



# Conversion from EMME/2 to VISUM – Metro Portland

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- How Far Are We?
- Highway
  - Network
  - Assignments
- Transit
  - Network
  - Assignments

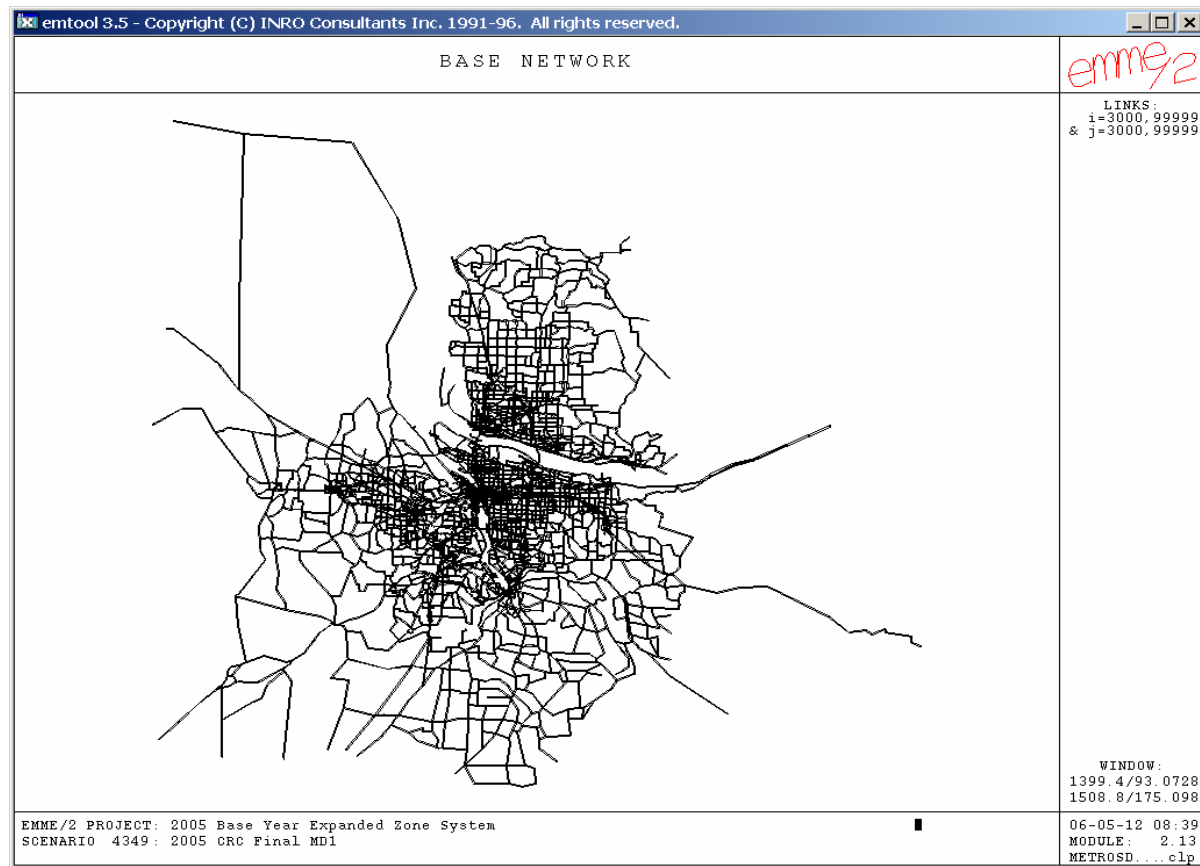


# Network Characteristics

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- 2029 Zones
  - 7 counties in 2 states
- 10,000 nodes, 32,000 links
- 200 transit lines
- Four classes of vehicle trips
  - SOV, HOV, HeavyTruck, MediumTruck

# Highway Network





# EMME/2 Export

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- Network Prep – Link User Fields
  - Link Capacities
    - Intersection Approach
    - Mid-Block
  - Facility Types
  - Volume/Delay Functions
    - Speed in User Field
  - Ramp Metering Rates
- Trip Tables
  - Easy!

