SIP/2008-WP16
Business case

Special Implementation Project

Introduction to Hands-on exercise for the development of business case

(Presented by Chaouki Mustapha
Economist, ICAO)

Workshop on the development of business case for the implementation of CNS/ATM systems
(Lima, 10 – 14 November 2008)

Welcome To

The Business case model

Introduction

Steps

- Step 1 : Input reference data
- Step 2 : Input Conventional Technology Equipment data
- Step 3 : Create implementation scenario
  - Step 3/1 : Select Homogeneous **ATM** area
  - Step 3/2 : Select Conventional Technology Equipment types
  - Step 3/3 : Define Scenario parameters
  - Step 3/4 : Make decisions on conventional technology equipment
  - Step 3/5 : Make decisions on new technology equipment
  - Step 3/6 : Add fleet and flight hours forecasts
  - Step 3/7 : Make decisions on aircraft equippage and efficiency rates
  - Step 3/8 : Add Additional costs
  - Step 3/9 : Give the scenario a name

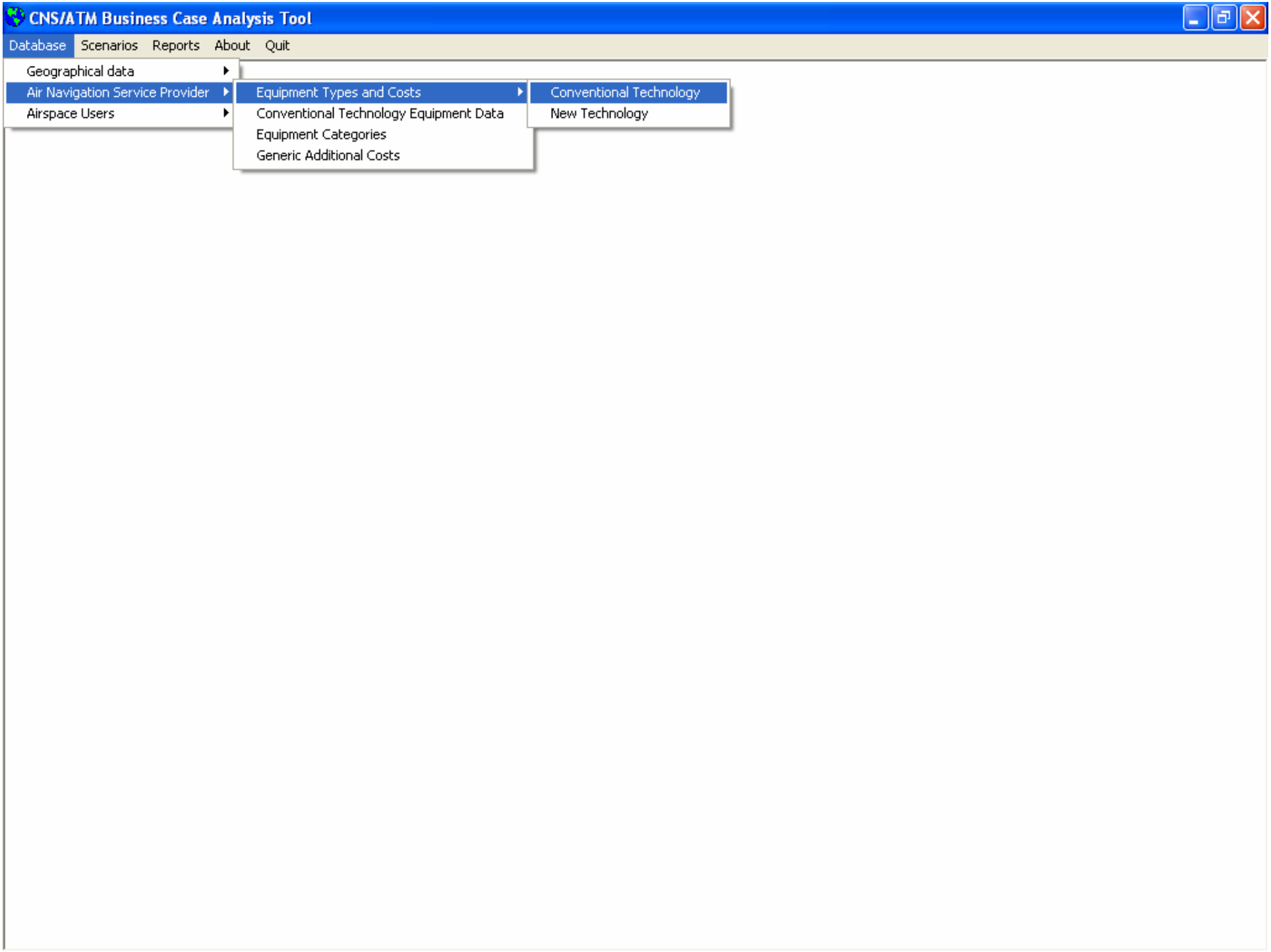
Steps (cont'd)

- Step 4 : Scenario analysis
  - Step 4/1 : Select Scenario
  - Output results/1 : Analysis Output Values
  - Output results/2 : Costs by State
  - Output results/3 : Service provider costs by equipment category
  - Output results/4 : Service provider cost details
  - Output results/5 : Conventional technology costs by location and by cost category
  - Output results/6 : New technology costs by location and by cost category
  - Output results/7 : Conventional technology cost chart
  - Output results/8 : New technology cost chart

Steps (cont'd)

- Output results/9 : Service provider recovery chart
- Output results/10 : Avionics cost details
- Output results/11 : Avionics costs by cost category
- Output results/12 : Avionics costs by aircraft type and by avionic type
- Output results/13 : Airspace users costs chart
- Output results/14 : Airspace users benefits details
- Output results/15 : Airspace users benefits chart
- Output results/16 : Airspace users cost recovery chart

Step 1 : Input reference data


CNS/ATM Business Case Analysis Tool
Database
Scenarios
Reports
About
Quit
Geographical data
Air Navigation Service Provider
Airspace Users
Equipment Types and Costs
Conventional Technology Equipment Data
Equipment Categories
Generic Additional Costs
Conventional Technology
New Technology

CNS/ATM Business Case Analysis Tool - [Conventional Technology Equipment Types and Costs]

Database Scenarios Reports About Quit

Equipment Costs

Total number: 0

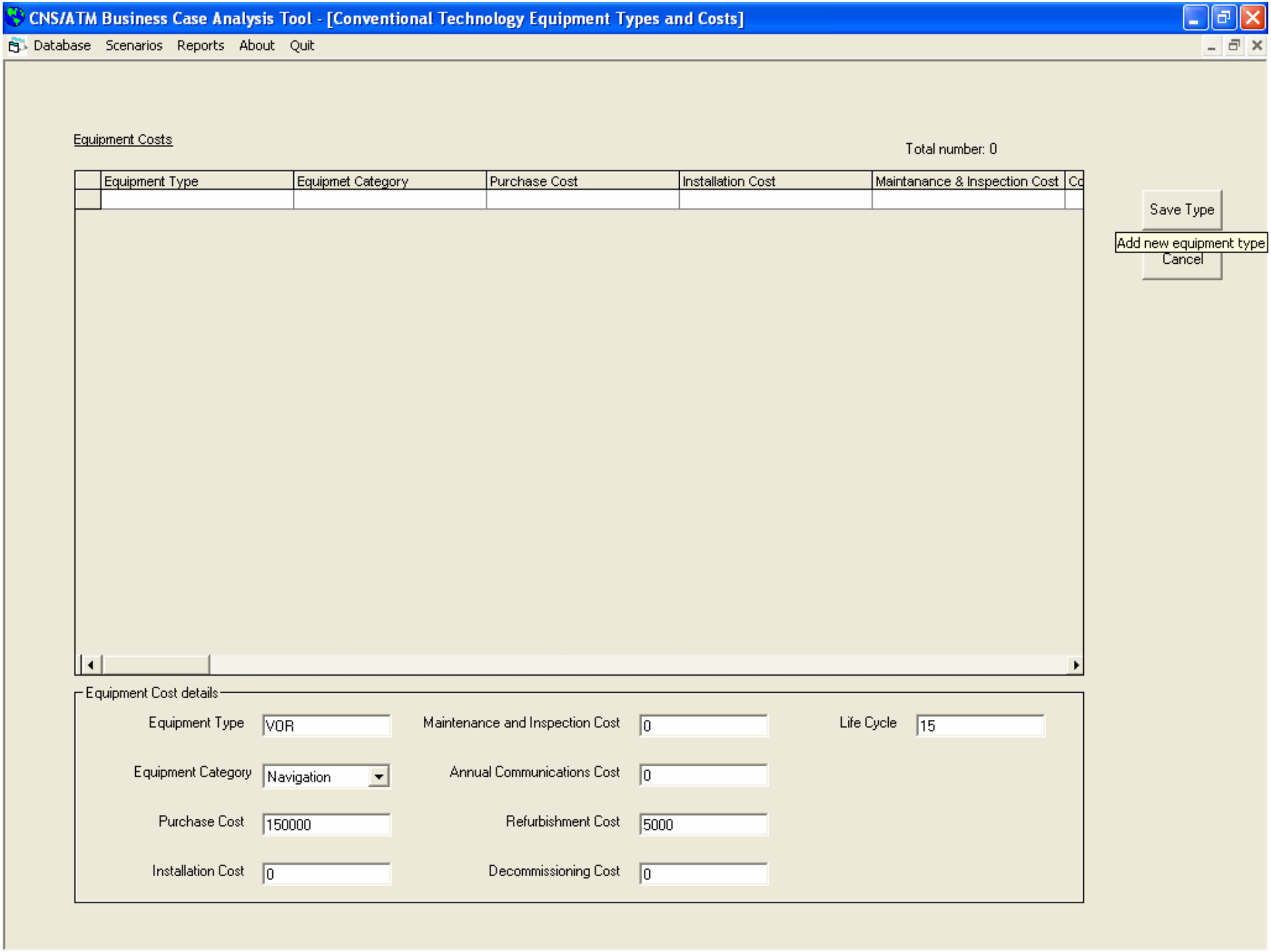
Equipment Type	Equipmet Category	Purchase Cost	Installation Cost	Maintanance & Inspection Cost	Co

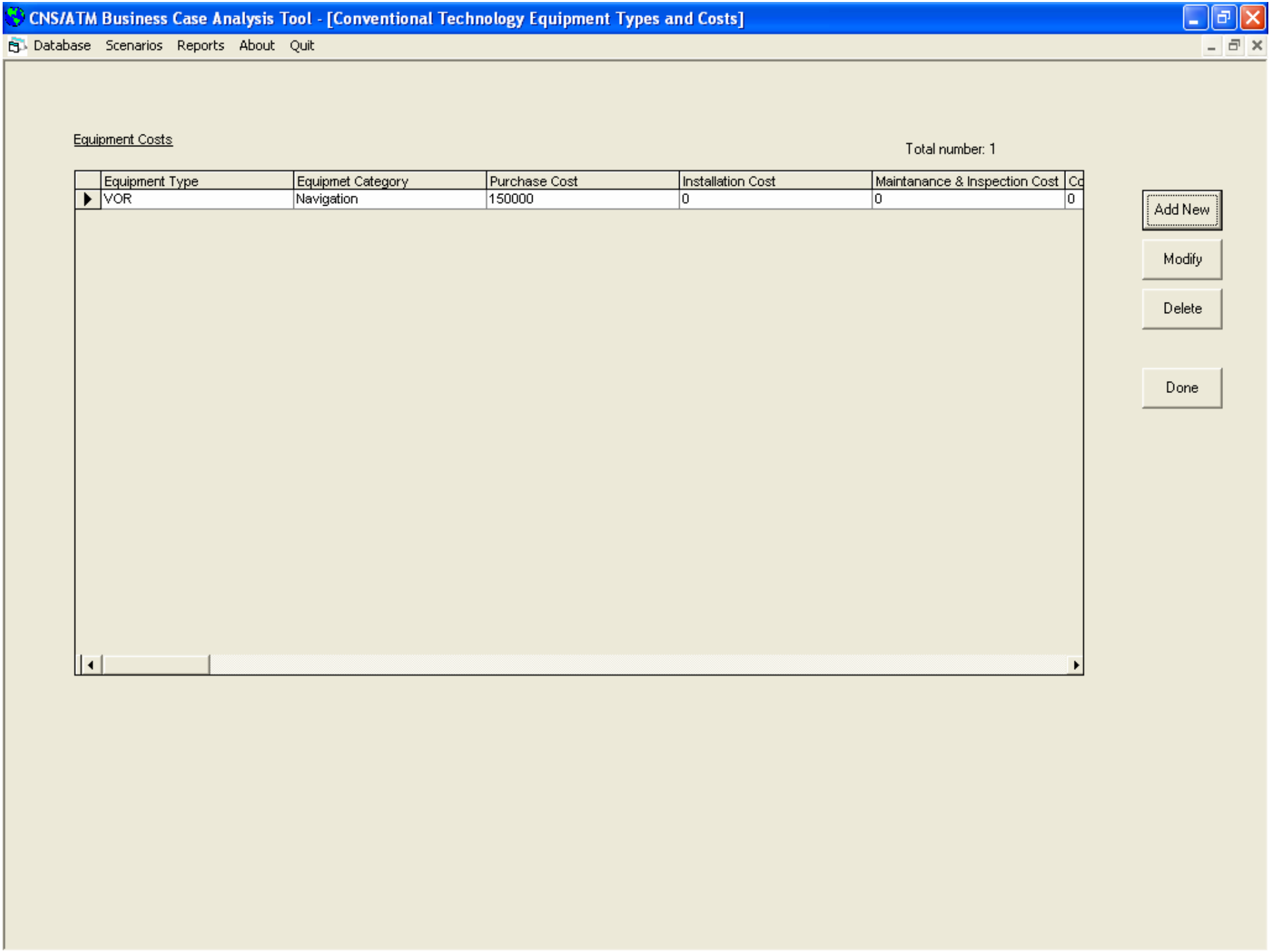
Add New

Modify

Delete

Done


CNS/ATM Business Case Analysis Tool - [Conventional Technology Equipment Types and Costs]
Database
Scenarios
Reports
About
Quit
Equipment Costs
Total number: 0
Equipment Type
Equipmet Category
Purchase Cost
Installation Cost
Maintanance & Inspection Cost
Cc
Save Type
Add new equipment type
Cancel
Equipment Cost details
Equipment Type
VOR
Maintenance and Inspection Cost
0
Life Cycle
15
Equipment Category
Navigation
Annual Communications Cost
0
Purchase Cost
150000
Refurbishment Cost
5000
Installation Cost
0
Decommissioning Cost
0


CNS/ATM Business Case Analysis Tool - [Conventional Technology Equipment Types and Costs]
Database
Scenarios
Reports
About
Quit
Equipment Costs
Total number: 1
Equipment Type
Equipmet Category
Purchase Cost
Installation Cost
Maintanance & Inspection Cost
Co
VOR
Navigation
150000
0
0
0
Add New
Modify
Delete
Done

CNS/ATM Business Case Analysis Tool - [Conventional Technology Equipment Types and Costs]

Database Scenarios Reports About Quit

Equipment Costs

Total number: 6

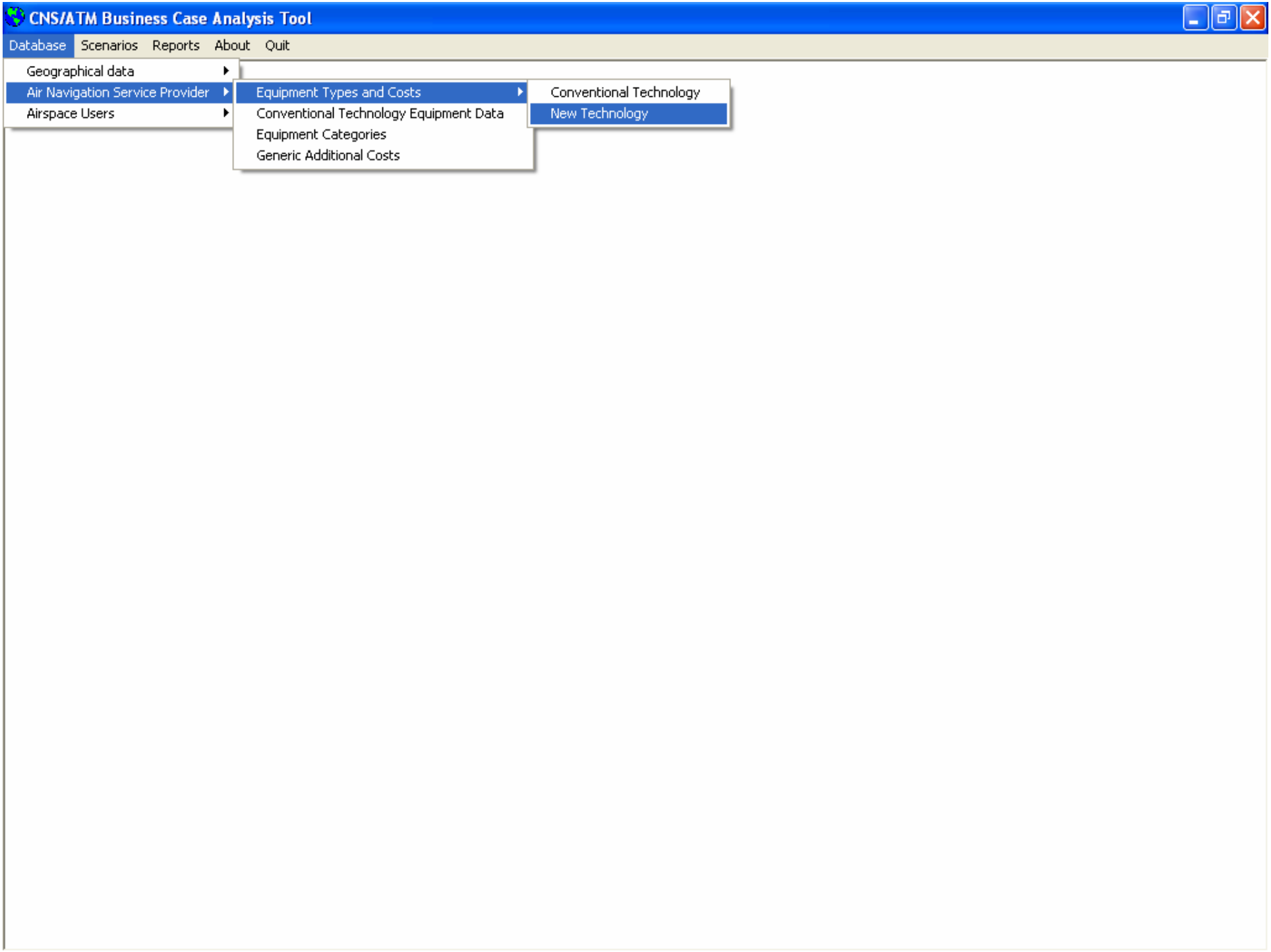
Equipment Type	Equipmet Category	Purchase Cost	Installation Cost	Maintanance & Inspection Cost	Co
VOR	Navigation	150000	0	0	0
VHF VOICE/DATA	Communication	620000	0	750	0
PSR	Surveillance	10000000	0	2000	0
MSSR	Surveillance	54000000	0	1000	0
ILS CAT II	Navigation	650000	0	75000	0
DVOR	Navigation	380000	0	0	0

