EXAM ELECTRONIC COMMERCE (192320501) April 17, 2014

Instructions: *This is an open book exam – it is allowed to consult any reading material provided by the teachers. Be sure to switch mobile phones off and store them in a closed bag. Be sure to indicate name, program and student number on each sheet. Grade for the exam is Round (Sum of Points / 10) + 1. Concise yet complete answers are better than long-winded answers. Success!!*

To answer the questions use Papazoglou and Ribbers (2006) and/or the corresponding slides of the lectures.

About Netflix:

Netflix, Inc. is an American provider of on-demand Internet streaming media available to viewers in North and South America, the Caribbean, and parts of Europe (Denmark, Finland, Ireland, the Netherlands, Norway, Sweden, and the UK), and of flat rate DVD-by-mail in the United States, where mailed DVDs are sent via Permit Reply Mail. Netflix uses *Permit Reply Mail* to send its discs to consumers. In 2007, the US Postal Service estimated that the excess manual handling required for its discs cost it roughly $21 million per year. The Postal Regulatory Commission ruled in 2010 that the US Postal Service had given Netflix preferential treatment to competitors.

The company was established in 1997 and is headquartered in Los Gatos, California. The company has amassed a collection of 100,000 titles and approximately 10 million subscribers. The company has more than 55 million discs and, on average, ships 1.9 million DVDs to customers each day. Netflix previously claimed to spend about $300 million a year on postage. On April 2, 2009, the company announced that it had mailed its 2 billionth DVD, and awarded the recipient with a complimentary lifetime membership.

As of September 2013, Netflix Q3 2013, Netflix reported global streaming subscribers at 40.4 million (31.2 million in U.S.).

Services

Netflix is a subscription-based movie and television show rental service that offers media to subscribers via Internet streaming and via US mail. Both Netflix's service offerings (DVD rental and streaming) rest on the concepts of accessibility and convenience from client's perspective.

In the US, the company provides a monthly flat-fee service for the rental of DVD and Blu-ray movies. A subscriber creates an ordered list, called a rental queue, of DVDs to rent. The DVDs are delivered individually via the United States Postal Service from an array of regional warehouses. Currently, there are more than 100 shipping points located throughout the United States. The subscriber can keep the rented DVD as long as desired, but there is a limit on the number of DVDs (determined by subscription level) that each subscriber can have on loan simultaneously. To rent a new DVD, the subscriber must mail a previous one back to Netflix in a prepaid mailing envelope. Upon receipt of the disc, Netflix ships the next available disc in the subscriber's rental queue. A new Netflix security prepaid mailing envelope, designed to prevent tearing or unauthorized access.

As of July 24, 2007, Netflix's most popular plan cost US $16.99 (plus tax) per month, allowing a subscriber to rent up to three DVDs at a time, with unlimited exchanges. Other monthly plans range from US $4.99, for one disc at a time and a limit of two per month, to US $47.99 for eight with unlimited exchanges. For the three-out and eight-out plans, each rental slot costs the subscriber approximately US $6 a month. Netflix also sells gift subscriptions for various renting intervals, although the recipient must register using a major credit or debit card.

Internet video streaming

In addition to Netflix's disc rental service, Netflix separately offers an Internet video streaming service, which gives internet-connected devices access to Netflix's online content library. The two libraries are also notably different, with the disc library having more movie titles available, while the streaming library has more Netflix original content. And among competing video streaming services, Netflix is probably the most widely supported among compatible devices. Netflix is the biggest source of North American downstream web traffic, at 32.3%, and registered 28.8% of aggregate traffic.

When the streaming service first launched, Netflix's traditional rental-disc subscribers were given access at no additional charge. Subscribers were allowed approximately one hour of streaming per dollar spent on the monthly subscription. (A $16.99 plan, for example, entitled the subscriber to 17 hours of streaming media.)

In January 2008, however, Netflix lifted this restriction, at which point virtually all rental-disc subscribers were entitled to unlimited streaming at no additional cost. (However, subscribers on the restricted plan of two DVDs per month ($4.99) were still limited to two hours of streaming per month.) This change was a response to the introduction of Hulu and to Apple's new video rental services. Subsequently, as it became clear that disc-rental and internet streaming markets were distinct, Netflix split DVD rental subscriptions and streaming subscriptions into separate, standalone services, at which point the monthly caps on internet streaming were lifted.

