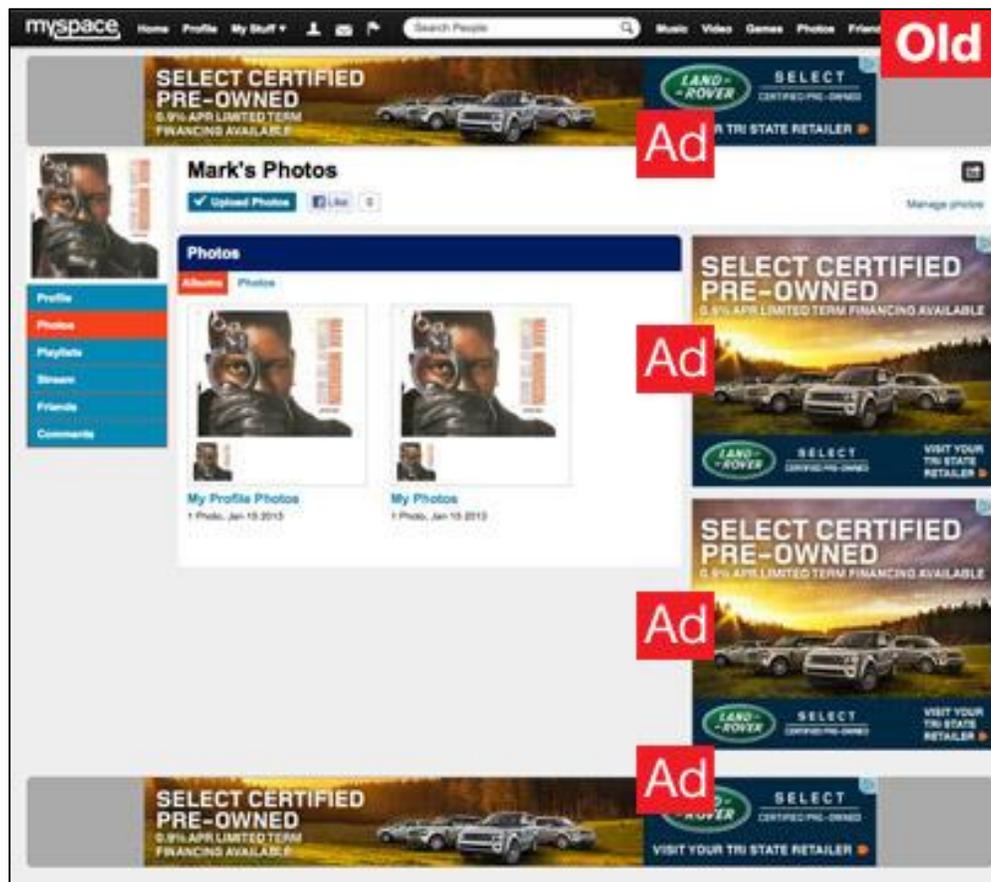
**7.3.8 Product Bundling:** Myspace's bundle of products was a menagerie of features and functionalities that reflected the transformation of the platform, first into an advertising board, evidenced by accompanying products, such as classifieds. And later into a music and entertainment portal, evidenced by products such as a music player, a video player, and a karaoke machine. The bundle did not have significant appeal and the complementary products were being rapidly enveloped by competitors, who were also offering them without a fee. For example, Orkut had been bundled with YouTube.

**7.3.9 Platform Usage Price:** While the monetization of a social networking service was not very clear, Myspace set the trend, as Brad Greenspan, founder of Myspace's parent company, dismissed Myspace's co-founder Chris DeWolfe's idea of charging users a fee for availing social networking services on Myspace. Greenspan believed that keeping the service free for individual users was key to making sure that the online community grows at a rapid pace (Greenspan, 2007).

**7.3.10 Design & User Experience:** One of News Corporation's primary reasons for acquiring Myspace was to find the right audience for advertising the wide range of media products that News Corp. owned. While News Corp. originally intended not to tinker with how a typical silicon valley technology firm operated, it couldn't help but impose on its investment to come through by pushing its products on its growing audience. As a result, soon after acquisition, the Myspace website's real estate started getting increasingly leveraged by advertisements. Attracted by Myspace's growing user traffic, Google approached the company with an advertising deal worth \$900 million, under which Myspace would surface Google's advertisements on the website's

pages. Note that Google struck this deal, even while it was investing in Orkut to build it as the world's biggest social networking service. Desperate to make money with an expensive acquisition, News Corp., Myspace's holding company, very eagerly finished the deal in 2007 (Malik, 2006). The end-result of this deal was an extremely advertisement-heavy website, which the users found extremely difficult to use. Some people have also speculated that this advertisement deal was the sole reason behind the death of Myspace (Johnson B. , 2011). Facebook's clear, clean and concise pages delivered a much better user-experience, as compared to Myspace's ad-laden pages, and have been considered as one of the main reasons why Myspace users migrated away (Pruden, 2011). *Figure 13* illustrates the Myspace *Photos* webpage with labelled advertisements.

*Figure 13: Ads-Heavy Myspace Photos Page*



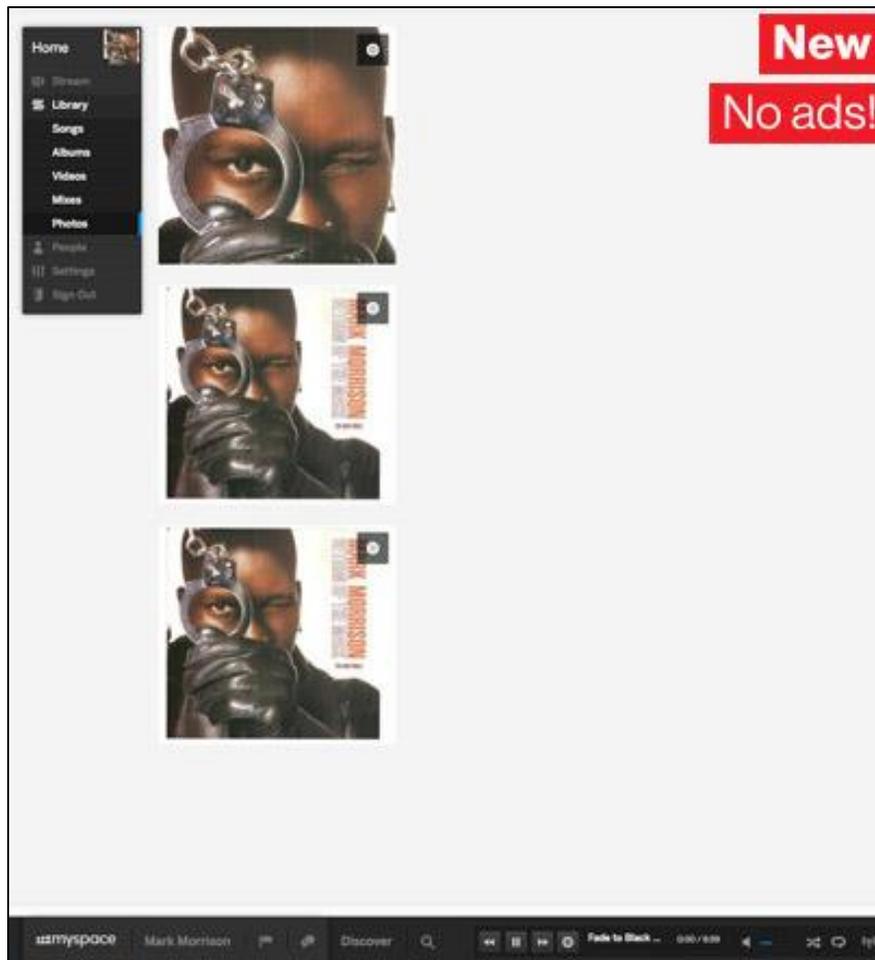
Source: <http://www.bloomberg.com/bw/articles/2013-01-16/myspace-act-ii-a-whole-new-tune>

**7.3.11 Iterative Product Releases:** Post-acquisition, it became difficult for Myspace to follow the rapid *build-measure-learn* loop. As admitted by Shawn Gold, former head of marketing and content at Myspace, the speed of software iteration was very slow and the platform suffered from inadequate quality assurance, lack of post-launch performance tuning and lack of sufficient designed iterations (Gillette, 2011).

**7.3.12 Points of Failure:** While Myspace's failure can be attributed to a host of different reasons, we find that at the core, all the problems that plagued the platform were housed in two primary areas – (a) Design & User-experience, and (b) Iterative Product Releases.

The new Myspace, launched, after a significant platform redesign, by Specific Media and Justin Timberlake, now positions itself as a portal dedicated to music and entertainment (Pachal P. , 2013). While the original user base has now long been plummeted, it remains to be seen whether the new positioning will help Myspace develop a niche as a platform for social media around music – *Will music groups and bands find the platform useful to promote themselves and connect better with their audience or is this niche use-case easily envelope-able by other full-service social media networking websites?* The 2013 re-launch has started with a base of 36 million users and includes a mobile application as well as a radio service (Stenovc, MySpace Relaunch: Redesigned Site, Mobile App Include MyRadio Streaming Music Service, 2013). The \$20 million advertisement campaign has been successful in creating awareness and the new face of Myspace (Marzilli, 2013). Looking at *Figure 14*, which shows the photos page on the redesigned website, it seems that the reborn platform has learnt from its past mistakes.

*Figure 14: Myspace Photos Page - 2013 Redesign*



Source: <http://www.bloomberg.com/bw/articles/2013-01-16/myspace-act-ii-a-whole-new-tune>

**7.4 Friendster:** Friendster can be credited as the platform that introduced online social networking, as we know it today, to the world. Founded by Johnathan Abrams, the platform was first launched in 2003 (Milian, 2009). The website quickly became the hottest new start-up in the Silicon Valley, with the web giants of the time, such as Google and Yahoo, scrambling to respond to what could be a big opportunity to their businesses. Being the very first *full-service online social networking* platform, the company brought forward many innovations, right from managing connections (or friends) in a list to arriving at a compatibility score between two users. A large chunk of these patents, 18 in all, were later acquired by Facebook (Gannes, 2010).

The growth of Friendster was nothing short of wildfire as it acquired close to 3 million users in the first few months of its launch in March 2003. The company was primarily backed by venture capital investments from Kleiner Perkins Caufield & Byers (KPCB), apart from other venture capital funds and individual investors. The platform's rapid growth and popularity helped it become a very attractive target for acquisition by web-based companies. In 2003, Google offered \$30 million to acquire it, but the KPCB board members convinced the founder, Jonathan Abrams, to forgo the offer and instead focus on building the company by himself (Rivlin, 2006).

