

TEST RESULTS REPORT

(Optimization Software)
University of Arizona Independent Test Auction
December 4 – 8, 2000

The purpose of this Test Results Report is to examine all data collected from the University of Arizona Independent Test Auction to ensure that the optimization software is working properly. The data will be checked for anomalies and the results will be verified against the IBM solver results. Specifically, the test results will be analyzed for consistency, correctness, and unforeseen biases.

Summary:

Data from the Arizona Independent Test Auction has been collected and checked. The optimization software is working properly. There was, however, one anomaly during the test auction. On the fifth day of the auction in round 20 a member of the FCC auction's team inadvertently became part of the provisionally winning set. In an attempt to not interfere further, an auction administrator attempted to remove the provisionally winning bid from the system after round 22. The effect was that the set of provisionally winning bids recorded for round 23 did not cover all the licenses and the revenue recorded in round 23 was less than that generated by the IBM Solver by the amount of the removed provisionally winning bid. Other than this one case, all licenses were awarded once in every round and the IBM Solver revenue matched in every case with the revenue found during the Arizona Test Auction. No other anomalies were apparent through analysis indicating that the optimization software is producing consistent and correct results. Furthermore, the random tie-breaking procedure produced no observable biases in its selection of provisionally winning sets.

Statistics:

Day by day and round by round statistics for the Arizona Test Auction can be found in the Microsoft Access Database called `Arizona_Test_Stats.mdb`. This database contains two reports: 1) Auction Results which displays statistics for each day of the test auction, and 2) Round Results which contains, for each day of the auction, statistics for each round. These reports contain statistics on revenue, solver checks, bidding activity, provisionally winning sets, and minimum acceptable bid calculations. Note, due to data loss in a transfer error of a database history table, bidding information on the final eight rounds of the second day's auction is missing.