SMX

Version 0.1 Beta

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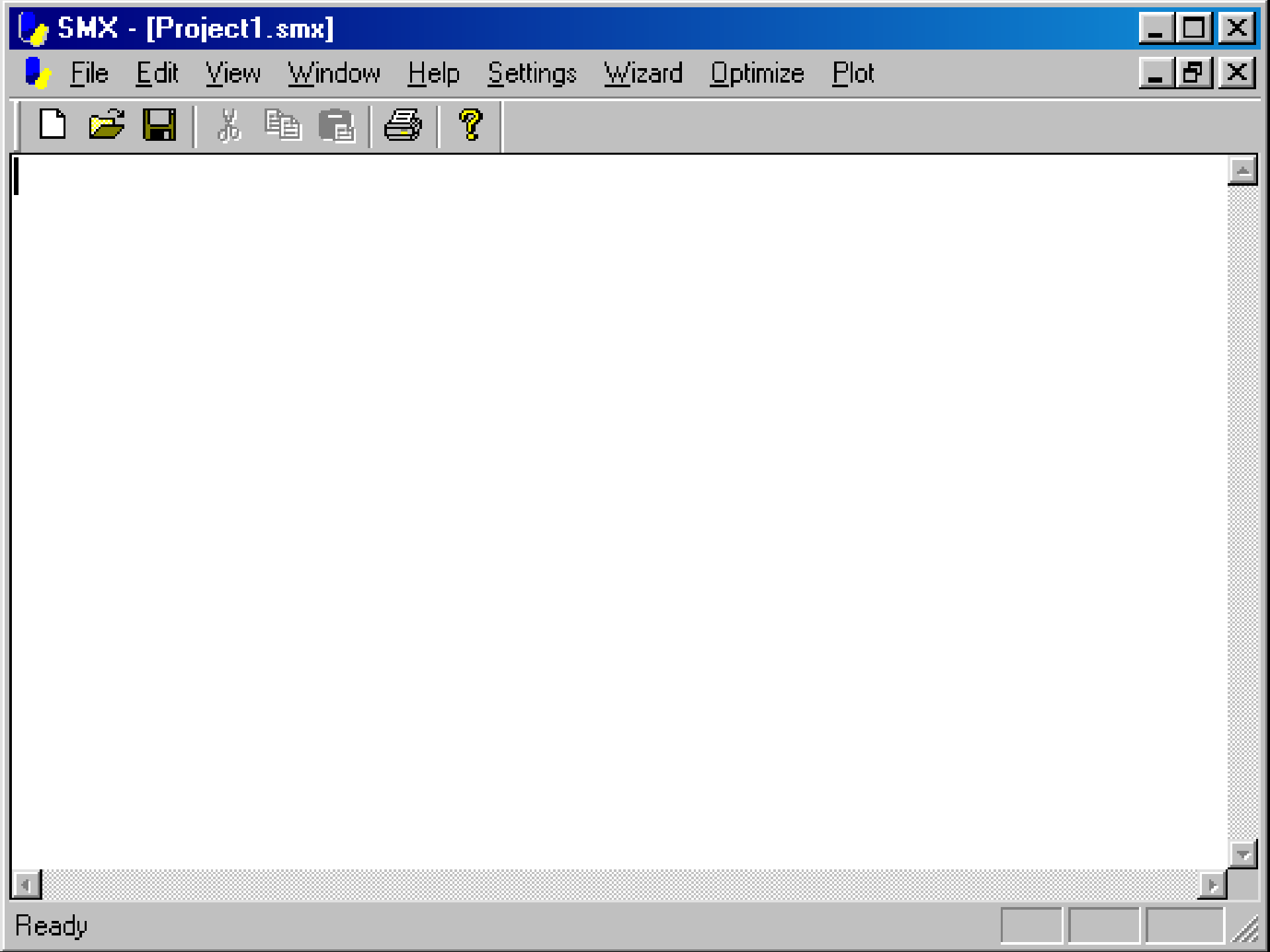
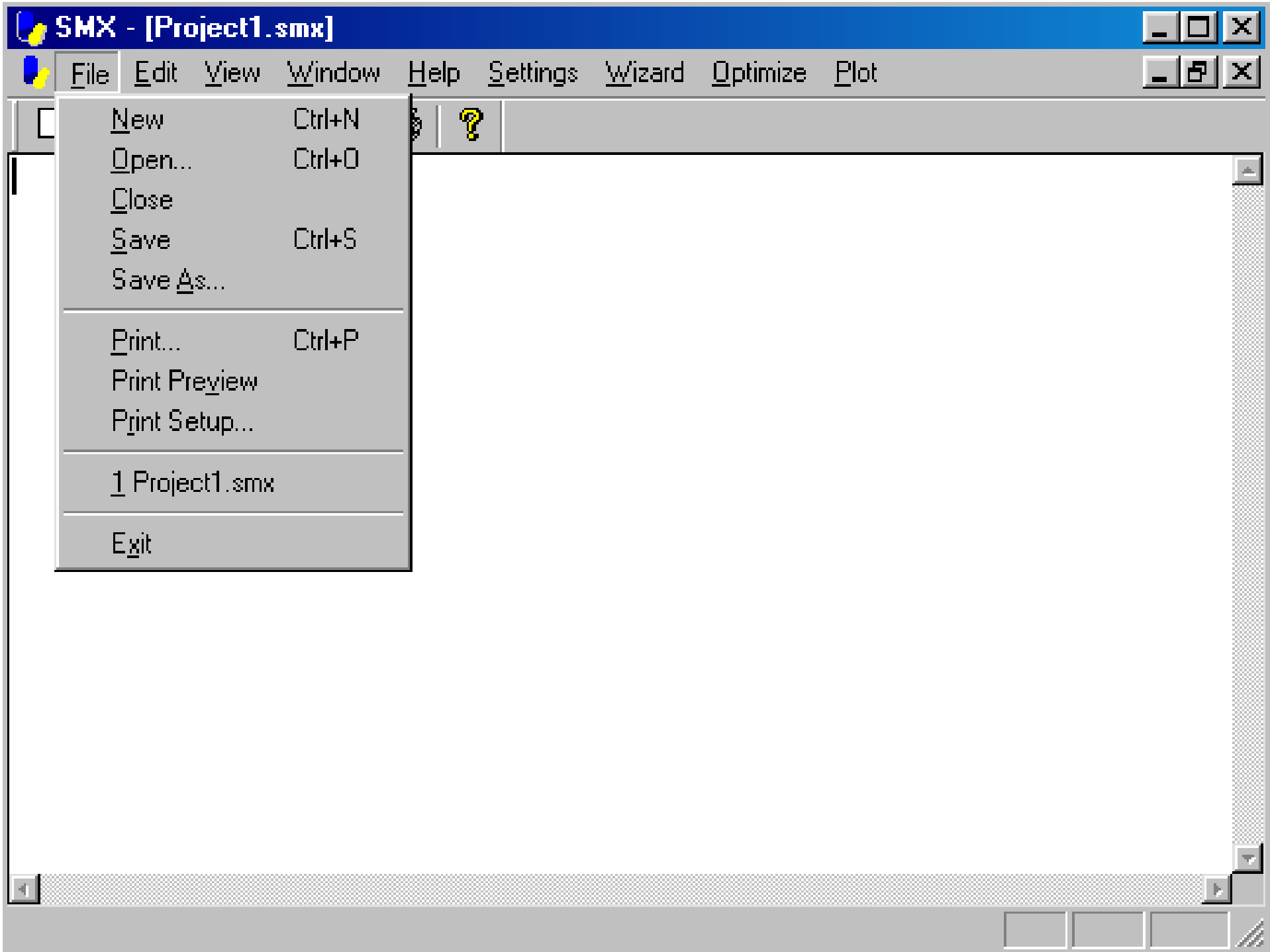
