Sequential Transportation Modeling Process

- Basic Modeling Steps: "4-Step Process":
  - 0. Land Use. Transportation facilities & current travel inventory
  - 1. Trip Generation
  - 2. Trip Distribution
  - 3. Mode Split
  - 4. Travel Assignment
- Input: Socio-economic data (Land-use, demographic, historic travel behavior)
  - Data structures
    - Geographic organization
      - Traffic Assignment Zones
        - » Homogeneous Land Uses: Survey-based trip generators, Travel Demand Model for: NC, Puget Sound, NYC Best Practice Model (BPM) , Urban Goods Movement Model
        - » Geographic Data Structures: Quad Tree Demo, More Demos,
        - » CoPilot Network Editor
  - Data Sources:
    - Housing Data: US Census
    - Employment Stats: State Employment Bureaucracies
    - Census Data for Transportation Planning: http://www.trbcensus.com/
    - Journey-to-Work US Census Travel Demand Survey ; List of Data Sources
    - Household Travel Survey
    - Using GPS to Survey Travel: Ref 1 Ref 2 Stopher 3
    - Bureau of Economic Analysis

- Land Use Models Notes from last week
- Trip Generation Models: Notes (Page 6)
  - TCRP B-15 Characteristics of Urban Travel , Travel Model Improvement Program (TIMP), commercial trip generation software (Microtrans, demo), TransCAD
    - An example LincolnTravelDemandModel
- Trip Distribution Models Notes
  - Gravity model (Inverse Square)
  - Lincoln, NE Trip Distribution Model (Gamma Function)
- Mode split