Crowds, Control & Connected

11th AASHTO International Day, Sept. 7th 2014

Xiaojing WANG

Chief Engineer of RIOH, MOT
Director of China National ITS Center
Chairman of China ITS Industry Alliance
ITS:

Past:
- Just play by the government and operator

Now:
- Do not just play by government and operator
- Has been played by everyone – crowd-source
Millions User Join The Service

- 5 billion locate request every day in Tencent system
- Calculation, Discovery, Guidance, Control

Data and Photo From Tencent
UGC in Traffic Area

- Many APP for Traffic have UGC (User Generated Content)
- Shared by participants
Mobile Internet in Taxi

**Didi Taxi**
- Cover city: more than 170
- APP downloads: more than 100 million
- Average Order Quantity per Day: 5.2 million
- Order success rate: more than 80%

**Fast Taxi**
- Cover city: more than 260
- Average Order Quantity per Day: 6.2 million

- Improving Taxi Operation
- Better experience for User
- More income for driver
- Win-win for user and driver
- For APP company: Competition
  - Mobile Internet access
  - Mobile payment user
Control:

Traditional:
- Traffic signal
- VMS
- Broadcast

New Model:
- Car navigation
- Strategy control
- Driver assistant system
- .......
Traffic Management and Control Center

- City Traffic Center: More than 600 cities
- Monitoring Camera: 51 thousand
Traffic Information via VMS

- A integrated system
- Cover urban area
- Example: about 500 VMS in Beijing
Car Navigation and Car Service

- Traffic Info provide by
  - Mobiles and map company
  - Internet Co. (example: Baidu)
  - Private company
Macroscopic Traffic Index & Control

- Data from Car (GPS) & Smartphone
- Real time information of roads travel time
- Road, area and city traffic index
- Control: executive order (example: Hangzhou city)
Connected

Traditional:
- By road and phone

New Model:
- New communication technology
- Car navigation
- Strategy control
- Driver assistant system
- Cooperative ITS
- ……

Just Beginning of the Research, Design and Standardization
Cooperative ITS Technology Development

V & I cooperative system research

- On board system technology
- Road side system technology
- Communication and control
- Simulation
- Integration
Research on ITS Based Mobile Internet

- Use Scenarios
- Technical Framework
- Development for Application
Standards in C-ITS

- Cooperative System, DSRC
  - Part 1: General Technology Requirement
  - Part 2: Physical and MAC Layer
  - Part 3: Network and Application Layer
  - Part 4: Equipment Application

- Cooperative System, Application
  - General Technology Requirement for Telematics Service of Vehicle Monitoring and Traveler Information
  - Function Requirement of Vehicle Crash Warning
Thank You!