

DOWLING FOSTER KAY PRABHU-GUANKAR

# Netflix Market Entry, Diffusion, Dominance and IP

Lessons Learned and Future Challenges in the  
DVD-rental-by-mail and Streaming-video Markets

Intellectual Capital Management

Prof. James Conley



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## **Abstract**

Netflix has a competitive edge in the DVD rental industry over competitors such as Blockbuster, Redbox and Coinstar because of its strategies of market entry, diffusion, domination and its revolutionary patented business model. It uses a combination of patents, trademark, copyright and trade secrets to protect its intellectual property. This paper will analyze the key patent decisions by Netflix as well as their novelties. Netflix patented the online DVD rental business model including open-ended rentals for a fixed fee and sued Blockbuster for infringement shortly after release of the patent. Netflix also uses a patented in-house video streaming technology with an interface compatible to desktop and mobile devices. The location of Netflix warehouses is a trade secret in order to protect the resources and to prevent people from returning DVDs at the warehouse location.

## The History of Netflix, Inc.

### Before the IPO, 1997-2002

Netflix, Inc. was founded in 1997 by Reed Hastings, Marc Randolph and Mitch Lowe in Scotts Valley, California<sup>1</sup>. According to Hastings, the company's CEO, the idea for Netflix came to him after he was charged a \$40 late fee on a Blockbuster movie rental<sup>2</sup>. Netflix.com came online in April, 1998, and initially offered US customers DVD rentals by mail for \$4 per rental plus \$2 postage<sup>2</sup>. These rentals had no due dates, and, as Hastings' story/marketing ploy suggests, no late fees<sup>3</sup>. Initially, DVDs were shipped from a single distribution facility in San Jose, California<sup>2</sup>.

At the time Netflix.com was launched, DVD rental made up a tiny fraction of the roughly \$8 billion U.S. video rental market<sup>4</sup>. Of course, DVD rental would grow rapidly over the next few years, as shown in Exhibit # 1<sup>3</sup>. During Netflix's first two years, however, there was some question whether or not the company would survive to see the DVD takeover<sup>3</sup>. Hastings later described Netflix during this early period as "a typical Internet company" with "an ugly financial story, [and] not much hope of breaking even"<sup>1</sup>.

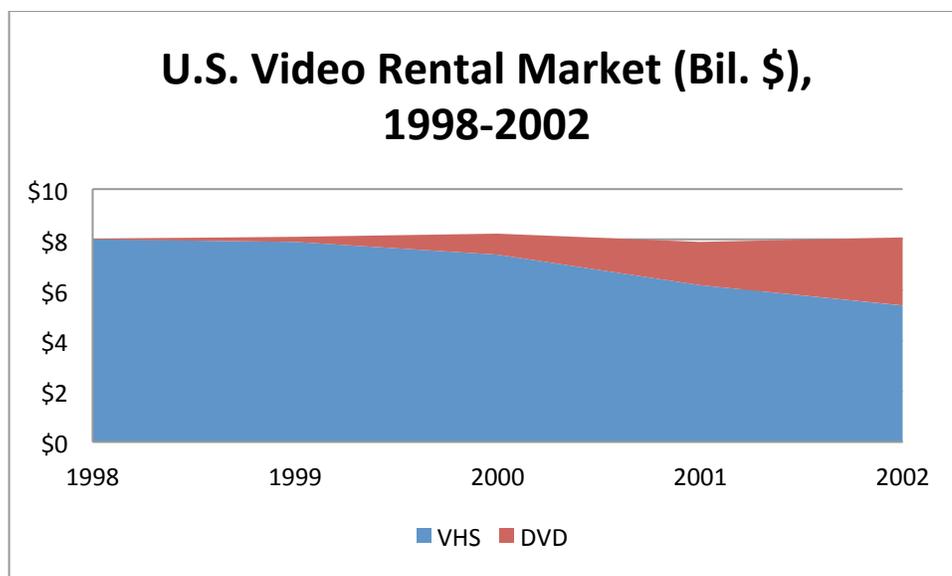
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<sup>1</sup> Funding universe, *Netflix, Inc.*, at <http://www.fundinguniverse.com/company-histories/Netflix-Inc-company-History.html> (last visited March 10, 2012)

<sup>2</sup> Jeffrey M. O'Brien, *The Netflix Effect*, WIRED MAG., Issue 10.12, Dec. 2002, at [http://www.wired.com/wired/archive/10.12/netflix.html?pg=1&topic=&topic\\_set=](http://www.wired.com/wired/archive/10.12/netflix.html?pg=1&topic=&topic_set=) (last visited March 8, 2012)

<sup>3</sup> Interview with Netflix CEO Reed Hastings, *How Netflix got started*, FORTUNE MAG, Jan. 28, 2009, at [http://money.cnn.com/2009/01/27/news/newsmakers/hastings\\_netflix.fortune/](http://money.cnn.com/2009/01/27/news/newsmakers/hastings_netflix.fortune/) (last visited March 8, 2012)

<sup>4</sup> Digital Sensei's blog, *Why premium video content is at risk of becoming a simple commodity*, Mar. 2, 2012, at <http://digitalsensei.wordpress.com/> (last visited March 6, 2012)



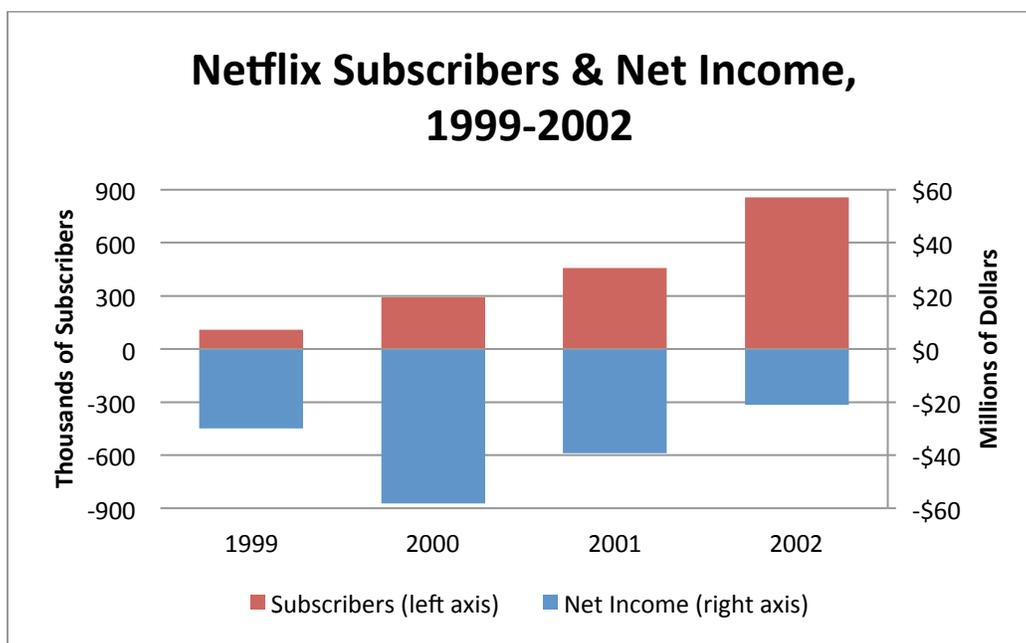
**Exhibit #1: Netflix Video rental revenue from 1998 - 2000**

For Netflix, hope came in September, 1999, when the company introduced its first monthly subscription plan<sup>2</sup>. Under this plan, customers paid \$19.95 per month to rent as many DVDs as they wanted, subject to the constraint that they could only rent 3 movies at a time<sup>2</sup>. This option proved more successful than the pay-per-rental option, and by late 1999, Netflix abandoned the pay-per-rental model altogether<sup>2</sup>. Throughout the following year, the company negotiated a series of revenue-sharing deals with the major movie studios<sup>2</sup>. Under these agreements, which were pioneered in the mid-'90s by Blockbuster, Netflix could purchase DVDs at cost and, in return, pay the studios a fee every time one of their movies was rented<sup>1</sup>. This, along with Netflix's rental-by-mail business model, allowed the company to offer an extensive catalog of over 12,000 titles<sup>2</sup>.

Following its transition to the monthly-subscription model and successful profit-sharing negotiations, Netflix began experiencing steady revenue growth<sup>5</sup>. From 2000 to 2001, revenue jumped from \$36 million to \$74 million<sup>5</sup>. To feed its rapid growth, Netflix initiated an IPO on May 29, 2002, selling 5,500,000 shares of common stock (NASDAQ: NFLX) for \$15 per

<sup>5</sup> Netflix, *SEC filings Home Page*, Mar. 2003 – Feb. 2012, at <http://ir.netflix.com/sec.cfm> (last visited Feb. 29, 2012)

share<sup>12</sup>. The company issued another 825,000 shares for the same price on June 14, 2002<sup>6</sup>. Exhibit #2 shows Netflix's number of subscribers and net income from 1999, the year it began using the subscription model, to 2002<sup>5</sup>.



**Exhibit #2: Change in Netflix # of subscribers and Net income from 1999-2002**

### Rise of the Online DVD Rental Market, 2003-2005

By early 2003, Netflix had passed the 1 million subscriber mark<sup>5</sup>. Needless to say, the company's rapid rise did not go unnoticed. Following Netflix's successful IPO, Wal-Mart announced plans to launch its own online DVD rental operations, and Blockbuster bought a Netflix copycat, DVDcentral.com<sup>7</sup>. Executives at Netflix recognized this as a threat, but also saw a silver lining. Up until that time, one of the company's biggest challenges had been converting customers to the DVD-by-mail/monthly-subscription model<sup>2</sup>. Now, the combined force of Wal-Mart's and Blockbuster's marketing budgets would help Netflix do the job. To take advantage of the increasing pie, Netflix opened 10 more distribution centers across the US in 2003<sup>2</sup>.

<sup>6</sup> Netflix, *10-K*, Annual report, 10 Feb. 2012, at <http://apps.shareholder.com/sec/viewerContent.aspx?companyid=NFLX&docid=2233293> (last visited Feb. 29, 2012)

<sup>7</sup> Aude Lagorce, *Netflix's Next Challenge*, FORBES MAG., Oct. 2, 2002, at [http://www.forbes.com/2003/10/02/cx\\_al\\_1002nflx.html](http://www.forbes.com/2003/10/02/cx_al_1002nflx.html) (last visited March 8, 2012)

Netflix also had a couple advantages over Wal-Mart and Blockbuster. By 2003, the company had built up a measure of brand recognition and loyalty; as the industry pioneer, the word Netflix was synonymous with online DVD rental. In addition, Netflix possessed something that Wal-Mart and Blockbuster did not, CineMatch<sup>2</sup>. This was the name given to the company's movie recommendation algorithm. Using a database of over 180 million customer film ratings, CineMatch produced new recommendations for subscribers based on their past ratings<sup>2</sup>. In the typical video store, roughly 200 titles generated 80% of rentals; however, due to CineMatch, 80% of Netflix rentals were generated by 2,000 titles<sup>1</sup>. This reduced costs by relying less heavily on hit films, which required higher revenue sharing fees<sup>2</sup>. In 2003, the CineMatch algorithm had a patent pending, and another would be filed in 2004<sup>8,9</sup>.

Despite these advantages, the market's initial reaction to Wal-Mart and Blockbuster's entry was to bring the price of Netflix shares down to \$3.28<sup>10</sup>. However, fears of a Wal-Mart or Blockbuster takeover never materialized. In the case of Wal-Mart, it was widely expected that the retail giant would compete on price; and, although this did occur<sup>7</sup>, Wal-Mart was unwilling to cut prices low enough to draw large numbers of subscribers away from the Netflix brand<sup>7</sup>. Blockbuster, on the other hand, was overly focused on the traditional movie rental market, to the neglect of its online DVD rental efforts<sup>11</sup>. Executives were quoted as viewing online DVD rental as a "limited business opportunity", given that in 2002 only \$200 million out of the \$8 billion in US movie rental spending came from online DVD rentals<sup>7</sup>. Thus, by the end of 2003, Netflix's market share in the online DVD rental market was 95%, exactly where it had been before the entry of Wal-Mart and Blockbuster<sup>7</sup>. Netflix also earned its first profit in 2003, earning \$6.5 million on \$270 million in revenue<sup>5</sup>. Exhibit #3 shows the growth of Netflix and Wal-Mart's stock prices from Netflix's IPO in 2002 to December, 2003<sup>10</sup>.

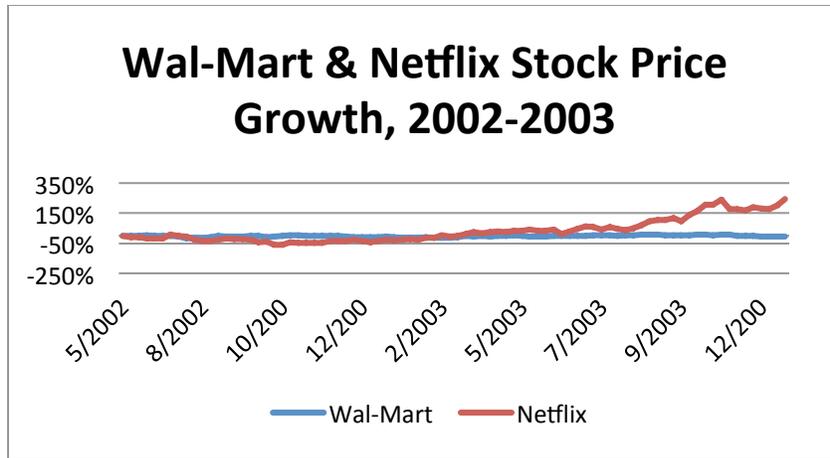
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<sup>8</sup> Espacenet.com, [http://worldwide.espacenet.com/?locale=en\\_EP](http://worldwide.espacenet.com/?locale=en_EP)