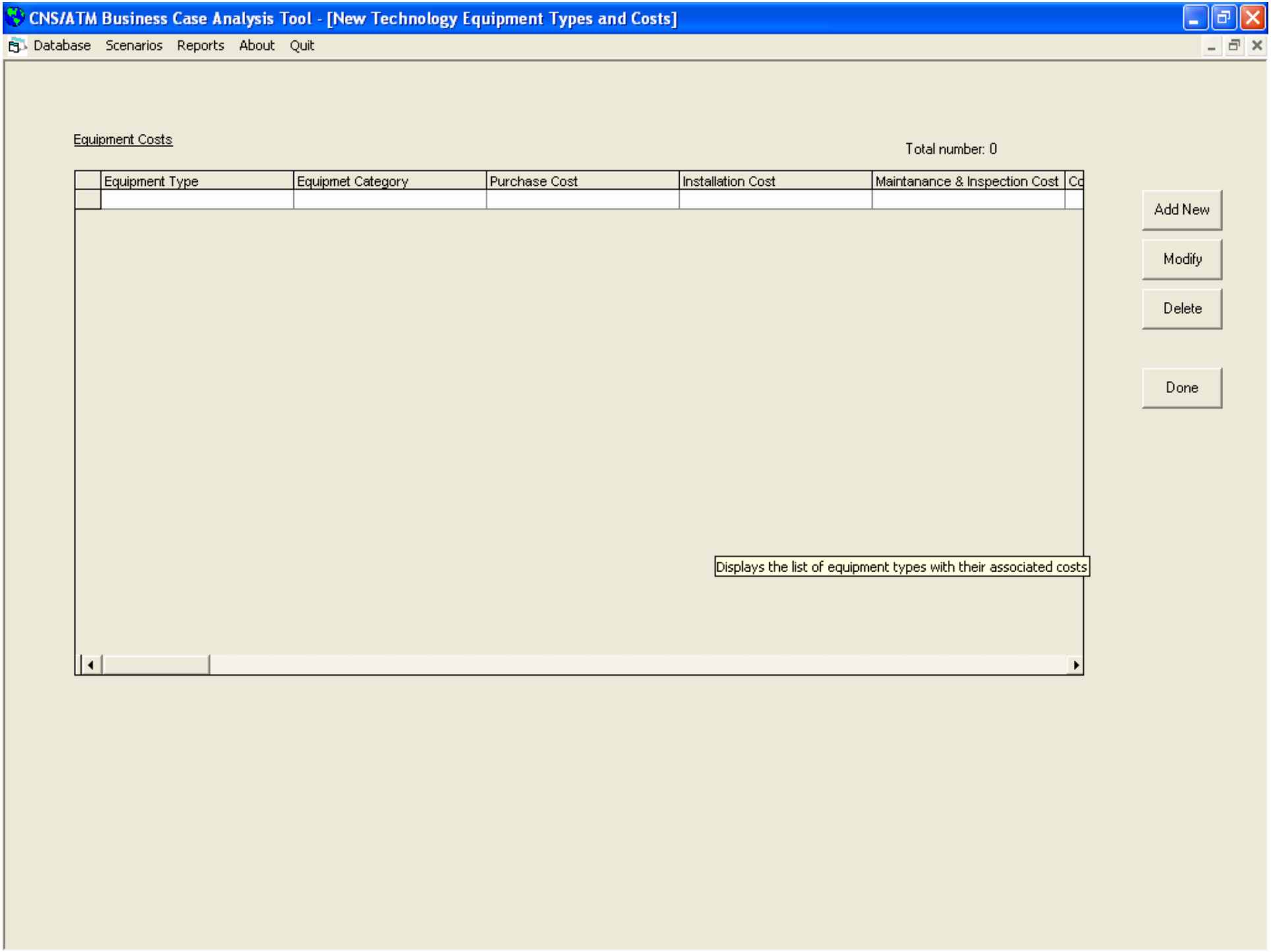
Add New

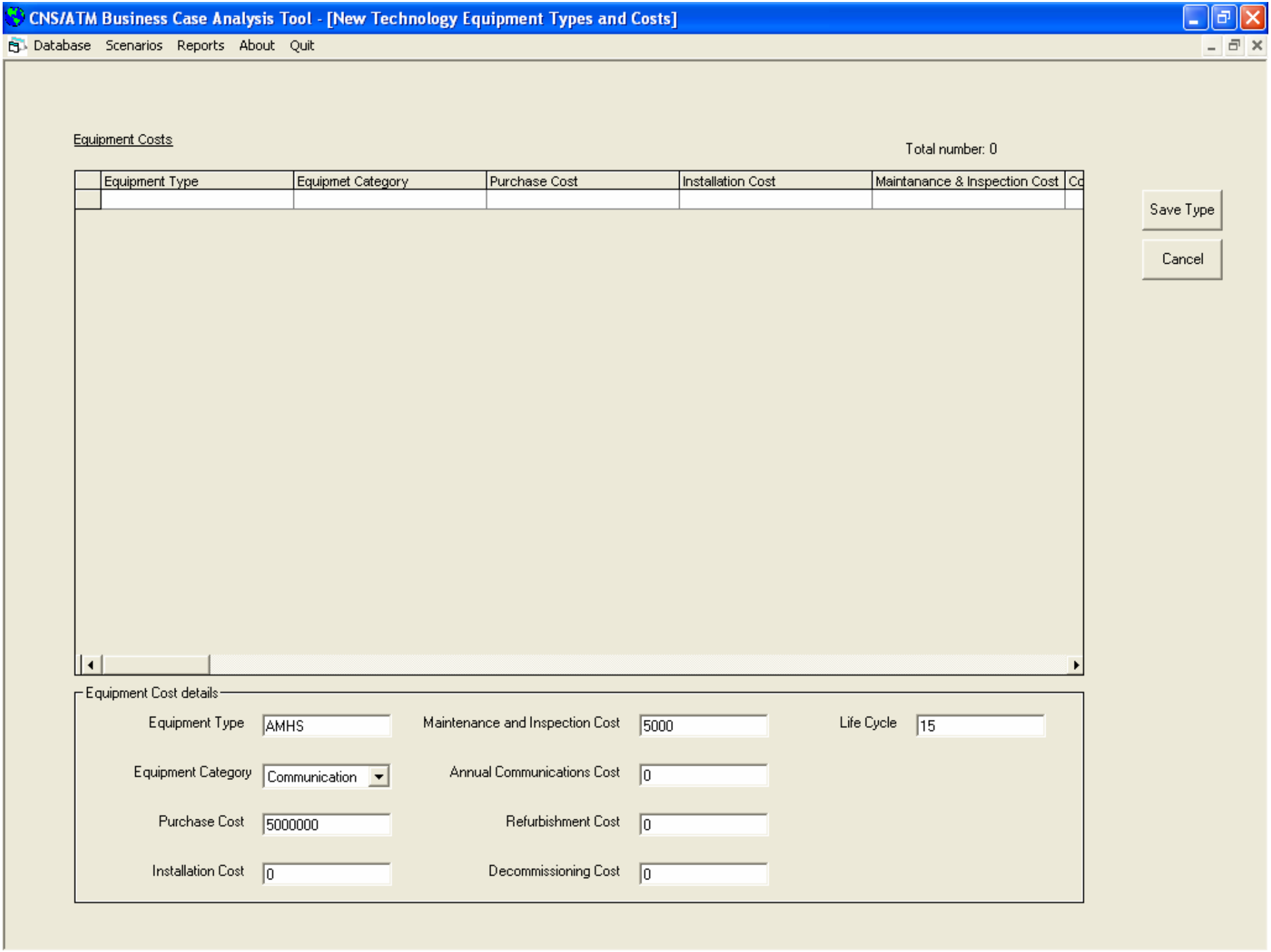
Modify

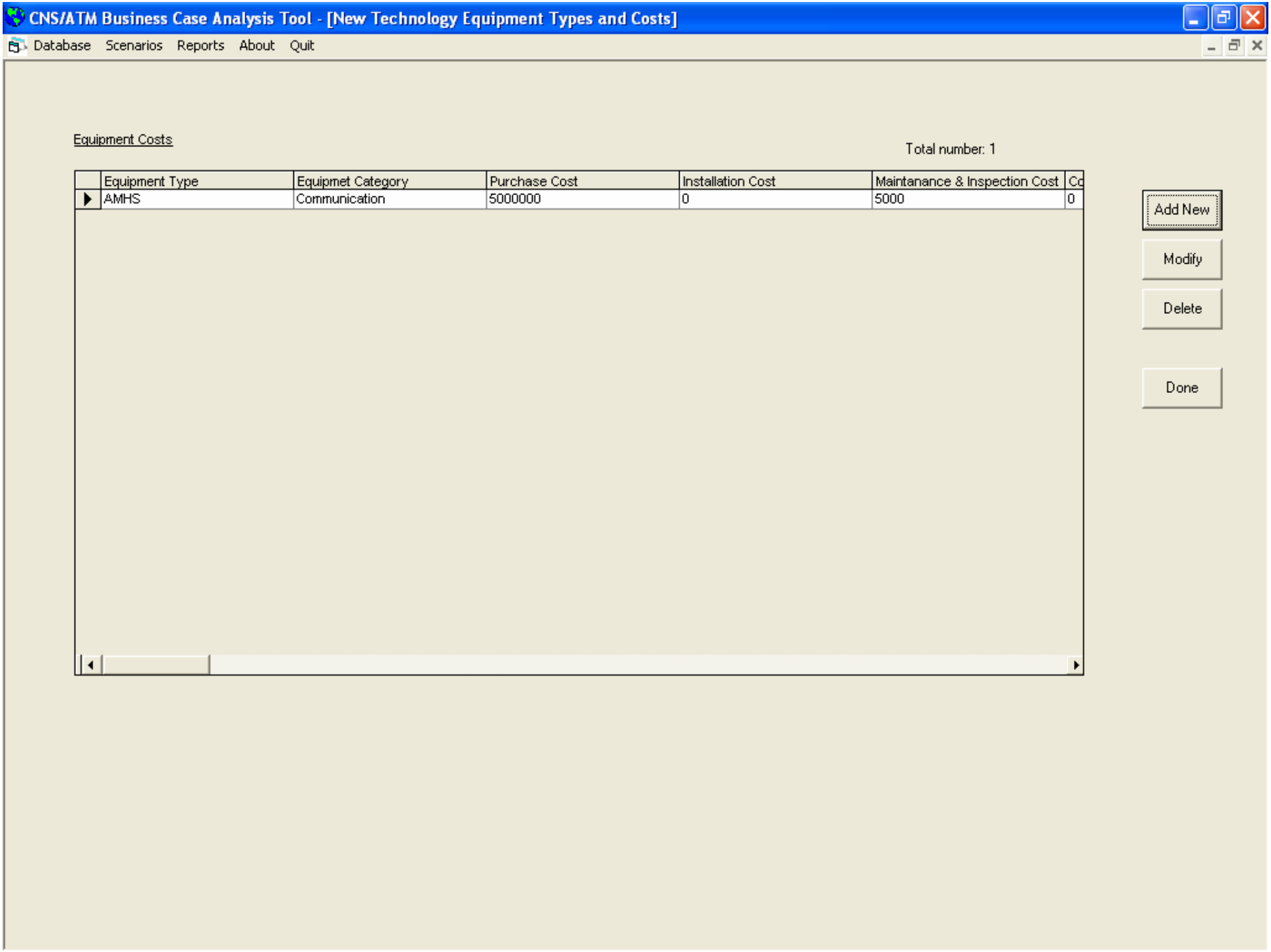
Delete

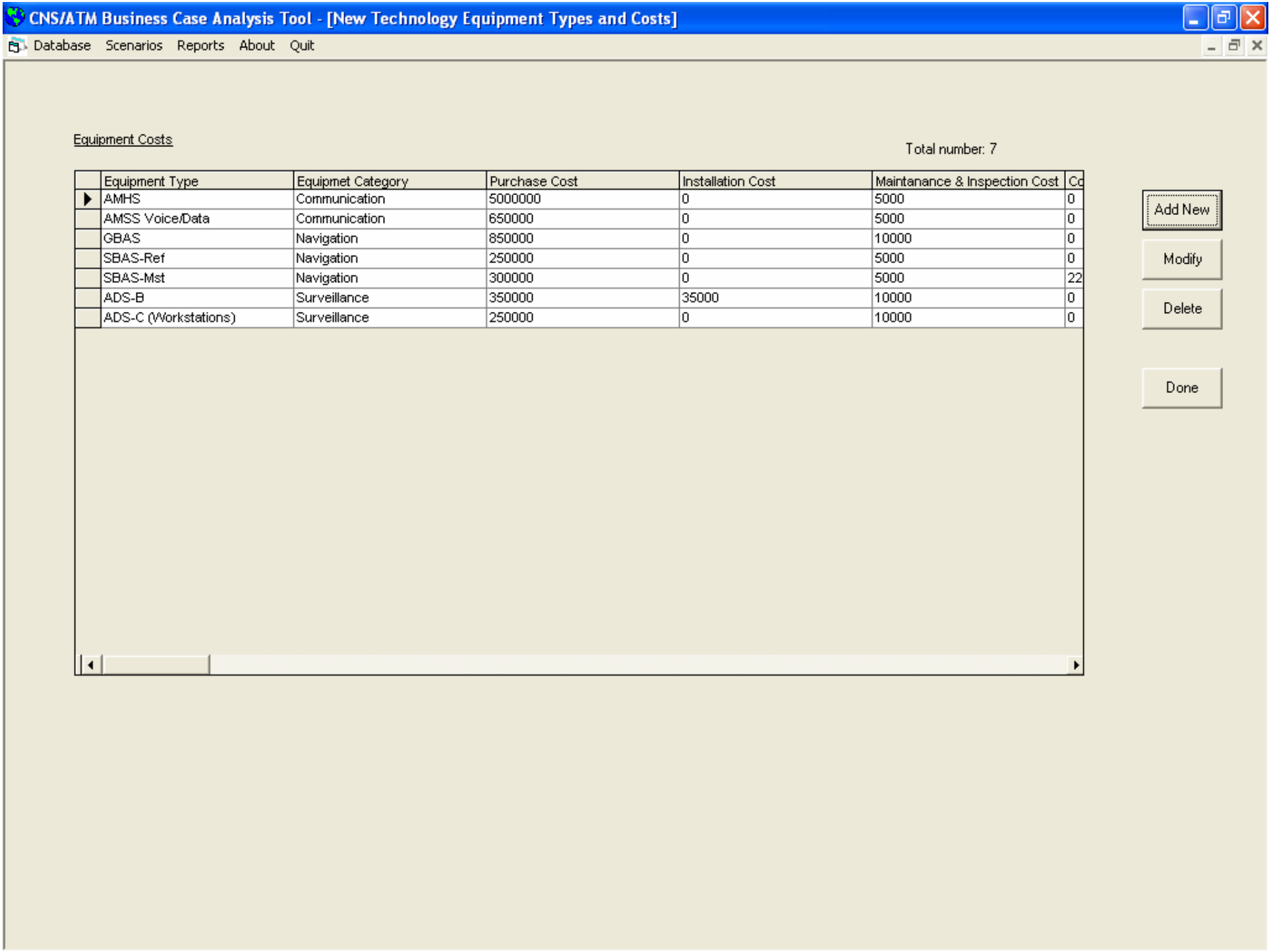
Done

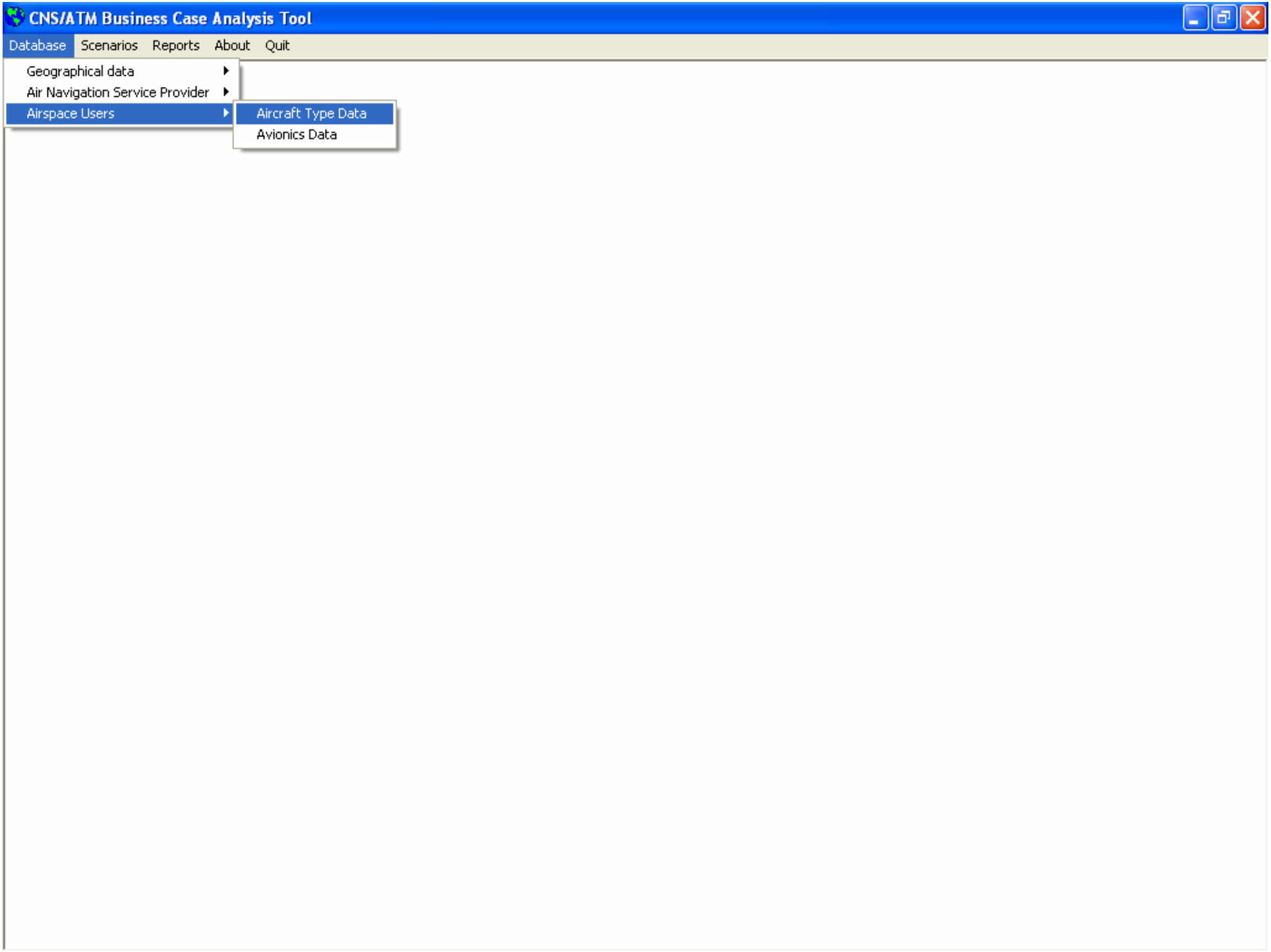

CNS/ATM Business Case Analysis Tool
Database
Scenarios
Reports
About
Quit
Geographical data
Air Navigation Service Provider
Airspace Users
Equipment Types and Costs
Conventional Technology Equipment Data
Equipment Categories
Generic Additional Costs
Conventional Technology
New Technology

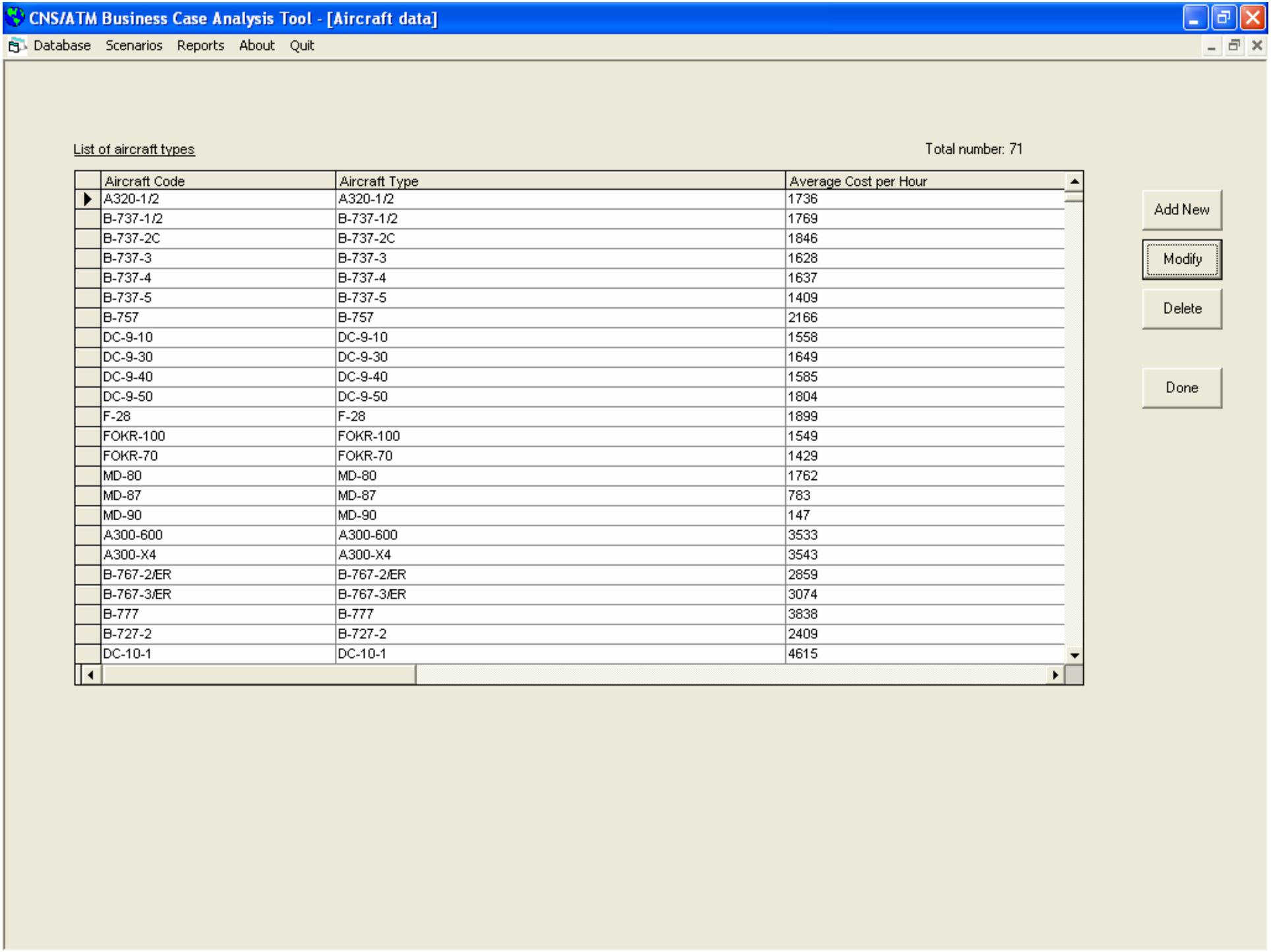

CNS/ATM Business Case Analysis Tool - [New Technology Equipment Types and Costs]
Database
Scenarios
Reports
About
Quit
Equipment Costs
Total number: 0
Equipment Type
Equipmet Category
Purchase Cost
Installation Cost
Maintanance & Inspection Cost
Cc
Add New
Modify
Delete
Done
Displays the list of equipment types with their associated costs

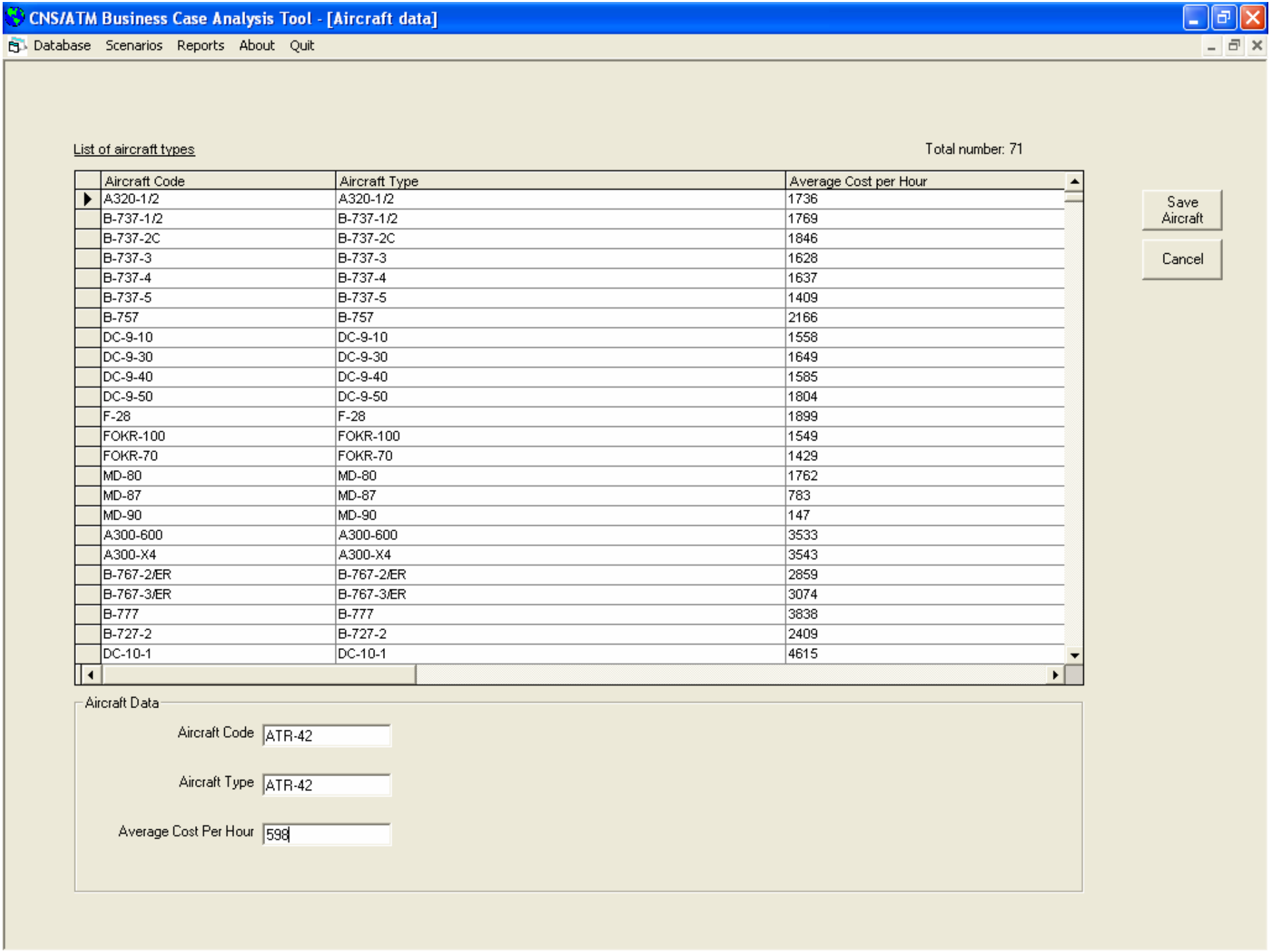

CNS/ATM Business Case Analysis Tool - [New Technology Equipment Types and Costs]
Database
Scenarios
Reports
About
Quit
Equipment Costs
Total number: 0
Equipment Type
Equipmet Category
Purchase Cost
Installation Cost
Maintanance & Inspection Cost
Cc
Save Type
Cancel
Equipment Cost details
Equipment Type
AMHS
Maintenance and Inspection Cost
5000
Life Cycle
15
Equipment Category
Communication
Annual Communications Cost
0
Purchase Cost
5000000
Refurbishment Cost
0
Installation Cost
0
Decommissioning Cost
0

