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XCERT SOFTWARE, INC.

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1. SYNOPSIS

The case on Xcert Software, Inc., illustrates the operational and strategic issues encountered by a startup IT company in the Internet security business. Xcert faces difficulty in a number of areas: (1) finances, (2) future direction and leadership, (3) organizational structure, experience and size, and (4) marketing. This is a discussion case that introduces students to the competitive world of Internet business and provides them an opportunity to discuss and debate the myriad issues facing the founders of Xcert.

2. CASE OVERVIEW

Xcert's business is in developing Internet and intranet security enhancement technology. Xcert was founded in April 1996 and is headquartered in Vancouver, Canada. The company was founded by Andrew Csinger and Pat Richard. Andrew Csinger is a recent Computer Science Ph.D. graduate of The University of British Columbia. Pat Richard is the architect behind Xcert's technology and he is less than 25 years old. The company had 18 employees at the time of writing and most of them are young and highly skilled in IT. The office environment is informal and casual. Xcert is operating like a typical R&D center but resides in the heart of the financial district in Vancouver.

Xcert's solution to Internet security is public key infrastructure (PKI). PKI is a system of digital certificates, certificate authorities (CA), and other registration authorities that verify and authenticate the validity of each party involved in an Internet transaction. Xcert's PKI technology allows organizations of any size to issue digital certificates to their members. These organizations become their own CA and are empowered to issue digital certificates to their individual client base.

This case is about a startup company that is in transition from the dream stage to the reality stage. One of the issues that surfaces in the case is intra-industry competition. Despite being an early entrant into the Internet security business, Xcert faces brutal competition from companies such as Entrust, Nortel, VeriSign, and Netscape. The company is in financial crisis and is facing senior management issues. Xcert is currently being run like an R&D division of a large company. The problem with this is that Xcert has no revenue from existing products to finance their development activities. This raises the possibility of a merger or acquisition. If a merger or acquisition is pursued, whom should they select? What criteria should they use to evaluate the situation and the potential candidates? What value should be placed on Xcert's technology? As the two founders are both technically oriented and have little management experience, Xcert has long been searching for a CEO (chief executive officer) with experience in running a startup technology company. However, a new CEO would mean another big paycheck every month. Marketing is another central issue. Should Xcert be hiring more marketing people or should they be hiring more systems developers? Should they be focusing on selling the technologies to software developers or should they be selling off-the-shelf software packages? Finally, there are questions regarding (1) the composition of the board of directors, (2) partnerships/alliances with companies that are also competitors, and (3) the importance of setting up a branch location in the U.S.

3. PEDAGOGICAL OBJECTIVES

The case serves two teaching aims. First, the case allows students to confront and discuss real-life issues facing a startup IT company. The students analyzing the case are asked to provide alternatives and solutions to the problems by putting themselves in the positions of the founders of the company. The students come to understand the difficulty in managing a startup company and the various tradeoffs the management needs to make. Second, the case introduces various Internet security concepts to students. Xcert is a high-tech company in an emerging area—Internet and intranet security. Students are usually fascinated with Internet-related topics and this case provides an excellent opportunity to introduce them to various concepts in Internet security. As Internet security is a relatively technical and new area, two supplementary cases are provided to complement the main case. The first supplementary case, which is usually of great interest to those students who are more technically inclined, provides technical details on the technologies mentioned in the main case. The second supplementary case, *Internet Security—Digital Certificates*, can be used to introduce students to the concepts of public key infrastructure and digital certificates. Nevertheless, it should be stressed that the main case is self-contained and can be used without the supplementary cases.

4. TEACHING STRATEGY

The Xcert case has been used successfully in MBA and undergraduate courses in MIS and entrepreneurial classes. It can be taught within a single 80 to 90 minute session. Although the case has been used very successfully in upper-level undergraduate programs, the complexity of the issues involved makes it particularly valuable in MBA and Executive MBA modules. The case can be used with topics such as Internet, electronic commerce, or IT business.

This is a very rich case with a number of interrelated issues. I generally distribute the main and supplementary cases, as well as the suggested assignment questions (see below), ahead of time. Since this is a real case on an existing company, I encourage students to visit the web-site of the company (<http://www.xcert.com>) and try out the products (there is a demonstration program on the company's web-site).

I generally open the class discussion by having students describe the Internet security technologies mentioned in the case (i.e., public key infrastructure, digital certificates, certificate authorities, etc.) and discuss the importance of these technologies to electronic commerce. This discussion usually takes about 10 to 15 minutes. For the actual case discussion, it is useful to start with Xcert's competitive environment and organizational structure. For this section of the class, I focus on Porter's model, the value chain model, the strategic grid, and the use and effects of IT on competition. Where possible, I draw on student knowledge of Internet and electronic commerce. This portion of the class usually takes up about 10 to 15 minutes and the students quickly realize that Xcert is operating in a very competitive industry that has no established players or standards. The threat of new entrants is substantial. I spend the next 10 to 15 minutes discussing the long- and short-term strategies and the marketing plans the company should have. Students are generally divided into two camps—one camp argues for the needs to continue research and development at the expense of marketing whereas the other maintains that marketing is the key to survival. The former generally proposes the selling of the technologies to software developers as the means of competing in the industry while the latter group argues for the merits of selling software products. To wrap up this section of the class, I ask students the following question: "Undoubtedly Xcert needs both R&D and marketing to survive. What should be the right amount of resources to be allocated to each activity?" Students generally conclude that there is no fixed rule and suggest that the company should stay flexible and adjust as opportunities arise. Once the students have decided on the overall strategies of the company and its marketing plans, the rest of the issues can be discussed fairly easily. With the remaining time, students can be asked if they would venture into the Internet security business. Most point to the hyper-competitive nature of the business and a company's ability to sustain a long period of losses.

5. SUGGESTED ASSIGNMENT QUESTIONS

1. Characterize Xcert's existing competitive environment.

2. What are the management challenges that Xcert faces since the inception of the company? What are the implications of these challenges on Xcert's strategies and organizational structure?
3. Who should they market their technology to (i.e., end users, software firms, consulting companies)? What should be the short-term and long-term marketing strategies? What are the risks? Can Xcert build barriers to entry and, if so, how?
4. How should Xcert manage their partnerships with other companies? Should they look to form strategic alliances with other companies? If so, what type of companies should they consider? What requirements should they make in their agreements?
5. What advice would you give to Xcert regarding:
 - (a) whether to open a new branch in US? If yes, which location?
 - (b) whether to hire a CEO? If so, what skills should they look for?
 - (c) the composition of the board of directors?
 - (d) the current financial crisis?
6. What lesson can you draw from the case regarding the Internet security business.