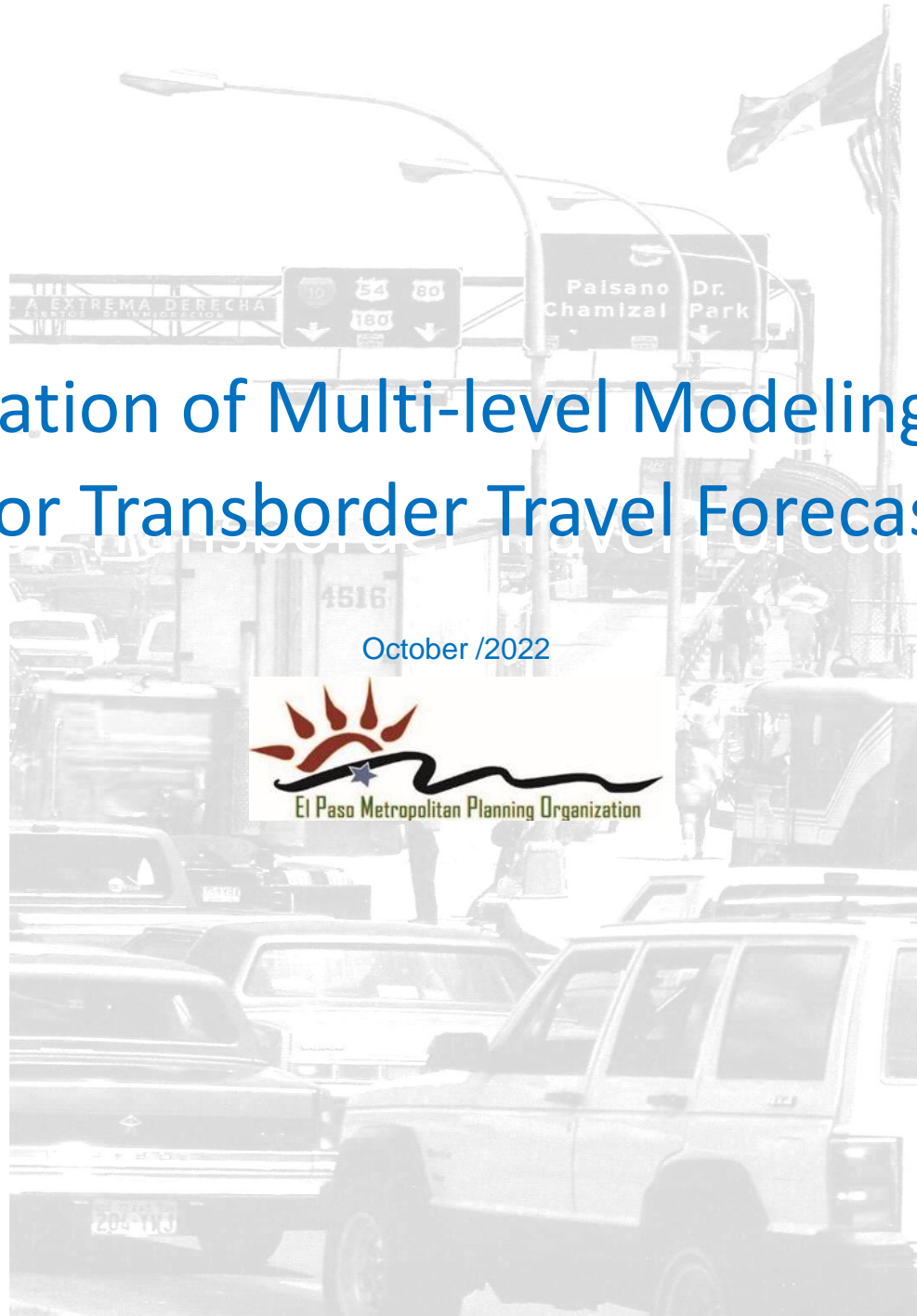


Integration of Multi-level Modeling for Transborder Travel Forecasting

October /2022



Integration of Multi-level Modeling for Transborder Travel Forecasting

Integration structure

Validation of current conditions
Demand forecasts on new IBCs
Evaluation of solutions SB
Conclusions
Recommendations

