High performance and reliability of solvers are the result of technological and theoretical advances in solution technology and modeling systems.

The Mathematical Program with Equilibrium Constraints (MPEC) model combines facets of optimization and complementarity. Using this powerful class of models, complementarity constraints can be added to NLP models. Viewed in another way, parameters in an equilibrium model can be chosen to optimize certain quantities (e.g. total wait time, system revenue, consumer surplus, etc.).

The graph illustrates reformulation/NLP-solver combinations that are effective in finding best known solutions for our MPEC test set.