The selection of available titles is based upon the user's IP address. For most users, this corresponds to the user's physical location. However, it means that, for example, a user in Canada who is accessing the Internet through a U.S.-based router connection will see the selection available to U.S. users.

According to a survey by Nielsen in July 2011, 42% of all Netflix users make use of a stand-alone computer to connect to Netflix, 25% do so by using the Wii, 14% by connecting their computers to a TV, 13% make use of a PlayStation 3 and 12% use an Xbox 360.

Currently the streaming service features more than 12,000 movies and recorded television shows available. Major studios including NBC Universal, MGM, 20th Century Fox, CBS/Paramount, ABC-Disney, Warner Brothers, are all distributing films and television shows via the service. In 2010, Netflix reached a five-year deal worth nearly $1 billion to stream movies from Paramount, Lionsgate and MGM. The deal increased the amount Netflix was spending on streaming movies annually and adds roughly $200 million per year. As of 2011, Netflix's streaming service holds first-run rights to films from Paramount Pictures, MGM, and Lions Gate Entertainment, and also provides TV programs distributed by Disney-ABC Domestic Television and other TV stations.

Movie and TV library
Netflix currently has exclusive pay-TV deals with major and mini-major movie studios. Epix signed a five-year streaming deal with Netflix where for the first two years, Epix content was exclusive to Netflix (Epix films will come to Netflix 90 days after they premiere on Epix. The exclusive portion ended on September 4, 2012, when Amazon signed a deal with Epix to feature movies on their streaming service. These include films from Paramount Pictures, MGM and Lionsgate). Other studios providing content on Netflix under license include Disney–ABC Television Group, DreamWorks Classics, Kino International, Warner Bros. Television, 20th Television, Hasbro Studios, Saban Brands (with the MarVista Entertainment distribution) and CBS Television Distribution.

On December 4, 2012, Netflix and The Walt Disney Company announced an exclusive multi-year U.S. subscription television service agreement with Netflix for first run of Walt Disney Studios animated and live-action movies. New titles from Disney, Walt Disney Animation Studios, Pixar, Marvel Studios and Disneynature will be available from Netflix in 2016. However, classic titles such as Alice in Wonderland were made available to Netflix immediately. Direct-to-video new releases were made available in 2013. The agreement came after Disney's announcement in November 2012, that it would be shutting down its web movie service Disney Movies Online on December 31, 2012.

Cinematch
Netflix developed and maintains an extensive personalized video-recommendation system based on ratings and reviews by its customers. In, 2006, Netflix offered a $1,000,000 prize to the first developer of a video-recommendation algorithm that could beat its existing algorithm, Cinematch, at predicting customer ratings by more than 10%.

Patents
Netflix owns 14 US patents covering the following aspects of its on-demand and DVD-by-mail business:
-Analyzing user ratings (4)
-DVD mailing envelopes (4)
-Rental system administration (3)
-Methods for managing rental workflow across distributed locations (2)
-Activating streaming video via a blu-ray disc player (1)

The company's US patent portfolio primarily protects aspects of its DVD-by-mail business, with only a single US patent with claims related to video streaming. However, Netflix owns 32 pending US patent applications that cover technologies to improve and optimize on-demand streaming video delivery, such as data synchronization, encoding, adaptive streaming, and multiplexing. Its pending patent applications suggest that Netflix's current R&D focus is in-line with its business shift towards on-demand streaming video.

Competitive environment
Netflix competes in the vast industry of online, digital, and TV entertainment. One may accuse this industry definition of being somewhat loose and too broad, but the definition is correct. People have limited time and resources to spend on entertainment; therefore, any product that can serve as a substitute for what Netflix offers must be considered a competitor. A simple analogy from the refreshment beverage market can help bring this point to light.

American consumers recognize Snapple as a bottled iced tea popular in convenient stores across the country. Yet, despite not being a carbonated beverage like Coke, Snapple must compete with Coke for business. This makes sense because the average consumer entering a convenient store will likely purchase either a Coke or a Snapple, but not both. The same type of competition takes place in the entertainment industry. Individuals have only a limited amount of time and resources to spend on entertainment forcing them to choose between alternatives. Unlike the beverage market, in which is it customary to buy multiple quantities of items, the entertainment industry is largely a perishable good because people's time to consume the entertainment cannot be retrieved at a later date.

