Panel Discussion – Impact of Travel Demand Forecasting

KERMIT WIES (RETIRED)  
CHICAGO METROPOLITAN AGENCY FOR PLANNING  
NORTHWESTERN UNIVERSITY  
TRANSPORTATION CENTER  

OCTOBER 22, 2015
Forecasting Urban Travel presents in a non-mathematical way the evolution of methods, models and theories underpinning travel forecasts and policy analysis, from the early urban transportation studies of the 1950s to current applications throughout the urbanized world. From original documents, correspondence and interviews, especially from the United States and the United Kingdom, the authors seek to capture the spirit and problems faced in different eras, as changing information requirements, computing technology and planning objectives conditioned the nature of forecasts.
Three “Eras” of Regional Planning in Chicago


- the spirit and problems...
  - information requirements
  - computing technology
  - planning objectives
1985-1995: The Venerable CATS

- Information requirements
  - One trend-based future land use scenario
  - Daily person trips
  - Total traffic volume on alternate paths

- Computing technology
  - Scientific calculator
  - Mainframe computer
  - Graph paper

- Planning objectives
  - New major capital projects: expressways and rail
1995-2005: Conformity Wars

- **Information requirements**
  - Multiple trend-based future land use scenarios
  - Time-of-Day person trips
  - Class-specific traffic volume on different networks

- **Computing technology**
  - Desktop applications
  - Unix Workstations
  - Computer-aided graphics

- **Planning objectives**
  - Produce inputs for air quality modeling
  - New major airport, expressways and rail
2005-2015: Transparency and Innovation

- **Information requirements**
  - Multiple policy-driven future land use scenarios
  - Activity-based person demand
  - Dynamic Traffic Assignment

- **Computing technology**
  - Open source applications
  - Clustered modeling servers
  - Geographic Information Systems (GIS)

- **Planning objectives**
  - Economic benefits of transportation investment
The coming **decade**?

- **Information requirements**
  - Daily activity patterns instead of traditional “land use”
  - Integrated activity-based and dynamic network models
  - Agent-based freight modeling
- **Computing technology**
  - Survey “apps”
  - Big data
  - Real-time information and autonomous operations
- **Planning objectives**
  - Performance-based programming and funding
Stay Tuned!