“Smart Mobility - Leveraging ICT & Geo-Technologies”

Gopal Valecha
AVP – IT (BD)

Delhi Integrated Multi-modal Transit System Limited
Joint Venture of Govt. of NCT of Delhi and IDFC Foundation

An ISO 9001, 14001, OHSAS 18001, ISO 27001 & CMMI L3 Certified Company
DIMTS is a 50:50 Joint Venture of Government of National Capital Territory of Delhi (GNCTD) & Infrastructure Development Finance Company Ltd. (IDFC; USD 10 billion assets under management; power, highways, ports, etc.)

Chief Secretary of Government of National Capital Territory of Delhi is the chairman of the company

Vision
To create an environment where the majority of trips take place by public transport in preference to personal motorized transport
About DIMTS

A Value Proposition

- Advisory Services
- Transport Planning
- Engineering
- Transport Technologies
- Operations

End to End Solutions – Urban Mobility
Areas and Geographies

Projects and clients across 17 states in India and 5 countries
DIMTS – in Numbers

1,500 Buses  80,000 TSR  25,000 PSV  400 + Water Tankers

40 + Make

12,00,000 Vehicle Registration  38,00,000 Smart Card License  1500 ETMs  900,000 E-Tickets

80 GB Data /Day
Any Mode – Any Device – Any Vendor

- Mode Independent
  (Cargo – Surface, Sea | Passenger | Paratransit)

- Vendor Neutral

- Device Agnostic
  GPS, E-seal, ETM ...
Urban Transport - Need of the hour: Operations Perspective

- Reliable, safe, and presentable service to citizens
- Revenue leakages plugged through use of electronic ticketing
- Methodical planning of routes

Is any of the bus over-speeding?
Has there been any accident?
Are all the buses operating as per schedule?
Are there any breakdowns?

Where are the buses??
Have any of the buses missed any schedule/stops?
GPS based **Automatic Vehicle Location (AVL) System** has been deployed on all the buses. System is being used to monitor operations of the fleet.

Alerts Dashboard manages alerts and responds to deviation/violations:

- Over-speeding reports
- Depot, vehicle and route wise reports
- Missed stops reports
- Route deviation reports
- Trip status reports (Cut/Short/Missed)
- Distance travelled
DIMTS has deployed **New Generation** Electronic Ticketing Machines (ETMs)

- Real Time data transfer through GPRS
- Smart Card Enabled
- Over the air configuration & update of master data, configuration data and application

Backend System enables:

- E-mail of Operation & Revenue parameters to key stakeholders
- Performance analysis Route-wise, Conductor-wise
- Display heath status of the field devices to take proactive action
- Day-end revenue reconciliation
Solution in Action: PIS (Public Information System)

Real Time Location, Speed Tracking of Vehicles On Detailed Delhi Map

ETA of Bus at each stop gets updated in real time on BQS LED as well as Web

Central School UP

<table>
<thead>
<tr>
<th>Bus Route No</th>
<th>Expected Arrivals (in min)</th>
<th>Bus No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>522UP</td>
<td>8</td>
<td>DL1PC0248</td>
</tr>
</tbody>
</table>

Buses in RED are AC. Buses in BLUE are Non AC.

Click on the route number to know the route details.
Para Transit

- Real-time tracking of > **80,000 Vehicles**
- Autos fitted with GPS integrated EFMs
- Complete Trip tracking with fare meter data
- MIS reporting to the Transport Department
- Pooch-o Auto booking mobile application for Public

GPS integrated EFM are approved by Dept. of Legal Metrology (Weights & Measures) with the following features:

- GPS / GPRS integrated EFM with position update at 10 sec interval
- Printer for printing fare receipt
- Display screen to show fare and distance as well as status of integrated device, Customizable buttons for trip start/stop
- Panic Button
- Tampering alert to prevent tampering of integrated meters
- Device installed and maintained by empanelled vendors
## Intelligent Signaling System – Ahmedabad

- DIMTS has been nominated for restoration & repair works of 186 signalised intersections and up-gradation of Control Room with remote monitoring, in a phased manner, for Ahmedabad Municipal corporation

- Based on DIMTS performance, Ahmedabad Municipal Corporation has renewed O&M contract by 3 more years - up to Octo 2018

