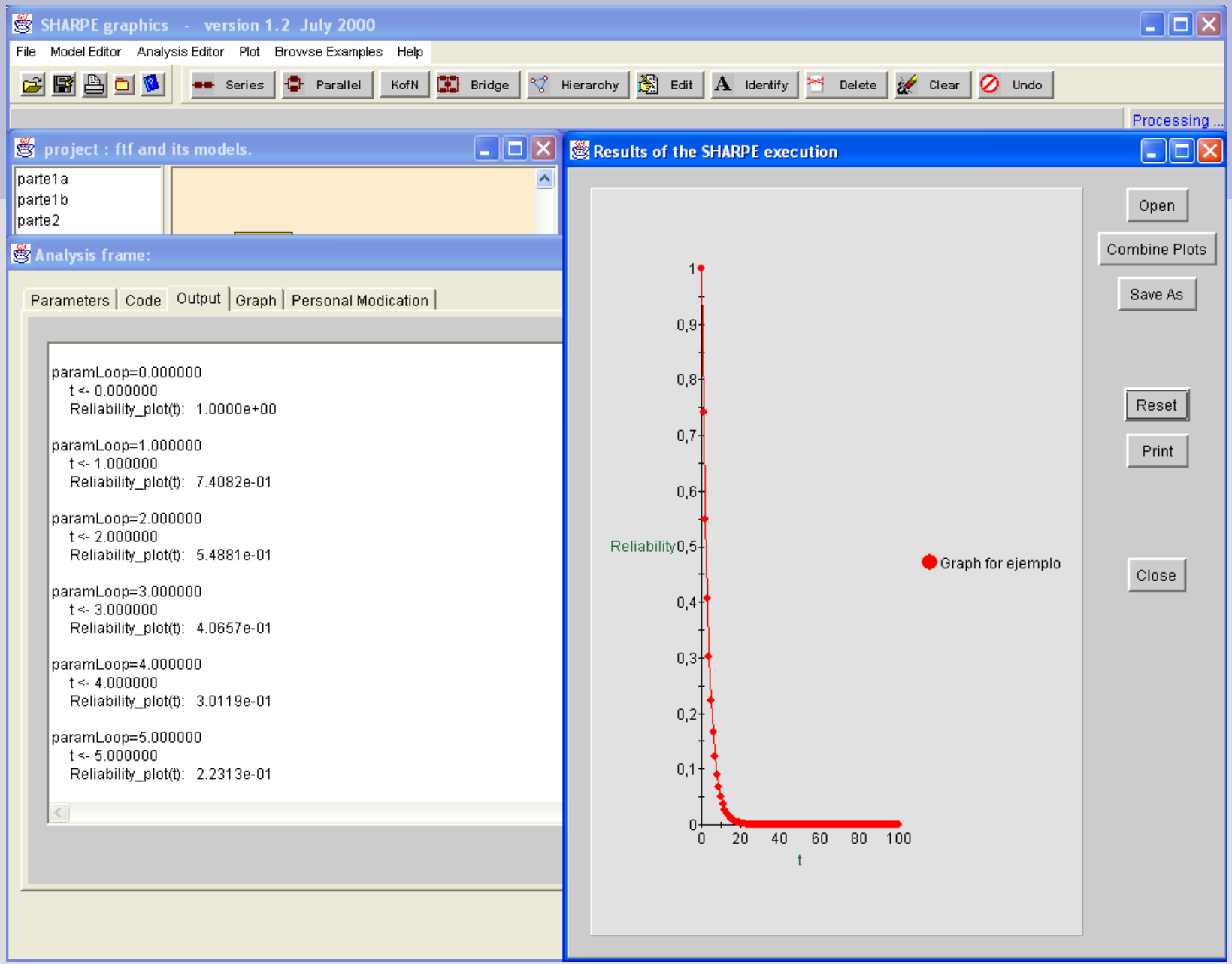
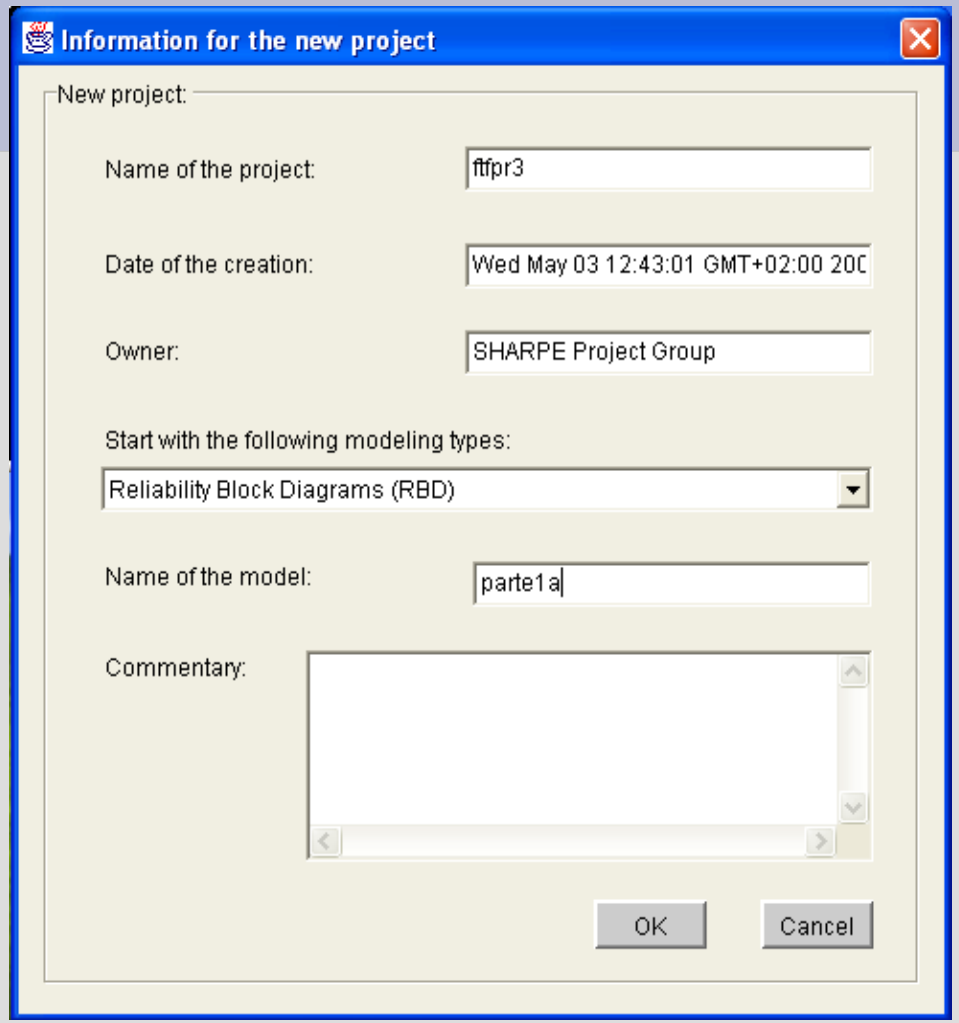
Practica 3