<sup>9</sup> See Appendix B

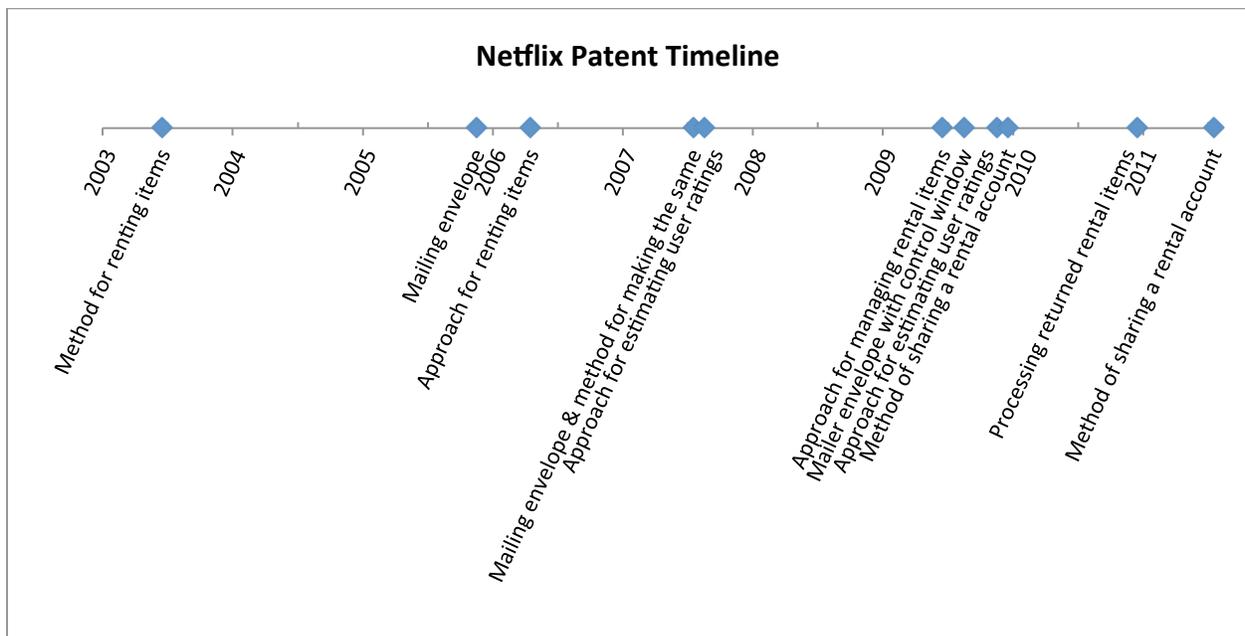
<sup>10</sup> Google finance, *Netflix .inc*, <http://www.google.com/finance?q=NFLX#>

<sup>11</sup> Bob Tedeschi, *E-commerce report*, April 28, 2003, at <http://www.nytimes.com/2003/04/28/business/e-commerce-report-blockbuster-moseys-online-two-competitors-are-already-running.html>, (last visited Mar. 5, 2012)

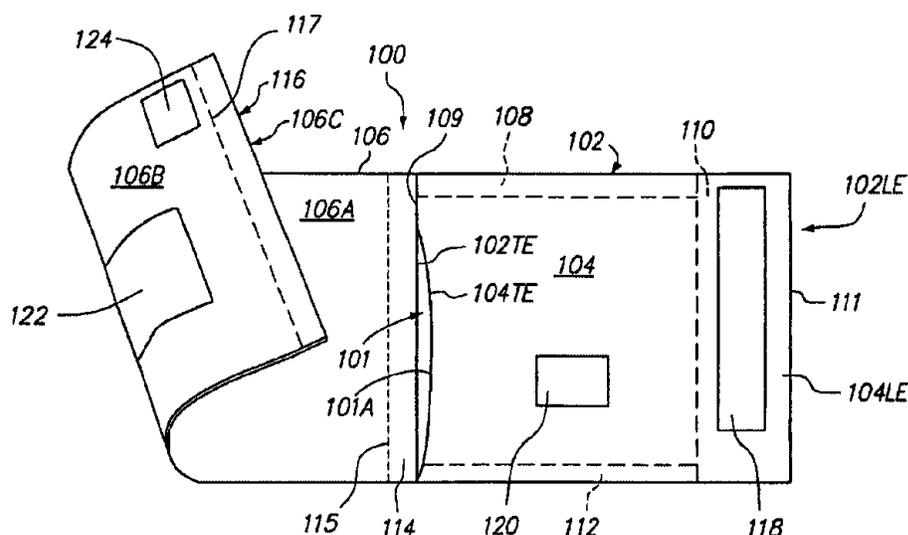


**Exhibit # 3: Growth of Netflix and Wal-Mart's stock prices from Netflix's IPO in 2002 to December, 2003**

During the years following its IPO, Netflix also received its first patents, which had been filed shortly after the company was founded<sup>8</sup>. The full timeline showing when patents were issued to Netflix is contained in Exhibit # 4<sup>8</sup>. As the timeline shows, the company's first patent, filed in April, 2000 and issued in June, 2003, was a utility patent for a "method and apparatus for renting items". As its title suggests, the patent granted Netflix temporary ownership of the operational process that the company used to rent DVDs. Netflix's second patent, filed in September, 2002 and issued in November, 2005, was a utility patent for a "mailing and response envelope". A sample of a drawing included in the patent application is shown in Exhibit # 5<sup>8</sup>.



**Exhibit # 3: Timeline showing when patents were issued to Netflix**



#### Exhibit # 4: Sample of a drawing included in the patent application

Interestingly, Netflix chose not to sue Wal-Mart or any of the many small Netflix copycats that had popped up by 2003 for infringement of its “method and apparatus for renting items” patent<sup>11</sup>. According to a spokesperson at the time, Netflix executives believed that “a great business is based on a great service, not a great patent”<sup>12</sup>. Of course, if Netflix had no intention of ever using the threat of patent litigation to its advantage, then why did the company’s founder and CEO apply for patents in the first place? A more likely explanation for Netflix’s restraint is that litigation was viewed as a negative NPV endeavor, given the strength of Netflix’s patent, the financial strength of Walmart, and the financial weakness of Netflix. Tellingly, when asked if the company would consider litigating in the future, the response was, “We haven’t made a decision yet”<sup>12</sup>.

#### Intellectual Property Wars, 2005-2007

By 2005, Wal-Mart left the online DVD rental market<sup>13</sup>, and Netflix was becoming too big for Blockbuster to dismiss<sup>5</sup>. While the online DVD rental market was still relatively small

<sup>12</sup> Lore Sjöberg, *Netflix Imitators Are Everywhere*, WIRED mag, 19 Feb., 2004, at <http://www.wired.com/techbiz/media/news/2004/02/62340> (last visited 12 March, 2012)

<sup>13</sup> Saul Hansell, *Wal-Mart Ends Online Video Rentals and Promotes Netflix*, NY times, May 20, 2005, at

compared to the overall movie rental market, it was growing fast and beginning to shrink the market that Blockbuster dominated<sup>14</sup>. In January of that year, Blockbuster eliminated late fees and launched its own online DVD rental service through Blockbuster.com<sup>15</sup>. However, the company had difficulty turning its 48 million customers into online rental subscribers<sup>7</sup>. By the end of the year, Blockbuster had approximately one million online subscribers<sup>7</sup>, compared to 3.6 million Netflix subscribers<sup>5</sup>. Without enough online subscribers to recoup the foregone profits from eliminated late fees, Blockbuster suffered a \$588 million loss in 2005 and closed 290 stores<sup>18</sup>. Meanwhile, Netflix's 2005 profits were \$42 million<sup>5</sup>.

Of course, Netflix executives were not at all happy about the one million online DVD rental subscribers that Blockbuster was able to obtain in 2005. So when Netflix was issued US Patent No. 7,024,381 on April 4, 2006, the company immediately filed a patent infringement lawsuit against Blockbuster in the US District Court for the Northern District of California<sup>16</sup>. The lawsuit alleged that Blockbuster had infringed on the patent Netflix had just been issued, which was a continuation of the Netflix's first patent, as well as Netflix's 2003 utility patent for a "method and apparatus for renting items"<sup>8</sup>.

In the fall of 2006, while the two companies were negotiating a settlement, Blockbuster signed an exclusivity agreement with the Weinstein Company, one of the major film studios<sup>17</sup>. The agreement would force Netflix to obtain copies of the studio's films through mass merchants or retailers, increasing their cost<sup>16</sup>. Given the timing of this move, it may have been part of an

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[http://www.nytimes.com/2005/05/20/business/media/20movie.html?\\_r=1&scp=5&sq=blockbuster%20netflix%202005&st=cse](http://www.nytimes.com/2005/05/20/business/media/20movie.html?_r=1&scp=5&sq=blockbuster%20netflix%202005&st=cse), (last visited 12 March, 2012)

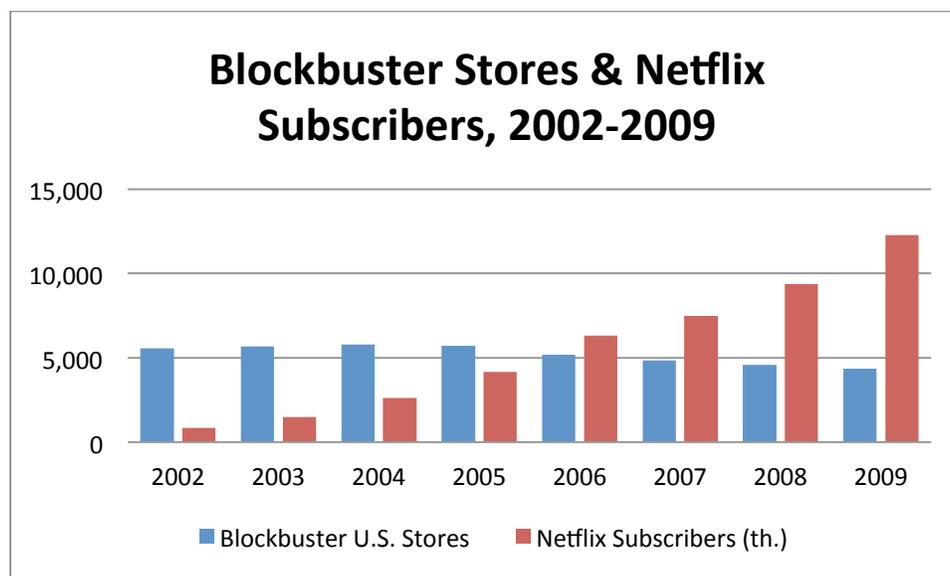
<sup>14</sup> Geraldine Fabrikant, MEDIA; Showdown Begins in Movie-Rental Business; Blockbuster Tries a Remake, NY times, July 26, 2004, at <http://www.nytimes.com/2004/07/26/business/media-showdown-begins-in-movie-rental-business-blockbuster-tries-a-remake.html?scp=6&sq=blockbuster%20netflix%202004&st=cse>, (last visited 12 March, 2012)

<sup>15</sup>Geraldine Fabrikant, So Far, Icahn's Midas Touch No Help to Blockbuster, NY times, Jan 16, 2006, at <http://www.nytimes.com/2006/01/16/business/16blockbuster.html?scp=2&sq=blockbuster%20late%20fees%202005&st=cse>, (last visited 12 March, 2012)

<sup>16</sup> Wikipedia, *Netflix*, at [http://en.wikipedia.org/wiki/Netflix#cite\\_note-151](http://en.wikipedia.org/wiki/Netflix#cite_note-151), *supra* note 152 (last visited 12 March, 2012)

<sup>17</sup> *So Far Blockbuster in Deal With Weinstains*, NY times, Nov. 16, 2006, at <http://select.nytimes.com/gst/abstract.html?res=F30E13F73C5A0C758DDDA80994DE404482&scp=1&sq=blockbuster%20wienstein&st=cse> (last visited 12 March, 2012)

attempt to increase Blockbuster's bargaining power in the settlement negotiations. Regardless, the two parties reached an undisclosed settlement on June 25, 2007<sup>18</sup>. At the time, Blockbuster released a statement claiming that the settlement would not have a major impact on its financial performance<sup>16</sup>. This may have been true; however, Blockbuster did end up closing 282 stores in 2007<sup>14</sup>, and would eventually file for bankruptcy in 2010<sup>19</sup>. Exhibit # 5 contrasts the experiences Netflix and Blockbuster during this period<sup>20</sup>. As the figure shows, Blockbuster's decline in stores began around 2006, the year the company was sued by Netflix for patent infringement.



**Exhibit # 5: Netflix and Blockbuster from 2002 - 2009**

Netflix also began employing an interesting approach to R&D in 2006. The company offered a \$1 million prize to the first developer of a video recommendation algorithm that could outperform CineMatch<sup>21</sup>. The winning algorithm would have to be able to predict customer

<sup>18</sup> Reuters, *Blockbuster settles fight with Netflix*, NY times, June 28, 2007, at <http://www.nytimes.com/2007/06/28/technology/28video.html?scp=1&sq=blockbuster%20netflix%20settlement&st=cse>, (last visited 12 March, 2012)

<sup>19</sup> Michael J. de la Merced, *Blockbuster, Hoping to Reinvent Itself, Files for Bankruptcy*, NY times, Sept. 23, 2010, at <http://www.nytimes.com/2010/09/24/business/24blockbuster.html?scp=2&sq=blockbuster%20bankruptcy&st=cse>, (last visited 12 March, 2012)

<sup>20</sup> Jay Yarow, *Netflix Takes Off As Blockbuster Fades*, Nov. 18, 2009, at [http://articles.businessinsider.com/2009-11-18/tech/29993690\\_1\\_netflix-big-one-stores](http://articles.businessinsider.com/2009-11-18/tech/29993690_1_netflix-big-one-stores)

<sup>21</sup> Steve Lohr, *A \$1 Million Research Bargain for Netflix, and Maybe a Model for Others*, NY times, Sept 21, 2009, at <http://www.nytimes.com/2009/09/22/technology/internet/22netflix.html?scp=3&sq=Netflix%20%241%20million%20prize&st=cse>, (last visited 12 March, 2012)

ratings with an accuracy that was 10% better than CineMatch<sup>21</sup>. This was no simple task; thousands of teams submitted algorithms, and it took the winning team three years to develop “Pragmatic Chaos”, an algorithm that used machine learning techniques<sup>21</sup>. The effort was notable in that it successfully solved a complex business problem through crowdsourcing<sup>21</sup>.

### Transition to Streaming Video, 2007-2011

As early as 2002, Netflix executives viewed sending videos over the internet as a potential option for Netflix. Hastings readily admitted that “DVD is not a hundred-year format” and recognized the need for a “second act” for Netflix<sup>22</sup>. The cost of sending a DVD-quality film over the internet, however, had always been too high for it to be a viable option; but by early 2007, broadband technology had made great strides<sup>23</sup>, and other competitive pressures were pushing Netflix to enter the streaming video market. Not least among these was the fact that both Apple and Amazon had announced movie-downloading services the previous year<sup>24</sup>. So in January 2007, Netflix unveiled a new streaming video feature that would be made available on the company’s website<sup>22</sup>. This feature, known as Watch Instantly, was free to Netflix subscribers, and gave them an hour of streaming video for every dollar they paid for their online DVD rental subscription<sup>16</sup>. In order to use the service, customers had to download and install special software; and the initial streaming catalog only included around 1,000 movies and shows (Netflix’s DVD catalog contained over 70,000 titles by 2007)<sup>22</sup>. As an indication of how important Netflix executives felt streaming video was for the company’s future, the service was expected to cost Netflix \$40 million dollars in 2007<sup>22</sup>.