The story of Friendster's decline is one fraught with frequent management changes and indecision with respect to what direction the company should take. This series of management shuffles started by removing the founder, Jonathan Abrams, and replacing him with Timothy Koogle, former executive at Yahoo (Fiegerman, 2014). The growth pains proved fatal for the platform and it couldn't compete with Myspace. The website then started focusing on Asia since it had already built a significantly big user base in Asia. The platform witnessed a very high growth rate, as high as 40% in 2007 in Asia (Biggs, 2007). In 2009 the website was acquired by MOL Global for \$26.4 million. In 2011, the parent company re-launched the website as a social gaming platform (McCarthy, Farewell, 2003: The Friendster apocalypse is nigh, 2011).

**7.4.1 Strategic Positioning:** It was still early days for social media networking and even users were learning what exactly they wanted from such a platform, let alone what the platform could provide them. What this meant was that there was no clear-cut focus on a particular use-case. The board of Friendster debated ideas ranging from integrating VoIP with the platform to using it as an advertisement vehicle (Chafkin, 2007). All of this led to unclear positioning of the platform in the market.

**7.4.2 Network Effects:** When the platform had launched, it was offering features such as maintaining connections and communicating with them. The network effects started out strongly positive, but the failure of Friendster was rooted in the fact that these effects became very weak over a period of time. The weakening of these effects is evidenced by a recent study that has conducted a mathematically rigorous examination of the phenomenon called *social resilience* – the ability of an online community to withstand change (Garcia, Mavrodiev, & Schweitzer, 2013). This research found that at Friendster, the connections between people gradually became very weak and the community's resilience to change waned. This eventually led to mass platform-switching as users flocked to Myspace, confused by all the interface changes that were imposed upon Friendster (McMillan, 2013).

**7.4.3 Competing Platforms:** While Friendster was indeed the first social networking platform, it did face competition early on by online communities created by Microsoft and Yahoo. Of course, as Friendster started to evolve, the competitive landscape became more crowded albeit with a few

major competitors, such as Myspace, Orkut and Facebook, which handled the challenges of the early days of social media much better (Yee, 2013).

**7.4.4 Enveloping Platforms:** From 2003 to 2005, none of the social networking platforms tried to envelope the social networking use-case's complementary products and services. The envelopment initiatives of Orkut were also limited to media sharing. At the time, Myspace & Facebook also solely focused on providing general social networking features.

**7.4.5 Multihoming & Switching Costs:** Since online communities and user networks were in their infancy, it was very easy for users to shop around and try other platforms. The switching costs were also very low for the same reason. Friendster could not capitalize in developing social assets that gave users a prohibitive reason to stick with Friendster and not migrate to competing platforms.

**7.4.6 Platform Openness:** Friendster was the first platform to support both OpenSocial (Kincaid, 2008) and the Facebook Platform (McCarthy, Friendster announces support for Facebook apps, 2008). Friendster also needs to be credited for devising and launching its own developer platform, soon after the launch of the Facebook Platform (Hendrickson, 2007). This launch did not reconcile with Friendster's support to the other two development platforms. Even though there were not many takers for application development, the website saw a spurt of widget applications that could be embedded into users' profile pages (Nyo, 2008).

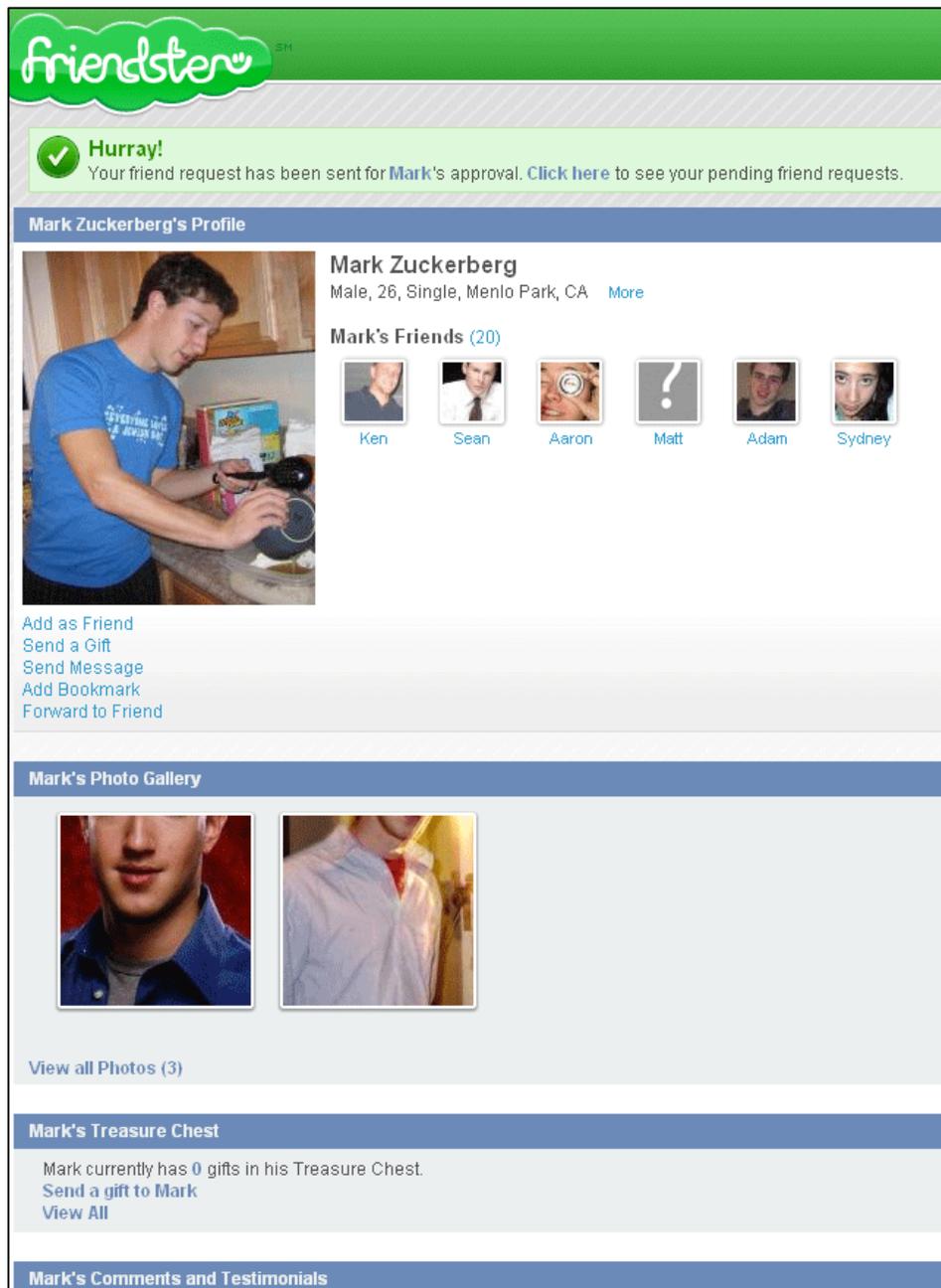
**7.4.7 Complementary Products & Services:** Friendster, at one point, considered providing voice calling services through the platform, but eventually dropped the idea. The platform, in its present form – a social gaming network, now provides gaming related complementary products & services. However, none of them existed when it was existing and competing as a social networking platform between 2003 and 2009.

**7.4.8 Product Bundling:** While social networking today comes bundled with many other products and services, in 2003, the phenomenon was too early in its stages of development to be associated with multiple offerings in the same bundle. As discussed earlier, Friendster did think about adding a complementary service – VoIP (which potentially could have led to bundling) – it did not materialize eventually.

**7.4.9 Platform Usage Price:** The platform's usage price was nil for all users. The only revenue stream that the platform relied on was advertisements. The platform was right in its decision to put off developing new revenue sources and instead focusing on user growth. However, the platform never got to reach such a level of growth that these growth focused investments could be effectively harvested.

**7.4.10 Design & User Experience:** The study of social resilience in Friendster's user base has found that the low resilience to change triggered the massive migration of users from the platform, following the 2009 redesign of the website that effectively killed it. The following two figures illustrate the profile page before and after the website redesign. While the later design was more in sync with what users expected with a social networking platform, it was still focused on the profile page and less oriented towards social communication – an area where later Facebook trumped all other networks. *Figure 15* below provides a glimpse of the original design of the website.

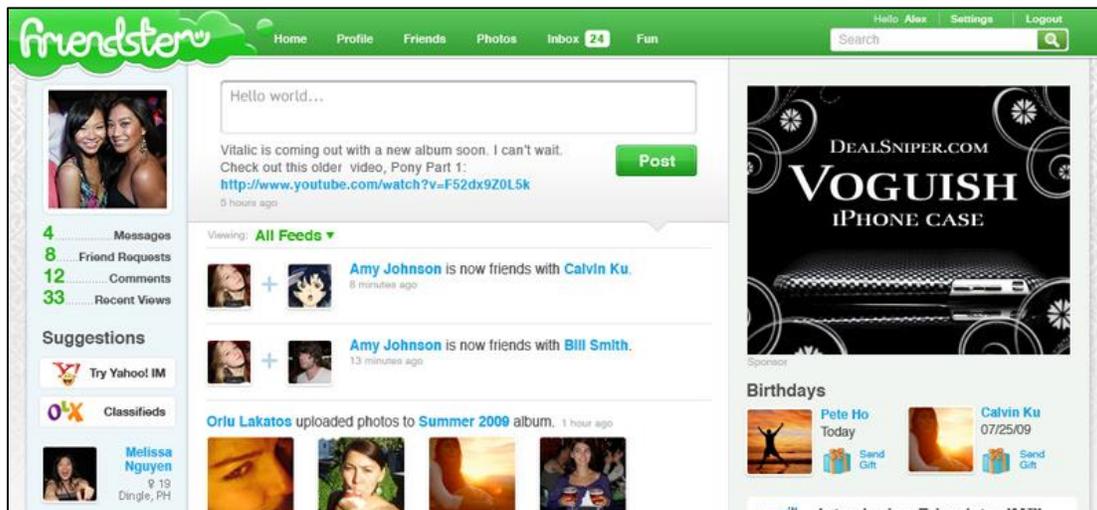
Figure 15: Friendster - Early Profile Page Design



Source: <http://www.wired.com/2011/04/friendster-zuckerberg/>

Quite ironically, the image above is the Friendster profile page of Mark Zuckerberg, who went on to build Facebook, presently the world's biggest social networking platform. The original design illustrates the ability of users to share identity related information, and also the inability to interact over user generate content. *Figure 16* below shows the redesigned profile page in 2009.

Figure 16: Friendster - Profile Page in 2009



Source: <http://port.kidhack.com/>

The platform continued to put too much emphasis on user content and media. This was in fact a good move. The more information users uploaded on Friendster, more were the multihoming and switching costs. However, the platform failed to enable users to interact over this media, whether in the form of content sharing or user comments. This missing social element to user media was manifested in the lack of a stream of information from a user's connections, which later became the *Newsfeed* at Facebook and *Stream* at Google Plus (Pachal P. , 2011). Friendster cannot be faulted for focusing on user information, since in the early of online social networking, the primary focus of users was to present themselves to other users as better as possible. However, there was also a fatal lack of foresight in failing to enable user interaction over content. Facebook, too, first lured people with games and status update features that allowed users to project their identities. However, it did have the foresight to drop this focus and later invested heavily in developing the users' *Newsfeed*.

