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Business models of the new web

The economics of content,
software and social networks

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Introduction

Web startups are small innovative companies that drive the social and technological progress of the web. Underestimating their importance to the internet is identical to underestimating R&D for the development of the economy. Yet, too many startups with reasonable product/service ideas fail because of improperly executed revenue strategy. Partly, this is because many startups are founded by programmers and designers who may lack business knowledge and experience. Another significant factor is that nowadays it is as cheap as never to start your own [web] company, so the costs of failure are not as high as they were before.

This paper analyzes the business models of the two key segments of the internet industry — content and software, to provide understanding of the factors that determine an optimal business model. In case of content, we will be focusing on online newspapers and magazines, since this industry is most affected by the spread of internet¹. We will bring together the results from several studies to expose the non-feasibility of charging for access to content online, and explain how to make most of the advertising. Special attention will be paid to drawbacks of the advertising approach and a new business model — a distributed ad-financed market for content — will be proposed for implementation.

The primary effect of the internet on the software industry was the possibility to create social software — software that makes use of collective intelligence and user data (e. g. relationships) and creates significant network value. We will explain how lack of personal value in general social networks makes monetizing social networks a problem. We will also analyze the steps taken by major social networks to mitigate this problem, and why they were less effective than expected. We will propose a new, portal strategy for social networks that is based on creating personal value in niche subnetworks, and explain how it will solve the monetization problem. In the end, we explain why acquisitions of web startups are so prevailing, and how leading social networks could have been targets of an undervalued acquisition if they do not show profit in the near future.

¹ Many would claim that the music and movie industries are most damaged by the internet. However, it is evident that their damage, while significant, is caused primarily by record labels' unwillingness to adapt to changing environment. For example, only about a year passed since digital-rights-management-free music downloads became a legal business..

Content online

Information production involves only a fixed cost with relation to the level of its consumption. The author of a book or an article, for instance, does not have to rethink the plot, redo the research and rewrite the book from scratch every single time someone wants to read it. Information is produced only once, after that, it is distributed.

Historically, the cost of distribution (e. g. printing books) was significant, and proportional to the level of information consumption. This imposed a natural constraint on the kind of information that can be distributed on physical media. Its value to consumers must be high enough so that it covers a significant marginal cost, and it should be popular and unique enough so that the publisher can extract a positive profit.

As the information market matured, competition among the publishers increased, which ultimately drove the prices (and hence profits) down. That was particularly true of newspapers, the content of which is more homogeneous (fungible) than that of books, on average.

The rise of the web

The new millennium saw a new medium of information distribution, commonly referred to as the *web (internet)*, which changed just about everything in the content market. Before the web, atoms of physical matter were distributed (paper, plastic, etc.). The internet distributes bits of information. This implies that:

1. *Information distribution costs are now virtually zero* — the only expenditure on distribution (ignoring marketing expenses) is the cost of running servers, which is now virtually zero per visitor of website, and is steadily falling every year due to technological progress.
2. *Supply of information is now virtually unlimited* — now that the distribution costs are “zero” and there are free tools to publish content on the web, anyone can publish. Newspapers, for example, now face competition not only from other newspapers and magazines, but from industry experts and independent professional and amateur journalists.

Music record labels face competition not only from other record labels, but from a growing number of independent and self-publishing artists. Some authors even self-publish books (in real paper, e. g. using lulu.com).

3. *Content is unbundled* — physical media required that every printed/recorded copy had a value higher than the significant cost of producing it, that is why music was bundled in albums, and articles — in newspapers and magazines. By nature, bits of information are not bundled, and as most information is free on the internet, and it costs nothing to distribute it, there is no need to force bundling.

In this section we will be primarily analyzing the newspaper (and magazine) market². Internet per se is a competitor to print editions of newspapers³, and the growth of internet penetration (M. Madden, 2006) threatens the revenues derived from print editions. Print advertising revenues are falling while advertising on newspapers' digital properties grows by double digits 3yк year (Forbes, 2007).

The micropayment problem

Obviously, increased competitive pressure drives prices closer to marginal cost, which is really close to zero on the web (see above). There are, however, fixed costs associated with any transaction: technical costs and mental accounting costs. The technical costs are the costs the seller faces of passing a transaction through a bank. They range from about 5 to 50 cents per transaction plus 0.5 to 5 percent of the value of transaction depending on the method used.

Mental accounting costs are the costs the buyer faces trying to estimate the desirability of the transaction. This involves estimation of the characteristics of the subject of the transaction, uncertain future cashflows⁴, and the actual inconvenience of having to make the decision (N. Szabo).

² That is because newspapers are fast to adapt to changes in the environment, but despite all efforts are losing revenues. Music industry, for example, fails because it is reluctant to adapt to the new rules and overestimates its monopoly power in the digital age. The book market was not affected as severely as newspapers and music since books carry significant value (a single book is worth much more than a single article or song) and are more unique, in general, than news articles.

³ However, a particular newspaper's website is typically not regarded as serious competition to its print subscription business as the use cases and audiences of online and print editions are rather different (N. Thurman and J. Herbert, 2007).

⁴ These may arise, for example, if the transaction involves a subscription to online edition of some newspaper with per-article payments; the consumer does not know in advance how many articles he will be willing to consume, hence the cashflow uncertainty.

There is also an inherent security risk of paying via the internet, arising from both third parties (hackers, internet service providers, etc.) and the seller. There are various payment methods which balance between convenience, security and minimizing technical costs, but ultimately there is a tradeoff between them, and the overall transaction costs are generally too high to use per-article pricing.

Bundling

An obvious solution would be to sell access to bundles of articles. This would typically be some non-news, editorial content, which is perceived to be more unique and hence would face higher willingness to pay from consumers (L. R. Ye, Y. Zhang, D. D. Nguyen and J. Chiu, 2004), to the extent that it can be charged for. Another common bundle of articles is the archive. Typically, only researchers and institutions are interested in articles that are several years old; their willingness to pay is much higher than that of an ordinary reader, hence the articles are priced accordingly — starting at about 2 dollars per article, or about 15 dollars per day of browsing the archive (N. Thurman and J. Herbert, 2007). Paid archive access can earn some revenue, but as the demand for such content is really thin, it's never a significant part of the total revenue.

Links and visitor multiplication

However, there is a bigger problem with non-free content, which is specific to the internet. On the web, the publisher is the primary distributor⁵. To see how it relates to the newspapers' revenue, consider how this revenue is generated. First, people have to come to visit the website of the newspaper. Then they may either purchase some content, or click an ad, or do nothing. The first two options will bring some revenue⁶ to the newspaper. So the revenue of an online newspaper is roughly proportional to the number of visitors to its website⁷.

⁵ It would be more appropriate to say, "the publisher *may* be a distributor". Amazon, for example, is a large (non-exclusive) distributor of most publishers' books, but in the case of newspapers online, publishers are primary distributors.

⁶ Advertising revenue may be based on the number of clicks on ads (cost-per-click, CPC) or on the number of times the ads were shown (cost-per-thousand, CPM). However, it should be clear that the price of a thousand views that the website can charge advertisers is tied to clickthrough ratio (the percent of people who click on ad after viewing it), since advertisers generally want clicks in the end, so the two measures are interdependent and for our purposes it does not matter much which one is used by the newspaper website to charge advertisers.