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<sup>22</sup> Miguel Helft, *A Netflix to Deliver Movies to the PC*, NY times, Jan. 16, 2007, at <http://www.nytimes.com/2007/01/16/technology/16netflix.html?pagewanted=all>, (last visited 12 March, 2012)

<sup>23</sup> Streaming media blog, *Bandwidth Pricing Trends: Cost To Stream A Movie Today, Five Cents: In 1998, \$270*, Jan. 06 2010, at [http://blog.streamingmedia.com/the\\_business\\_of\\_online\\_vi/2010/01/bandwidth-pricing-trends-cost-to-stream-a-movie-today-five-cents-cost-in-1998-270.html](http://blog.streamingmedia.com/the_business_of_online_vi/2010/01/bandwidth-pricing-trends-cost-to-stream-a-movie-today-five-cents-cost-in-1998-270.html), (last visited Mar. 5, 2012)

<sup>24</sup> Saul Halsell, *A New Service From Amazon Offers Downloadable Films*, NY times, Sept. 8, 2006, at <http://www.nytimes.com/2006/09/08/technology/08amazon.html?scp=3&sq=apple%20amazon%20movie%20download%202006&st=cse>, (last visited 12 March, 2012)

Netflix's streaming service proved highly popular, and in January, 2008, the company made the decision to lift the cap on the number of hours of streaming video that each subscriber could view<sup>16</sup>. Then, in October of that year, Netflix signed a four-year, \$100 million deal with Starz Entertainment, adding 2,500 more titles to Watch Instantly<sup>25, 26</sup>. This was the first of several large deals over the next few years, the largest of which was a five-year, \$1 billion deal to stream movies from Paramount, Lionsgate and MGM in 2010<sup>27</sup>.

Following the successful introduction of Watch Instantly in the U.S., Netflix executives made the decision to expand their streaming service internationally. In September, 2010, the company entered Canada as a streaming-only service<sup>28</sup>. The following year, Netflix launched its streaming-only service in the Caribbean, Mexico, and Central and South America<sup>29</sup>. Meanwhile, Netflix's streaming service was growing rapidly in the U.S.; according to one survey, 33% of U.S. respondents said Netflix was their preferred source for online videos, followed by YouTube at 20%<sup>30</sup>. As a result, Netflix.com was the biggest source of North American web traffic in 2011<sup>35</sup>.

Netflix's successful domestic and international streaming services caused the company's stock price to soar to \$220 by September, 2011<sup>10</sup>. That month, however, the company announced plans to separate their U.S. streaming service from their U.S. online DVD rental

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<sup>25</sup> Brad Stone, *Starz Gives Netflix Fans a Reason to Stream*, NY times Bits, Oct. 1, 2008, at <http://bits.blogs.nytimes.com/2008/10/01/starz-gives-netflix-fans-a-reason-to-stream/?scp=1&sq=netflix%20starz%202008&st=cse>, (last visited 12 March, 2012)

<sup>26</sup> Tim Arango, *Time Warner Views Netflix as a Fading Star*, NY times, Dec. 12, 2010, at <http://www.nytimes.com/2010/12/13/business/media/13bewkes.html?scp=5&sq=netflix%20starz%202008&st=Search>, (last visited 12 March, 2012)

<sup>27</sup> Brian Stelter, *Netflix to Stream Films From Paramount, Lions Gate, MGM*, NY times mediacoder blog, Aug. 10, 2010, at <http://mediacoder.blogs.nytimes.com/2010/08/10/netflix-to-stream-films-from-paramount-lionsgate-mgm/?scp=1&sq=netflix%20paramount%202010&st=cse>, (last visited 12 March, 2012)

<sup>28</sup> Verne G. Kopytoff, *Shifting Online, Netflix Faces New Competition*, NY times, Sept. 26, 2010, at <http://www.nytimes.com/2010/09/27/technology/27netflix.html?scp=1&sq=netflix%20canada%202010&st=cse>, (last visited 12 March, 2012)

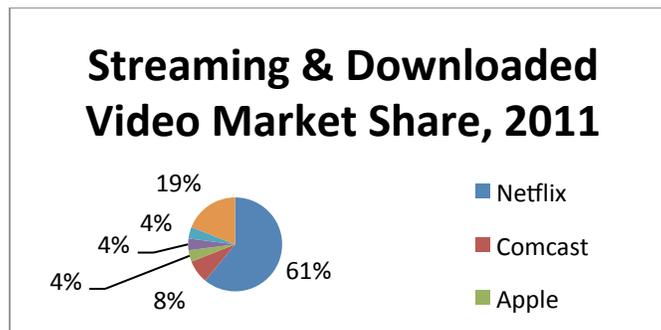
<sup>29</sup> The Associated Press, *Netflix Begins Expansion in Latin America*, NY times, Sept. 5, 2011, at <http://www.nytimes.com/2011/09/06/business/global/netflix-begins-expansion-in-latin-america.html?scp=4&sq=netflix%20mexico%202011&st=cse>, (last visited 12 March, 2012)

<sup>30</sup> Online marketing trends, *Netflix edges out Youtube for share of mind*, NY times, Mar. 16, 2011, at <http://www.nytimes.com/2011/09/06/business/global/netflix-begins-expansion-in-latin-america.html?scp=4&sq=netflix%20mexico%202011&st=cse>, (last visited 12 March, 2012)



second version was released in 2010<sup>34</sup>. Also in 2010, the streaming-TV-show website Hulu.com launched its subscription service, Hulu Plus<sup>35</sup>, and Walmart purchased streaming-video company, Vudu, Inc.<sup>36</sup>. Then, in 2011, Amazon began offering free streaming movies and shows to Amazon Prime members<sup>37</sup>; and Dish Network's streaming service, DishOnline, signed an exclusive deal with HBO and Cinemax<sup>38</sup>. Just last month, Comcast launched a new streaming video service, Xfinity Streampix<sup>39</sup>, and Verizon entered a joint venture with Coinstar to create an online streaming video service<sup>40</sup>. Unfortunately for Netflix, the entry of these competitors has coincided with the arrival of new problems in the content side of its streaming business. The company's success in streaming video has apparently prompted content providers to ask for higher fees upon contract renegotiation, as evidenced by the fact that Netflix's contract with Starz expired on March 1<sup>st</sup> after the two companies failed to reach a renewal agreement<sup>26</sup>.

Exhibit #7



<sup>34</sup> *Apple TV (fall 2010)*, NY times: personal tech, Mar. 12, 2012, at <http://techcrunch.com/2011/03/15/apples-video-store-nowhere-near-success-of-netflix-streaming/>, (last visited March 6, 2012)

<sup>35</sup> Brian Stelter, *Hulu Unveils Subscription Service For \$9.99 a Month*, Ny times: media decoder, June. 29, 2010, at <http://mediadecoder.blogs.nytimes.com/2010/06/29/hulu-unveils-subscription-service-for-9-99-a-month/>, (last visited March 6, 2012)

<sup>36</sup> Brad Stone, *Wal-Mart Adds Its Clout to Movie Streaming*, Ny times, Feb. 22, 2010, at <http://www.nytimes.com/2010/02/23/technology/23video.html>, (last visited March 6, 2012)

<sup>37</sup> Matt Richtel, *Amazon Couples Movie Streaming With Shipping*, Ny times: Bits blog, Feb. 22, 2010, at <http://bits.blogs.nytimes.com/2011/02/22/amazon-movie-streaming/>, (last visited March 6, 2012)

<sup>38</sup> Brian Stelter, *Dish Network Is Joining Other Carriers in Offering Its Content for Online Viewing*, Ny times, Aug. 23, 2010, at <http://www.nytimes.com/2010/08/23/business/media/23dish.html>, (last visited March 6, 2012)

<sup>39</sup> Brian Stelter, *Comcast Introduces a Streaming TV Service*, Ny times, Dec. 16, 2009, at <http://www.nytimes.com/2009/12/16/business/media/16comcast.html>, (last visited March 6, 2012)

<sup>40</sup> Amy Choziak, *Hulu Verizon Teaming With Redbox for DVD and Streaming Service* Ny times: media decoder, Feb. 6, 2012, at <http://mediadecoder.blogs.nytimes.com/2012/02/06/verizon-teaming-with-redbox-for-dvd-and-streaming-service/>, (last visited March 6, 2012)

For its part, Netflix is not going down without a fight. In January, 2011, the company announced that it had negotiated deals to include a Netflix button on remote controls for TV's, Blu-ray player's, and set-top boxes<sup>41</sup>. These red buttons, on remotes from companies such as Samsung, Sharp, Sony, and Toshiba, among others, connect users directly to the company's streaming service<sup>5, 41</sup>. An example of one such remote, by Toshiba, can be seen in Exhibit # 8. As such, this tactic is highly threatening to stand-alone streaming devices such as Apple TV. Not surprisingly, other streaming-video companies have copied Netflix's move. In May 2011, consumer electronics manufacturer Vizio announced the release of remote controls featuring both a Netflix and a Vudu button<sup>42</sup>.



**Exhibit # 8: Remote with Netflix button**

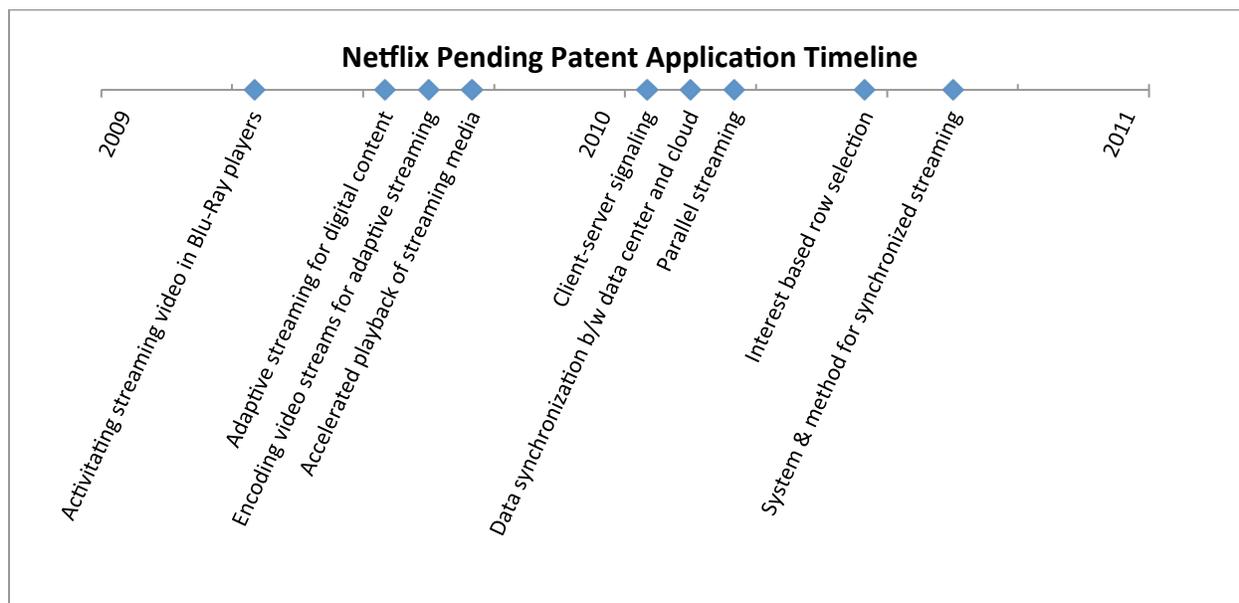
Netflix is also awaiting the approval of a collection of streaming-video patents that the company has filed over the past three years. As of today, nine Netflix patent applications for streaming-video related inventions have been published<sup>8</sup>. The filing times for each of these applications are shown in Exhibit # 9<sup>8</sup>. Clearly, the competitive landscape in the streaming video market would be drastically altered if Netflix, or one of its competitors, were issued a strong streaming-video patent. In the meantime, Netflix must find a way to leverage its existing

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<sup>41</sup> AVS Forum, June 28, 2007 at <http://www.avsforum.com/avs-vb/showthread.php?t=868112>, (last visited Feb. 5, 2012)

<sup>42</sup> Ryan Lawler, *Vizio's Vudu Button Highlights Race to the Remote Control*, Gigaom website, May. 23, 2011, <http://gigaom.com/video/vizio-vudu-remote-control/>, (last visited March 10, 2012)

physical, human, and intellectual capital to remain the online-DVD-rental and streaming-video market leader.



**Exhibit # 9: Filing time of pending Netflix patent applications**

## Netflix Today

### The Current Business Model: Online Streaming Video and DVD-by-mail<sup>43, 44</sup>

Netflix Inc. is the world's leading Internet subscription service for watching TV shows and movies. Netflix currently has a market capitalization of roughly \$6.05 billion. Their core strategy is to grow the streaming subscription business domestically and globally. Headquartered in Los Gatos, CA and operates 58 distribution facilities nationally. As of December 31, 2011, Netflix had 2,348 full-time employees and 579 part time and temporary employees. Once only a domestic business, in September 2010 Netflix began international operations by offering streaming service in Canada. In September 2011, they expanded streaming service to Latin America and the Caribbean. In January 2012, they launched their streaming service in the UK and Ireland. Netflix does not have any current plans for further

<sup>43</sup> Erick Schonfeld, *Netflix Streaming Margins Are 11 Percent, DVD Margins Are 52 Percent*, Techcrunch Mag., Jan. 25, 2012, at <http://techcrunch.com/2012/01/25/netflixs-streaming-dvd-margins/>, (last visited March 8, 2012)

<sup>44</sup> Netflix, *10-K*, Annual report, 10 Feb. 2012, at <http://apps.shareholder.com/sec/viewerContent.aspx?companyid=NFLX&docid=2233293> (last visited Feb. 29, 2012)

international expansion until such time as the existing international market segments are profitable. The firm reported sales revenue and operating income of \$3,204 million and \$376 million respectively. Today, Netflix's services tens of millions of customers with 21,675 million Domestic streaming subscribers, 1,858 million International streaming subscribers and 11,165 million Domestic dvd subscribers.

### **Intellectual Property: Patents and Trademarks**

A detailed list of Netflix patents and trademarks is listed<sup>45</sup>, <sup>46</sup>. Netflix has a strong appropriability regime in the DVD model having secured patents for DVD mail order distribution process and method of customer preference ranking and movie queuing. However, its patent applications for streaming technologies are still under review. Netflix uses a patented in-house video streaming technology with an interface compatible to desktop and mobile devices. Netflix has pursued many patents in streaming which have been published in the last month. Whether these patents will issue or not is not known.

Netflix has seven trademarks secured for the following: name and logo, fonts, shape and size of work etc. We discuss the trademarks in detail in Section. on semiotics. It also possesses trade secrets for customer lists, storage and distributions center locations. The location of Netflix warehouses is a trade secret in order to protect the resources and to prevent people from returning DVDs at the warehouse location.

