Time Dependent Pricing for Large-scale Mobile Networks of Urban Environment Feasibility and Adaptability

ABSTRACT

With the popularity of smart phones, tablets, and media-rich applications, mobile data traffic has been growing significantly over the past ten years. Global mobile data traffic is expected to surpass 24.3 Exabyte's per monthly 2019, 10_ larger than the traffic served by existing cellular infrastructure. Serving such a large amount of traffic, mobile operators experience severe network congestion, especially during peak hours in urban areas. On the other hand, data collected from our collaborative operator shows that the traffic usage in one day exhibits a "tide" phenomenon. The usage in peak hours can reach five times more the level of off-peak hours, which causes a waste of bandwidth resource in off-peak periods. All of these motivate the investigation of migrating mobile data traffic from peak hours to off-peak time slots.

EXISTING SYSTEM

In Existing System, Severe network congestion is observed by many mobile operators, especially during peak hours. As a result, time-domain patterns of cellular traffic have been extensively investigated and leveraged for reducing the network congestion. Because of severe network congestion experienced during peak hours in the urban area, dynamic time-dependent pricing has been proposed by some mobile operators to shift users' data usage from peak hours to off-peak time slots. We look at the performance of time-dependent pricing on a large scale cellular network comprising ten thousand base stations.

DIS ADVANTAGES

- The potential revenue lost due to reduced traffic.
- It cannot be directly used to model the deferrals of data consumption in each record.

PROPOSED SYSTEM

In Proposed System, we investigate the performance of time dependent pricing on a large scale cellular network deployed in an urban area. Our investigation reveals two important

discoveries. First, a single price used by the time dependent pricing system does not perform well for base stations deployed in specific locations, such as residential regions. Second, in addition to time, spatial information, such as urban function regions, should be included in the design of a data pricing model. Inspired by the two observations, we propose a framework that is able to dynamically combine both temporal and spatial information for determining the price of cellular data. Our simulation shows that we are able to reduce traffic peak-to-average ratio by an average of 16%.

ADVANTAGES

- It reduces the peak-average ratio of the overall traffic of the network.
- Leveraged for reducing the network congestion.

SYSTEM REQUIREMENTS

H/W System Configuration:-

Processor	-	Pentium –III
RAM	-	256 MB (min)
Hard Disk	-	20 GB
Key Board	-	Standard Windows Keyboard
Mouse	-	Two or Three Button Mouse
Monitor	-	SVGA

S/W System Configuration:-

Operating System	:	Windows95/98/2000/XP
Application Server	:	Tomcat5.0/6.X
Front End	:	HTML, Jsp
Scripts	:	JavaScript.

Server side Script	:	Java Server Pages.
Database	:	MySQL 5.0
Database Connectivity	:	JDBC