Modelado con diagramas de bloques

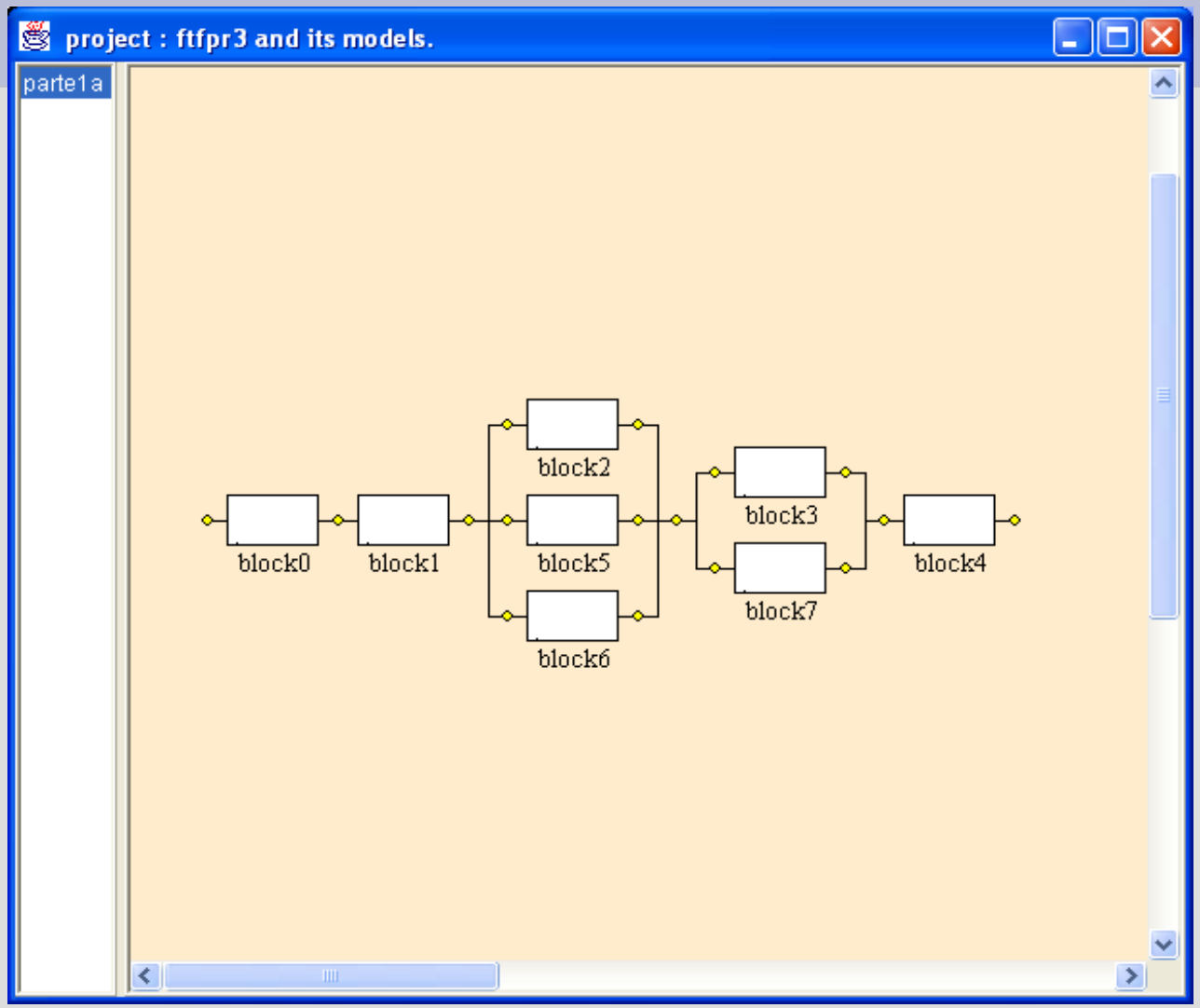

SHARPE graphics - version 1.2 July 2000
File
Model Editor
Analysis Editor
Plot
Browse Examples
Help
Series
Parallel
KofN
Bridge
Hierarchy
Edit
Identify
Delete
Clear
Undo
Processing ...
project : ftf and its models.
parte1a
parte1b
parte2
Analysis frame:
Parameters
Code
Output
Graph
Personal Modication
paramLoop=0.000000
t <- 0.000000
Reliability_plot(t): 1.0000e+00
paramLoop=1.000000
t <- 1.000000
Reliability_plot(t): 7.4082e-01
paramLoop=2.000000
t <- 2.000000
Reliability_plot(t): 5.4881e-01
paramLoop=3.000000
t <- 3.000000
Reliability_plot(t): 4.0657e-01
paramLoop=4.000000
t <- 4.000000
Reliability_plot(t): 3.0119e-01
paramLoop=5.000000
t <- 5.000000
Reliability_plot(t): 2.2313e-01
Results of the SHARPE execution
Open
Combine Plots
Save As
Reset
Print
Close
Reliability
1
0,9
0,8
0,7
0,6
0,5
0,4
0,3
0,2
0,1
0
0
20
40
60
80
100
t
Graph for ejemplo