### **Recent Financials and Current Forecasts**<sup>47</sup>, <sup>48</sup>, <sup>49</sup>

Although many things are changing for Netflix due to the evolution of the VOD market and how it will force the firm to compete and operate to build on its past successes, one thing that will not change is where Netflix will experience higher profit margins and more predictable

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<sup>45</sup> See Appendix A, B

<sup>46</sup> See Appendix C

<sup>47</sup> Hackingnetflix.com blog, Netflix Pacific Growth Equities Presentation, Nov. 16, 2005, at [http://www.hackingnetflix.com/2005/11/netflix\\_pacific.html](http://www.hackingnetflix.com/2005/11/netflix_pacific.html) (last visited March 6, 2012)

<sup>48</sup> Netflix, *SEC filings Home Page*, Mar. 2003 – Feb. 2012, at <http://ir.netflix.com/sec.cfm> (last visited Feb. 29, 2012)

<sup>49</sup> Blockbuster news release, *Blockbuster Reports Fourth Quarter and Full Year 2005 Results*, Mar. 9, 2006, at [http://blockbuster.mwnewsroom.com/manual-releases/Blockbuster-Reports-Fourth-Quarter-and-Full-Ye-\(1\)](http://blockbuster.mwnewsroom.com/manual-releases/Blockbuster-Reports-Fourth-Quarter-and-Full-Ye-(1)) (last visited Feb. 29, 2012)

cash flows. While the streaming business is expanding, adding 220 subscribers domestically in the 4th quarter 2011, the DVD business shrunk by 2.76 million subscribers. According to Netflix 2011 annual report, Netflix believes “that DVD will be a valuable consumer proposition and steady profit center for the next several years, even as DVD sales decline. The contribution profit generated by our domestic DVD business will help provide capital resources to fund losses arising from our growth internationally.” The benefits of the value of the DVD consumer to Netflix ability to compete are evident in their 4th qtr numbers. Netflix had approximately \$847 million in revenue for the quarter of which 56% or \$476 million was derived from streaming and the remainder, \$370 million from the DVD business. But of these revenue streams, approximately \$52 million of the streaming revenue contributed to Netflix profits with \$194 million of the DVD revenue falling to the bottom line for Netflix. When analyzed on a per customer basis, Netflix currently has 21.7 million streaming subscribers and only 11.2 subscribers, so each customer in the streaming business derives \$2.4 in profit while each DVD customer is worth \$17.32. The financial strength of Netflix aided by their DVD base business will give it an advantage when investing in new technology and licensing agreements. This will aid Netflix in its transition from its traditional DVD business toward a growing domestic and international streaming market.

## Porters five Forces<sup>50</sup> analysis of NetFlix's

### DVD rental business

#### Buyer (Customer) Power

**Low.** Netflix sells its subscriptions to customers that prefer the convenience of online browsing and mailbox delivery. Although the individual customer has very little buying power, with no fees for canceling the service there is very little switching cost.

#### Rivalry

**High.** There is spirited competition for the DVD business. Main competitors today include Blockbuster, Redbox and Amazon.

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<sup>50</sup> Michael E. Porter, *The Five Competitive Forces That Shape Strategy*, Harvard Business Review, January 2008

### Threat of Substitutes

**Low.** For the DVD business the only threat of substitution is the old format bricks and mortar. Netflix has already dominated this threat of substitution. Technology evolution will continue to change the threats of substitution as we have seen with VOD or Streaming.

### Supplier Power

**Low.** Netflix acquires its content like any other movie rental provider, from the movie studios who create the films or firms that already have licensing agreements with the studios to provide content to viewers. In the business model of DVD distribution Netflix had more bargaining power with their supplier. Under the DVD platform the movie studios and distributors were interested in maximizing their DVD sales. Netflix acquires content by buying DVDs and also paying a fee or revenue sharing to license content. .

### Threat of New Entrants

**Low.** Netflix's combination of strategic partnerships, economies of scale and distribution systems in conjunction with its Intellectual Property place a high barrier for new entries.

## Video Streaming business

### Buyer (Customer) Power

**Low.** limited alternative purchasing decisions. No individual customer decision to subscribe or not will affect the market enough to alter pricing, demand, content, etc. While there are substitutes to online subscriptions (DVD /local stores) as discussed above, the consumer has already made a conscious decision to not utilize these vehicles.

### Threat of Substitutes

**Low.** While the evolution of technology makes the threat of others entering the market ever present, currently this threat is low and would require both a financial and time commitment to achieve. The primary substitute to streaming video is DVD by mail or via local stores. Netflix already dominates this distribution channel and enjoys IP giving it some competitive advantage.

### Threat of New Entrants

**Extremely high.** Potential new entrants include Roku, Redbox, Apple, Google, Blockbuster, HBOgo, Amazon.

## Rivalry

**High.** The VOD/streaming video industry is becoming more saturated with spirited competition. With the success seen by others the likes of Amazon, Hulu and cable companies alike are all vying for the attention of the online movie subscriber. It is foreseeable that rivalry will become much more heated as the large players will scramble to hold onto the changing market.

## Supplier Power

**Very Strong.** Netflix has two types of suppliers that are vital to its business. First is the supplier of content that Netflix streams to customers. In this area Netflix is no different than other movie rental provider as to where it accesses movies from, the movie studios who create the films or firms that already have licensing agreements with the studios to provide content to viewers. The major studios have the advantage and can set the price as well as the rules for the streaming game. Without the big name new movie releases Netflix is little more than a pay-per-view platform. It is estimated that Netflix will see its cost for accessing content go from 1.2 billion to almost 1.9 billion in 2012. The other supplier is the ISP that provide the necessary bandwidth to provide the product to customers. Although the doctrine of Internet neutrality somewhat governs this, as VOD traffic is increasing to significant proportion of traffic this is changing.

## A Teece Analysis of Netflix's Intellectual Capital<sup>51</sup>

### Patent Strength, Trademark Strength : Appropriability regime

In order for Netflix to continue to thrive it must be asked whether the components of Netflix' strategy can fall victim to a second fast follower or slow third. While being first to market with DVD mail order and streaming may provide a first mover advantage, this does not mean there is a sustainable competitive advantage. In fact, Netflix efforts could turn out to have benefited the product category of home video more than it will benefit the innovator, Netflix, in the long run.

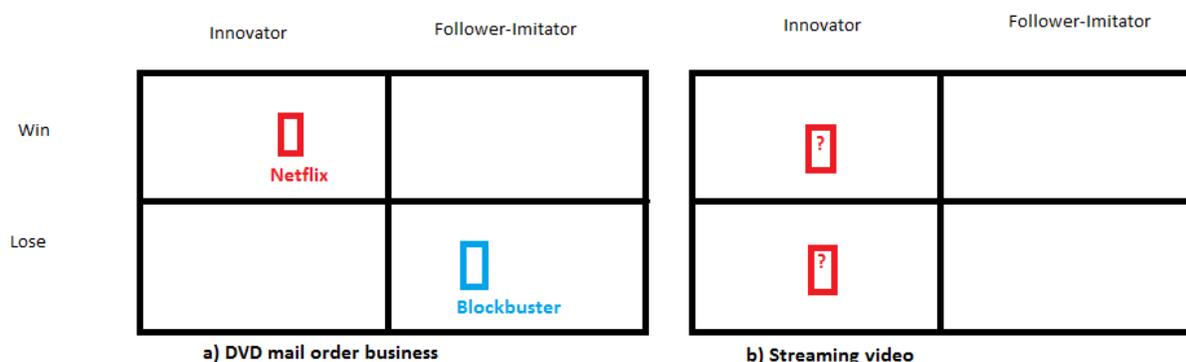
Utilizing a framework put forth by Teece, we will analyze how Netflix has behaved and the consequences that naturally follow. Being first in mail order DVD's combined with use of

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<sup>51</sup> David J. Teece, *Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy*, Research Policy 15 (1986) 285-305

intellectual capital has kept Netflix the winner as seen in Exhibit # 10. However, a mixed appropriability regime and lack of complementary assets will challenge Netflix in the streaming space.

**Taxonomy of outcomes from innovation process**



**Exhibit # 10: Taxonomy of outcomes from innovation process using framework from Teece<sup>52</sup>**

### Appropriability regime and Dominant design paradigm

Given the rapid advances and easy availability of software developers, any advantage Netflix would have had in its core technologies would not have remained tacit knowledge for long. Netflix provides a service rather than a product. To gain monopoly rights on the use of the technologies used in the DVD mail order business, Netflix codified their knowledge and applied for patents on their processes.

While some trade secrets were kept regarding geographic locations of warehouses and the process of choosing these locations may have remained tacit knowledge, these are minimal and are not the largest contributors to Netflix IP portfolio.

In the DVD mail order business Netflix entered and the design of the processes changed, not from competitive forces, but rather from Netflix own desire to experiment. Once competition, Blockbuster, did enter, some changes to how product was bundled and offered became options. However, in the end the design Netflix offered through rankings and

<sup>52</sup> Adapted from David J. Teece, *Taxonomy of outcomes from the innovation process - Framework/methodology*, *Managing Intellectual Capital*, published 2000 Oxford University Press, Location 1031 - Figure 5.2

distribution, a patented system, was dominant. No one successfully patented around the Netflix process design for mail order.

Having patents on the ranking for consumer preferences and on the distribution process strengthens Netflix's appropriability regime. Having a trademarked name associated with a strong brand has greatly strengthened Netflix's appropriability regime as will be discuss further in the touchpoints discussion of the paper.

The appropriability regime for the mail order business is therefore tight but only within the niche that Netflix has carved out of the home video market (sees Exhibit # 11).

Within this niche, Netflix can price itself just right for those individuals who do not want to leave their home to get their movies. This allows for maximum leverage of their appropriability regime to extract value. However for just the price of a walk or drive to the closest road intersection, and for a small \$1 fee per video movie boxes, like Red Box, have carved out a niche between the traditional store and the mail order convenience model. Since Netflix is offering a differentiated service for those who do not want to drive, it stands to reason they could raise prices. After all, video on demand through cable and phone lines direct to your TV is quite pricey. In fact, Netflix has to offer more value for price compared to cable TV VOD service in order to remain a viable along the entire spectrum of home video service.

### **Spectrum of convenience niches in home video rental services**



### **Exhibit # 11: Spectrum of convenience niches in home video rental services**

In summary for their target consumer, Netflix DVD mail order service has a tight appropriability regime allowing it to generate a healthy profit stream in the present competitive landscape.

In the streaming video space, Netflix was the first big name to enter. Here the process was preparadigmatic and various attempts to stream through the computer, internet ready TV's and wireless receivers linked to televisions were made. Netflix not only experimented in these areas, they attached their trademarked name to many of the hardware and software peripherals through strategic partnering. (similar to Ray Dolby and noise reduction)Such a move improved their appropriability regime in the streaming business.

Netflix does not own the patent on streaming in the United States and so have weak appropriability in terms of patents. Others therefore such as Hulu have entered the streaming space focusing on Television over movies and have proved capable of gaining quick attention. The basic process design paradigm has been narrowed down to internet ready TV's with wireless or wire access with the content provider having special software on the TV, set-top box or wireless receiver which can provide access to unlimited library content for a fixed monthly fee. The next step in the Abernathy-Utterback framework would be for new entry to move in and compete on price<sup>53</sup>.

In summary Netflix streaming service has a medium level (or mixed) appropriability regime which is fully dependent on their trademarked brand and will fluctuate with the value of that brand.

### **Netflix brand value**

Brand ranking services show that Netflix brand has risen in many of the last several years (see appendix), however, recent strategic decisions made regarding splitting the company and the lack of ability to renew content have hit Netflix hard in the second half of 2011 hurting their reputation. Brand management for Netflix has to be for Netflix the key piece of intellectual capital management in the streaming business.

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<sup>53</sup> David J. Teece, *Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy*, Research Policy 15 (1986) p36

Rank	Brand	Brand Value
29	AMERICAN EAGLE OUTFITTERS	1,552
30	BANANA REPUBLIC	1,545
31	PETSMART	1,523
32	NETFLIX	1,288
33	RadioShack	1,254
34	URBAN OUTFITTERS	1,134

**Exhibit #12: 2009 brand rankings**

Ranking in 2009 (Exhibit # 12) in terms of brand value by a popular publisher.

Rank	Brand	Brand Value
21	TIFFANY & CO.	4,000
22	VICTORIA'S SECRET	3,982
23	GAP	3,622
24	Target	3,084
25	KOHL'S	3,045
26	NETFLIX	2,303
27	OLD NAVY	1,981

**Exhibit # 13: 2010 brand rankings**

Then in 2010 we see Netflix climbing higher approaching Tiffany and Co.(Exhibit # 13)

Rank	Company	Hate Score
4	NOKIA	2
5	Goldman Sachs	-
6	Best Buy	4
7	Bank of America	8
8	Johnson & Johnson	11
9	Sears	-
10	NETFLIX	-

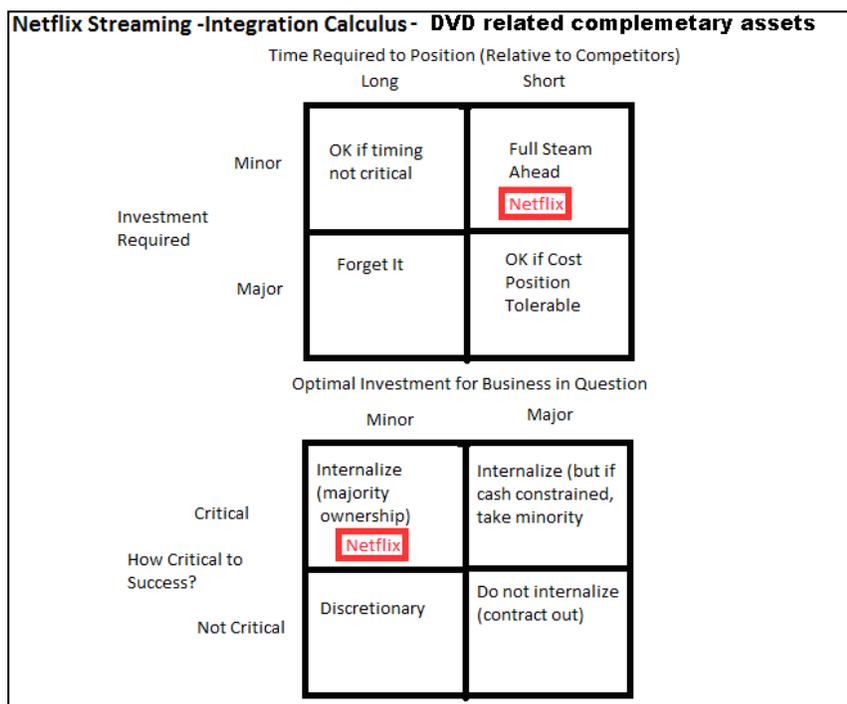
**Exhibit # 14: 2011 brand rankings**

By 2011 a turn for the worst as one brand evaluation company sited Netflix as being in the top ten most hated companies in America. (Exhibit # 14)

**Complementary assets – DVD mail order case** (Exhibit # 15, 16, 17)

Assets such as distribution warehouses, warehouse personnel, mail carriers, envelope making equipment, DVD sorting equipment, and web development are some of the complementary assets required to commercialize. Each of these are in general availability and can be procured from the market.

These are critical, minor investments needed in the short run so per a Teece integration calculus, Netflix should move full steam ahead with internalizing these assets.



