

# Virulent word of mouse

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..... Never underestimate the ability of enterprising firms to direct basic human behavior toward achieving commercial goals. It is in the spirit of that observation that this column discusses a clever strategy for the dissemination of client software built on the normal human propensity to make recommendations.

This strategy is often given the cute and misleading label "word of mouse." Alternatively, it sometimes has the more suggestive label of "viral marketing." These labels have meaning, since the strategy is, in fact, a firm's deliberate attempt to build what a nonvirtual marketing director would recognize as word-of-mouth or contagion marketing into Internet software applications.

The strategy has received its share of hype in the high-tech business press. For example, just last June *The Industry Standard* called viral marketing "perhaps the most influential idea in the Internet economy right now." Such hype is not new to the Web, but does invite a slightly more skeptical approach to understanding this phenomenon.

How is word-of-mouse different from standard diffusion by word of mouth? What conditions are crucial for employing the strategy? Why is it we mostly hear of viral marketing used by new firms? Can any firm, even an old stodgy one, make use of it, and if not, why? When do companies that grow this way become valuable and why?

Let me tip my hand. The hype exaggerates the merits of this strategy, whose usefulness is confined to uncommon (though interesting) circumstances. To be sure, when it works, this strategy makes it easy to build a new service with remarkable speed. Moreover, the types of opportunities it works well with, while specialized, will likely exist for quite some time—particularly in Internet software. However, the strategy requires extreme luck or uncommon entrepreneurial savvy. Thus, most firms won't find this strategy useful, particularly established businesses unwilling to take high risks. The strategy is hard to use, but interesting for observers to watch.

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### A background story

An excellent illustration of this strategy is the history of Hotmail, an early, free e-mail service, presently owned by MSN. A Hotmail user acts as an advertiser for the service in two ways: the word Hotmail is in a user's e-mail address, as in "johndoe@hotmail.com," and every e-mail footer contains "Get Your Private, Free E-mail at <http://www.hotmail.com>." Thus, with every e-mail, a user makes a recommendation, and the URL makes it easy for others to act.

Hotmail grew phenomenally fast, reaching 12 million users in a year and a half. It spread quickly throughout the US and in other countries. Indeed, the installed user base was so large that the company became an attractive merger target. Hence, its sale to Microsoft was

profitable for both the founders and the venture capitalists that backed them. This is about as close as high tech comes to get-rich-quick. As it happens, this type of growth is not as easy as it looks. Nor is it easy to replicate.

The venture capitalist firm that backed Hotmail was Draper, Fisher, and Jurvetson. In the popular telling of this story, Tim Draper, the managing partner, gets credit for suggesting the URL in the footer and for coining viral marketing. This firm, as well as several others, continues to back the strategy and develop the technique in new contexts. Today viral marketing is standard in many Internet start-up business plans.

### Get behind the strategy

No single strategy is ever a panacea for every firm. The question naturally arises: when does word-of-mouse work?

The strategy works well, first, when it's easy for the first user to make a recommendation, and second, when it's easy for the friend to act on the recommendation. Third, and this will become clearer in a moment, it's easy when it demonstrates the value of a new function. Finally, this strategy depends on many factors that influence functionality on the Internet.

The first two conditions, making it easy to make and act on a recommendation, are probably the strategy's most appealing feature. If users like a product, they show their friends. Using a product is also an endorsement. The product spreads by its very use. Popular or useful products

get more attention, spreading from one user to the next. Both firms and users benefit from this pattern.

Internet-greeting cards or online invitations are examples of how enterprises grow with viral marketing. In online greeting cards, one user sends another user an e-mail, notifying them about the card, which is actually a Web page that the receiver can inspect. These pages are mildly customized with names and greetings, and often include cute cartoonish graphics. If a receiver likes this, they can easily go from their card to the order page. Online invitations work much the same way. The Web pages include the standard invitation with directions, an RSVP, and perhaps directions for what type of salad to bring to the party.

Blue-Mountain Arts developed the greeting card service first (though they are now heavily imitated). After several years with this application, with the intent of cross marketing their nonvirtual greeting card business, they are now trying to capitalize on their large online user base.

Evite, an online invitation company, illustrates a related approach. Its success depends on user cooperation; yet, user cooperation comes more readily when commercial motives are less explicit. That is, the activity is likely to grow if the installed base develops with a softer, gentler model for revenue generation. Hence, Evite explicitly downplays its commercial motives.

If a firm offers a free service and soft-pedals its own commercial motives while the service is growing, how does this strategy lead to revenue generations, profitability, and long-term economic viability?

### One key condition

To date, most viral marketing users focus on growing and developing an installed user base for a particular application. Once large, companies hope the user base remains—that users continue to use the original service. If the user base displays stability, the business can either go public, merge with someone else, or sell advertising. This pattern reveals the strengths

and limitations of viral marketing.

The strategy presumes that the first developer can limit competitors and imitators and keep its users. But there is the rub. Wouldn't all firms love to own an application that grows fast and retains users even in the face of imitators? So why would a small firm necessarily better succeed at developing new sticky applications than a large firm? (Sticky is the Web industry's description of users who often return to a site, stay there a long time when they do visit, and remain loyal in spite of the entry of imitators.)

