Market Analysis Report of Eruler

Team Name: W^W^W

Yingkai Wang

Hongting Wang

Haonan Wang

DEPARTMENT OF ELECTRICAL ENGINEERING,

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING,

UNIVERSITY OF WASHINGTON, SEATTLE, WA, 98195

ERuler is a smartphone application for iOS system that can take length measurements of any objects in real life, designed especially for real estate agents, engineers, architects, and designers. But anyone with an iPhone who is eager to obtain an object length, like height of a building, a doorway, or an overhang, is our potential customer.

The problem we are solving through Eruler is an important issue because nowadays people rely heavily on their smartphones for everything when outside. Almost as a mini-computer, people carry their smartphones with them everywhere to solve all kinds of problems. With this trend, smartphones have replaced a lot of tools that used to be in our lives. In our case, the tool is a traditional ruler, which is so commonly used but uneasy to carry around. So our goal is to make use of this opportunity to create an easier life for people by solving the problem that most people always face.

Eruler takes advantage of the rising of smartphones in recent years. For the last few years, smartphones have been playing an increasingly important role in our everyday life. There were 75.23 million iPhone smartphone users in the United States in 2015, shown in Figure 1 [1]. From the same chart, the number of iPhone users increases around 9 million each year. Figure 2 [2] shows that the cumulative number of apps downloaded from apple store has increased exponentially since 2008, which clearly indicates the rapid growth of the base of our potential customers.

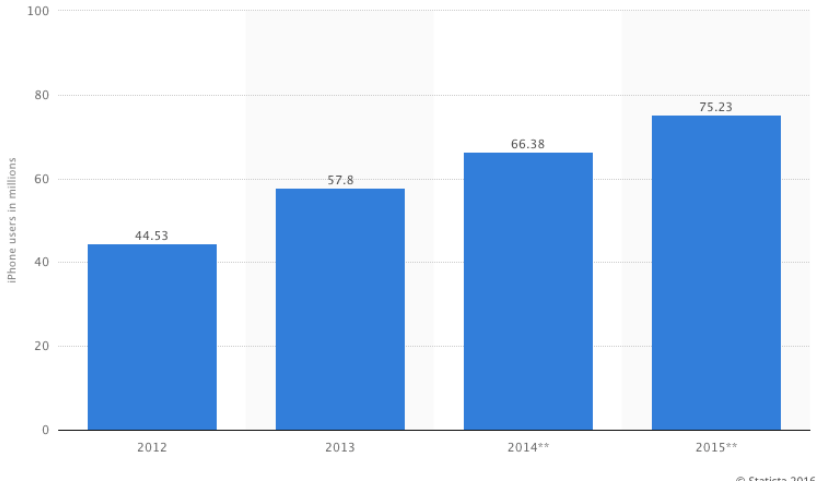

Figure 1. Histogram of the number of iPhone users in millions [1]

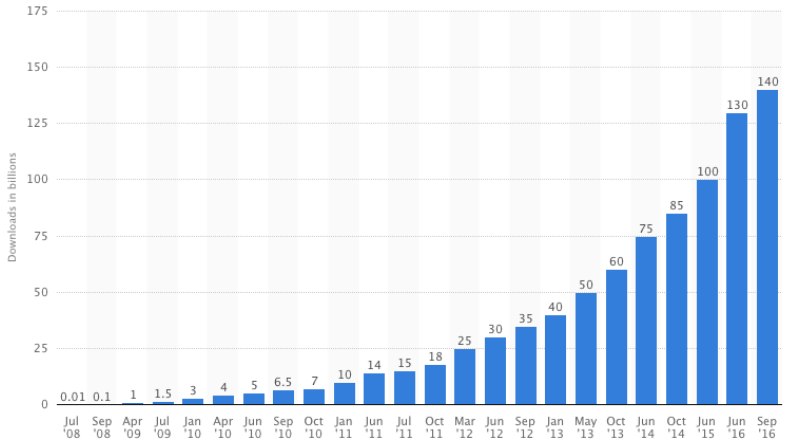

Figure 2. Cumulative number of apps downloaded from the Apple App Store [2]

Eruler stands out from existing measurement tools since it does not request a reference input compared against the object being measured. Instead, by moving the camera on the phone and taking photos in two different positions and angles, this application gets a precise measurement of the object being measured. It takes measurements much easier and is less time consuming than with traditional rulers or other measurement tools or even mobile applications that need a reference length. Current length of object and distance measurement apps, such as *A to B*, *Easy Measurement*, *CamMeasure* and so on, ask users to provide a reference, which is either imprecise or inconvenient to users. Eruler not only provides users the freedom of only using one iPhone and taking two photos in any positions or angles, but also calculates the length between two locations as precisely as an error range of 6.5% in displacement measurement and 5.7% in ideal condition without rotation.

Reference

[1] *S. 2016, "IPhone users in the US 2012-2015," Statista, 2016. [Online]. Available: https://www.statista.com/statistics/232790/forecast-of-apple-users-in-the-us/.*

[2] *S. 2016, "Apple store downloads 2016 | statistic," Statista, 2016. [Online]. Available: https://www.statista.com/statistics/263794/number-of-downloads-from-the-apple-app-store/.*