**Exhibit # 15: DVD related complementary assets<sup>54</sup>**

<sup>54</sup> Adapted from David J. Teece, *Complementary assets needed to commercialize an innovation - Framework/methodology*, Managing Intellectual Capital published 2000 Oxford University Press - Location 1120 - Figure 5.7

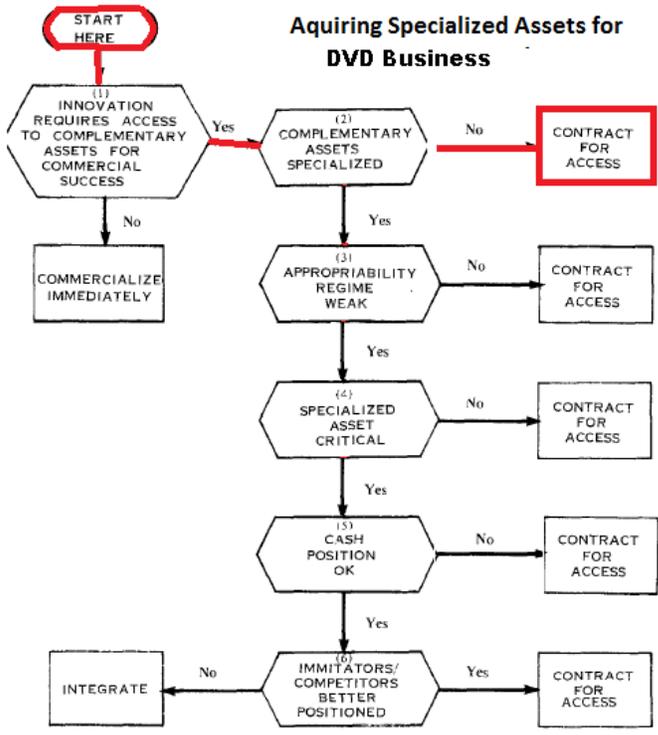


Exhibit # 16: Teece flow chart implies path to acquiring specialized assets for DVD business <sup>55</sup>

key:

	Strong Legal/Technical Appropriability	Weak Legal/Technical Appropriability	
		Innovator Excellently Positioned versus Imitators with Respect to Commissioning Complementary Assets	Innovator Poorly Positioned versus Imitators with Respect to Commissioning Complementary Assets
innovators and imitators advantageously positioned vis a vis independent owners of complementary assets	(1) contract innovator will win	(2) contract innovator should win	(3) contract innovator or imitator will win; asset owners won't benefit
innovators and imitators disadvantageously positioned vis a vis independent owners of complementary assets	(4) contract if can do so on competitive terms; integrate if necessary innovator should win; may have to share profits with asset holders	(5) integrate innovator should win	(6) contract (to limit exposure) innovator will probably lose to imitators and/or asset holders

degree of intellectual property protection

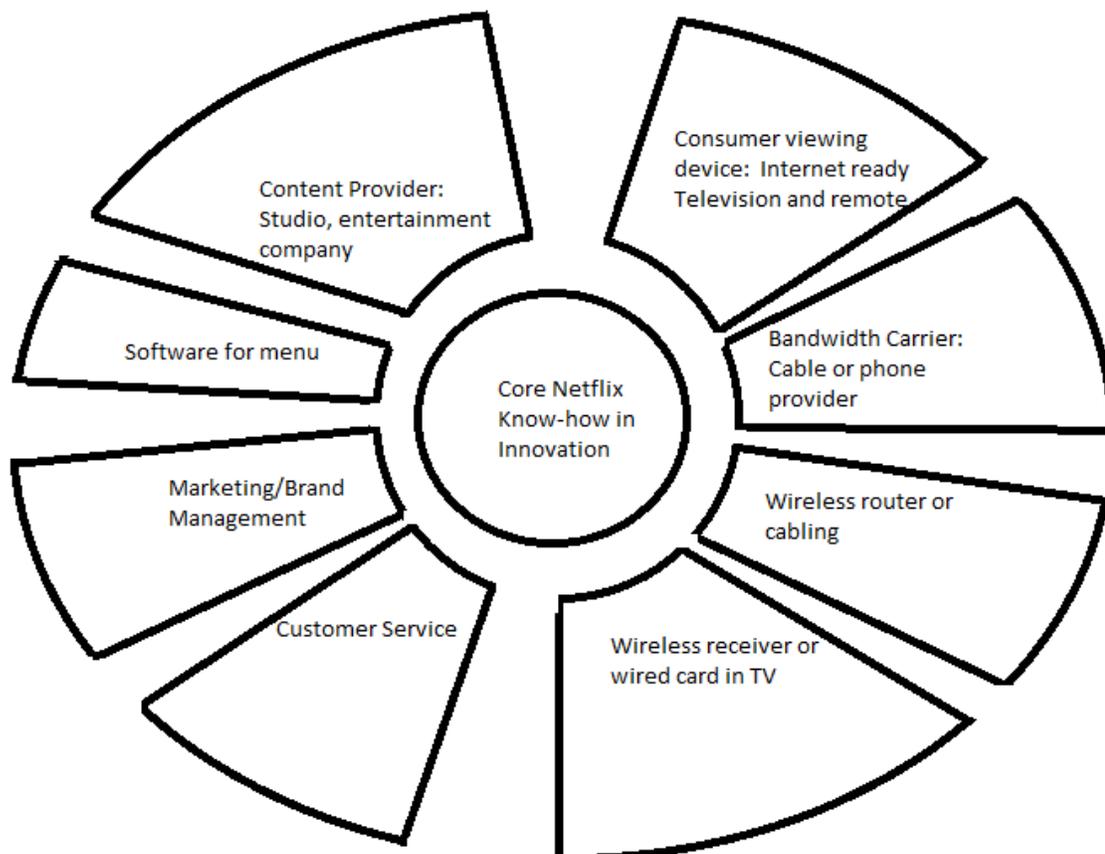
market power of innovators/imitators versus owners of complementary assets

Exhibit # 17: Optimal contract and integration strategies and outcomes for Netflix DVD business <sup>56</sup>

<sup>55</sup> Adapted from David J. Teece , *Flow chart for integration vs contract/alliance decision - Framework/methodology*, *Managing Intellectual Capital* published 2000 Oxford University Press - location 1171/3920 - Figure 5.8

### Complementary assets – streaming case currently with no patents

Other than the Netflix innovations, the company also needs access to complementary assets such as marketing and complementary technologies. Here the complementary assets are all part of a system. See Exhibit # 18.

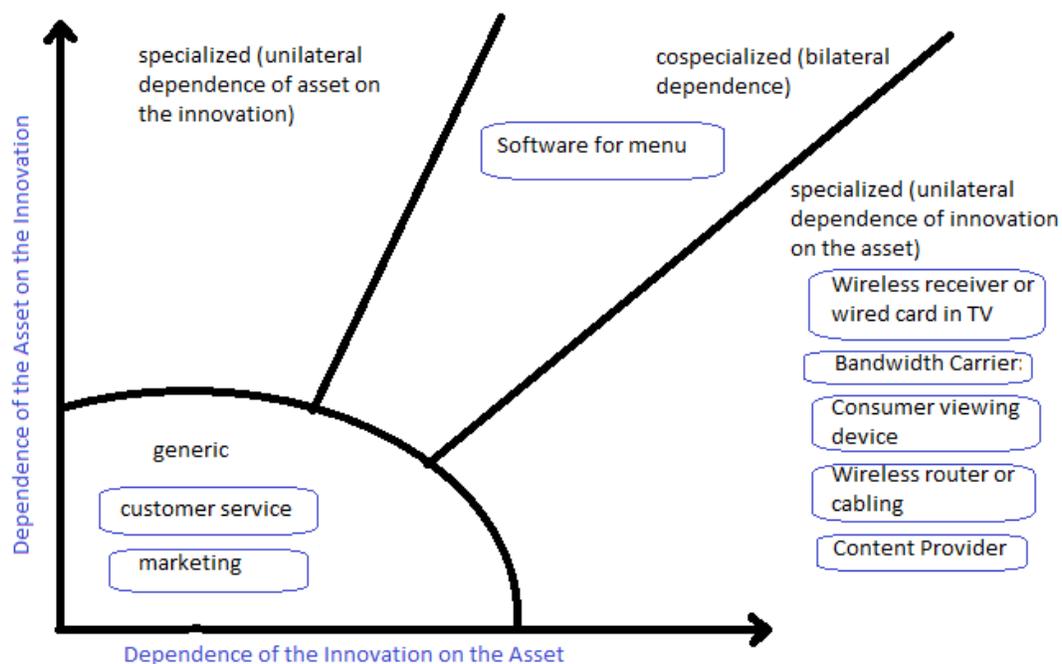


### Exhibit # 18: Complementary Assets needed for commercialization of Home video streaming of time limited content

In order to analyze which of the complementary assets Netflix should engage, it is helpful to classify each asset by the dependence of the innovation on the asset. In Exhibit # 19 we see that the bulk of complementary assets are not only specialized, but have unilateral dependence of the innovation on the asset.

<sup>56</sup> Adapted from David J. Teece, *Optimal contract and integration strategies and outcomes - Framework/methodology, Managing Intellectual Capital* published 2000 Oxford University Press - location 1206/3920 Figure 5.9

### Dependence of Netflix Innovation on Complementary Assets



### Exhibit # 19: Teece flow chart implies path to acquiring specialized assets for Streaming if the streaming patents get granted to Netflix<sup>57</sup>

In each of these areas, Netflix faces a choice of whether to vertically integrate or contract. There are hazards for whoever commits investment dollars to building up the assets if the arrangement/partnering does not work out. However, for many of the specialized assets needed, the asset owners will provide these assets to consumers regardless of whether Netflix is involved. As such, those asset owners are already invested for the longrun and are not reliant on Netflix success.

Content can always be provided through cable tv basic service, pay per view or DVD rental. Bandwidth is already provided for internet, phone, and cable tv services. Wireless routers are already in homes that need wireless networks for internet use. Cabling is already provided to the home by a number of cable or phone installers who will route it through the home to the television. Televisions will be sold to consumers regardless of whether streaming exists. Wireless receivers, such as Roku and Apple TV are dependent on the streaming video market but not on Netflix in particular. Other streaming services are available through these devices.

<sup>57</sup> Adapted from David J. Teece, *Flow chart for integration vs contract/alliance decision - Framework/methodology*, *Managing Intellectual Capital* published 2000 Oxford University Press - location 1171/3920 - Figure 5.8

Software for the Netflix menu is dependent on the Netflix innovation and the Netflix innovation is dependent on it, so is is cospecialized. Marketing and customer service can always be procured on the market and so are general complementary assets.

Since the appropriability regime is not tight, and the industry is in the paradigmatic stage, a shakeout is inevitable. To be successful, Teece explained that “innovators in weak appropriability regimes need to be intimately coupled to the market so that user needs can fully impact designs”<sup>58</sup>.

Netflix is intimately coupled through its brand and associated customer ranking. Netflix could be more coupled to the consumer if it had maintained its multiple profiles per household and social networking tools such as sharing recommendations with friends. Other competitors, collaborators and suppliers have strong established brands should they choose to vertically integrate into the streaming space.

To survive shakeout Netflix must act differently in the paradigmatic stage than it did in the preparadigmatic stage.

Previously, Netflix could afford to contract with collaborators without a need for exclusivity and price to consumers did not have to be rock-bottom. We believe Netflix recognized the new era as prices have been lowered over the past year. However it is not evident whether Netflix has been able to secure deals of exclusivity with collaborators. In fact to the contrary, Netflix lost some of their content licensing when it expired in 2011. Further no exclusive deals or partnering with bandwidth providers has been seen. On the contrary, Blockbuster was acquired by Dish Networks, a bandwidth supplier, after bankruptcy filings, and so is in a good position to leverage its intellectual capital in markets where that bandwidth is sold. It is also not evident whether Netflix is making arrangements with wireless receiver makers such as Roku and Apple TV. These devices seem to promote more of an open platform inviting Netflix’s competitors to have “shelf space” right next to Netflix on your Television screen.

One possible saving grace is Netflix partnering with television suppliers to add not only the Netflix software but the Netflix enabled remote with a red Netflix button. This strategy

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<sup>58</sup> David J. Teece, *Flow chart for integration vs contract/alliance decision - Framework/methodology*, *Managing Intellectual Capital* published 2000 Oxford University Press, page 39

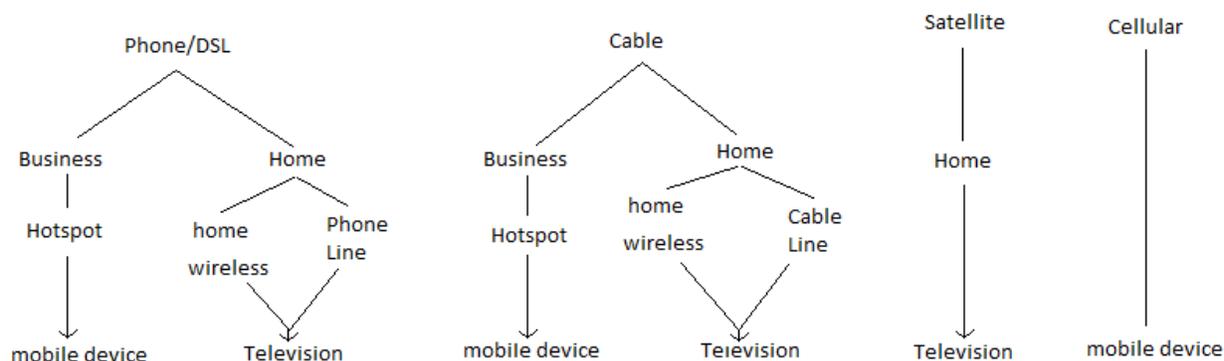
sounds similar to a Ray Dolby strategy with the NR button or a Microsoft strategy to put windows on all PC's before they were sold at retail. The difference is that the consumer is not forced to use Netflix unlike the Microsoft case, where booting up the computer means you are using Windows. The consumer can channel surf cable channels and use VOD just as easily as pushing the Netflix button. Furthermore, many people use universal remotes today which combine the functions of several consumer electronics remotes all in one. These remotes do not promote Netflix and in fact could just as easily promote a collaborator such as the cable TV (Comcast) or Phone provider (AT&T) who are already providing VOD and television to the consumer while inadvertently providing bandwidth that consumers piggyback for Netflix use.

To remain viable in this paradigmatic stage, Netflix may need to vertically integrate or create further strategic partnerships with more bite. To an extent, Netflix can leverage its brand and established base in order to secure a space at the bargaining table but as other combinations of complementary assets emerge as new competitors, scale economies will be targeted and critical assets may get locked up.