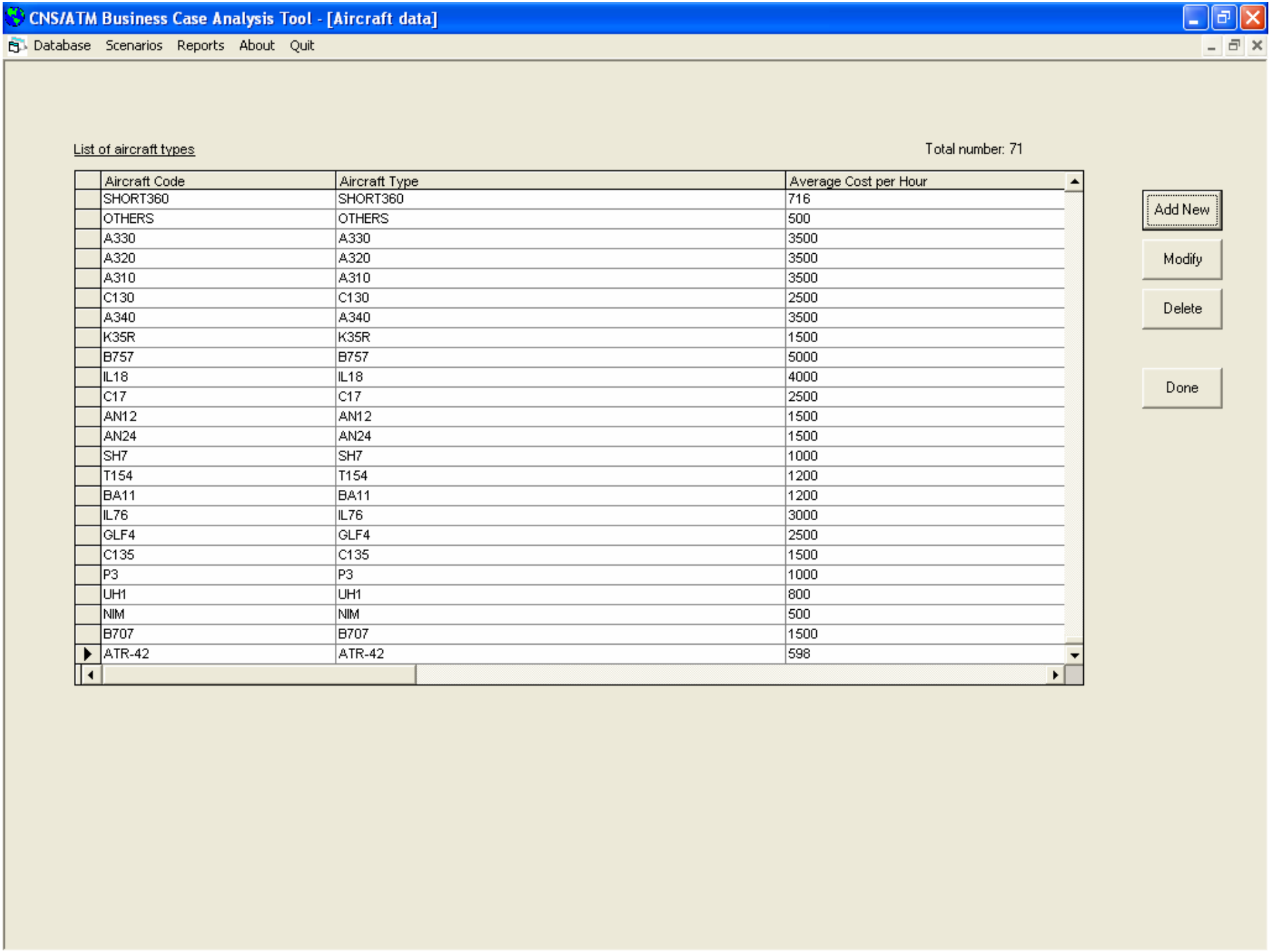

CNS/ATM Business Case Analysis Tool - [New Technology Equipment Types and Costs]
Database
Scenarios
Reports
About
Quit
Equipment Costs
Total number: 1
Equipment Type
Equipmet Category
Purchase Cost
Installation Cost
Maintanance & Inspection Cost
Cc
AMHS
Communication
5000000
0
5000
0
Add New
Modify
Delete
Done

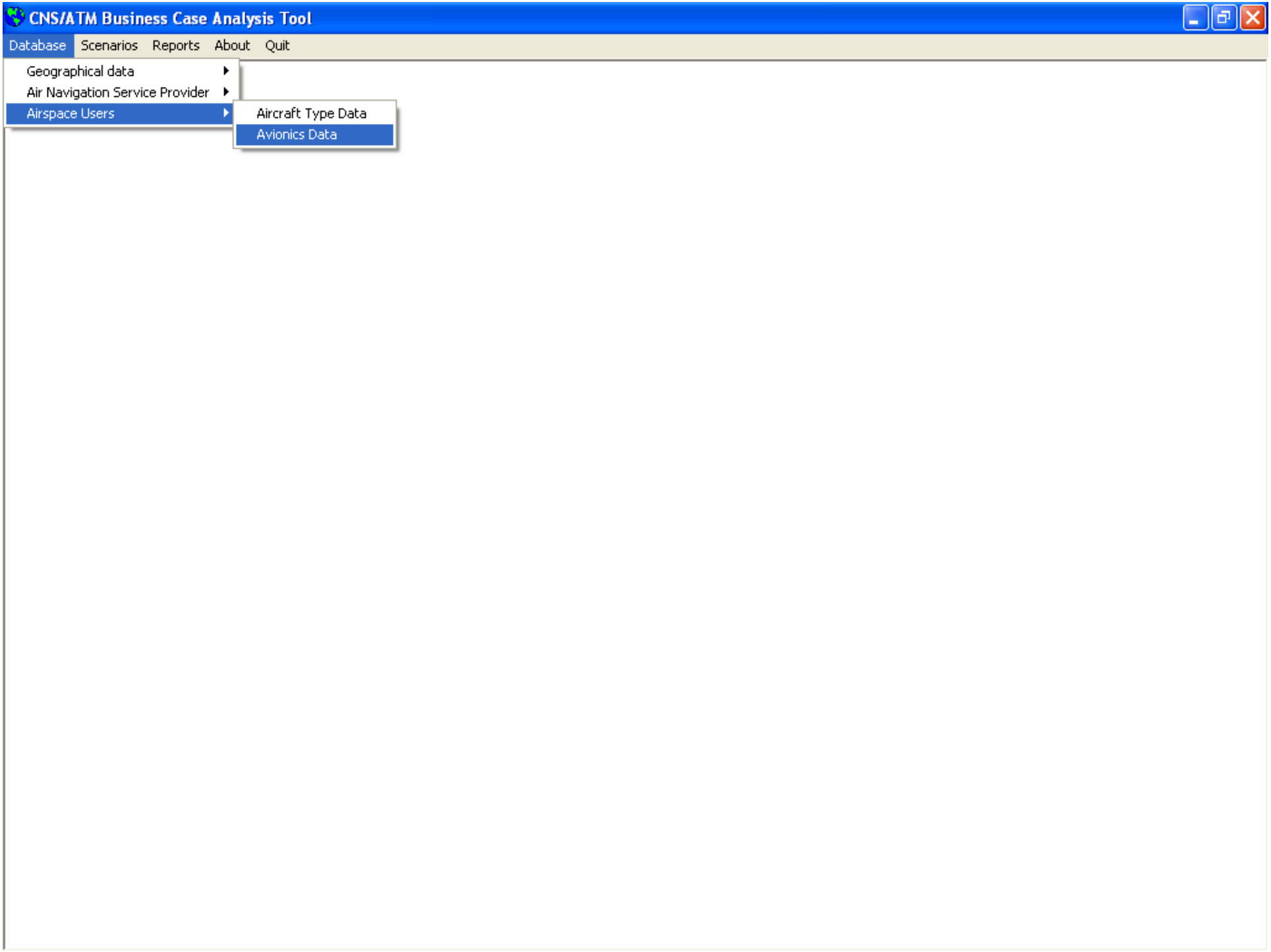

CNS/ATM Business Case Analysis Tool - [New Technology Equipment Types and Costs]
Database
Scenarios
Reports
About
Quit
Equipment Costs
Total number: 7
Equipment Type
Equipmet Category
Purchase Cost
Installation Cost
Maintanance & Inspection Cost
Cc
AMHS
Communication
5000000
0
5000
0
AMSS Voice/Data
Communication
650000
0
5000
0
GBAS
Navigation
850000
0
10000
0
SBAS-Ref
Navigation
250000
0
5000
0
SBAS-Mst
Navigation
300000
0
5000
22
ADS-B
Surveillance
350000
35000
10000
0
ADS-C (Workstations)
Surveillance
250000
0
10000
0
Add New
Modify
Delete
Done

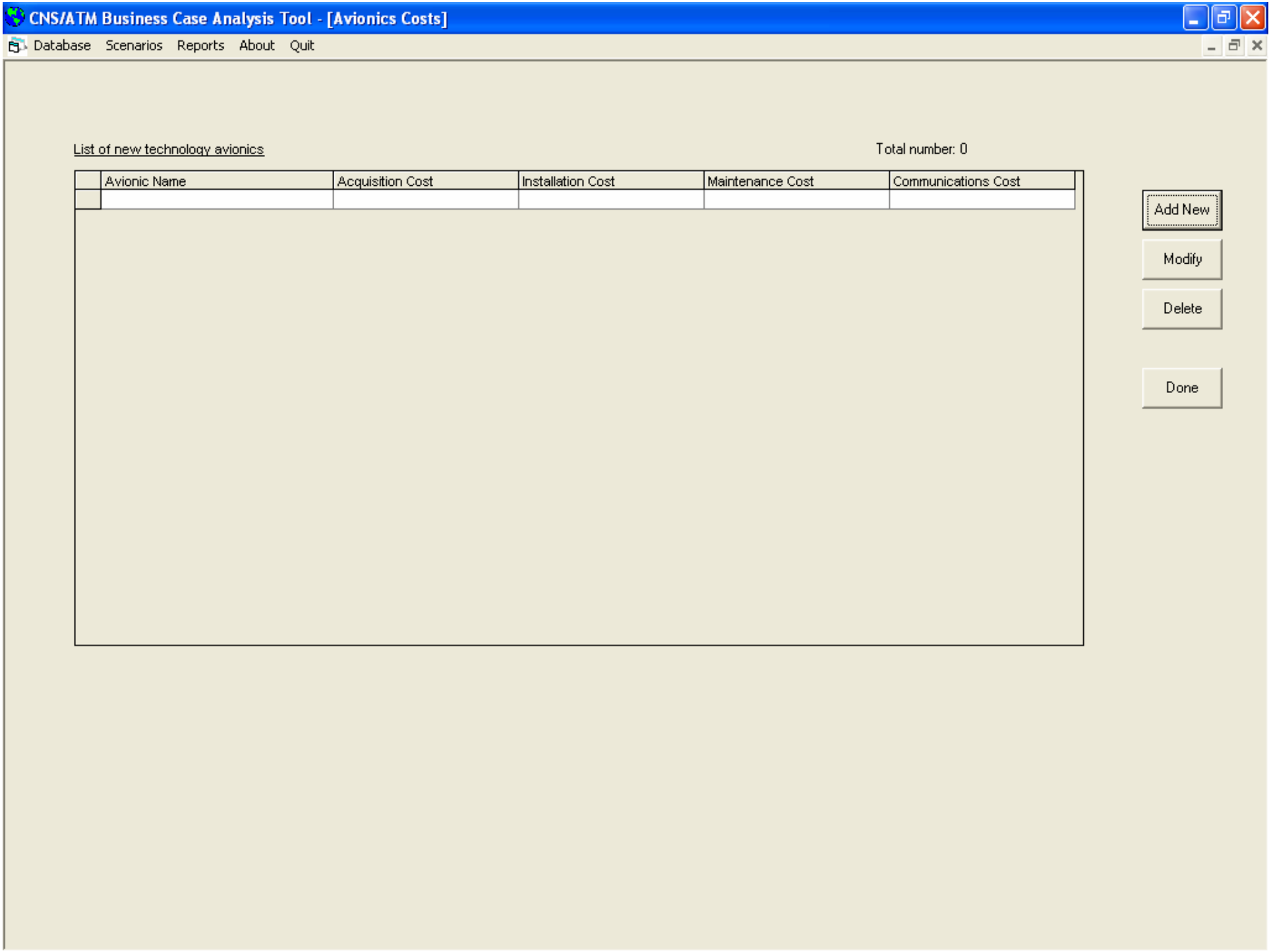

CNS/ATM Business Case Analysis Tool
Database
Scenarios
Reports
About
Quit
Geographical data
Air Navigation Service Provider
Airspace Users
Aircraft Type Data
Avionics Data

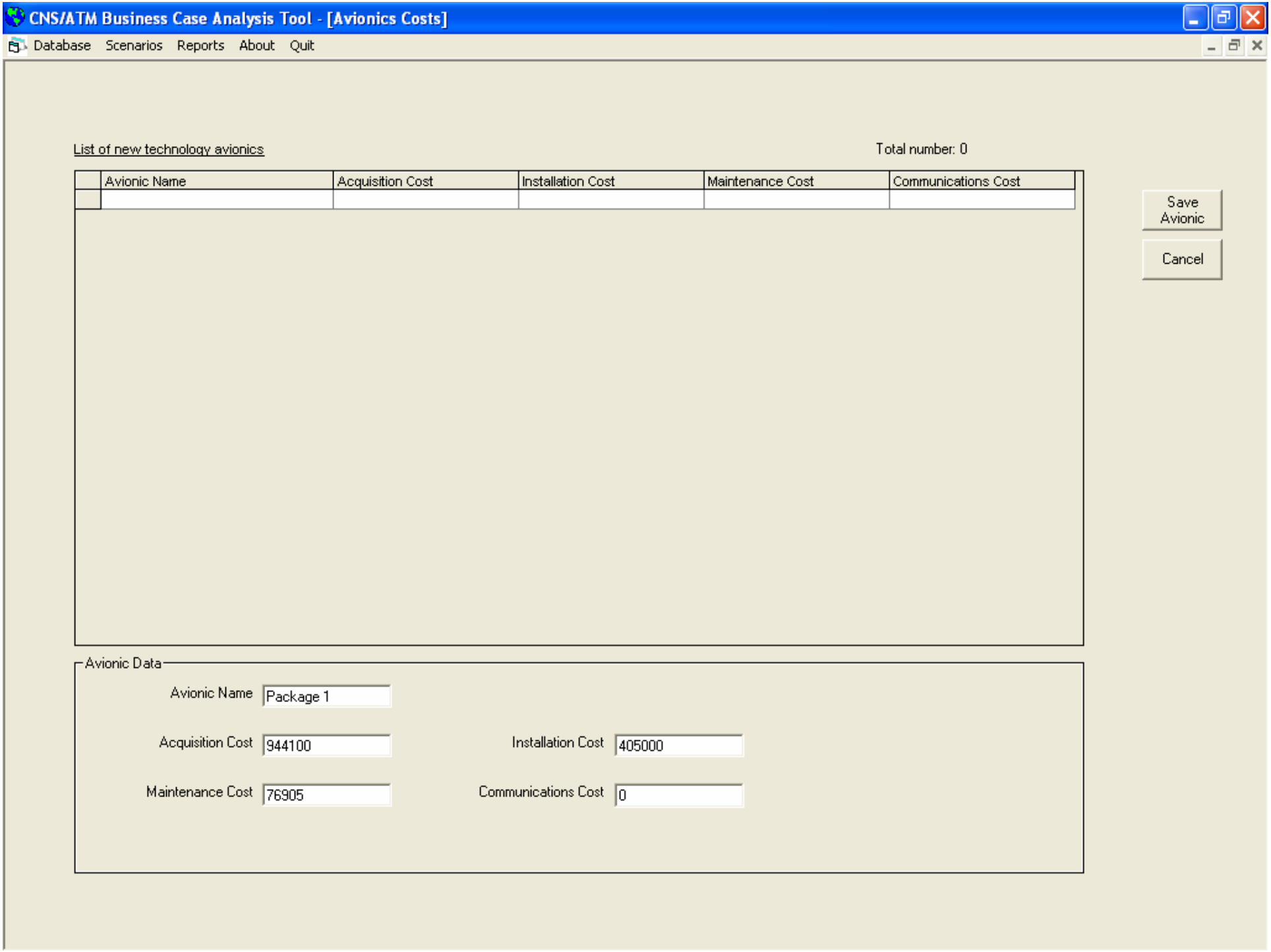

CNS/ATM Business Case Analysis Tool - [Aircraft data]
Database
Scenarios
Reports
About
Quit
List of aircraft types
Total number: 71
Aircraft Code
Aircraft Type
Average Cost per Hour
A320-1/2 A320-1/2 1736
B-737-1/2 B-737-1/2 1769
B-737-2C B-737-2C 1846
B-737-3 B-737-3 1628
B-737-4 B-737-4 1637
B-737-5 B-737-5 1409
B-757 B-757 2166
DC-9-10 DC-9-10 1558
DC-9-30 DC-9-30 1649
DC-9-40 DC-9-40 1585
DC-9-50 DC-9-50 1804
F-28 F-28 1899
FOKR-100 FOKR-100 1549
FOKR-70 FOKR-70 1429
MD-80 MD-80 1762
MD-87 MD-87 783
MD-90 MD-90 147
A300-600 A300-600 3533
A300-X4 A300-X4 3543
B-767-2/ER B-767-2/ER 2859
B-767-3/ER B-767-3/ER 3074
B-777 B-777 3838
B-727-2 B-727-2 2409
DC-10-1 DC-10-1 4615
Add New
Modify
Delete
Done

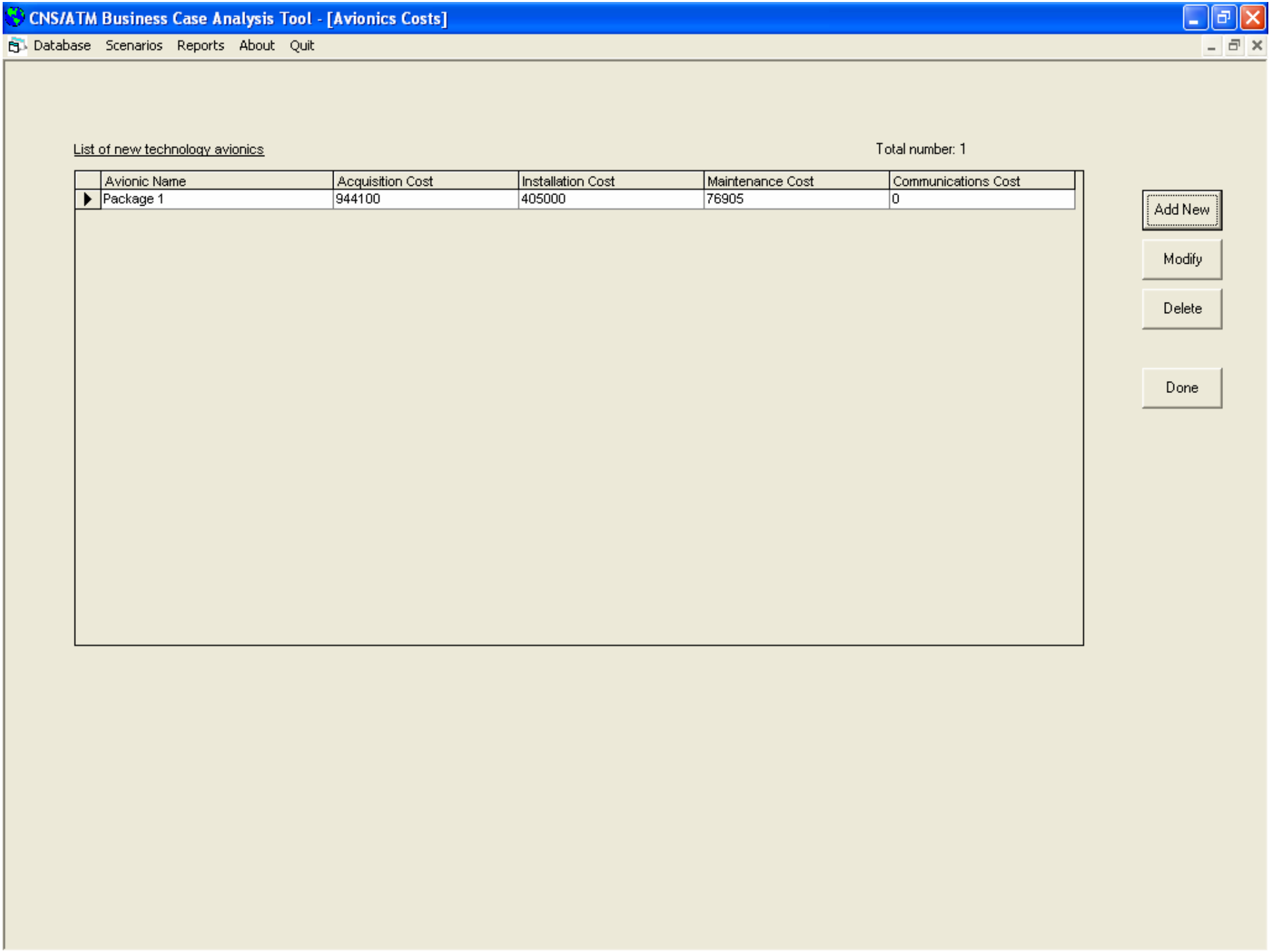

CNS/ATM Business Case Analysis Tool - [Aircraft data]
Database
Scenarios
Reports
About
Quit
List of aircraft types
Total number: 71
Aircraft Code
Aircraft Type
Average Cost per Hour
A320-1/2 A320-1/2 1736
B-737-1/2 B-737-1/2 1769
B-737-2C B-737-2C 1846
B-737-3 B-737-3 1628
B-737-4 B-737-4 1637
B-737-5 B-737-5 1409
B-757 B-757 2166
DC-9-10 DC-9-10 1558
DC-9-30 DC-9-30 1649
DC-9-40 DC-9-40 1585
DC-9-50 DC-9-50 1804
F-28 F-28 1899
FOKR-100 FOKR-100 1549
FOKR-70 FOKR-70 1429
MD-80 MD-80 1762
MD-87 MD-87 783
MD-90 MD-90 147
A300-600 A300-600 3533
A300-X4 A300-X4 3543
B-767-2/ER B-767-2/ER 2859
B-767-3/ER B-767-3/ER 3074
B-777 B-777 3838
B-727-2 B-727-2 2409
DC-10-1 DC-10-1 4615
Save Aircraft
Cancel
Aircraft Data
Aircraft Code
ATR-42
Aircraft Type
ATR-42
Average Cost Per Hour
598


