Cedar Point Communications

Michael Novak

UMBCMWP 1037

January 2008

E9 (Entrepreneurship)

CEDAR POINT COMMUNICATIONS

Michael A. Novak

ABSTRACT

Cedar Point Communications, a telecom company founded in 2000 by four engineers, barely survived its first year. The bottom fell out of the telecom industry in 2000-2002. However, its radically innovative yet simple VoIP system (hardware and software) for integrating multiple telephone functions and services was a major breakthrough in the industry, allowing cable companies to offer full telephone service to their customers in addition to video and internet access. Telephone service has been the major growth area for cable companies over the last few years. In 2000, Cedar Point had 75 competitors. In 2007 it has three: Cisco, Nortel, and Seimens. Cedar Point has 22 top tier customers in 14 countries, including Comcast and Liberty Media International and 100% of the market in Ecuador and Columbia. Cedar Point has had strong revenue growth each of the last five years. In 2001 it had 20 employees and has 250 today. This case describes Cedar Point and its challenges from its near-death first year to 2007. The crucial question facing this currently successful company is: what should their next major steps be?

I. INTRODUCTION

Cedar Point Communications (CPC), a worldwide leader in integrated VoIP switching technologies for cable and telecommunications industries, was honored as the "Top IPO or M&A Candidate" in the third annual "Leading Lights" telecommunications industry awards program on November 15, 2006. Cedar Point was chosen from a group of six finalists in judging by the editors of Light Reading publications and Heavy Reading analysts. The Best IPO or M&A Candidate, Private Company honor is "awarded to the private company that most clearly has the management, products, and financial stability to launch a successful IPO or to be acquired on its own terms within the next 12 months." "From Cedar Point's earliest days, the company recognized the market potential for a simple, cost-effective, scalable voice switching platform," said Andy Paff, president and CEO. "We're grateful to our employees and our customers for their contributions to our success and to the editors and analysts of the Light Reading family for recognizing our success."

In May 2007, CPC received the Red Herring 100 Award as one of the top 100 most promising North American startups to lead the next wave of disruption and innovation. Past winners include Google, Yahoo!, Skype, Netscape, Salesforce.com, and YouTube. Technology industry executives, investors, and observers regard the Red Herring 100 list, selected by *Red Herring's* editorial team, as an invaluable instrument to discover cutting-edge companies. While such recognition by peers and observers is welcomed, CPC leadership realizes that they face important challenges and that crucial strategic decisions need to be made and made soon. According George Kassas, founder and Executive Vice President of Global Business Development, the key question is: what steps does CPC need to take at this time? CPC has always been a leader by innovation and wants to remain one. How do they best maintain the creative control necessary to produce industry-leading innovations and maintain their strong financial position? . Incremental innovations have continually improved its radically innovative initial product and kept it competitive. Are they sufficient? For how long? Does Cedar Point need another radical innovation? Should they remain private or go public? Should they grow via M&A?

Cedar Point's SAFARI C3 Multimedia Switching System is the only integrated carrier class VoIP switch that incorporates all of the components that make up the voice switching infrastructure. Further, it brings value to the network by providing SIP-based features and seamless evolution to an IP Multimedia System (IMS) architecture. SAFARI provides superior performance and reliability, significantly reducing capital expenditures as well as system integration and operations costs for network operators offering telephony services, while increasing network integrity, security and privacy. It allows network operators to leverage their initial equipment investment in voice as they introduce such services as video telephony and fixed-mobile applications. New applications can be integrated into SAFARI or can be accessed via third-party application servers. The name SAFARI is an acronym for the main characteristics of the product: Simple, Affordable, Flexible, Adaptable, Reliable, Integrated.

II. IN THE BEGINNING

In 2000 after sixteen years at Lucent, George Kassas was getting bored. He was ready to spread his wings, to go out on his own as an entrepreneur, ready to take risks. During their last few months at Lucent, Kassas and 3 other engineers met over dinner every Thursday to discuss entrepreneurial possibilities. They noted that competing local exchanges such as Celex and Paytech were evaporating daily. At the same time, cable companies were rich in cash, were upgrading their networks, and were looking for the next product to keep revenues growing. Video and internet services were plateauing.

