ABSTRACT

Mobile devices and wireless networks are becoming a necessity today. The user needs information at fingertips. With advancements in technology and cheaper hardware, mobile devices such as phones and laptops have become more sophisticated and have increased the number of users. The Service Providers are faced with the challenge of enhancing the user experience of delivery of services to attract and retain their client database. High complexity of applications and services along with the dimension of mobility has put forth new design issues for delivery of these Value Added Services (VAS).

This work aims to improvise value added services. It evaluates query processing techniques in mobile database in wireless environment. The mobile environment is faced with various constraints such as resource limitations of bandwidth, memory at mobile devices, power and intermittent connectivity. Traditional algorithms are not applicable to mobile environment due to the inherent characteristic of mobility.

A technique of using concept hierarchy to form a condensed database is proposed and evaluated for Value Added Services. This is useful during weak connections between the network and user. The objective of this work is to enhance user experience of VAS. Personalization techniques to predict what the user may require while moving is evaluated. The work proposes considering global preferences of users in the entire system rather than individual user personalization. This reduces the storage and time of VAS. Various tests are carried out to validate the proposed technique. Further enhancement to broadcast or PUSH mode of delivery of VAS is proposed. This work considers non transactional VAS. The primary data that was collected was limited to Mumbai region where connectivity is always strong. It suggests placement of data in the servers according to global patterns of usage and movement. It will help the Service Providers to strategize placement of data in their databases for improving response times of VAS.