The answer is the high-tech version of the old joke about the \$20 bill in the street gutter. Everyone passes it up with the thought, "If that were really a \$20 bill, someone would have picked it up by now." We would all like to be the finder, but doing so requires a combination of perception and lucky timing.

In other words, if it were obvious how to develop a new sticky application, then many established firms would have done it by now. Successfully developing such a product depends on having the right combination of imagination and luck, and having it before anyone else. Once a lead is built, the product's stickiness ensures that latecomers have a difficult time building similar networks.

If a young firm identifies the right combination of features to make the strategy work, it can make a huge return with the sale of those assets. If not, if the idea is off by just a bit, it creates the opportunity for someone else to quickly imitate it and start the "virus" on their idea. The imitator will build the installed base and make the sale.

As it turns out, some of the most sticky applications are those that facilitate communication or club formation. For example, ICQ, the Internet conferencing program, keeps users because everyone needs the same protocol to communicate. Unsurprisingly, sponsors of online voice systems attempt similar techniques for their services. Interestingly, many online pages try to form buying clubs such as Mercata, which increase in value as the user base grows.

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Getting the service right, reacting to feedback quickly, staving off competition with rapid response to imitation, building a club—these are all tough to do well at any firm, whether big or small. The successful firms have particular characteristics and are generally found in the entrepreneurial, fast-moving, and risk-taking parts of the economy.

Therefore, we get what economists and market ecologists often call a selection bias. Most successful users of viral marketing are lucky enough to get the right combinations of strategy and timing. We disproportionately hear about these firms. They are also excessively new. Hence, we should expect to observe an association between new uses and applications with viral marketing.

### Another key condition

Now consider the other half of the equation. Why do firms like Microsoft or AOL or Cisco prefer buying firms that employ viral marketing instead of developing these applications themselves? It is important to large firms to find new crucial applications that fit into their future platforms, therefore this is not a trivial question.

Most of the time, large firms have a natural advantage, particularly in setting interoperability and communications standards and developing new functionality. They have experience working with the IEEE and ANSI committees, they make alliances that favor their preferences, and they have access to distribution networks down which they can push particular standards or freeze out others. Large firms such as IBM and Microsoft have done this for years, and these advantages still exist today.

There are four related issues that motivate large firms to merge with small firms employing viral marketing.

- They don't have much choice because venture capitalists fund many different and small firms.
- It is easier, and possibly cheaper in the long run, to let a hundred new firms experiment with different applications and users, then buy the most

successful. From the platform-provider perspective—a firm that maintains a portfolio of applications for a variety of users—it is rarely worthwhile to take risks on large numbers of new applications. Certainly, platform providers will try to develop new applications, but they primarily monitor others, absorb firms in mergers, and grow through acquisitions.

- Platform providers have offensive and defensive reasons for buying new functions that grow through viral marketing. For example, AOL regarded ICQ as a potential tool for its already extensive set of communities, but also as potentially useful to their competitors for the same purpose. Similarly, Microsoft perceived Hotmail as a potential complement to its extensive investments in online network software, but also as a potential tool for a competitor to build an online platform. Indeed, sometimes it seems that Cisco merges with any frontier networking application that it perceives as a potential complement or threat.
- Many online users of viral marketing are complements to some other application. Online invitations and greeting cards are a natural complement to online calendaring. Online voice has applications in online games and conferencing. Firms building these functions are not really economical as stand-alone units and make more sense as part of a large-firm's platform. Large firms know this and explicitly try to act as an aggregator of these functions.

Commercial Internet technology is still in its cowboy days, characterized by widely distributed technical leadership and decentralized initiatives from unexpected corners. This is one of the Internet's most endearing features, but it is also symptomatic of commercial adolescence. There is room for viral marketing as long as this adolescence persists, because it gives small firms a chance to succeed.

### It depends on the Web

The commercial immaturity of the Web also contributes to the success of viral marketing because of its constantly changing nature. How many new sticky applications can there be? At any point in time, not too many. If it were easy, then there would be many.

Conditions change every week as new development tools diffuse, as a wider population gets access to broadband services, and as yesterday's new users gain greater familiarity with e-functions. A new function that did not gain much acceptance two years ago may find more receptive conditions today. Viral marketing is a perfectly good tool for building that application quickly.

This leads to the final paradox. Viral marketing depends on developers taking advantage of changes to underlying conditions. Firms need to demonstrate new functionality, while Internet functionality is expanding and expandable and while the Internet continues to enable new applications.

It seems reasonable to expect conditions to change frequently for at least a few more years. After all, the Internet is full of inventions that incubated among noncommercial users for many years before migrating into commercial use. This should remain consistent; there are simply too many students, amateurs, and hackers still at work, as well as commercial firms developing new tools.

There are obvious applications which someone will someday get right: voice messaging functions like e-mail, pictorial greetings like Web greeting cards, conferencing functions with more sophistication than ICQ, and scores of others associated with enabling electronic commerce such as billing or identity verification. Of course, if I have already thought of them, then somebody else has too. I am unlikely to ever find that \$20 bill.

The future will bring many more popular but unexpected applications. These will come from somebody clever, possessing imagination and the entrepreneurial spirit to develop the vision. It is a good bet that the business plan will include a hefty use of viral marketing.