<table>
<thead>
<tr>
<th>ISS Ahmedabad includes –</th>
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</thead>
<tbody>
<tr>
<td>- 186 Signalised Intersections</td>
</tr>
<tr>
<td>- Adaptive Signal Controller</td>
</tr>
<tr>
<td>- LED Signal Heads</td>
</tr>
<tr>
<td>- Vehicle detection cameras</td>
</tr>
<tr>
<td>- MPLS-VPN leased line</td>
</tr>
<tr>
<td>- Operations Control Center</td>
</tr>
<tr>
<td>- CoSiCoSt ATCS software</td>
</tr>
<tr>
<td>- Operations &amp; Maintenance of Signalised intersections</td>
</tr>
<tr>
<td>- Maintenance contract of 186 Jns renewed till 2018</td>
</tr>
</tbody>
</table>
Intelligent Signaling System – Ahmedabad
Intelligent Signaling System – Surat

- In Jan 2014, DIMTS was awarded the contract for Development, Supply, Installation & Maintenance of Area Traffic Control System (ATCS) at 52 Junctions on BRTS corridor in Surat City

- DIMTS will Operate & Maintain these Junctions for 6 years.

- ISS Surat includes
  - 52 Signalised Intersections
  - adaptive Wireless Traffic Signal Controller,
  - LED Signal Heads,
  - Vehicle detection cameras,
  - OFC for 24x7 communication
  - Operation Control Center (OCC),
  - CoSiCoSt application software
  - TraMM Application Software
State-of-the-art Command & Control Center for monitoring of various ITS sub-systems:

- Adaptive Traffic Control System (ATCS)
- CCTV based Junction Surveillance
- Variable Message Signs (VMS)
- Red Light/Speed violation Detection
- Video Incident Detection System
- Parking lot Vacancy Counter
- Automatic Vehicle locator System
AUTOMATED PARKING MANAGEMENT SYSTEM (APMS)

- Operator based Entry/Exit Booth with interface to Arming/Exit Loops, Bar-code printer/reader, Smart-Card Reader, User fare Display, Boom Barrier & ANPR camera for Number plate reading.
- Bar code based token generation at Entry Gate while Bar code token scanning, tariff calculation and Payment receipt generation at Exit Gate
- VMS as part of Parking Guidance system provides vacancy information.
- Availability of Parking slot information upon arrival and proper signage and navigation system, ensures hassle-free parking space.
- Provision for advance Parking reservation through SMS or Internet
- Efficient Parking reduces congestion, pollution, driver’s frustration and enhances overall driving experience within Parking lot.
Location-wise Revenue & Capacity Utilization

Current Month From 15-Feb-2015 To 16-Mar-2015
Previous Month From 16-Jan-2015 To 14-Feb-2015

Average Revenue Per Location (lacs)

- **SW AREA**: Current Month 0.9, Previous Month 0.6
- **CP**: Current Month 0.83, Previous Month 0.86
- **BK ROAD & JANPATH**: Current Month 1.36, Previous Month 1.33
- **AROUND INDIA GATE**: Current Month 0.6, Previous Month 0.74
- **AROUND CP**: Current Month 0.48, Previous Month 0.45

Capacity Utilization (%)

- **SW AREA**: Current Month 10.37%, Previous Month 10.95%
- **CP**: Current Month 26.79%, Previous Month 25.94%
- **BK ROAD & JANPATH**: Current Month 14.05%, Previous Month 14.32%
- **AROUND INDIA GATE**: Current Month 8.05%, Previous Month 6.56%
- **AROUND CP**: Current Month 11.68%, Previous Month 10.97%
Day-wise Analysis with Capacity Utilization

Minimum Amount | Maximum Amount | Average Amount

Day

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
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</thead>
<tbody>
<tr>
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<td>2190</td>
<td>2002.5</td>
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<tr>
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<td>1830</td>
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<tr>
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<td>2460</td>
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<td>420</td>
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<tr>
<td>2002.5</td>
<td>5.68</td>
<td>2002.5</td>
<td>1742.5</td>
<td>420</td>
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<tr>
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<td>2290</td>
<td>2290</td>
<td>420</td>
<td>420</td>
<td>420</td>
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Capacity Utilization in %

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<td>5.01</td>
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Empowering Commuters .... Poochh-O App
Fare Estimation

Auto Fare Estimation

Origin
Genpact, Brahmapuri Road, New Delhi

Destination
van, Connaught Place, New Delhi

Via (Optional)
Enter the first 3 letters for search

Show Route  Calculate Fare

* DISCLAIMER:
Night Charges (11 pm – 6 am): 25% extra on normal fare
Baggage charges: Rs. 10/bag
Waiting charges as applicable.
Fare calculation is on the basis of shortest route, which may not be the most optimal route.
Poochh-O (पूछो), ड्राइवर एप के स्क्रीन

चालक के लिए प्रारंभिक पंजीकरण स्क्रीन

Set Ring Tone
Poochh-O (पूछो)

ड्राइवर ऐप

यात्री ऐप

यात्री ऐप
Welcome to Poochh-O Carpool

Please enter your mobile number
+91 Mobile No.