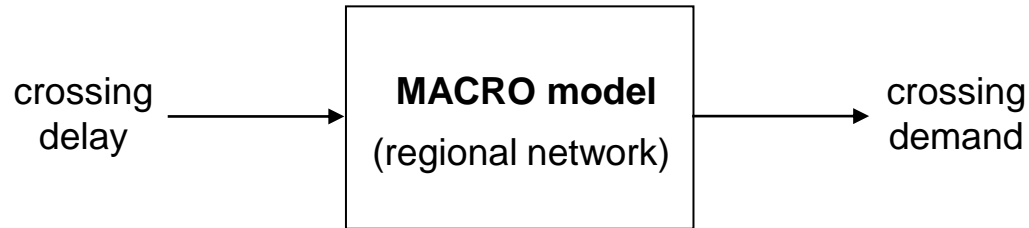
- **Integration structure**
- **Validation of current conditions**
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Integration of Multi-level Modeling for Transborder Travel Forecasting

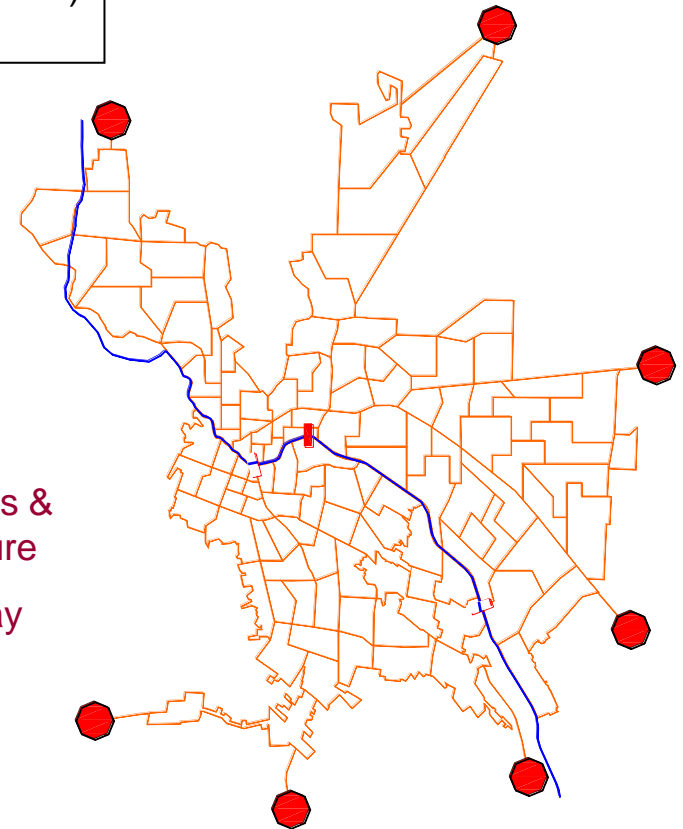
Integration structure

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Basic Concept:



- Bi-national setting
- Sensitive to demographics & transportation infrastructure
- Sensitive to crossing delay

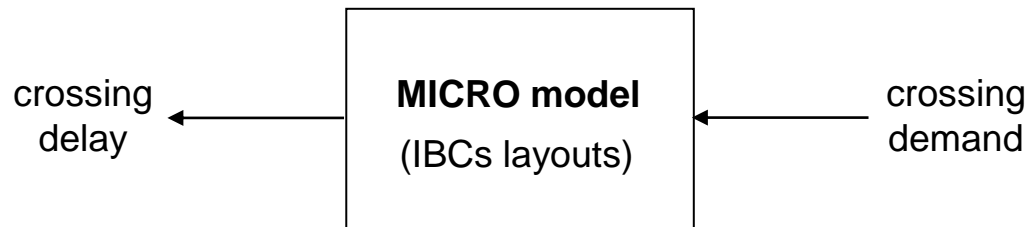


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Basic Concept:

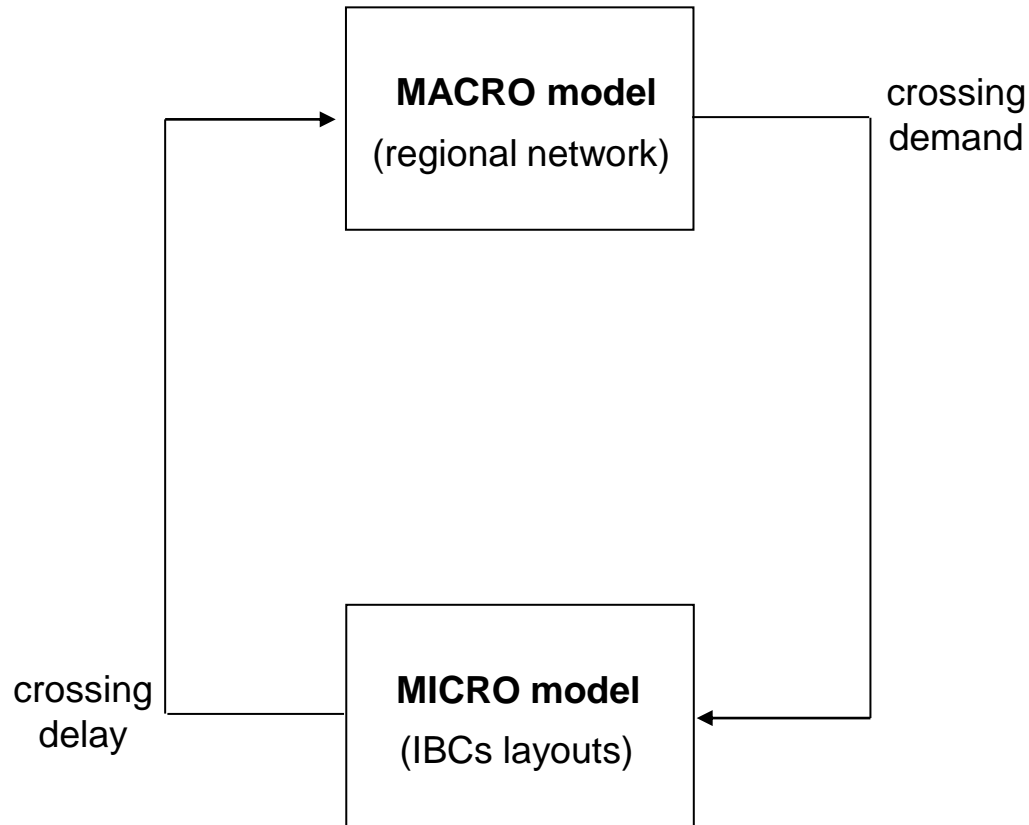


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Basic Concept:

