



Class: IT & Strategic Opportunity
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¹ Image from Valve Software's website: <http://www.valvesoftware.com>

Introduction:

Companies in the video game creation industry have always been at the fore-front of the Digital Rights Management (DRM) battle between consumers and producers long before the music industry entered the DRM fray in the late 90's. Issues of cheap, perfect copies of games have forced these producers to advance this technology, which is seemingly thwarted at every new step by underground software groups reverse engineering the DRM implementations and distributing these “warez” versions of software – perfect unprotected copies – for free. This paper discusses the basic concepts behind DRM, super distribution, economic and marketing models, and then shows Valve software's approach to dealing with these specific DRM concerns as well as their super distribution model.

Digital Rights Management Model (DRM):

a) Digital Right Management

Digital Rights Management (DRM) “Allows a copyright holder to define a set of rules attached to a work in digital format that control consumer access, use, and manipulation of that work”. (Petrick, 4)

b) Super-distribution

Is “An online retailing scheme that encourages the free and widespread distribution of digital files (e.g., music files) that can only be opened under a restricted set of circumstances.” (McFedries)

c) How They Are Related

Super-distribution is related to DRM in that it employs the use of DRM in distribution of media to end users. Most digital products are “experience goods” – they must be experienced to know what they are worth, meaning end users need

to use the goods in some form before they are willing to buy them. (Shapiro, Hal Varian, 85) Digital files lend themselves to this distribution model as they are cheaply and perfectly reproduced. By including rights management in these files, end users can spread the actual content for the company by word of mouth (also called viral marketing² – a concept Google used with gmail), while the company retains the ability to collect payments for their intellectual property.

Economic and Marketing Concepts:

a) Versioning Products

This marketing concept is important to attract new customer and illicit new sales from these customers. By allowing customers to try a version with reduced functionality, it allows them to decide whether the product will fit their needs.

This fits particularly well with digital media, as it is primarily an experience good, and reproduction is essentially free. (Shapiro, Hal Varian, 91)

b) Giving Away Content

Information goods are experience goods. To know the true value of these products, end users need to experience them before they are going to be ready to buy them. Building on the versioning strategy, “The cheap versions (which can even be free) serve as advertisements for the high-priced versions” (Shapiro, Hal Varian, 86). By giving away these free products with DRM, it is essentially creating demand through viral marketing.

d) Growing the market

² A marketing phenomenon that facilitates and encourages people to pass along a marketing message. (Marketing)

Giving more than just free samples of content in traditional businesses normally goes against the generally accepted principles; this trend does not necessarily apply for information goods businesses. The ability to distribute an almost unlimited quantity of information extremely cheaply is a great opportunity. “The important thing is to *maximize the value* of your intellectual property, not to protect it for the sake of protection. ... The first thing to do is to recognize the fundamental trade-off between control and customer value.” (Shapiro, Hal Varian, 97). Creating a balance between selling price and quantity will lead to an optimal amount of profit made while at the same time expanding your market share as shown in the graph above (figure 1).

Figure 1: Demand Curve



Valves Solution:

Valve software, created in 1996, has produced some of the best selling, most enjoyable video games ever created. Their flagship product – Half-life – has received over 50 “game of the year” awards and has also received “Best PC game ever”. (Valve) In late 2004, Valve, commonly recognized as an industry leader, was ready to release their follow up product for their original hit – Half-life 2. There were many concerns for Valve though, as demand for their product was so high that DRM was critical in the release of their product – if there were no rights or very easily thwarted rights, sales would be disparagingly low. Indeed, software pirates had already broken into their servers and stole the source code to play this game – pushing the release date off by four months while they worked around this issue. (Morris) DRM implementation and the economic impacts of it were of critical importance to the success of this product.

Along with the common approach to distributing demo products on the Internet for free (versioning and giving away content), Valve decided to start down a new path for distributing this game. The full version of the game would be freely downloaded on the internet service known as “Steam” (Valve’s content server). Players who wanted the game could start downloading the game weeks before it was released in stores and install it. (Osborn) This version was exactly the same as the people who would buy the actual CD’s from the store. Before the game could be played (for either version), a player had to connect to a Steam server, and authenticate their CD-key against it. The Steam account also kept track of other games registered through it, and in effect, allows a player to play the game he purchased on any computer. (Amone) This distribution is a form of super-distribution, in which the files can be passed around from player to player for free but to actually play the game, in essence you need to purchase a CD-key. Valve exploited the super-distribution model and the economic models of growing the market and giving away content – turning the base content that was actually paid for into a CD-Key. The game was essentially free.

Illicit copying of software products (called software piracy) is a major fear for any software producer. By allowing their content to be distributed essentially for free, authenticating users and CD-Keys became a manageable problem to control piracy. Using DRM, they were able to focus their efforts into detecting pirates of software (typically many users using the same CD-Key). When a user was found to have done this, their account was shut-down, locking them out of other software that they purchased legally. This dramatically increased the cost of being caught to pirates – instead of being

caught and having to go out and buy the game, they now had to go out and re-buy all of their other related software as well; turning a \$50 cost into what could easily be \$100's of dollars. In short, the cost of being caught was made so expensive that actually buying the game was the cheaper way out:

Of course, as is the case with most popular software, would be pirates tried to crack Half Life 2's protection and play for free. Valve's response - [20,000 Steam accounts were shut down](#). Valve claims "there is no question that the accounts disabled were used to try and illegally obtain Half-Life 2."

As Geoff Gasior at [tech-report.com](#) notes, "disabling a user's Steam account locks them out of other games they may have purchased legitimately through the service." (Amone)

The success of this DRM system is not only enforced by statements that most users "actually quite like it now" (Unknown), but also that the rest of the gaming industry is carefully watching the outcomes of this model – Valve has already publicly stated that it is willing to license the Steam technology to other developers. (Unknown)

Conclusion:

Valve has once again defined itself as a software industry leader. By applying basic economic and marketing concepts, innovating distribution channels, and implementing super-distribution along with DRM, Valve has produced a system that most end users enjoy. The "Steam" system they have implemented enforces DRM and has created a new marketing distribution channel for the gaming industry. They were able to maximize the value of their product, even though the intellectual content was already leaked four months before the game was released. Although Valve's model may not be effective for all information goods, its innovative model should not be ignored for application to other industries – music, online books, and many more.

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