CNS/ATM Business Case Analysis Tool - [Aircraft data]
Database
Scenarios
Reports
About
Quit
List of aircraft types
Total number: 71
Aircraft Code
Aircraft Type
Average Cost per Hour
SHORT360 SHORT360 716
OTHERS OTHERS 500
A330 A330 3500
A320 A320 3500
A310 A310 3500
C130 C130 2500
A340 A340 3500
K35R K35R 1500
B757 B757 5000
IL18 IL18 4000
C17 C17 2500
AN12 AN12 1500
AN24 AN24 1500
SH7 SH7 1000
T154 T154 1200
BA11 BA11 1200
IL76 IL76 3000
GLF4 GLF4 2500
C135 C135 1500
P3 P3 1000
UH1 UH1 800
NIM NIM 500
B707 B707 1500
ATR-42 ATR-42 598
Add New
Modify
Delete
Done

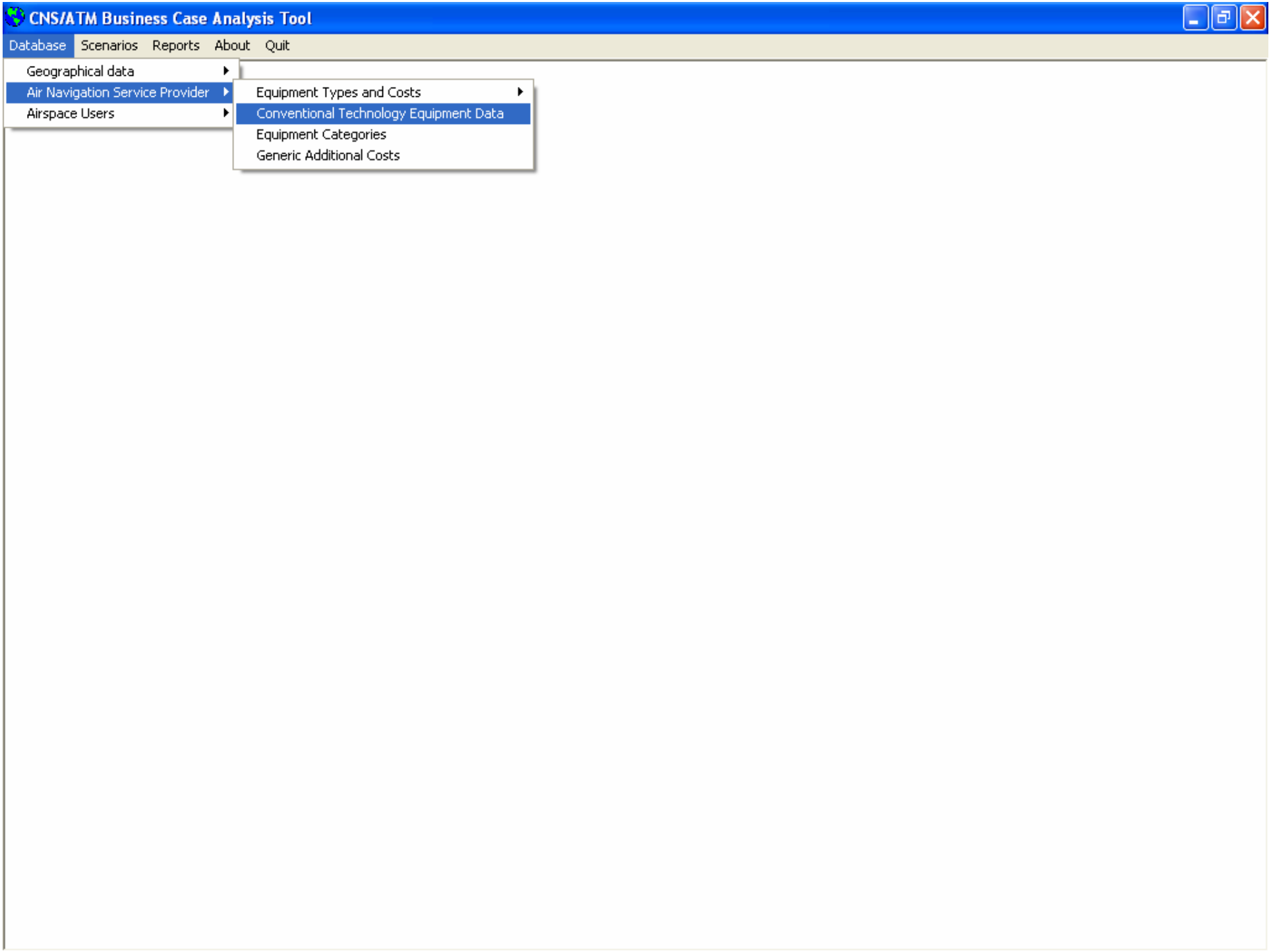

CNS/ATM Business Case Analysis Tool
Database
Scenarios
Reports
About
Quit
Geographical data
Air Navigation Service Provider
Airspace Users
Aircraft Type Data
Avionics Data

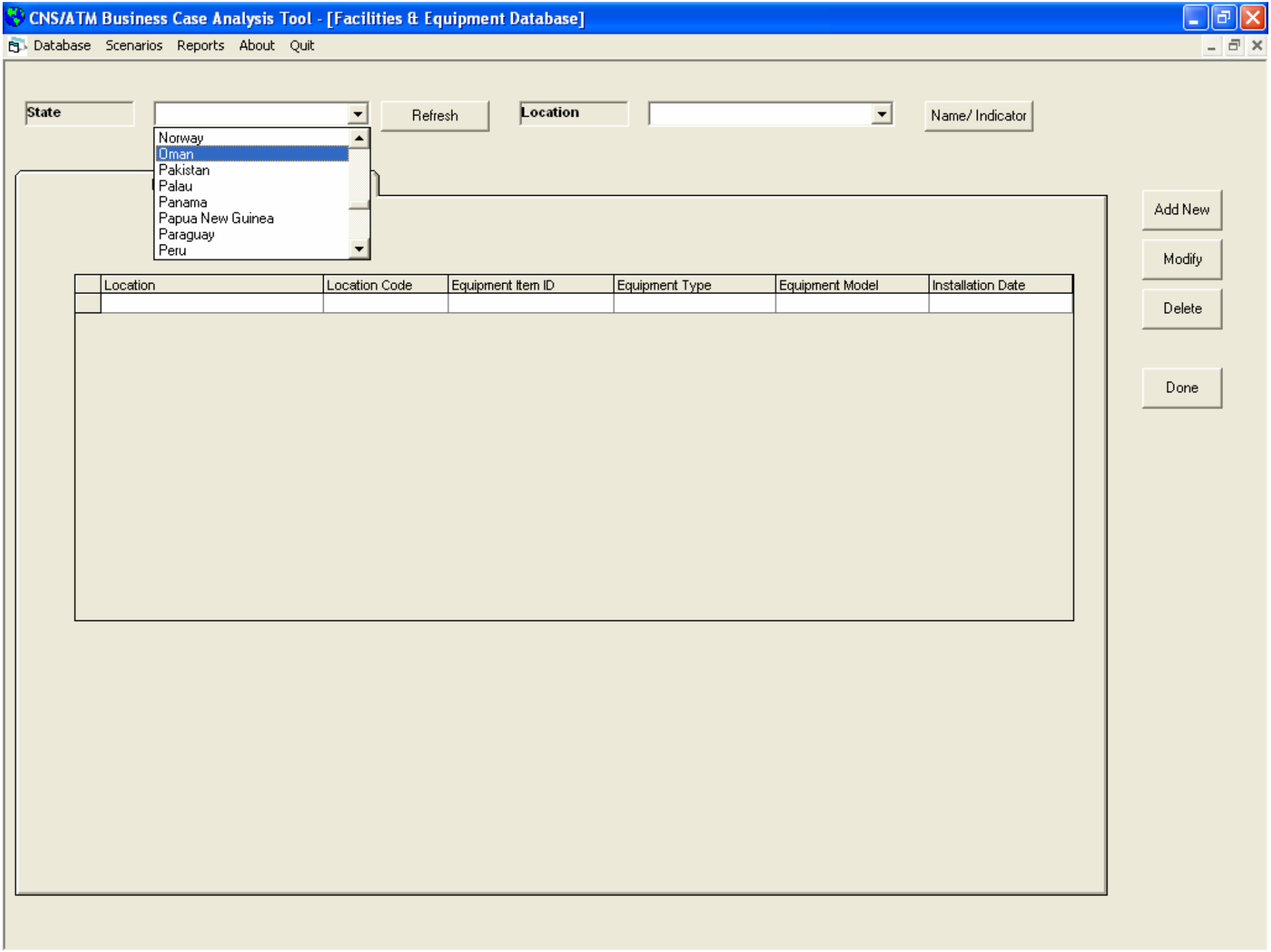

CNS/ATM Business Case Analysis Tool - [Avionics Costs]
Database
Scenarios
Reports
About
Quit
List of new technology avionics
Total number: 0
Avionic Name
Acquisition Cost
Installation Cost
Maintenance Cost
Communications Cost
Add New
Modify
Delete
Done

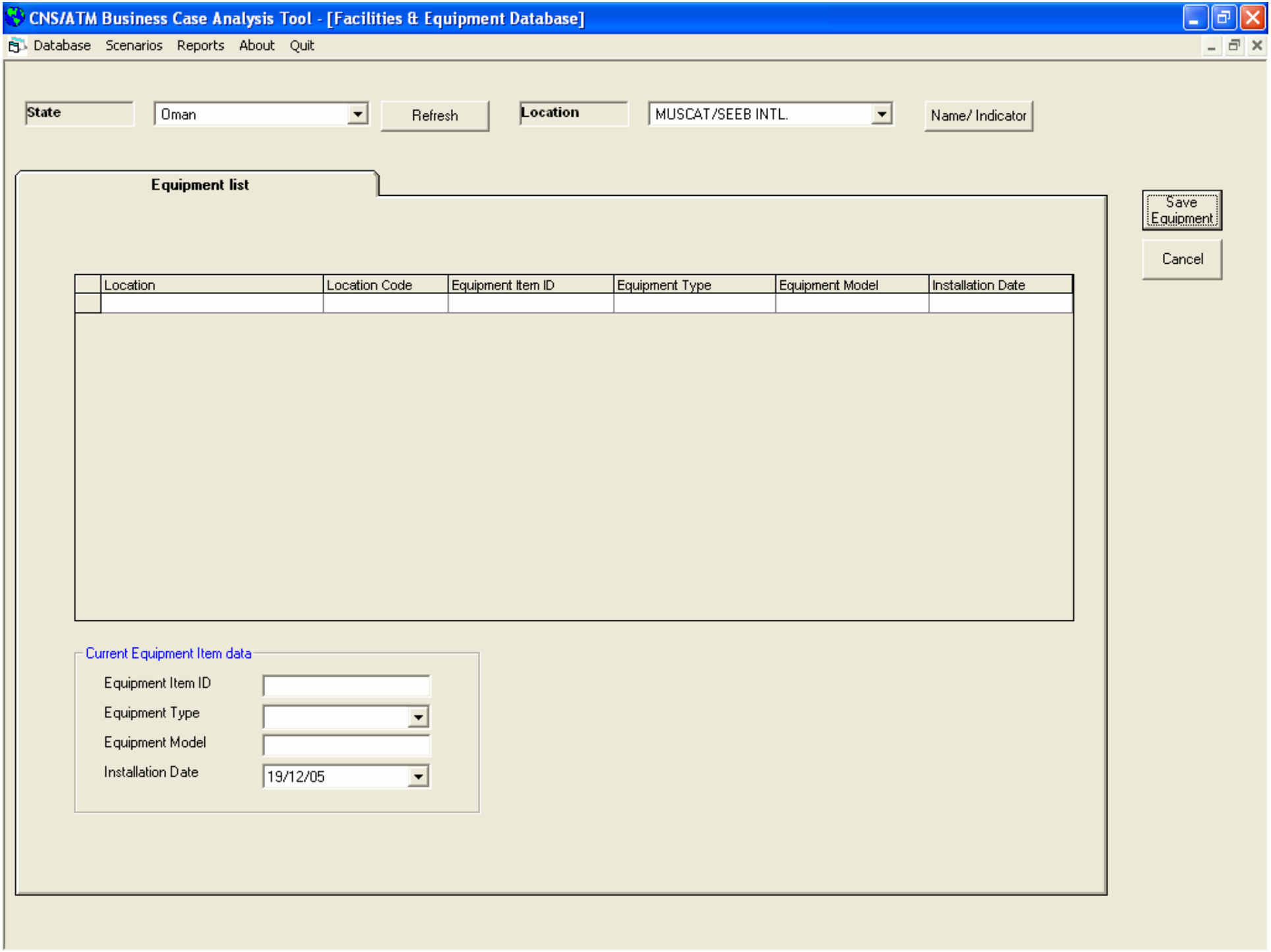

CNS/ATM Business Case Analysis Tool - [Avionics Costs]
Database
Scenarios
Reports
About
Quit
List of new technology avionics
Total number: 0
Avionic Name
Acquisition Cost
Installation Cost
Maintenance Cost
Communications Cost
Save Avionic
Cancel
Avionic Data
Avionic Name
Package 1
Acquisition Cost
944100
Installation Cost
405000
Maintenance Cost
76905
Communications Cost
0

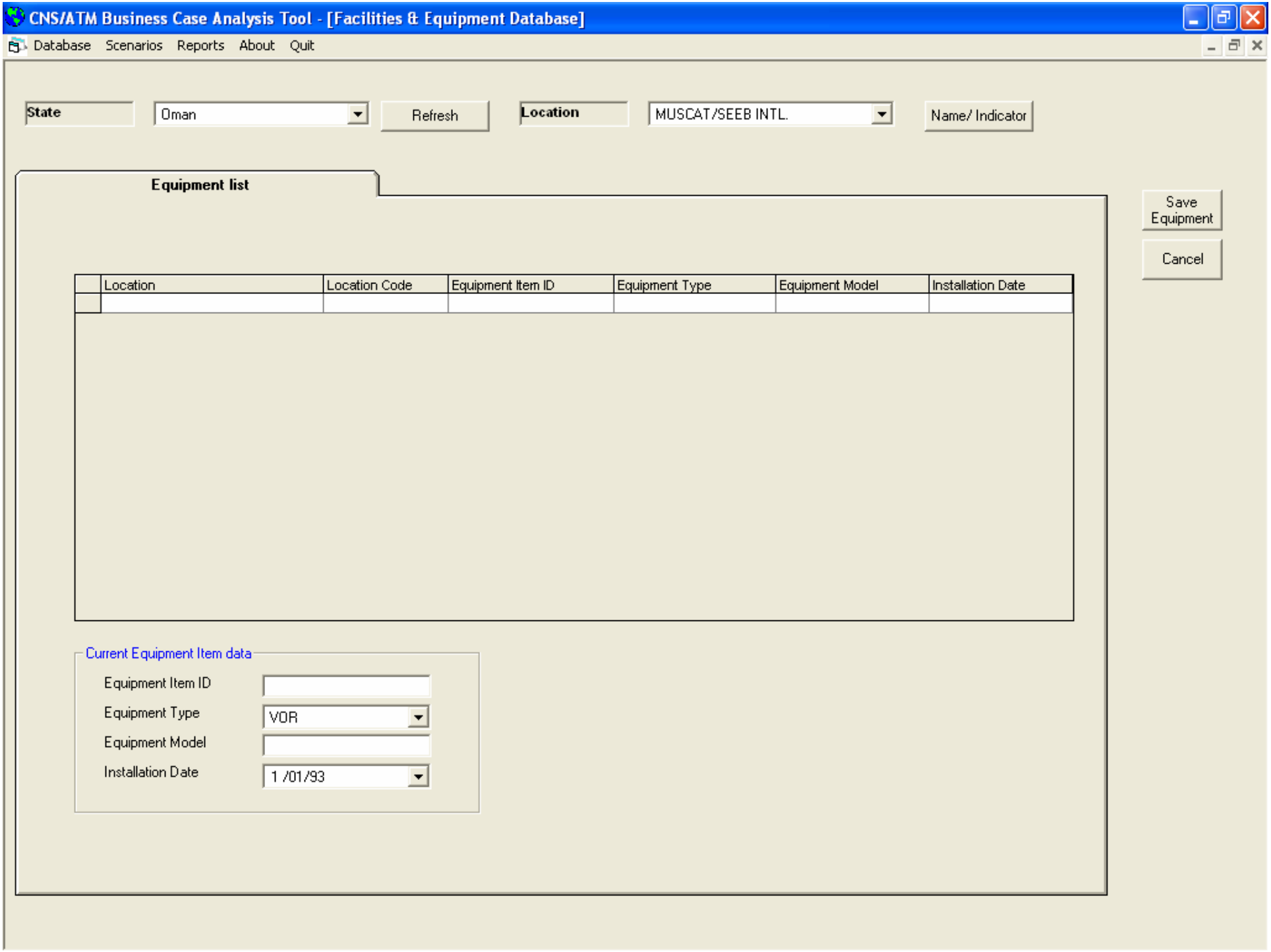

CNS/ATM Business Case Analysis Tool - [Avionics Costs]
Database
Scenarios
Reports
About
Quit
List of new technology avionics
Total number: 1
Avionic Name
Acquisition Cost
Installation Cost
Maintenance Cost
Communications Cost
Package 1
944100
405000
76905
0
Add New
Modify
Delete
Done

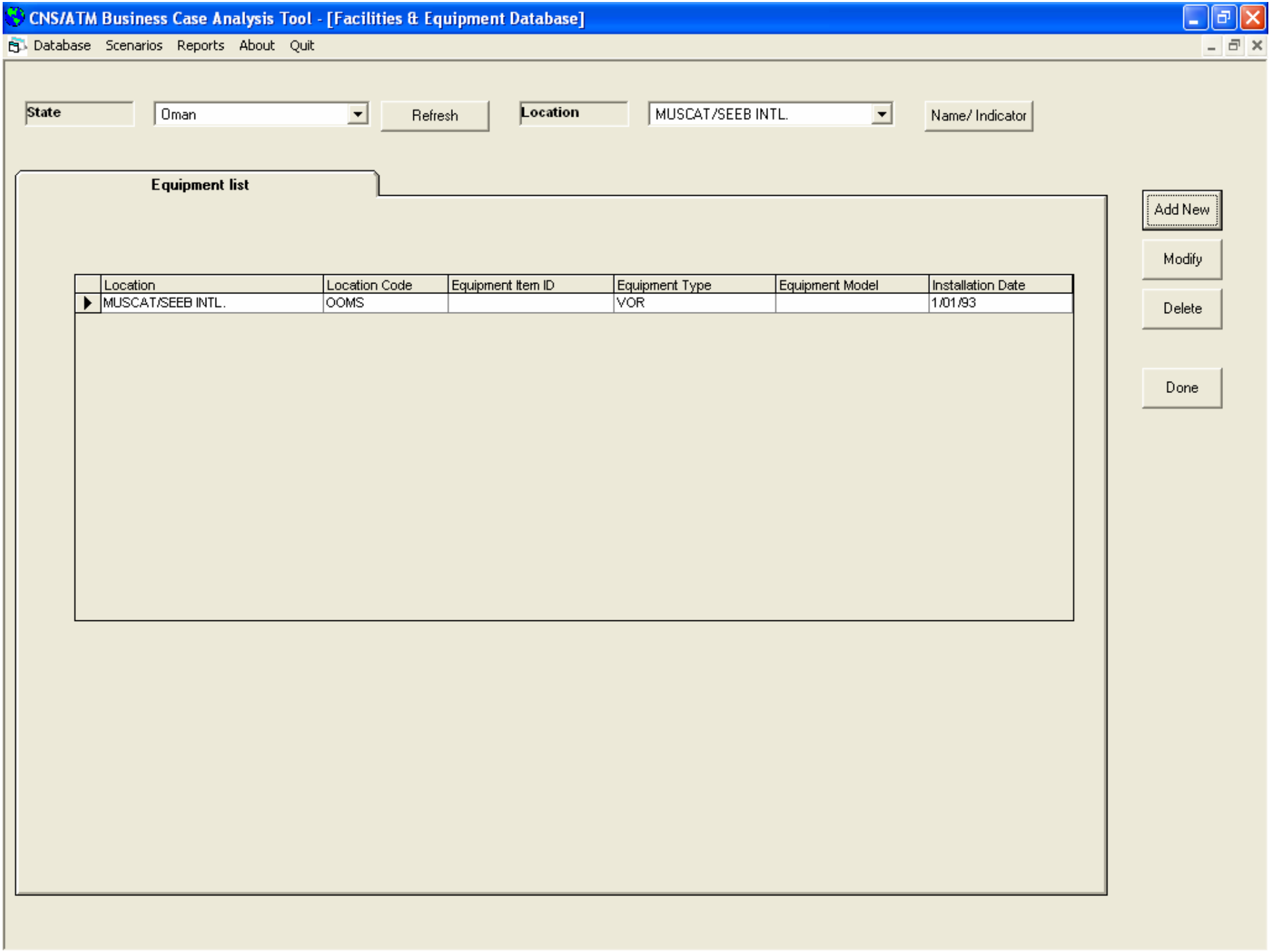
Step 2 : Input Conventional Technology Equipment data

