Abstract:

NetJets operates 400 private aircraft in its fractional business in the US with approximately 2,500 pilots. Roughly 40% of these pilots work an 18 work day schedule; the work schedule is created by the 15th of each month for the next month of operation. Pilots express preferences for a number of preferences, specific days off, tour length, weekends off, etc... NetJets demand varies considerably by day and therefore it’s need for pilots; we developed an optimization program that balances the pilot preferences and company requirements. The problem is modeled as a Mixed-Integer Program (MIP); implemented and solved using ILOG/OPL Studio. We will review the modeling of the schedule rules, preferences, and company requirements and discuss how the software seeks near optimal solutions.