⁷ More precisely, it is proportional to the number of pageviews, especially in the case of advertising, but the visitor/pageview ratio is usually constant unless special design and marketing measures are taken to increase it.

Most visitors come from links on other websites and from searches performed on Google and other search engines. First, it is important to understand that the number of links to a website is proportional to the number of its visitors, since people must read an article first, to be willing and able to link to it. Second, we should understand that search engines pay significant attention to the number of links to an article in determining its importance and quality (and therefore its position in search results), and finally, the higher is the article in search results, the more people will click on it rather than other search results.

So here is the multiplication: increased number of visitors means increased number of links which means that the number of visitors is further increased (both via links and searches) (the loop goes on). This effect makes it much more costly, than an oversimplified economic analysis may show, to hide the content behind a paywall.

Let us analyze a recent case when New York Times removed the fee barrier from a significant part of its nytimes.com archive and some other previously premium content on 18th September 2007. If we look at estimated traffic statistics for nytimes.com (Compete, 2008b), we'll see that for at least four months before that day, around 7 million people were coming to nytimes.com each month. After the fee barrier was removed, traffic jumped by 4 million visitors per month in just two months. Compete data on monthly visits to nytimes.com (Compete, 2008c) suggests that it is roughly a 20% increase in traffic and hence advertising revenues. New York Times Company reports (Infoworld, 2007) that the cancelled subscription barrier generated \$10 million in annual revenues. Online advertising revenue of News Media Group of the New York Times Company (which includes many local online newspapers as well as nytimes.com, which is clearly dominant here) is estimated to be \$15.8 million for May 2007 (Publishing 2.0, 2007). From Compete data on visits cited above we see that traffic grew by roughly 25% between may and August, suggesting monthly pre-cancellation advertising revenues of News Media Group to be equal to \$19.75 million (assuming similar growth rates among the various online newspapers in it). If we assume nytimes.com online advertising revenue was 75% of that, i. e. \$14.81 million/month and that it grew by 20% (i. e., by \$2.96 million/month or \$35.55 million/year, as the increase in traffic has no reason to wear off (and the data shows it does not)), we see that abolishing the paywall alone will account for a net increase in revenue by \$25.55 million *in the first year* (and this does not include

the part of the multiplication effect that was taking place after two months of cancellation).

Advertising

We've established that free content would significantly increase traffic to newspapers' websites, but it would be worthless if it could not be converted into revenue. Paid content implied a simple bilateral transaction: newspapers exchanged cash for content. If the content is free, newspapers need to use multilateral transactions, i. e. extract something valuable (but not cash) from a consumer and sell it to third parties, who will pay for it in cash. Advertising is a common multilateral transaction. Newspapers extract attention from the consumers by placing distracting ads, and the advertisers pay for this attention.

The importance of multilateral transactions is that they allow to make content completely free⁸ to the consumer in terms of cash. Free content has a huge competitive advantage, especially online, and hence there is a ratchet effect — the more online publishers use advertising (and make their content free), the higher is the competitive pressure on paid content publishers and the more incentives they have to make their content free (and therefore ad-financed).

There are two obvious questions that arise at this point — “why do consumers allow content providers to extract their attention?” and “would not some consumers pay more than advertisers to keep their attention (i. e. to not see the ads)?”. First of all, attention costs can hardly be measured — in terms of money, brain cycles or anything that makes sense. Advertisers can measure the value of consumers' attention by the value of the leads that advertising generates (on the web, it's all trackable), but the consumers have no tools to link attention to cash. Second, there are no mental transaction costs associated with displaying advertising, since the consumer does not have to make any financial decisions. And of course, now that advertising is decades old, everyone understands that without it, they would need to pay for the content; this adds significantly to consumers' willingness to pay with attention. Another important point is that advertising can be simply ignored — no one makes consumers look at all the ads, they are just there. In fact, most online readers ignore advertising (ReadWriteWeb, 2008).

⁸ Or, in the case of print newspapers, decrease the price significantly.

Concerning the fact that some consumers may be willing to pay more for their attention than advertisers, there are two important points to note. First, the value they would be willing to pay would be likely lower than transaction costs if we assume unbundled content⁹. It would be impossible to make consumers pay such small amounts (see the micropayment problem above), while it is easy to receive cash from advertisers in bulk. Second, allowing some consumers to opt-out of advertising for cash would likely decrease advertising revenue by a greater amount than the revenue from opt-outs. This is explained in more detail below.

We reasonably assume that the more affluent the readers are, the more they value their attention. By allowing to opt-out of advertising for a flat subscription fee, only readers who value their attention more than that fee would purchase an opt-out. This will have two effects (note that advertisers are of course aware of the opt-out policy). First, advertisers of luxury brands would leave since the effectiveness of their advertising would fall dramatically since their target audience is no longer exposed to their ads. That would surely decrease ad revenues. Second, those who would still see the ads would be on average less wealthy than they would be without the possibility to opt-out, and this would make advertising less effective¹⁰ (ReadWriteWeb, 2008) and hence cheaper and decrease advertising revenues, which are a significant proportion (up to 90%) of total revenues of most newspapers.

Relevance and effectiveness

As we have already explained above, the price of advertising online is necessarily tied to the clickthrough ratio. A higher clickthrough ratio, *ceteris paribus*, means more effective advertising and therefore increases advertising revenue.

The most important determinator of clickthrough ratio is the relevance of the advertising to the visitors exposed to it. Niche content websites (e. g. techcrunch.com, tuaw.com etc.) typically charge more for advertising because the

⁹ This particular argument does not work, however, in case of bundled content, and in fact, online newspapers often show less ads on paid areas of their websites.

¹⁰ A study was performed by Starcom, Tacoda and ComScore that showed that less wealthy people generally click more on ads, but their online purchases as percent of their clicks are lower than that of an average web user, hence the value of their click is lower to advertisers. Although this, combined with increased number of clicks does not guarantee lower ad revenues, in practice it is most often the case.

visitors are known to be interested in a particular topic and hence the clickthrough ratio is higher and every pageview is more valuable for the advertisers¹¹.

There are methods to reveal visitors' interests and therefore increase the relevance of advertising. The most common one is to require a free registration to use some areas of the website and gather the information about the user's age and preferences during the sign-up process. Another way is to use the information from print subscribers by allowing them free access to some premium content (archives, for example). Another strategy is to split the website into categories like "Technology", "Business", "Environment", and sell advertising in these categories separately. It is clear that if the visitor is reading an article about Audi R8 then he is likely to be interested in automobiles. Such technique, however, requires complex algorithms to be effective and not all publishers chose to face the costs of developing these. There is an opportunity to outsource advertising provision to a third party (e. g. Google, Microsoft, Federated Media), which are known to have sophisticated advertising efficiency algorithms, but third parties require revenue sharing, which may just defeat the purpose.

Drawbacks and resulting opportunities

Advertising is important in that it allowed media independence (M. Petrova, 2008) (without advertising newspapers had to rely on special interest groups for financing and hence publish a necessarily biased view on the news). The fact that nowadays any website can outsource advertising provision for a share in the revenue means that the entry barrier into (profitable) publishing is now lower than ever.