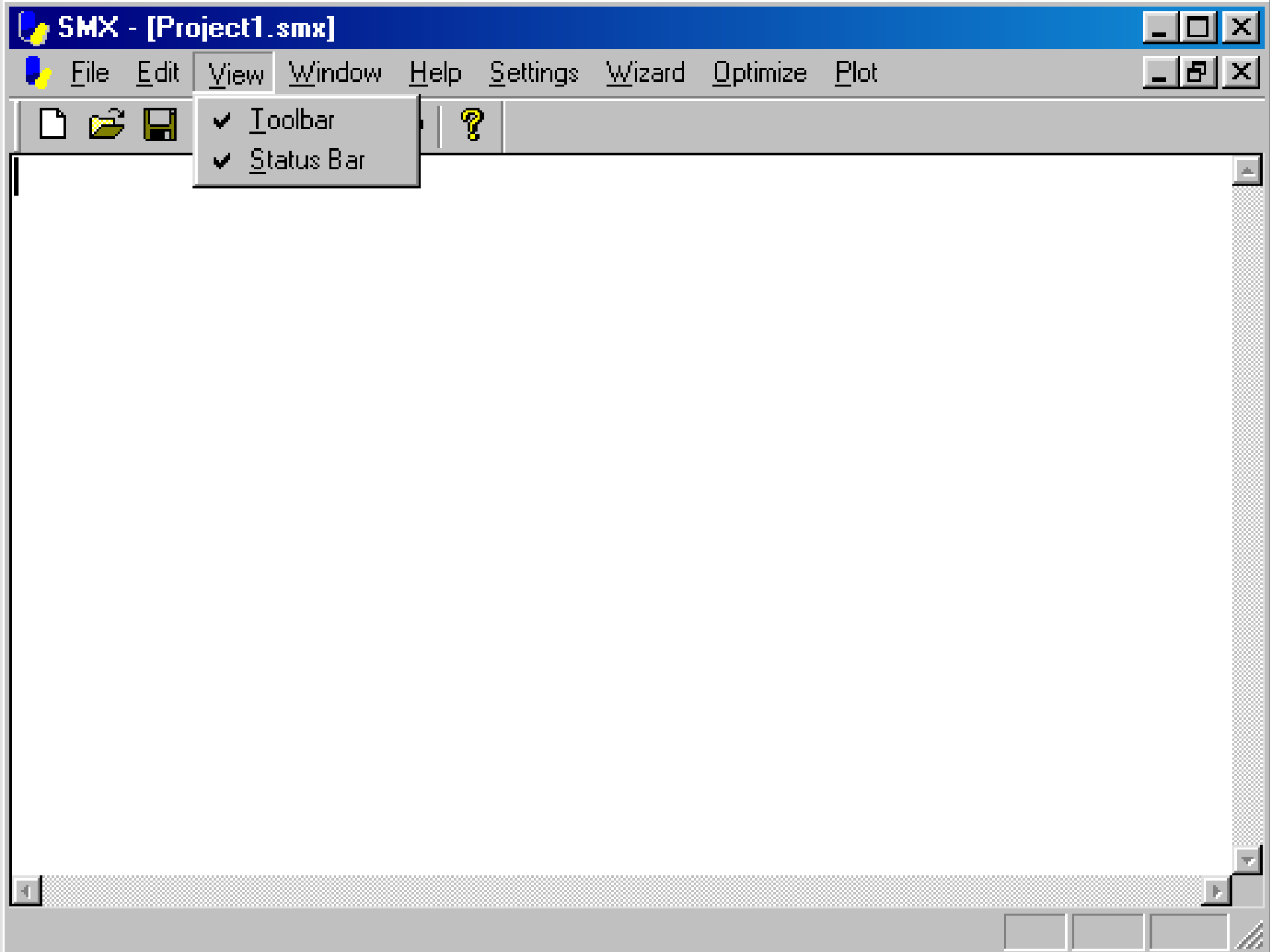
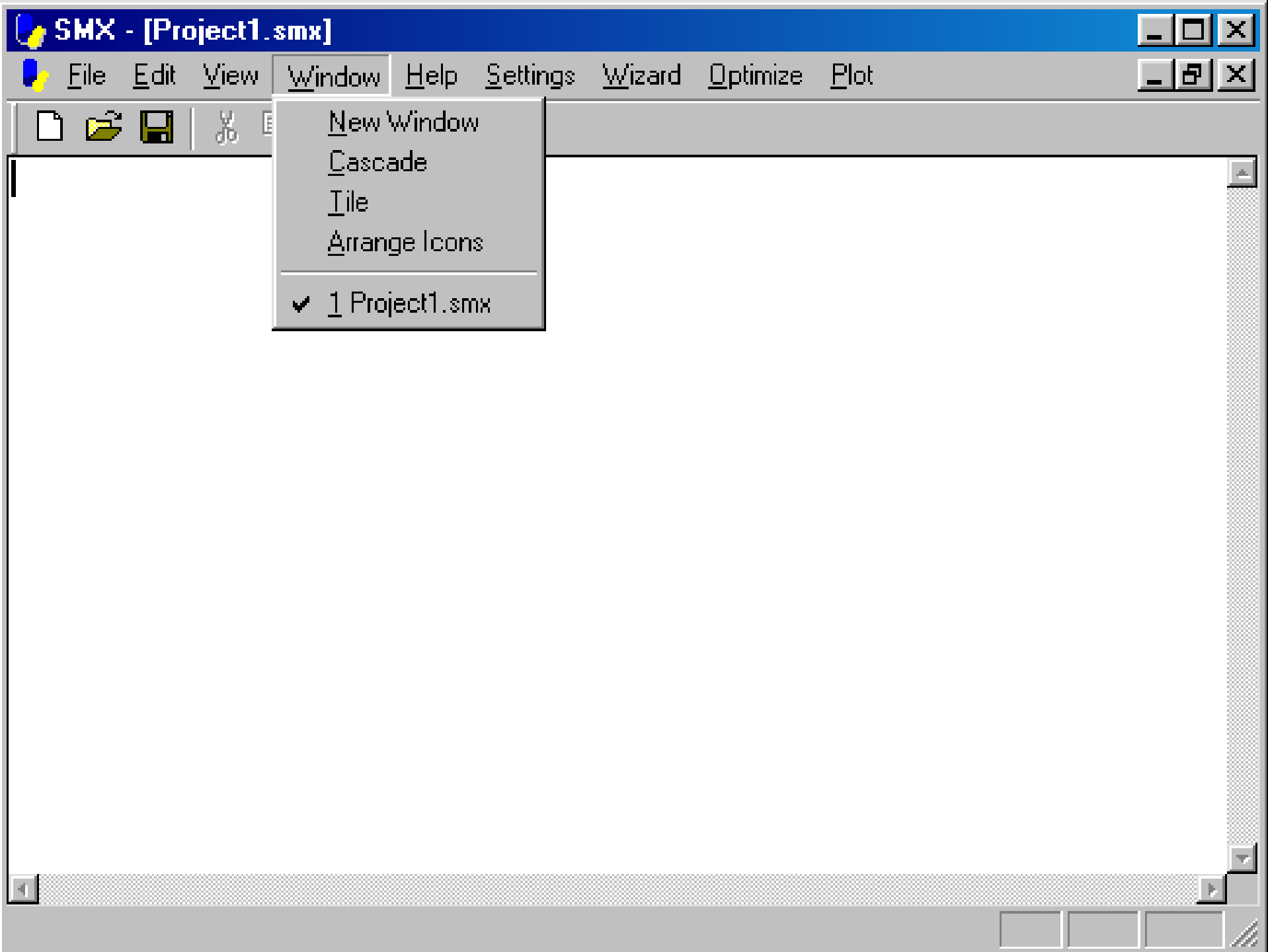
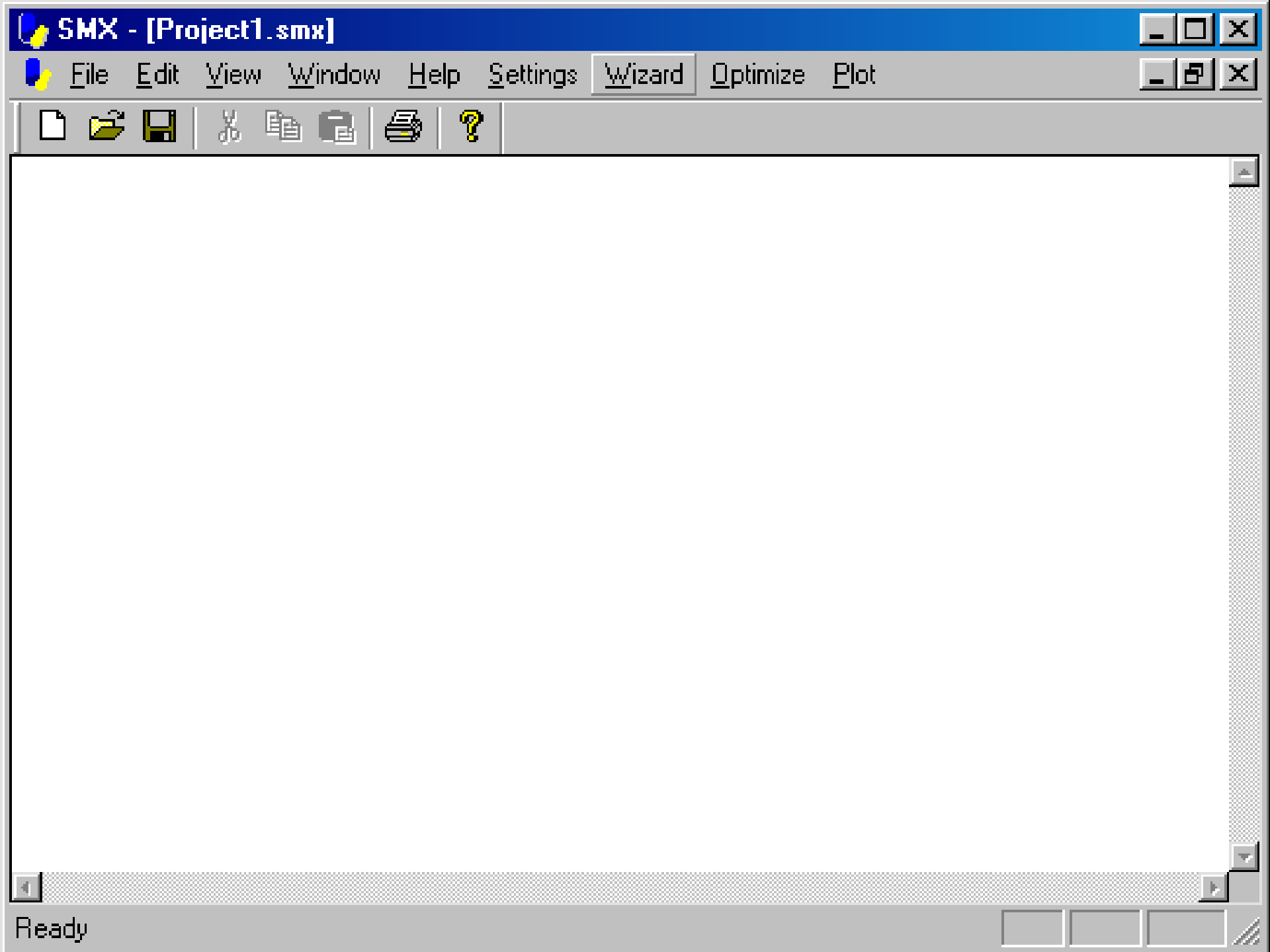
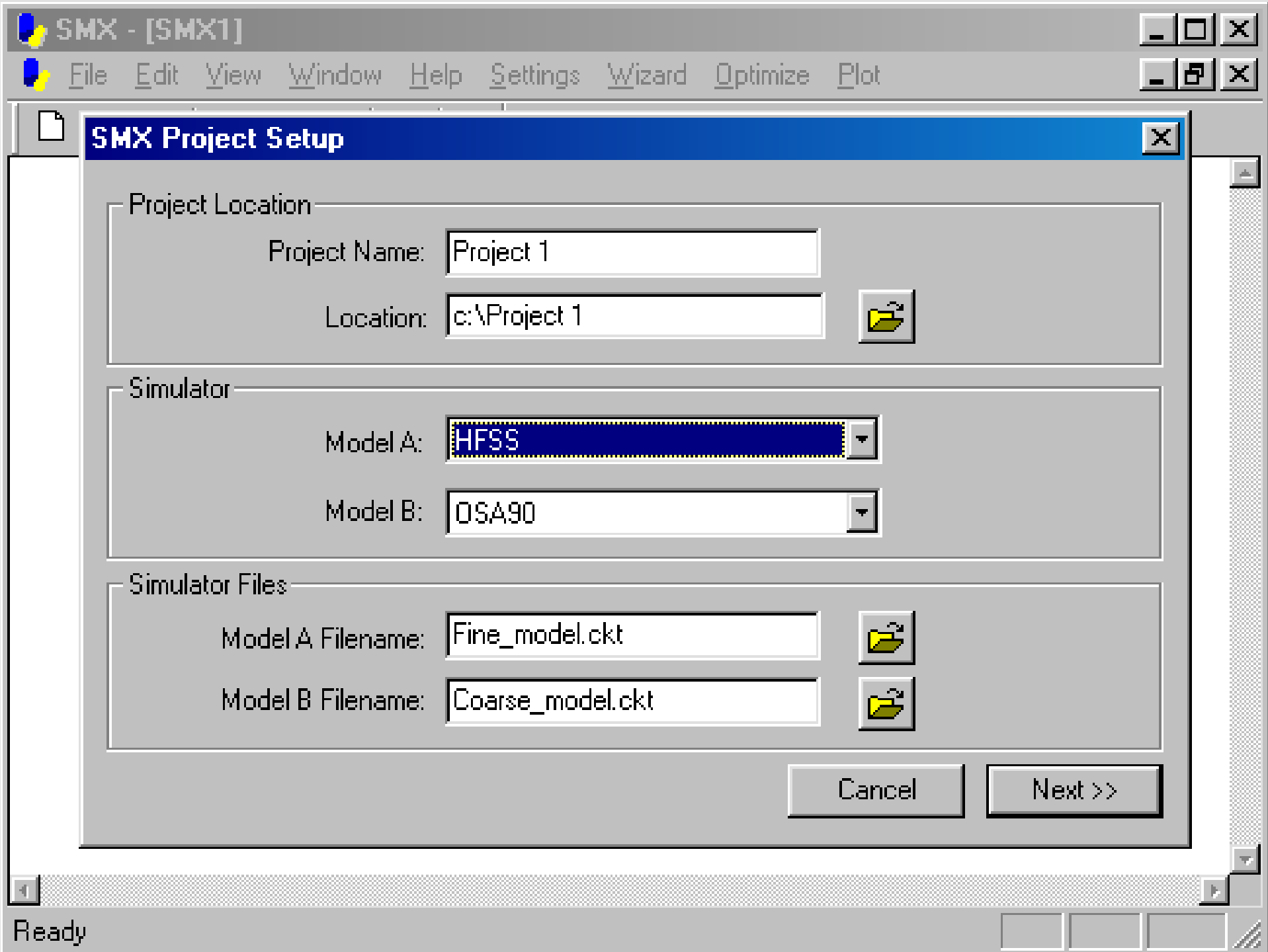

