



Mobile Computing

Varshan. M¹, Nishanth. S², Sasidharan. C³, Manjeet Prabhu. P⁴

^{1,2,3,4}Sri Krishna Arts and Science College, BK Pudur, Sungunapuram East, Coimbatore, Tamilnadu- 641008

ABSTRACT: -

Mobile computing refers to the ability to use technology that is not physically connected to a fixed location or network. This is made possible by portable devices such as smartphones, tablets, and laptops, which allow users to access information and services from anywhere at any time. Key technologies that enable mobile computing include wireless networks, mobile operating systems, and mobile applications. As mobile computing continues to evolve, it is likely to have an increasingly significant impact on the way people work, communicate, and live their daily lives.

1. INTRODUCTION

The Mobile computing has also had a significant impact on industries ranging from healthcare to finance, enabling new ways of working and delivering services to customers. For example, mobile healthcare applications allow patients to monitor their health and communicate with healthcare providers from anywhere, while mobile banking applications enable users to manage their finances on the go. Key technologies that enable mobile computing include wireless networks, mobile operating systems, and mobile applications. As mobile computing continues to evolve, it is likely to have an increasingly significant impact on the way people work, communicate, and live their daily lives.

1.1 What is Mobile Computing

Mobile computing refers to the use of portable computing devices such as smartphones, tablets, laptops, and wearable devices that allow users to access data, applications, and services while on the move. Mobile computing devices typically rely on wireless networks, such as Wi-Fi, cellular, or satellite networks, to connect to the internet and exchange data with other devices. This allows users to access information, communicate with others, and perform a variety of tasks from almost anywhere, without being tethered to a fixed location



Fig 1.1: Mobile Computing

1.2 History of Mobile Computing

Mobile computing refers to the use of portable devices such as smartphones, tablets, laptops, and other handheld devices to access and use digital resources, including the internet, applications, and data. The history of mobile computing can be traced back to the early 1970s when the first portable computer was introduced.

1970s-1980s: The first mobile computer, the IBM 5100, was released in 1975. It weighed around 50 pounds and cost \$8,975. The 1980s saw the emergence of laptop computers with smaller form factors and more powerful processors. The first laptop, the Epson HX-20, was released in 1981.

1990s: The 1990s saw the introduction of personal digital assistants (PDAs) such as the Apple Newton and Palm Pilot. These devices were small, handheld computers that could store contact information, schedules, and notes. In 1993, IBM released the Simon, the first smartphone, which featured a touch screen, email, and fax capabilities.

Early 2000s: The early 2000s saw the emergence of smartphones with more advanced features such as cameras, music players, and internet connectivity. The BlackBerry, introduced in 2002, became a popular device among professionals for its email capabilities.

Mid to late 2000s: In 2007, Apple introduced the iPhone, which revolutionized the mobile computing industry with its intuitive touch screen interface and extensive app store. Android, a mobile operating system developed by Google, was released in 2008 and quickly became a popular alternative to iOS.

2010s: The 2010s saw the rise of tablets such as the iPad, which provided a larger screen for consuming digital content. Mobile computing became more integrated with everyday life, with many people using their devices for social media, entertainment, and work.

1.3 Divisions of Mobile Computing

● Mobile Communication

Mobile Communication specifies a frame that's responsible for the working of mobile computing technology. In this case, mobile communication refers to an structure that ensures impeccable and dependable communication among wireless bias. This frame ensures the viscosity and responsibility of communication between wireless bias. The mobile communication frame consists of communication bias similar as protocols, services, bandwidth, and doors necessary to grease and support the stated services. These bias are responsible for delivering a smooth communication process.

● Mobile Hardware

Mobile Hardware consists of mobile bias or device factors that can be used to admit or pierce the service of mobility. exemplifications of mobile tackle can be smartphones, laptops, movable PCs, tablet PCs, Personal Digital sidekicks,etc. These bias are inbuilt with a receptor medium that can shoot and admit signals. These bias are able of operating in full- duplex. It means they can shoot and admit signals at the same time. They do not have to stay until one device has finished communicating for the other device to initiate dispatches.

● Mobile Software

Mobile software refers to software operations designed to run on mobile bias similar as smartphones, tablets, and wearable bias. These operations are specifically optimized for use on lower defenses, touchscreens, and limited processing power and memory of mobile bias. Mobile software can include a wide range of operations, including productivity tools, games, social media apps, communication tools, and more. Mobile software development requires specific chops and knowledge to optimize the app for colorful mobile platforms and bias. This includes knowledge of programming languages similar as Java, Swift, and Kotlin, as well as an understanding of mobile stoner interface design, mobile device tackle capabilities, and security considerations for mobile operations.

1.4 Uses of Mobile Computing

Communication: The primary use of mobile computing is communication. Mobile devices allow people to make phone calls, send text messages, and access social media and other messaging apps.

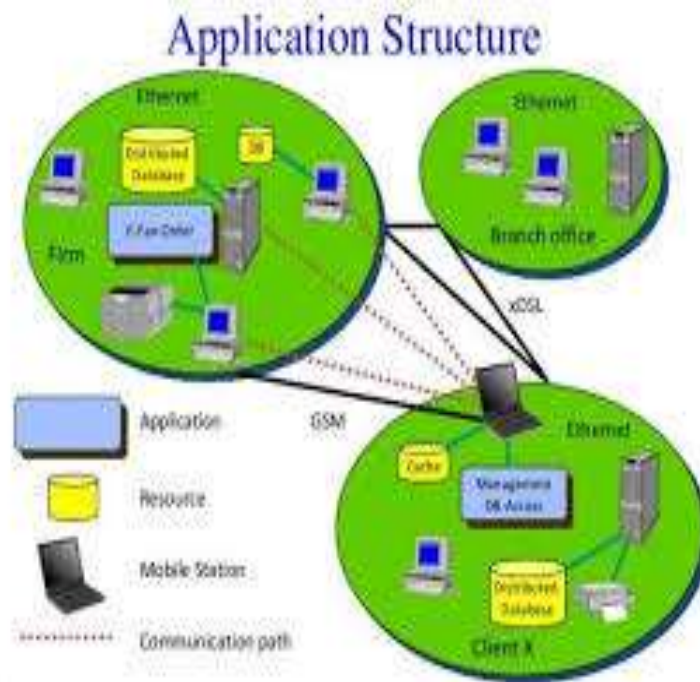


Fig 1.3: Structure

References

- Asoke K. Talukder and Roopa R. Yavagal, "Mobile Computing: Technology, Applications, and Service Creation", 2nd edition, McGraw-Hill Education, 2012.
- Jochen Schiller, "Mobile Communications", 2nd edition, Addison-Wesley Professional, 2003.
- Raj Kamal, "Mobile Computing: Principles and Applications", 2nd edition, Oxford University Press, 2014.
- Imrich Chlamtac and Ashok Kumar, "Handbook of Mobile Computing", CRC Press, 2004.
- Liang-Jie Zhang and Honglin Hu, "Mobile Computing Handbook", CRC Press, 2005.
- Reza B'Far, "Mobile Computing Principles: Designing and Developing Mobile Applications with UML and XML", Cambridge University Press, 2011.
- Ying Zhang and Jun Zheng, "Wireless Communications and Mobile Computing", Springer, 2008.