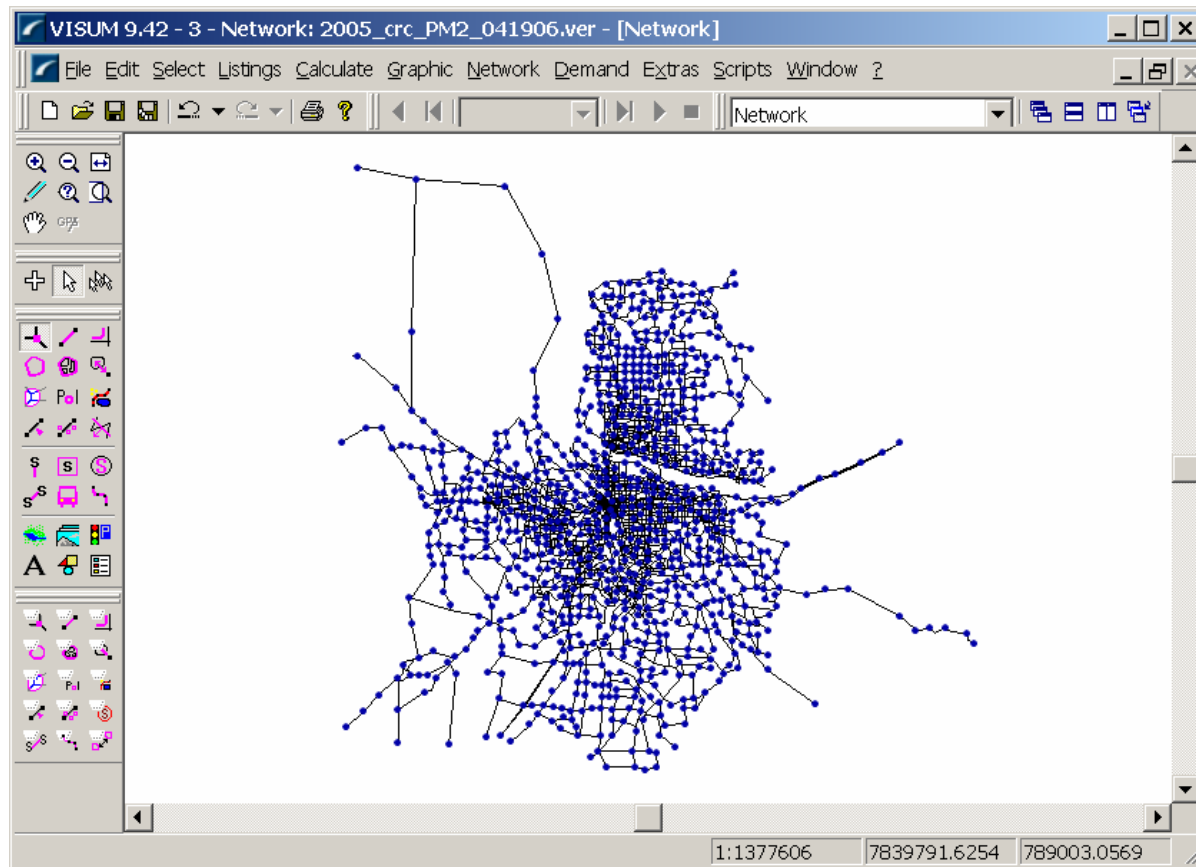


# VISUM Import

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- File/Import/EMME2
- Revisions
  - Connectors – travel times
  - Link UDA – one hour capacity
  - Link Type Lookup Table
  - VDF creation

# VISUM Network





# Highway Assignment

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- Multi-Equilibrium
  - 4 classes
- Stopping Criteria
  - 30 Iterations, 4 balancing steps
- Time Period Capacities
  - One/Two/Four Hour Assignments
- Run Times
  - 10-12 hours