However, there are drawbacks of advertising as a revenue model. For the publishers, a major problem is that advertising is highly sensitive to recessions. The problem stems from the corporate managers' desire to cut costs when the revenue is falling, and the easiest way to do it is by cutting advertising, since in many cases its effectiveness is mostly unmeasurable and the measurable part underestimates the overall effect of advertising on sales. The extent of this problem, however, is highly dependent on national management culture (B. Deleersnyder, M. Dekimpe, J. B. Steenkamp and P. Leeflang).

¹¹ On the contrary, a visitor to general-interest website is not ex-ante known to be interested in any particular topic.

The fundamental problem with current advertising technology, however, is that it prevents the spread of information. It relies on pageviews and thus restricts the use of content (information) to a particular website. That is, if an article from nytimes.com is republished on another website (e. g. on techcrunch.com), The New York Times Company has no way of getting revenue from the use of the information on the other website. Currently, it's illegal to republish (copy) content without explicit permission from the copyright holder. However, if the copyright holder had a way to get significant revenue from republishing, it would be in his best interest to allow to republish their content.

At this point it may be unclear of why this is a problem. Let us dissect the situation. Currently, the only way to get revenue is to have visitors come to your website. However, there is a certain marketing cost associated with gaining new visitors. What if another website would republish your article and share advertising revenue (from the pageviews of that article on that other website) with you, the original publisher. Of course, proper attribution and a link back to your website would be provided. You would gain revenue from pageviews you would probably not get without it, and suffer no marketing cost (it may be even more efficient). There are three evident problems with such a method.

1. Current transaction costs are prohibitively high
2. The trust problem — how do we know how many pageviews our article saw on their website?
3. Possible cannibalization — we “sell” content to other websites, hence they partly become our competitors (since they publish not only our content but probably others' and their own)¹².

The first two problems are easily solved by software. Actually, it's a solid business opportunity to create an advertising platform that would take the origin of the article into consideration and split the revenue from pageviews between the copyright holder, the republishing website and the ad platform. There are of course minor technical problems like proper content attribution, but they are all manageable. An exit could be selling the technology to Google, since no one other

¹² This may result in further unbundling — when you come to nytimes.com for example, you see a bundle of articles. You are not forced to stay on the website, but you hardly ever see a link to an external article that could distract you from browsing nytimes.com. This allows to publish not only top-tier articles but also articles of medium quality (that are created at a lower cost, while drive presumably similar advertising revenues per visitor per article). In the case of exporting articles to other websites, evidently only the best ones will be exported and they will be now bundled with other articles on that other website, not with all-NYT articles on nytimes.com.

company beats them on the online advertising arena. Actually, I believe that Google would come to creating or obtaining such technology in about 3 – 4 years, or maybe even earlier if there would be successful startups in this area.

Fundamentally, what we have just described is a distributed market of content, financed by advertising rather than payments from consumers. It is like Amazon for books, but distributed among many websites. Any website could become a publisher or a distributor. That would probably increase competition among certain types of content (more homogeneous, like news), hence profit margins would lower. However, it would also increase the volume of information consumed for the participating parties. Actually, the system can be designed to have the ratchet effect – the more websites use it, the more worse-off are outsiders¹³.

User-generated content (UGC)

So far we were concerned with the revenue side of the business equation. There is, however, a place for innovation on the cost side. One of the major web trends today is that there are more publishers. The main growth comes from blogs, ranging from personal diaries to mass media (e. g. Weblogs, Inc., TechCrunch Network, ReadWriteWeb, Raquo Journal).

There is a way to harness the increased publishing activity on the web. Create a niche community where the primary content is written and published by the members of the community. There are numerous examples around – habrahabr.ru, lookatme.ru, digg.com, autokadabra.ru. If users are primary generators of the content, then the major costs of the publishers (hiring staff to create the content) disappear, since users are typically not financially rewarded for creating content¹⁴.

Instead, users are rewarded for publishing with 1) scarce resources of the community – most commonly, reputation and fame, and 2) links to the users' blogs or websites become automatically more visible the more and better content they publish. Traffic through these links may be monetized in various forms

¹³ Another possibility would be to make a positive network effect, but that would require some serious design thought.

¹⁴ That is because 1) that would defeat the purpose of UGC, 2) the cash income from advertising per user is small and is likely to suffer from the micropayment problem, 3) there are other ways to incentivize users to create content, and 4) cash payments may even alienate some users and create incentive distortions to others.

ranging from advertising to new customers for users' offline businesses (see "Non-information goods" section below).

UGC communities are always free to access. First of all, there is a significant network effect — users typically not only create content, but also vote on it, i. e. act like an information routing group, filtering out most valuable bits of content. Hence, the more members there are, the more content there is¹⁵ and the better content ends up on the front page of the community, which again drives more visitors to the website.

So the most common option for monetization is advertising, which is rather effective due to good targeting given the community is a niche. Another option for monetization (which is by the way used not as often as advertising), is adding value to the community by creating special tools and services (more on this in "Social Software" section). For example, a catalog of relevant products or businesses (businesses pay to get listed), a job board for jobs in the niche (recruiters pay to get a job listing), etc.

New platforms

When most people refer to the internet, they mean websites inside a web browser on their computer. Internet is *less* than that — it's merely a set of technologies for data exchange. It means that there are opportunities for internet to grow past the browser on entirely new platforms. One of such platforms launched recently by Amazon is the Kindle, a standalone book-size device for reading books, newspapers and blogs on the go. It's main feature is that it is a completely autonomous device — you do not need a computer or a wifi network to upload files to it, it connects to the internet itself using the CDMA cellphone network and lets you download latest posts and articles as well as buy full e-books.

This new distribution platform currently experiences some scarcity of content, which is the case with all new platforms initially. Sooner or later the content market for Kindle is going to saturate and the profits from this segment will likely decline (Kindle lets you *buy* books and subscribe to newspapers and blogs *for a fee* that is shared by Amazon and the content provider). However, I would anticipate

¹⁵ Existing empirical evidence suggests, roughly 1% of users create the content in such communities, independently of the size of the community (The Guardian, 2006).

Amazon to play supply restriction here (most likely, in the form of minimum price per unit of content) in order to maintain publishers' interest in the platform.

Digging into promising new platforms early yields publishers additional profits and gives them a significant advantage over inert competitors in case the new platform becomes popular, like it happened with the internet. Note that as new platforms are likely to be all *digital*, the costs of reformatting content for these new platforms is likely to be virtually zero, and no significant upfront capital requirement would be required.

Non-information goods

The challenge of the impossibility to sell goods that we have been talking about so far is only the case with information. It is not the case with physical goods that are scarce and hence do not face direct competition from the internet.

There is a way to monetize publishing content online without charging for access to it and without advertising. Create a loyal following and sell physical goods.

For example, xkcd.com is a popular geek comic that is published exclusively on the web, is free and has no advertising whatsoever. The sole source of income for its creators is the branded apparel that they sell. It's unique and it's scarce, and can not be copied at no cost, unlike the comics they publish.

Many authors (of books, primarily), like Seth Godin¹⁶ or Alexander Tabarrok¹⁷ publish short articles in their blogs as a way to earn reputation and expand the loyal audience and sell more of their books when they come out. I believe such model would be the most popular publishing model during the next several years at the very least. As Seth Godin says, "*Everyone's an expert [about something]*" (Seth Godin, 2005).