SMX - [Project1.smx]
File
Edit
View
Window
Help
Settings
Wizard
Optimize
Plot
Ready

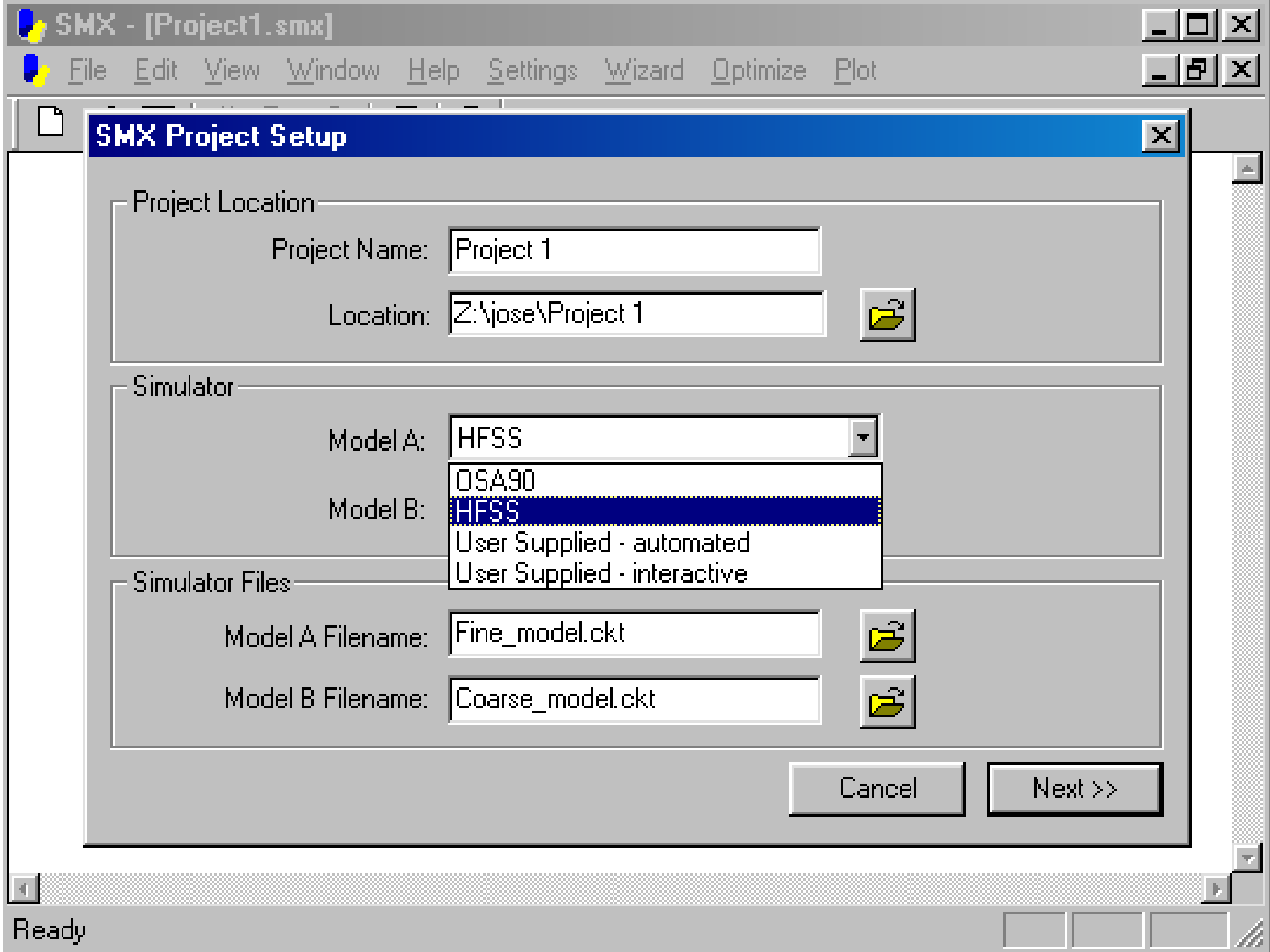

SMX - [Project1.smx]
File
Edit
View
Window
Help
Settings
Wizard
Optimize
Plot
New Ctrl+N
Open... Ctrl+O
Close
Save Ctrl+S
Save As...
Print... Ctrl+P
Print Preview
Print Setup...
1 Project1.smx
Exit

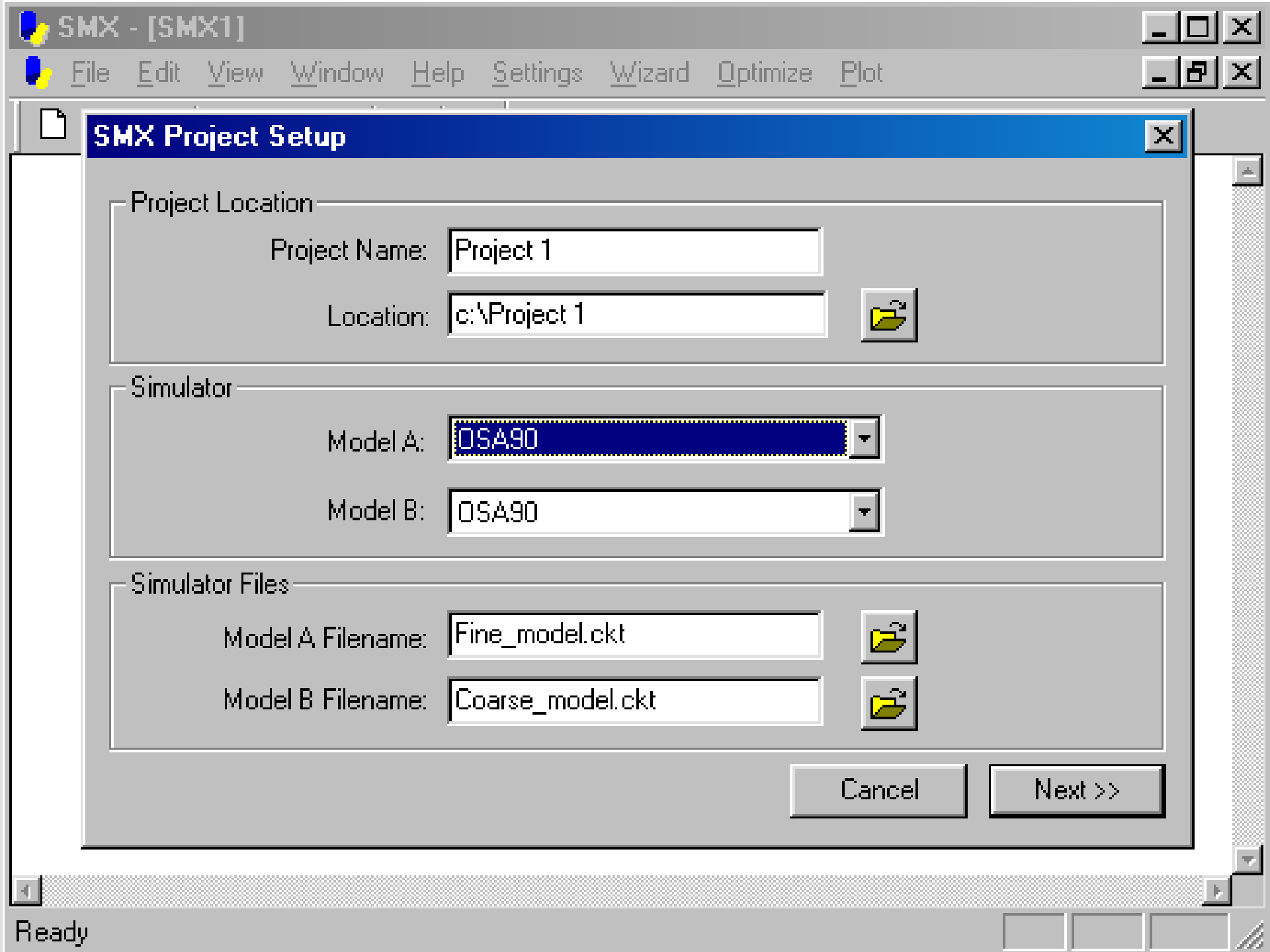

SMX - [Project1.smx]
File
Edit
View
Window
Help
Settings
Wizard
Optimize
Plot
Toolbar
Status Bar


SMX - [Project1.smx]
File
Edit
View
Window
Help
Settings
Wizard
Optimize
Plot
New Window
Cascade
Tile
Arrange Icons
1 Project1.smx


SMX - [Project1.smx]
File
Edit
View
Window
Help
Settings
Wizard
Optimize
Plot
Ready


SMX - [SMX1]
File Edit View Window Help Settings Wizard Optimize Plot
SMX Project Setup
Project Location
Project Name:
Project 1
Location:
c:\Project 1
Simulator
Model A:
HFSS
Model B:
OSA90
Simulator Files
Model A Filename:
Fine_model.ckt
Model B Filename:
Coarse_model.ckt
Cancel
Next >>
Ready


SMX - [Project1.smx]
File Edit View Window Help Settings Wizard Optimize Plot
SMX Project Setup
Project Location
Project Name:
Project 1
Location:
Z:\jose\Project 1
Simulator
Model A:
HFSS
Model B:
OSA90
HFSS
User Supplied - automated
User Supplied - interactive
Simulator Files
Model A Filename:
Fine_model.ckt
Model B Filename:
Coarse_model.ckt
Cancel
Next >>
Ready


SMX - [SMX1]
File Edit View Window Help Settings Wizard Optimize Plot
SMX Project Setup
Project Location
Project Name:
Project 1
Location:
c:\Project 1
Simulator
Model A:
OSA90
Model B:
OSA90
Simulator Files
Model A Filename:
Fine_model.ckt
Model B Filename:
Coarse_model.ckt
Cancel
Next >>
Ready

SMX - [Project1.smx]

SMX Responses & Specifications

Specification Setup

Start	Stop	Step	Response		Value	
0.5	1.5	0.1	ms11	<=	0.5	Add

Specifications

Start	Stop	Step	Response	Constraint	Value
0.500000	1.500000	0.100000	ms11	<=	0.500000

Delete

Mapping Parameters

- (•) Designable Parameters
- ( ) Space
- ( ) Space and Frequency (decoupled)
- ( ) Space and Frequency (coupled)

