सत्यमेव जयते
Government of India
Ministry Of Communications & Information Technology
Department of Telecommunications

DoT M2M initiatives

Joint Japan - India Workshop
Annual M2M India Conclave 2013

Delhi, 23.09.2013

M2M – A long term perspective

Future Internet : 2020

M2M Devices

Open Ipv6 Based communication protocols

Internet of Things

Cloud based Applications

Smart M2M application

Government Initiatives to build M2M Eco System in India

IPv6 Deployment Roadmap v. II - Timelines and Guidelines on IPv6

SERVICE PROVIDERS

- **Enterprise Customers - 01-01-2014**
- **Retail Customers (Wire line)- 30-06-2014.**
- **Retail Customers (Wireless)-**
- LTE customer 3**0-06-2013**
- GSM/ CDMA **30-06-2014**

CONTENT PROVIDERS

- **New contents & applications 30-06-2014**
- **Existing 01-01-2015.**
- **Financial ecosystem 30-06-2013.**
- **The new registrations on '.in' domain 01-01-2014.**
- **The entire '.in' domain June 2014**

EQUIPMENT MANUFACTURER

- **All mobile phone handsets/ data card dongles/ tablets and similar devices 30-06-2014.**
- **All wire line broadband CPEs 01-01-2014**

GOVERNMENT ORGANIZATIONS

- **Transition plan for transition to IPv6 by December 2017 to be prepared by December 2013**
- **The public interface for delivery of citizen centric services 01-01-2015.**
- **The Government procurement to be either TEC certified or IPv6 Ready Logo certified.**
- **The IPv6 to be included in the curriculum of technical courses being offered by various institutes / colleges**

Glimpse of IPv6 Deployment in India

SERVICE PROVIDERS

- 15 Service Providers ready to handle IPv6 traffic and Enterprise IPv6 services
- 9 ready to offer Broadband services on IPv6.

CONTENT & DEVICES

- 6 out of Top 10 Websites are on IPv6.
- All major end user device manufacturers have models supporting IPv6

GOVERNMENT

- All Government Organizations, including its PSUs, have been sensitised and geared up for IPv6 transition.

ENTERPRISE

- Banking Sector is going to be ready soon
- More than 20 enterprises across India have enabled IPv6 in their network.

Service Providers IPv6 Readiness Status

NTP – 2012 Recognises M2M

Extract from NTP 2012 regarding M2M:

To facilitate the role of new technologies in furthering public welfare and enhanced customer choices through affordable access and efficient service delivery. The emergence of new service formats such as Machine-to-Machine (M2M) communications (e.g. remotely operated irrigation pumps, smart grid etc.) represent tremendous opportunities, especially as their roll-out becomes more widespread…

Potential Face Changer M2M Projects in India

Smart City Projects:

- India has vision to have 2 Smart Cities in every state under phase II of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM).
- A Smart City Model is being developed in Pondicherry.
- 7 Smart cities have been announced along high speed rail Corridors:
  - ✓ Dadri-Noida-Ghaziabad Investment Region, Uttar Pradesh;
  - ✓ Manesar-Bawal Investment Region, Haryana;
  - ✓ Khushkhera-Bhiwadi-Neemrana Investment Region, Rajasthan;
  - ✓ Pithampur-Dhar-Mhow Investment Region, Madhya Pradesh;
  - ✓ Ahmedabad-Dholera Investment Region, Gujarat;
  - ✓ Shendra-Bidkin Industrial Park city near Aurangabad, Maharashtra;
  - ✓ Dighi Port Industrial Area, Maharashtra.
- Smart City, Kochi project kicked off in Jan 2013 and expected to be completed in 6 years.
- Private sector has also taken lead. "Wave City" project on 18 sq. Km. in Ghaziabad kicked off.

Potential Face Changer M2M Projects in India

Smart Grid Pilot Projects:

- 14 such pilots announced by Ministry of Power
- Average Customer base is around 20000
- Requires robust communications over long distances and at each consumer level
- Provide usage information to consumers
- Provide information from and control of the power grid
- Bi-directional and net metering for new power sources
- Electric consumption data on hourly or sub-hourly basis
- Support business logistics
  - ✓ On-request reads
  - ✓ Operational control

Potential Face Changer M2M Projects in India

National Mission for Electric Mobility (NMEM):

- 6 million Electric Vehicles announced by Ministry of Heavy Industry by 2020.
  - ✓ 2 millions 4 wheelers
  - ✓ 4 millions 2 wheelers
- Needs to be efficiently connected to Power Grid for charging without overload.
- Requires robust communications spread over geography for each vehicle owner at multiple locations.
- To support different Battery Charging Business Models.
- Provide information from and control of the power grid

Policy document from Government of India

Policy & Regulatory Committee:

- Advisor (T), Chairman
- Sr. DDG (TEC)
- ED (CDoT)
- JS (T)
- DDG (NT), Convenor

Policy document from Government of India

Consultative Committee:

- DDG (NT), DoT
- Representative from FICCI
- Representative from ASSOCHAM
- Representative from COAI
- Representative from AUSPI
- Representative from India Smart Grid Forum
- Dir (NT-III), Convenor

Issues for consideration...

- Bring Standards For M2M in line with global standards
- Allocating Spectrum for M2M local area network Layer
- Revisit National Numbering Plan to accommodate M2M
- To ensure the Always on requirements –
  Inter-Operator Roaming and Inter-Network Mobility
- To ensure Interoperability
- Guidelines for Bundled Services
- Address Privacy and Data Protection
- Address KYC and customer traceability issues.
- Address Security and Lawful Interception for M2M
- To have policy around Customers ethical Issues
- Close coordination with relevant global organizations

Broad Strategy

- A sub-committee is formed to suggest guidelines around
  - M2M security,
  - Lawful Interception,
  - Privacy & Data Protection,
  - KYC, Customer traceability requirements
- TEC is made responsible to suggest
  - M2M Standards,
  - Interoperability
  - revisiting national numbering
- DoT WA wing got associated to address M2M specific spectrum requirements,

Future Course of Action

- **A questionnaire is prepared to understand Industry requirements: Questionnaire**
- Interact with all M2M Eco System Partners including Academia, Industry, Chip Set Vendors, Service Providers, OEM's, Consultants, Solution Providers, Enterprises etc.
- Understand Global Activities and Scenarios
- **Hold Workshops with stakeholders from Telecom, BFSI, power, healthcare and other public utility sectors in association with Industry**
- Formulation of Guidelines (including changes in license agreements) for adoption and facilitation of M2M based services.

Thank You

Reena Malhotra,
Director (NT-III)
Department of Telecommunications, New Delhi,
Ministry of Communications & IT
Government of India.
Dirnt3-dot@nic.in
+91 9868132627