As stated by Teece, "in rare instances where incumbent firms possess an airtight monopoly over specialized assets, and the innovator is in a regime of weak appropriability, all of the profits to the innovation could conceivably inure to the firms possessing the specialized assets who should be able to get the upper hand"

The most specialized assets in this case are owned by the content providers (raw materials) and bandwidth providers (transportation). There are ways around using wireless by using cable so wireless routers and receivers will not have the leverage. There are too many television suppliers producing products at low margin for there to be a real threat from television suppliers (unless they formed a consortium). The real threat comes from, first, content providers and second, bandwidth providers who mainly consist of cable/fiber, phone/DSL, satellite, and cellular networks, partnering or vertically integrating to have their own streaming channels and services.

### How Bandwidth Providers Move Content to Consumers



#### Exhibit #20: Path of Content to Consumer

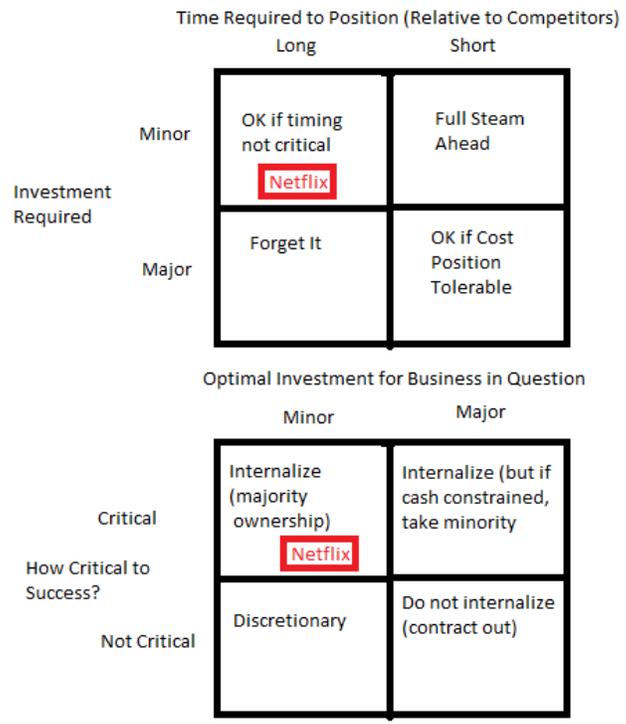
When we compare the content providers to the bandwidth providers (Exhibit # 20) it is clear that there are fewer bandwidth providers and that the multitude of content providers depend more on the bandwidth providers than vice versa. One content provider deciding to go on strike and not contract with a cable TV provider hurts the content provider more than the cable provider. The carriers have constructed toll bridges and have the true upper hand.

In recent weeks Red box, a video rental service, struck a streaming deal with Verizon (a bandwidth provider), Amazon, an internet retailer, announced a streaming service coupled to its Amazon Prime service and Comcast (a bandwidth provider), who bought NBC in 2011, announced a streaming service called Streampix which will compete with Netflix at close to half the price to the consumer. The recent developments add credence to our analysis regarding the need for vertical integration and strategic partnering in this paradigmatic stage.

#### Specialized complementary assets - Integration Calculus

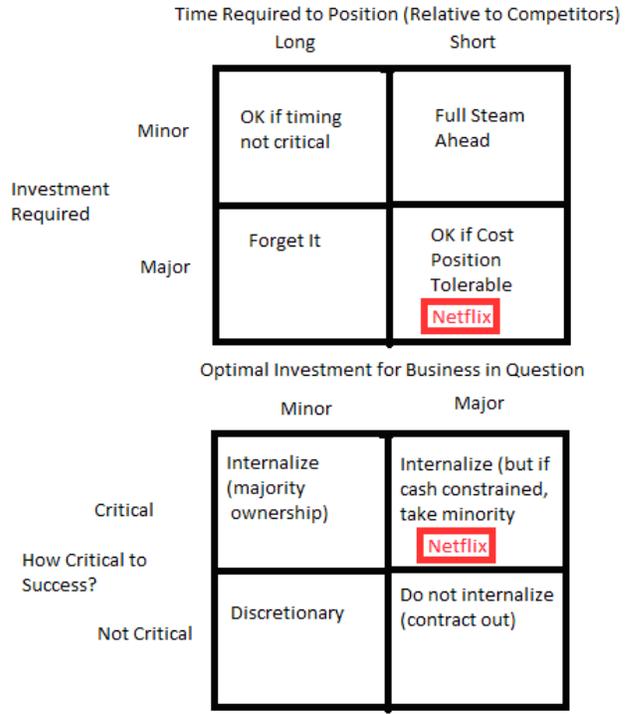
The decision Netflix faced regarding acquiring the ability to stream to computers versus the decisions they will face going forward are vastly different now that the paradigmatic stage is reached. The differences are contrasted in the Exhibits # 21, 22 where we first look at the acquisition decision for streaming technology assets in the preparadigmatic stage and then where Netflix stands today facing the possible integration with much larger assets or companies.

**Netflix Streaming -Integration Calculus Paradigmatic Stage Computer Streaming Tech**



**Exhibit # 21: Netflix Streaming- Integration Calculus: Computer Streaming Tech.**

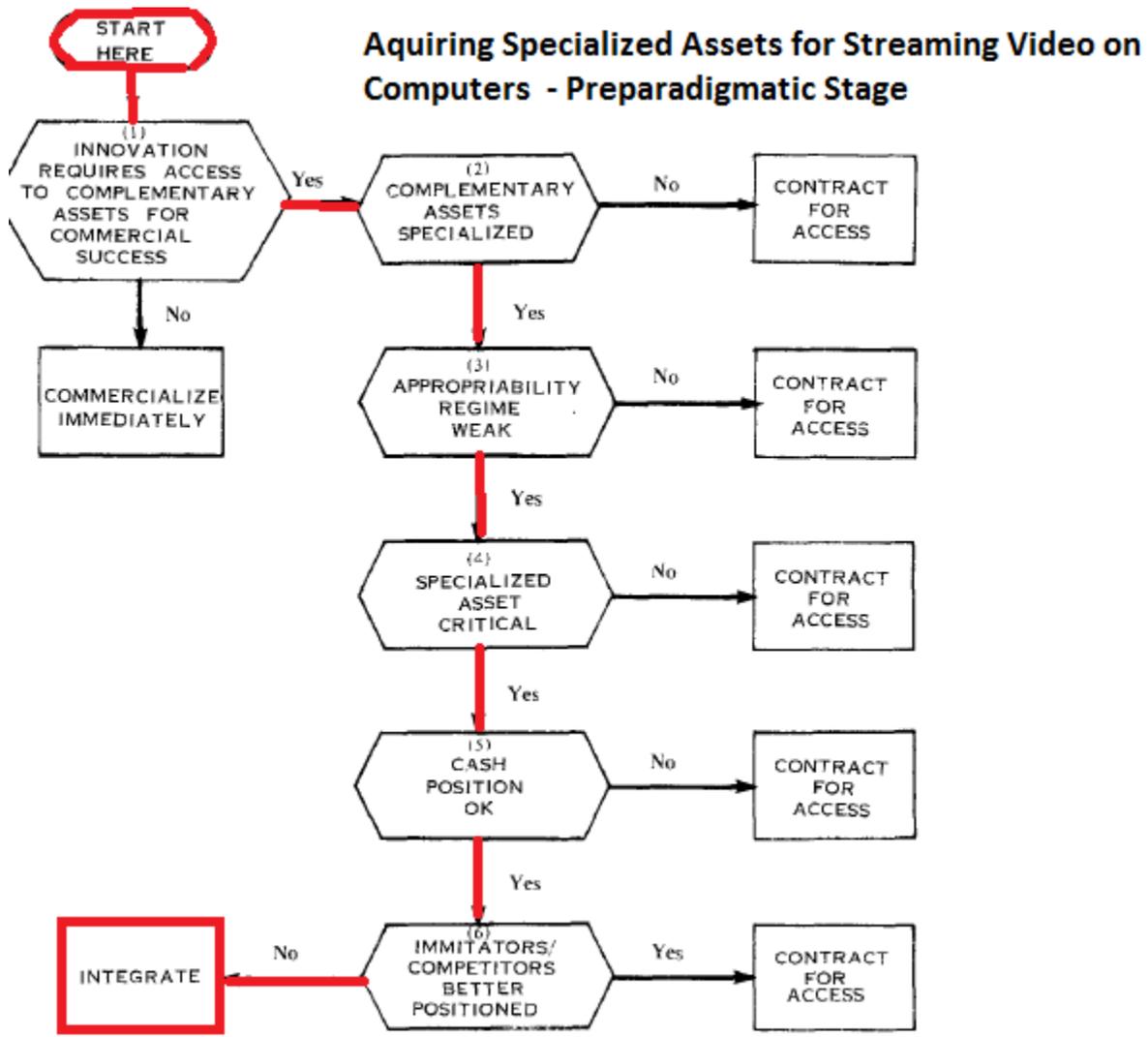
**Netflix Streaming -Integration Calculus - paradigmatic Stage Bandwidth Provider Asset**



**Exhibit # 22: Netflix Streaming- Integration Calculus: Bandwidth Provider**

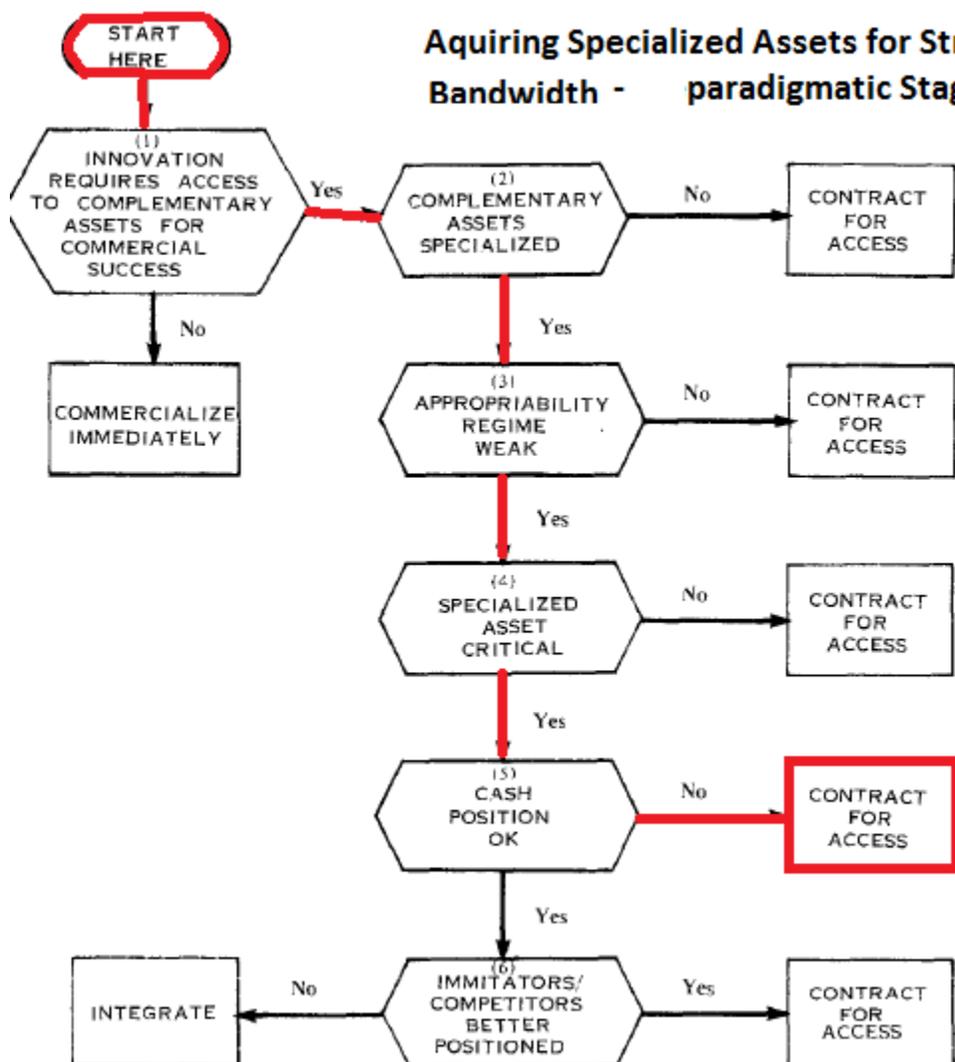
It must be stressed that with partnering, the term of the partnership may come to an end leaving either party searching for leverage to either renew the partnership or strike out on their own with the “secret sauce” learned from recent experience. With very limited legal protection of the technologies employed, taking on a strategic partner could mean you are giving the business away. It is therefore very important to weigh all sides when making decisions on how to address contracting for specialized assets.

In the preparadigmatic stage of streaming we find that the initial technology investments were small and following the Flowchart for integration versus contract we are better to integrate. See Exhibit # 23.



### Exhibit # 23: Flowchart for integration versus contract

In the paradigmatic stage of streaming we find that in the decision to access the specialized asset of bandwidth following the Flowchart for integration versus contract we are better to contract (See Exhibit # 24). In this case it does not make sense to build something if it cannot be done better and cheaper than others. It does not make sense to buy it if our competitors are in a better cash position to acquire the asset. For Netflix the potential imitators already own the specialized assets.



### Exhibit # 24: Flowchart for integration versus contract

Looking back to the entry into streaming the decision to integrate can also be seen from a strategies/outcome diagram (See Exhibit # 25). Here Netflix was poorly positions to move from DVD mail order to streaming without first investing in the move.

key:

strategies	outcomes
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	Strong Legal/Technical Appropriability	Weak Legal/Technical Appropriability	
		Innovator Excellently Positioned versus Imitators with Respect to Commissioning Complementary Assets	Innovator Poorly Positioned versus Imitators with Respect to Commissioning Complementary Assets
innovators and imitators advantageously positioned vis a vis independent owners of complementary assets	(1) contract  innovator will win	(2) contract  innovator should win	(3) contract  innovator or imitator will win; asset owners won't benefit
innovators and imitators disadvantageously positioned vis a vis independent owners of complementary assets	(4) contract if can do so on competitive terms; integrate if necessary  innovator should win; may have to share profits with asset holders	(5) integrate  innovator should win	(6) contract (to limit exposure)  innovator will probably lose to imitators and/or asset holders

degree of intellectual property protection

market power of innovators/imitators versus owners of complementary assets

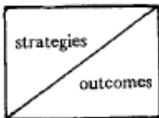
### Exhibit # 25: Contract and Integration strategies and outcome Preparadigmatic stage

Then taking a look at the paradigmatic stage, Netflix must contract with for the bandwidth provider but will probably lose to the imitators. In the current setup, it is the consumer who contracts with the bandwidth supplier. So Netflix does not an arrangement to safeguard access to this asset. Presently approximately 30% of the bandwidth used is for Netflix movies. To the bandwidth provider who is getting paid with a subscription service by the consumer for unlimited data, the advent of streaming represents a increased cost where no additional revenue is present. Bandwidth suppliers could act to limit data to consumers or charge by the megabyte rather than the month. Such a move would produce revenue for the bandwidth provider but likely reduce the customer base for Netflix as consumers would search for less costly alternatives (Exhibit # 26).