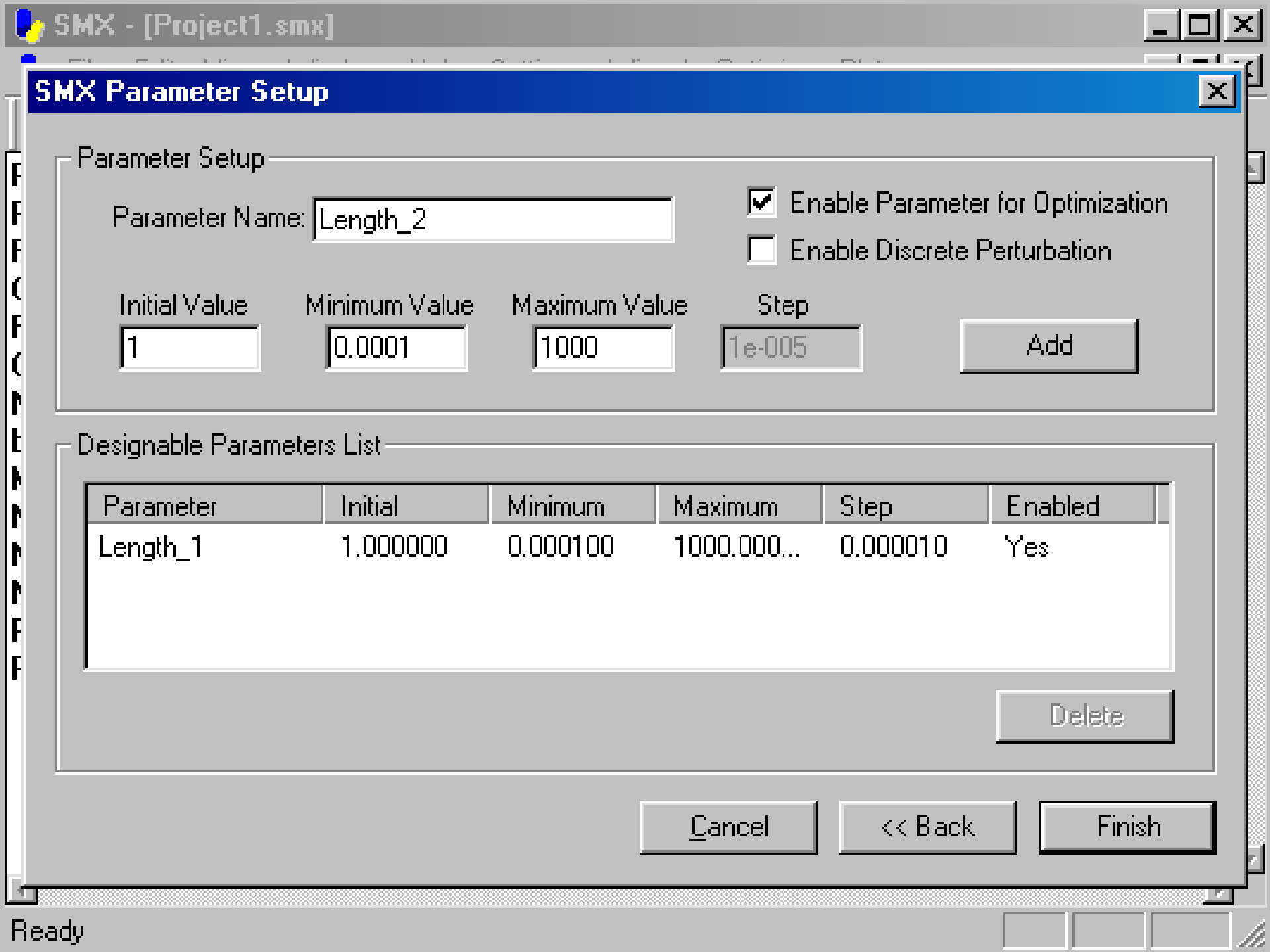
Simulation Setup

Number of Iterations: 5

Number of Ports: 1

Cancel | << Back | Next >>

Ready

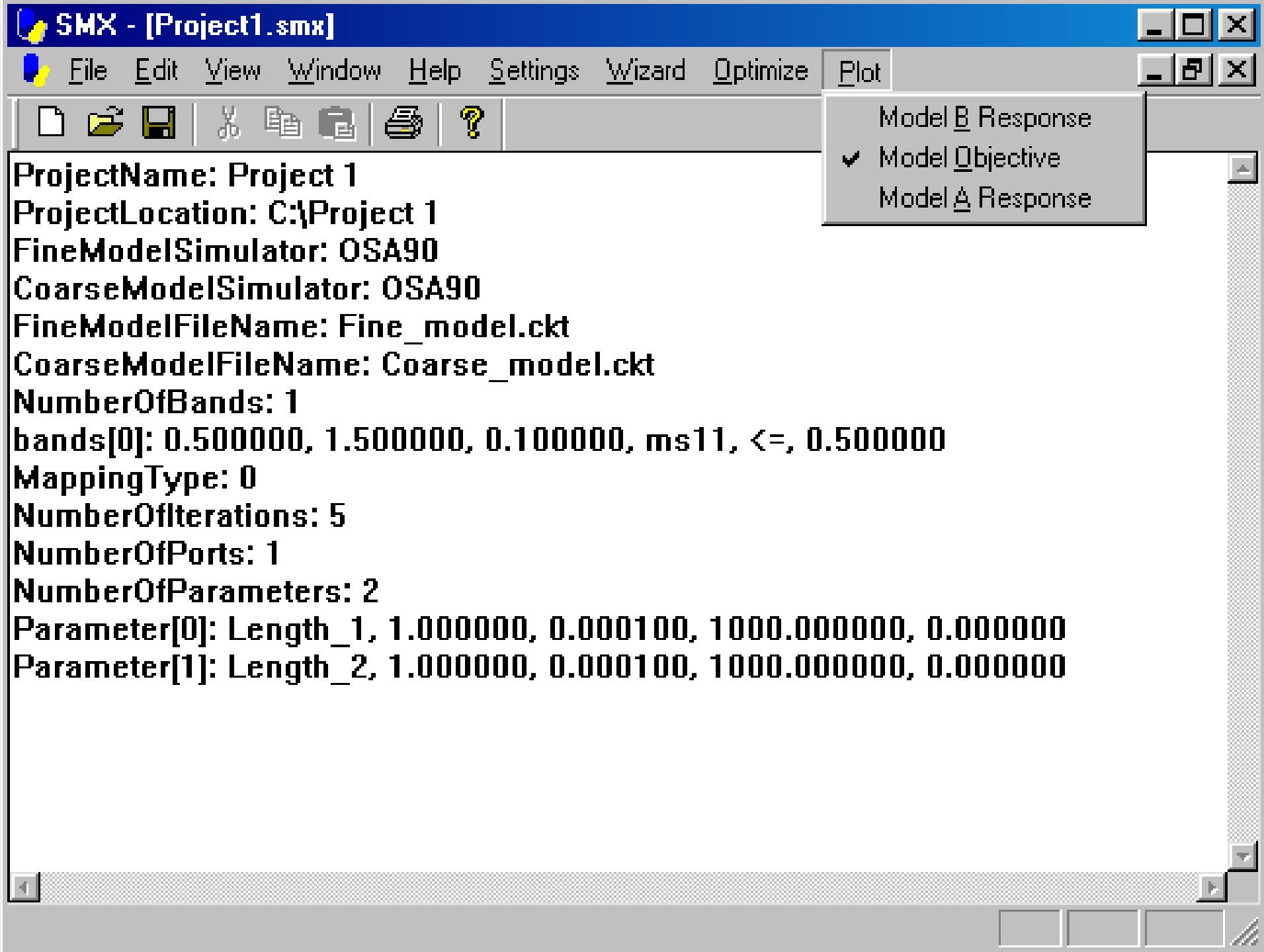

SMX - [Project1.smx]
SMX Parameter Setup
Parameter Setup
Parameter Name: Length_2
Enable Parameter for Optimization
Enable Discrete Perturbation
Initial Value
Minimum Value
Maximum Value
Step
1
0.0001
1000
1e-005
Add
Designable Parameters List
Parameter
Initial
Minimum
Maximum
Step
Enabled
Length_1
1.000000
0.000100
1000.000...
0.000010
Yes
Delete
Cancel
<< Back
Finish
Ready

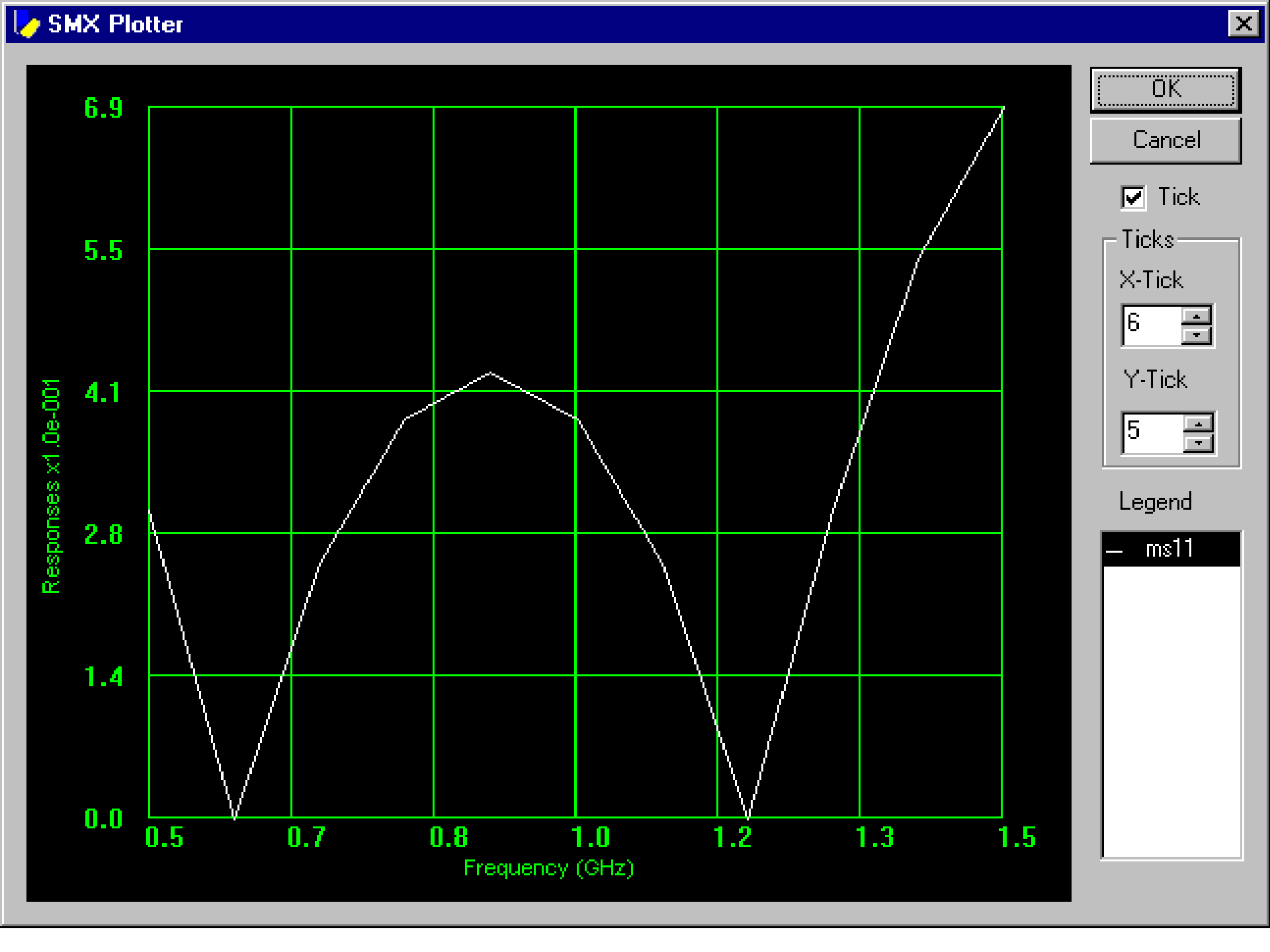
SMX - [Project1.smx]

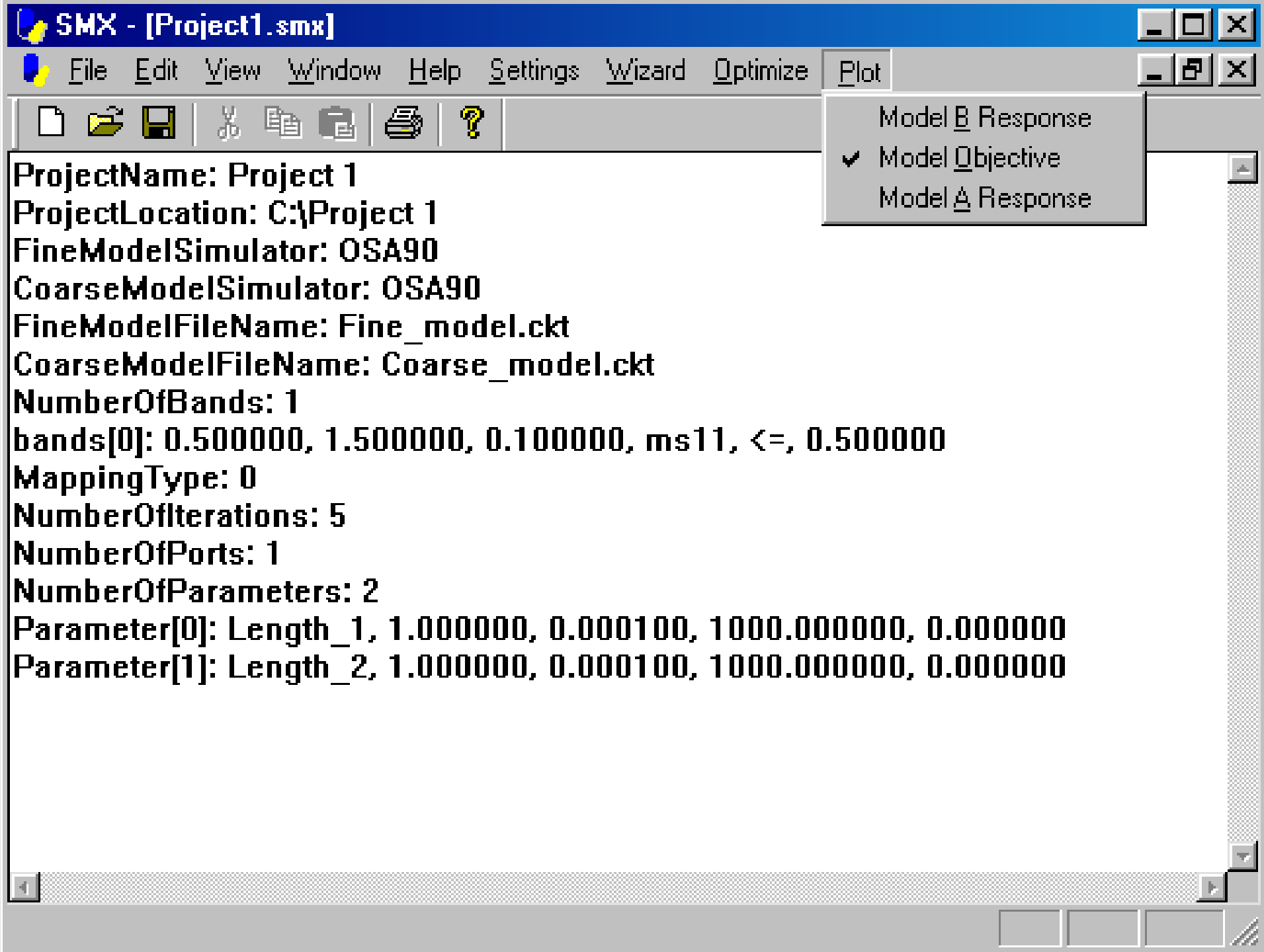
File Edit View Window Help Settings Wizard Optimize Plot

