**ComputePredictor()**

*LInes 28-30: Allocate memory for variables*

*Lines 27-48: transfer function parameters to local variables*

*Lines 54-64: rhs = [xis - s + r - W^-1R xiw xib]*

*Line 72: find dpi and dx by solving augmented system. Uses SolveAugmented() from solve.c*

*Lines 76-80: recover dw*

*Lines 83-84: recover ds*

*Lines 90-91: free memory allocated. Uses Free() from memory.c*

**ComputeCorrector()**

*LInes 110-116: Allocate memory for variables*

*Lines 122-133: transfer function parameters to local variables*

*Lines 141-151: Compute right-hand side of centering direction*

*Line 159: find dpi2 and dx2 from augmented system. Uses SolveAgmented() from solve.c*

*Lines 163-167: recover dw2*

*Lines 170-171: recover ds2*

*Lines 174-175: recover dr2*

*Lines 177-178: frees memory allocated for variables. Uses Free() from memory.c*

**ComputeGondzioPredictor()**

*LInes 202-221: Allocate memory for variables*

*Lines 227-244: Transfer function parameters to local variables*

*Compute Step length*

*Line 251: move to boundary. Uses StepToBoundary() from solve.c*

*Line 253: loop until done correcting*

*Lines 257-265: calculate max step-length*

*Lines 268-270: recompute sigmamu*

*Lines 273-274: set target step length*

*Lines 286-310: implementing heuristics from gondzio code*

*Lines 319-349: More gondzio heuristics*

*Lines 356-365: Compute right hand of Gondzio corrections*

*Lines 375-395: find dpi2 and dx2 from augmented system. Uses SolveAugmented() from Solve.c*

*Lines 401-433: Compute step length for predictor + new corrector step. Uses StepToBoundary from solve.c*

*Lines 437-441: Free memory from variables. Uses Free() from memory.c*

**StepToBoundary()**

Find the distance to boundary, the largest alpha value that does not violate the non negativity of x, s, w, and r

Lines 466-489: Find step size for predictor correction.

Lines 498-534: Find step size for predictor + corrector direction for Gondzio corrections

**ComputeCentering()**

*LInes 547-549: Allocate memory for variables*

*Lines 555-560: transfer function parameters to local variables*

*Line 567: Find the distance to boundary. Uses StepToBoundary form solve.c*

*Lines 574-581: Uses largest step to compute the centering parameter mu*

**SolveADAT()**

*LInes 595-601: Allocate memory for variables*

*Lines 604-649: Check the accuracy of the solutions*

*Line 651: Free memory from variables. Uses Free() from memory.c*

**SolveAugmented()**

*LInes 669-686: Allocate memory for variables*

*Lines 690-707: Perform solve for each search direction and check accuracy. Uses SolveADAT() from solve.c*

*LInes 708: Free memory. Uses Free() from memory.c*

**ComputeStructureAAT()**

*LInes 719-724: Allocate memory for variables*

*Lines 728-743: Compute A^T*

*Lines 747-779: Allocate memory for AAT*

*Line 783: extend AAT begin row by 1*

**ComputeADAT()**

*LInes 795-808: Allocate memory for variables*

*Lines 812-832: Copy elements of A^T column to Temp*

*Lines 839-843: Finish storing the elements in AAT*

*Lines 848-849: Free memory. Uses Free() from memory.c*