In putting together this initial team, Kassas tried to make sure that they had the necessary technical and business expertise. They were engineers who had worked with many clients over the years. To this team, Kassas added a friend who was a serial entrepreneur to help them develop a business plan. Many engineers are essentially risk-averse. The question facing Kassas and his team was how willing were they to take a risk: to start to build a new product? He soon learned that he had to be ready to adapt, to lead with conviction, and to make controversial decisions.

Upon leaving Lucent, Kassas and the initial team recruited additional members (15-16) from people they had worked with before, essentially from Lucent and Nortel where there were engineers who had Class 5 switching expertise. They looked for people with 10-15 years of experience in the industry and with a skill area that was needed. They needed to have expertise in architecture, software, hardware, internet protocol, and/or HR. Some narrow areas of expertise were needed—e.g., bullet proof expertise against software hacking. Finally, they needed to be creative, smart, problem solvers who were open to new ways of thinking. In the southern New Hampshire/northern Massachusetts area, there were many similar startups competing for the same type of people. CPC had an in-house referral program such that if a new employee stayed for three months, the referrer would receive a fee of $3-5 thousand. While they could not pay well at the start, they could offer the chance to be part of a creative adventure with great potential. This was attractive to some who already had successful careers with established companies.

New Product Idea. Their new product idea was to create the first integrated VoIP switch that incorporates in a single unit/box all of the components that make up the voice switching infrastructure. This solution is like a single stereo unit someone can buy off the shelf with all the audio components already built in. All anyone needs to do is plug it in. This compares favorably to more complicated stereo or home theater setups with individual components (often from different companies) that need to be assembled and integrated at home, taking many hours if not a few days. The founding team wanted to address a focused marketing opportunity by providing a solution that is based on proven technology, is less complex than competing solutions, and dramatically improves the customer's profitability. Their integrated VoIP switch would give cable companies a new service to offer their customers, providing a new revenue stream beyond the video and high speed internet service they were already providing. Cable companies had zero knowledge of telephony but that was where they saw their growth and where they wanted to go. CPC saw this and decided to focus on the needs of the cable companies.

There were many competitors in 2000 for the product they envisioned. There were 75 startups and established companies in soft-switching for VoIP and they spend about $800 million in marketing their

architectures. Unfortunately, in 2000 the bottom fell out of the telecom industry. 2000-2002 was a very bad time for telecom technology companies. Yet, that was what CPC was trying to be.

Most of their competitors were 'best of breed,' each providing one superb piece of functionality needed by the operators (e.g., a cable company). Integrating 7-8 separate pieces was further complicated by the fact that their development cycles did not coincide. Each time a 'best of breed' supplier came out with a new version of their single piece that led to integration problems and additional operating costs for the operator. Essentially, for a cable company such as Comcast, their integrated network of multiple functions would 'blow up'. Integrating the new version was not simple or easy. Comcast technicians had to figure out how to get the new version to work with the older functions provided by other suppliers. Operators such as Comcast had to deal with 7-8 vendors of the needed software and hardware. Comcast, for example, had no technical knowledge of how to bill for phoning or how to pass a phone call from New Hampshire where there is Comcast cable to Chatham where there is no Comcast. Cable companies seeking to provide primary phone line E911 phone service needed to comply with CALEA, passed in 1996, but had no idea how to do it.

Could CPC create this integrated switching box it had envisioned—something no one else had yet done? For the first 14 months (roughly from September 2000 to October 2001), CPC had very limited funding. The team of 20 lived from venture capital payroll to payroll on a two-week basis. During those months they were architecting the product and developing the basic operating system. Architecting the box (that is, deciding and designing what features to keep and what to cut) took 9 months. They had no money to add more people and, therefore, could not develop additional functionality (i.e., 6 of the 8 envisioned functionalities were not being worked on). At auctions of bankrupt companies, they bought test gears for their code and hardware. The telecom industry was down in 2000 and that meant little VC interest in cable with telephony. Wireless and optical networking were the hot areas. Then came 9/11, creating more VC uncertainty. The question at CPC was: are we going to survive? With their limited initial funding and with maxing out their personal credit cards, they kept their resolve. At this point (September-October 2001) they were looking for possible buyers. Juniper and Lucent could buy their nascent product but made no offers.