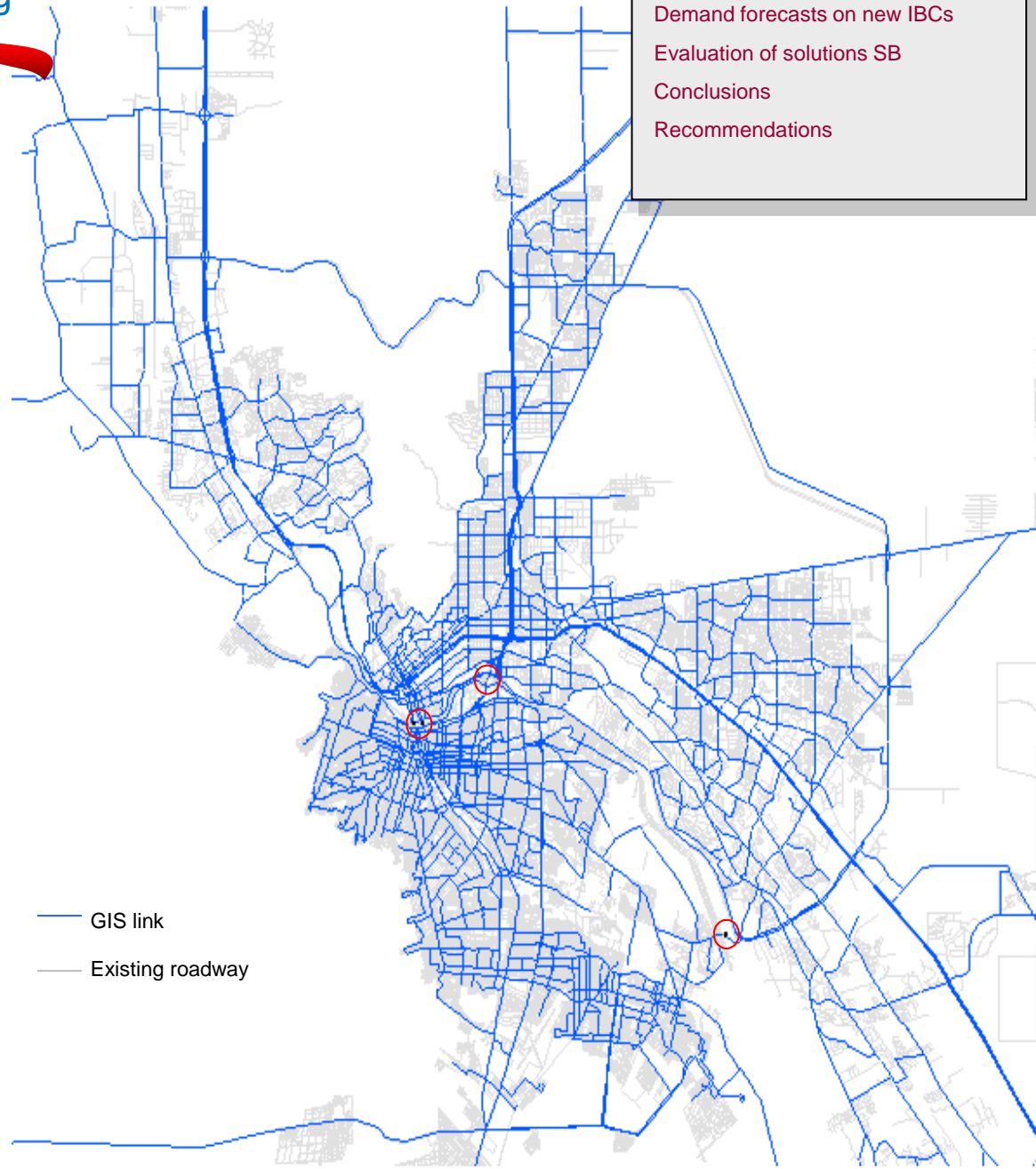


Integration of Multi-level Modeling for Transborder Travel Forecasting

Macro level:

IBC demand obtained through iTDM

- Roadway and pedestrian network integration



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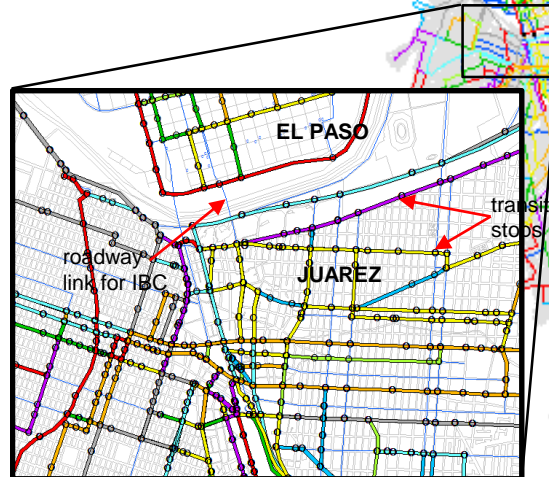
Integration of Multi-level Modeling for Transborder Travel Forecasting