The user-experience of Friendster users was further plagued by technical problems. In fact, Jonathan Abrams, the founder of Friendster, as well as Kent Lindstrom, a former president at the company, also admitted that the company's technical infrastructure failed to keep up with the speed at which its user base grew (Rivlin, 2006). This led to frequent outages and increased the website latency. Overall, this experience was key in driving people away from the platform, as they didn't have the patience to wait for the website's pages to keep loading for so long.

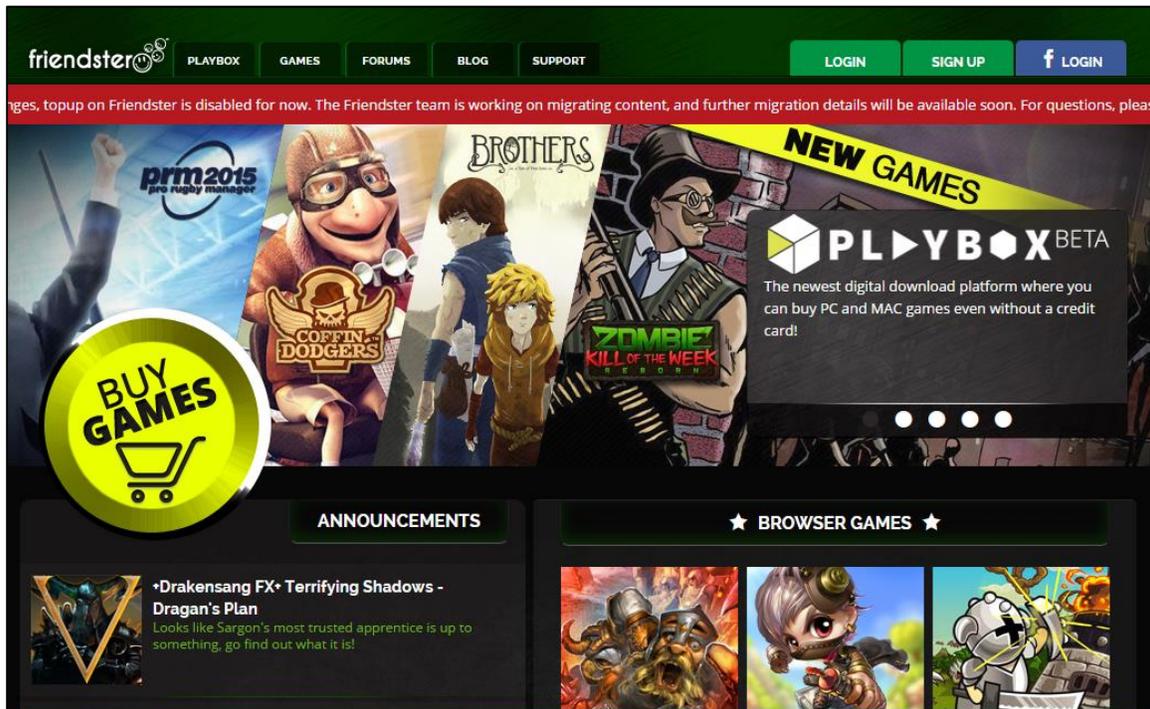
**7.4.11 Iterative Product Releases:** As discussed earlier, Friendster was never agile enough in keeping up with its user base's use-case scenarios. Their product releases were divorced from the need to fasten up the website and instead solely focused development of new features often without consideration of user engagement (Rivlin, 2006).

**7.4.12 Points of Failure:** Considering the fact that the online social networking platforms have very strong and positive same-side network effects and the fact that it was the first-mover in this market, Friendster failed to capitalize on its big entry and the creation of a new market. *The failure of Friendster can be solely attributed to the platform's design and user experience.*

*Friendster's inability to provide users with an easy and meaningful experience on the platform led users to migrate to other platforms.*

Since its acquisition by MOL Global, the website has been doing really well as a gaming website. It was in fact the largest social gaming platform in South East Asia (Yung-Hui, 2012). *Figure 17* below illustrates what the reincarnated website, which started the social networking platform, looks like today.

*Figure 17: Friendster - Social Gaming Platform*



## **8. Questions & Answers Platforms**

Questions & Answers Platforms are online multi-sided platforms that connect a party who wants to ask questions with other parties who can answer them. The earliest instance of such a platform was the Internet Oracle, which spawned as far back as 1989 (The Internet Oracle, 2015). While Internet Oracle sprung humor oriented replies, the idea of a platform where people could get their questions answered was germinated. The rise of the Google search engine and resultant ease of discovering information made people realize how the internet could enable a knowledge market, where people can transact with each other with knowledge being the prime commodity.

In the past, many such platforms have been launched. Leveraging its search capabilities and existing market, Google launched Google Questions & Answers. A number of platforms have been successful in creating communities oriented towards enabling such a knowledge market. Yahoo Answers in the late 2000s and Quora, today, are examples of successful knowledge markets. In this section, we focus on three platforms that failed despite an existing community with very strong same-side network effects. This study is fascinating from the point of view of nurturing a platform that enables information exchange between mutually unknown parties, often with no monetary incentives.

**8.1 Google Answers:** Capitalizing on the growing community of Google search engine users, the company launched the Google Questions & Answers (Q&A) Platform in April 2002 (Mangalindan, 2014). This platform enabled users to ask questions and get them answered by Google approved researchers. On successful acceptance of the answer, the researcher would get paid and Google would take a percentage charge off the fee, apart from charging a fixed per-question fee to the user asking the question (Bulygo, 2012).

The model of the platform was essentially one where researchers conducted Google searches to find answers for the user asking the question. The transaction was effectively one that emulated the outsourcing of internet search and information compilation. The idea had merit in the sense that there were users who would pay good sums for a question well answered and the lure of good payments would lead to better quality answers and more researchers attracted to the platform. The setting of the platform seemingly did not have loopholes. Being extra cautious, in order to moderate and ensure the quality of replies, Google accepted applications from users to become a *researcher* and then approved or rejected them after verifying their qualifications and running them through basic communication tests. This strategy can be seen as one where Google initially tried to handhold one side of the platform (the researchers), so that the other paying side gets attracted to the platform. As we see later in this section, Google's strategy did not fare well in face of competition and it eventually closed down in November 2006 (Official Google Blog, 2006).

**8.1.1 Strategic Positioning:** The Q&A platform was sewn into the google search engine's fabric and can be best seen as an alternate search monetization attempt from Google. It is important to note the context of this platform's launch – in 2002 – when the online advertisement market, after the dot com bust, was on a decline (Nitke, 2002). The platform was, therefore, positioned to leverage the incoming search traffic by giving users the opportunity to seek well researched answers that would otherwise take a lot of effort to search and compile.

**8.1.2 Network Effects:** The platform exhibited positive cross-side network effects between researchers and users asking questions. Greater number of researchers (sell-side) promised better quality of answers and lower prices. This, in turn, attracted greater number of people asking questions (buy-side). Similarly, greater number of people asking questions made the platform more lucrative and attracted greater number of researchers. The same-side network effects were negative between people asking questions as greater number of questions led to more resource utilization and lesser number of researchers free to answer the question. Similarly, researchers experienced negative same-side network effects as the competition for answering questions intensified with higher number of researchers.

**8.1.3 Competing Platforms:** At the time, the Google platform did not face direct competition from other platforms, since, the Google's platform was only meant for paying consumers. However, this positioning was very *fragile* and this market soon saw stiff competition from other platforms that were free and did not monetize the transactions. These platforms included ask.com, answers.com and the very successful Yahoo Answers. These platforms set themselves apart by letting users post their questions and get them answered for free.

Yahoo's approach to establishing the platform was markedly different from that of Google. Yahoo decided to keep the platform free for all users (both for people asking questions and those answering them) and instead created alternate incentives for users, such as point scores and

badges that embellished a user's profile, i.e. a reputation economy (Pomerantz, 2006). The origin of this difference was in the primary objective of both platforms. While Google was looking for quick and additional monetization, Yahoo was intent on developing a community of users, who were motivated to keep using the platform for discovering new information, rather than making money off it. Yahoo's decision to keep the platform free relied on the thesis that consumers were not looking for very well researched answers, which they would have to pay for, and instead just wanted quick and acceptable answers (Chitu, The Failure of Google Answers, 2006). The growing community would then provide monetization streams through advertising and corporate partnerships with companies wanting to interact with users. The platform went on to be so successful that Tomi Poutanen, former product director for Yahoo Social Search, called Yahoo Answers one of the company's most successful launches (Helft, 2006).

**8.1.4 Enveloping Platforms:** None of the Q&A platforms, at the time, tried to envelop any associated use cases. Envelopment efforts came later when social networking websites, such as LinkedIn and Facebook launched their respective platforms in the same space, hoping to leverage their existing networks.

**8.1.5 Multihoming & Switching Costs:** The multihoming costs associated with questions & answers platforms were very low. On Google's platform it was especially easy for a researcher to switch to a different platform, without any associated costs. Whereas, on Yahoo Answers a researcher developed a portfolio of replies and received a rating and scored points. Therefore, for Yahoo researchers, the multihoming as well as the switching costs were high.

**8.1.6 Platform Openness:** The concept of platform openness, in its traditional sense of letting third parties develop value-adding applications, did not quite apply to questions & answers platforms. Google didn't let a third party utilize the platform to add value to its users, but Yahoo did institute a program to let companies establish corporate identities on its platform in order to interact with its community and answer any questions they had. In this sense, Google's platform was closed, while Yahoo (relatively) opened it up.

**8.1.7 Complementary Products & Services:** A questions & answers platform casts a wide scope for complementary products and services. This could include academic research, library services or even developing a crowdsourcing platform. None of these use-cases were catered to by any of the existing Q&A platforms. In addition to asking questions, a critical complement was the ability to efficiently browse through already answered questions and learn new information. Google Q&A lacked this ability.