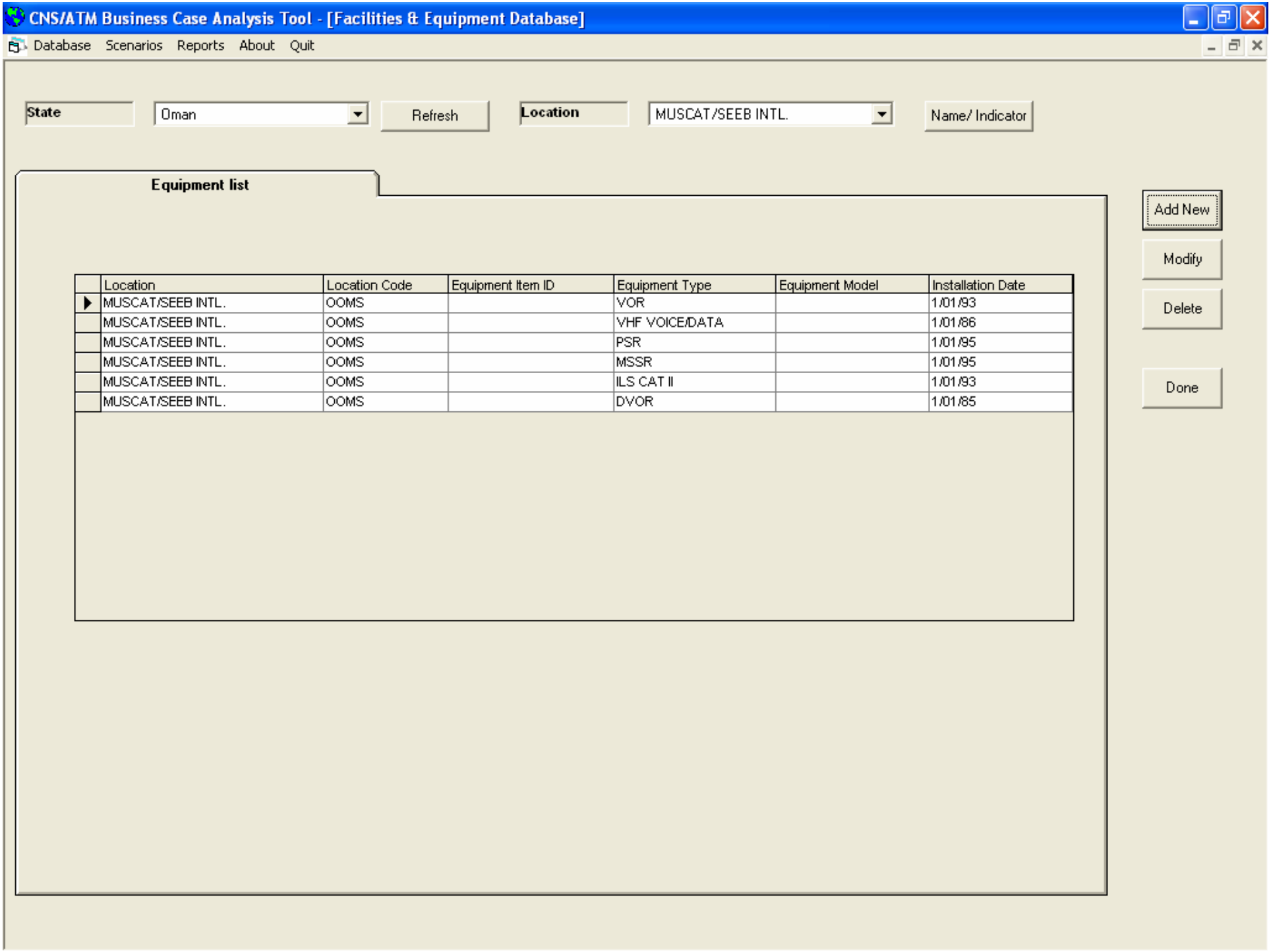

CNS/ATM Business Case Analysis Tool
Database
Scenarios
Reports
About
Quit
Geographical data
Air Navigation Service Provider
Airspace Users
Equipment Types and Costs
Conventional Technology Equipment Data
Equipment Categories
Generic Additional Costs


CNS/ATM Business Case Analysis Tool - [Facilities & Equipment Database]
Database
Scenarios
Reports
About
Quit
State
Refresh
Location
Name/ Indicator
Norway
Oman
Pakistan
Palau
Panama
Papua New Guinea
Paraguay
Peru
Location
Location Code
Equipment Item ID
Equipment Type
Equipment Model
Installation Date
Add New
Modify
Delete
Done

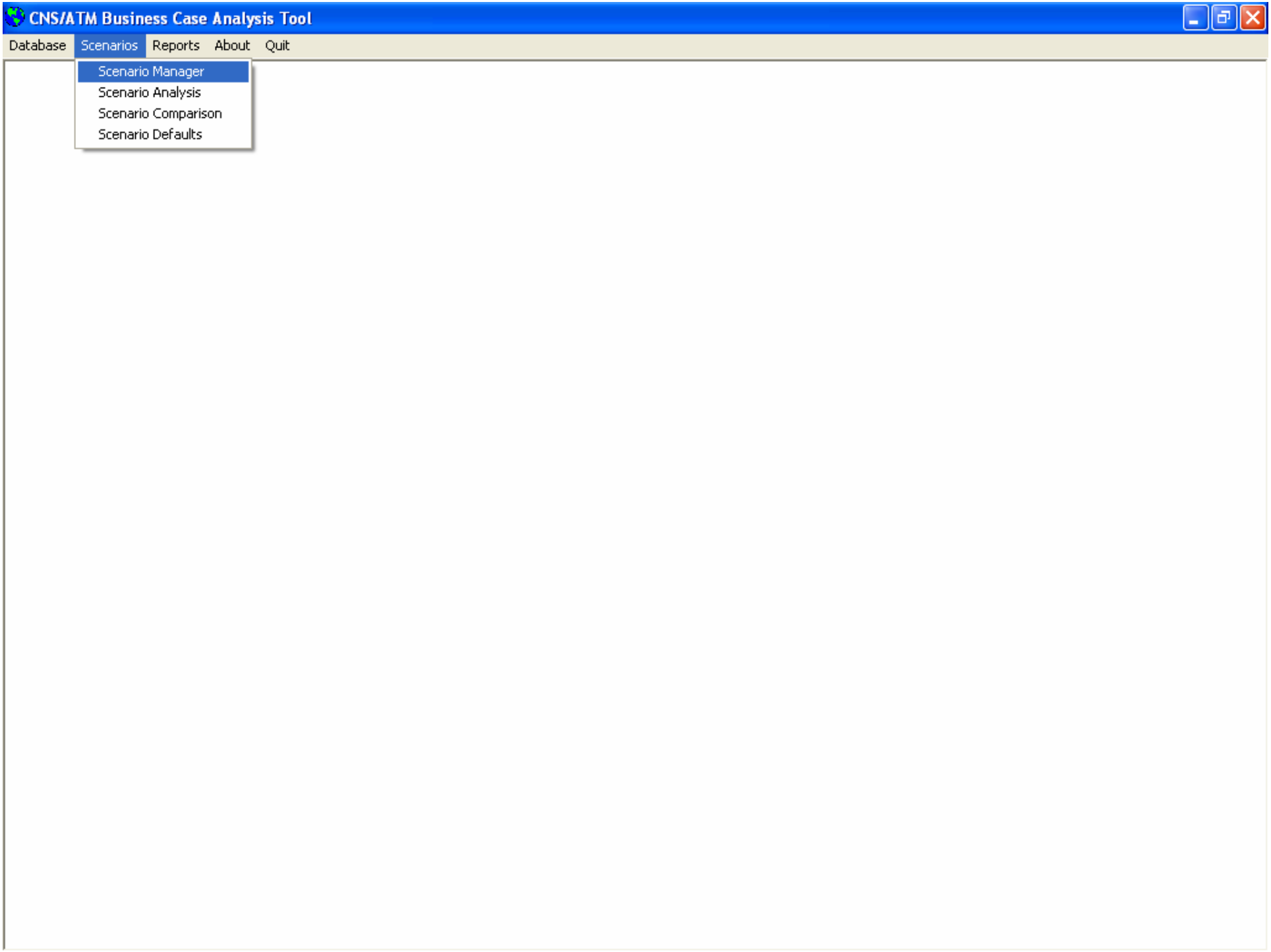

CNS/ATM Business Case Analysis Tool - [Facilities & Equipment Database]
Database
Scenarios
Reports
About
Quit
State
Oman
Refresh
Location
MUSCAT/SEEB INTL.
Name/ Indicator
Equipment list
Save Equipment
Cancel
Location
Location Code
Equipment Item ID
Equipment Type
Equipment Model
Installation Date
Current Equipment Item data
Equipment Item ID
Equipment Type
Equipment Model
Installation Date
19/12/05

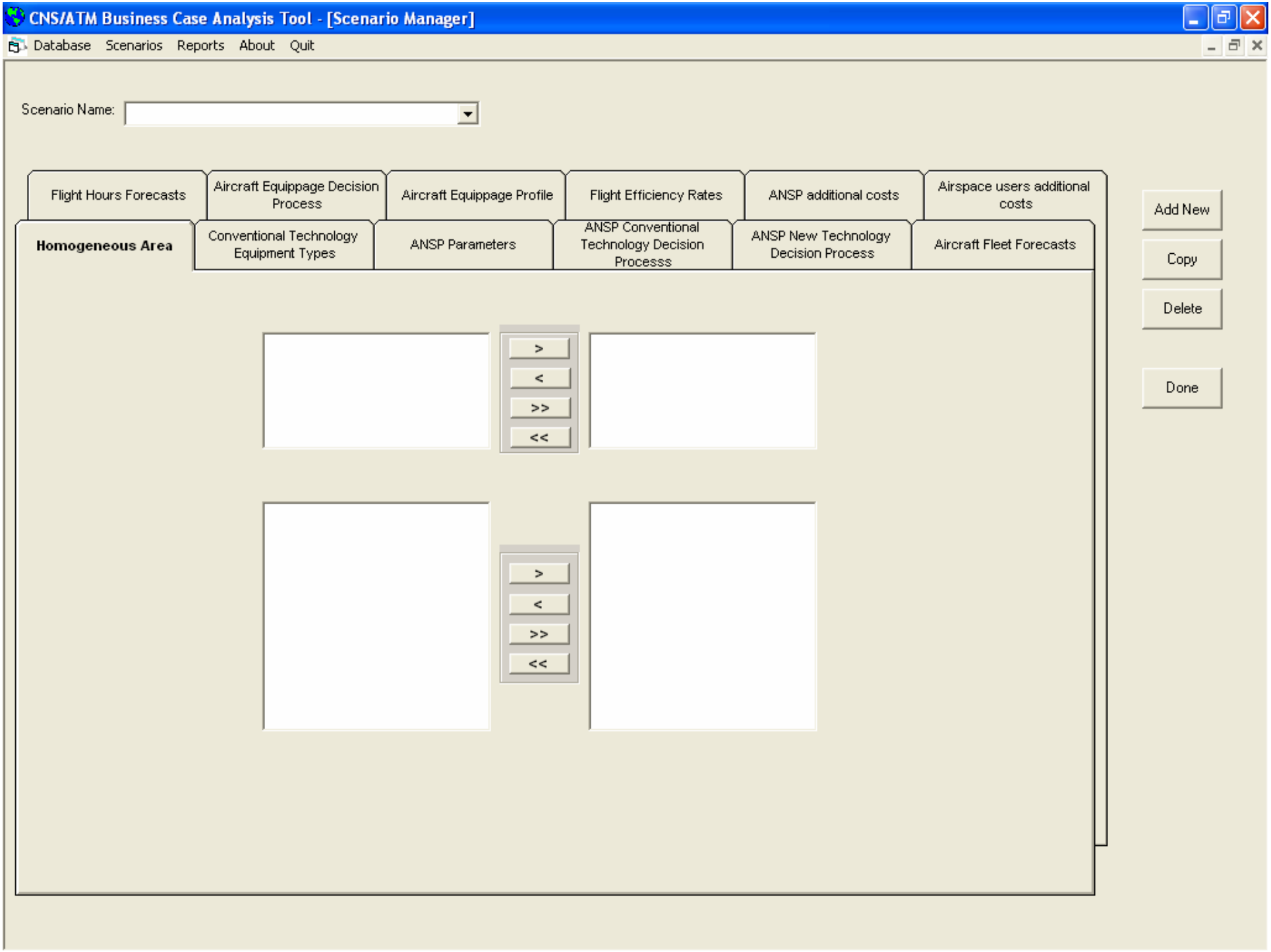

CNS/ATM Business Case Analysis Tool - [Facilities & Equipment Database]
Database
Scenarios
Reports
About
Quit
State
Oman
Refresh
Location
MUSCAT/SEEB INTL.
Name/ Indicator
Equipment list
Save Equipment
Cancel
Location
Location Code
Equipment Item ID
Equipment Type
Equipment Model
Installation Date
Current Equipment Item data
Equipment Item ID
Equipment Type
VOR
Equipment Model
Installation Date
1 /01/93


CNS/ATM Business Case Analysis Tool - [Facilities & Equipment Database]
Database
Scenarios
Reports
About
Quit
State
Oman
Refresh
Location
MUSCAT/SEEB INTL.
Name/ Indicator
Equipment list
Add New
Modify
Delete
Done
Location
Location Code
Equipment Item ID
Equipment Type
Equipment Model
Installation Date
MUSCAT/SEEB INTL.
OOMS
VOR
1/01/93

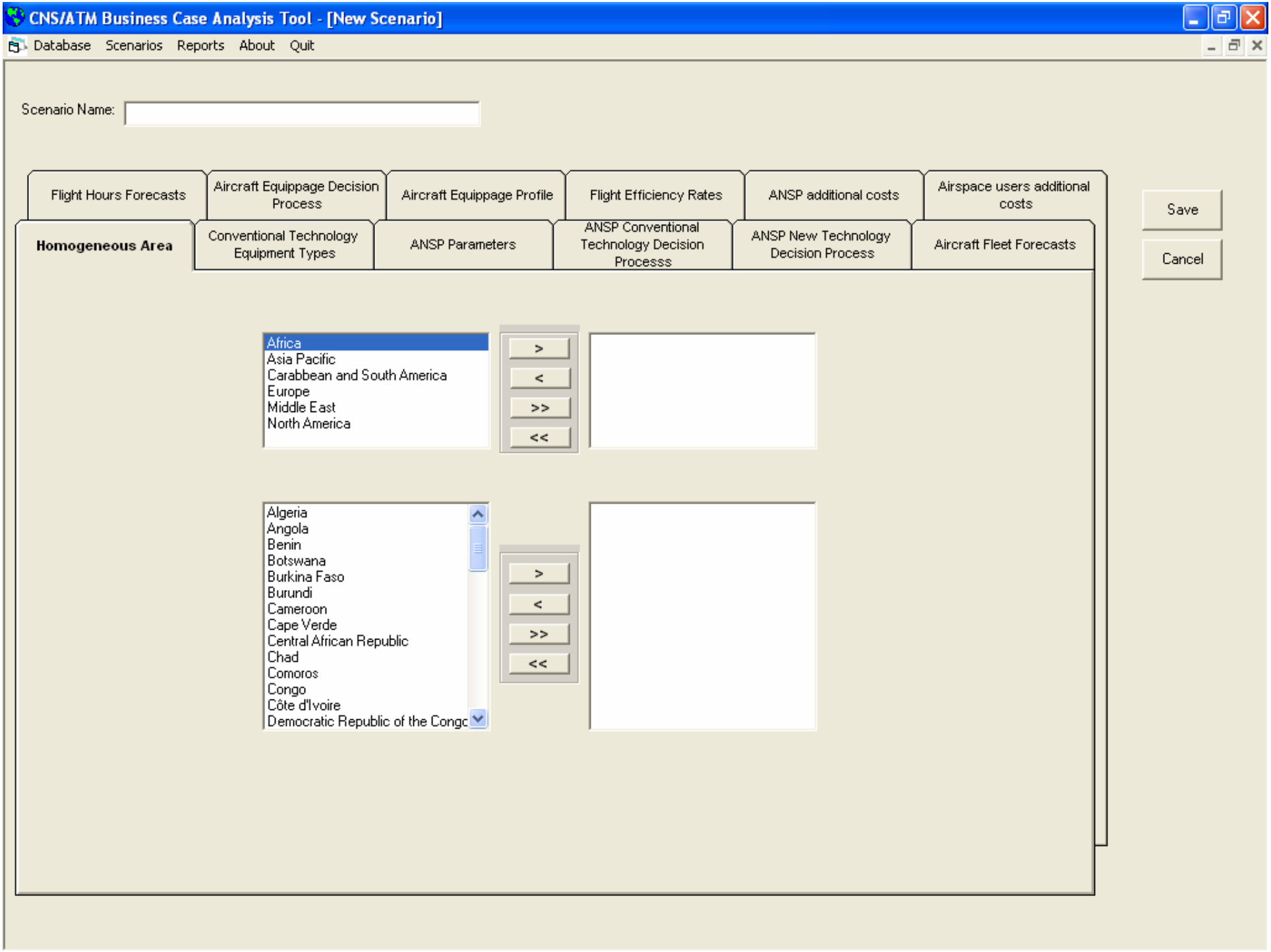

CNS/ATM Business Case Analysis Tool - [Facilities & Equipment Database]
Database
Scenarios
Reports
About
Quit
State
Oman
Refresh
Location
MUSCAT/SEEB INTL.
Name/ Indicator
Equipment list
Add New
Modify
Delete
Done
Location
Location Code
Equipment Item ID
Equipment Type
Equipment Model
Installation Date
MUSCAT/SEEB INTL.
OOMS
VOR
1/01/93
MUSCAT/SEEB INTL.
OOMS
VHF VOICE/DATA
1/01/86
MUSCAT/SEEB INTL.
OOMS
PSR
1/01/95
MUSCAT/SEEB INTL.
OOMS
MSSR
1/01/95
MUSCAT/SEEB INTL.
OOMS
ILS CAT II
1/01/93
MUSCAT/SEEB INTL.
OOMS
DVOR
1/01/85

Step 3 : Create implementation scenario


CNS/ATM Business Case Analysis Tool
Database
Scenarios
Reports
About
Quit
Scenario Manager
Scenario Analysis
Scenario Comparison
Scenario Defaults


CNS/ATM Business Case Analysis Tool - [Scenario Manager]
Database
Scenarios
Reports
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
>
<
>>
<<
>
<
>>
<<
Add New
Copy
Delete
Done

Step 3/1 : Select Homogeneous **ATM** area


CNS/ATM Business Case Analysis Tool - [New Scenario]
Database
Scenarios
Reports
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Africa
Asia Pacific
Carabbean and South America
Europe
Middle East
North America
>
<
>>
<<
Algeria
Angola
Benin
Botswana
Burkina Faso
Burundi
Cameroon
Cape Verde
Central African Republic
Chad
Comoros
Congo
Côte d'Ivoire
Democratic Republic of the Congo
>
<
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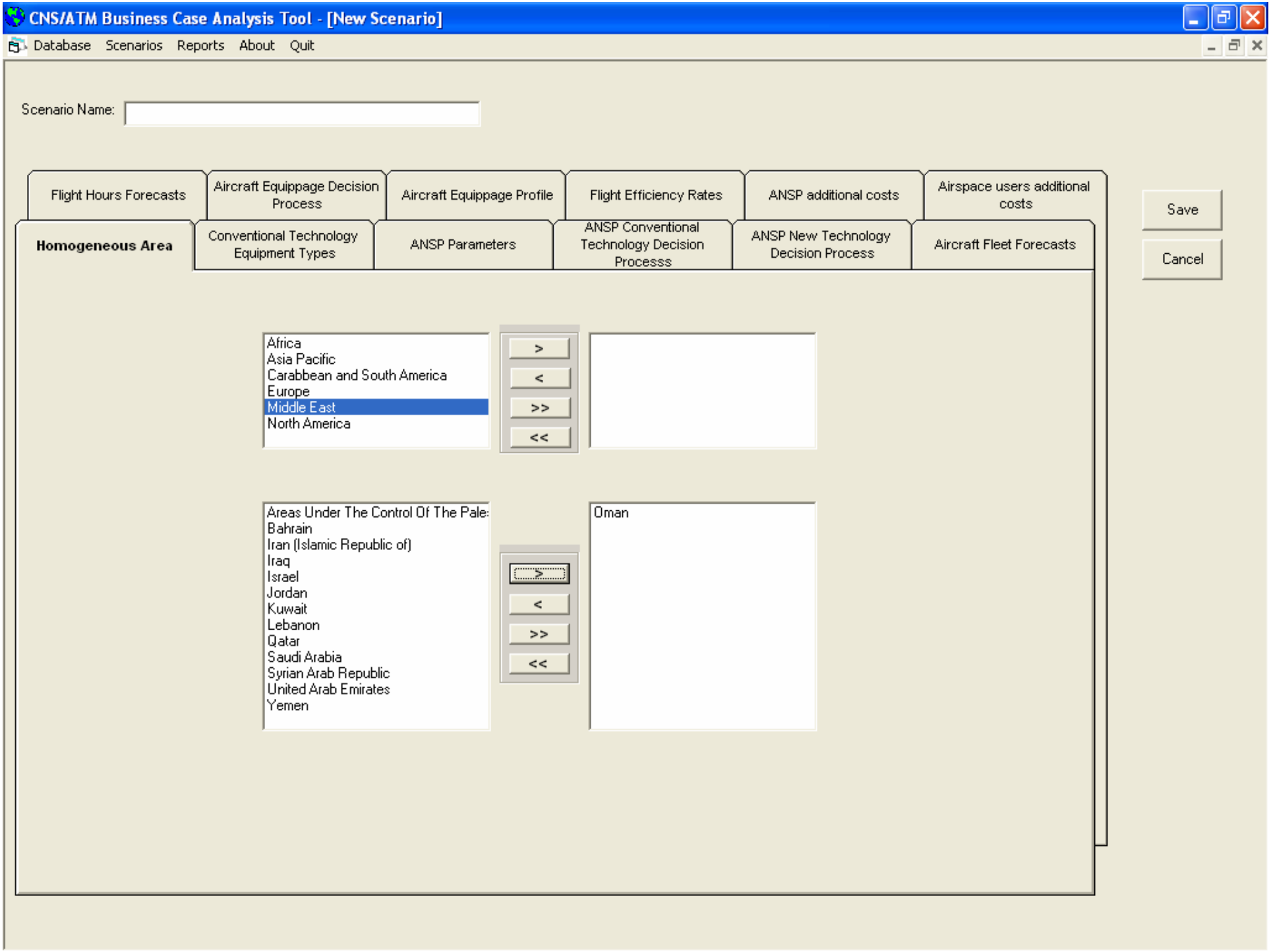
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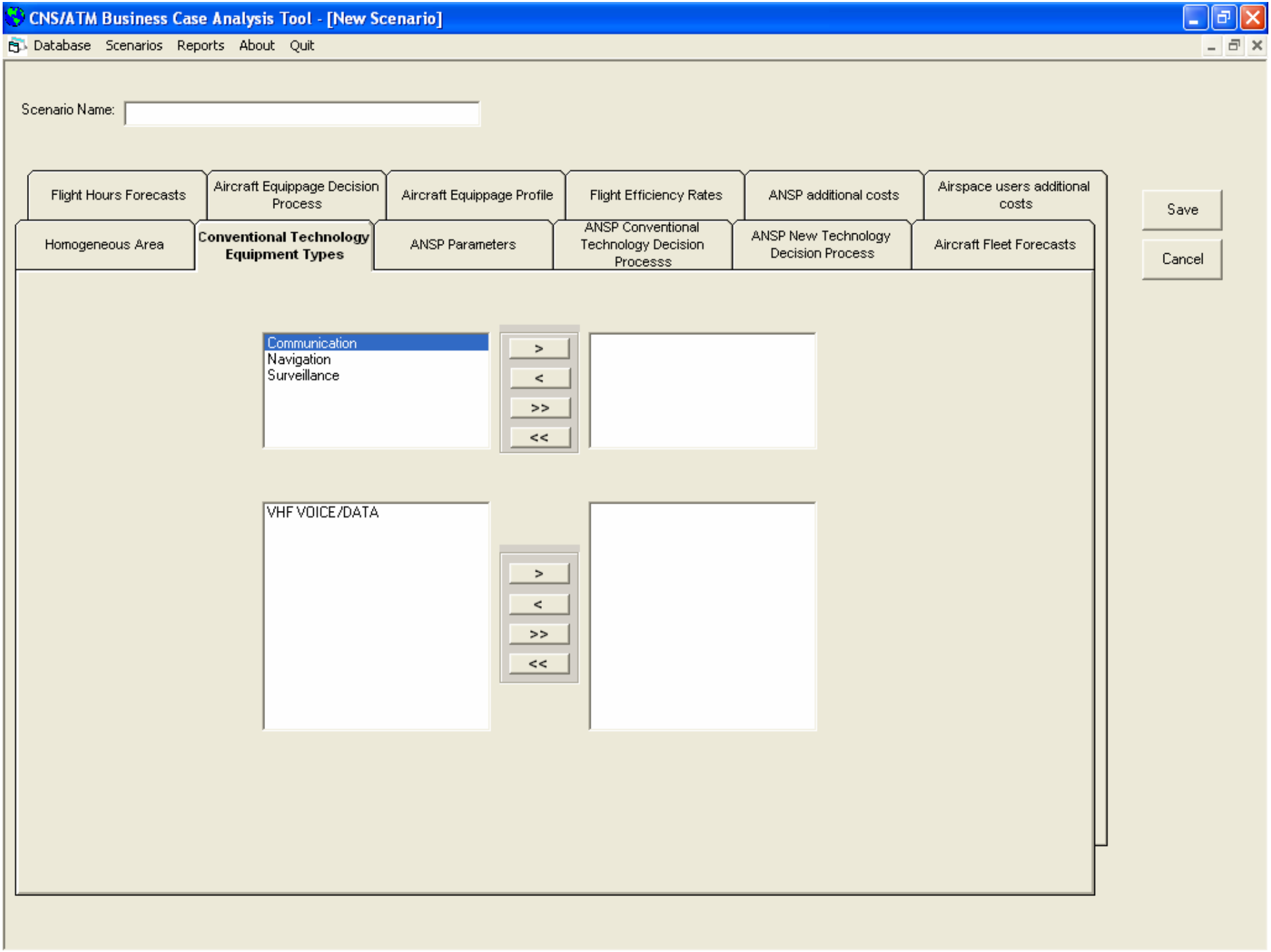
Database
Scenarios
Reports
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Africa
Asia Pacific
Carabbean and South America
Europe
Middle East
North America
>
<
>>
<<
Areas Under The Control Of The Pale:
Bahrain
Iran (Islamic Republic of)
Iraq
Israel
Jordan
Kuwait
Lebanon
Qatar
Saudi Arabia
Syrian Arab Republic
United Arab Emirates
Yemen
Oman