Predicated on this concept, Netflix makes a key distinction between competitors-for-time and competitors-for-content. Under the umbrella of digital entertainment, competitors are separated into these two categories. Two large competitors-for-time are video games and movie theaters. Noting the differences between the businesses illustrates how having a narrowly focused target market can assist a business to carve out a competitive advantage within a broader market. Following the example, we note that movie theaters only target people who are able and interested in going outside their homes for entertainment. In this schema both Hulu and Amazon pose immediate competitive threat to Netflix. Currently, Hulu and Amazon are the most salient threats because they have been bidding most aggressively for available content, which is a large driver of Netflix's costs. Apple and Google with compete, at least initially, less directly with Netflix. A more nuanced analysis of the competition is presented later in this paper.

Question 1 (45 points):

1.1 Based on Porter's Five Forces Model, analyze the industry profitability of the video streaming service sector. *(15 points)*

1.2 In Lecture 6, we discussed the link to Business-IT architecture. Based on the case study information, identify 7 systems that are critical to the Netflix online business. For each system, motivate your answer*(15 points)*

1.3 What are the competitive advantages of Netflix? Discuss critically by using the concepts in the lectures. *(10 points)*

1.4 When the streaming service was launched, Netflix let its existing DVD rental clients to use it for free. Explain the role of these free clients (of the streaming service) by using the concepts we discussed in Lecture 5. *(5 points)*

Question 2 *(10 points)*
Mock-ups and (cartoon) videos are two ways of creating a 'paper prototype'.

2.1. Give an example of a setting in which mock-ups would provide more value than a (cartoon) video. (5 points)

2.2. Give an example of a setting in which using a cartoon video would provide more value than mock ups. (5 points).

Question 3 *(15 points)*

3.1.Suppose you have read a movie blog authored by a regular user of a Netflix service. You have read a blog post about a movie and you watched the movie afterwards. You were very satisfied with the experience and wrote a comment on the blog where you also recommended the movie to other people. Identify four actors for whom this recommendation is a value object. Motivate your answer. (6 points)

3.2 Suppose Netflix gives a donation to the Red Cross organization. Write two value objects that Netflix gets in return? (3 points)

3.3.Based on the case study text, identify three intangible value objects that Netflix provides to its clients and are fundamental to the value proposition of the Netflix streaming service offering. (under 'Intangeable', we mean money-unrelated/non-monetary). (3 points)

3.4.In this course, we referred to the statement *"In some situations, acquiring free customers in the early stages of a business is crucial"*.

Give an example of an e-commerce site for which this statement holds. Explain how you conclude that this statement holds in your example. (3 points)

Question 4 *(20 points)*
Create an e3value model for the Netflix case. Indicate explicitly if you take an actor-oriented or a market-oriented perspective. Write any assumption that you make when creating the e3value model.

Question 5.(10 points)

5.1.. The description below is about a social networking feature offered by Netflix.

Although Netflix has long posted film reviews written by customers, in November 2005 it launched a social networking service, called "Friends," which lets customers share movie preferences and reviews with a community. This service organizes reviews and other personal information related to individual subscribers. A subscriber can: (i) view other subscribers' rental queues (the queues of the so-called 'friends'), (ii) compare his/her ratings with the rating of the other subscribers (the 'friends'), and (iii)exchange comments and suggestions with 'friends'.

After the launch of this service, Netflix observed a quick increase of the number of new subscribers. More people are becoming Netflix-subscribers as a consequence of that the existing subscribers start using the Friends-service and invite others into their personal network, including some people who are already Netflix-subscribers and some who aren't. Netflix also found that their subscribers liked much better the recommendations by their friends than their own selections (which they did without using reviews and recommendations). Netflix-subscribers did love to browse through their friends' rental queues to see what was keeping their friends entertained.

The Friends service is an example of value co-creation. Explain how value is co-created in this case. (7 points)

5.2 The Friends-service is not presented in the e-3 value model that you created while responding to Question 4. Add to this model a value exchange to present the Friends-service. (3 points)

Note: please re-draw only those actors who are engaged in the new value exchange. There is no need to re-draw the whole model.