FACULTY OF ENGINEERING & TECHNOLOGY

Brajesh Mishra
Assistant Professor
Department of Computer Science & Engineering

Topics Covered

Clustering transaction model
Two-Tier transaction model
Pro-motion transaction model
Twin Transaction Model
PMTM

Clustering transaction model

This model add big enhancement in mobile environment that suffer from disconnection variation by adding replication scheme, the database dynamically divided into clusters, each one group together related data, maintains two copy to all object in database, on copy called strict version must be globally consistence, the other version called weak version can tolerate some of globally inconsistence but must be locally consistence, when the mobile host is weakly connected or disconnect, the update will applied on weak version on database object, so the degree of inconsistency between week and strict version very depend on the availability of network bandwidth among clusters.

Two-Tier transaction model

This transaction model use the replication mechanism, the ager replication mechanism is not effective in mobile environment, so this model use the lazy replication mechanism; there is master and replicated version for each data [5], two types of transactions are used, Base transactions which access master versions of data and tentative transaction which executed when the mobile transaction in disconnection mode, the transaction execute the update on mobile host, when the mobile host reconnect, tentative transactions are converted to base transaction that are executed on master copy.

Pro-motion transaction model

Pro-motion is mobile transaction processing system that support the disconnection mode, it enhance the cashing mechanism used on mobile host to make possible local transaction processing in consistence mode. [5], Pro-motion transaction model use the concepts of nested spilt transaction, it is one example of open nesting, which relaxes the top-level atomicity restriction of closed nested transactions where an open nested transaction allows its partial results to be observed outside the transaction.

Twin Transaction Model

Defines a transaction execution mechanism which achieve the needing of connecting and disconnecting modes of operation, this model uses resynchronization mechanism to achieve the consistence state after the mobile host is connected to the network

PMTM

New theoretical mobile web transaction model is proposed by Zhengwei et al. called PMTM (P system-based Mobile Transaction Model) to be suited the behavior of mobile transactions,This model use two transition rules, Membrane rules and Object rules, The Object rule describes the transitions in membranes whereas the Membrane rule defines the structural modification of membranes.