CECS 526

Spring 2020

Cal State Long Beach

Term Paper Assignment

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Mobile vs Traditional OS (Case study: Linux vs Android)

Abstract

Operating system (os) is a type of system software that manages computer hardware and provides services for users. Traditional operating system focuses on delivering speed with powerful CPU. However, mobile devices have more constraints than traditional desktops. Mobile phones are less powerful, which supports limited types of user interaction and runs on a set amount of battery power. Thus, mobile os design requires a small footprint and higher efficiency per power usage. Although there are many choices among traditional and mobile os in the market, we choose Android as a representative for mobile os and Linux for traditional os. Linux is the leading operating system on servers and other big iron systems such as mainframe computers, and the only OS used on TOP500 supercomputers [1]. Android is the most popular mobile operating system nowadays both for smartphones and tablets [2]. Android may be based on Linux, but it's not based on the type of Linux system we may use on the desktop. This paper presents a detailed view of differences in hardware architecture, kernel design, underlying file system, power management, and c library support.

Reference:

[1] A. Prakash. Linux runs on all of the top 500 supercomputers, again!, 2020. URLhttps://itsfoss.com/linux-runs-top-supercomputers/. Online.

[2] P. D. P. Bhargavi Padhya, Prasad Desai. Comparison of mobile operating systems.Inter-national Journal of Innovative Research in Computer and Communication Engineering,4(8), 20