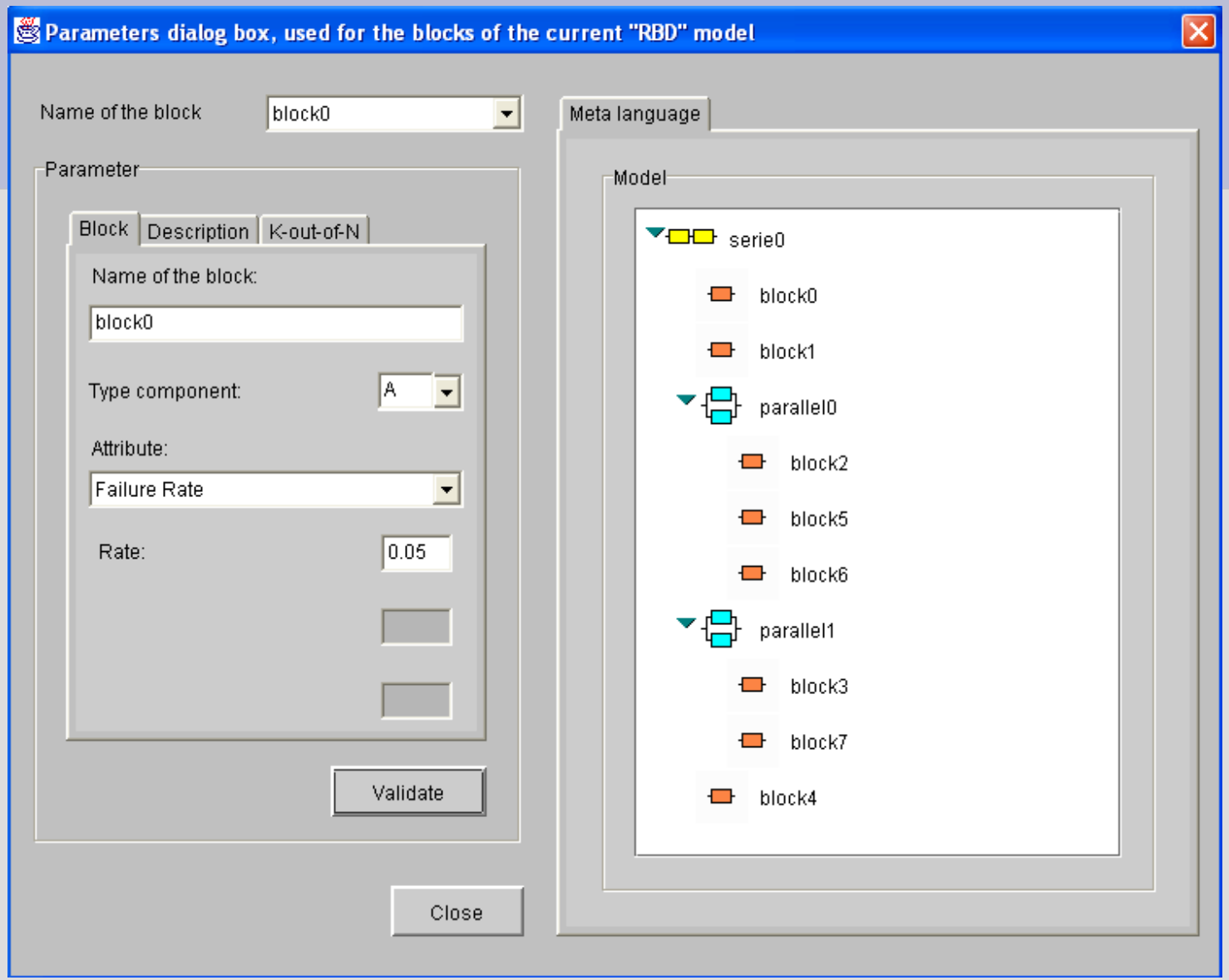
Claves

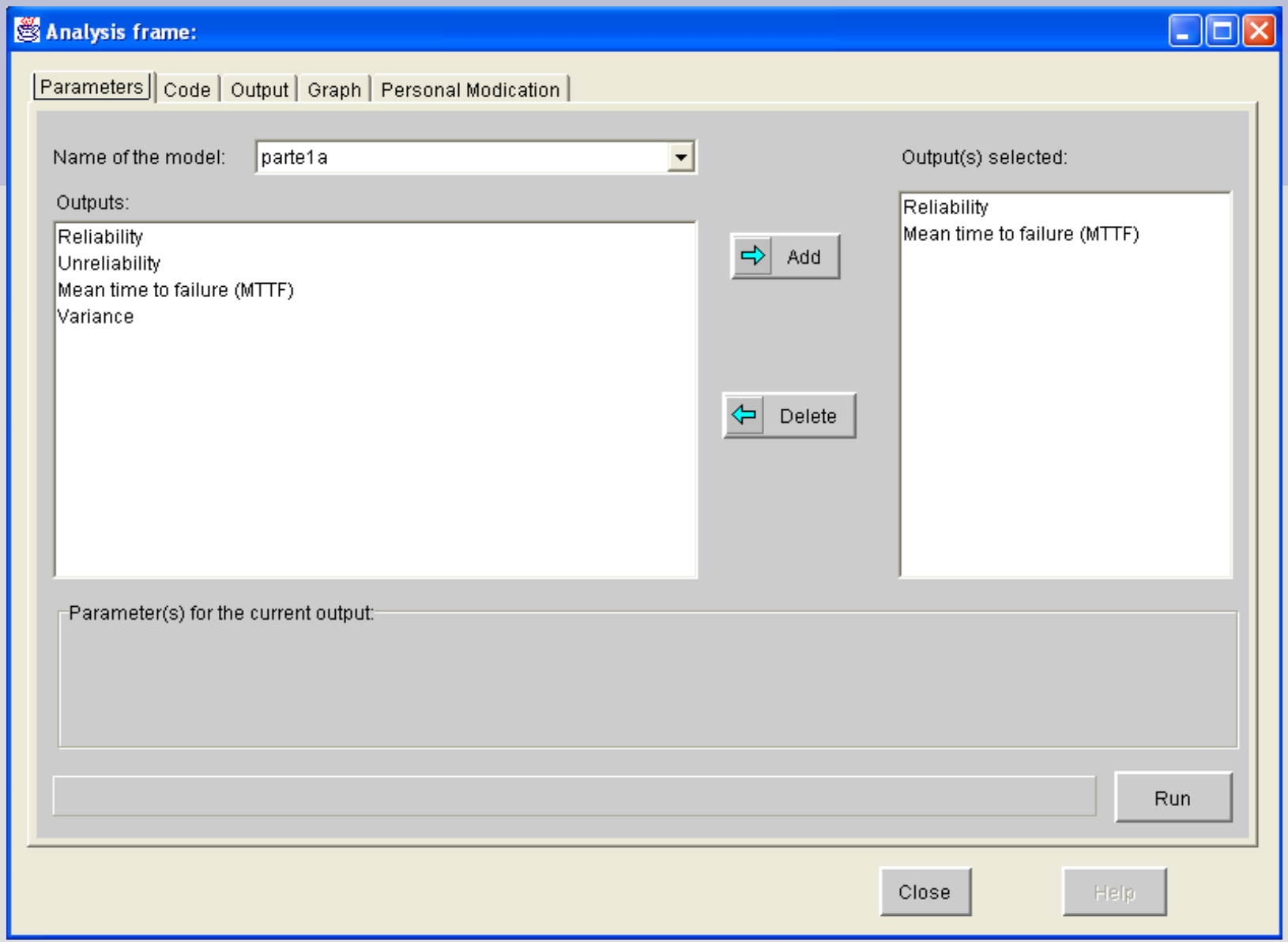
- Se utilizan bloques serie – paralelo
- Tasa de fallo = 1 / T medio entre fallos
- Tasa de reparación = 1 / T medio de reparación
- Generar gráficas
  - Con mismos tiempos
  - Con valores adecuados
- Almacenar modificaciones y gráficas
- Extensiones: .rgl, .rbd, .txt, .dat, .info

