



The Hype over Skype: Can It Go the Distance?

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Although Skype, which provides Voice over Internet Protocol (VoIP) telephony services and PC-to-PC calling, turns two years old on August 29, it remains unclear what kind of business this relative newcomer will turn out to be. Skype could remain a mere fad for techies, become a next-generation communications platform or evolve into the next eBay or Google, say Wharton experts.



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What's certain, however, is that Skype, which has offices in Estonia, London, San Francisco, Korea and Japan, is worth watching. The company touches on a handful of key trends -- peer-to-peer technology (using the computing power of a distributed network of PCs), the commoditization of telephone service and the viral nature of Internet marketing.

Here's how Skype works. It's a software application that allows people to talk and instant message for free using PC-to-PC connections. Users -- identified through names instead of numbers -- talk through a headset and microphone attached to their computers (although the connections require someone else to have Skype). But, unlike most other most other VoIP services, Skype uses peer-to-peer technology to combine the computing resources of all of its users -- not surprising considering that Skype CEO Niklas Zennström also created the Kazaa software that enables people to swap music files easily. Zennström says Skype is more than just a cheap way to have a conversation and notes that the company will be offering video and a host of other yet-to-be-created communication services in the future.

Meanwhile, it's hard to argue with Skype's numbers. Skype's software had been downloaded nearly 145 million times as of Aug. 4, and the company claims to have 47 million people using its services. More than 1.8 million people use SkypeOut, a pay service that allows users to call traditional phones from their PCs for low minute rates. Skype also charges for voice mail. "It's funny the way things grow," says [Barbara Kahn](#), a Wharton marketing professor and Skype user. "Skype just crept along and then there's this explosion."

The Network Effect

According to Kahn, Skype has gone from 100,000 users to 47 million in less than two years, largely because of viral marketing. Since starting to use Skype a few weeks ago, Kahn has already encouraged six friends to download the software. Wharton marketing professor [Xavier Dreze](#) uses Skype to make calls from his PC when traveling abroad to places like Singapore. At this point, Dreze isn't sure if Skype is a short-term phenomenon or the beginnings of the world's largest communications service, but he predicts that it will keep growing as long as users keep encouraging friends to sign on. "Skype now has a cult following, but the challenge is going to be making it mainstream," says Dreze. Wharton public policy and business professor [Gerald Faulhaber](#) agrees, adding that while Skype has gotten significant press coverage, it still remains "a techie delight that makes PC-to-PC calls. Whether it can make the leap to the big leagues will depend on shedding its image as primarily a geek thing," he says.

[Kevin Werbach](#), legal studies and business ethics professor at Wharton, acknowledges the challenges but still considers Skype to be an "underappreciated phenomenon in telecom. The fact that Skype has grown its usage by so much in such a short period of time without marketing is extraordinary," says Werbach.

Skype's potential has a few big investors placing bets. Speaking at the AlwaysOn Innovation Summit at Stanford University on July 20, Tim Draper, founder and managing director of venture capital firm Draper Fisher Jurvetson, said he invested about \$10 million in Skype after meeting with Zennström. Draper also funded Hotmail, a web-based email service that was acquired by Microsoft on New Year's Eve in 1997.

Steve McGeown, director of product management at Sandvine, a Waterloo, Ontario-based company that makes equipment for broadband networks, says Draper's bet could pay off. McGeown's colleagues use Skype regularly when traveling and have been putting Skype numbers on their business cards -- a sign of mass market appeal. "Skype doesn't have a mass market yet, but I did get my first business card with a Skype number on it," says McGeown.

Migrating Toward Pay Services

For now, Skype is generating revenue by selling value-added services such as voice mail and the ability to call someone on a regular phone for a few cents per minute. In the future, Skype could sell subscriptions, charge small fees or license its software. According to Zennström, who also spoke at the AlwaysOn conference, if Skype can get just a sliver of the people who download its software to pay, it will generate profits because "we have no cost per additional user." Skype doesn't disclose its financials.

Faulhaber says Skype's challenge is to begin as a free service and migrate toward pay services. "Skype can't just be a low end player. If it is, it just becomes the cheap spread without a lot of profit." Kahn argues that the model of providing free services and then charging for extras can work. "You get used to free [service], but you also get dependent on it. Once you can't live without it, you will be willing to pay a small fee." To Werbach, the question isn't whether Skype can be profitable, but whether it can be hugely profitable. "Can Skype scale profitably? Is it a moderate opportunity or a Google-sized opportunity?" he asks.