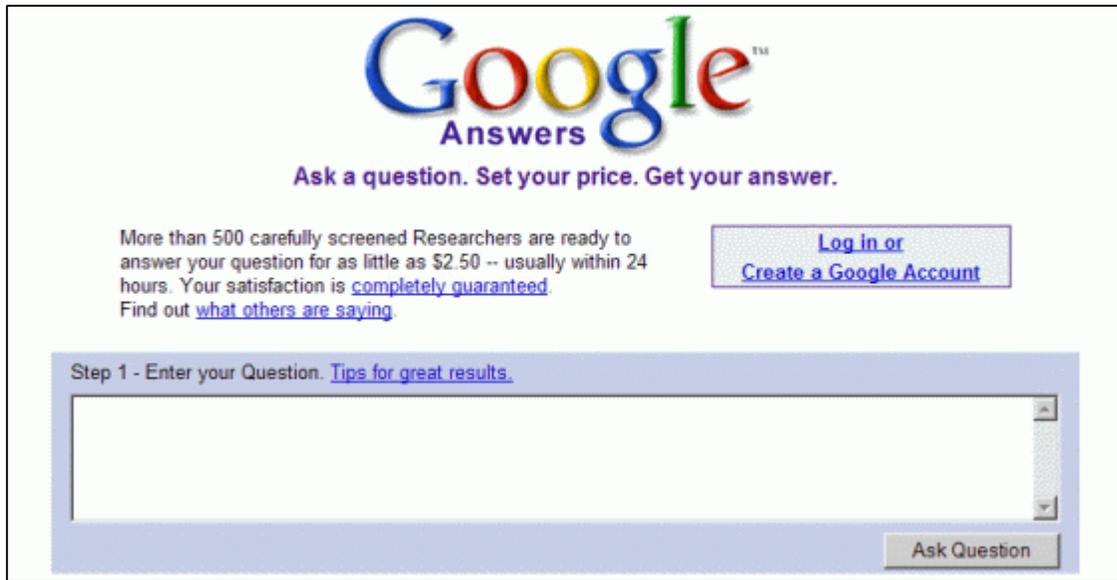
**8.1.8 Product Bundling:** The Google Q&A platform was a standalone product, where even the user accounts (or researcher *handles* as they were referred to) were created solely for the purpose of using the platform. This meant that the platform did not come bundled with any other Google products and services.

**8.1.9 Platform Usage Price:** Google earmarked the researchers as the subsidy-side on the platform, while the users asking the questions were the revenue-side as they had to pay a fee to the researchers as well as a small percentage fee as a usage charge to Google. The quoted prices for answering questions ranged from \$2.5 to \$200 and allowed tips for up to \$100 (West, 2002).

**8.1.10 Design & User Experience:** User experience on a Q&A platform can be defined as comprising the following elements – (a) ease of asking questions, (b) speed of the response, (c)

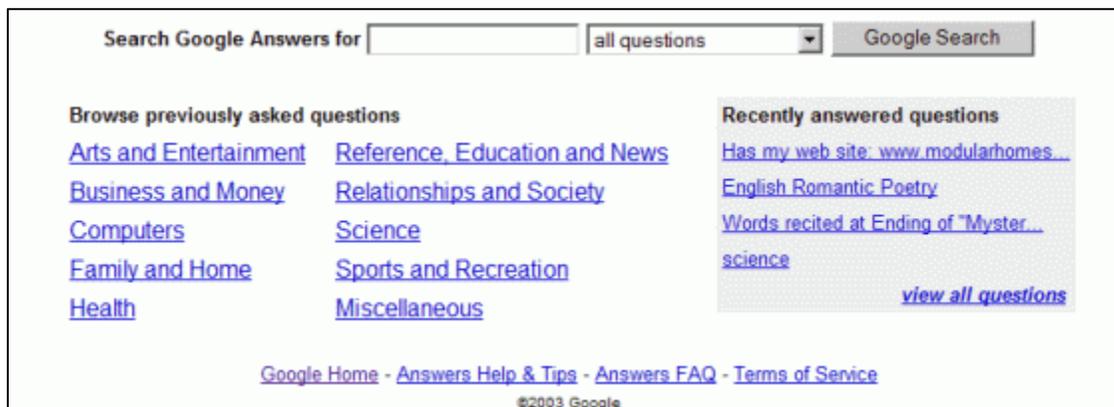
accuracy & satisfaction from the response, (d) ease in discovering new information, and (e) ease in earning money by answering questions. Consistent with Google’s strategy of building clean user interfaces for users, its Q&A platform also offered a very simple and intuitive experience to users for asking new questions and answering those questions. This is illustrated in Figure 18.

Figure 18: Google Q&A Interface



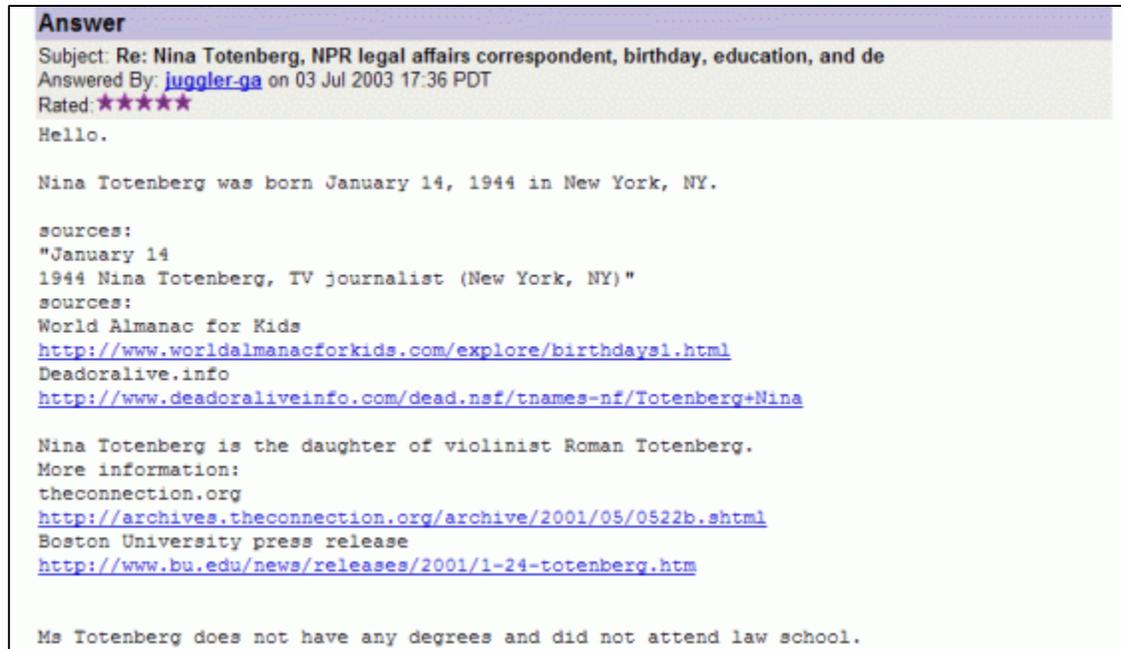
By manually approving each and every researcher, Google restricted the growth of one-side of the platform. This ensured that the accuracy and the depth of the answers was very good (West, 2002), but it also meant that the speed of the response was slow, as the number of people asking questions far exceeded the capacity in terms of the numbers of researchers available. Discovering new information was also very difficult. Figure 19 below shows the browse nodes. The organization of questions is done well, but requires users to navigate deep into the links in order to learn new information.

Figure 19: Browse Interface on Google Answers



Similarly, it was not easy to earn money on the platform as users asking questions started abusing the platform by marking even well-researched answers as unsatisfactory and demanded refunds (West, 2002). *Figure 20* illustrates the primitive Q&A threads on the platform.

*Figure 20: Q&A Threads on Google Answers*



Source: <http://www.googleguide.com/answers.html>

**8.1.11 Iterative Product Releases:** It is difficult to guess whether it was a genuine failure to progressively iterate over the product or if it was a series of measures taken to phase out the Q&A platform, but updates to the platform became very slow. This also included delayed repairs to the email delivery system and infrequent newsletters (Google Blogoscoped, 2007).

**8.1.12 Points of Failure:** *The discussion in previous sections leads the paper to conclude that there were two factors mainly responsible for Google Q&A's demise – (a) Platform Usage Price and (b) Design & User Experience.* Google made a mistake in choosing users asking questions as one of the revenue-sides on the platform. Users weren't looking for very high quality answers. They only wanted quick and satisfactory replies.

From the design and user experience perspective, Google made two big mistakes. First, it was very difficult to discover new information and see what questions have been asked and what answers have people come up with. Second, Google never attempted to build a community around the platform and instead kept it as a cold and hard marketplace. As we saw with Yahoo, the key to succeeding with this platform was to let users interact with each other and share information, which as a critical side-effect would have attracted more experts to the platform (Arrington, Yahoo's Big Win, 2006). After Google closed its platform in 2006, it launched localized versions of the platform in French & Russian as well. Both these versions have also been shut down as of April 2015.

**8.2 Facebook Questions:** As Quora soared in popularity with a vibrant community of users and experts, Facebook realized that they wouldn't want to miss out on valuable data related to the opinions and affiliations of their users. This led to the launch of Facebook Questions in July 2010 (Hicks, 2010). Facebook Questions can be called a platform in the sense that it connected multiple parties and enabled people to exchange information.

**8.2.1 Strategic Positioning:** Since, at the time of launch, Facebook already had ~500 million users, it looked like it would give tough competition to Quora. Just as users wanted to share information on a knowledge sharing only network, they were expected to do so on a social network as well. Therefore, Facebook Questions was positioned as a platform to capture user relationships, interests, opinions and other data that would otherwise not be possible to collect through status updates and other long-running Facebook features.

**8.2.2 Network Effects:** Same-side network effects were generally positive. However, some use cases are imaginable, where a user might not want people in his or her network to know that he or she asked a particular question. Since there was no monetary value involved, the cross-side network effects were also positive – more people answering questions attracted more people asking questions and vice versa.

**8.2.3 Competing Platforms:** Facebook Questions primarily competed with Quora. The user experience elements outlined in *Section 8.1.10* was met very well by Quora. While the community on Facebook is very casual and doesn't have the time and patience for accurate replies, the community on Quora is somewhat serious and attracts more experts. The presence and activity of experts on Quora is what differentiated it from Facebook Questions.

**8.2.4 Enveloping Platforms:** Facebook itself was the enveloper as it tried to enter the questions and answers business after seeing synergies with its mainstream business of social networking. There was no other platform which practiced envelopment around the basic platform. LinkedIn did envelop the question and answers use-case, but it didn't envelop the greater value proposition of Facebook, i.e. social networking.

**8.2.5 Multihoming & Switching Costs:** Both multihoming costs and switching costs were very low. There was no monetary or reputational incentive for users to ask or answer questions. There was also no problem in replicating these questions on multiple platforms. If anything, this increased the chances of getting a question answered. The switching cost remained very high for Facebook in its entirety, but as far as just the Questions platform was concerned, it was relatively easy to switch to a competitor, such as Quora, for asking questions.

**8.2.6 Platform Openness:** Facebook never opened up its Questions platform. While there were customer requests to allow users to develop applications around it, they never materialized. Requests for opening the platforms varied from wanting programmatic API access to the platform to wanting to embed the Questions interface on a webpage<sup>2</sup>.

**8.2.7 Complementary Products & Services:** Facebook Questions indeed provided solutions to complementary use-cases such as conducting polls and surveys. This type of functionality is even today not available on Quora, arguably the most successful Q&A platform ever. It should be

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<sup>2</sup> These examples are ironically taken from Quora's *Facebook Questions Product* category webpage.