One way to contract would be a revenue sharing scheme, much like that used by Blockbuster with the movie studios. Netflix could pay a fraction of proceeds to the bandwidth provider proportional to the amount of information viewed by the consumers. In return, the

bandwidth provider would promote the use of Netflix and even add the Netflix software to their set-top box and the Netflix button to their remote.

key:



	Strong Legal/Technical Appropriability	Weak Legal/Technical Appropriability	
		Innovator Excellently Positioned versus Imitators with Respect to Commissioning Complementary Assets	Innovator Poorly Positioned versus Imitators with Respect to Commissioning Complementary Assets
innovators and imitators advantageously positioned vis a vis independent owners of complementary assets	(1) contract  innovator will win	(2) contract  innovator should win	(3) contract  innovator or imitator will win; asset owners won't benefit
innovators and imitators disadvantageously positioned vis a vis independent owners of complementary assets	(4) contract if can do so on competitive terms; integrate if necessary  innovator should win; may have to share profits with asset holders	(5) integrate  innovator should win	(6) contract (to limit exposure)  innovator will probably lose to imitators and/or asset holders

degree of intellectual property protection

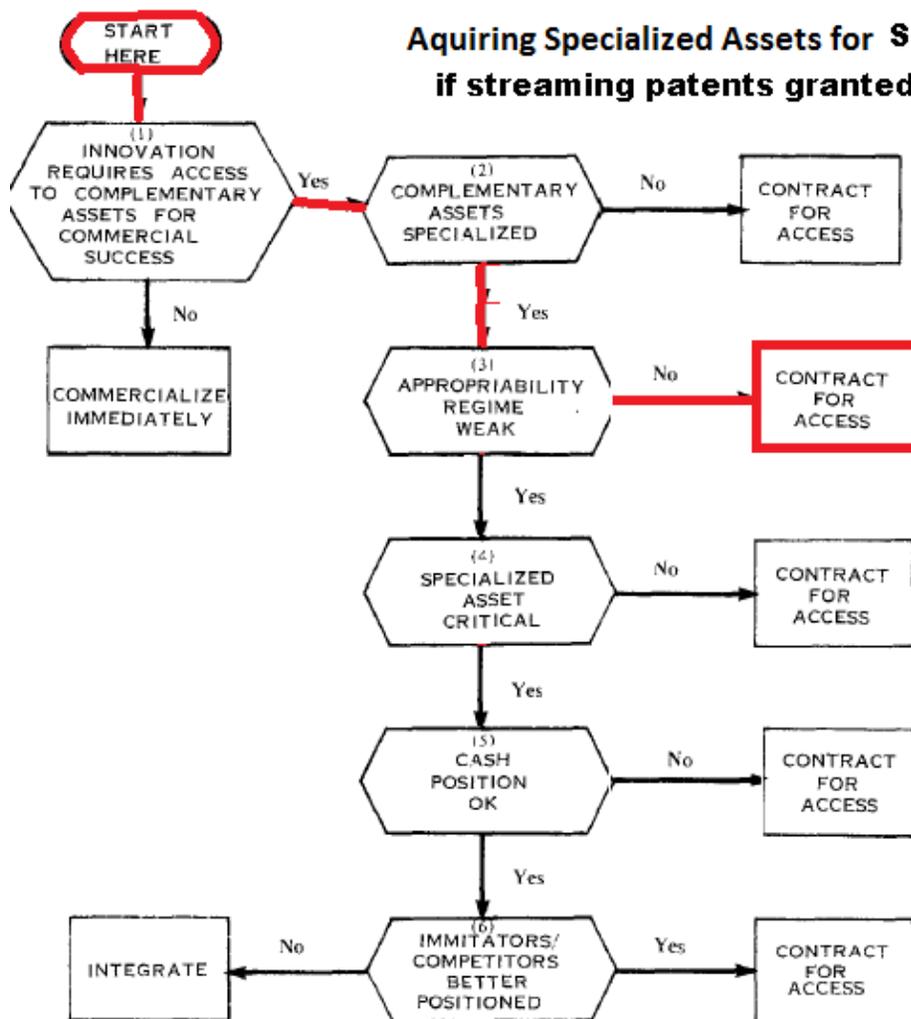
market power of innovators/imitators versus owners of complementary assets

**Exhibit #26: Contract and Integration strategies and outcome Paradigmatic stage**

### Complementary assets – streaming case if streaming patents granted to Netflix

In the case where Netflix is granted the bulk of the streaming patents currently under review by the patent office, Netflix would again have tight appropriability as it does in the DVD mail order business.

Complementary assets would include the same as those listed above in the streaming case without patents. However we see from Teece analyses that they should contract for the assets on competitive terms and integrate where necessary. Here the innovator, Netflix, should win but may have to share profits with asset holders (see Exhibit # 27).



**Exhibit # 27: Optimal contract and integration strategies and outcomes for Netflix streaming business<sup>59</sup>**

### Semiotics and Arnheim approach<sup>60</sup>

Netflix has created a semiosphere of convenience and easy information access in the mind of the consumer. The Netflix brand is built on the color red and rectangular shape: red

<sup>59</sup> Adapted from David J. Teece, *Optimal contract and integration strategies and outcomes - Framework/methodology*, *Managing Intellectual Capital* published 2000 Oxford University Press - location 1206/3920 Figure 5.9

<sup>60</sup> Rudolf Arnheim, *Art and Visual Perception*, published 1974 The Regents of the University of California

envelopes, red logo back background. The consumers have extended the perceived meaning of the Netflix red rectangle to the software user interface and the Netflix button on the remote controls<sup>41</sup>. Netflix has seven trademarks on the shape of word, shading of letters etc<sup>61</sup>. Netflix has secured service marks and word marks on its name. As evidence to the brand's value, Qwikster failed<sup>31</sup> due to consumer backlash even though it had the same packaging and business structure for the DVD business. The Netflix needs to preserve its brand and ensure brand transference through semiotic means to its future model. The Netflix business model is adapted by several other enterprises (see Appenix E) which again confirms that the brand identity is strong.

## Lessons learned and Recommendations

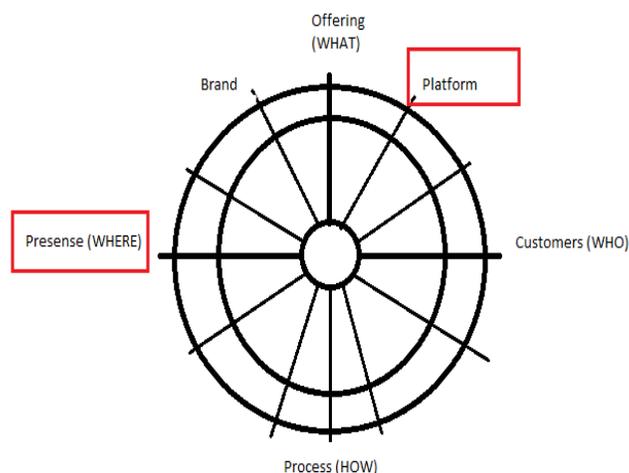
The strategy that ensues from the Teece analysis is that Netflix must contract with bandwidth providers but will probably lose to the imitators<sup>12</sup>. In the current setup, it is the consumer who contracts with the bandwidth supplier. Netflix does not have arrangement to safeguard access to this asset. To the bandwidth provider who is getting paid with a subscription service by the consumer for unlimited data, the advent of streaming represents an increased cost where no additional revenue is present. A potential exposure/threat would be the bandwidth provider limiting data to consumers or charging by the gigabyte rather than by the month. Such a move would produce revenue for the bandwidth provider but likely reduce the customer base for Netflix as consumers would search for less costly alternatives.

We recommend that Netflix pursue an alternative arrangement with the bandwidth providers, such as a revenue sharing scheme, much like that done with content providers. business innovation<sup>62</sup>. A fraction of the proceeds would be paid to the bandwidth provider proportional to the amount of information viewed by the consumers if this could be monitored. In return, the bandwidth provider would promote the use of Netflix and even add the Netflix software to their set-top box and the Netflix button to their remote.

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<sup>61</sup> See Appendix C

<sup>62</sup> Adapted from Conley and Sawhney et al., *The 12 different ways for companies to innovate*, MIT Sloan Management Review, Spring 2006



### Exhibit # 28: Innovation radar displaying Netflix's dimensions of

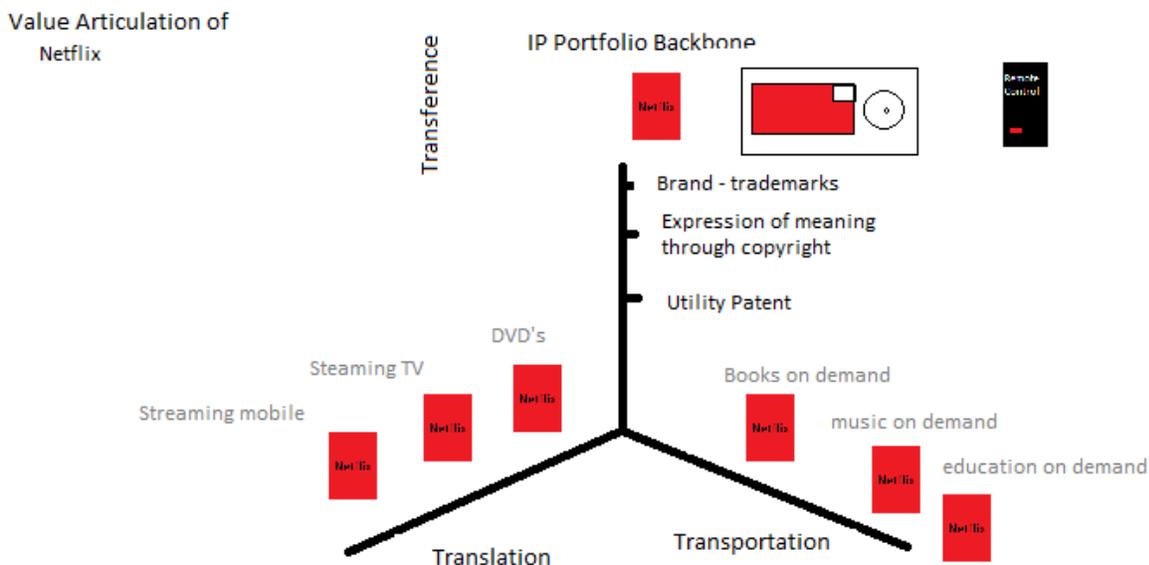
Assuming Netflix can contract these assets, we believe Netflix could continue to target a long tail approach adding value as a platform for content rather than just value through convenience. We think Netflix should use their customer preference ranking information and look closely at touchpoints to determine what other service offerings fit well within the Netflix semiosphere and find new ways to articulate value. (see Exhibit # 28) Proper management of the brand transference ultimately can take Netflix in new direction in the DVD, streaming, and other similar businesses.<sup>63</sup> (See Exhibit # 29)

### Challenges to content licensing

With the fantastic growth of the home video market in recent decades, movie studios are looking for new ways to manage their intellectual capital in a way that maximizes profit. The original business model was the sale of physical memory storage devices (VHS tapes) at wholesale prices to video stores. The movies would be sold to the stores after the showing in theatres had ended to protect from cannibalization and to tap a different target audience more interested in a lower price point and the convenience of not leaving the home.

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<sup>63</sup> Appendix D



### Exhibit # 29: Netflix value articulation diagram<sup>64</sup>

Revenue sharing models became the popular way for studios to gain a share of the variable sales while reducing the upfront costs for the stores. This also allowed stores to purchase more titles and offer more variety.

Streaming, however, generally involved a middle man such as Netflix securing rights to an entire library of movies from the studio, which can be rented to the consumer by the movie or rented providing unlimited access over a period of time.

The challenge for the studio is whether to provide their own channel to the consumer for the services or outsource to companies like Netflix with an established brand in the rental category. As more competitors to Netflix pop up, the studios have more choices. With choice comes upward price pressure on the wholesale deal to rental companies.

Furthermore, the advent of wifi networks and mobile devices had led to a proliferation of mobile apps allowing companies to link and sell direct to consumers without the need for consumers to use a browser. An opportunity for studios to provide streaming direct to consumers through apps while gathering consumer data allows them to better serve consumers. Such a model would require partnering with patent holders in these technologies rather than striking deals with Netflix. To take advantage of this model, Netflix has established a presence in the apps on mobile devices, allowing streaming. With the a growing category of tablet computers

<sup>64</sup> Adapted from the value articulation from class for framework - from Professor James Conley

since 2010, these devices have the potential to be the main source of media content for people on the go.

## **Strategy Going Forward: Tactics and the Role of Intellectual Property**<sup>65</sup>

Netflix's business model and use of intellectual property to accomplish market dominance in the DVD rental business has been nothing short of impressive. But evolving technology is quickly making the DVD technology within the media entertainment industry like that of the VHS and vinyl record before it. The new technology of VOD is quickly evolving, with new players and changing competitive forces. During the time that Netflix has dominated DVD business they have worked very hard to develop a strong brand name having developed a different value offering with innovative and superior customer service. To the extent Netflix can continue to use its IP to hold a competitive advantage in the DVD business the VOD business should enhance their product offering and help Netflix answer the demands of the expanding customer base.

Netflix can continue to capitalize on the Long Tail marketing strategy that exists within the media entertainment business. Netflix was able to dominate the DVD mail business much like Amazon dominated online book sales by deploying the Long Tail strategy. The Long Tail basically refers to the retailing strategy of selling a large number of distinct items with relatively lower inventories and demand in addition to selling fewer very popular items in large quantity. The distribution and inventory costs of companies competing in this space are critical and allow firms to make a profit off more customers with less demand per customer. Ultimately Netflix offered a far larger library catalogue than competitors like Hollywood Video or Blockbuster and as such ended up with a large number of customers with lower volume per customer.

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<sup>65</sup> Can-Turtles-Fly blog, *A Look at Netflix's History and Its Business Transformation*, Jan. 8, 2012, at <http://can-turtles-fly.blogspot.com/2012/01/look-at-netflixs-history-and-its.html> (last visited Mar. 9, 2012)

This should continue to be a source of competitive advantage for Netflix's offerings as the direction of the market toward VOD does not necessarily lend itself to the Long Tail marketing strategy. Netflix dominated the Long Tail concept in physical DVD rentals because it could acquire the content on its own. As long as a physical DVD is available, they could buy it and rent it to as many customers as possible. As the company became more and more successful, and could purchase more DVDs, it ended up owning more and more, eventually owning almost anything available on DVD. With VOD, Netflix can neither buy content nor procure content on its own. Instead, it has to sign licensing deals with the content owners. This hampers the Long Tail strategy for firms competing in the VOD space for several reasons.