Step 3/2 : Select Conventional Technology

Equipment types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Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
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Cancel
Communication
Navigation
Surveillance
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<<
VHF VOICE/DATA
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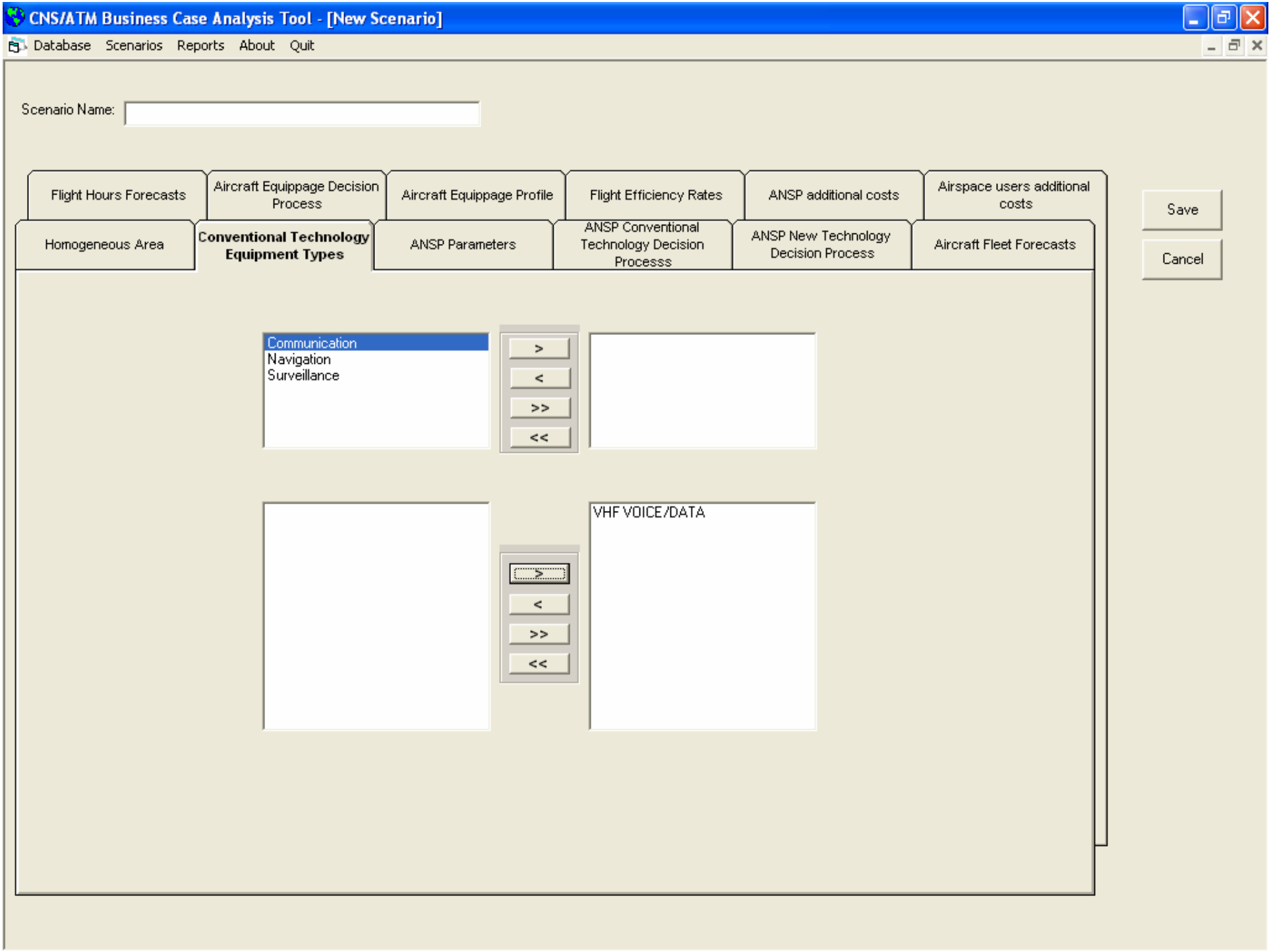
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Flight Efficiency Rates
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Airspace users additional costs
Homogeneous Area
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ANSP Parameters
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ANSP New Technology Decision Process
Aircraft Fleet Forecasts
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Cancel
Communication
Navigation
Surveillance
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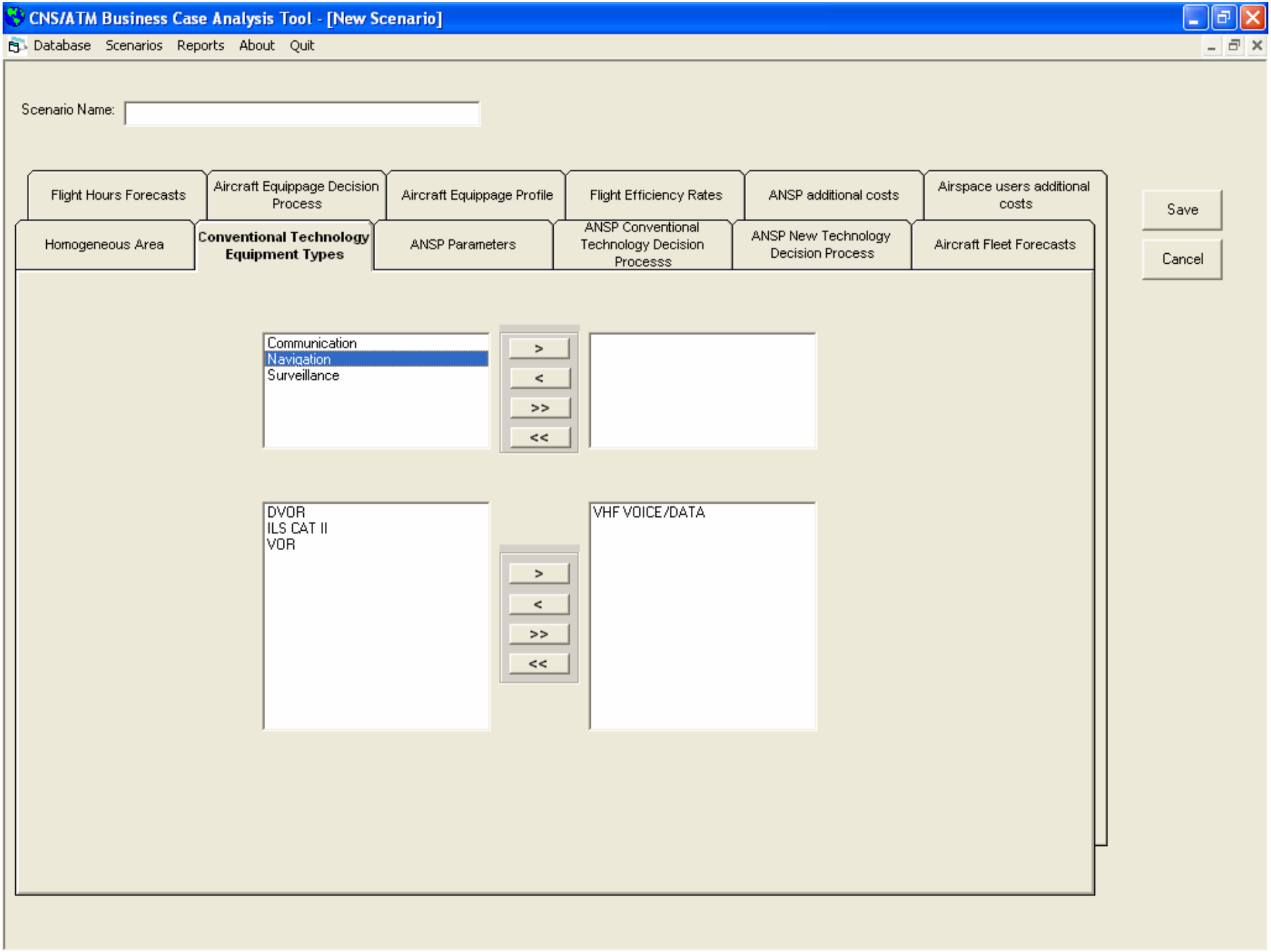
VHF VOICE/DATA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Quit
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Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Communication
Navigation
Surveillance
>
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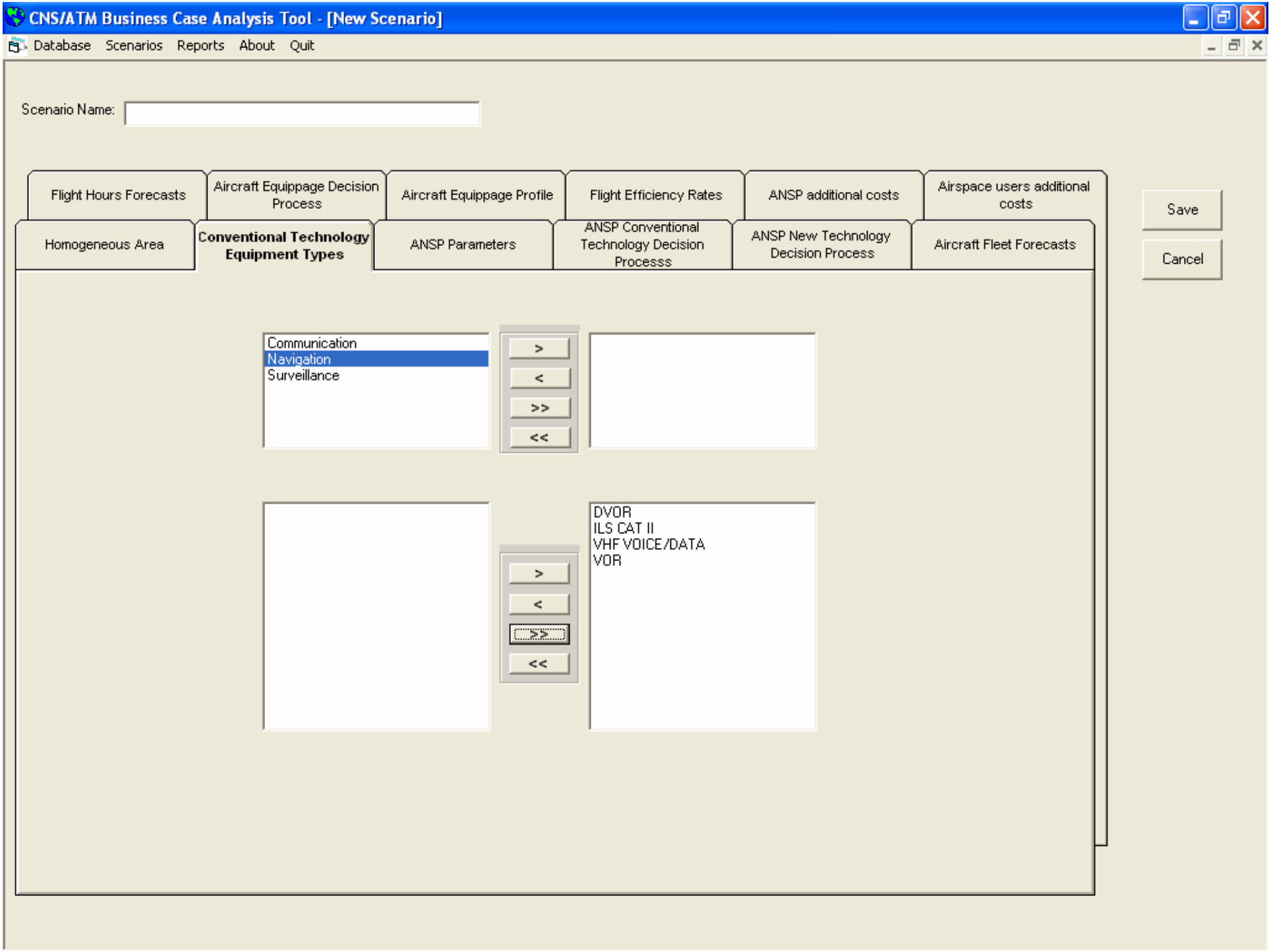
>>
<<
DVOR
ILS CAT II
VOR
VHF VOICE/DATA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Quit
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Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Communication
Navigation
Surveillance
>
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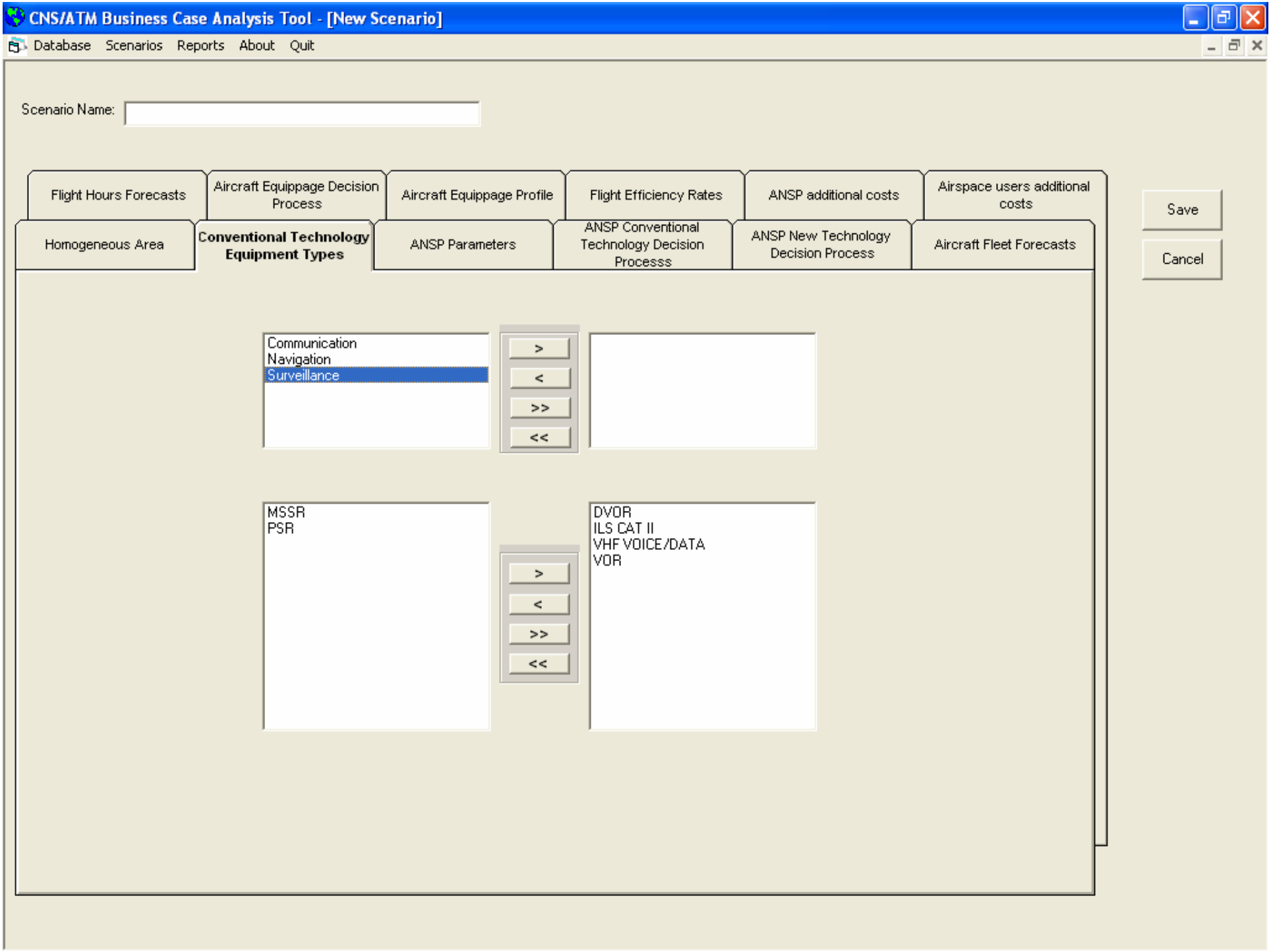
>>
<<
DVOR
ILS CAT II
VHF VOICE/DATA
VOR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Reports
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Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Communication
Navigation
Surveillance
>
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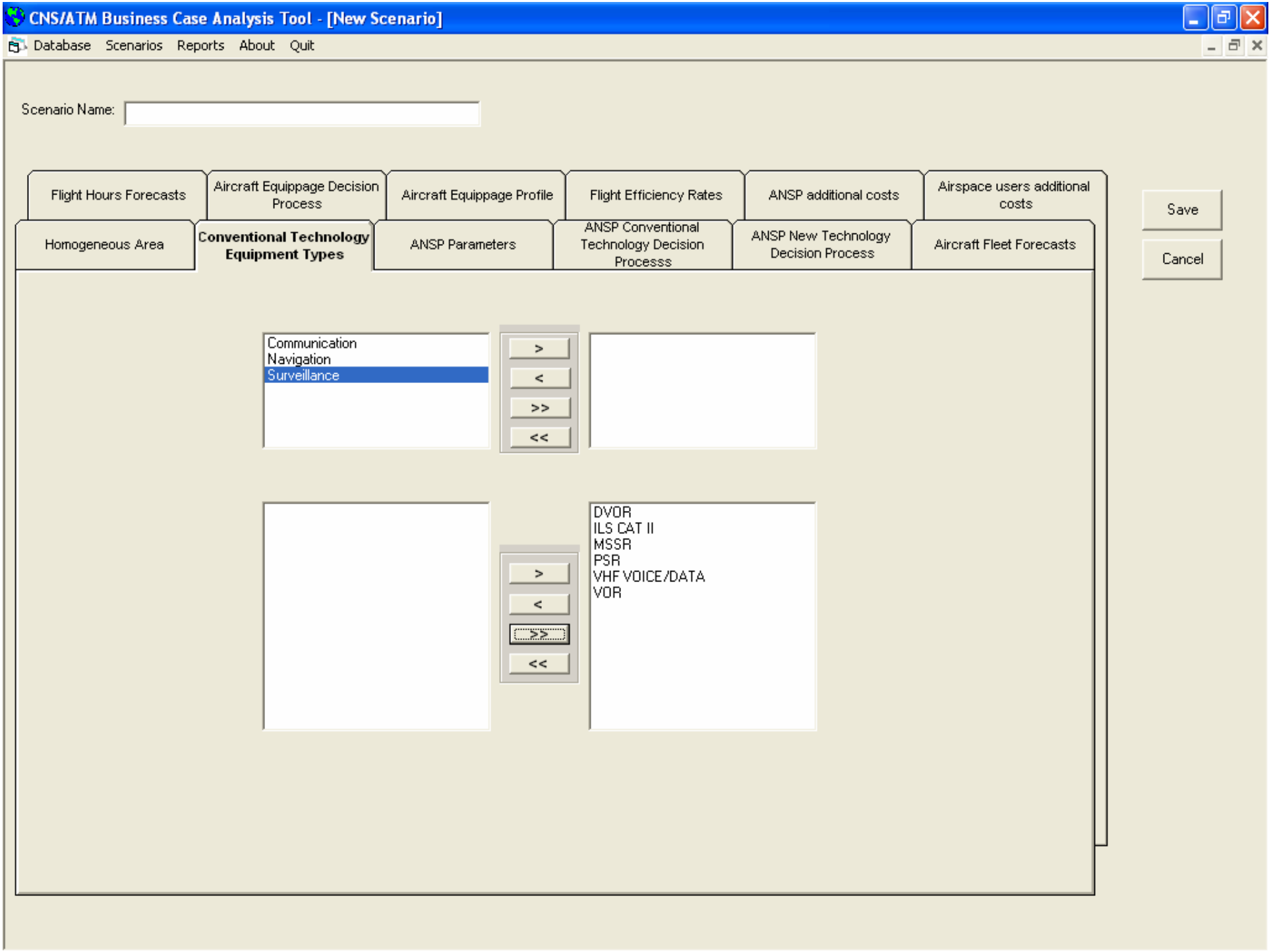
MSSR
PSR
DVOR
ILS CAT II
VHF VOICE/DATA
VOR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Quit
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Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Communication
Navigation
Surveillance
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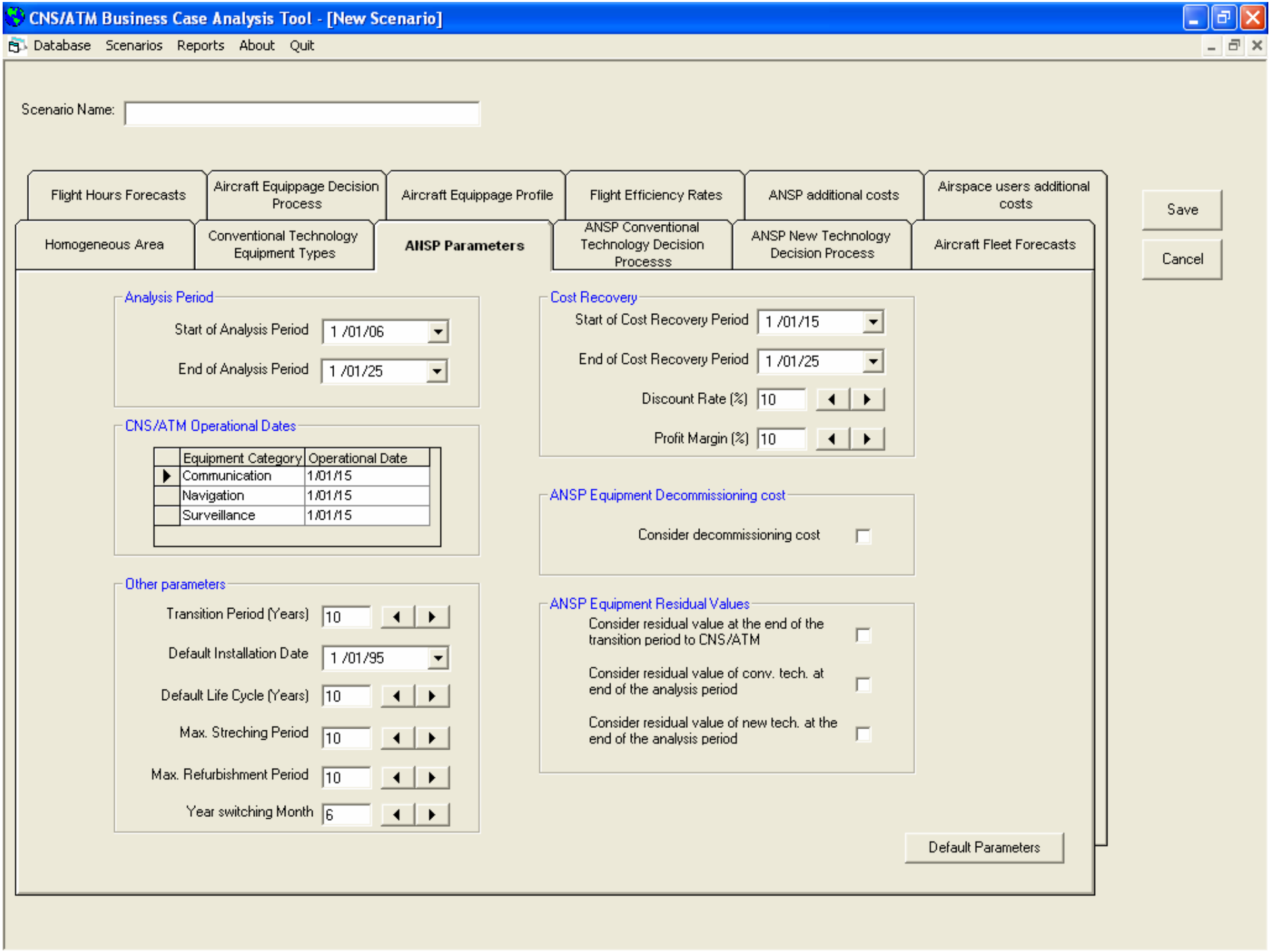
DVOR
ILS CAT II
MSSR
PSR
VHF VOICE/DATA
VOR

