## The OPTMODEL Procedure

| Problem Summary         |               |  |  |  |  |
|-------------------------|---------------|--|--|--|--|
| Objective Sense         | Minimization  |  |  |  |  |
| Objective Function      | TotalDistance |  |  |  |  |
| Objective Type          | Nonlinear     |  |  |  |  |
|                         |               |  |  |  |  |
| Number of Variables     | 30            |  |  |  |  |
| Bounded Above           | 0             |  |  |  |  |
| Bounded Below           | 0             |  |  |  |  |
| Bounded Below and Above | 30            |  |  |  |  |
| Free                    | 0             |  |  |  |  |
| Fixed                   | 0             |  |  |  |  |
| Binary                  | 24            |  |  |  |  |
| Integer                 | 0             |  |  |  |  |
|                         |               |  |  |  |  |
| Number of Constraints   | 9             |  |  |  |  |
| Linear LE (<=)          | 0             |  |  |  |  |
| Linear EQ (=)           | 9             |  |  |  |  |
| Linear GE (>=)          | 0             |  |  |  |  |
| Linear Range            | 0             |  |  |  |  |
|                         |               |  |  |  |  |
| Constraint Coefficients | 48            |  |  |  |  |

## The OPTMODEL Procedure

| Solution Summary   |                      |  |  |  |  |
|--------------------|----------------------|--|--|--|--|
| Solver             | LSO                  |  |  |  |  |
| Objective Function | TotalDistance        |  |  |  |  |
| Solution Status    | Function Convergence |  |  |  |  |
| Objective Value    | 0.0181298862         |  |  |  |  |
|                    |                      |  |  |  |  |
| Infeasibility      | 0                    |  |  |  |  |
| Random Seed Used   | 1                    |  |  |  |  |
|                    |                      |  |  |  |  |
| Evaluations        | 9675                 |  |  |  |  |
| Cached Evaluations | 2743                 |  |  |  |  |
| Iterations         | 64                   |  |  |  |  |
| Presolve Time      | 0.00                 |  |  |  |  |
| Solution Time      | 0.53                 |  |  |  |  |



| [1] | X       | Y      |
|-----|---------|--------|
| 1   | -85.713 | 38.244 |
| 2   | -85.739 | 38.247 |
| 3   | -85.751 | 38.235 |

| W |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

| W |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |