YAHOO!

Guess, three and a half years ago, if we were looking to start a business and make a lot of money, we wouldn't have done this.

—Jerry Yang, 1997

It was April of 1995—a key decision point for Jerry Yang and David Filo. These two Stanford School of Engineering graduate students were the founders of Yahoo!, the most popular Internet search site on the World Wide Web. Yang and Filo had decided that they could transform their Internet hobby into a viable business. While trying to decide between several different financing and partnering options that were available to them, they attended a meeting with Michael Moritz, a partner at Sequoia Capital. Sequoia, one of the leading venture capital firms in Silicon Valley, had been discussing the possibility of investing in Yahoo!.

Michael Moritz leaned forward in his chair. As he looked across the conference table at Jerry and Dave, he laid out Sequoia's offer to fund Yahoo!:

> As you know, we have been working together on this for some time now. We have done a lot of hard work and research to come up with a fair value for Yahoo!, and we have decided on a $4 million valuation. We at Sequoia Capital are prepared to offer you $1 million in venture funding in exchange for a 25 percent share in your company. We think that with our help, you have a real chance to make Yahoo! something special. Our first order of business will be to help you assemble a complete management team, after which we should be able to really start helping you to develop and manage your site's vast amount of content.
>
> Right now, the biggest risk that you guys run is *not* making a decision. You *have* to make a decision, because if you don't, someone else is going to run you over. You might get run over by Netscape. You might get run

> over by AOL. You might get run over by one of these other venture-backed start-ups. It is imperative that you make a decision now if you are going to survive. To help you make a decision, I am going to give you a deadline: tomorrow. If you don't want to do business with Sequoia, that's OK. I'll be disappointed, but that's OK. But you are going to have to call me by 10 A.M. tomorrow morning to tell me yes or no.[1]

Yang and Filo gazed around the Sequoia conference room and noticed the many posters of companies such as Cisco, Oracle, and Apple that were hung from the walls—all success stories from past Sequoia investments. They wondered if Yahoo!'s poster would someday join that group. The two were excited at the possibilities; however, they still had some decisions to make. There were several other financing options available, and they were still not sure if they wanted to accept Sequoia's funding. Yang responded:

> That sounds like a pretty fair offer, Mike. Let us talk this over tonight, and we will get back to you by tomorrow after we weigh all of our options. However you have to realize that we're still grad students, and we don't even usually wake up by 10 A.M., so can you give us until noon?

Yahoo!

Yahoo! was an Internet site that provided a hierarchically organized list of links to sites on the World Wide Web. It offered a way for the general public to easily navigate and explore the Web. Users could click through multiple topic and category headings until they found a list of direct links to Web sites related to their interest. In addition, Yahoo! offered a central place where people could go to just to see what was out there. This made it easy for people with little previous exposure to the Web to start searching through Yahoo!'s lists of links, often just to see if they could find something of interest. In a little over a year since its inception, it had become one of the most heavily visited sites on the Web.

But Yang and Filo believed Yahoo! had the potential to be much more than a way for Web surfers to find what they were looking for. In 1995, John Taysom, a vice president of marketing of Reuters, a London-based provider of news and financial data, called Jerry Yang to explore the idea of a Yahoo!-Reuters partnership. It seemed to Taysom that affiliating with Yahoo! could help Reuters to build a distribution network on the Web.

> "The first thing Jerry said to me," Taysom remembers, "was 'if you hadn't called me, I would have called you.'" Jerry *got* the news feed vision. He had been thinking about it for months. He further surprised Taysom by informing him that as far as he was concerned, Yahoo! was "not just a directory but a media property."[2]

Yang further believed that: "Primarily we're a brand. We're trying to promote the brand and build the product so that it has reliability, pizzazz, and credibility. The focus of the business deals we are doing right now is not on revenues but on our brand."[3]

Dave and Jerry at Stanford

David Filo, a native of Moss Bluff, Louisiana, attended Tulane University's undergraduate program in computer engineering. In 1988, Filo finished his undergraduate work and enrolled in Stanford's master's program in electrical engineering. Completing his master's degree, he opted to stay at Stanford and try for his PhD in electrical engineering. Extremely competent in the technical arena, Filo had been described by many as a quiet and reserved individual.

Jerry Yang was a Taiwanese native who moved to California at the age of 10. Yang was raised by his widowed mother and grew up in San Jose with his younger brother, Ken. Yang was a member of the Stanford class of 1990 and completed both his bachelor's and master's degrees in electrical engineering. Yang also opted to stay at Stanford for a PhD in electrical engineering. Also technically competent, Yang was considered much more outgoing than Filo.

Yang and Filo met each other in the electrical engineering department at Stanford; Filo was Yang's teaching assistant for one of his classes. They also both worked in the same design automation software research group. They became close friends while teaching at the Stanford campus in Kyoto, Japan. Upon returning to the Stanford campus, they moved into adjacent cubicles in the same trailer to conduct their graduate research. They both enjoyed working together, as their individual personalities perfectly complemented each other, forming a unique combination.

Their office was not much to look at, but it served as a place for them to work on their research as well as a place from which they could run their website. "The launching pad (for Yahoo!) was an oxygen-depleted, double-wide trailer, stocked by the university with computer workstations and by the students with life's necessities . . . that prompted a friend to call the scene 'a cockroach's picture of Christmas'."[4] Michael Moritz remembered his early visits to Jerry and Dave's cube:

> With the shades drawn tight, the Sun servers generating a ferocious amount of heat, the answering machine going on and off every couple of minutes, golf clubs stashed against the walls, pizza cartons on the floor, and unwashed clothes strewn around . . . it was every mother's idea of the bedroom she wished her sons never had.[5]

Mosaic and the World Wide Web

In 1993, the University of Illinois-Urbana Champaign's National Center for Supercomputing Applications (NCSA) revolutionized the growth and popularity of the World Wide Web by introducing a Web browser they had developed called Mosaic. Mosaic made the Web "an ideal distribution vehicle for all kinds of information in the professional and academic circles in which it was known."[6] It provided an easy-to-use graphical interface that allowed users to travel from site to site simply by clicking on specified links. This led to the widespread practice of surfing the Web, as people spent hours trying to find new and interesting sites. This easy-to-use browser for navigating the Internet was estimated to have 2 million users worldwide in just over one year.

Creating Jerry's Guide to the World Wide Web

With Mosaic's introduction in late 1993, Filo and Yang, along with thousands of other students, began devoting large amounts of time to surfing the Web and exploring the vast content available. As they discovered interesting sites, they made bookmarks of the sites. The Mosaic Web browser had an option to store a bookmark list of your favorite sites. This feature allowed users to return directly to a page that they had visited, without having to navigate through several different links. As the popularity of the Web quickly increased, so did the total number of sites created, which in turn led to an increase in the number of interesting sites that Filo and Yang wanted to bookmark. Eventually, their personal list of favorite Web sites grew large and unwieldy, due to the fact that the earliest versions of Mosaic were unable to sort bookmarks in any convenient manner.

To address this problem, Filo and Yang wrote software using Tcl/TK and Perl scripts that allowed them to group their bookmarks into subject areas. They named their list of sites "Jerry's Guide to the World Wide Web" and developed a Web interface for their list. People from all over the world started sending Jerry and Dave e-mail, saying how much they appreciated the effort. Yang explained: "We just wanted to avoid doing our dissertations."[7]

The two set out to cover the entire Web. They tried to visit and categorize at least 1,000 sites a day. When a subject category grew too large, subcategories were created, and then sub-subcategories. The hierarchy made it easy for even novices to find websites quickly. "Jerry's Guide" was a labor of love—lots of labor, since no software program could evaluate and categorize sites. Filo persuaded Yang to resist the engineer's first impulse to try to automate the process. "No technology could beat human filtering," Filo argued.[8]

Though engineers, Yang and Filo had a great sense of what real people wanted. Consider their choice of name. Jerry hated "Jerry's Guide," so he and Filo opted for "Yahoo!," a memorable parody of the tech community's obsession with acronyms (this one stood for "Yet Another Hierarchical Officious Oracle"). Why the exclamation point? Said Yang: "Pure marketing hype."[9]

Yahoo!'s Growing Popularity

At first, Yahoo! was only accessible by the two engineering students. Eventually, they created a Web interface that allowed other people access to their guide. As knowledge of Yahoo!'s existence spread by word of mouth and e-mail, more people began using their site, and Yahoo!'s network resource requirements increased exponentially. Stanford provided them with sufficient bandwidth to the Internet, but bottlenecks came from limitations in the number of TCP/IP connections that could be made to the two students' workstations.[10] Additionally, the time required to maintain the site was becoming unmanageable, as Yang and Filo found themselves continually updating their Web site with new links. Classes and research fell behind as Yang and Filo devoted more and more time to their ever-expanding hobby.

Competing Services

A number of businesses already existed in the Internet search space. While none offered the same service that Yahoo! did, these companies could definitely provide potential competition to any new business that Yahoo! would start. Among the competitors were Architext, soon to be renamed Excite, Webcrawler at the University of Washington, Lycos at Carnegie Mellon, the World Wide Web Worm, and Infoseek, founded by Steven Kirsh. AOL and Microsoft in 1995 represented larger competitors who could enter the market either by building their own capability or acquiring one of the other start-ups.

Yahoo!'s human-crafted hierarchical approach to organizing the information for intuitive searches was a key component of its value proposition. Rob Reid, a Venture Capitalist with 21st Century Internet Venture Partners, explained how this made Yahoo! unique among Internet search providers.

> The Yahoo! hierarchy is a handcrafted tool in that all of its . . . categories were designated by people, not computers. The sites that they link to are likewise deliberately chosen, not assigned by software algorithms. In this, Yahoo! is a very labor intensive product. But it is also a guide with human discretion and judgment built into it—and this can at times make it almost uncannily effective. . . .

> This is the essence of Yahoo!'s uniqueness and (let's say it) genius. It isn't especially interesting to point to information that many people are known to find interesting. *TV Guide* does this. So do phone books, and countless Web sites that cater to well-defined interest groups. . . . But Yahoo! is able to build intuitive paths that might be singularly, or even temporarily important to the people seeking it. And it does this in a way that no other service has truly replicated.[11]

However, if Yahoo!, as a business, was to survive and flourish in the face of increasingly well-funded competition, it would quickly need to find some outside capital.

Leaving Stanford and Starting the Business

Yang and Filo had been in Silicon Valley long enough to realize that what they really wanted to do was to start their own business. They split much of their free time between their Internet hobby and sitting around thinking up possible business ideas.

"A considerable period of time passed before it occurred to them that the most promising idea was sitting under their noses, and some of the credit for their eventual illumination belongs to their PhD adviser, Giovanni De Micheli. Toward the end of 1994, De Micheli noted that inquiries to Yahoo! were rising at an alarming rate. In a single month, the number of hits jumped from thousands to hundreds of thousands daily. With their workstations maxed out, and the university's computer system beginning to feel the load, De Micheli told them that they would have to move their hobby off campus if they wanted to keep it going."[12]

By fall of 1994, the two received over two million hits a day on their site. It was then that Jerry and Dave commenced the search for outside backing to help them continue to build up Yahoo!, but with only modest hopes. Yang thought they might be able to bootstrap a workable system, using personal savings to buy a computer and negotiating the use of a network and a Web server in return for thank-you banners. Unexpected overtures from AOL and Netscape caused them to raise their sights, although both companies wanted to turn Filo and Yang into employees.

If they were going to abandon their academic careers (as they soon did, six months shy of their doctorates), they reasoned that they should hold out for some control. Filo and Yang had three main potential options to explore: (1) sell Yahoo! outright; (2) partner with a corporate sponsor; (3) start an independent business using venture capital financing.

The Search for Funding

Looking to receive funding and create a credible business out of Yahoo!, Filo and Yang began preliminary discussions with potential partners in October 1994. One of the first people who contacted them was John Taysom, a vice-president of marketing at Reuters, the London-based media service. Taysom was interested in integrating Reuters' news service into Yahoo!'s Web pages. Yahoo! would gain the advantage of being able to provide news services from a well-known source, while Reuters would be able to begin developing its own presence on the Internet. Unfortunately, since Yahoo! did not generate revenues, it was in a poor negotiating position. Talks between the two were cordial, but they also progressed very slowly.

Yahoo! also talked to Randy Adams, founder of the Internet Shopping Network (ISN), a company that styled itself as "the first online retailer in the world." ISN, funded by Draper Fisher Jurvetson, was one of the first venture funded Internet companies. It had recently been purchased by the Home Shopping Network, in order to expand its possible exposure. ISN was interested in being a host site for Yahoo!, offering them the chance to finally generate some revenue. However, there were also definite possible disadvantages that came from being associated with a shopping network.

Another company that approached Yahoo! was Netscape Communications Corporation. Founded in April 1994 by Jim Clark, who also founded Silicon Graphics, and Marc Andressen, who created the NCSA Mosaic browser with a team of other UIUC students and staff, Netscape was a hot private company developing an improved browser based on the old Mosaic technology. Andressen contacted Yang and Filo over e-mail and, in Yang's words said, "Well, I heard you guys were looking for some space. Why don't you come on into the Netscape network? We'll host you for free and you can give us some recognition for it."[13] This was a fortuitous contact that allowed Yahoo! to move itself off of Stanford's campus. By early 1995, Yahoo! was running on four Netscape workstations.

Soon after, Netscape offered to purchase Yahoo! outright in exchange for Netscape stock. The advantage of this option was that Netscape was already planning its initial public offering and had tremendous publicity and momentum behind it. Coupled with high profile founders and backers like Clark, James Barksdale, former president and CEO of AT&T Wireless Services, and the venture capital firm Kleiner Perkins Caufield & Byers, this offer was a potentially lucrative one for the two Yahoo! founders. Additionally, Netscape's company culture was more in tune with what the two students were looking for, in comparison to some of the more established market players.

Corporate Partnerships

Yahoo! was also feeling tremendous pressure to partner or accept corporate sponsorship from other large content companies and online service providers like America Online (AOL), Prodigy, and Compuserve. These companies offered the carrot of money, stock, and/or possible management positions. They argued that if Yahoo! did not partner with them, as large players they could develop their own competing services that would cause Yahoo! to fail. One potential disadvantage with corporate funding was the potential taint that came with such sponsorship. Yahoo! had started as a grass-roots effort, free of commercialization. A second disadvantage was the lack of control that the two Yahoo! founders would have over their creation. "Building Yahoo! was fun, particularly without adult supervision. (Dave) and Jerry were also worried that selling to AOL would have 'most likely killed' Yahoo! in the end."[14]

With partner discussions beginning to heat up, Yang requested help from Tim Brady, a friend and second-year Harvard Business School student. As a class project, Brady generated a business plan for Yahoo! during the 1994–1995 Christmas vacation. (See the Appendix for excerpts of the business plan circa 1995.)

With Brady's business plan in hand, Filo and Yang began to approach different venture capital firms on nearby Sand Hill Road. Venture capital firms brought experience, valuable contacts in the Silicon Valley, and most importantly, money. However, they also required substantial ownership in return for their services. One venture firm that the Yahoo! founders approached was Kleiner Perkins Caufield & Byers. KPCB had an excellent reputation as one of the most prestigious VC firms in the Silicon Valley, and their list of successful investments included Sun Microsystems and Netscape. KPCB showed a definite interest in Yahoo!; however, Vinod Khosla of KPCB and Geoffrey Yang of Institutional Venture Partners had just invested $0.5M in Architext (later renamed Excite), another company started by Stanford engineering students that was developing a search-and-retrieval text engine. Architext was receiving increased press coverage, with a March 1995 *Red Herring* magazine spotlighting the company and its venture capital partners. KPCB proposed to fund Yahoo!, but only if they agreed to merge with Architext.