Step 3/3 : Define Scenario parameters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About
Quit
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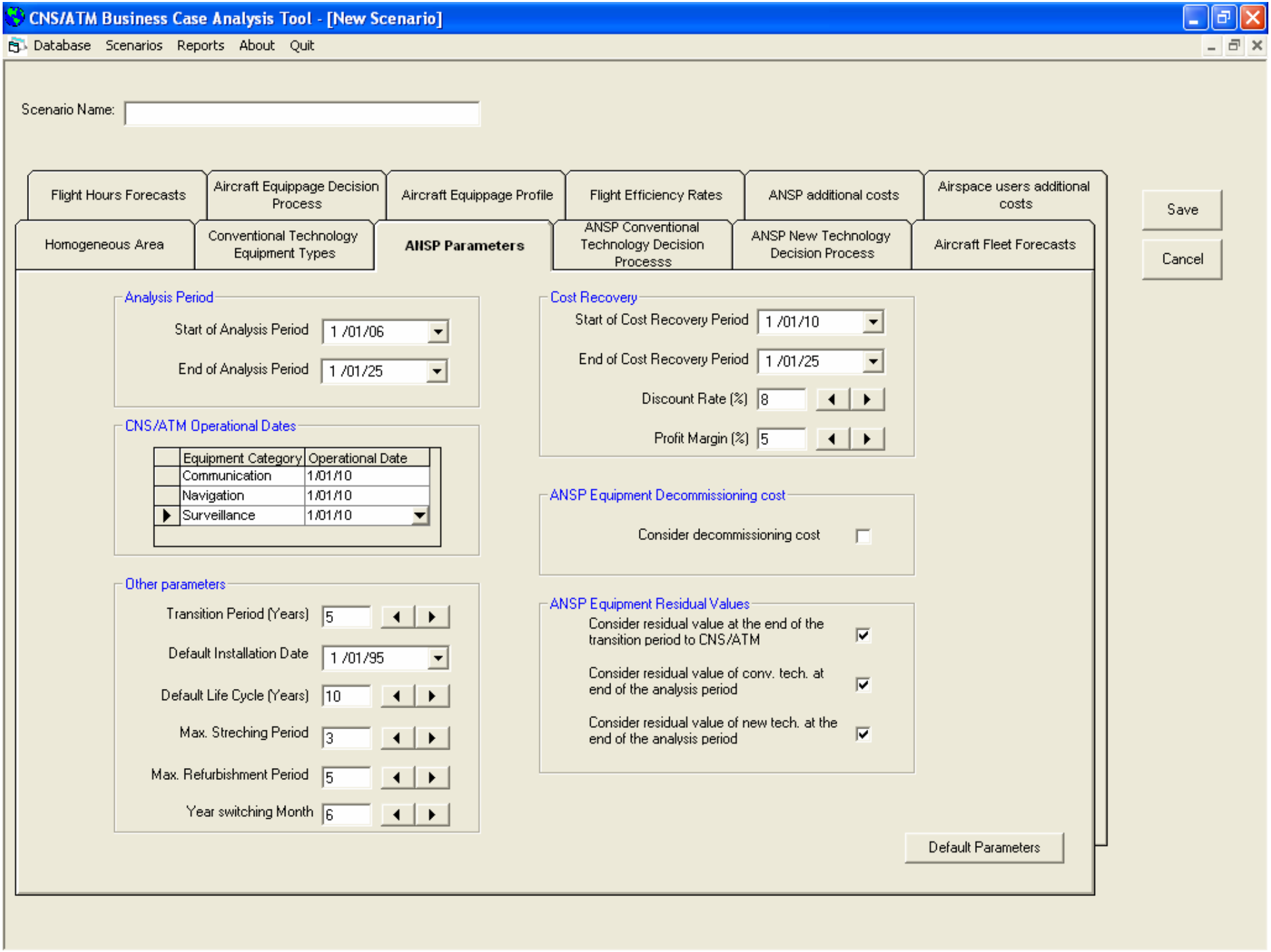
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Analysis Period
Start of Analysis Period
1 /01/06
End of Analysis Period
1 /01/25
CNS/ATM Operational Dates
Equipment Category
Operational Date
Communication
1/01/15
Navigation
1/01/15
Surveillance
1/01/15
Other parameters
Transition Period (Years)
10
Default Installation Date
1 /01/95
Default Life Cycle (Years)
10
Max. Streching Period
10
Max. Refurbishment Period
10
Year switching Month
6
Cost Recovery
Start of Cost Recovery Period
1 /01/15
End of Cost Recovery Period
1 /01/25
Discount Rate (%)
10
Profit Margin (%)
10
ANSP Equipment Decommissioning cost
Consider decommissioning cost
ANSP Equipment Residual Values
Consider residual value at the end of the transition period to CNS/ATM
Consider residual value of conv. tech. at end of the analysis period
Consider residual value of new tech. at the end of the analysis period
Default Parameters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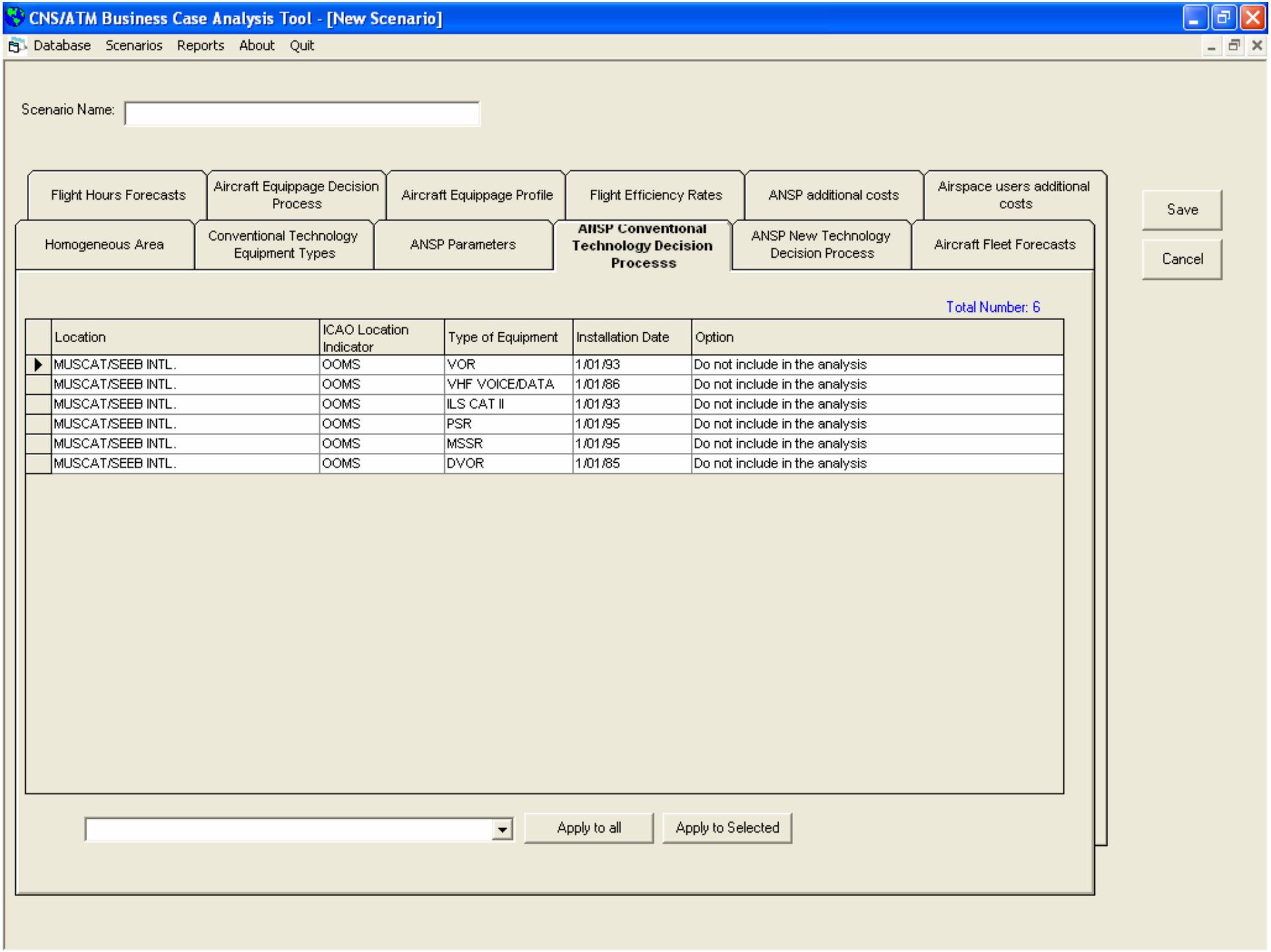
Database
Scenarios
Reports
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Analysis Period
Start of Analysis Period
1 /01/06
End of Analysis Period
1 /01/25
CNS/ATM Operational Dates
Equipment Category
Operational Date
Communication
1/01/10
Navigation
1/01/10
Surveillance
1/01/10
Other parameters
Transition Period (Years)
5
Default Installation Date
1 /01/95
Default Life Cycle (Years)
10
Max. Streching Period
3
Max. Refurbishment Period
5
Year switching Month
6
Cost Recovery
Start of Cost Recovery Period
1 /01/10
End of Cost Recovery Period
1 /01/25
Discount Rate (%)
8
Profit Margin (%)
5
ANSP Equipment Decommissioning cost
Consider decommissioning cost
ANSP Equipment Residual Values
Consider residual value at the end of the transition period to CNS/ATM
Consider residual value of conv. tech. at end of the analysis period
Consider residual value of new tech. at the end of the analysis period
Default Parameters

Step 3/4 : Make decisions on conventional technology equipment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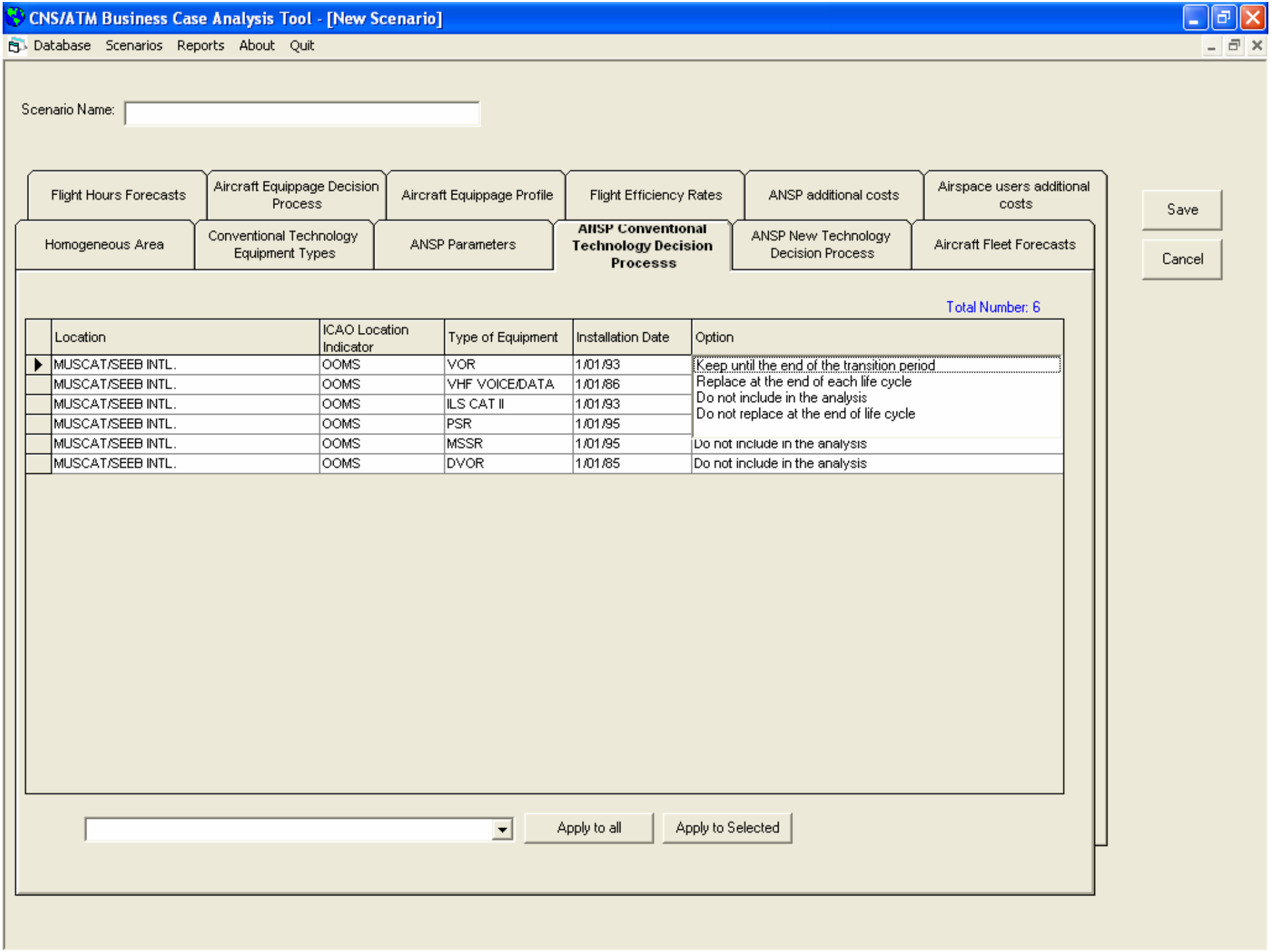
Database
Scenarios
Reports
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Total Number: 6
Location
ICAO Location Indicator
Type of Equipment
Installation Date
Option
MUSCAT/SEEB INTL.
OOMS
VOR
1/01/93
Do not include in the analysis
MUSCAT/SEEB INTL.
OOMS
VHF VOICE/DATA
1/01/86
Do not include in the analysis
MUSCAT/SEEB INTL.
OOMS
ILS CAT II
1/01/93
Do not include in the analysis
MUSCAT/SEEB INTL.
OOMS
PSR
1/01/95
Do not include in the analysis
MUSCAT/SEEB INTL.
OOMS
MSSR
1/01/95
Do not include in the analysis
MUSCAT/SEEB INTL.
OOMS
DVOR
1/01/85
Do not include in the analysis
Apply to all
Apply to Selected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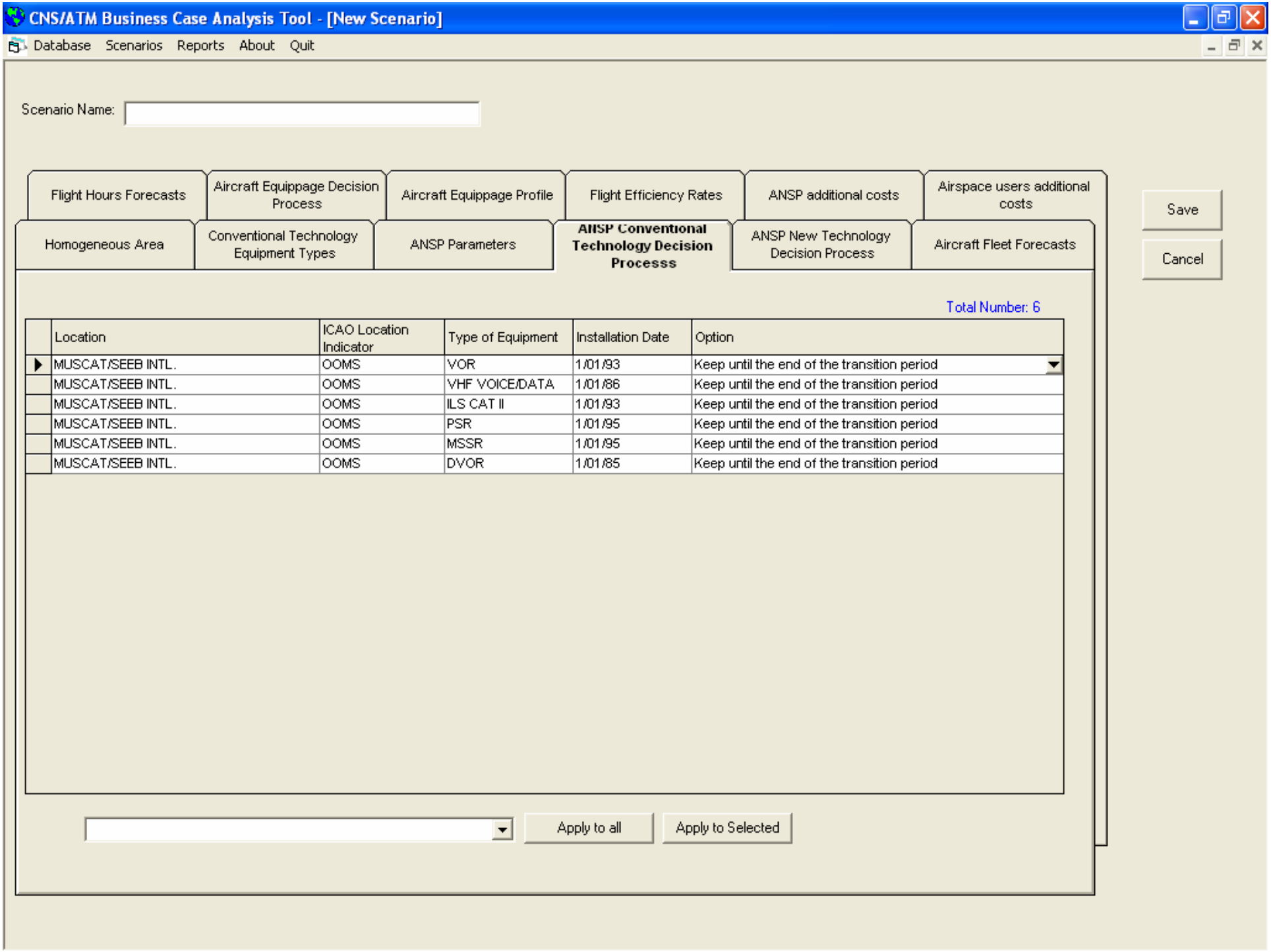
Scenarios
Reports
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Total Number: 6
Location
ICAO Location Indicator
Type of Equipment
Installation Date
Option
MUSCAT/SEEB INTL.
OOMS
VOR
1/01/93
Keep until the end of the transition period
MUSCAT/SEEB INTL.
OOMS
VHF VOICE/DATA
1/01/86
Replace at the end of each life cycle
MUSCAT/SEEB INTL.
OOMS
ILS CAT II
1/01/93
Do not include in the analysis
MUSCAT/SEEB INTL.
OOMS
PSR
1/01/95
Do not replace at the end of life cycle
MUSCAT/SEEB INTL.
OOMS
MSSR
1/01/95
Do not include in the analysis
MUSCAT/SEEB INTL.
OOMS
DVOR
1/01/85
Do not include in the analysis
Apply to all
Apply to Selected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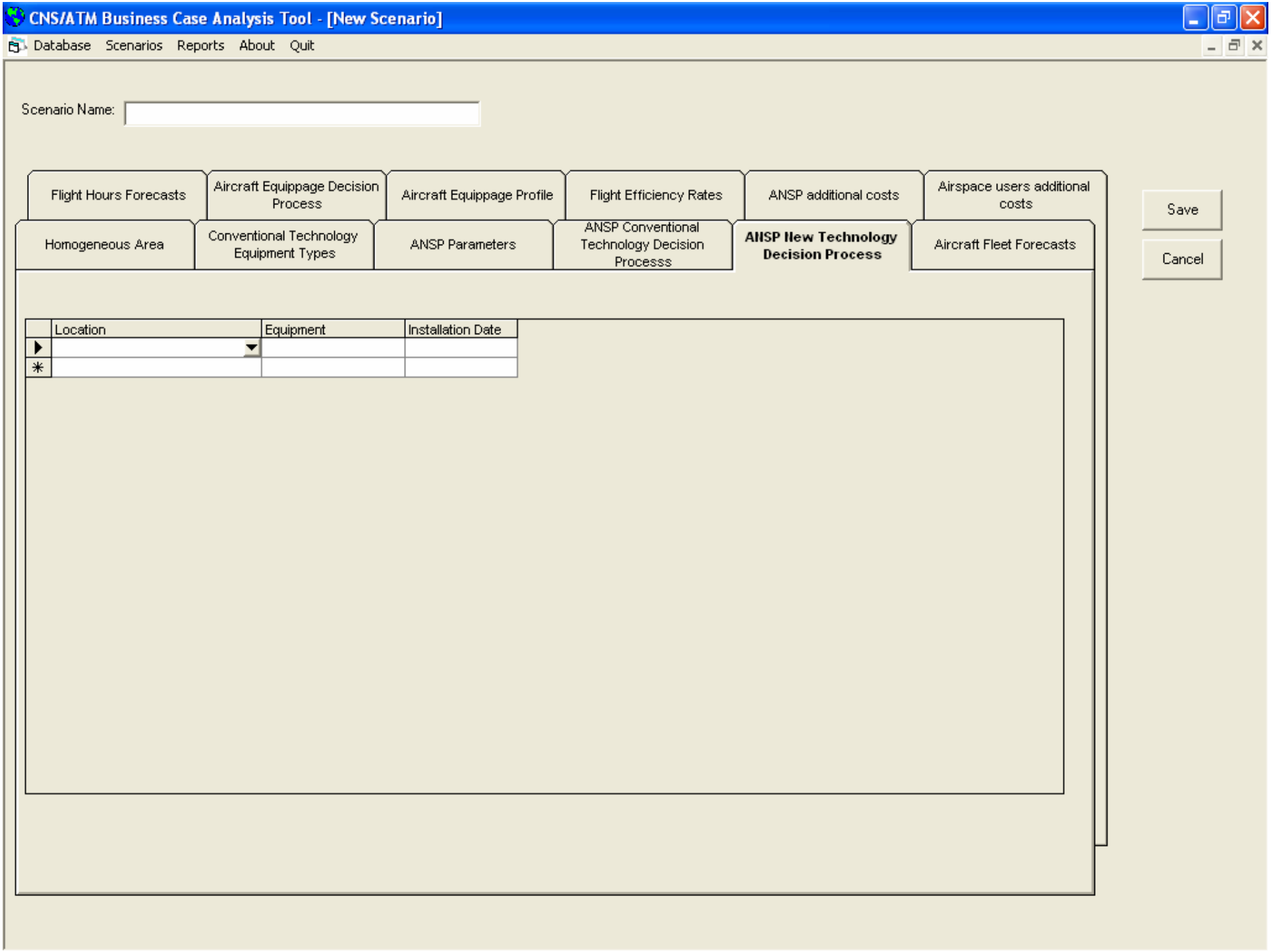
Scenarios
Reports
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Total Number: 6
Location
ICAO Location Indicator
Type of Equipment
Installation Date
Option
MUSCAT/SEEB INTL. OOMS VOR 1/01/93 Keep until the end of the transition period
MUSCAT/SEEB INTL. OOMS VHF VOICE/DATA 1/01/86 Keep until the end of the transition period
MUSCAT/SEEB INTL. OOMS ILS CAT II 1/01/93 Keep until the end of the transition period
MUSCAT/SEEB INTL. OOMS PSR 1/01/95 Keep until the end of the transition period
MUSCAT/SEEB INTL. OOMS MSSR 1/01/95 Keep until the end of the transition period
MUSCAT/SEEB INTL. OOMS DVOR 1/01/85 Keep until the end of the transition period
Apply to all
Apply to Selected