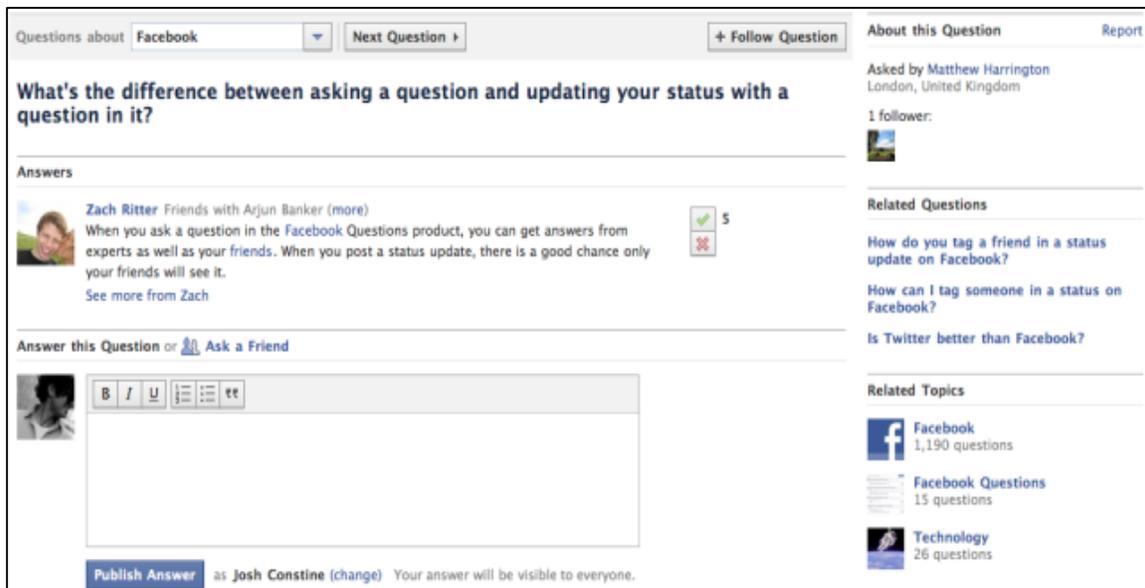
noted that these complements were in the context of the enveloper belonging to the online social networking market.

**8.2.8 Product Bundling:** Since it is essentially an envelopment initiative, Facebook Questions comes bundled with everything that Facebook – the social network – has to offer. This value proposition is massive with respect to what a knowledge sharing only network, such as Quora, has to offer.

**8.2.9 Platform Usage Price:** Facebook Questions, keeping in line with the monetization policy on the rest of the website, did not charge its users anything for asking and answering questions. This was also in line with how Quora operated its community.

**8.2.10 Design & User Experience:** Facebook questions offered a great experience to users for asking questions and getting them answered. However, there was no attempt to nurture a community where people answered questions seriously. This can be expected of a social network where interactions are casual and there isn't much motivation to answer questions with well-researched and well-crafted answers. *Figure 21* shows how the interface looked like when it was launched first.

*Figure 21: Facebook Questions Interface*



Source: <http://techcrunch.com/2012/10/19/facebook-questions-shut-down/>

**8.2.11 Iterative Product Releases:** Facebook has to be credited with agility, no matter what the product. Even with the Questions platform, the speed of iteration was good. However, all the iterations progressively diminished the platform further (McGee, Facebook Questions Has Died A Quiet Death, 2012). At one point during its life, the platform was converted & limited to polls. The interface of these polls, as seen in *Figure 22*, was essentially a derivative of the original Questions interface.

Figure 22: Facebook Polls



Source: <http://techcrunch.com/2012/10/19/facebook-questions-shut-down/>

The polls feature was later relegated to the status update bar as a button. The button gave users the ability to ask questions that were attached to their profiles and could be answered by other user in their network.

Figure 23: Facebook Questions in Status Update



Source: <http://techcrunch.com/2012/10/19/facebook-questions-shut-down/>

And then later, plagued with limited engagement, the platform was rolled back for good. The whole process of launching the platform to progressively iterating to shut down the product was completed in roughly 2 years. The speed of iteration was therefore fast; the direction, however, wasn't what Facebook had imagined.

**8.2.12 Points of Failure:** The failure of Facebook Questions can be attributed to the design and user experience of the platform, which is just not suited for a serious, studious and diligent community which pays attention to detail and values well-researched answers. The failure of

Facebook Questions was sealed when it was closed for good in October 2012 (McGee, Facebook Questions Is Finally Dead, 2012). It has been speculated that besides the limited success of this platform, Facebook was also quick to extricate its resources in order to reassign them to build a more important feature for the website – search (Constine, Facebook Officially Begins Shutting Down “Questions” Product, May Refocus On Search, 2012).

**8.3 LinkedIn Answers:** Soon after Google Q&A shut down, LinkedIn launched its Answers platform in January 2007 (Cashmore, 2007). The platform allowed existing users to ask questions to the larger LinkedIn community, much in the same fashion as Facebook Questions. From the outset, the platform seemed to find a perfect home at the professional networking website. LinkedIn was crowded by people projecting their professional profiles and Answers gave them a very good opportunity to showcase their expertise by providing answers. The platform was a personal branding tool for LinkedIn users. Every good answer or advice would garner more traffic to a user’s website and hence more professional opportunities (Taylor-Parker, 2013).

Despite the careful positioning of the platform and its *supposed* value addition for the users, the platform was eventually taken off the LinkedIn website in January 2013 after it failed to attract significant engagement from users (Wasserman, 2013).

**8.3.1 Strategic Positioning:** For the larger LinkedIn website, the Answers platform was a tool to engage users and get them to interact with each other even more. Of all the services LinkedIn provided, it essentially remained a static repository of what people *thought* (or projected) that their professional strengths were. The Answers platform was positioned to let users *demonstrate* those strengths by answering questions in their respective areas of expertise. The platform was also meant to serve as another means of surfacing advertisements.

**8.3.2 Network Effects:** Unlike Google Q&A and Facebook Questions, LinkedIn Answers curiously exhibited negative same-side network effects for users. The platform did not allow users to post anonymous questions. We also have to understand the context that all user activities on LinkedIn get tied to a user’s professional identity. Therefore, every question on LinkedIn Answers could potentially reflect what a user genuinely did not know. Users obviously did not want others to know that there were a great many things that they did not know. This translated into negative same-side network effects, i.e. the greater the number of people on the platform, the more hesitant users were in using the platform and asking questions.

While no such data is available at hand, it would be interesting to see whether it was the number of questions on LinkedIn Answers that fell or if questions simply failed to get enough responses. The second interesting analysis would be to compare the nature of questions (specific vs. open-ended) asked on LinkedIn vis-à-vis the questions asked on the very popular and successful Quora platform. The second comparison would be interesting since users on LinkedIn would want to ask Questions that project their aspirations rather than what they actually don’t know. Ex: On Quora, a software engineer might ask – “*How to write a multi-threaded program in Java?*” as compared to something loftier on LinkedIn – “*What are the three most important skills for a technology leader?*”

**8.3.3 Competing Platforms:** While a number of Q&A platforms existed at the time, LinkedIn Answers mainly competed with Quora. In previous sections, this paper discussed how the community building exercise at Quora was very cautious, from-scratch, slow and ultimately successful in attracting experts. The Answers platform, on the other hand, started with millions of

professionals already on the larger LinkedIn website. While this was a shot in the arm to start with, it also proved to be a baggage, ultimately to the detriment of the platform.

**8.3.4 Enveloping Platforms:** There were no platforms enveloping Answers. LinkedIn itself, as a professional networking website, enveloped the Q&A use-case. We can, however, say that Quora was a potential enveloping platform, since it allowed its users to connect to each other, much in the same way that LinkedIn did; with the exception that interacting with members on Quora remained free, while doing the same on LinkedIn required users to pay expensive premium fees.

**8.3.5 Multihoming & Switching Costs:** The multihoming costs were very low, since it was easy for users to post questions and answers on other competing platforms. Switching, on the other hand, could have been costly on LinkedIn by instituting reputation systems and by associating professional endorsements with the insightful answers that users posted. But, no such features existed and switching platforms remained easy for users.

**8.3.6 Platform Openness:** The Answers platform remained a closed one, keeping in line with the rest of the LinkedIn website. This changed in 2009, when LinkedIn opened up its larger professional networking platform. Third-party developers could allow users to log into their websites through their LinkedIn accounts (much like what Google and Facebook did). The platform also allowed third-party recruitment websites to let users apply to jobs through their LinkedIn profiles. Unfortunately, none of these open platform abilities were offered around the Answers platform.

**8.3.7 Complementary Products & Services:** Compared to Facebook, LinkedIn failed to offer any complementary products and services around the Q&A platform. A complementary use-case that could have been enveloped was a voice-to-text support in the LinkedIn mobile application. Another use-case was to let companies ask for product feedback from their consumers. This was especially easy for LinkedIn as the platform already attracted companies for talent recruitment.

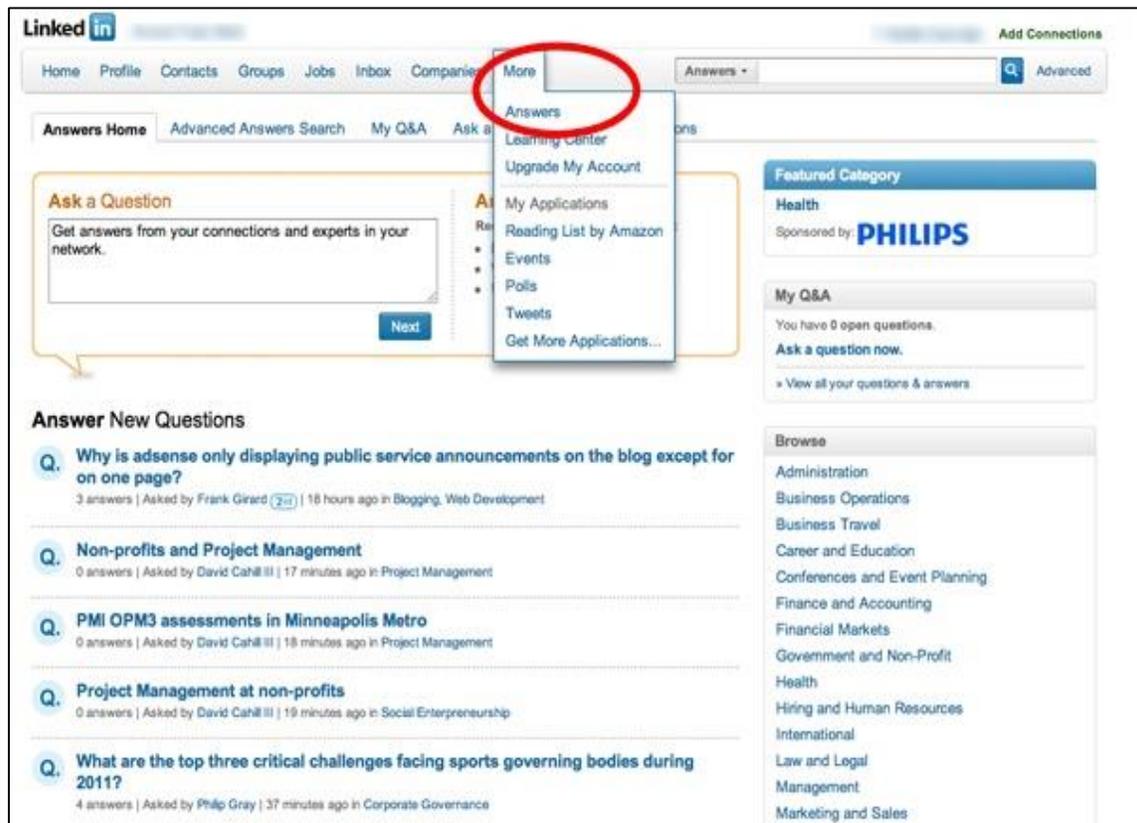
**8.3.8 Product Bundling:** LinkedIn Answers came together with the bundle of products and services that LinkedIn as a professional networking website had to offer – company sponsored news, recruitment opportunities, blogging platform, etc. If anything, the presence of Answers in the bundle increased the value proposition of a LinkedIn premium account.