Sequoia Capital

Another venture capital firm that Yahoo! approached was Sequoia Capital. It was during partnership discussions with Adams at the Internet Shopping Network that Yang and Filo were first introduced to Michael Moritz, a partner at Sequoia Capital. Moritz went to visit Jerry and Dave, who were at the time still operating out of their tiny Stanford trailer. Said Yang, "The first time we sat down with Sequoia, Mike (Moritz) asked, 'So, how much are you going to charge subscribers?' Dave and I looked at each other and said, 'Well, it's going

...Wiley and Sons, New York, p. 256.

to be a long conversation."[15] Fortunately, Moritz, who came from a journalistic background at *Time* was flexible in his thinking. Some of the major advantages that Moritz brought to the negotiating table were his contacts with publications and knowledge about how to manage content. Moritz talked about the roots of Sequoia's interest in working with Yang and Filo. "I think we are always enamored with people that seem to be on to something, even if they can't define that something. They had a real passion and a real spark."[16]

Sequoia Capital had a long tradition of success in the venture capital market, citing that the total market capitalization for Sequoia backed companies exceeded that of any other venture capital firm. Sequoia's trademark *modus operandi* was funding successful companies using only a small amount of capital. Its list of successful investments included Apple Computer, Oracle, Electronic Arts, Cisco Systems, Atari, and LSI Logic. Said Moritz, Sequoia preferred "to start wicked infernos with a single match rather than 10 million gallons of kerosene."[17]

In February 1995, Filo and Yang were weighing a number of possibilities and in no hurry to accept any of them, when Michael Moritz made them an offer. Sequoia Capital would fund Yahoo! for $1 million and would help them to assemble a top management team. In return, Sequoia would receive a 25 percent share of the company. Additionally, Moritz gave them only 24 hours to accept the deal before it was pulled off the table. "I felt a need to deliver them from the agony of indecision," claimed Moritz. With the deadline quickly approaching, Yang and Filo sat down to weigh their options. The decisions that they made that night would determine the direction of their careers as well and the future of Yahoo!

The Decision

Sitting in their tiny office on the Stanford campus, Jerry and Dave shared a late-night pepperoni and mushroom pizza as they explored their options and tried to come to a decision. It was already getting pretty late, and they only had until noon the next day to make their decision.

Yang took a bite from his pizza as he looked over the terms sheet that Sequoia had given them.

> We have some pretty tough decisions to make, and Michael has really forced the issue now with this 24-hour deadline. As I see it, we have a couple of options. The first is to accept Sequoia's offer and launch Yahoo! as our own company. We would be giving up a significant percentage of Yahoo!, but we really need the money if we are going to survive. Moritz and the rest of the resources at Sequoia could also prove to be invaluable as we try to assemble the rest of our management team.

Our second option is to accept corporate sponsorship. This would allow us to get the funding we need and still retain 100 percent ownership of Yahoo!. However, I am worried about selling out to corporate America. We were fortunate to be able to develop our site in an educational setting as a noncommercial free site. I am afraid if we accept the corporate sponsorship, it will taint Yahoo!'s image.

Finally, we could agree to merge with an existing corporation. The word is that Netscape is pretty close to their IPO, and Architext has some really big time investors behind it. If we merge with Netscape or Architext in exchange for stock options, it could mean a lot of money for us in the next couple of years.

Filo got up from his seat and kicked aside some of the empty pizza boxes that had started to accumulate. He walked over to Yahoo!'s tiny office window and stared at Stanford's Hoover Tower, which was barely visible in the distance.

It's true that we could make some money if we sell to Netscape or Architext, but we would have to give up primary control of Yahoo! if we did. We would never know what we could have done if we would have maintained control of the site ourselves.

There is also a fourth option you forgot to mention. I'm excited by Sequoia's offer, but I'm wondering if maybe we are giving up too much of our company. A fourth option could be to not decide tonight and look for better terms with another VC firm. I know Michael said that we should decide quickly, but I would hate to give up 25 percent of our company, only to find out in a week that another firm would have offered us $3 million for the same percentage. I know that time is really important, and we like working with Michael Moritz. On the other hand, I don't want to be regretting our decision two months from now.

As they grappled with the alternatives facing them, Filo and Yang began to envision life outside of the Stanford trailer in which Yahoo! was born. It was well past 2 A.M., and they had to make a decision in less that ten hours. What should they do?

Questions

1. What makes Yahoo! an attractive opportunity (and not just a good idea)?
2. How will Yahoo! make money (i.e., business model)?
3. Identify the major risks in each of these categories: technology, market, team, and financial. Rank order them.
4. What are the advantages and disadvantages of each of the funding options they could pursue? Which one do you recommend?