

# STUDY ON UBIQUITOUS COMPUTING – STEP TOWARDS DIGITALIZATION

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**Abstract:** Ubiquitous computing means computing found everywhere, anywhere and at anytime. This paper relates to an overview and a need to establish a payment gateway to the people who are not a part of smart computing. Although the future of smart homes is promising, many technical challenges must be addressed to achieve convenience and security. In this paper, we delineate the unique combination of security challenges specifically for access control and consider the challenges of how to simply and strongly assign access control policies to visitors for home devices.

**IndexTerms-** payment gateway, Ubiquitous, Security, Digitalization

## I. INTRODUCTION

Ubiquitous computing is a concept in which computing is made to appear anytime and everywhere.[1]. It will occur victimisation any device, in any location, and in any format. The underlying technologies to support ubiquitous computing include Internet, operating system, mobile codes, sensors etc., all models of ubiquitous computing share a vision of small, inexpensive, robust networked processing devices, distributed at all scales throughout everyday life and generally turned to distinctly common-place ends.[2] The research has focused on building an environment in which computers allow humans to focus attention on choose aspects of the atmosphere and operate in superior and political roles. It emphasizes the creation of a human computer interface that can interpret and support a user's intentions.

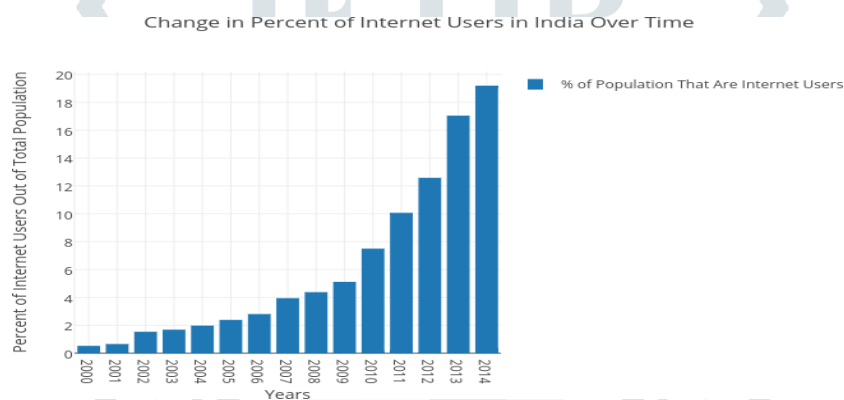


Figure 1: Internet users out of total population in India

## II. LITERATURE SURVEY

Literature survey are some things once you scrutinize a literature (publications) in an exceedingly surface level, or associate Ariel read.[3] It includes the survey of place individuals and publications is context of Research ... And in general, a literature survey guides or helps the researcher to define/find out/identifying a problem. Now-a-days, the regular monthly bills are paid manually through cash. The smart computing is used by the people those who are enough educated. [4]The problems of this system are majority of the population (the vendors of small scale industry) is not covered by smart computing. These small scale vendors form a large chunk of transaction in India in which the present existing system failed to access their data even rural India is neglected for smart computing which covers over 62% of the India population. This system can bring only the educated people into the smart computing. It is no surprise that mobile is that the most used device for web access, both in Urban and Rural India. Female 25% Male 75% Gender Ratio: Rural, Daily Users Source: IMRB I-Cube 2016, Internet Users in Rural India estimates Male 60% Female 40% Gender Ratio: Urban, Daily Users Source: IMRB I-Cube 2016, Internet Users in Urban India estimates 7 77% of Urban users and 92% of rural users consider mobile as the primary device for accessing the Internet. Mobile phones are the primary devices for accessing the Internet across demographics. In Urban India, the usage of Desktops/Laptops are expected to go down further with the most accessed purposes viz. Online Communication, Social Networking and Online Entertainment will be fulfilled using Mobile Phones. The Desktops / Laptops will be used mostly for Office and School work. In Rural India, penetration of desktop/laptops has been historically low; and the sector has leapfrogged these devices to move into mobile, which is the medium of introduction to the internet today. Completely different mobile telephone set makers have targeted on introducing low priced handsets and tablets compatible to access the net. More and a lot of corporations have gotten into this section and this has resulted in competition primarily basis the retail value and options of the device. Fall in the rates for internet access due to cut throat competition among Mobile service providers has also contributed to significant increase in mobile phone as preferred device for internet access.