**8.3.9 Platform Usage Price:** While Quora and Facebook Questions were free, LinkedIn charged users a fee for premium accounts. This did not extend to the usage of LinkedIn Answers, so we can consider the platform free. But, we can argue that there was a hefty fee associated with asking a question on LinkedIn that reflected what a user did not know. This (perceived or actual) loss in reputation can be thought of as a steep fee for using the platform.

**8.3.10 Design & User Experience:** Answers offered its users a smooth experience in asking and answering questions. However, there were many shortcomings that can be directly related to the platform's failure in driving engagement. These shortcomings have to be analyzed keeping in mind that LinkedIn's initial investment in Answers was low and was expected to grow as the platform grew.

It was not easy for users to reach the platform from as the link was hidden under the *More* buttons in the toolbar. This meant that the discoverability of the platform was very low and the same set of users kept using it. *Figure 24* below illustrates the interface to reaching the platform.

Figure 24: LinkedIn Answers - Feature Accessibility

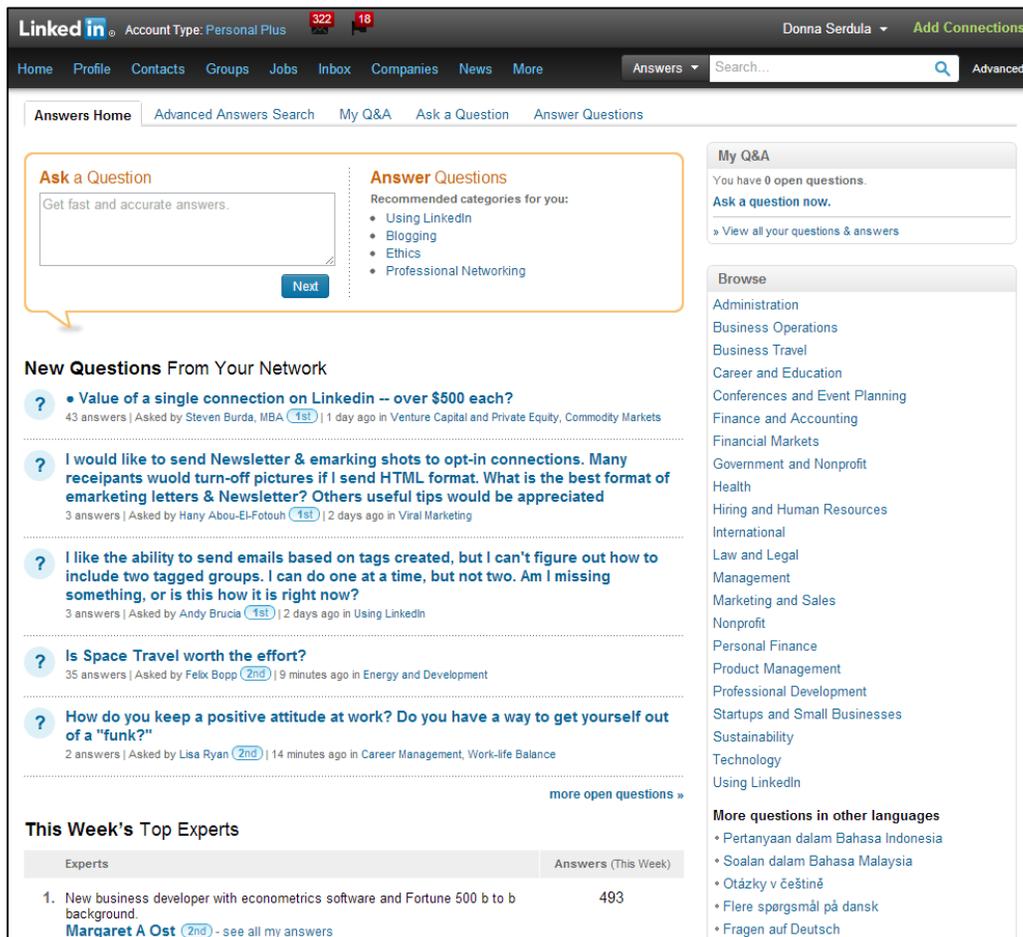


Source: <http://www.clicktrue.biz/social-media-marketing/how-to-promote-your-business-with-linkedin>

It was also very difficult for users to categorize their questions. There were no user-defined categories and often it was difficult for users to find categories that matched the questions they were asking. Another fallout of this shortcoming was that the organization of questions and answers was very poor. For illustration see Figure 25 below. It was very difficult for users to discover new information and learn new things. In Section 8.1.10, this functionality has been identified as one of the key elements of user-experience on Q&A platforms.

Lastly, LinkedIn has also been accused of using Answers as another medium for marketing and recruitment advertisements, which supposedly contributed to driving user away from the platform (Boris, 2013). This strategy was understandable from LinkedIn's perspective as it was looking to monetize the user engagement on its Q&A platform. This could only have been done through advertisements and paid-posts from marketers and headhunters. However, it was this decision to monetize the platform that further eroded the user-experience on the platform. It should be noted that early or misconfigured monetization was also found to be the primary reason behind the failure of Google Questions & Answers.

Figure 25: Browsing Questions on LinkedIn Answers



Source: <http://www.linkedin-makeover.com/2013/01/21/linkedin-answers-alternatives/>

**8.3.11 Iterative Product Releases:** LinkedIn’s approach to launching Answers was essentially an iterative one, where the platform was started as a small initiative and further development decisions depended upon the success of the initial launch. This strategy sounds good in theory and is also well practiced by most, if not all, software companies. However, it might not make sense to use this strategy for a platform which is launching in a market full of competitors. The decision to play down the platform and isolate it to a *more options* tab is highly questionable. It can be argued that, in face of a well-defined use-case, a more full-fledged release might have made more sense.

**8.3.12 Points of Failure:** Reviewing all the factors discussed so far, it can be concluded that the primary reason behind the failure of LinkedIn Answers was the existence of negative same-side network effects as users were afraid of posting questions that reflected their lack of knowledge and also afraid to post answers that could perhaps be criticized or considered inadequate. The LinkedIn user community was not open to asking and answering questions publicly. Perhaps, allowing users to anonymously post questions would have helped. But it could also have opened another can of worms – spam.

## **9. Instant Messengers**

Instant messaging refers to the real-time transfer of text between two or more parties. The idea of this form of message transmission dates back to the 1960s when the *Compatible Time Sharing System* was created at Massachusetts Institute of Technology (Petronzio, 2012). The message can be sent exclusively from one party to another or it could be broadcasted to multiple recipients. Instant messengers allow users to maintain a list of contacts or connections, which they can maintain and curate over a period of time. A user can chat and interact with his or her connections maintained this way. This characteristic gives instant messengers the form of a multi-sided platform and which is why, in this and following sections, we discuss two of the most popular instant messengers – Microsoft’s MSN Messenger and the Yahoo Messenger – which eventually waned away and find the reason behind the failure of these platforms.

While the form and features of instant messengers has evolved over the years, the basic functionality of being able to talk to someone over text, transmitted, through computer networks, has not changed. Instant messengers, today, come bundled with other functionalities as well, such as, VoIP, files transfer, leaving offline messages, customized application backgrounds and webcam sessions. While some instant messengers come with as desktop applications that need to be installed over a computer’s host operating system, others are not bound to the native operating system and offer web browser based access; still others offer both kinds of access points. The following table traces the major events in the timeline of the evolution of instant messengers since the 1960s.

*Table 4: Timeline of IM Evolution*

<b>Timeline</b>	<b>Event</b>
1960s	MIT’s <i>Compatible Time Sharing System</i> lets users send messages to each other.
1970s	The peer-to-peer protocol, which enables private messaging, is invented.
1982	Quantum Link on Commodore 64 computers allows instant messaging.
1988	Internet Relay Chat (IRC) is created by Jarkko Oikarinen.
1991	Quantum Link becomes American On Line (AOL)
1996	ICQ allows users to send real-time instant messages
1997	AOL’s AIM messenger is launched.
1998	Yahoo Pager is launched, which later becomes Yahoo Messenger.
1999	Microsoft launches MSN Messenger.
2005	Google launches Google Talk
2011	Apple launches iMessage, standalone instant messenger for all apple devices.

*Source: Compiled from (Scheele, 2002), (De Hoyos, 2006) and (Mac Staff, 2011)*

The use-cases served by Instant Messengers often conflict with those served by Email. While both allow users to send messages to each other, Instant Messengers in relaying information give the user the experience of *real-time* communication. In fact, there are messengers today that allow users to send messages as they are being typed. The distinction between the email and messenger doesn’t just stop with user experience. Email is still considered a relatively more formal means of communication than instant messaging (Ritchel, 2010). However, the overlapping use-cases of the two indeed motivated companies to integrate both and as a result there were several instances of platform envelopment that led to the demise of a number of standalone messengers.

The two primary segments of the instant messaging market are – enterprise messaging and consumer messaging. The needs of the two segments differ in many respects. The most noteworthy difference is the extra emphasis on information security and privacy in case of enterprise usage as compared to the consumer segment. Another point to note is that enterprise usage is heavier, with 43% of the US workforce estimated to work away from office by 2016 (Lister, 2013), often requires integration with other complementary services, such as email, file storage, etc. (Nieves, 2014).

The evolution of instant messaging and the spurt of new instant messengers in 1990s after the launch of AOL's AIM and Yahoo Messenger created the need of standardization. Most messengers had developed and were using their own messaging protocols. Keeping this mind, Jabber launched in 2000, was the first multiple protocol instant messenger that allowed users to access their multiple accounts in the same messenger interface. Jabber was developed on the Extensible Messaging and Presence Protocol (XMPP) that effectively got rid of the difficulty in maintaining multiple accounts and significantly reduced the multihoming costs (Quayle, 2012).