¹⁶ <http://sethgodin.typepad.com>

¹⁷ <http://www.marginalrevolution.com>

Software

In this section we will contrast two alternative strategies to pricing software – selling a perpetual license that allows the customer to use the software as long as he wishes, and the Software-as-a-Service (SaaS) approach, whereby the customers are charged on the subscription basis – a lump sum in every period (e. g. month, year) for the use of software. We will discuss only the software that is not subject to significant network effects and has enough of personal value to be sold¹⁸.

Costs

On the cost side, there are two types of software: on-premise and off-premise. The former (also known as desktop software) is installed on the customers' computers as a standalone application, the latter is typically accessed via a web browser (hence is also sometimes referred to as webware). It is crucial for our analysis to understand the cost structure of each of the methods.

In both cases, there are significant development costs – the costs of programming, designing and testing the software. *Ceteris paribus*, many would argue that for webware these are lower than for on-premise software, but it is hardly justified by any empirical evidence and is likely to be a biased view, because there is an implicit upper limit on the complexity of webware and desktop software is on average more complex than webware. We assume development costs to be independent of the type of software, *ceteris paribus*.

Webware business is also subject to server costs – the costs of running the servers that perform all the calculations behind the web interface and store the application data. This cost is proportional to the number of users of the software, and is incurred on a continuous basis (e. g. \$8 per user per month). Desktop software is not subject to such costs since all calculations are performed and all application data is stored on the customers' computers.

Desktop software, however, is subject to legacy costs. These costs arise from the fact that there are always multiple versions of the software installed on customers' computers, because they were purchased or downloaded at a different time. For

¹⁸ We will discuss social software in detail in the next section

example, some might have Microsoft Office 2002 SP2, others — Microsoft Office 2003 SP1, others — Microsoft Office XP. The legacy costs are the costs of making all these versions work and interoperate properly. It is a significant addition to development costs. The more there are versions, the higher are legacy costs. These costs are fixed with relation to the number of users, though. Webware does not exhibit legacy costs, since all software updates affect all users automatically and simultaneously. It is not possible for a user to run an “old” version of the software by not upgrading, since the vendors control the servers where the software files are actually stored.

We see that webware has significant marginal costs (server costs) with relation to the number of users, while desktop software only has a fixed cost of development. For historical reasons desktop software was primarily sold on a perpetual license basis¹⁹. Partly that is because such payment scheme better matches development costs, partly because during the early days of software development there was no cheap way to bill customers monthly or annually. Webware, however, has a problem with perpetual licensing. First of all, there are no new versions of the software to charge for — there is just one version that is updated continuously. Also, perpetual license payments simply do not match the cost structure — the marginal costs of the customer using the software are significant and spread in time, while the revenue from the customer comes only once. This imposes significant risks of illiquidity and defaulting on the obligations given to users. So, webware companies typically use SaaS to better match costs and to gain the advantages of the subscription revenue model.

Customers' perspective

Perpetual license has three significant disadvantages for the customers.

First, it is fundamentally riskier in terms of future cashflows. The vendor is free to make the next version of the software not backward-compatible (or render old version of the software not forward-compatible) to force existing customers to upgrade (and therefore pay for another perpetual license). If we assume desktop software and compare perpetual license and SaaS, it is clear that under perpetual

¹⁹ A notable exception is anti-virus software, as their costs are more spread in time (although independent of the number of users) and as what their software does — security provision — is in fact a service. Microsoft has recently introduced Microsoft Office Equip, a package of Microsoft Office and OneCare, Microsoft anti-virus application, priced on the subscription basis. Equip is currently distributed only in one brick-and-mortar retailer in the USA, CircuitCity.

license the vendor has a higher incentive to do it. There are numerous examples of such behavior in real life, the most recent and major probably being the introduction of OOXML format (.docx) into Microsoft Office 2007, which is not supported by previous versions of Microsoft Office²⁰. SaaS, on the contrary, is a symbiotic relationship (J. Stone). The vendor does not have the incentive to cheat, since its revenues are not dependent on the version of the software the customer is running (if it's webware, everyone is even running the same version) and are more dependent on customer loyalty.

Second, upfront costs to the consumer are much higher in case of a perpetual license. A new customer is unaware of the exact benefit he will make from using the software, so a required significant specific upfront investment reduces the demand for the software. This problem is often mitigated by free trials — the vendor allowing the customer to use the software without paying a penny for some period (usually 30 to 90 days), after which the vendor requires to purchase the license to be able to continue using the software. Such strategy not only decreases customers' risk, it also makes use of lock-in effect (the value of software to the user increases with the time that he uses it — due to learning, accommodation and ongoing specific investments like saving files in proprietary file formats) and the bounded rationality effect (Kahneman, 2003) (At the end of the trial period the user perceives the software is already his property, and the payment for the license is the payment to prevent losing his property, while losing \$1 is perceived as a greater fall in utility than gaining \$1 is an increase in utility, hence the consumer's willingness to pay for the software is higher after the trial period). Obviously these two effects work for the benefit of the vendor.

Third, perpetual license scheme incentivizes the vendor to add new features in new versions of the software. The rationale for this is that existing customers must have some incentives to purchase a license for the new version of the software, since it is not possible to always grow the market share and make money only from new customers (it soon becomes cheaper to leverage existing customer base). The problem with such behavior is that features also have a usability cost. Every feature that is added yields a diminishing marginal value of the feature, but also results in increasing marginal usability cost. At some point of adding new features, they

²⁰ Past versions of Microsoft Office supported binary .doc format (which also had multiple versions), and future versions are expected to have ODF format set as default. Future versions are likely to be able to read .doc and OOXML files, but will probably not write .doc.

actually make the software less valuable than it would have been without them²¹ (D. V. Thompson, R. W. Hamilton, R. T. Rust, 2005). The problem is known as feature bloat, and it's actually a problem of the customer as well as of the vendor. The vendors have to balance between adding new features and keeping the software usable. Another tradeoff is between new and existing customers. By their nature, usability costs become observable only as software is used, they are not seen before it is acquired, hence new customers underestimate such costs and give more weight to the number of features (then existing customers) when making the software purchase decisions (R. T. Rust, D. V. Thompson, R. W. Hamilton, 2006).

Financial results

There is one important advantage of the perpetual license model. It has better financial results, at least in short run. In case of SaaS, the revenue from a customer is spread during his use of the software; in case of a perpetual license, there is a significant upfront revenue from each customer.

Initially, a new software company faces significant fixed (in terms of the number of users) development costs. These are incurred in every period, since there is always a need to develop the application. In the first periods, the cashflow of the company would definitely be negative due to such high costs. In case of SaaS, this period would be longer and the negative cashflows – more extreme. THINKStrategies, and IT consultancy firm, and SaaS Capital, which specializes on issuing debts to SaaS companies, estimate that it takes 50-70% more capital to launch a SaaS company than a similar company selling perpetual licenses, and it takes about 60% more time for SaaS companies to become liquid, and requires 75% more revenue and 265% more capital to achieve profitability, compared to perpetual license software companies (THINKStrategies and SaaS Capital, 2006) Research conducted by Will Price (W. Price, 2007) of Hummer Winblad Venture Partners yielded similar results. SaaS companies, however, have more stable cashflows in the future due to their subscription essence (THINKStrategies and SaaS Capital, 2006), and in long run are more valuable businesses.