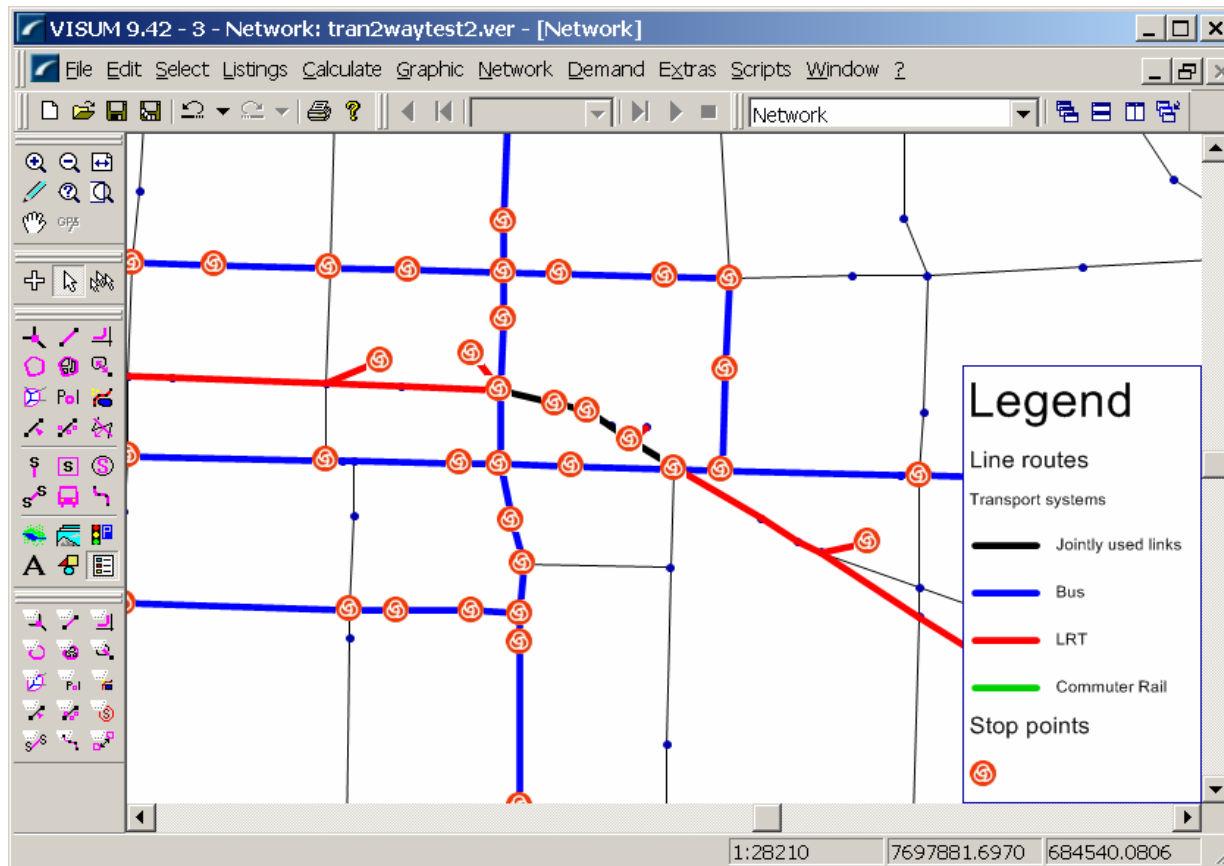


# Transit Network

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- Differences in base assumptions
  - Stops
  - One-way coding
  - Dwell time functions
  - Run-time
    - Bus Only Links
    - Mixed Bus/Auto Links
    - LRT

# Transit Network



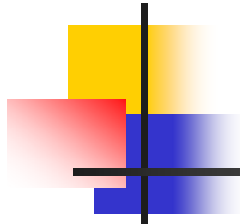


# Transit Network

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- Easy
  - Stop Points (nodes)
  - Routing
- Difficult
  - Dwell Times (per mile)
  - Headway
  - Run Times