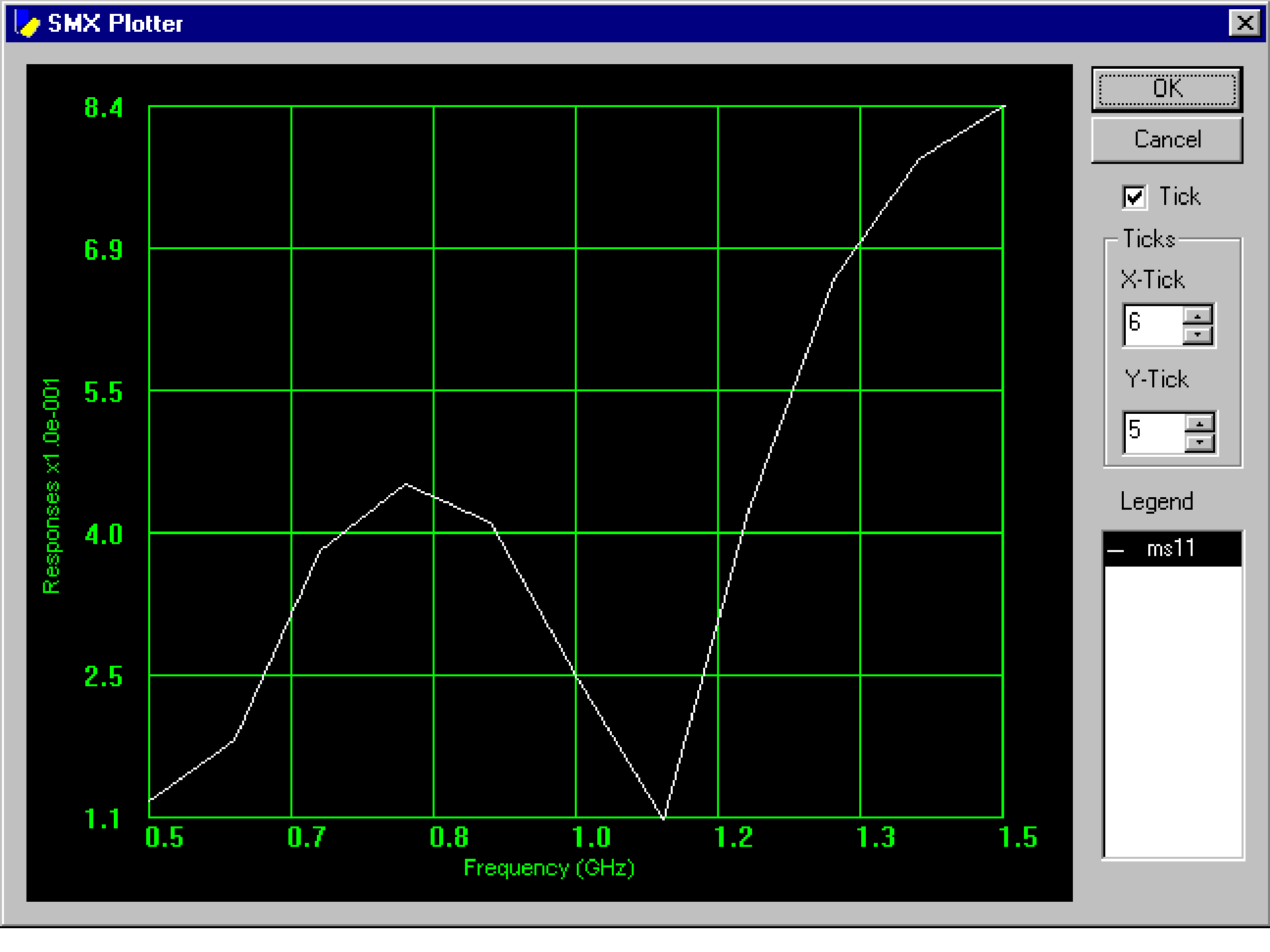
ProjectName: Project 1
ProjectLocation: Z:\jose\C++\SMX_PROJ
FineModelSimulator: OSA90
CoarseModelSimulator: OSA90
FineModelFileName: Fine_model.ckt
CoarseModelFileName: Coarse_model.ckt
NumberOfBands: 1
bands[0]: 0.500000, 1.500000, 0.100000, ms11, <=, 0.500000
MappingType: 0
NumberOfIterations: 5
NumberOfPorts: 1
NumberOfParameters: 2
Parameter[0]: Length_1, 1.000000, 0.000100, 1000.000000, 0.000000
Parameter[1]: Length_2, 1.000000, 0.000100, 1000.000000, 0.000000

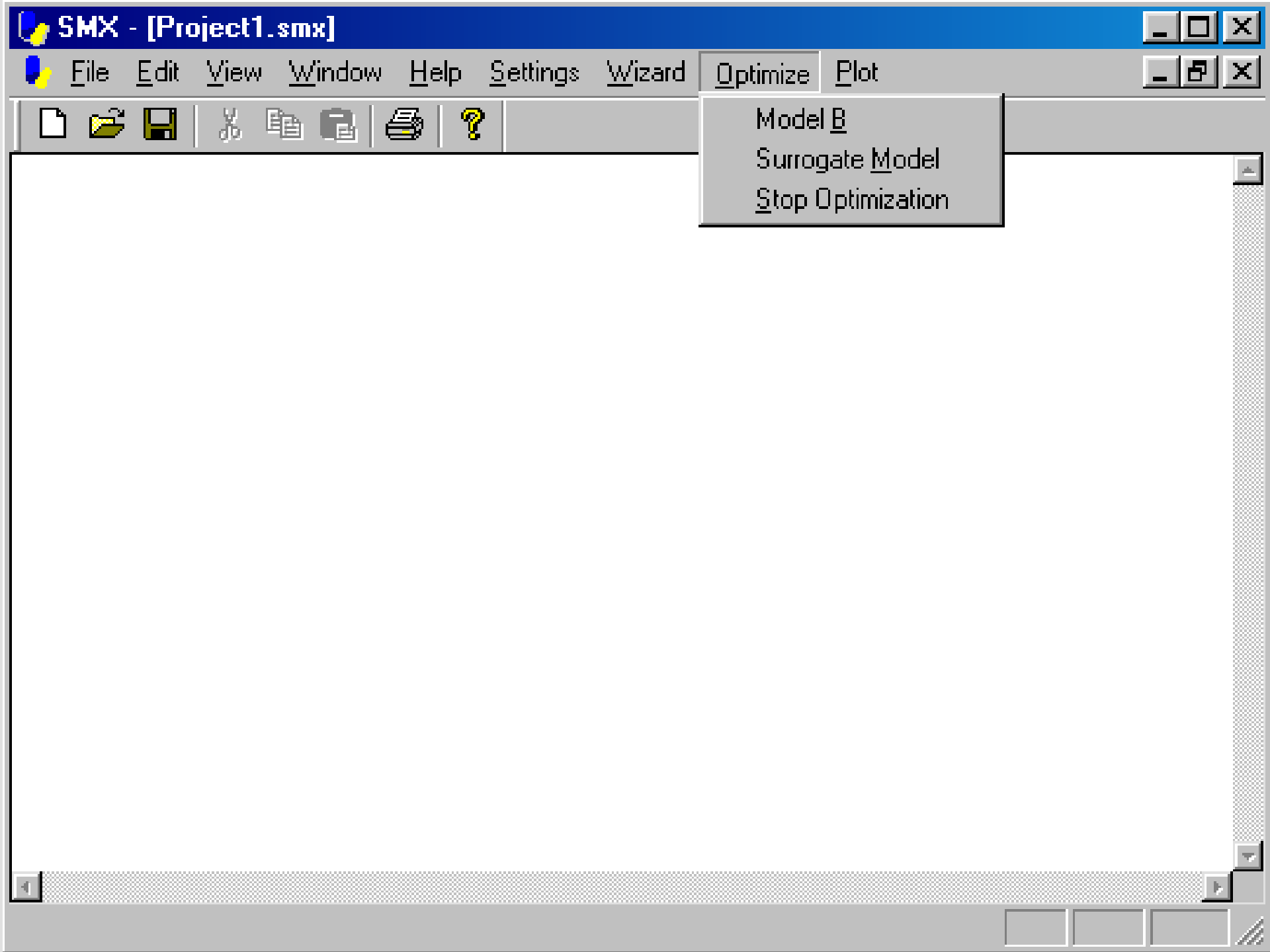
Ready

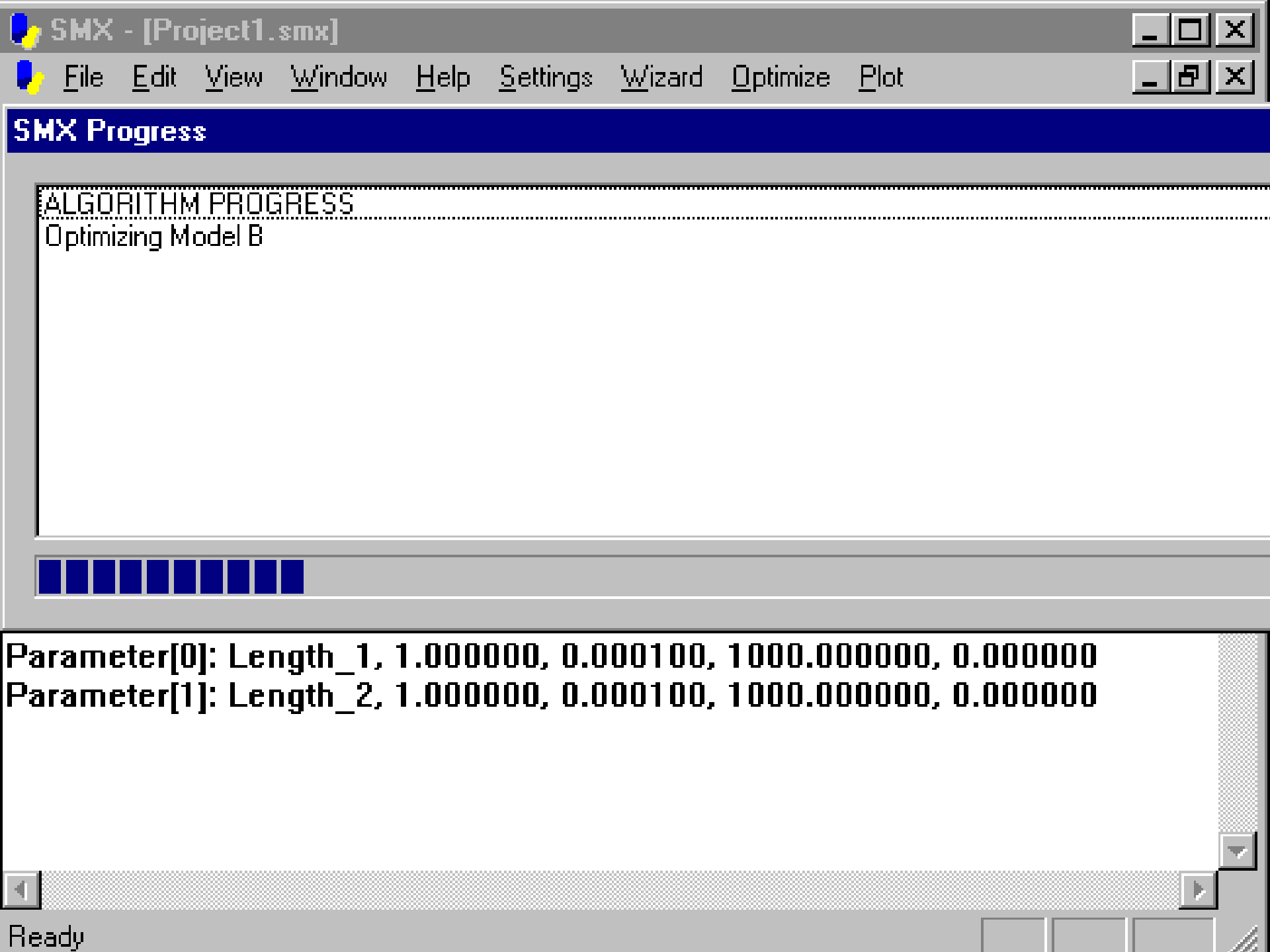

SMX - [Project1.smx]
File Edit View Window Help Settings Wizard Optimize Plot
Model B Response
Model Objective
Model A Response
ProjectName: Project 1
ProjectLocation: C:\Project 1
FineModelSimulator: OSA90
CoarseModelSimulator: OSA90
FineModelFileName: Fine_model.ckt
CoarseModelFileName: Coarse_model.ckt
NumberOfBands: 1
bands[0]: 0.500000, 1.500000, 0.100000, ms11, <=, 0.500000
MappingType: 0
NumberOfIterations: 5
NumberOfPorts: 1
NumberOfParameters: 2
Parameter[0]: Length_1, 1.000000, 0.000100, 1000.000000, 0.000000
Parameter[1]: Length_2, 1.000000, 0.000100, 1000.000000, 0.000000