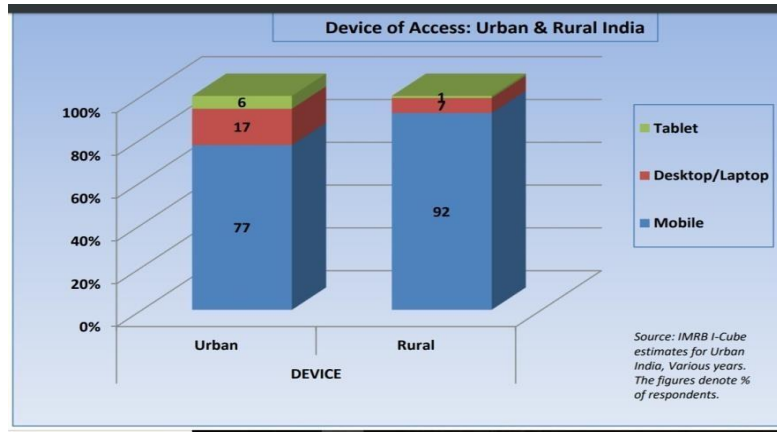


Figure 2: Mobile –Internet User in India

**III. STUDY ON SMART COMPUTING:**

The proposed system ensures that providing a new payment gateway by smart computing. The gateway should be in such a way that it should be of illiterates user friendly. [5]The accessing should be done with the help of voice assistance, face sensors, eye lens scanner etc., in this system a path should be established in smart computing for the business of small vendors. The smart computing should be made as a need for the small scale vendors, many of them will think that using smart computing is being luxurious , but the proposal is making their business into smart computing is a need. With the help of this proposed system we can increase the number of internet users .As the smart computing is done mostly by the palmtops the sales of smart accessories will be raised to a greater extent.

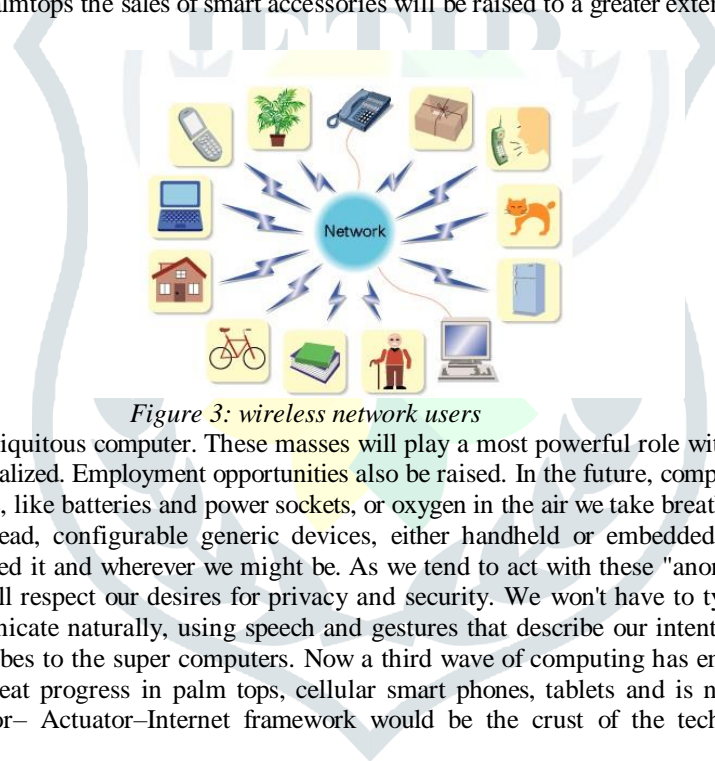


Figure 3: wireless network users

Identifying the new market for ubiquitous computer. These masses will play a most powerful role with growth economy. It fulfills the modern makers to make India digitalized. Employment opportunities also be raised. In the future, computation will be human centered. It will be freely accessible everyplace, like batteries and power sockets, or oxygen in the air we take breaths... We will not need to carry our own devices around with us. Instead, configurable generic devices, either handheld or embedded in the environment, will bring computation to us, whenever we need it and wherever we might be. As we tend to act with these "anonymous" devices, they will adopt our info personalities. [6] They will respect our desires for privacy and security. We won't have to type, click, or learn new computer terminology. Instead, we'll communicate naturally, using speech and gestures that describe our intent... Computers have been evolved from the first generation vacuum tubes to the super computers. Now a third wave of computing has emerged in the last decade of hand held technology. It has made a great progress in palm tops, cellular smart phones, tablets and is now trending towards Internet of Things. [7] The integrated Sensor– Actuator–Internet framework would be the crust of the technology used in the Ubiquitous computing.

