

A Proposal to Review the Pricing and the Feasibility of the Mainstream Usage of NVIDIA's GeForce Now Cloud Gaming Service

Introduction

The constant technological advancements in the modern world have created an increasing demand for appealing visuals from consumers in the gaming industry [1]. This increasing demand has also created a need for faster and more expensive hardware. The cost of acquiring the resources to be able to play modern games at high settings can be expensive. Cloud gaming provides users with scalable cloud computing resources which can be used as an alternative compared to purchasing hardware [2, p.1]. However, the services of cloud gaming are limited and can be expensive [3]. This document proposes a review of the pricing of cloud gaming services, more specifically, Nvidia's GeForce Now. This document will also review the feasibility of a mainstream transition to using cloud gaming services over the traditional PC gaming practices of purchasing and utilizing localized PC hardware. The proposed review will discuss the hardware constraints when running graphically demanding games and compare the costs of paying for a high-end gaming PC versus paying for GeForce Now. Included in this proposal will be a problem description entailing relevant background research on the matter as well as objectives to support the proposal.

Problem Description

AAA games (games with the highest development budgets and the highest quality) are developed to be graphically demanding [4]. The high-end hardware required to run AAA games at high graphics settings is usually priced outside of the average consumer's budget and can cost thousands of dollars [5]. This price to performance ratio represents itself as a significant financial constraint against consumers on a budget who wish to experience high-end gaming.

Cloud gaming, also known as gaming as a service (GaaS) [2, p1] is a solution to the hardware performance constraints on users imposed by graphically demanding games. Cloud gaming is "[d]ifferent from the traditional method of distributing game software [because it] introduces a third party, i.e., the cloud service provider [2, p.1]. The cloud service provider makes use of their own computing resources to host and render games on their servers [2, p.1]. The games are then video streamed to users. This process allows users to enjoy the experience of high-end AAA gaming and makes "the capability of the user's computer unimportant" [5].

Cloud gaming is a new service compared to the traditional method of playing games via a localized computer. There are still challenges and research issues associated with providing the optimal service to users [2, p.6-7]. For example, Nvidia's GeForce NOW cloud gaming service, introduced on October 1, 2015, is still only in its beta testing phase [6]. There is limited access to the service because of popular demand [6]. Users cannot freely access the service because it is still in the process of being tested for bugs.

Nvidia's GeForce Now service is currently free of charge because it is in its beta testing phase. However, Nvidia has plans to change the service into a paid service after the service's beta testing phase is over. Nvidia has announced that the company plans to price the service using a pricing structure which charges a user based on their playtime [7]. After the full release of the service, the service will charge a user at a rate of 25 USD per 20 hours of gameplay [7].

This pricing represents a significant financial obstacle for users willing to allot many hours into gaming. Casual gamers who do not spend many hours on average playing games will benefit from this pricing structure in the short term. They benefit because they will not have to down pay the initial cost of a PC capable of running high-end games. On the other hand, users who spend many hours gaming will incur charges greater than the initial cost of their gaming machine at a much faster rate when compared to casual users. Nvidia's proposed pricing for their cloud gaming service is not sufficiently low enough for non-casual gaming users.

At the time of its introduction, Nvidia's GeForce Now service was priced at 7.99 USD per month [8]. This pricing was low enough for the service to be attractive to heavy gamers. The service at the time, however, was less compatible with different platforms and operating systems such as MacOS and Windows [8]. In addition to less cross-compatibility on different platforms, the service also supported less games [9]. Nvidia needed to introduce the new pricing structure of users paying by playtime hours to warrant the server costs and upgraded functionality of GeForce Now [6].

Objectives

I propose to review the available literature about the pricing and availability of cloud gaming as a service. In this review, I will achieve the following three goals:

- (1) explain the hardware constraints when running graphically demanding games; I will do this by determining the components of a PC which factor in the PCs ability to run games
- (2) compare the cost constraints of utilizing a cloud gaming service on a low-end PC over investing in a traditional localized high-end gaming set-up; I will do this by determining the price range of a typical high-end gaming PC and compare that to the calculated price a certain user would have to pay for a cloud gaming service given their playtime hours
- (3) determine the feasibility constraints of lowering the costs of cloud gaming services; I will do this by determining the reason for Nvidia's price increase in their GeForce Now cloud gaming service from \$7.99/month to \$25 per 20 hours and arguing for the possibility for the service to stay at \$7.99/month

The result of this review is to propose for a different price structure in cloud gaming services, more specifically, in Nvidia's GeForce Now cloud gaming service. As a result of the proposed price structure, this review will acknowledge the mainstream use of cloud gaming over traditional PC gaming practices of purchasing PC hardware.

Significance

The result of changing the price structure for cloud gaming services, more specifically, Nvidia's GeForce Now service, will result in an increase in its overall attractiveness towards potential customers. Transitioning from a price structure which charges customers based on the amount of playtime hours they have, to a general monthly basis charge, will cause the service to become more suitable for users who spend a lot of hours playing games. With the price structure change and the attraction of more users, the service will eventually become more accessible because more users will want to transition into subscribing for a cloud gaming service compared to investing in a gaming machine.

Conclusion

The costs of paying for a cloud gaming service, specifically Nvidia's GeForce Now service, while utilizing a low-end gaming machine, are significant amongst users who spend a lot of time gaming. On the other hand, the initial cost of investing in a high-end gaming machine is not an option for casual users who do not wish to spend many hours gaming. Lowering the pricing of cloud gaming services will cause the services to become more attractive to users who spend a lot of time gaming. The different pricing will solve the problem of users investing heavily on gaming hardware just to be able to play the latest high-end graphically demanding games because more users will be able to utilize cloud gaming services on low-end gaming machines. Additionally, a lower price point for GeForce Now will allow it to become more accessible for the population of users who wish to game.

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