SMX Plotter
6.9
5.5
4.1
2.8
1.4
0.0
Responses x1.0e-001
0.5
0.7
0.8
1.0
1.2
1.3
1.5
Frequency (GHz)
OK
Cancel
Tick
Ticks
X-Tick
6
Y-Tick
5
Legend
ms11


SMX - [Project1.smx]
File Edit View Window Help Settings Wizard Optimize Plot
Model B Response
Model Objective
Model A Response
ProjectName: Project 1
ProjectLocation: C:\Project 1
FineModelSimulator: OSA90
CoarseModelSimulator: OSA90
FineModelFileName: Fine_model.ckt
CoarseModelFileName: Coarse_model.ckt
NumberOfBands: 1
bands[0]: 0.500000, 1.500000, 0.100000, ms11, <=, 0.500000
MappingType: 0
NumberOfIterations: 5
NumberOfPorts: 1
NumberOfParameters: 2
Parameter[0]: Length_1, 1.000000, 0.000100, 1000.000000, 0.000000
Parameter[1]: Length_2, 1.000000, 0.000100, 1000.000000, 0.000000


SMX Plotter
8.4
6.9
5.5
4.0
2.5
1.1
Responses x1.0e-001
0.5
0.7
0.8
1.0
1.2
1.3
1.5
Frequency (GHz)
OK
Cancel
Tick
Ticks
X-Tick
6
Y-Tick
5
Legend
ms11


SMX - [Project1.smx]
File
Edit
View
Window
Help
Settings
Wizard
Optimize
Plot
Model B
Surrogate Model
Stop Optimization


SMX - [Project1.smx]
File Edit View Window Help Settings Wizard Optimize Plot
SMX Progress
ALGORITHM PROGRESS
Optimizing Model B
Parameter[0]: Length_1, 1.000000, 0.000100, 1000.000000, 0.000000
Parameter[1]: Length_2, 1.000000, 0.000100, 1000.000000, 0.000000
Ready

SMX - [Project1.smx]

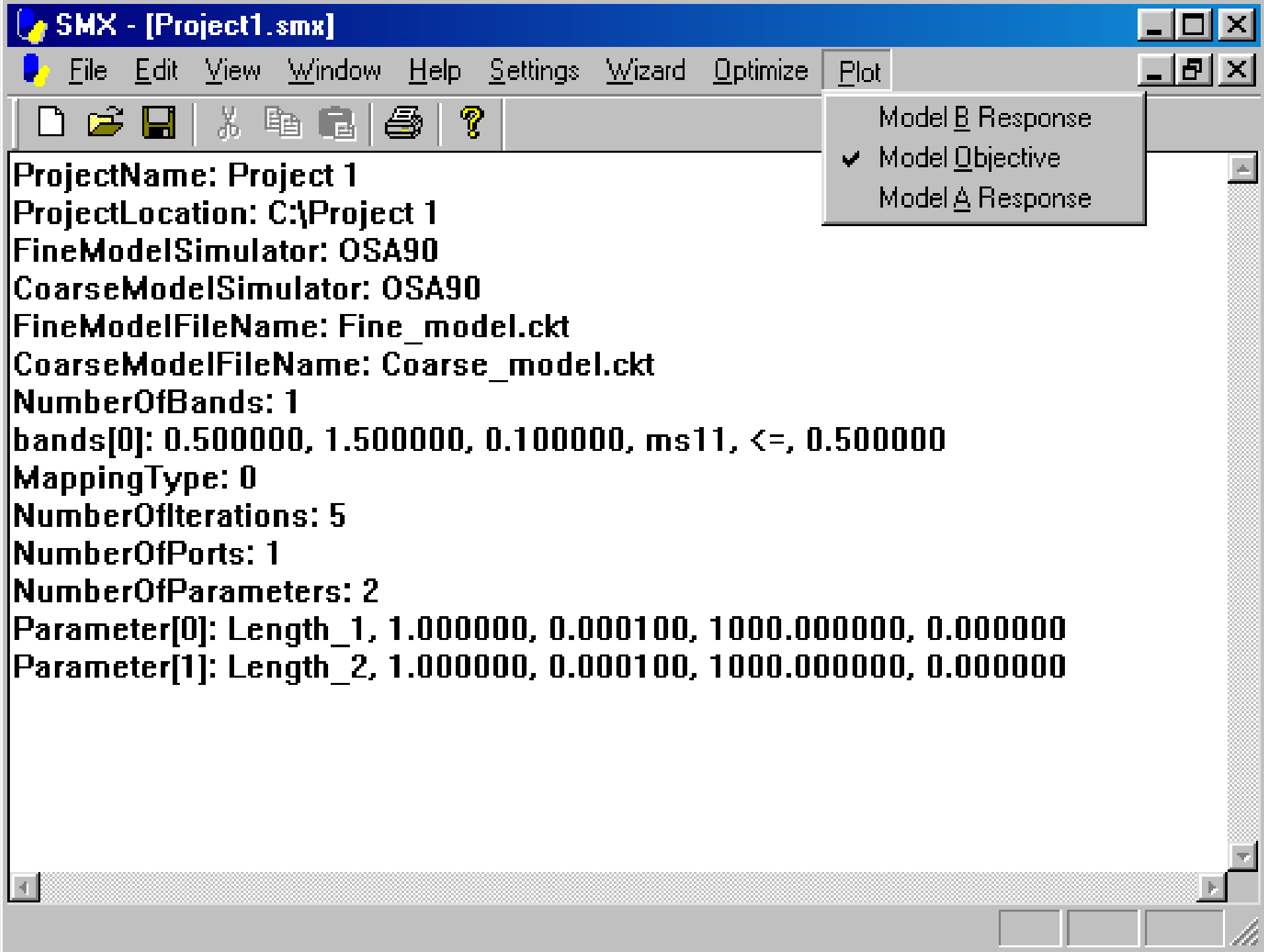
File Edit View Window Help Settings Wizard Optimize Plot

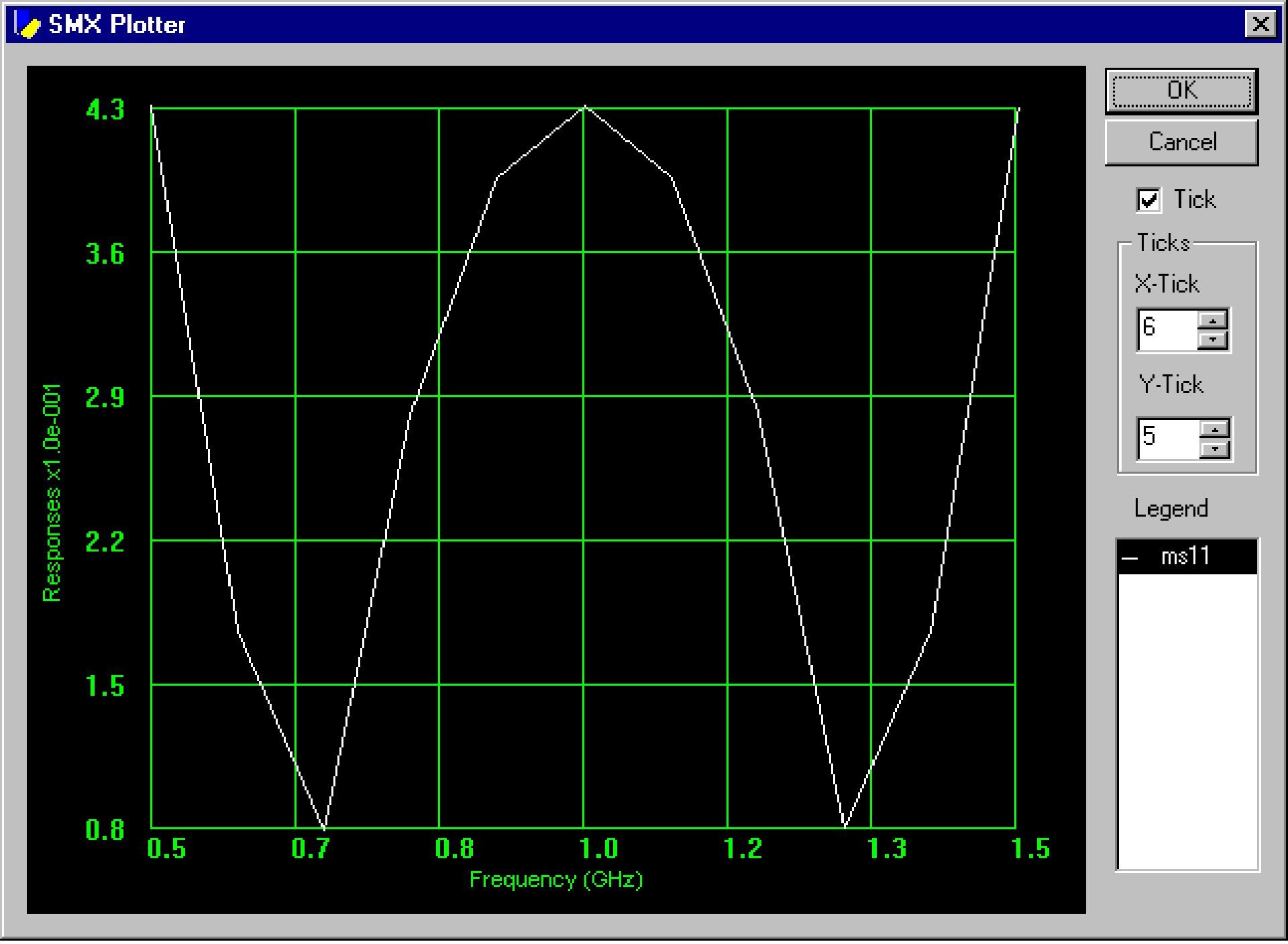
SMX Progress

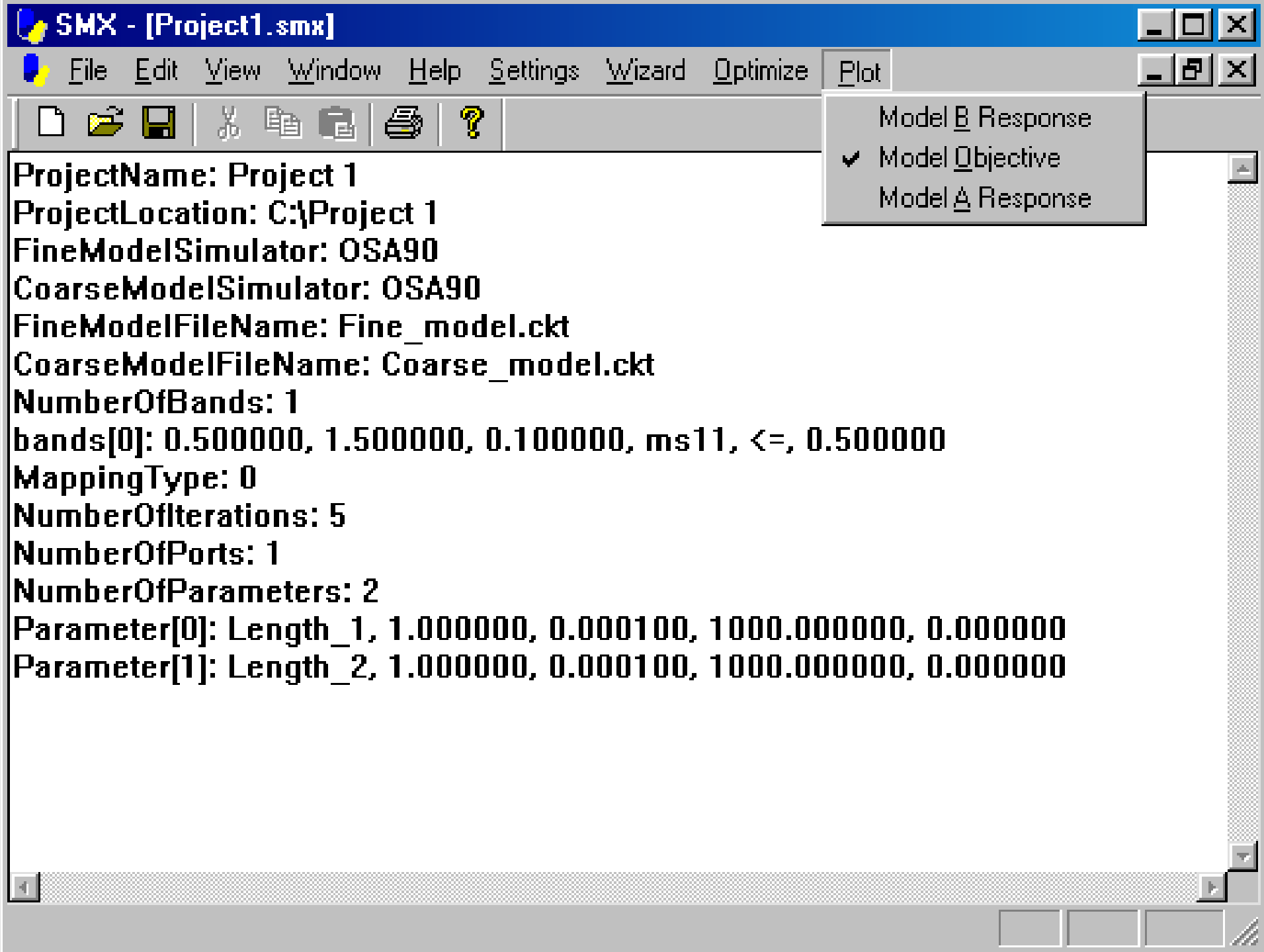
ALGORITHM PROGRESS
Optimizing Model B
Optimal Model B Design
Xos=[0.892725721
0.907274037]