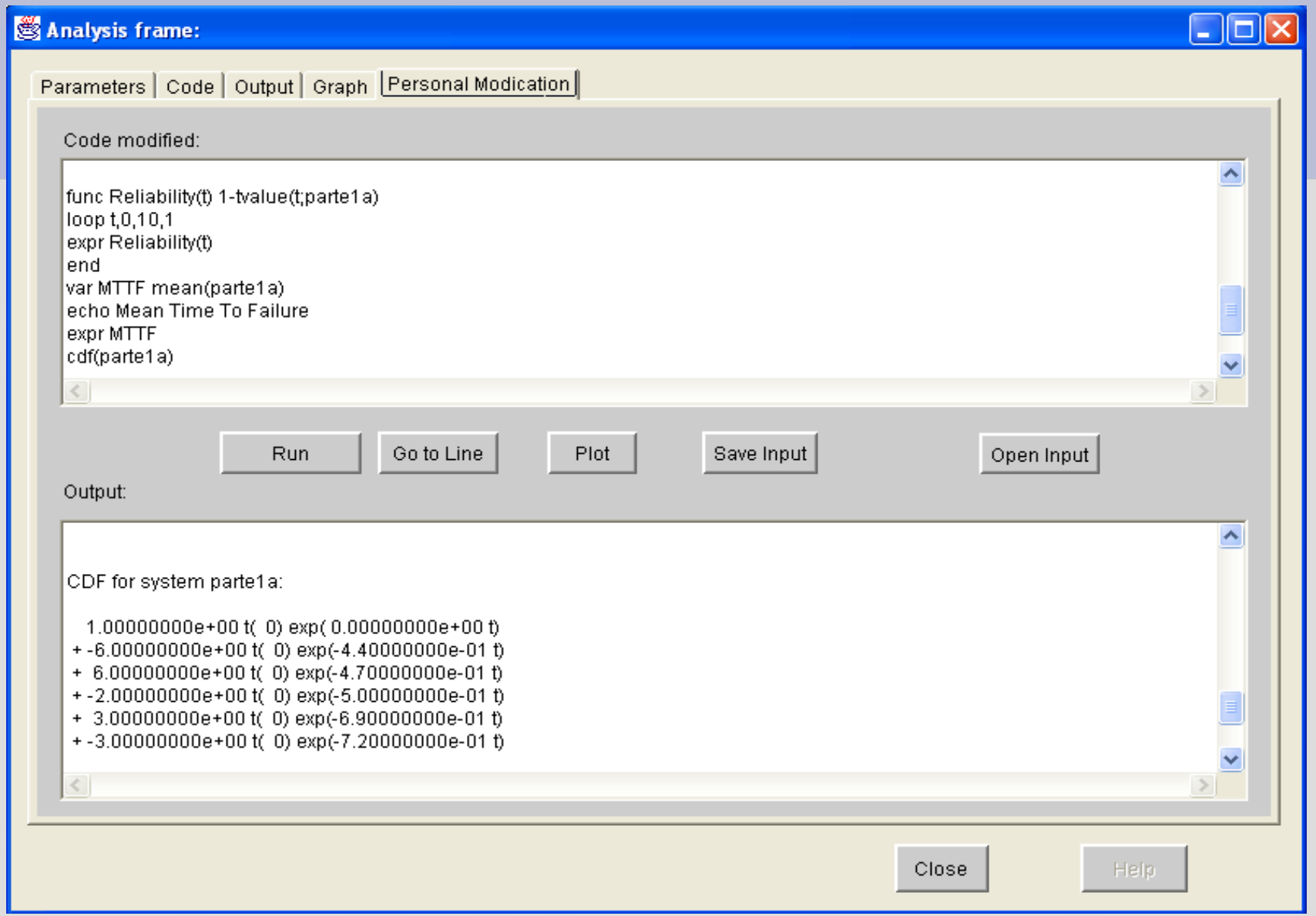

Information for the new project
New project:
Name of the project:
ftfpr3
Date of the creation:
Wed May 03 12:43:01 GMT+02:00 200
Owner:
SHARPE Project Group
