**CASE STUDY: Apple, Google, and Microsoft Battle for your Internet Experience**

The three Internet titans - Google, Microsoft and Apple - are in an epic struggle to dominate your Internet experience. They are competing on several fronts: digital content, from music to videos and books for sale in their online stores; physical devices, from Apple’s iPhone to Google’s Android phones. And let’s not forget they all offer tablets as well.

Each firm generates extraordinary amounts of cash based on different business models and is using that cash in hopes of being the top dog on the Internet. In this triangular fight, at one point or another, each firm has allied with one of their two major foes to team up on the third. Two of the firms - Google and Apple - are determined to prevent Microsoft from expanding its dominance beyond the PC desktop and onto the new mobile platform. So Google and Apple are friends. But when it comes to mobile phones and apps, Google and Apple are enemies: both want to dominate the mobile market. Apple and Microsoft are determined to prevent Google from extending beyond its dominance in search and advertising. So Apple and Microsoft are friends. But when it comes to the mobile marketplace for devices and apps, Apple and Microsoft are enemies. Google and Microsoft are just plain enemies in a variety of battles. Google is trying to weaken Microsoft’s PC software dominance, and Microsoft is trying to break into the search advertising market with Bing.

The Internet, along with hardware devices and software applications, is going through a major expansion. Mobile devices with advanced functionality and ubiquitous Internet access are rapidly gaining on traditional desktop computing as the most popular form of computing, changing the basis for competition throughout the industry. Some analysts predict that mobile devices will account soon for the majority of Internet traffic. These mobile Internet devices are made possible by a growing cloud of computing capacity available to anyone with a smartphone and Internet connectivity. Who needs a desktop PC anymore when you can listen to music and watch videos anytime, anywhere on mobile devices? It’s no surprise, then, that today’s tech titans are so aggressively battling.

Apple, Google, and Microsoft already compete in an assortment of fields. Google has a huge edge in advertising, thanks to its dominance in Internet search. Microsoft’s offering, Bing, has about 5 percent of the search market, and about 80 percent belongs to Google. Apple is the leader in mobile software applications, thanks to the popularity of the App Store for its iPhones. Google and Microsoft have less popular app offerings on the Web.

Microsoft is still the leader in PC operating systems, but has struggled with many of its other efforts, including smartphone hardware and software, mobile computing, cloud-based software apps, and its Internet portal. Even though Microsoft’s Xbox consoles and games are popular, they contribute less than 5 percent of Microsoft’s revenue (the rest of its revenue comes from Windows, Office, and network software). While Windows is still the operating systems for approximately 90 percent of the world’s PCs, Google’s Android OS and Apple’s iOS are the dominant players in the mobile computing market, and all three of these companies now realize that this market will only increase in size and scope going forward.

Apple has several advantages that will serve it well in the battle for mobile supremacy. It’s no coincidence that since the Internet exploded in size and popularity, so too did Apple’s revenue. The iMac, iPad, and iPhone have all contributed to the company’s enormous success in the Internet era. Apple has a loyal user base that has steadily grown and is very likely to buy future product and offerings. Part of the reason for the popularity of the iPhone, and for the optimism surrounding Internet-equipped smartphones in general, has been the success of the App Store. A vibrant selection of applications distinguishes Apple’s offerings from its competitors’, and gives Apple a measurable head start in this marketplace. Apple already offers approximately700,000 applications for their devices, and Apple takes a 30 percent cut of all app sales. Applications greatly enrich the experience of using a mobile device, and without them, the predictions for the future of mobile Internet would not be nearly as bright. Whoever creates the most appealing set of devices and applications will derive a significant competitive advantage over rival companies. Right now, that company is Apple.

Google has acted swiftly to enter the battle for mobile supremacy while they can still “win.” More and more people are likely to switch to mobile computing as their primary method of using the Internet, so it’s no surprise that Google is aggressively following the eyeballs. Google is as strong as the size of its advertising network. With the impending shift towards mobile computing looming, it’s not certain that they’ll be able to maintain their dominant position in search. That’s why the dominant online search company began developing its Android operating system, which is used on almost 70 percent of smartphones worldwide. Google offers Android for free to manufacturers of handsets that run the operating system. Via Android, Google hopes to control its own destiny in an increasingly mobile world. Because Google provides Android at no cost to smartphone manufacturers, competitors have sought to weigh it down with patent claims and other lawsuits. That’s part of the reason why Google made its biggest acquisition yet in August 2011, buying Motorola Mobility Holdings for $12.5 billion. The deal gave Google 17,000 patents and another 7,000 more in the pipeline that will help the company defend Android from these patent lawsuits. But buying Motorola’s phone business does more than just give Google patents. It also gives Google the ability to make its own cell phones and tablet devices, which would be its most aggressive move against Apple yet.

Google is entering completely new territory. Google has been particularly aggressive with moves such as the acquisition of Motorola’s phone business because it is concerned about Apple’s preference for “closed,” proprietary standards on its phones. Apple retains the final say over whether or not its users can access various services on the Web, and that includes services provided by Google. Google doesn’t want Apple to be able to block it from providing its services on iPhones, or any other smartphone. Apple is reliant on sales of its devices to remain profitable. It has had no problems with this so far, but Google only needs to spread its advertising networks onto these devices to make a profit. In fact, some analysts speculate that Google envisions a future where mobile phones cost a fraction of what they do today, or are even free, requiring only the advertising revenue generated by the devices to turn a profit. Apple would struggle to remain competitive in this environment. Apple has kept the garden closed for a simple reason: you need an Apple device to play there.

Microsoft hasn’t given up trying to establish a cloud and mobile presence. Its Office productivity suite operates in the cloud as well as on the desktop, giving users the option of saving documents to Microsoft’s OneDrive cloud storage service. Microsoft launched its Surface tablet computers around the same time as the launch of the Windows 8 operating system.

The struggle between Apple, Google, and Microsoft wouldn’t matter much if there wasn’t so much potential money at stake. Billions of dollars hang in the balance, and the majority of that money will come from advertising. App sales are another important component, especially for Apple. Apple has the edge in selection and quality of apps, but while sales have been brisk, developers have complained that making money is too difficult. Roughly a quarter of the apps available in the App Store are free, which makes no money for developers or for Apple, but it does bring consumers to the Apple marketplace where they can be sold other apps or entertainment services.

The three-way struggle between Microsoft, Apple, and Google really has no precedent in the history of computing platforms. In early contests, it was typically a single firm that rode the crest of a new technology to become the dominant player. Examples include IBM’s dominance of the mainframe market, Digital Equipment’s dominance of minicomputers, Microsoft’s dominance of operating systems and PC productivity applications, and Cisco’s dominance of the Internet router market. In the current struggle, three firms are trying to dominate the customer experience on the Internet. Each firm brings certain strengths and weaknesses to the fray. It’s too early to tell if a single firm will “win,” or if all three can survive the contest for the consumer Internet experience.

**CASE STUDY QUESTIONS**

1. Compare the business models and areas of strength of Apple, Google, and Microsoft.

2. Why is mobile computing so important to these three firms? Evaluate the mobile platform offerings of each firm.

3. What is the significance of mobile applications, app stores, and closed vs. open app standards to the success or failure of mobile computing?

4. Which company and business model do you think will prevail in this epic struggle? Explain your answer.

5. What difference would it make to a business or to an individual consumer if Apple, Google, or Microsoft dominated the Internet experience? Explain your answer.

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**Answers**