# Chapter 68
# Mobile Cloud Gaming and Today's World

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## ABSTRACT

*Mobile cloud computing is the emerging field. Along-with different services being provided by the cloud like Platform as a Service, Infrastructure as a Service, Software as a Service; Game as a Service is new terminology for the cloud services. In this paper, we generally discussed the concept of mobile cloud gaming, the companies that provide the services as GaaS, the generic architecture, and the research work that has been done in this field. Furthermore, we highlighted the research areas in this field.*

## INTRODUCTION

In past few decades, people like to work on desktop computers. But with the evolution in technology, people are most interested to use mobile devices since it is handy and portable. Moreover, mobile is satisfying the needs of user by providing them facility to play games and providing them online video streaming etc. Mobile devices are now the major source of entertainment for the users Cai and Leung (2013).

According to the survey (Netimperative, 2015), in China, 8% of the total mobile subscribers were increased within one year till January 2015 and 15% of growth was observed in number of active mobile social users. Moreover, the web traffic requested by mobiles till August 2015 was 136% increased. Figure 1 presents the stats of mobile gaming in China by August, 2015.

*Figure 1. Increasing trends of mobile users in China*
Netimperative, 2015.
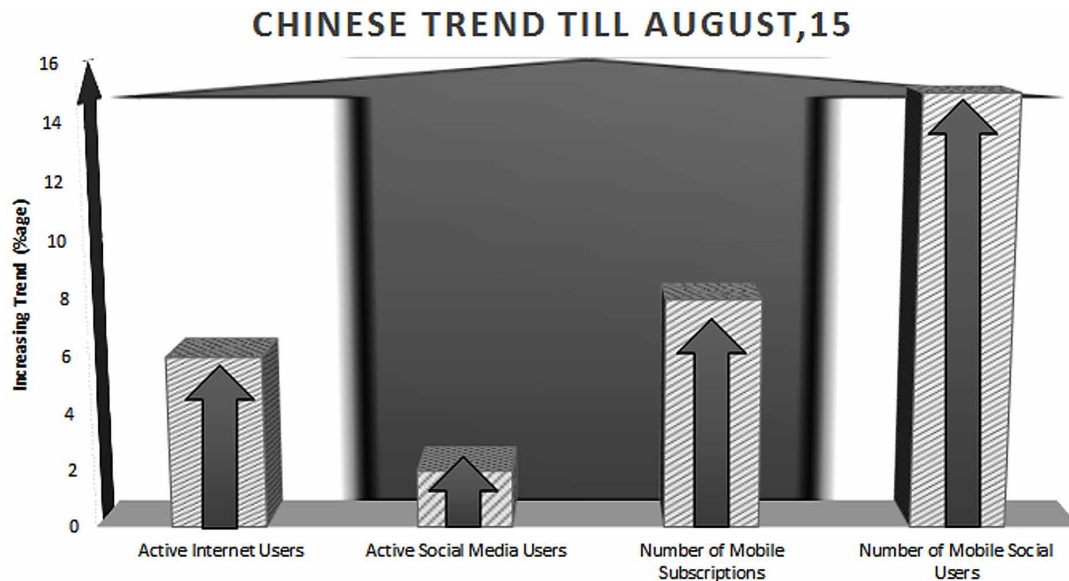


This signifies that the use of internet resources via mobile in increased. This leads to the need to fulfill or meet the needs of users accordingly. According to Cai and Leung (2013), along with the social activities, mobile devices are also used to play different games. These games can be browser based (Mobile Browser Game- MBG) or it can be video based (Mobile Video Gaming). Mobile cloud computing (MCC) - an emerging field- is there to help out such users. Since clouds provide different services based on their infrastructure like Infrastructure as a Service (IaaS), Platform as a Service (PaaS); similarly, Game as a Service (GaaS) is new service being provided by the clouds environment. One interesting advantage of cloud gaming is that it updates games instantly with the web without downloading a new version of the game. By having the ability to push patches to a game, it can be personalized much easier. One of the examples is "The Walking Dead" game, which releases new episodes after two weeks. As each episode is released the data is analyzed and their teams make real-time decisions on how to improve the user experience. The next episode that comes out will be better than the last. (Decker, 2016) The chapter describes the MCG definition, cloud gaming companies, frameworks or models used for it and research areas in this domain.

In this chapter first we will discuss the introduction of mobile cloud gaming which is followed by the identification of cloud gaming companies. General architecture of mobile cloud environment is discussed. Related literature work is also described in this chapter.

## MOBILE CLOUD GAMING

### Definition

Cloud services are on-demand services. Similarly, gaming on clouds is games on demand service. It is new and emerging trend. Mobile Cloud Gaming is known as collective gaming exhausting mobile devices

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