



# to substantiate pedagogical activities



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## Abstract

This poster introduces the new ranking and marking testing method which provides educational support and gives complete picture for developing new pedagogical protocols and applications for MCL. On the basis of ranking and marking method, the poster introduces new server and client side interactive prototypes with support of various working components, which help the users in obtaining the contents from server to meet the pedagogical requirements. The poster also proposes and integrates the features of content-server with cache-server to provide the faster delivery of contents for MCL. Furthermore, the poster proposes and implements some features of a novel "group application" to support asynchronous and synchronous and multimodal features to facilitate the students for MCL. Finally, the poster validates the features of interactive architectural based protocols, group application and light weight software threads. This contribution will encourage and motivate the students to pursue their education again because the students will be able to get the course contents at anytime and anywhere.

## Introduction

Latest studies show that MCL is highly focusing paradigm for research particularly in distance and online education. The idea of mobile-based learning is different from traditional classroom-based learning. The mobile-based learning pedagogical method provides many possibilities. It helps the people to bring together working in same or different organizations for achievement of any specific goal. MCL exhibits intellectual synergy of various combined minds coming together to handle the problem and stimulate the social activity of mutual understanding. MCL initiates a new rationales and paradigms to deliver learning materials into our daily life. Many mobile communication frameworks promote the mobile learning through the learning portal by using Internet, sending SMS and voice communication. MCL could be made more effective due to convergence of promising interactive features of audio, video, web and new emerging mobile technologies in one package.

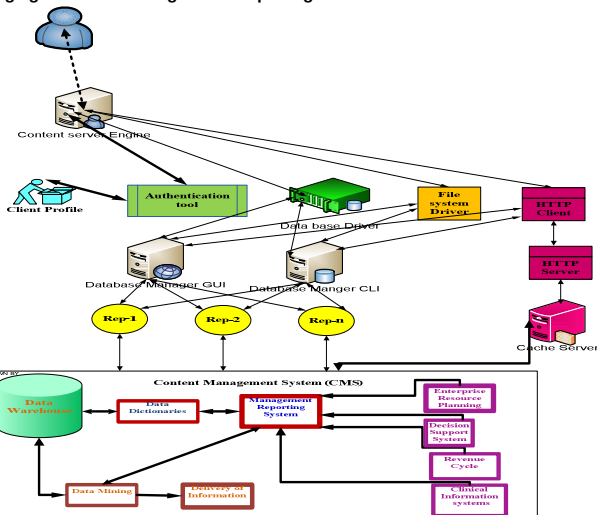


Figure 1. Architectural Prototype for MCL at server side for asynchronization

## Client side prototype for MCL

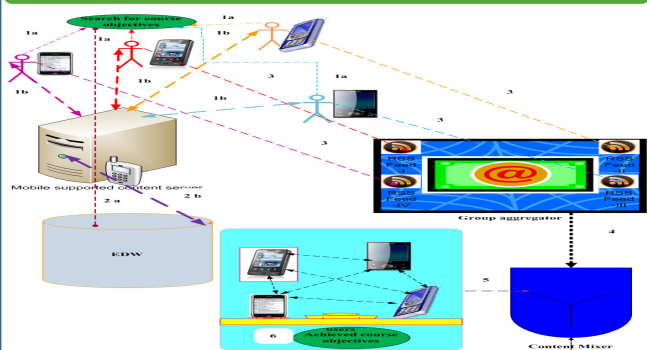


Figure 2: Content storing and extracting process from client side

## WIRELESS & MOBILE COMMUNICATION (WMC) LABORATORY

## Design and Implementation at server side

The server side protocol for MCL is envisioned as promising platform that substantiates latest technologies and mobile applications to meet pedagogical requirements. This integrates various functional components to cover all necessary features for MCL from sending SMS to large size of videos. It supports to content generation, content fragmentation, content buffering, content modification, content integrating, content diagnosing, content retrieving, content refinement, content visualization and ultimately to dissemination of results. Content server is a central processing unit at server side protocol.

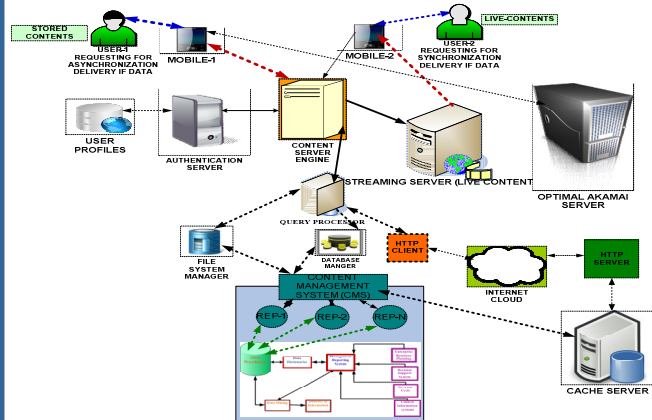


Figure 3: Prototype for MCL at server side for synchronization of contents

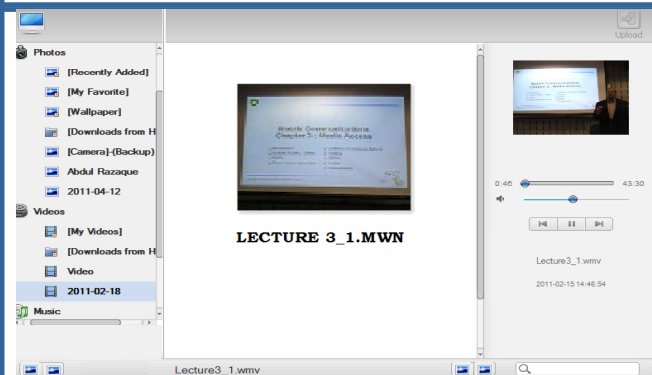


Figure 4. Sharing of Video for Mobile Collaborative Learning (MCL)

## GROUP APPLICATION



Figure 5. Sharing of contents for Mobile Collaborative Learning (MCL)

## Conclusion

The poster introduces the novel architecture for server to support MCL in education. The design and development process of server-based architecture provides faster delivery of contents to users. The main objectives of introducing the architecture-based prototypes are to obtain the learning materials on handheld devices particularly on mobile devices. The deployment of these prototypes in educational institutions will foster the pedagogical activities. The students can get course-contents at anytime and anywhere.