For verification, a One Time Password (OTP) will be sent to you.

I agree to the Terms & Conditions. I understand that I would not carpool with strangers and I would choose known people from my neighbourhood / office etc. for the carpool.

Register
Carpool

My Car Details
- I have a car
- I don't have a car
- DL 4 BE 2345
- Maruti
- Wagon R
- I have a valid Driving License
- I have Car Insurance (Including Third Party)
- I have a valid Pollution Under Control Certificate (PUC)

Update Car Details

My Journey Details
- Regular Carpool
- One Time Carpool
- I am looking for a ride
- I want to offer a ride
- 02-01-2016
- Shri TN Kundra Marg, Kamla Nagar, New
- InnovationM, Sector 4, Noida, Uttar Pradesh, India
- 09:00 AM
- 06:00 PM
- Male Only
- Days of the week I travel:

Save
Remove Journey

Save
Scope is to support MoRTH in formulating and implementing the scheme “Security for Women in Public Road Transport in the Country”

Project is planned to be funded from the Nirbhaya Fund.

Following components are proposed:

- A National Backend Data Centre.
- CCC in 32 cities covering more than 3 million vehicle
- Installation of GPS CCTV Panic Buttons in nominated PSVs
Intelligent parking system debuts at Connaught Place

Also planned is an app that will allow you to book a slot in advance.

Boards give you information on empty spaces within a parking lot.

SHALINI NARAYAN & ADITI VATSA experiment in some NDMC areas to check

Now a mobile app to track buses, provide info on seat availability

BUS TRACKER
NextBus app to provide information on routes, bus frequency, bus stop locations

NEW DELHI: Travelling by public transport is set to get easier in the Capital. The Delhi Integrated Multi-Modal Transit System (DIMTS) — an agency that consults with the government on transport issues — has come up with a mobile application that will tell you the exact time of arrival of the next bus at a particular stand. It will also indicate whether the bus is crowded or seats are available.

NextBus, the application, is available on all mobile platforms. The application will initially provide information only on 1350 odd orange-coloured cluster buses run under the brand name of 'Delhi Trans' However, it will soon include DTC buses.

According to DIMTS officials, commuters can now plan their journey with the help of NextBus. The application will tell them the exact time of arrival of the next bus along with its route number.

“The most exciting feature of the application is ‘Occupancy Status’. This feature helps commuters know the availability of seats in orange buses which are arriving. Commuters will get to know in advance if the next bus has ‘Seats Available’ or ‘Standing Available’ or if it is ‘Crowded’,” a DIMTS official said. The official said the occupancy status information is relayed real-time to give the correct status to commuters.

Despite the Delhi Government strengthening the foot of buses in the national capital, frequency and reliability of buses continue to be a major cause of concern. DTC officials claim they follow a timetable and try to maintain the frequency of buses, but commuters complain that buses often fail to turn up at the expected time.

Cluster buses, on the other hand, are better managed, follow a strict timetable and maintain efficiency of more than 96%. While GPS devices installed in DTC buses have either been stolen or removed, the ones installed in cluster buses send real-time status of its location to the central control room to help the centre use that information for the benefit of commuters.

“The NextBus application will also help you with the exact location of the bus. Commuters can share their location with their family and friends using SMS and social media like WhatsApp, Facebook, Gmail, Hangouts, LinkedIn and Skype to keep their family and friends informed about their location,” an official said.

The application also provides information on the estimated fare and the trip distance, estimated travel time and traffic condition on the route.
Now a mobile app to track buses, provide info on seat availability

**BUS TRACKER** NextBus app to provide information on routes, bus frequency, bus stop locations

Atul Mathur
atul.mathur@industrialtimes.com

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Pooch-O Android app lets you book autos through smartphone

Dimts in News

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Thank You

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