Start with the following modeling types:
Reliability Block Diagrams (RBD)
Name of the model:
parte1a
Commentary:
OK
Cancel

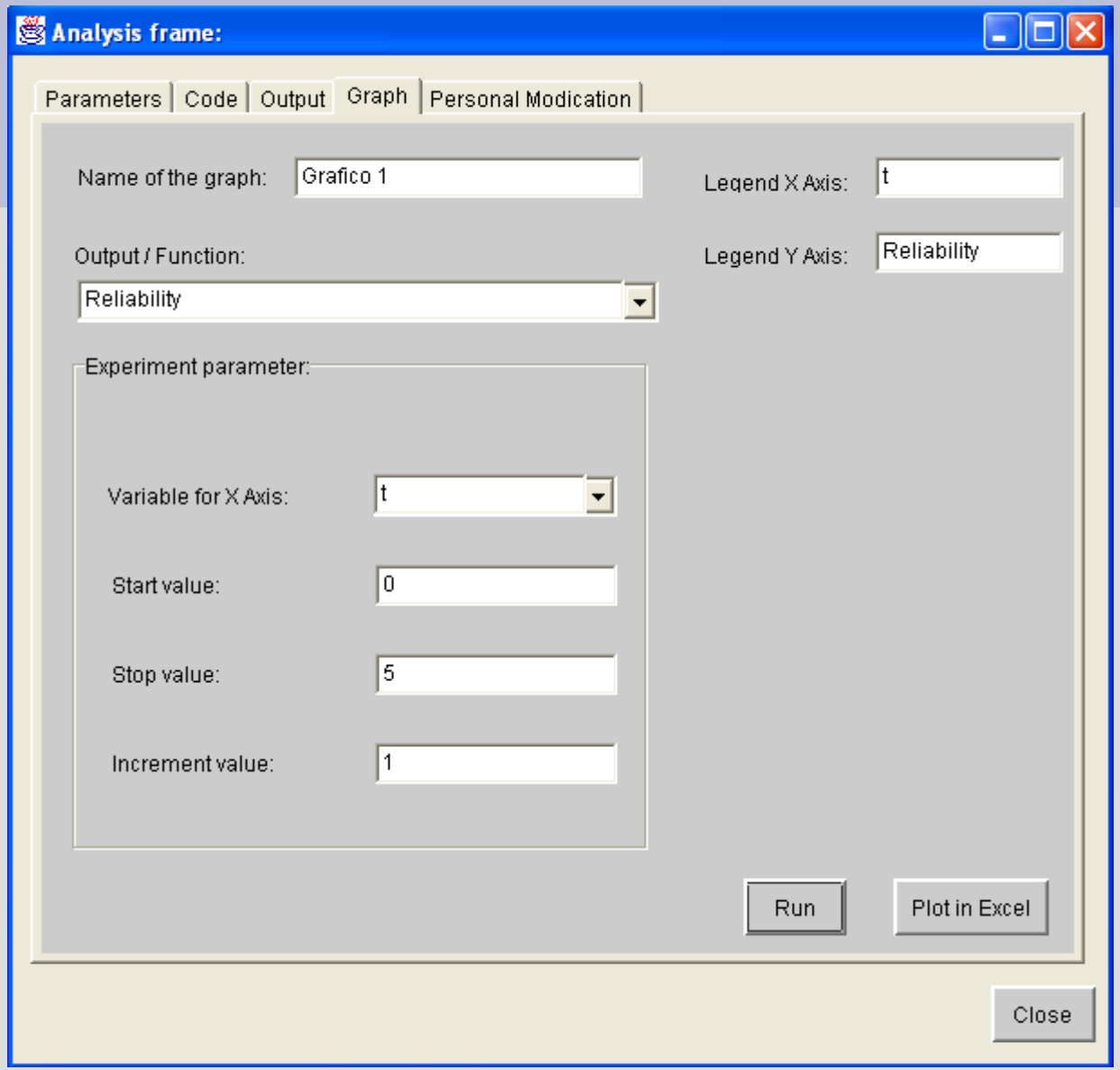
Modelado de la fiabilidad y la disponibilidad