²¹ Increased number of features also increases development and legacy costs

Social Software

In the previous section we have made the assumption of insignificant network effects. While this is true of most desktop software, web-based applications typically exhibit significant and positive network effects. The reason for it is the nature of such applications itself — all user data is stored on the servers, hence companies use it (and user behavior, which is also easily trackable) to make their applications more useful. Some applications, like social networking sites²² (SNS), are designed to make use specifically of the user data; they are worthless if no one actually uses them.

The network effect implies that the value of the software to the user depends on the number of other people using that software. The more users of the software there are, the more valuable is the software to each of them. A social network like facebook.com only has a value to its users because there are millions of users. If there were, say, only a hundred people on facebook.com, its value would be close to zero²³.

Cold start

Hence, there is a problem with getting the first X users (where X should be rather large) to use the social software, as initially, there is very little value in the software. It is known as the *cold-start* problem, and is often quoted as the reason why it is impossible to bootstrap general social networks²⁴.

The network effect is fundamentally a positive externality that a user creates for all other users. A common treatment to overcome the cold start would be to “subsidize” the first users. In practice, it means not displaying any advertising and making access to the website completely free. Overall, all frictions should be eliminated. This means of course that the revenue streams (from advertising for

²² It should be understood that an website is just the interface of the software behind it. Software is the code that is interpreted by the machine to perform calculations. Hence the title of the section.

²³ The value of general-interest social networks grows with the number of users because of the increasing number of possible connections (Metcalfe’s law), and/or because of the number of possible groups that can be created (Reed’s law).

²⁴ A general social network is one that is not tied to a specific niche, where social objects are mostly real-life relationships between the users. The primary social object of the niche social network, however, is the interest of the users to that niche per se.

instance) will be delayed in time. Under the conditions of a significant network effect it is likely to make financial sense to start with a very low (possibly zero) level of advertising and increase it over time as the number of users grows (R. Dewan, M. Freimer and J. Zhang, 2003).

We talked about network value (value to a user from the existence of all other users), but have not mentioned the personal value (value to the user if he is the only user of the software), reasonably assuming that general social networks lack it. However, there are social networks that have intrinsic personal value (J. Porter, 2007c, 2007d). Let us denote such networks *functional social networks*. Flickr (<http://flickr.com>) lets you store your photos on their servers and share it with anyone (not only Flickr users); Youtube (<http://youtube.com>) does the same for your videos; Delicious (<http://del.icio.us>) is the solution for bookmarks. There is some value in the service these companies provide regardless of how many users they have. Network effects, however, are still there (e. g. Flickr has groups, popular photos section, etc — the value of these grows with the number of users (and therefore photos)).

Functional social networks are social software at its best. They benefit from the web network effects, but also have significant intrinsic value. Actually, that value is so high, users are willing to pay for it (that is the case of *significant* personal value). However, as we have mentioned above, it is irrational to introduce needless frictions if network effects are present. *Freemium* model is often found to be a rational compromise — such a model assumes that by default the service is free, users are charged only for some advanced functions and increased opportunities²⁵. Flickr, for example, charges an annual subscription fee for a bundle of unlimited photo storage, additional page layouts and ways to structure user's photos, as well as advanced statistics and other services. It is important to properly segment the users. Flickr's offer, for example, is primarily for professional photographers — a group of users whose requirements exactly match that offer.

Niche social networks

²⁵ Software piracy is sometimes quoted as a particular freemium case, helping spread desktop software with significant network effects. For example, there are millions of pirated Windows and Microsoft Office installations all over the world. They create significant network value (via spreading file formats, making Windows more appealing to application developers because of a lot of users, etc.), which probably would have not been created if it was not possible to install pirated software.

While general social networks use primarily real-life relationships as social objects for people to connect around, niche social networks use the interest in a particular area (e. g. knitting, driving, etc.) as the glueing element of the community. The examples are numerous — Colourlovers (<http://www.colourlovers.com>) is a community of graphic designers, Ravelry (<http://ravelry.com>) is a social network for knitters.

One advantage of a niche social network is that advertising is much more effective, since the ads can be delivered to the right people at the right time. Effective advertising, naturally, provides for a sustainable business model. The problem of general social networking sites is that people simply do not click on ads while browsing²⁶, despite all the targeting efforts (Official Google Blog, 2008). The primary reason is that while browsing a general social network, people are not looking for anything of commercial value. They are looking for their friends — their photos, new messages, wall posts, comments, etc. People are good at ignoring advertising, especially on websites they visit often. Joshua Porter explains the difference with search engine advertising (J. Porter, 2008b):

“The difference [with social networks], of course, is that when people go to Google, they’re actively looking for something. That something isn’t on Google. They are performing a search activity. Thus their task will be to click on a link that seems to promise what it is they’re looking for. It may be the organic results, or it may be an ad that seems close to what they want.

When people are on MySpace, the activity they’re doing isn’t search. It’s something akin to “hanging out” or “networking”. Their task is almost the opposite of search. They are already on the site they want to be on. They don’t need to click on links to take them where they want to go.”

A properly designed niche social network, on the other side, is not only a place to “hang out”. It usually contains relevant editorial and/or UGC content (news, industry trends, product benchmarking, etc.), as well as some niche-specific tools and services (most commonly — industry job boards), which make it less of a destination and more of a hub.

Niche communities are not only cashable, they are easier to launch than general social networks. A minor point is that off-the-shelf technology is there waiting for you to use it — Ning (<http://ning.com>) and KickApps (<http://kickapps.com>) are

²⁶ Facebook, for example, has a clickthrough ratio of about 0.4%, which means that a user clicks on an ad on average once per 2500 page views (BizReport, 2007), which is very low compared to internet average.

probably most popular social network platforms. A major point is in the value of “special tools and services” mentioned above. Such tools that go beyond the simple contact list + messages + groups formula often provide significant functional value, and can help to overcome the cold start problem. It is important to understand that most people are not interested in social networking per se. They are interested in solving problems, in doing their job or hobby better. Leveraging this motivation should be a primary focus for any niche community (J. Porter, 2008e).

An great example of functional value is a community (social network) of people with serious diseases like HIV/AIDS, OCD and PMA, <http://patientslikeme.com>. The website features a set of tools designed to analyze patients’ health condition data and link it to the medication taken, it shows relative effectiveness of medication) compared with other users of the website). It also aims to connect companies that need to conduct medical trials with patients willing to participate in it.

Another interesting site is threadless.com — a community of designer apparel lovers. Members submit designs they create and vote on them. The best designs are manufactured in a limited edition and sold online. UGC and collective intelligence at its best. Needless to say, the company has no monetization problems with no advertising whatsoever.

General social networks

As we have already mentioned, general social networks in a form they exist today can hardly be monetized with advertising — it is simply not effective enough to cover the costs by any reasonable margin. Fox Interactive Media (parent company of MySpace), for example generated only \$10 million in profit in financial year (FY) 2007, at the profit margin 1.81%. In FY 2008 FIM is also expected to fall about \$100 million short of its \$1 billion target revenue (TechCrunch, 2008b).

Advertising is typically the major, but far not the only source of income for social networks. Facebook, for example, is estimated to have been earning around \$23 million a month only from its lifestyle marketing solution for brands — “Pages” (essentially, micro-communities around some particular brand) (LiveIdea, 2008). Later, Facebook tried to introduce a new way of mixing advertising and

personal recommendations — the so-called “Project beacon”. The service would post a note to your newsfeed saying that you purchased something at a partner store if you did not opt-out of such a scheme. Beacon was a dance on the edge of privacy and ethics , and Facebook actually failed it, which was acknowledged publicly by its founder mark Zuckerberg. Apart from lifestyle marketing, selling limited community resources is often used. On Facebook, virtual “gifts” were a significant revenue stream, generating about \$2 million per month in 2007 (LiveIdea, 2008).