First, much of the content is owned by numerous individuals and you would need to sign licensing deals with all of them. Just the task of getting all the parties to agree is a large task. In addition, some content it would literally be impossible as there are so many content rights holders you can't even track them all down. For example, think of trying to license content on a film from the 1950's with some studio that may not even exist today. Secondly, the normal structure of the video business is to sign *exclusive* deals. For example, a television show or movie acquired by, say, ABC, is not shown on CBS. So, a company like Netflix or YouTube will never own all the streaming rights to all the content. Capitalizing on the expanding base and new demands of the customers Netflix will be able to use the VOD as a compliment to the product offerings instead of its only offering (See Appendix D).

## Conclusion

In conclusion, it is not evident that Netflix has taken the steps to secure all the specialized assets needed to remain successful in its growth streaming business. Unless Netflix is granted new streaming patents new entry and price competition will come fast as the dominant design process of subscription streaming to TV's has been embraced by the market. Whether or not granted new patents in streaming it is clear from the analysis that Netflix needs to contract with the specialized asset holder such as the bandwidth providers giving up some profit to limit exposure to the threat of losing access to these assets. A revenue sharing model may prove useful. It is likely that combination of companies will emerge in the near future to scale up and compete in this arena.

An important aspect of Netflix brand in the past has been its long tail strategy. It is unclear whether the same strategy can be followed in the streaming environment, however, if sustainable such a strategy would complement a platform approach to value. If Netflix can continue to manage its brand and integrate the visual cues into hardware and software accessing consumer touchpoints, it stands to be able to leverage its intellectual capital creating value as a platform. Such a platform has value articulation through translation to new ways of offering movies and transportation to new frontiers in education, advertising, music and many others. Whatever path is chosen Netflix must be careful to align with the semiosphere it has created in the mind of the consumer. A single poor decision on any of these frontiers could damage trust and tarnish the brand as a whole. The reputation of the company as a whole needs to be strong to survive the coming shakeup.

## Appendix

### Appendix A: Summary of patents secured by Netflix

#### 1) US Patent No. 6,584,450 B1 “Method and apparatus for renting items”

**Issued:** June 24, 2003

**Use:** According to a computer-implemented approach for renting items to customers, customers specify what items to rent using item selection criteria separate from deciding when to receive the specified items. According to the approach, customers provide item selection criteria to a provider provides the items indicated by the item selection criteria to customer over a delivery channel. The provider may be either centralized or distributed depending upon the requirements of a particular application. A "Max Out" approach allows up to a specified number of items to be rented simultaneously to customers. A "Max Turns" approach allows up to a specified number of item exchanges to occur during a specified period of time. The "Max Out" and "Max Turns" approaches may be used together or separately with a variety of subscription methodologies.

#### 2) US Patent No. 6,966,484 B2 “Mailing and response envelope”

**Issued:** Nov 22, 2005

**Use:** A mailing and response envelope for conveying an item from a sender to a recipient and back is disclosed. The envelope comprises a base panel, a sender address panel, and a recipient address panel. The sender address panel is affixed to the base panel by an adhesive region. The sender address panel and adhesive region define a pocket sized to accept an item. The adhesive region extends laterally on the base panel in an amount selected to ensure that a postal cancellation is not applied to an area overlying the item. The recipient address panel is joined to the base panel by a detachable joint. In this configuration, a fragile item may be conveyed from the sender to the recipient and from the recipient back to the sender without damage to the item.

#### 3) US Patent No. 7,024,381 B1 “Approach for renting items to customers”

**Issued:** April 4 2006

**Use:** According to a computer-implemented approach for renting items to customers, customers specify what items to rent using item selection criteria separate from deciding when to receive the specified items. According to the approach, customers provide item selection criteria to a provider provides the items indicated by the item selection criteria to customer over a delivery channel. The provider may be either centralized or distributed depending upon the requirements of a particular application. A “Max Out” approach allows up to a specified number of items to be rented simultaneously to customers. A “Max Turns” approach allows up to a specified number of item exchanges to occur during a specified period of time. The “Max Out” and “Max Turns” approaches may be used together or separately with a variety of subscription methodologies.

4) **US Patent No. 7,401,727 B2 “Mailing and response envelope and method of making the same”**

**Issued:** July 22, 2008

**Use:** A mailing and response envelope for conveying an item from a sender to a recipient and back is disclosed. The envelope comprises a base panel, a sender address panel, and a recipient address panel. The sender address panel is affixed to the base panel by an adhesive region. The sender address panel and adhesive region define a pocket sized to accept an item. The adhesive region extends laterally on the base panel in an amount selected to ensure that a postal cancellation is not applied to an area overlying the item. The recipient address panel is joined to the base panel by a detachable joint. In this configuration, a fragile item may be conveyed from the sender to the recipient and from the recipient back to the sender without damage to the item.

5) **US Patent No. 7,403,910 B1 “Approach for estimating user ratings of items”**

**Issued:** July 22, 2008

**Use:** According to another embodiment of the invention, an approach is provided for estimating how a user would rate an item that the user has not yet rated. The approach is applicable to any type of items, including rental items such as movies and games, and the invention is not limited to any particular type of item. The approach is applicable to a wide variety of contexts and is ideally suited for automatically selecting rental items to be recommended for rental. One or more items that have been rated by the user are identified. Then, one or more other users are identified

that have rated the one or more items and given ratings to the one or more items that are substantially similar to ratings given by user to the one or more items. Finally, estimation is made how the user would rate the item that the user has not yet rated based upon how the one or more other users rated the item.

**6) US Patent No. 7,546,252 B2 “Approach for managing rental items across a plurality of distribution locations”**

**Issued:** June 9, 2009

**Use:** An “inventory free” approach for managing rental items across a plurality of distribution locations includes sending at least some rental items that are not needed by two or more distribution locations to a designated distribution location. Rental items sent to the designated distribution location may be permanently stored at the designated distribution location, returned to the distribution location from which they were sent, or sent to other distribution locations, depending upon where the rental items are needed. In situations where particular rental items are not currently needed by customers at a distribution location, but there is a high likelihood that the particular rental items will be needed by the customers within a specified time, the particular rental items may be maintained at the distribution location as “float” and not sent to the designated distribution location. The float is re-processed as returned rental items prior to being again rented to customers.

**7) US Patent No. 7,568,613 B1 “Mailer envelope with inventory control window”**

**Issued:** August 4, 2009

**Use:** An envelope for conveying an item from a sender to a recipient and back with a window and unique identifying indicia. The envelope comprises a base panel with a window, a sender address panel, and a recipient address panel. The sender address panel is affixed to the base panel by an adhesive region, which defines a pocket sized to accept an item. The adhesive region extends laterally on the base panel to ensure that a postal cancellation is not applied to an area overlying the item. The recipient address panel is joined to the base panel by a detachable joint. A fragile item may be conveyed from the sender to the recipient and back without damage to the item. The base panel includes indicia that uniquely identify the

envelope among a plurality of envelopes. Reading the indicia assists in resolving inventory problems, for example, when unknown items are returned.

8) **US Patent No. 7,617,127 B2 “Approach for estimating user ratings of items”**

**Issued:** Nov 10 2009

**Use:** Approach is provided for estimating how a particular user would rate a particular item from a plurality of items. The approach is applicable to any type of items, including rental items such as movies, music and games, and the invention is not limited to any particular type of item. One or more items from the plurality of items that have ratings similar to the particular item are identified. Then, one or more other users are identified that have given ratings to the one or more items that are substantially similar to ratings given by the particular user to the one or more items. Finally, estimation is made of how the particular user would rate the particular item based upon ratings for the particular item given by the one or more other users.

9) **US Patent No. 7,631,323 B1 “Method of sharing an item rental account”**

**Issued:** December 8, 2009

**Use:** An account in an item rental service is shared with others using computer - implemented profiles, subject to computer-enforced constraints. In one embodiment, a method provides for establishing a user account, wherein the user account is associated with an account owner, wherein the user account comprises a first ordered queue indicating two or more items that the account owner desires to rent; receiving a request to add a second ordered queue to the user account, profile member identifying information, and a constraint value; creating and storing a profile record based on the profile member identifying information and the constraint value, wherein the profile record is further associated with a second queue; receiving a request to add a specified rental item to the second queue, wherein the specified rental item does not conform to the constraint value; and adding the specified rental item to the second queue only in response to receiving confirmation by the account owner.

10) **US Patent No. 7,848,968 B1 “Processing returned rental items”**

**Issued:** Dec 7, 2010

**Use:** In an embodiment, a method of processing returned rental inventory items comprises receiving, at a rental item provider and from a set of first customers of the rental item provider, a

set of returned rental items that the first customers have returned to the rental item provider after renting the items; predicting a subset of the returned rental items that the rental item provider will need to provide in the future to a set of second customers; creating and storing a record in a computer of the subset of the returned rental items; providing the subset of the returned rental items to the set of second customers without first returning the returned rental items to an inventory of rental items.

**11) US Patent No. 7,958,529 B2 “Method of sharing an item rental account”**

**Issued:** July 7, 2011

**Use:** An account in an item rental service is shared with others using computer-implemented profiles, subject to computer-enforced constraints. In one embodiment, a method provides for establishing a user account, wherein the user account is associated with an account owner, wherein the user account comprises a first ordered queue indicating two or more items that the account owner desires to rent; receiving a request to add a second ordered queue to the user account, profile member identifying information, and a constraint value; creating and storing a profile record based on the profile member identifying information and the constraint value, wherein the profile record is further associated with a second queue; receiving a request to add a specified rental item to the second queue, wherein the specified rental item does not conform to the constraint value; and adding the specified rental item to the second queue only in response to receiving confirmation by the account owner.

**Appendix B: Pending Netflix patent applications**

Reference #	Filing date	Publication Date	Use
2010/0262833	April 13, 2009	Oct 14, 2010	Activating Streaming Video in a Blu-Ray Disc Player
2011/0302158	June 8, 2010	Dec 8, 2011	Interest based row selection
2011/0225302	March 12, 2010	Sept 15, 2011	Parallel Streaming
2011/0208695	Feb 22, 2010	Aug. 25, 2011	Data synchronization between a data center environment and a cloud computing environment

2011/0185041	Jan 22, 2010	June 28, 2011	Client-server signaling in content distribution networks
2011/0268428	Sept 9, 2009	Nov 3, 2011	Accelerated playback of streaming media
2011/0268178	Aug 18, 2009	Nov 3, 2011	Encoding Video Streams for adaptive video streaming
2011/0023076	Jul 24, 2009	Jan 27, 2011	Adaptive Streaming for Digital Content
2012/0042047	Aug 13, 2010	Feb 16, 2012	System and method for synchronized playback of streaming digital content

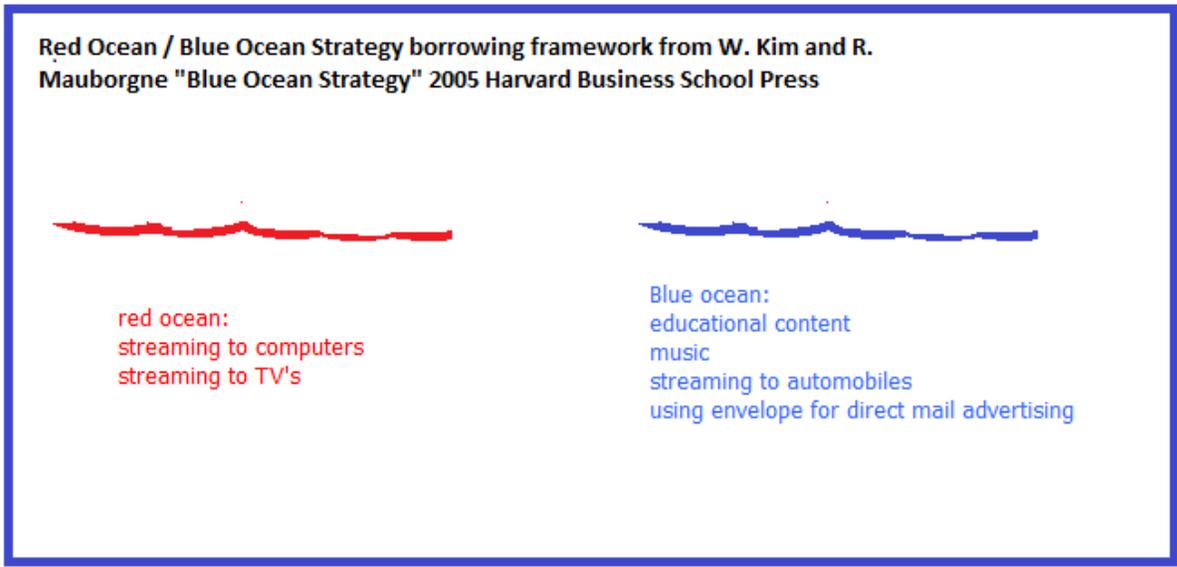
### Appendix C: Netflix US trademarks<sup>66</sup>

US Trademarks:

	Serial #	Reg #
Netflix	85389635	
Qwikster	85425828	
Qwikster	85425822	
Netflix	78787630	3171517
Netflix	78725329	3299362
Friends	78586432	3150600
Netflix	78081303	3194832
Netflix	75412591	2552950

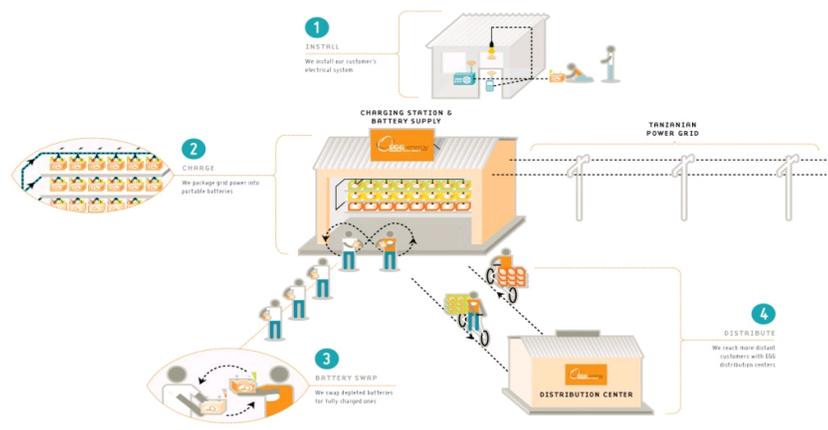
**Appendix D: Blue-ocean Red-ocean diagram. Red signifies the current product and blue signifies the new markets for Netflix**

<sup>66</sup> USPTO gov, Trademark electronic search, <http://www.uspto.gov/trademarks/index.jsp> (last visited Feb. 28, 2011)



**Appendix E: Others adapt Netflix business model<sup>67</sup>**

A start-up by the name of EGG-energy is providing 'Netflix' battery service aims to power up Africa. They are relying on a low cost subscription based model. *Think of it as a kind of "Netflix for batteries," minus the postal service* says Jamie Yang, EGG-energy's co-founder.



<sup>67</sup> Clark Boyd , 'Netflix' battery service aims to power up Africa, BBC world, 8 March 2012, at <http://www.bbc.com/future/story/20120308-powering-up-africa-by-battery> (last visited March 8, 2012)