Macro level:

IBC demand obtained through iTDM

- Roadway and pedestrian network integration
- Transit network integration

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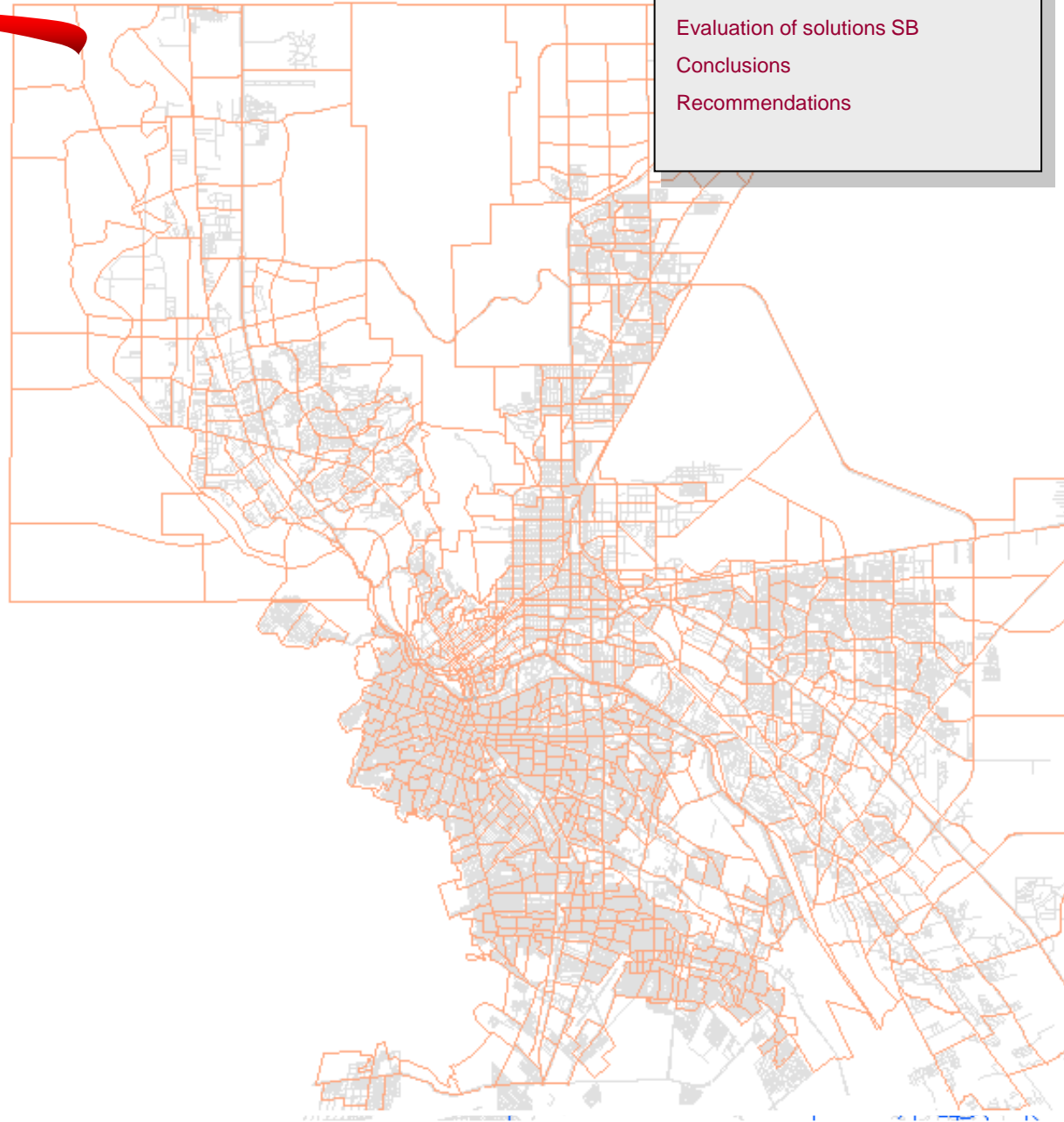