**9.1 MSN Messenger:** Microsoft's response to the growing popularity of AOL's AIM Messenger and Yahoo Messenger, then called Yahoo Pager, was the launch of MSN Messenger in 1999 (Microsoft Press, 1999). Trying to latch on to the user base already on AIM Microsoft launched a *chat-application-war*, with the original version of the MSN messenger allowing users to connect their AIM accounts to their MSN Messenger application (Auerbach, 2014). Initially the messenger was only supported on the Microsoft Windows operating systems, but this support later expanded to other operating systems as well. In 2005, MSN messenger was made a part of the Windows Live suite of applications and rechristened as the Windows Live Messenger (Thomas, 2014).

The user base of the MSN Messenger and later the Windows Live Messenger remained strong over the period of its existence. However, this user base could be strongly associated with the rise in Windows installations, where new accounts came bundled with the messenger application. The popularity of the messenger saw a gradual decline soon after the rise of Google Talk and the envelopment practiced by various providers.

**9.1.1 Strategic Positioning:** Microsoft's successful corner-stoning strategy of building applications around their very successful operating system proved useful in developing a strong user base for the MSN messenger early on. The platform, very much like the Internet Explorer browser, was uniquely positioned as a standalone application for all Windows users to maintain a list of connections and communicate with them in a *real-time* fashion (as opposed to email). For Microsoft, this messenger was positioned to create an even stronger binding for Windows users by connecting them with each other.

**9.1.2 Network Effects:** The MSN messenger, like other networking platforms, exhibited positive same-side network effects, i.e. users flocked to platforms where they were most likely to find their network. These network effects for MSN messenger were very strong considering that Windows captured majority of the operating system market. Initially, the platform was two-sided, with just two consumer parties interacting with each other, and there were no direct revenue streams as the platform was free. Later, looking to monetize the messaging platform, Microsoft added-on advertising to the platform. These advertisements were very effective in monetizing as an average user spent at least a minute looking at them, while he or she communicated with

connections (Burkitt, 2009). These advertisements and hence the number of advertisers on the platform exhibited negative cross-side network effects as too many advertisements irked users.

**9.1.3 Competing Platforms:** MSN Messenger's major competitors were AOL's AIM Messenger, Yahoo Messenger and later Google Talk. The market was very competitive with each tech giant trying to capture the fast growing market. In this scenario, Microsoft had the unique advantage of having most of those messenger users on the Windows operating system. The competition between these platforms took a significant turn as the axis of differentiation turned towards complementary products and services.

**9.1.4 Enveloping Platforms:** The instant messaging platforms first experienced envelopment when email was combined with instant messaging. The overlapping use-cases of the two have been discussed earlier. Gmail was the first to integrate its popular Google Talk client into Gmail, its popular email application. Yahoo was quick to follow by combining Yahoo Messenger with Yahoo Mail. After the surge of envelopment of instant messaging by email platforms, the next wave of merging use-cases was the envelopment of instant messaging by online social media networks. In fact, Yahoo built its social media application around its messenger. Facebook launched the Facebook messenger as a part of the social networking platform. Google was also quick to integrate Google Talk, and later Google Hangouts, with Google Plus.

This last wave of envelopment has come to unravel as a number of new platforms and even old ones have now been unbundled and launched as standalone applications. Facebook decoupled its messenger and launched a separate messaging application for mobile platforms. It went even further and launched a standalone web-version of messenger. The rise in standalone messengers can be thought of as an end-product of the move of user traffic to mobile devices, where user experience is better when concentrating on one application at a time, rather than using just one with multiple capabilities.

**9.1.5 Multihoming & Switching Costs:** The multihoming costs were high for users. It was difficult to create new accounts and use the different applications at the same tie. However, this changed completely with the advent of XMPP and multiple protocol supporting platforms, i.e. messaging clients where users could add their accounts from various platforms and manage all of them simultaneously. The platform switching cost, initially, remained high as it was difficult for users to replicate their networks on other platforms. This also changed with the advent of enveloping platforms where stronger network of connections were present in users' email address books and their social networking profiles.

**9.1.6 Platform Openness:** MSN messenger never reportedly provided compatibility with AIM or ICQ or XMPP protocols; though there was news that MSN would provide XMPP compatibility. With the advent of XMPP and developers coming up with aggregator messengers for specific use-cases, there was ample need to let the community identify use-cases and create solutions for them, but Microsoft as a company had been a laggard in embracing the open-platform concept.

**9.1.7 Complementary Products & Services:** The instant messaging business evolved with a host of complementary products and services that nowadays users expect as a bare minimum in any client. Some of these complements include - voice chat (which is a very important feature since it is much cheaper to make a VoIP call as compared to a phone call), webcam chat, file transfer and offline messaging (much like email). The MSN messenger went on to provide all of these

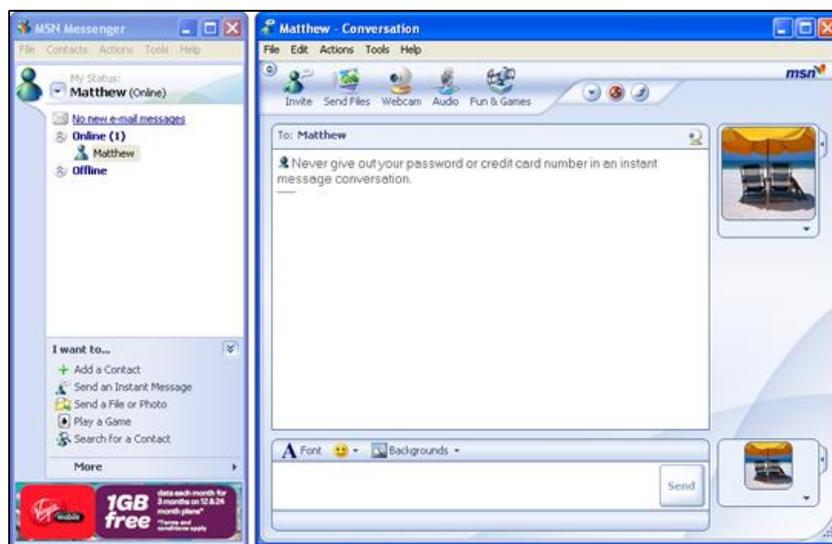
services. These complementary products and services failed to become a differentiating factor as all of them were replicated across platforms at a very fast pace.

**9.1.8 Product Bundling:** The MSN Messenger itself was part of the Microsoft Windows bundle. Any user creating an account with Microsoft would be provided with an MSN account as well. Another bundling attempt was Microsoft's ISP product called the MSN Dial up, which allowed users to boost their experience on the MSN Messenger with faster speeds & rich media transfers.

**9.1.9 Platform Usage Price:** The MSN Messenger was freemium in nature, i.e. users were not charged any fee for using the basic features on the platform, but they had the option of buying MSN premium, where connect time charges applied for the MSN Dial up bundle. Comparing this with other platforms, we find that pricing for messengers essentially remained nil for users. A contributing factor was the fact that advertisements on messengers were able to grab user attention for a long time and hence provided sufficient monetization.

**9.1.10 Design & User Experience:** The user experience on the MSN Messenger was significantly disrupted by spam messages and robots which frequented online chatrooms. These spam messages were also responsible for phishing and identity theft attempts. Besides, users also reported frequent application crashes and technical difficulties in logging-in to the application (Asgerally, 2006). Most of these difficulties could be attributed to the difficulty in developing a client that worked on multiple operating systems. All these technical difficulties were navigated very easily by web-based instant messaging clients, which ran on top of browser applications and hence did not have to take care of the nuances of the native operating system. Perhaps, the most significant user experience issue was the absence of message encryption on the MSN Messenger's protocol, which effectively meant that it was easy for hackers to spy on these messages (McCullagh, 2008). The graphical user interface of instant messengers evolved over time, but remained constant across competitors. *Figures 26 & 27* illustrate the original MSN Messenger interface and the Windows Live Messenger interface (a rechristened version of the MSN messenger), which was launched later.

*Figure 26: MSN Messenger Interface*



*Source: <http://nicolashayek.me/silent-death-msn-messenger/>*

Figure 27: Windows Live Messenger Interface



Source: <http://allthingsd.com/20081112/microsoft-officially-facebooks-oops-socializes-windows-live-internet-services/>

**9.1.11 Iterative Product Releases:** There were seven major versions released before MSN Messenger was completely fused into the Windows Live application suite. The speed of iteration for Microsoft was high enough to compete in the changing market. This changed however with the advent of social media, a space where Microsoft had no presence. This was also the reason that their releases became slower & slower as they had no option but to give up on the MSN messenger, with the lack of an email service or a social networking service.

**9.1.12 Points of Failure:** Looking at all the factors that determine platform success, this analysis finds that the key factor behind the eventual failure of the MSN Messenger was the rise in various enveloping platforms that ate away its active user base. First, envelopment by email applications and later by social networking applications, left Microsoft, which unfortunately did not offer either email or social networking services, with no competitive edge.

The dwindling user base and weak activity of its users eventually made Microsoft realize that they needed to strengthen their position amongst communication platforms. This led to the acquisition of Skype by Microsoft for \$8.5 billion in 2011 (Bright, 2011). Understandably, Microsoft then closed down the Windows Live Messenger (later version of the MSN Messenger) and merged all its user accounts with Skype in 2013 (Passary, 2013), except those in China which were scheduled to be closed in 2014 (Solomon, 2013). This move was driven by the not just the need to expand user base, but also to monetize the platform; and Skype already has a good user base of paying customers, which now Microsoft has the opportunity to leverage (Whittaker, 2012).

**9.2 Yahoo Messenger:** One of the most popular instant messaging clients, Yahoo Messenger, was first launched as Yahoo Pager in 1998 (Petronzio, 2012). Initially, the messenger was isolated to desktop systems and supported multiple operating systems – Windows, Macintosh and Unix-based kernels. Later, the platform also introduced clients to support Android and iOS mobile operating systems (Lynch, 2010). The decision to launch mobile clients mirrored the diversion of majority of internet traffic towards mobile devices. What this also meant was that now Yahoo was in a better position to compete with Google Talk and Apple iMessage. However, it needs to be noted that Google Talk on Android and iMessage on iOS were both tailor-made for their respective operating systems, while the Yahoo Messenger application came from a third-party.

The original desktop client needed to be installed on the system. The logical integration between Yahoo Mail & Yahoo Messenger, similar to the integration between Gmail & Google Talk, came as late as 2007 and the actual integration of the messenger's interface in Yahoo Mail came even later (Popa, 2007).

**9.2.1 Strategic Positioning:** Access to the Yahoo Messenger was provided to anyone with a Yahoo account. The usage of the same account for the different services provided by Yahoo made sure that the instant messenger was very well integrated into Yahoo's ecosystem of products.