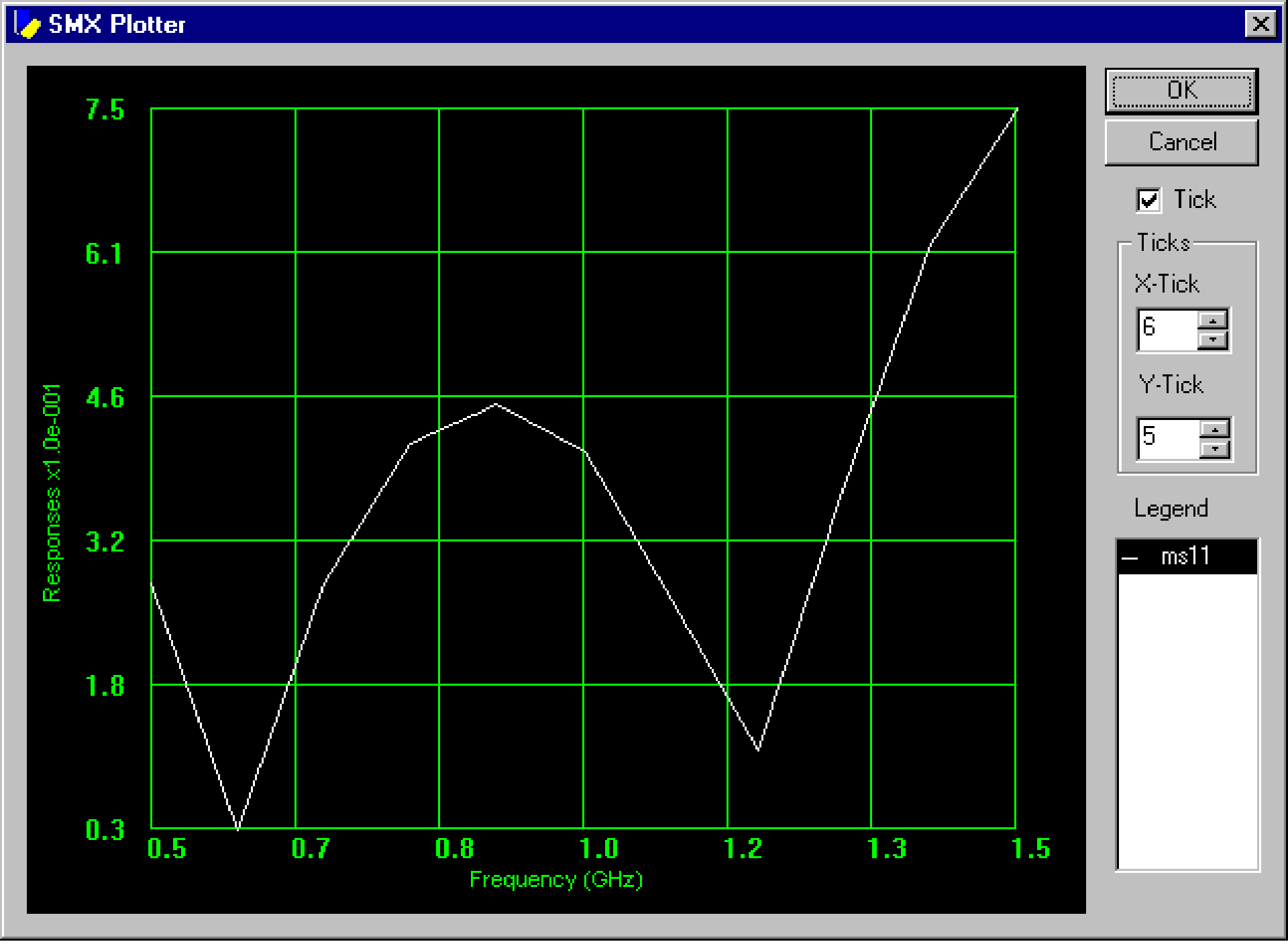
Parameter[0]: Length_1, 1.000000, 0.000100, 1000.000000, 0.000000
Parameter[1]: Length_2, 1.000000, 0.000100, 1000.000000, 0.000000

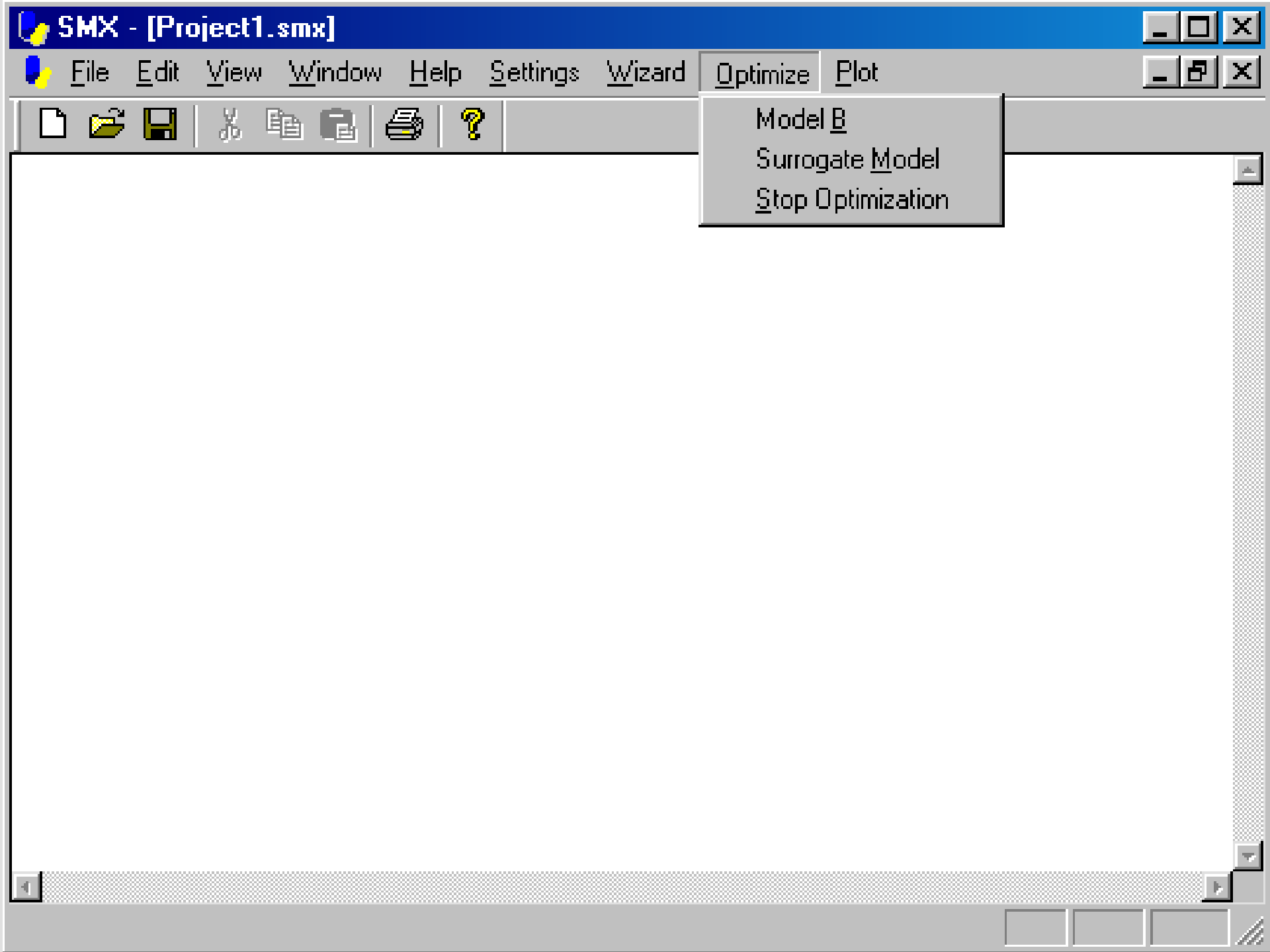
Ready

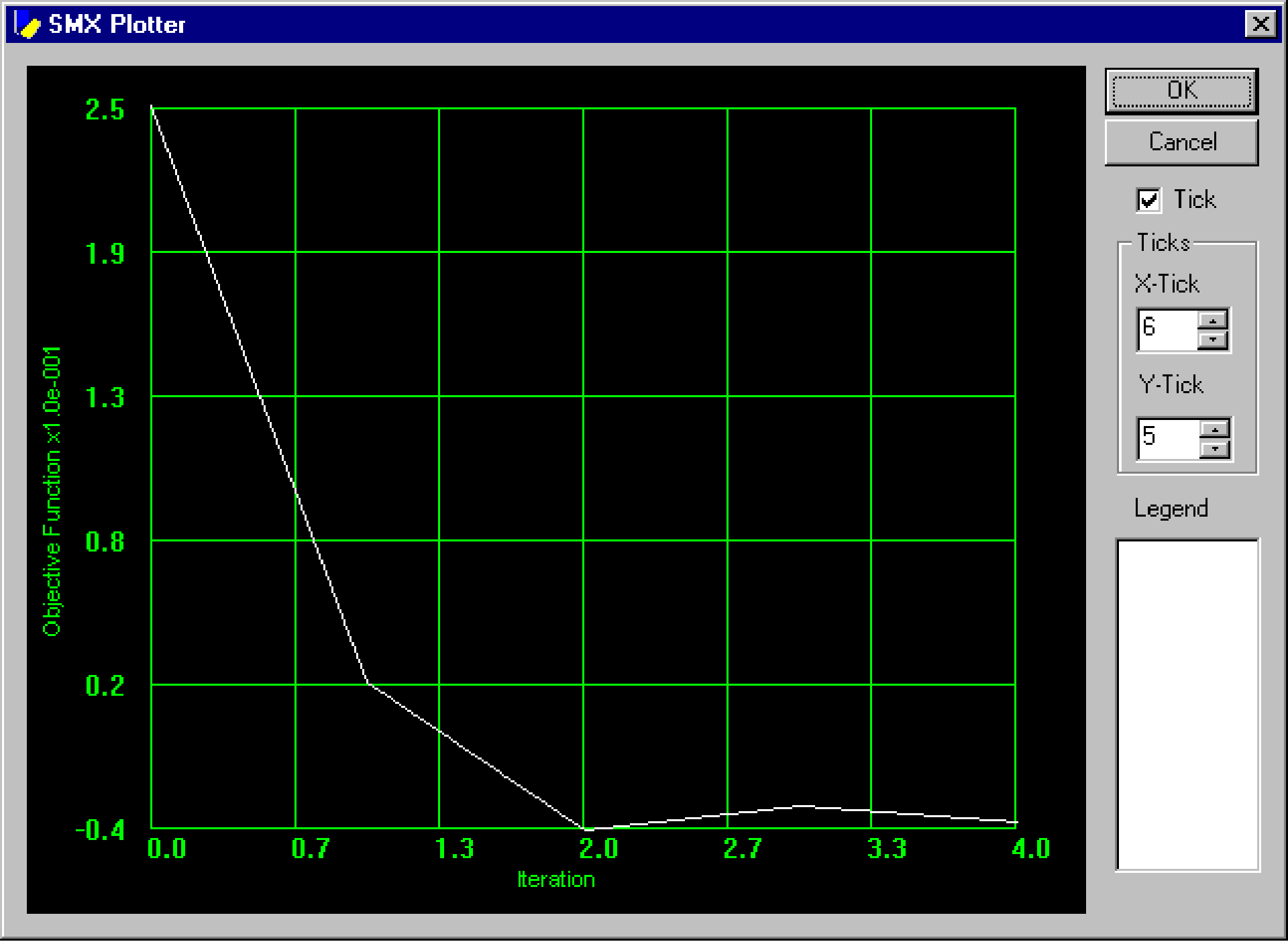

SMX - [Project1.smx]
File Edit View Window Help Settings Wizard Optimize Plot
Model B Response
Model Objective
Model A Response
ProjectName: Project 1
ProjectLocation: C:\Project 1
FineModelSimulator: OSA90
CoarseModelSimulator: OSA90
FineModelFileName: Fine_model.ckt
CoarseModelFileName: Coarse_model.ckt
NumberOfBands: 1
bands[0]: 0.500000, 1.500000, 0.100000, ms11, <=, 0.500000
MappingType: 0
NumberOfIterations: 5
NumberOfPorts: 1
NumberOfParameters: 2
Parameter[0]: Length_1, 1.000000, 0.000100, 1000.000000, 0.000000
Parameter[1]: Length_2, 1.000000, 0.000100, 1000.000000, 0.000000