# Transit Assignment

| OrigZoneNo | DestZoneNo | PathIndex | ODTrips | PathLegIndex | FromStopPointNo | ToStopPointNo | ProfileKeyStr | Time      | WaitingTime | Dist  |
|------------|------------|-----------|---------|--------------|-----------------|---------------|---------------|-----------|-------------|-------|
| 765        | 766        | 1         | 45.728  |              | 31310           | 27482         |               | 10min 29s | 3min 15s    | 0.770 |
|            |            |           |         | 1            |                 | 31310         | OConInNet     | 2min 35s  | 3min 15s    | 0.130 |
|            |            |           |         | 2            | 31310           | 27482         | 12S 1 > 1     | 2min 4s   | 0s          | 0.510 |
|            |            |           |         | 3            | 27482           |               | DConInNet     | 2min 35s  | 0s          | 0.130 |
| 765        | 766        | 2         | 28.670  |              | 31311           | 27483         |               | 10min 25s | 2min 44s    | 0.920 |
|            |            |           |         | 1            |                 | 31311         | OConInNet     | 2min 24s  | 2min 44s    | 0.120 |
|            |            |           |         | 2            | 31311           | 27483         | 19G 1 > 1     | 2min 53s  | 0s          | 0.680 |
|            |            |           |         | 3            | 27483           |               | DConInNet     | 2min 24s  | 0s          | 0.120 |
| 765        | 766        | 3         | 25.602  |              | 31311           | 27484         |               | 9min 56s  | 2min 45s    | 0.690 |
|            |            |           |         | 1            |                 | 31311         | OConInNet     | 2min 24s  | 2min 45s    | 0.120 |
|            |            |           |         | 2            | 31311           | 27484         | 20BSTC 1 > 1  | 2min 12s  | 0s          | 0.440 |
|            |            |           |         | 3            | 27484           |               | DConInNet     | 2min 35s  | 0s          | 0.130 |
| 766        | 765        | 1         | 42.536  |              | 27482           | 31310         |               | 9min 44s  | 3min 11s    | 0.770 |
|            |            |           |         | 1            |                 | 27482         | OConInNet     | 2min 35s  | 3min 11s    | 0.130 |
|            |            |           |         | 2            | 27482           | 31310         | 12S 1 < 1     | 1min 23s  | 0s          | 0.510 |
|            |            |           |         | 3            | 31310           |               | DConInNet     | 2min 35s  | 0s          | 0.130 |
| 766        | 765        | 2         | 30.716  |              | 27483           | 31311         |               | 9min 27s  | 2min 49s    | 0.920 |
|            |            |           |         | 1            |                 | 27483         | OConInNet     | 2min 24s  | 2min 49s    | 0.120 |
|            |            |           |         | 2            | 27483           | 31311         | 19G 1 < 1     | 1min 50s  | 0s          | 0.680 |
|            |            |           |         | 3            | 31311           |               | DConInNet     | 2min 24s  | 0s          | 0.120 |
| 766        | 765        | 3         | 26.748  |              | 27484           | 31311         |               | 8min 59s  | 2min 48s    | 0.690 |
|            |            |           |         | 1            |                 | 27484         | OConInNet     | 2min 35s  | 2min 48s    | 0.130 |
|            |            |           |         | 2            | 27484           | 31311         | 20BSTC 1 < 1  | 1min 12s  | 0s          | 0.440 |
|            |            |           |         | 3            | 31311           |               | DConInNet     | 2min 24s  | 0s          | 0.120 |



# Remaining Tasks

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- Thorough Skim Check
- Transit Route Patronage
- Stop Points/Stop Areas/Stops
- Dynamic Traffic Assignment
- Interaction with Demand Model in R
  - Skims
  - Trip Tables
- “Prettier” Displays



# Suggestions for Easier Transition

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- Tutorials
  - How To Guides
- Guidance
  - Agency/Model-Specific Help
- Agency Commitment Level