Integration of Multi-level Modeling for Transborder Travel Forecasting

Macro level:

IBC demand obtained through iTDM

- Roadway and pedestrian network integration
- Transit network integration
- Disaggregate demographic characterization



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Integration of Multi-level Modeling for Transborder Travel Forecasting

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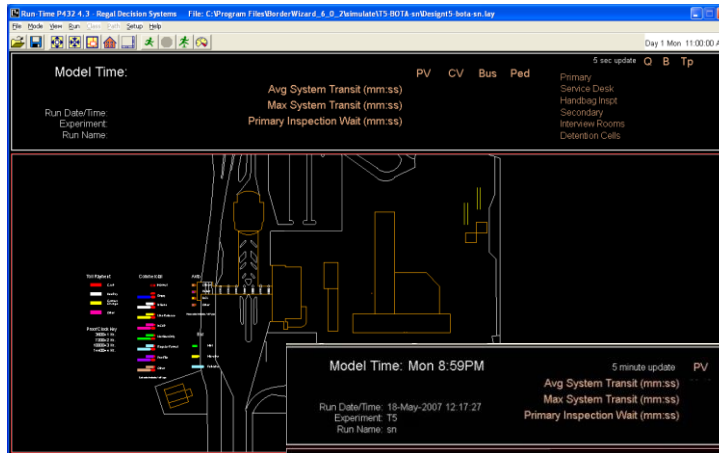
Conclusions

Recommendations

Micro level:

IBC delay obtained through micro-simulation

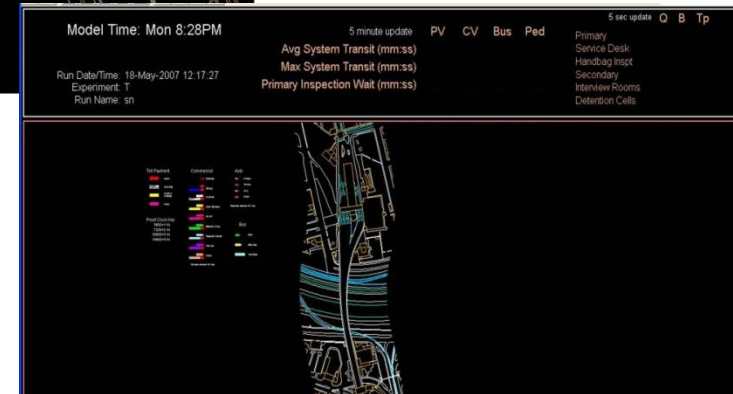
• Bota IBC



• Zaragoza IBC



• PDN IBC



Integration of Multi-level Modeling for Transborder Travel Forecasting

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Conclusions

- Combination of MACRO and MICRO level does improve POE demand estimation (MICRO alone not enough)
- Ability to incorporate SB operations: an added value

Recommendations

- El Paso MPO to test other lane types on existing IBCs:
 - ✓ Ready
 - ✓ SENTRI
 - ✓ HOV
 - ✓ BUS
- Continue travel survey program at IBCs / gather data at different seasons of the year:
 - ✓ School in session
 - ✓ Vacation season
 - ✓ Christmas holidays

Integration of Multi-level Modeling for Transborder Travel Forecasting

Thank you