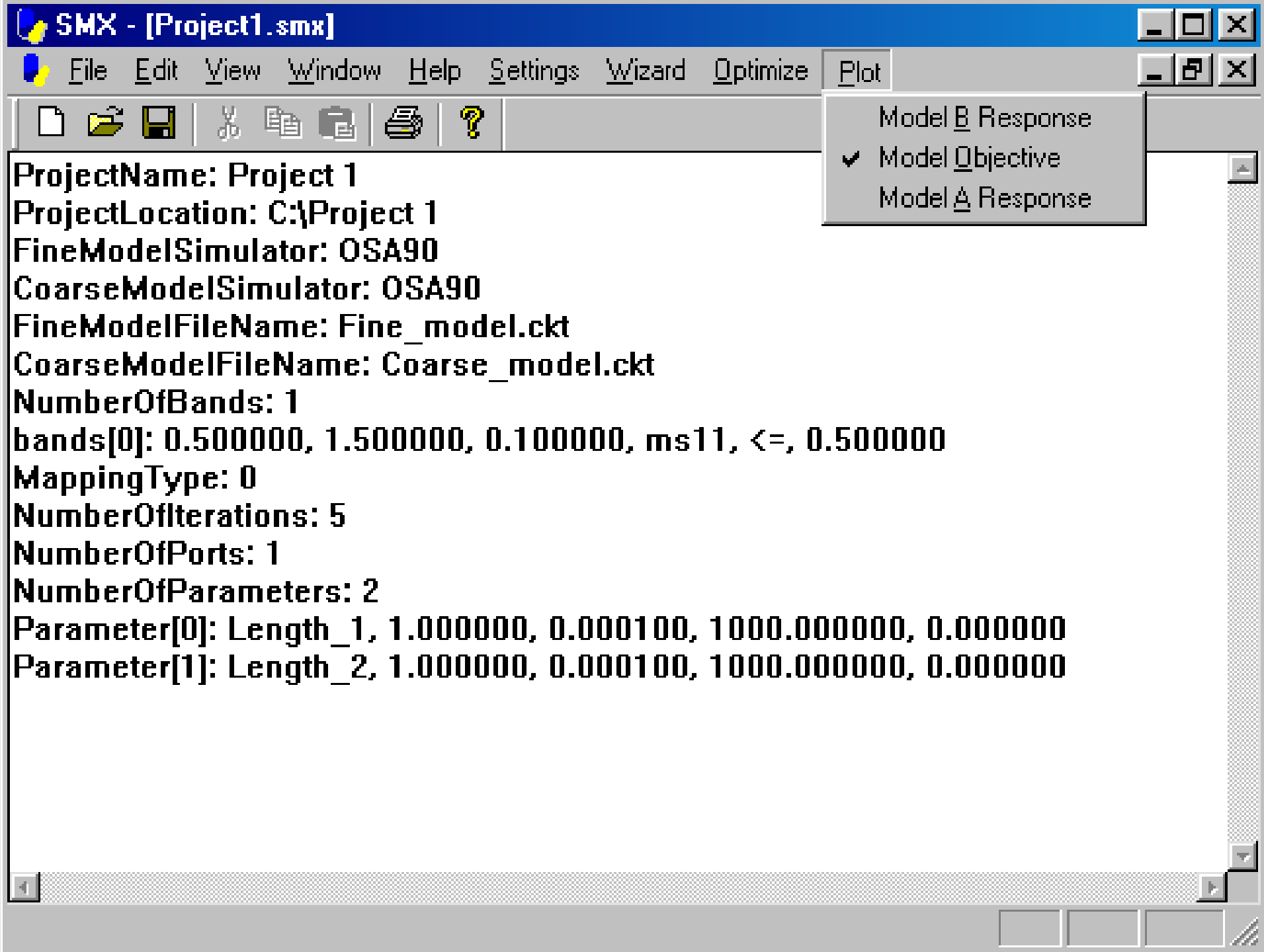

SMX Plotter
4.3
3.6
2.9
2.2
1.5
0.8
Responses x1.0e-001
0.5
0.7
0.8
1.0
1.2
1.3
1.5
Frequency (GHz)
OK
Cancel
Tick
Ticks
X-Tick
6
Y-Tick
5
Legend
ms11

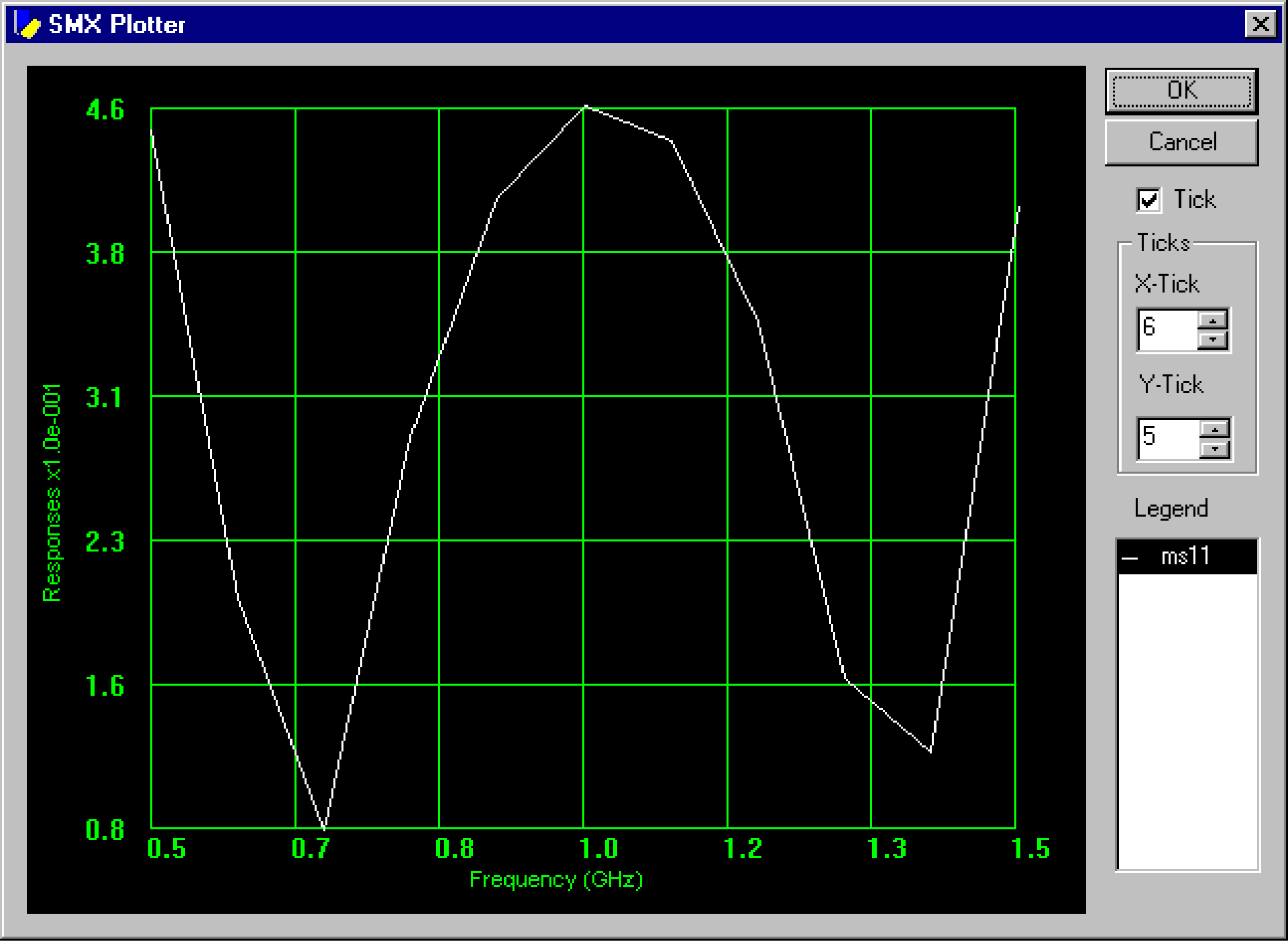

SMX - [Project1.smx]
File Edit View Window Help Settings Wizard Optimize Plot
Model B Response
Model Objective
Model A Response
ProjectName: Project 1
ProjectLocation: C:\Project 1
FineModelSimulator: OSA90
CoarseModelSimulator: OSA90
FineModelFileName: Fine_model.ckt
CoarseModelFileName: Coarse_model.ckt
NumberOfBands: 1
bands[0]: 0.500000, 1.500000, 0.100000, ms11, <=, 0.500000
MappingType: 0
NumberOfIterations: 5
NumberOfPorts: 1
NumberOfParameters: 2
Parameter[0]: Length_1, 1.000000, 0.000100, 1000.000000, 0.000000
Parameter[1]: Length_2, 1.000000, 0.000100, 1000.000000, 0.000000

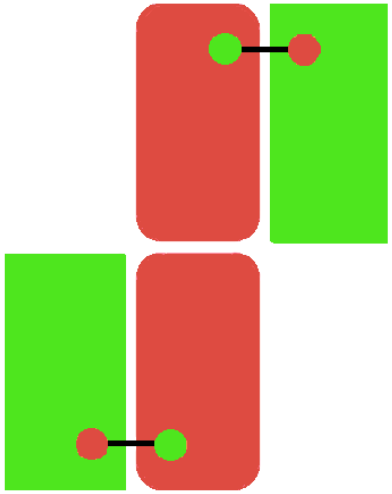

SMX Plotter
7.5
6.1
4.6
3.2
1.8
0.3
Responses x1.0e-001
0.5
0.7
0.8
1.0
1.2
1.3
1.5
Frequency (GHz)
OK
Cancel
Tick
Ticks
X-Tick
6
Y-Tick
5
Legend
ms11


SMX - [Project1.smx]
File
Edit
View
Window
Help
Settings
Wizard
Optimize
Plot
Model B
Surrogate Model
Stop Optimization


SMX Plotter
2.5
1.9
1.3
0.8
0.2
-0.4
Objective Function x1.0e-001
0.0
0.7
1.3
2.0
2.7
3.3
4.0
Iteration
OK
Cancel
Tick
Ticks
X-Tick
6
Y-Tick
5
Legend


SMX - [Project1.smx]
File Edit View Window Help Settings Wizard Optimize Plot
Model B Response
Model Objective
Model A Response
ProjectName: Project 1
ProjectLocation: C:\Project 1
FineModelSimulator: OSA90
CoarseModelSimulator: OSA90
FineModelFileName: Fine_model.ckt
CoarseModelFileName: Coarse_model.ckt
NumberOfBands: 1
bands[0]: 0.500000, 1.500000, 0.100000, ms11, <=, 0.500000
MappingType: 0
NumberOfIterations: 5
NumberOfPorts: 1
NumberOfParameters: 2
Parameter[0]: Length_1, 1.000000, 0.000100, 1000.000000, 0.000000
Parameter[1]: Length_2, 1.000000, 0.000100, 1000.000000, 0.000000


SMX Plotter
4.6
3.8
3.1
2.3
1.6
0.8
Responses x1.0e-001
0.5
0.7
0.8
1.0
1.2
1.3
1.5
Frequency (GHz)
OK
Cancel
Tick
Ticks
X-Tick
6
Y-Tick
5
Legend
ms11



First International Workshop on

SURROGATE MODELLING AND SPACE MAPPING FOR ENGINEERING OPTIMIZATION

Technical University of Denmark
Lyngby, Denmark
November 16-18, 2000