Another plank of Skype's emerging business model is partnering with hardware companies to put the company's software on various devices. McGeown says Skype has the potential to turn the traditional telecommunications model -- where providers give customers inexpensive phones in exchange for monthly service fees -- inside out. "The business model won't be long distance and additional services per se," says McGeown. "The smartest thing they are doing is licensing software for handheld devices and phones."

If Skype gets enough users, he adds, it could be bundled onto handheld devices and collect a fee, say \$1, for each one sold. These handhelds would be the customer's primary purchase since service would be essentially free.

And even if that doesn't pan out, McGeown predicts that Skype can build a profitable business by selling video conferencing services to companies and individuals. "These small services can have enormous margins," says McGeown. "If Skype develops a mass market it will only need a small percentage of customers to buy services to be financially sound."

One problem could be quality of service, says Faulhaber. He notes there are sometimes delays of just a fraction of a second that make Skype's voice service jumpy. For instance, a call from Singapore to a telephone line can experience small delays that results in two parties talking over each other. Dreze says PC-to-PC calling on Skype is more reliable. Until service is as reliable as regular phone lines, Faulhaber predicts that Skype will be used as a supplement to existing telecommunication services. Werbach, however, suggests that Skype will become part of a stable of services used by customers. And for international travel calls, he adds, Skype may be the leading choice.

The Regulation Game

According to Faulhaber, one of the biggest challenges for Skype will be walking the line between operating as a telecommunications company subject to regulation and being a software company that operates under the Federal Communications Commission's radar. For instance, Vonage and the regional Bells have been squabbling over allowing 911 emergency calls to travel over Internet telephony. Vonage can now offer 911 calling, but customers have to note their location -- Internet telephony can't tell where the call originates from -- and acknowledge that they realize that 911 calling may not be available all the time due to broadband or electric outages.

The fact that some basic services aren't always available is a knock against Internet telephony and services like Skype. "The thing about the phone is that it's always available," says Faulhaber. "VoIP will migrate to becoming more feature rich, but it has to become more reliable."

For now, Zennström's position is that Skype isn't a voice service at all. When asked whether Skype would enable 911 emergency calling services, Zennström said he didn't see the need. After all, Skype isn't necessarily a local telephone service. According to McGeown, that argument illustrates how positioning is critical when it comes to regulation. "All these companies are living a big lie," he notes. "Vonage says it's not a competitor to Skype because Skype is PC-to-PC. Skype says it's not a voice replacement and that's smart since there is a lot of baggage with voice. But when I'm in Korea I can't tell the difference between Skype and a regular call except that I don't get a bill with Skype."

Regulating Skype would be extremely difficult, if not impossible, adds Werbach. "The regulation issues are a challenge [for the FCC]. What extent could you apply regulation to a Luxembourg company with free software? It's hard to see how anything would be enforced." Skype may have to "walk a fine line, but it can't get sucked into that regulation fray," adds McGeown. "If it does, it could just become an underground business."

Takeover Target?

What the future holds for Skype is unclear. Its options include:

Skype could emerge as a new communications platform that ties voice and video, not to mention millions of people together via handheld devices. Regardless, Dreze expects Skype to face increasing competition from the likes of Microsoft, Yahoo and Google.

It could be acquired by an established communications or media company. Werbach says rumors about companies allegedly looking to buy Skype are a dime a dozen. Indeed, a report in CNET.com this week says that Rupert Murdoch's News Corp. allegedly discussed buying Skype for around \$3 billion, but that talks broke down. The big question is valuing Skype. When Zennström was asked how much Skype is worth, the CEO replied, "We don't know. We're happy to keep this a private company."

The company could be pulled into a regulatory fray over issues such as 911 calls as it grows into a de facto telecommunications company.

Or it could remain an underground movement that continues to garner millions of users across the globe and is able to skirt regulatory concerns altogether.

Another potential threat for Skype lies in cable and telecommunications companies that could

block its use. However, Zennström says such a move would be counterproductive for the telecoms. "People use the Internet to get access to services," he notes. "If a telecommunications company is blocking access to those services it's telling people to go away." Given that fact, maybe it would make sense for a telecommunications carrier to simply buy Skype. "A takeover has potential, but the culture and the history of the company would be a challenge for most major telecom and media companies," says Werbach. "I would be surprised, but not shocked, if it was acquired."

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