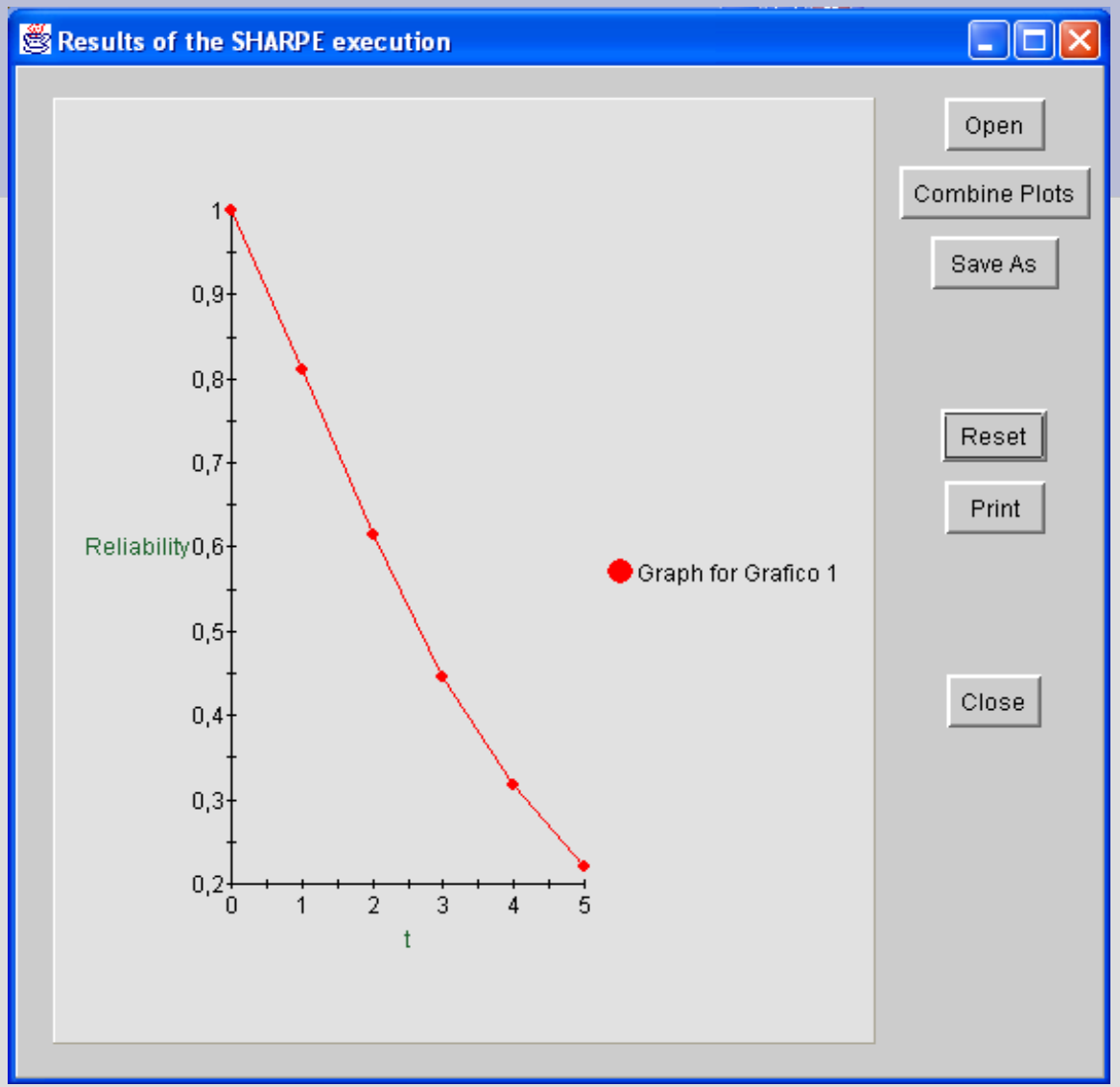


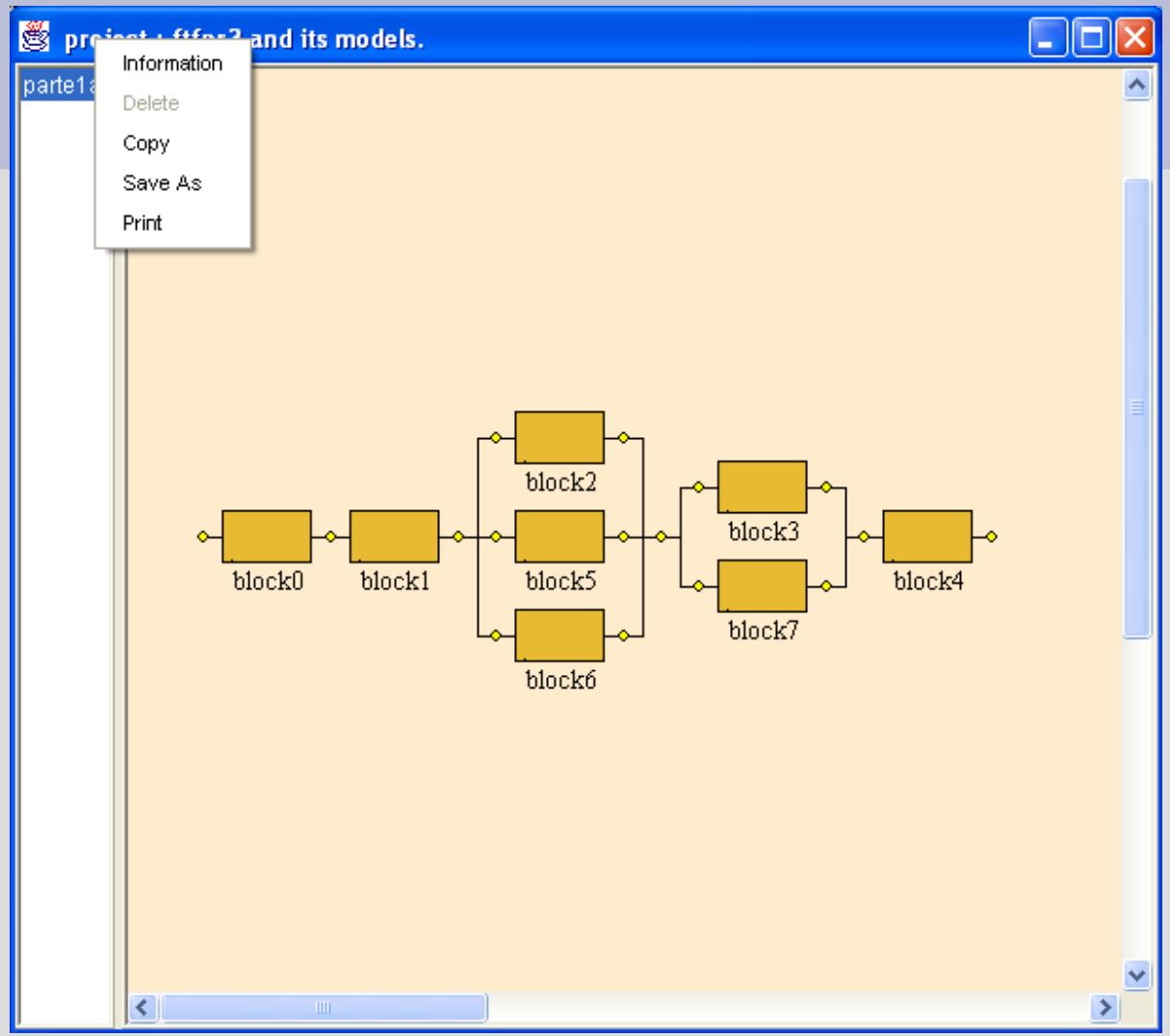

Parameters dialog box, used for the blocks of the current "RBD" model
Name of the block
block0
Parameter
Block
Description
K-out-of-N
Name of the block:
block0
Type component:
A
Attribute:
Failure Rate
Rate:
0.05
Validate
Close
Meta language
Model
serie0
block0
block1
parallel0
block2
block5
block6
parallel1
block3
block7
block4


Analysis frame:
Parameters
Code
Output
Graph
Personal Modication
Name of the model:
parte1a
Outputs:
Reliability
Unreliability
Mean time to failure (MTTF)
Variance
Add
Delete
Output(s) selected:
Reliability
Mean time to failure (MTTF)
Parameter(s) for the current output:
Run
Close
Help