**9.2.2 Network Effects:** Yahoo Messenger enjoyed strong and positive same-side network effects. More so because of the fact that one Yahoo account provided access to a host of Yahoo products and an instant messenger became the social contact layer on top of all those products and services. This strengthened the same-side network effects further. While the messenger was absolutely free to use, the platform was monetized through advertisements. The growth of advertisements drove down the user base through negative cross-side network effects.

**9.2.3 Competing Platforms:** Yahoo Messenger's major competitor was the MSN Messenger and Google Talk. Till the rise of social media networks and their envelopment of instant messaging, these competitors provided similar services to consumers to choose from. Google Talk grew very popular due to the simplicity of its interface and integration with the Gmail address book. Yahoo Messenger on the other hand, experienced a decline in the messenger's usage with a decline in the usage of the rest of Yahoo products. In particular, the decline of Yahoo Mail can arguably be linked to the drop in the usage of Yahoo Messenger.

**9.2.4 Enveloping Platforms:** Yahoo executed the envelopment strategy by integrating their mail client with Yahoo Messenger. This was a replication of what Google did with Google Talk. The second type of envelopment – by social media applications – is something that Yahoo attempted through Yahoo 360, but it never amounted to much, since the social media application couldn't get a lot of traction.

**9.2.5 Multihoming & Switching Costs:** As discussed earlier, the multihoming costs had been significantly reduced with the advent of multi-protocol instant messaging clients. The same held true for Yahoo Messenger users as well. The platform switching cost, however, was high, considering that users had a significant sized networks in their Yahoo Mail address books. The ability to discover new connections in chat rooms also increased the switching cost. Google Talk never supported the chat room functionality and hence Yahoo Messenger held this edge.

**9.2.6 Platform Openness:** The Yahoo Messenger platform was opened up for third party developers to develop *plugins* for the application. The platform provided and supported a plugin development Software Development Kit (SDK). But, the company ended supporting development of third-party applications for *concentrating their resources on developing core technologies* (LeBlanc, 2009).

The messenger operated the proprietary Yahoo Messenger Protocol (YMP), which according to an agreement with Microsoft was modified to support interoperability between Yahoo Messenger and MSN Messenger. This interoperability existed between 2005 and 2012 (LiveSide Staff, 2012). Recently yahoo messenger's users are now allowed to connect their Facebook accounts (Yahoo Messenger Blog, 2014).

**9.2.7 Complementary Products & Services:** The vast variety of complementary features that Yahoo launched around its messaging application included the very popular chat rooms (enabling users to discover new friends), social games and even a music playing radio application. The platform did really well in creating a good assortment of features for its users.

**9.2.8 Product Bundling:** Yahoo Messenger comes bundled with a *Yahoo Search Toolbar* for browsers and other varying add-on applications. While the value of the platform should ideally increase with such add-on features, it was actually very frustrating for users to find another application installed on their system, especially as it was difficult to figure out how to exclude the installation of these add-ons. The perception of these add-ons in the messenger bundle was that of malwares (Pilici, 2013). Bundling, for yahoo messenger, therefore, further eroded the value of the platform.

**9.2.9 Platform Usage Price:** The platform did not charge its users any fee for using it. The only source of monetization was geared towards advertisers.

**9.2.10 Design & User Experience:** The biggest issue that plagued the Yahoo Messenger user experience was the vast presence of spam and robot accounts that sent unsolicited messages to messenger users (Dignan, 2007). The only solution of navigating around these spam machines was to either add them to the blocked users list or to mark those accounts as spam. By putting the burden of avoiding spam on to the users themselves, the users were constantly irked and the user experience deteriorated. The inability to handle spam also led to vulnerabilities such as phishing attacks (Constantin, 2011). The ability of a user, whether real or a robot, to send message to anyone else as long as the user's id was available, was what caused all these problems.

The user interface of Yahoo Messenger was heavily laden with advertisements as well as with promotions for the Yahoo Search Toolbar. As *Figures 28 & 29* show, the original clean and simple interface gradually made way for the media heavy application. Note that this interface design was markedly different from Google Talk, which like all other Google applications did not put explicit focus on advertisements.

Figure 28: Yahoo Messenger - Original Interface



Source:

[http://www.oldapps.com/yahoo\\_messenger.php?images=1](http://www.oldapps.com/yahoo_messenger.php?images=1)

Figure 29: Yahoo Messenger - 2013 Interface



Source:

<http://myfreesoftdownload.blogspot.com/2012/09/downloadnewyahoomessenger2013.html>

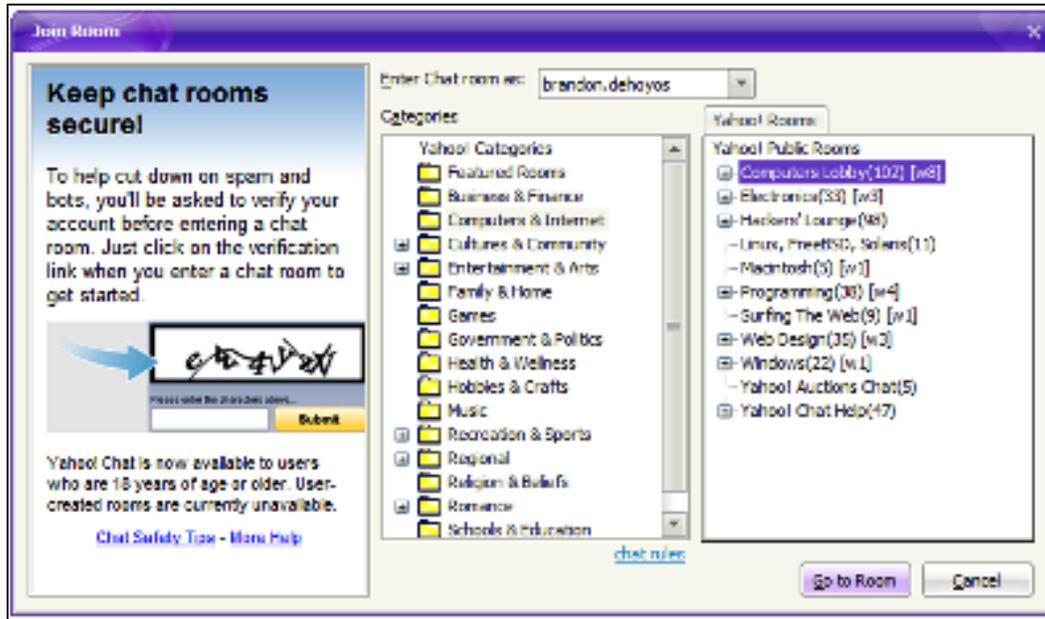
What differentiated Yahoo Messenger from other instant messengers were its chat rooms where people came together on lines of interests and hobbies and interacted with each other. These chat rooms were critical to the platform's growth (Dewey, 2014). However, due to lack of monitoring, this feature got in trouble when allegations of pedophilia were filed against it and was eventually discontinued (Harper, 2012). Figure 30 shows the chat rooms interface and the clunky solution that Yahoo devised to keep spam away – ask users to enter a *captcha* code to start using chat rooms.

The user experience of Yahoo Messenger's mobile client received mixed reviews. Though, the number of installs for the android version is between 50 to 100 million<sup>3</sup>. The iOS version, in

<sup>3</sup> Source: <https://play.google.com/store/apps/details?id=com.yahoo.mobile.client.android.im&hl=en>

particular, was severely lacking as it did not operate in the landscape orientation and did not even maintain an archive of past messages (Truta, 2014).

Figure 30: Yahoo Chat Rooms



Source: [http://im.about.com/od/advancedimfeatures/ss/yimchat\\_3.htm](http://im.about.com/od/advancedimfeatures/ss/yimchat_3.htm)

**9.2.11 Iterative Product Releases:** As Table 5 below shows, Yahoo Messenger (for desktops) picked up and released frequent updates and features between 2006 and 2010. This can be interpreted as the time when the competition for the instant messaging market intensified with Google entering the fray.

Table 5: Yahoo Messenger Release Frequency

Timeline	Number of Releases
1998	1
2000	2
2001	1
2002	1
2004	1
2005	2
2006	7
2007	12
2008	4
2009	13
2010	6
2011	3
2012	2

Source: Compiled from <http://yahoomessenger.tumblr.com/archive>

**9.2.12 Points of Failure:** Even though the Yahoo Messenger is still used by many users, its market share fell down to 15% in 2011 (OPSWAT, Inc., 2011) and as the instant messaging market turned mobile, its usage became fairly non-existent (Ignatescu, 2014). *The failure of Yahoo Messenger, just like the MSN Messenger, can be attributed to (a) envelopment of instant messaging by email and social networking applications, and (b) a progressively weaker set of complementary products and services.*

At this point this paper would like to present the argument that instant messaging will soon cease to exist as a standalone application as users find it more useful in maintaining a single set of connections and derive them from their online social networking profiles, rather than creating a new one on a standalone instant messenger. The envelopment of instant messaging by social media platforms and email applications is complete and the already declining user base of instant messengers (Warzel, 2013) is right now only multihoming, but will make the final platform switch very soon, and then instant messaging will be dead.

## **10. Conclusion**

Reviewing the points of failure identified so far, we find that the reasons platforms fail vary across products, timelines and market niches.

The recurrence of design and user-experience as a root cause in platform failures across different platform-types and timelines, goes to show how it has emerged as the new axis of differentiation in the market. It is also important to note that user-experience evolves over time and in order to keep a platform successful, it has to keep up with this evolution. Case in point is the association of instant messaging with email. The failure of messengers, such as Yahoo Messenger and MSN Messenger, wasn't due to another superior messenger, but due to email applications. The envelopment that no one could imagine a decade ago suddenly became imminent and its implementation swiftly wiped away an entire software market.

The eventual demise of a platform can always be linked to the weakening of the network effects, but, wherever necessary, this paper has attributed failures to root causes. In case of Google Plus and LinkedIn Answers, at face value, we find that network effects played a big role in their failures. For Google Plus, it was the strong and positive network effect between Facebook's users and very low multihoming costs. In case of LinkedIn Answers, it was the poor user-experience and negative same-side network effect between its users. In both these cases, it is found that it is extremely difficult to reverse these network effects or to fight against them. As a new-entrant in a market, a new platform has to have an incredible value proposition (perhaps through envelopment) in order to compete with an incumbent. Facebook provided this value proposition with its fantastic user experience. Google Plus remains to find a similar competitive edge. Also, when the platform is predisposed to detrimental network effects, as was the case with LinkedIn Answers, there is no point in entering the market, unless instituting mechanisms to overcome these effects.

Lastly, platform openness is critical to markets with high rates of use-case generation. This is evidenced by the online social networking platforms, where the platform derives significant value from ecosystem innovation. Therefore, it can be argued that it is more critical to open the platform in a market like social networking than in a market like Q&A platforms, where use-cases are *relatively* limited.

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