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ApProtect

Executive Summary

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The Business

ApProtect develop a revolutionary software protection technique that will stop crackers from violating software copyrights. At the first stage ApProtect will focus on the $6.7 billion online video games industry, an industry that is probably the no. 1 victim of piracy, but also, ironically, the industry that is least protected against unauthorized use. ApProtect's vision is to become the standard for software protection on all platforms (PC, cellular, handheld, game console…) and result in software sales increase by several-fold.

Market Opportunity

Most state of the art software protection techniques are easily cracked. The few resistant software protection techniques involve expensive hardware and are therefore impractical for the low-cost software market, e.g., home entertainment software, especially computer games. In addition, these techniques are too complicated to be practiced by software developers who should be focused on developing their own software.

The lack of cost-effective software protection techniques coupled with the availability of peer to peer technology and high bandwidth internet connections leaves the software industry extremely vulnerable to theft which leads to high piracy rates. "Last year, the world spent more than $50 billion (US dollars) for commercial packaged software that runs on personal computers (PCs). Yet, software worth almost $80 billion was actually installed." (BSA 2003 study). This 36% piracy rate refers only to the business software market. The situation in the residential software market is much grimmer and is deteriorating as the number of residential broadband Internet subscribers increases. An IDC analyst recently stated that the Internet is the no. 1 source for piracy.

According the IDC, the video game market size was about $22.4 billion during 2004. Surveys show that appropriate protection in the video games market may yield a 125% increase in revenues. During a conversation with ApProtect's management, some CTO and VP-R&D of several computer games companies have confirmed the aforementioned reasons for not using software protection within their product. They

have also expressed their will to purchase, at the right price, software protection that will stop the great losses that they experience due to piracy.

Unlike the case for offline games, ApProtect's technology requirement for connectivity to the Internet is seamless for the online games. Therefore ApProtect management sees an easy penetration to this market. During 2004 IBM analysts stated that "The online games market is expected to expand from $6.7 billion in revenues this year to $31.4 billion in 2008".

Technology

ApProtect's patent pending technology for software protection can provide practically unbreakable protection at low-costs that suits the home entertainment software market in particular. This breakthrough technology is based on the idea that software can be protected only by executing part of the code on a separate impenetrable device. ApProtect's method of protection involves wisely choosing parts of the code to be non-local (de-centralized) so as to maximize the software performance while minimizing the theoretical possibility of reverse engineering and unauthorized use. ApProtect's technology also includes a unique mechanism for recognizing attempts to bypass the protection system. Software protection is not the only benefit of this technique, it can also be used to protect a secret algorithm from being exposed, provide pay-per-use facilities and more.

ApProtect's technology works as follow. At the first step the binary (distribution, not source code) version of the software application goes through an automatic process that is called "software decentralization". Two products are outputted at the end of this process: one is called the "secret code" and the other is called the "protected version". The secret code is installed on an impenetrable server that is usually owned by the software company. The "protected version" is installed on the client/user computer. The application on the client computer will work only while the client computer is connected to such a server (usually through the Internet). The installation process of a protected version is as simple as the installation process of any other software application – no special steps should be taken. The server operator has full control and tracing capabilities over the software usage. New users can be added or deleted and various kinds of usage reports can be generated instantly.

This breakthrough technology, which was developed and tested by the founders, may be applied to most software that constitutes the PC packaged software market, the gaming consoles market (Microsoft Xbox, Sony PS2, Nintendo GCube), and the fast growing wireless gaming market. Moreover, as ApProtect's technology does not demand additional hardware, it can be priced at acceptable rates for the video games market. The only drawback of this technology – the requirement of continuous connectivity between the client and the server – implies no drawback in the case of the $6.7 billion fast growing online games market and the wireless gaming market as connectivity in these markets is already a necessity.

Business Model

ApProtect is capable of providing its technology both as a service or packaged software. When provided as a service, ApProtect takes care of all issues related to software protection. All the software developer has to do is to write the application (as he has always done) and sell it (after has been protected by ApProtect). This model has the benefit of totally freeing the software developer's mind of the protection task. The packaged software model, on the other hand, best suits a software company that already has the infrastructure required for hosting ApProtect's technology. From to the software developer's point of view, this model has the benefit of being independent of any third party.

In any of this cases, the pricing model may include license fees, installation fees and royalties.

Market Penetration and Revenues Forecast

Starting from the launching of the service model during the second half of 2006 and up until the end of 2006, ApProtect plans to have three customers, each protecting one of their titles. As these copies will be protected, we assume that around 1M copies of all the three titles will be sold during 2006. ApProtect will charge $50K for the decentralization process of each title plus $3 for the first year of each issued serial number (corresponding to a single user). This estimation reflects sales of about $3M during the second half of 2006. Taking in account the statistics of gamers consuming

habits and assuming a group of gamers that is spread around the globe, 500 servers will be needed. Annual maintenance costs of each such server, including its connection to the internet, electrical power interruption backup and all other expenses are projected to be about $700. Therefore, overall expenses of server maintenance are about $350K. The decentralization expenses are more than covered by the installation fee. Therefore, net sales for 2006 are estimated to be around $3M.

ApProtect estimates that at least an additional 10M serial keys will be issued during 2007 on behalf of the former titles and additional new titles. We project that the company will reach breakeven point during 2007 and become profitable shortly thereafter. ApProtect estimates that during 2008 50M serial keys will be sold and sales will amount to $150M.

	2006	**2007**	**2008**
Sales	3M	30M	150M
Gross Profit	2.5M	25M	125M
Operation Expenses	3M	10M	30M
Pre-Tax Income	-0.5M	15M	95M

Finances and Investment Opportunities

Currently, ApProtect has a protected version of a well known computer game that demonstrates the capabilities of the technology. ApProtect needs $1.5M for the completion of the product development and initial marketing activity. Up until now, the founders have operated at their own expense and are not bound to anyone.

The Founders

Yaron Ben-Shoshan

Yaron gained his M.Sc degree from the Electrical Engineering faculty of the Technion in 2002. He is a specialist in the distributed systems field. Yaron served as the project director in charge of the EE faculty software lab (2001-2003) and as the T.A. in charge of the microcomputers course (2000-2001). During his lab work, Yaron supervised the development of various software projects in the area of distributed systems. Yaron has gained an excellence degree for his job in the lab. Before his M.Sc studies, Yaron worked for Motorola Semiconductors (1997-2000) where he developed compression algorithms. Yaron gained his B.Sc degree in 1999, summa cum laude, from the EE faculty of the Ben-Gurion University.

Yair Koren

Yair is a direct course Ph.D. student at the Computer Science faculty of the Technion. He specializes in various algorithmic and optimization techniques. Yair is the T.A. in charge of the algorithms course at the Technion (2001-2004) and winner of the excellent T.A. award in 2003/2004. Yair gained his B.Sc. degree from the Haifa University in math and computer science (summa cum laude in both departments) in 2001 and served as T.A. in charge of the computational models and calculus courses at the Haifa University (2000-2001). Yair holds various distinction awards such as two yearly awards from the CS department at the Haifa University (2000 and 2001), excellent student award in the department of Mathematics at the Haifa University (2001), excellent student award in the faculty of sciences at the Haifa University (handed at the Kneset at 2001) a grant from Applied Materials for academic achievements in 2002 and the ministry of science's Eshkol scholarship for excellence. Yair has worked in the industry at I.B.M. (1998-2000) where he dealt with operating systems, distributed systems and networking. In addition he worked at Creo Ceitex (2002) where he researched improved image processing algorithms. Yair has several published and pending publication scientific papers.