The last non-advertising revenue stream worth mentioning is selling business opportunities inside the network. For example, Microsoft bought the exclusive right for display advertising on Facebook for \$240 million. 1.6% of Facebook stock was also bundled into the deal, but industry experts all agree that the resulting \$15 billion valuation is insane and unjustified and just reflects Microsoft competing with Google for the advertising deal (for the needs of ConnectU vs. Facebook litigation the official internal Facebook company valuation was disclosed recently to be \$3.75 billion) (MarketWatch, 2008). Another case is Google guaranteeing \$900 million in advertising revenue from myspace.com during the years 2008—2010 to Fox Interactive Media, which is likely to be hardly profitable for Google in the end (TechCrunch , 2008b), bundled with Google-branded search on myspace.com²⁷.

The threat

The fundamental problem of why general social networks are hard to monetize is the lack of personal value to the users. This makes it impossible to charge users and SNS can only rely on advertising, which is ineffective (see above). It is a paradox that the most trafficked (popular) website (MySpace) (Compete, 2008a) in the USA is barely breaking even.

The real threat, however, is that the network value comes from users, not the technology used (messaging, photo albums, etc.), which is per se nothing extraordinary. So the entry barriers are generated only by the network effect. However, there are players in the market able and willing to eat the social networks’ lunch. First of all, Google. It has a solid user base, driven primarily by

²⁷ Selling defaults also found it way to desktop software. Mozilla, Inc., the makers of open-source browser Firefox, and Opera Software, the makers of Opera web browser, receive tens of millions each for making Google the default search engine in their browsers.

Gmail, Google's free hosted email solution. Gmail is per se a bare-bones social network. It features the basics of communication — email and chat. Google is adding new features, more common to social networks — photo sharing (Picasa web albums), videos (Google Video + YouTube), calendars, etc. More importantly, Google is working on integrating all these features into Gmail. If you have “Gmail labs” enabled in your account, you can see a list of plug-ins to Gmail that are currently beta tested.

So Google is just a couple of steps away from creating its own social network out of the community of users it already has. It won't suffer a cold start effect, and, what is more important, Google's social network will be fully or mostly an open one. You are not limited to sending emails to addresses ending with @gmail.com, you are not limited to chat with Google Talk users only²⁸, you can set permissions in your Picasa web albums so that everyone sees your pictures.

In that way Google would be effectively creating a distributed social network based on open protocols like XMPP, email and OAuth. Google would benefit from such openness since it has the scale and money to offer more storage space for photos and videos and overall provide a better service.

Note the contrast with Facebook and MySpace — these are walled gardens, not willing to interoperate nicely with other web services. They reasonably fear opening the silos will be followed by users flowing to competing social networks, and as their advertising revenues are proportional to pageviews on their respective domains, they would be losing money.

The opportunity

We have established the fundamental problem with social networks to be the lack of personal value of using them. The obvious solution is to introduce it. The non-obvious part is the implementation.

Platform failure

Social networks, starting with Facebook, attempted to increase the functional value of the network by transforming it into a platform for social applications. Facebook platform lets users “install” applications created by third-party developers

²⁸ Google talk is based on the open-source XMPP protocol, which is distributed unlike protocols like AIM (AOL instant messenger) and MSN messenger and ICQ.

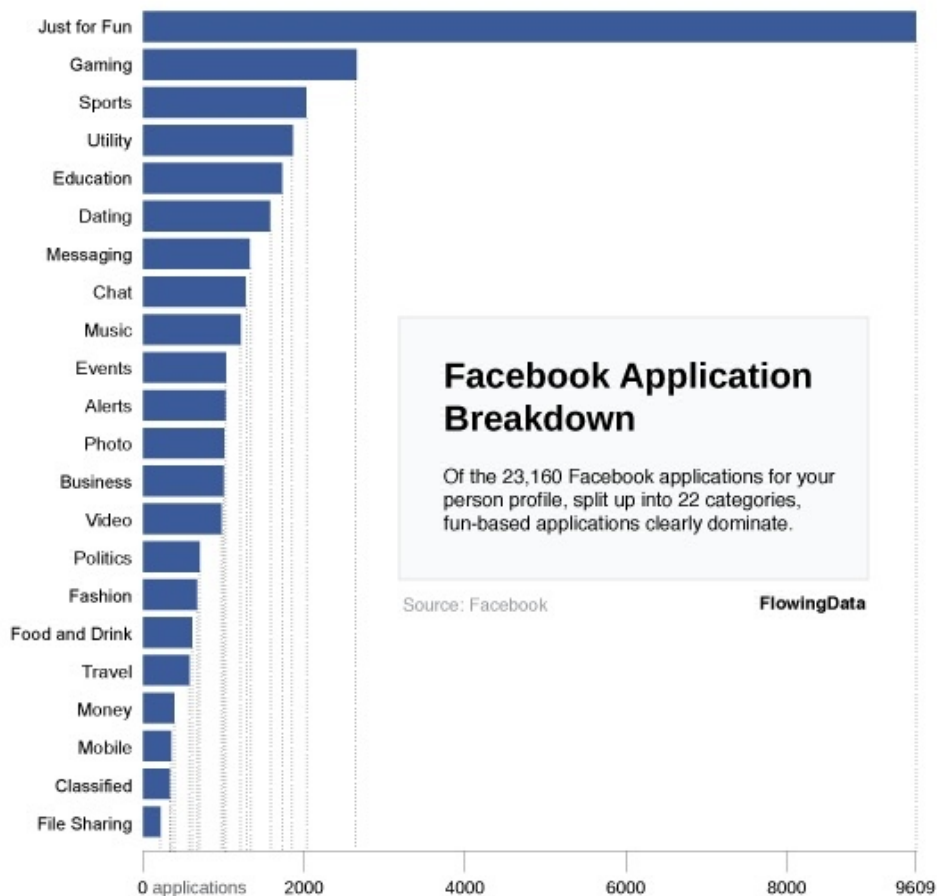
specifically for Facebook. Such applications have access to the user's personal information, including the list of his friends. This information is used to make applications "social" — to allow interactivity with other users.

The advantage of the newly created facebook platform for the developers was the opportunity to cheaply obtain a large user base, albeit restricted to Facebook. That was possible because initially the supply of applications was rather low and the visibility of each application in the catalog was higher than it would have been on the web, a saturated application market. Another advantage was from the early Facebook's policy to allow applications to express their activity loudly and frequently in the newsfeed which helped the applications spread virally (at the expense of usability of the newsfeed).

However, as Facebook application market matured and that initial policy was cancelled, the major advantages of the platform naturally disappeared, as the barriers to entry into the application market were virtually zero.

Applications, in general, failed to provide facebook with significant additional value. The problem is that viral platform design embraced the creation of useless but viral applications, but failed to provide the fundamental reason of why an application is better-off (for the creator) on a Facebook platform rather than on a standalone website. The limitations in design and functions were evident, but the benefits are rather blurry, especially in case of functional rather than social software.

