Abstract

This paper proposes a multi HLR scheme for location management in PCS network instead of having a single HLR. In conventional architecture we have a single HLR that acts as centralized database to store the user profile along with the MT’s location information. This approach of single HLR suffers from two major disadvantages: bottleneck and call misrouting during the peak load. In multi HLR architecture, we store the users profile and MT’s location information zone wise or area wise. By doing so, we minimize the possibility of both bottleneck and call misrouting. In conventional architecture, we use explicit de-registration scheme for de-registration of an MT from a VLR on move. Several de-registration schemes has proposed previously in spite of explicit de-registration scheme as: implicit de-registration scheme, polling de-registration scheme, timeout de-registration scheme and group de-registration scheme. Performance analysis of all these schemes shows that group de-registration scheme is best among existing and proposed schemes. In the proposed multi HLR architecture group de-registration scheme is implemented instead of explicit de-registration scheme. Result shows that proposed architecture with group de-registration scheme is more efficient than explicit de-registration scheme.
Multi HLR Architecture for Improving Location Management in PCS Network

References


Index Terms

Computer Science
Communications

Keywords

Bottleneck
Call misrouting
Implicit de-registration scheme
Polling de-registration scheme
Timeout
deregistration scheme
Group de-registration scheme
Explicit de-registration scheme