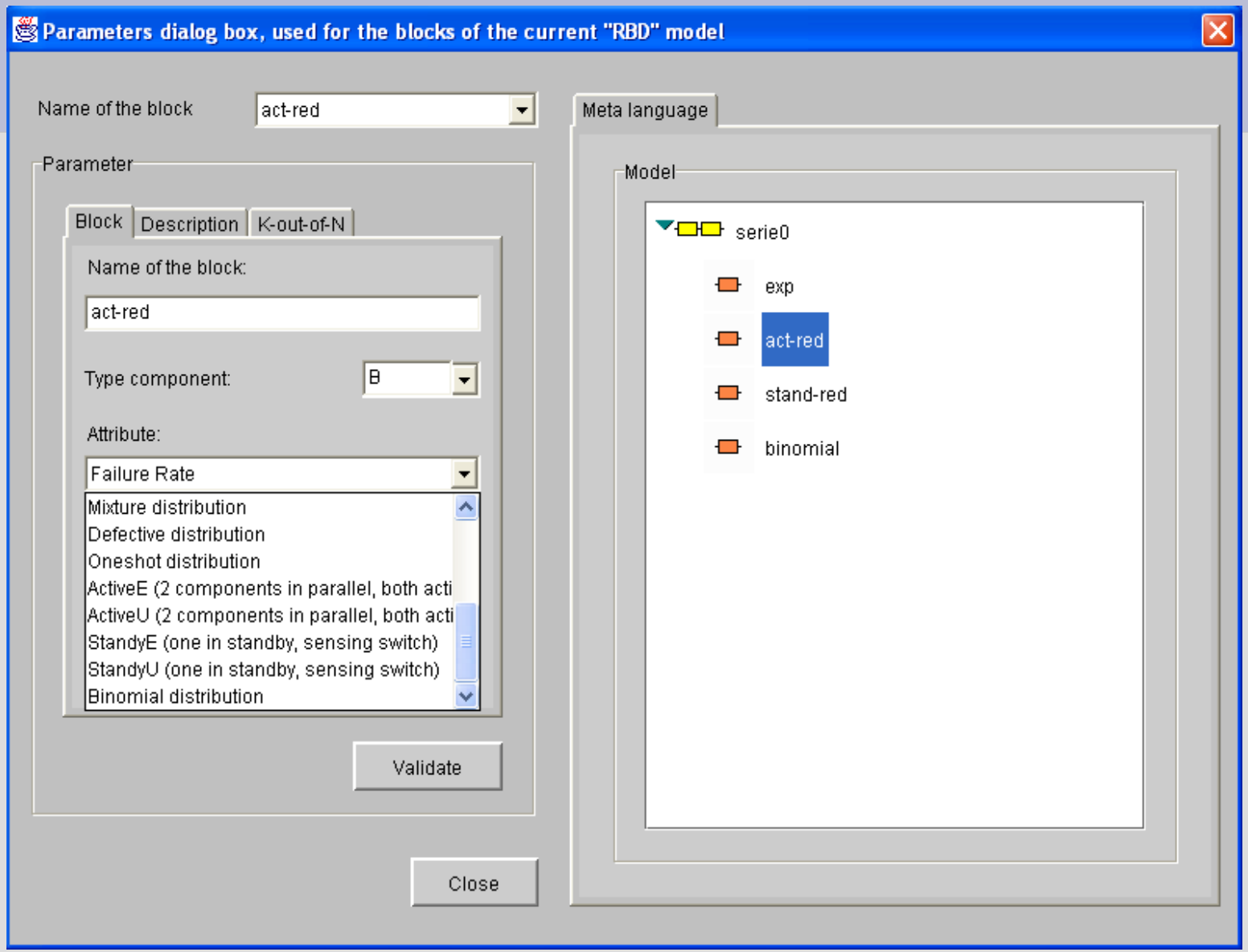

Analysis frame:
Parameters
Code
Output
Graph
Personal Modication
Code modified:
func Reliability(t) 1-tvalue(t;parte1a)
loop t,0,10,1
expr Reliability(t)
end
var MTTF mean(parte1a)
echo Mean Time To Failure
expr MTTF
cdf(parte1a)
Run
Go to Line
Plot
Save Input
Open Input
Output:
CDF for system parte1a:
1.00000000e+00 t(0) exp(0.00000000e+00 t)
+ -6.00000000e+00 t(0) exp(-4.40000000e-01 t)
+ 6.00000000e+00 t(0) exp(-4.70000000e-01 t)
+ -2.00000000e+00 t(0) exp(-5.00000000e-01 t)
+ 3.00000000e+00 t(0) exp(-6.90000000e-01 t)
+ -3.00000000e+00 t(0) exp(-7.20000000e-01 t)
Close
Help


Analysis frame:
Parameters
Code
Output
Graph
Personal Modication
Name of the graph:
Grafico 1
Legend X Axis:
t
Output / Function:
Reliability
Legend Y Axis:
Reliability
Experiment parameter:
Variable for X Axis:
t
Start value:
0
Stop value:
5
Increment value:
1
Run
Plot in Excel
Close

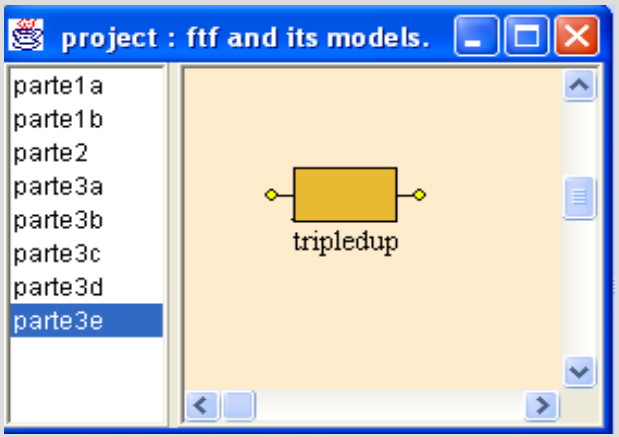

Results of the SHARPE execution
Open
Combine Plots
Save As
Reset
Print
Close
Reliability
1
0,9
0,8
0,7
0,6
0,5
0,4
0,3
0,2
0
1
2
3
4
5
t
Graph for Grafico 1


and its models.
Information
Delete
Copy
Save As
Print
block0
block1
block2
block5
block6
block3
block7
block4

Modelado de sistemas redundantes



Análisis de sistemas típicos



Material y Trabajo opcional

- Trabajo opcional
  - Modelado con Cadenas de Markov
- Enunciado:
  - Pizarra
- Software:
  - http://informatica.uv.es/~rmtnez/ftf/lab/sharpe/inde
  - Descomprimir en c:\