The chart on the next page was created by FlowingData (FlowingData, 2008) and the shows breakdown of Facebook applications by categories. Category "fun" (that's in which most of the useless viral applications are put) is severely outperforming all others.



The portal strategy

Now that third-party applications proved to be mostly useless, social networks have only one option to create personal value. Create it themselves. Create niche communities, one at a time, inside the general network. Such communities should not be mere “groups” or “networks”, but rather brand new websites built with the best advice from our previous discussion of niche social networks. For example, Facebook could create a community “Facebook Music” at music.facebook.com that would feature (paid) music downloads, rankings, artists marketing sites and fan clubs, that would recommend you new artists and tracks using special algorithms that take into account what kind of music you like, what your friends like and what people with similar music tastes to you like. Basically, it could be Last.fm + iTunes + MySpace all-in-one. Other niches may be online games, sports, education, jobs, etc. There is plenty of functional value in each of such communities. Potential revenue from such communities (advertising + *charging users* for music downloads, game levels, etc.) may easily justify Facebook’s currently insane \$15 billion valuation. It is important to note that music providers would be happy to deal with Facebook since it would increase their revenue and demonopolize the

iTunes-dominated legal digital music distribution market (and hence decrease distributors' margins).

The only way general social networks can survive is redefine the meaning of a social network. The strategy proposed above is similar to the portal strategy taken by Yahoo!, but it is built around users rather than search and email. The new services of social networks should make use of the enormous corpus of user data. For example, there is a problem among the students — seeking and apartment to rent and finding roommates is a risky process in terms of result if the relationships are not used. Software could easily determine your closest friends and friends of friends who are also seeking a roommate in your area and connect you with them.

Areas for improvement

The portal strategy is the major but not the only opportunity to earn a profit in existing social networks. First of all, many networks (especially Russian ones) hardly use any non-advertising revenue streams. Facebook showed that areas like lifestyle marketing may be even more lucrative than display advertising, while most other networks are yet to find a way to increase revenue per user.

Design in a real problem in some networks. For example, *odnoklassniki.ru* tells the users who visits their profiles and photos. As far as I know from my own and friends' experience, this severely discourages browsing the site. Possibly that feature was created in an attempt to make users' views of photos discussable social objects and thus increase engagement, but in the end it seems to have backfired. Some rough evidence is that an average visit to *Odnoklassniki* consists of 28 pageviews, while that metric for *Vkontakte*, which is similar in terms of functionality, but has no explicit user tracking, is 44 (as of may 2008) (Compete, 2008d).

A particular implication of the portal strategy, which is not implemented in most social networks, is virtual currency. *QQ* is an example of success in this area. It is a chinese virtual currency built on top of an instant messaging platform. It is so dominant in China that the government is limiting its use in the real world to be able to control the money supply. The reason why a virtual currency is a reasonable monetization strategy is that it partly solves the micropayment problem. Virtual currency is commonly not perceived to be money per se and hence is more easily spent (Фонд “Общественное мнение”, 2006), since it is not directly linked to a

cash source (it typically can be converted to cash, but it is not automatically funded by your credit or debit card like it is the case with PayPal (<http://paypal.com>)). Virtual currency also decreases cash flow volatility since usually rather small amounts are kept in virtual currency wallets (compared to real credit/debit cards). Virtual currency is generally a good service for a SNS to implement as it increases engagement (especially in games where players are awarded virtual currency for high scores), allows for micropayments and can be a standalone revenue stream if the social network charges users a small percentage (e. g. 1%) per transaction. Spare Change (<http://sparechangepayments.com>) is an independent virtual currency platform built as an application for leading social networks — Facebook, MySpace and Bebo. The fact that it can be easily integrated in any SNS platform application makes it an ideal candidate for acquisition by Facebook or MySpace (Spare Change has, however, its own source of income — charging application developers who receive the currency a small percentage of the transaction value, just like PayPal or Google Checkout works).

A particular case of virtual currency is the cell phone account, at least in Russia where it is rarely auto-linked to a credit/debit card. Mobile payments can thus be another revenue stream, if the social network develops a mobile version of its website. People are used to paying up to several dollars for ringtones and backgrounds. The benefits of mobile are not limited to payments, though. Mobile is like search in terms of advertising effectiveness (J. Porter, 2008b). Besides, simply making use of the knowledge of our current location (which is possible on modern phones and PDAs even without GPS) can boost the relevance of advertising for local offline businesses.

Acquisitions

Owners of the company need money to cover the costs of running the company. Traditionally, revenue came from the users of the products and services in a simple bilateral transaction model. Recently, however, we have seen a dramatic rise in the use and variety of multilateral transaction models as described in the section above. The basic case is advertising, another common class are job boards (free for candidates, but the recruiters are charged for posting offers), but solutions as radical as free cars (financed by petrol purchases) (C. Anderson, 2007) or free internet access (financed by landline charges) (Wikipedia, 2008) have been

proposed and many of them implemented as successful businesses (Freemove, for example). A particular case of a multilateral transaction business model is building a startup for sale to a particular company. Usually, the primary value to the raider is either technology or market share (the users). Acquisitions are important in our analysis of social software business models, since such a strategy does not necessarily require the acquired company to have any profit whatsoever. The primary reason is that it is not the existing profit that is acquired, but rather the profit that can be generated only by gaining control over the company²⁹ — by integrating the acquired technology into the raider’s services, or by attracting the acquired user base to the raider’s services that generate profits, or by applying raider’s monetization schemes to the community or technology that was acquired.

A recent example of an acquisition of the community (rather than technology) is Google’s acquisition of YouTube for \$1.6 billion. Before that, Google launched Google Video — a service with functionality similar to YouTube’s, but was unable to gain market share higher than 8% in the video sharing market (M. Kirkpatrick, 2008). After YouTube was acquired, Google announced its plans to monetize it with innovative overlay video ads. A problem with advertising monetization of YouTube is that only legal content can contain advertising. It is estimated that only a third of YouTube’s content is legal (even if some home-made video has a pirated soundtrack, it is considered illegal). Google also has a backup revenue model to deal with content providers and high-quality video hosting (for a fee), but that model alone could not even partly justify the \$1.6 billion valuation, and it is clear that the primary target is the advertising opportunities.

The market for startups

The obvious question at this point would be “Why can not the big companies launch new services themselves rather than acquire them? That would likely be more effective and they have the resources to do it”. The basic reason is that it is really expensive and not always possible to grow a market share in a new service from scratch, especially if you are not first to market. In case of social software, network effects work against new entrants.

²⁹ IPO also brings cash, but it is not a solution . In case of IPO investors buy primarily future dividends and capital gains, which can only be sustained if there is a stable profit. IPO assumes many investors and none of them alone typically has full control of the company so as to integrate its technology into its own service or to make use of acquired share of the user base. Control is necessary to be able to rip the benefits we are talking about.

A complementing reason is that large companies tend to be slower innovators than startups. This is partly because of ineffective corporate structure and decision making processes, partly because of significant reputation and valuation costs of mistakes (for managers and the company itself). A particular case of reputation costs are the costs of user frustration when terminating an unsuccessful service (we have talked in the Software section about features being a one-way street — easy to add, very costly to remove).

