“IPDB” Project
real-time session/user management system
for KDDI mobile service

Hiromitsu Fujikawa
Mobile Engineering Manager, KDDI
KDDI's Business Vision: Three “Multi” Strategy

**Multi - Use**
- Music
- Movie
- Game
- Radio & TV
- Book
- Money

**Multi - Network**
- WiMAX
- FTTH
- 4G LTE
- 3G
- Wi-Fi
- CATV

**Multi - Device**
- Smartphones
- Tablets
- E-Books
- PCs
- TV-STB
- FTTH/CATV

- diverse services and contents
- seamless access and optimized network
- any device of choice
In the year ended March 31, 2012, KDDI addressed the priority issue of recovering au momentum and enhancing our shift toward smartphones.
Unit sales of smartphones

- Unit sales of smartphones in the year ended March 31, 2012, surged by 4.54 million units, to 5.63 million units. Furthermore, we forecast smartphone sales of 8 million units for the year ending March 31, 2013.
We have to identify the user profile by assigned IP address in real-time.
Identify the user by assigned IP address

Session Information by RADIUS

Packet Data Network Gateway

WEB Proxy

SELECT some user properties from IP address

IP address and IMSI

IPDB

INSERT or DELETE

IPDB

AAA

IMSI: International Mobile Subscriber Identity

Exadata

Service Provisioning System

IMSI and user properties

Billing System

SELECT

CACHE

TimesTen

IP address and IMSI

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## Requirements Specification for IPDB-TimesTen

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Results/Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consistent Latency</strong></td>
<td>Less than 10msec</td>
</tr>
<tr>
<td><strong>Write Transaction</strong></td>
<td>4,500 TPS</td>
</tr>
<tr>
<td><strong>Read Transaction</strong></td>
<td>10,000 TPS</td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td>Active-Standby Synchronous replication</td>
</tr>
<tr>
<td><strong>Active Session</strong></td>
<td>10 million session</td>
</tr>
<tr>
<td><strong>User properties cache size</strong></td>
<td>50 million user</td>
</tr>
<tr>
<td><strong>Storing data</strong></td>
<td>Store Session Information to Exadata</td>
</tr>
</tbody>
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