



# case studies

customer success stories from the paramics community

## Project

'New Starts' Transit Alternatives Analysis for Indianapolis' Northeast Corridor

## Organization

Jacobs Edwards and Kelcey, Inc. & Stump-Hausman Partnership

## Sector

Transit System Planning

## Objective

To provide quantitative and qualitative decision support in helping select among competing transit alignments and technologies.

## Highlights

Integrated Transit/Roadway Microsimulation

Broad Range of Operating Environments: Suburban to Central Business District

Presentation-Quality 3D Visualization

## Contact Point

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## Indianapolis Regional Rapid Transit Study

Jacobs Edwards and Kelcey performed services applying Paramics micro-simulation software on this transit study for the Indianapolis region. The first corridor under study was the Northeast Corridor, running roughly 20 miles from the city center to the fast-growing suburbs along SR 37 and I-69.

Four possible alignments were evaluated, each with three distinct transit technologies – light rail, bus rapid transit, and automated guideway transit.

The microsimulation effort was undertaken to help flesh out the alignments, and allow stakeholders and interested citizens to visualize how the various transit modes would operate and impact traffic operations. The alignments were divided into a series of discreet locations for analysis – permitting concurrent progress by multiple analysts, and ensuring ease of analysis.



When complete, the analysis encompassed nearly 80 separate microsimulation models. Managing the electronic network files (and animations, for public distribution via web access) required developing a standard for file naming and implementing it in a structured manner.

Wide use was made of the 3D 'PMX models' capability for developing the visualizations of transit operations. Transit vehicle shapes were developed using CAD software for each of the transit technologies, conceptual station platforms & shelters were prepared, and support columns for the elevated AGT technology were sketched and placed along the alignments.

The analysis included consideration of the 'Cultural Trail' in Indianapolis' central districts. This bicycle/pedestrian urban trailway was analyzed by JEK in Spring 2007 using Paramics software, and initial sections are currently under construction.