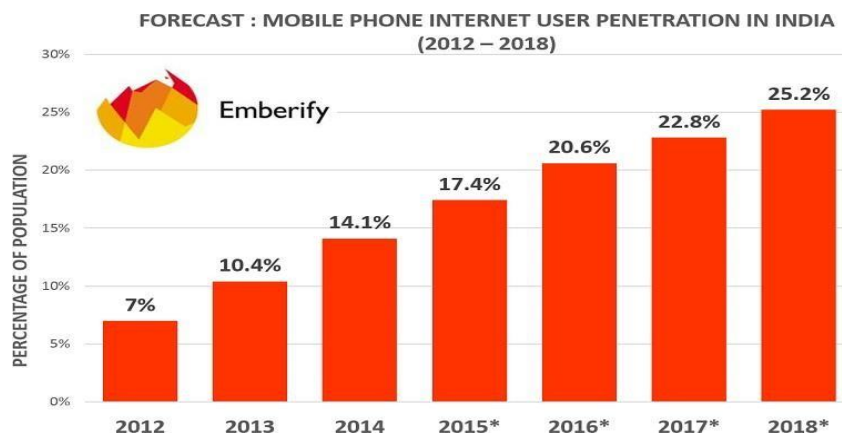


Figure 4: Mobile –Internet User in India

#### IV. Impact of Ubiquitous Computing

Ubiquitous computing can permeate everyday life—both private and working—and is therefore expected to have far-reaching consequences that will be reflected in a variety of socio-economic contexts. Both positive and negative effects square possible in equal measure at many levels. Safety and privacy, for example, make up two ends of one key pole. The following discussion presents the impact of present computing in terms of privacy, economics, society and therefore the digital divide.

##### Impact on privacy:

In terms of privacy, slightly positive effects are expected for the applying fields of security, drugs and production; moderately negative effects are expected in alternative application contexts. A present computing style for privacy that conforms to information protection standards is considered a demand for making certain privacy and is most popular to the downstream construct of context-dependent data protection filters. [8] Only a system architecture that protects privacy from the outset can prevent serious conflicts in data protection from developing. In these and processing of data, rendering all steps in the process visible and logically comprehensible seems to be of less importance. Far more crucial is a user's express trust during an explicit present computing system that the service provider will handle personal data responsibly. Apart from this concern, there is the danger that frequent use of a ubiquitous computing application could potentially lead to the inattentive handling of personal data.

##### Economic impact:

Among the economic effects related to smart computing, work potency specially is predicted to enhance. This will become most apparent within the key economic areas of production, supply and commerce. This will not, however, play a role in smart homes. It is worth noting that no significant efficiency gains from ubiquitous computing are expected for housework, professionals working at home, and homecare of the elderly and/or ill. The motivation for introducing ubiquitous computing into the sensible house is to extend personal comfort, which is not quantifiable in economic terms. The experts in market research and technology trends domains anticipate effects similar to those resulting from the introduction of modern household appliances during industrialization. Back then, the time saved by the utilization of recent appliances was counteracted by enhanced demands in hygiene and cleanliness, which resulted in extra work. Moderately positive effects are anticipated for increasing energy and resource efficiency in all areas of application. Significant will increase square measure expected, however, in production and especially logistics. Indeed, the potential of ubiquitous computing for commerce and production is brobdingnagian due to its ability to self-organize and control industrial processes. Such organization depends on many things, including the availability of fully developed knowledge-based systems. Developing these systems successively, however, poses a significant challenge. Finally, newly adapted recycling procedures will be needed to allow for the re-use of ubiquitous computing components that have been integrated and embedded into everyday objects.

#### V. CONCLUSION




Ubiquitous computing is that the next generation computing surroundings with information and communication technology everywhere, for everybody, at all time. It is all about making our lives simpler through digital environments that are sensitive, adaptive and response to human needs. One of the most precious growth topic which will be covering all facets of life. In the course of standard activities, somebody using ubiquitous computing engages many process devices and systems at the same time, and will not essentially even be aware that they are doing this. This model is considered advancement from the older desktop paradigm more formally; ubiquitous computing is defined as "machine that fit the human environment instead of forcing humans to enter theirs."

#### VI.

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