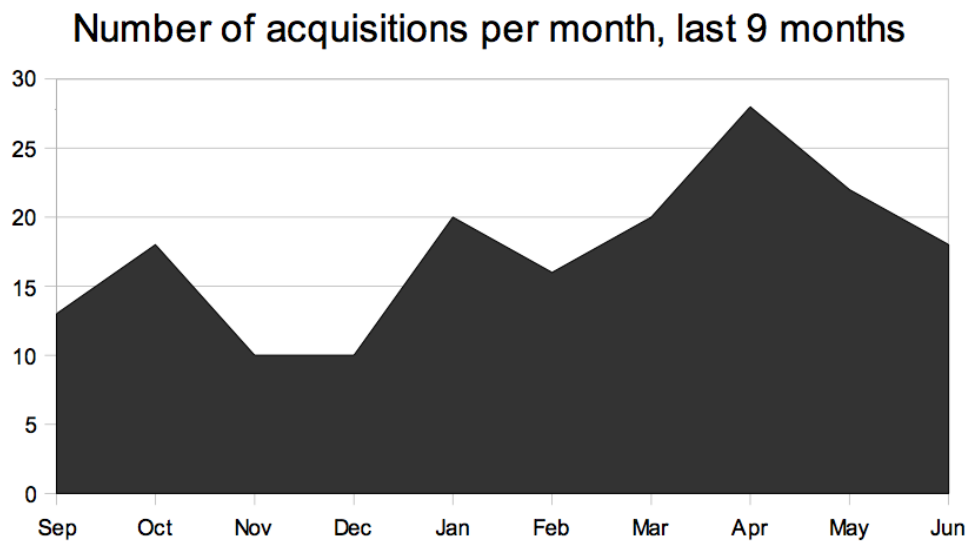
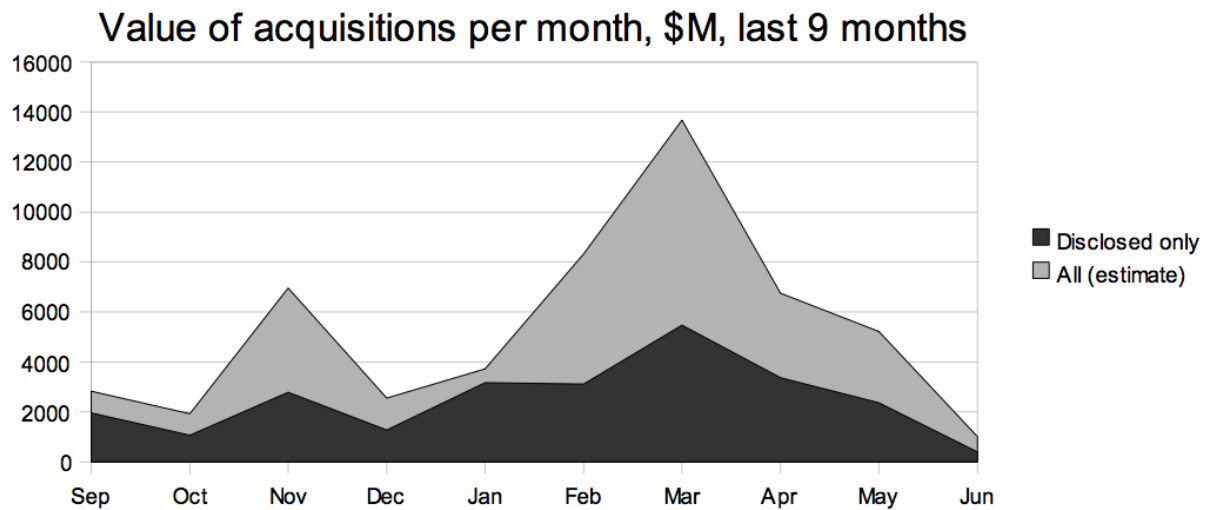
Startups have the advantage of being fast due to effective decision making and highly innovative due to self-selection of the founders. Risky opportunities attract risky founders, no one is forced to launch a startup (while to launch a new service at a corporation may be someone's job). Startups also do not face the cost of user frustration in case of termination of the service, as there is simply no one to reply (the startups mostly have one service or product).

These conditions, coupled with lower than ever cost of launching a new software or web company, naturally lead to many startups launching every month, and many of them failing during the first year. There is no precise data on how much percent of all startups fails, because many are not even registered as corporations, but it is evidently higher than in any other field, and the average time to bankruptcy is lower.

The startups that survive, however, are good targets for acquisitions from the “Big Three” — Google, Yahoo! or Microsoft, as well as many other software companies ranging from Oracle to Amazon. The founders who sell a startup effectively sell their previous exposure to high risk. As they are less risk averse than the raider, their asking price *for risk* is lower than the raider is willing to pay. So raiders are effectively purchasing risky R&D services for a flat rate (that contains the risk premium, of course).

I used disclosed and published acquisition values for 222 companies in internet and software fields that were acquired during the last 9 months (not including July 2008) to reveal the trends on the acquisition market. The information used came from CrunchBase (CrunchBase, 2008), a free database of web companies.

Although there may be better data available, it would require considerable costs to obtain it, nothing better than CrunchBase was found in free access.



The charts above show an upsurge in acquisition activity in late 2007 and Q1 2008, followed by a decline in Q2 in both the number of deals and the value of the deals. June 2008 was also notable for a very low average disclosed deal value (\$57 million counter 9-month average of \$259 million). The value of all deals is estimated by simply dividing the monthly values of disclosed deals by the percentage of disclosed deals in the month (this is accurate for trend watching assuming the ratio of the value of an average disclosed deal to an average undisclosed deal is not changing over time).

We see that although 2007 was a good year to build a on the startup-for-sale business model, year 2008 is rather low on acquisitions. We could attribute it to recession in the USA (most of the companies we sampled are based there) and the mortgage crisis (TechCrunch, 2008a), but another possible reason would be that

top acquirers — Google, Microsoft and Yahoo!, are busy integrating acquired technologies. In case of Google, we know that integration of Feedburner and Doubleclick with Google Reader, Google Analytics, Measuremap and Adwords is taking significant resources. Google also acquired several image recognition companies in 2000s which still did not evolve into any public product or service, which means that the technology is still being developed and/or integrated into Google Image Search and Picasa, Google's photo management application.

Conclusion

We have analyzed the evolution of business models used in software and internet industries, identified the key factors that should influence the choice of the business model, such as the presence of network effects and advertising effectiveness. We have defined the segments of software and content businesses and identified key problems in each of them, and showcased existing solutions and proposed yet untapped opportunities in both content distribution and social software. In particular, we have shown how social networks could be monetized by implementing a portal strategy and why recent monetization and value addition efforts were less of a success than it was expected.

We are yet to see if the proposed solutions would be adopted by social networks. On July 23rd, Facebook will hold a conference at which it is expected to unveil the new monetization policy³⁰. Some of the recommended actions were already taken by major players. V Kontakte, for example, just unveiled a job board, vshtate.ru, which would evidently bring revenues from recruiters. V Kontakte, overall, is following a very reasonable strategy that does not even involve advertising (since they know it is ineffective, and because of the delayed revenue principle).

We hope that performed analysis will help improve the understanding of the business aspects of web startups and this industry will see less failures. On the other side, we hope that social networks will find a proposed way of monetization effective enough to be pursued since that would clearly mark a step towards a more social web and wider internet adoption, which in our understanding is inevitable part of technical progress.

³⁰ Or at least give some clue to the reason for purchasing servers for \$200 million recently (K. Swisher, 2008)

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