

Appendix C: Screenshots from COTester

Example of an NLP problem formulated with GUI

MINLP Problem Creation - C:\Documents and Settings\Yidong\My Documents\My DATA\CAPE-OPEN\From Michel\Tester\CO...

	X1	X2	X3	Y1	Y2	Y3	Log(X2+1)	Log(X1-X2+)	Constant	Type
OF	0	0	-7	5	6	7	18.0	19.2	10	Min

	X1	X2	X3	Y1	Y2	Y3	Log(X2+1)	Log(X1-X2+)	LB	UB
C1	0	0	-8	0	0	0	0.8	0.96	-Inf	0
C2	0	0	-1	0	0	-2	1	1.2	-Inf	2
C3	-1	1	0	0	0	0	0	0	-Inf	0
C4	0	1	0	1	-2	0	0	0	-Inf	0
C5	1	-1	0	0	-2	0	0	0	-Inf	0
C6	0	0	0	1	1	0	0	0	-Inf	1

	X1	X2	X3	Y1	Y2	Y3
Integer	False	False	False	False	False	False
LowerBound	2	0	-Inf	0.1	0.2	0.3
UpperBound	4	2	3	1.1	1.2	1.3

Load Save Launch Clear

Screenshots from COTester for the NLP

MINLP Solver Tester

Registration: CAPE-OPEN MIILP Tester

Basic: GCOIpopWrapper_v6.CapeMINLPSolverManager.
GCOIpopWrapper_NET.CapeMINLPSolverManag
GCOWrapper.CapeMINLPSolverManager.1
GCOIpopWrapper.CapeMINLPSolverManager.1

Integration:

Reports:

MINLP Solver ProgID: GCOIpopWrapper_NET.CapeMINL

MINLP Solver Tester

Registration: MIILP Solver

	Is supported ?
IUnknown	YES
IDispatch	YES
ICapeIdentification	YES
ICapeMINLPSolverManager	YES
ICapeNumericSolver	YES

Integration: All needed interfaces are implemented

Reports:

MINLP Solver ProgID: GCOIpopWrapper_NET.CapeMINL

MINLP Solver Tester

Registration: MIILP Solver

	Is supported ?
IUnknown	YES
IDispatch	YES
ICapeIdentification	YES
ICapeMINLPSolverManager	YES
ICapeNumericSolver	YES

Integration: All needed interfaces are implemented

Reports:

MINLP Solver ProgID: GCOIpopWrapper_NET.CapeMINL

MINLP Solver Tester

Registration: Solver Side **Problem Side**

	Is called ?
CreateMINLPSystem	Yes
Solve	Yes

Reports:

MINLP Solver ProgID: GCOIpopWrapper_NET.CapeMINL

MINLP Solver Tester

Solver Side **Problem Side**

	Counted calls
GetMINLPSize	2
GetMINLPStructure	2
GetMINLPVariableNames	0
GetMINLPVariableTypes	2
GetMINLPVariableBounds	2
GetMINLPVariableValues	1
SetMINLPVariableValues	81
GetMINLPVariableBooleanv	0
GetMINLPVariableIntegerA	0
GetMINLPVariableDoubleA	0
GetMINLPVariableStringAtt	0

Launch TEST

MINLP Solver ProgID `GCOIpopWrapper_NET.CapeMINL`

MINLP Solver Tester

Solver Side **Problem Side**

	Counted calls
GetMINLPNonlinearObjecti	16
GetMINLPObjectiveFunctio	17
GetMINLPObjectiveFunctio	0
GetMINLPObjectiveFunctio	0
GetMINLPObjectiveFunctio	0
GetMINLPObjectiveFunctio	0
SetMINLPLagrangeMultipli	16
GetMINLPLagrangeMultipli	0
SetMINLPHessianValues	16
GetMINLPHessianStructure	1
GetMINLPHessianValues	16

Launch TEST

MINLP Solver ProgID `GCOIpopWrapper_NET.CapeMINL`