Proof-of-Concept Prototype. After 14 long, grueling months, they developed and built the basic chassis for their integrated system and the first 2 (of 8) cards—the system controller and the switch fabric, connecting traffic from point A to multiple points. More specifically, on September 1st, 2001, they received the first chassis (box) that determined the number of slots and size and heat dissipation. Over the next month they completed and installed the first 2 cards. On November 1st, they shipped their first simple product to a major customer's lab (Comcast) for testing. It was their proof-of-concept prototype. The test documentation was only 4-5 pages. However, the key pillars had been identified along with a sequential development plan for each additional card. They were on their way to solving the complexity issues of integrating the 8 essential telephony functions.

A little later in November, after 14 months in development and after over 50 presentations to VC's (each sharpened their pitch), two VCs like what they saw enough to put up $20 million in funding. Once this new funding was received, CPC got calls from experienced engineers who wanted to work for them. Now they could work on developing additional product functions.

III. ONGOING CREATIVITY & INNOVATION

Creativity and Innovation at CPC. Creativity, essentially incremental creativity, is a continuous process at CPC and spans the entire development cycle. Kassas states "We are always looking for any and all new ideas or solutions to improve our product, our processes, our markets, our relationships. Obviously, our chief architects of hardware and software are expected to come up with new ways to improve our hardware and software."

In Marketing, CPC is always looking for new markets for our applications as well as new uses or benefits for current customers. For example, DNT is a customer using SAFARI C3 (the latest version of their integrated VoIP hardware and software) in its telecom company. DNT also runs a charter airline,

taking people to the Caribbean. Kassas suggested that they could offer their vacationing customers international phone service from anywhere in the Caribbean as part of a charter vacation package. "Given that DNT already owns SAFARI C3, they could provide SIP phones for a small charge and provide excellent and relatively inexpensive phone service for their travelers. The Caribbean is notorious for its expensive and relatively poor international phone service."

Not surprisingly, CPC engineers have huge amounts of assigned work (e.g. coding) that needs to get done. Their efficiency and productivity on such tasks are important. At the same time, in the course of getting their work done, they may come up with new solutions to problems that they encounter . Every 3-4 months, CPC legal people meet with engineers (individually or in small groups) to discuss issues they've been working on and solutions they've come up with (e.g., such as reducing heat dissipation) to see if any of them are patentable. Kassas explains, " We don't expect the engineers to spend time figuring out whether or not their solutions are patentable. If a solution is patentable, the person or people who came up with it get their name(s) on the patent. The patent, of course, belongs to the company. Patents are important intellectual property (IP) for the company, improving its valuation. The payoffs for the employees who come up with patentable solutions are (a) getting their names on the patent(s), (b) knowing they have added value to the company, (c) getting recognition by everyone in the company, and (d) recognition by peers in their professional community (e.g. engineers)."

The challenge of meeting customer demands. There are a variety of customers who value/want/need different things that often are in some conflict with one another. The Advanced Engineering Team headed by the CTO is concerned with future capabilities and standards and whether or not CPC's products will be able to meet them. The Strategic Engineering Planners are concerned with what customers will need or want in video, voice, etc. in 3-5 years. The Operations people want reliable, stable equipment with no bugs and new releases that are the same. The Marketing people want everything yesterday to fill their customer orders. The Financial people want costs contained and strong revenue. To accomplish all the above, Kassas explains that "we need balanced innovation. We need to create value every day. The challenge is to determine how much and what kind of investment to put into creating value in each of those areas. What's the proper balance?"

Collaboration. CPC uses teams and collaboration for determining how to move forward. First, there are the customer facing teams that need the appropriate engineering and marketing skills as well as culture and language skills. Each team needs to learn what their customers will be needing in 6 to 18 months in terms of applications. As such CPC needs to be a multi-local company in dealing with the variety of customers across the world. These teams come back to headquarters and need to communicate the customer future needs as they understand them to engineering, finance, business development, and sales. Often this communication falters if it is mainly via email. Understanding gets lost. Face-to-face conversations and discussions are needed.

CPC also has a cross-functional team comprising the directors and/or vice presidents of Finance, Field Service Engineering, Application Engineering, Tech Support, Testing, Training, and Documentation. (See the CPC organizational chart in Table 1.) This team meets with the program managers for their various customer groups: cable operators, carriers, universities, and CLECs (competitive local exchange carriers). For example, cable operators utilizing CPC products include Comcast, Charter, Insight, Atlantic Broadband, Bresnan, Buckeye, Metrocast, and cable overbuilder RCN. These managers give input on customer needs to the team whose job it is to make decisions on what exactly to put into the upcoming release—e.g. release XXX of SAFARI due out in August 200?—and how to tailor the release for the various markets—US, Europe, Latin America, Asia. In addition to serving the cable industry in the United States, CPC has become the phone switch of choice for operators in Latin America, the Caribbean, Europe, and the Mediterranean. After beginning with the cable VoIP market, CPC expanded to working with a number of universities to trial SAFARI C3 in the campus setting. Further, in May 2007, Lawrence Berkeley National Laboratory in Berkeley, California tested the capabilities of SAFARI CD3 among its researchers and staff.

ServiceClass Partner Program. To provide leading innovation in products and services to their various customer groups, CPC established the ServiceClass Partner Program. Carriers and cable operators need end-to-end solutions to generate new revenue and growth, and enterprise networks and educational institutions need reliable VoIP solutions to drive down communications costs and improve productivity and user satisfaction levels. Technology companies need to work closely together to provide the necessary integration that will allow network operators to rapidly implement a highly cost-effective, scalable and reliable service offering. The ServiceClass Partner Program brings best-in-class technology leaders and their products and services together into a set of standards-based packaged solutions to meet customer demands.

There are three partner levels. At the basic level, partners provide high-quality products and services that complement SAFARI C3. Partners are listed as partnering with CPC, share test results and joint marketing and sales activities. They can also showcase their products in the ServiceClass Integration Lab. At the next level, *Elite* Partners have either had their products successfully pass interoperability testing with SAFARI C3 or SafariView EMS, or they are professional service organizations that have been trained in using SAFARI C3. Elite Partners gain increased customer confidence after successful interoperability testing with SAFARI C3 as well as the ability to position their products and services as a proven part of a best-in-class solution. In addition to the benefits of the *Elite* level, *Win Elite* Partners have had their products deployed in a customer network with SAFARI C3 or SafariView EMS, or they have provided professional services to support either or both Safari systems. Moreover, *Win Elite* Partners receive a discount on CPC equipment for lab use. CPC has over two dozen partners, including Lucent Technologies, Motorola, and Toshiba.

Table 1.

CPC Organization Structure

President

CTO

Product Management	*New Business Development*	*Engineering*	*Operations*	*Finance*	*Sales*	*HR*
-Advanced Engineering -Prototyping -Application Engineering -Pricing	- New Markets - Incubation	-Hardware -Software -Sustaining	-Manufac-turing -Quality -Procurement -IT -Customer Support -Technical Support -Field Services			

Investors. CPC is a privately held company. Since 2002, CPC has received approximately $79 million in financing from private, venture, and strategic investors.

IV. CPC'S COMPETITIVE ADVANTAGE

Kassas sums up CPC's competitive advantage as "Our agility. We can adapt to new markets and new architectures. The initial platform (i.e., the basic architecture) we built has enormous flexibility,

enabling us to adapt to new applications from many different providers who partner with CPC." CPC's basic SAFARI architecture (hardware and software) was a radical innovation that cost about $50-60 million to develop. Kassas notes that "Over the past six years we have been developing incremental innovations to stay ahead of the competition and maintain leadership in various markets and enter new markets." CPC has doubled its revenue every year for the past few years (in the realm of $10s of millions). While revenue is currently strong and growing, it is no longer doubling every year. In terms of production, over the first nine months of 2007, CPC went from shipping one million to two million production lines. The founding team searched for two and a half years to find a CEO with the DNA in the markets CPC was going after and who could take the company to the next level. Key challenges and questions for the CEO and the executive team are "What's the next network going to look like? Where and how should we invest in R&D, what or whom should we acquire? With whom should we partner?"