Step 3/5 : Make decisions on new technology equipment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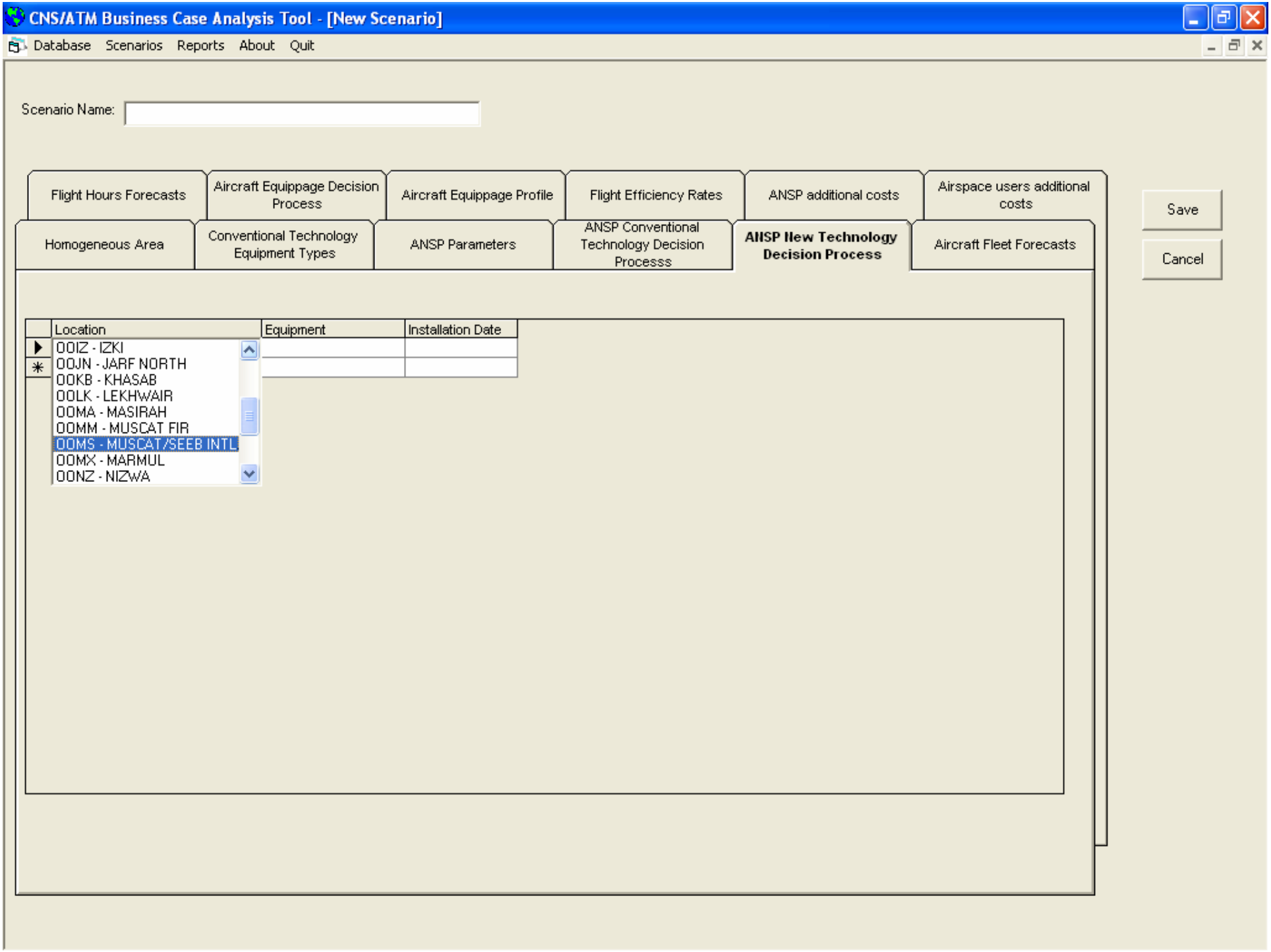
Reports
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Location
Equipment
Installation Date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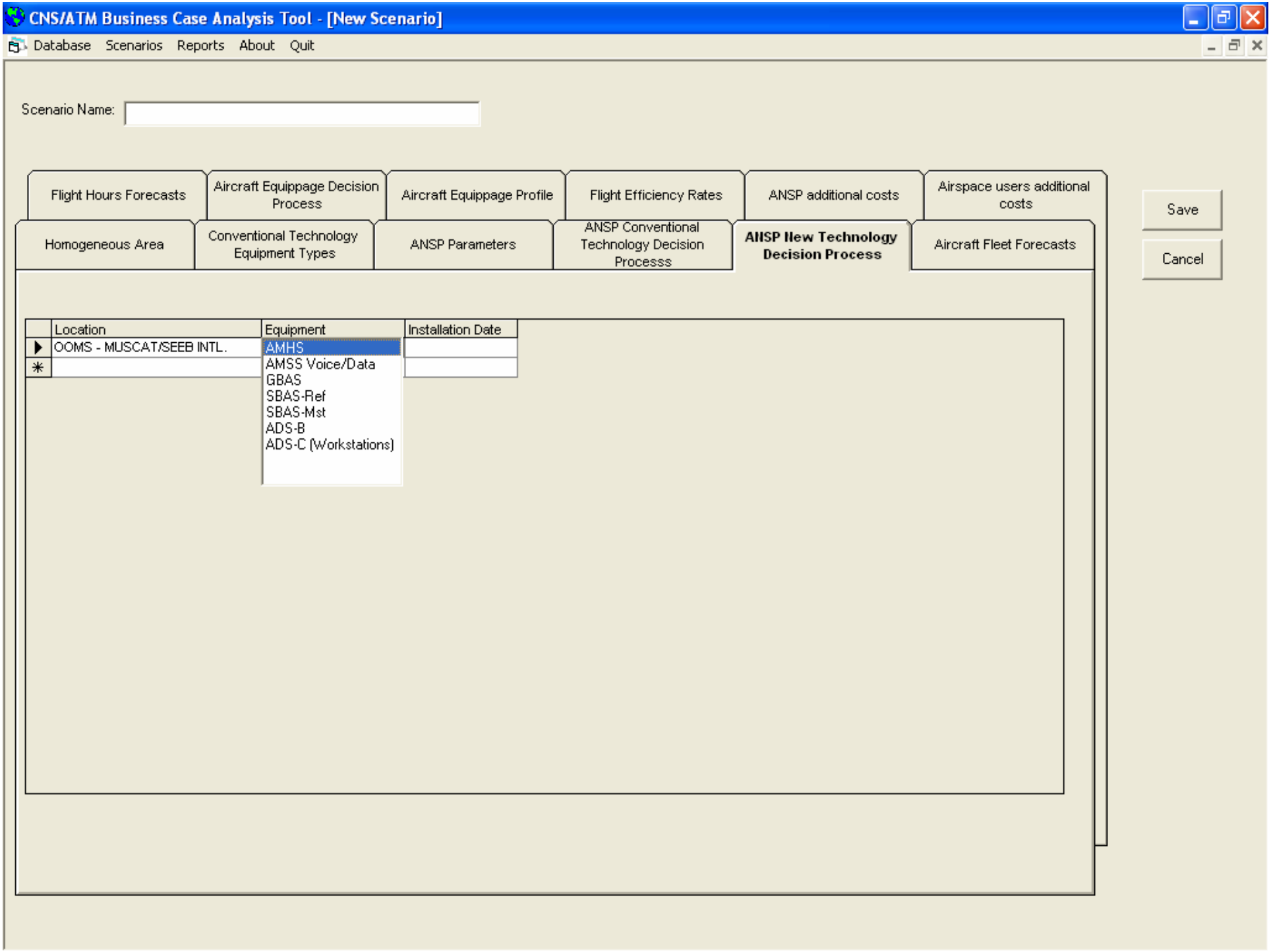
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Location
Equipment
Installation Date
OOIZ - IZKI
OOJN - JARF NORTH
OOKB - KHASAB
OOLK - LEKHWAIR
OOMA - MASIRAH
OOMM - MUSCAT FIR
OOMS - MUSCAT/SEEB INTL
OOMX - MARMUL
OONZ - NIZWA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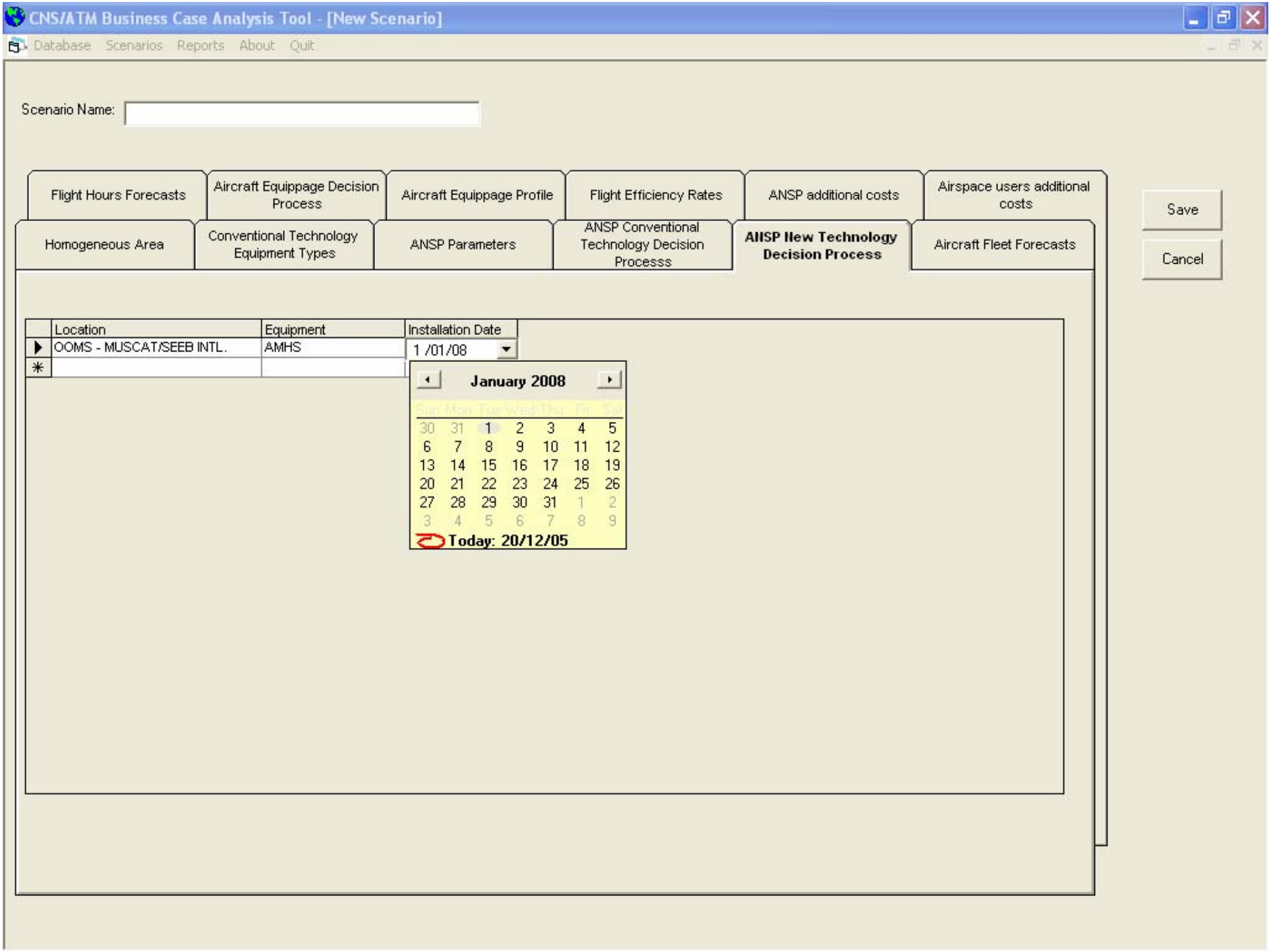
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Location
Equipment
Installation Date
OOMS - MUSCAT/SEEB INTL.
AMHS
AMSS Voice/Data
GBAS
SBAS-Ref
SBAS-Mst
ADS-B
ADS-C (Workstations)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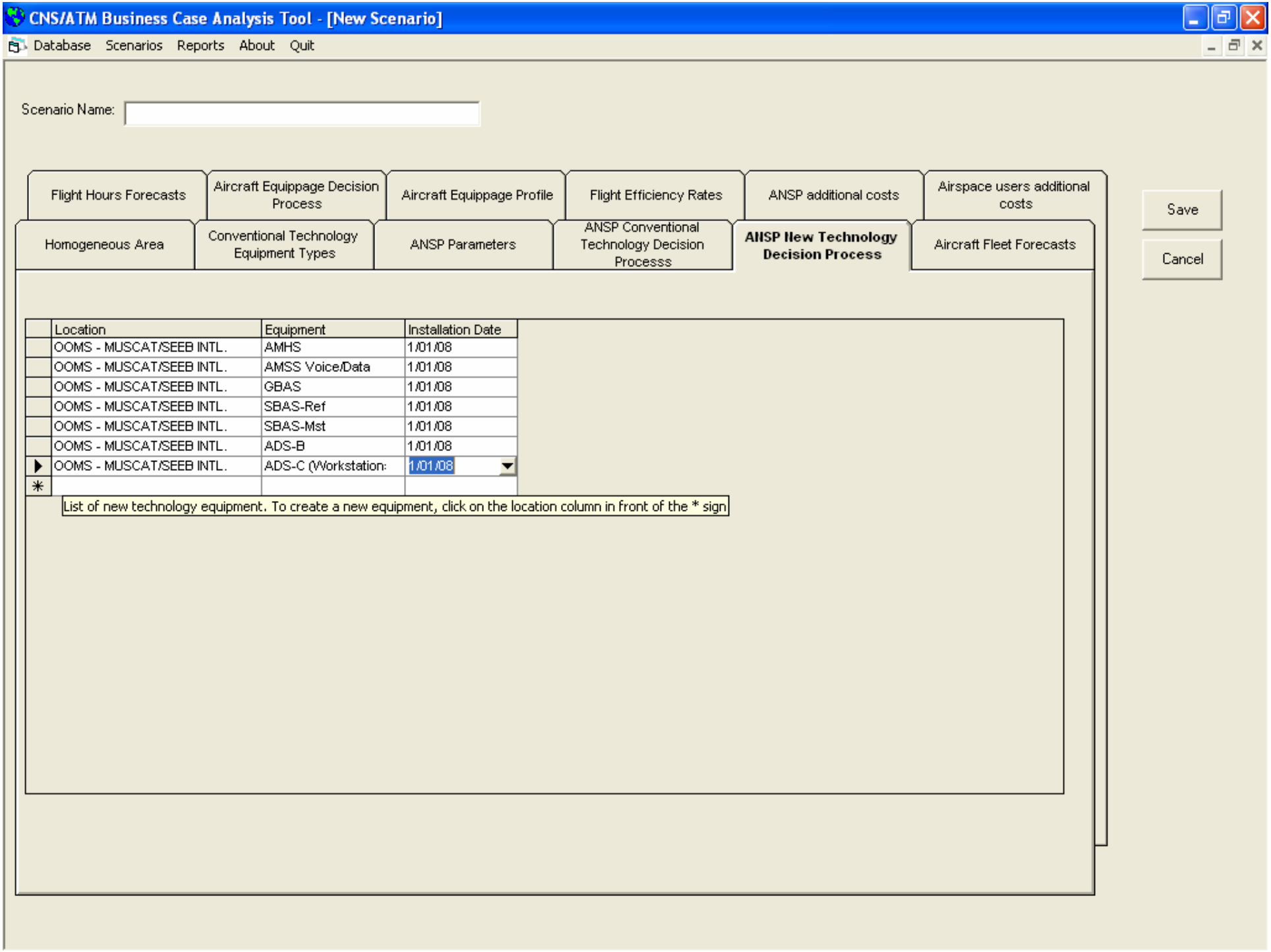
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Location
Equipment
Installation Date
OOMS - MUSCAT/SEEB INTL.
AMHS
1 /01/08
January 2008
Sun Mon Tue Wed Thu Fri Sat
30 31 1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31 1 2
3 4 5 6 7 8 9
Today: 20/12/05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Quit
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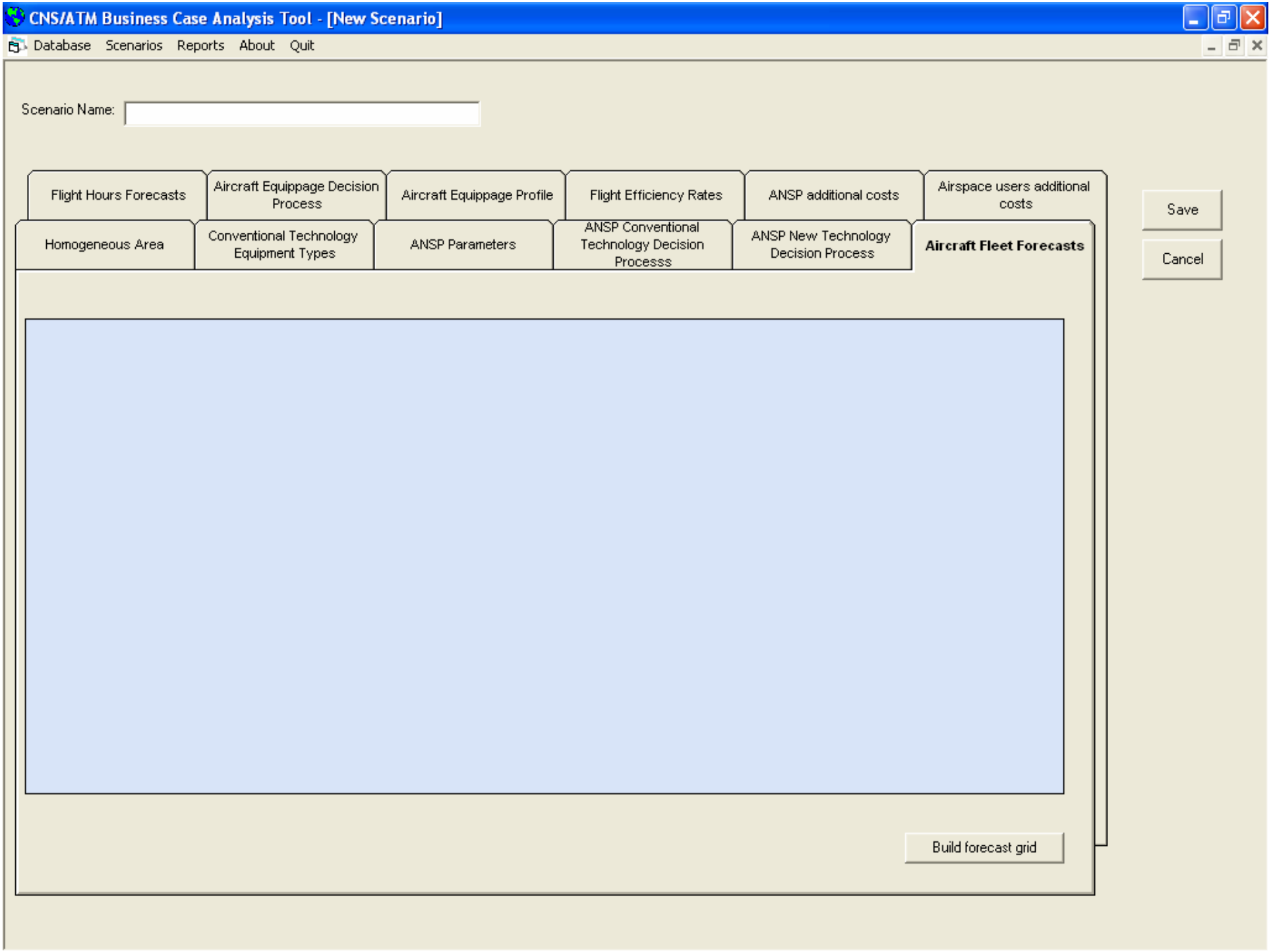
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Location
Equipment
Installation Date
OOMS - MUSCAT/SEEB INTL.
AMHS
1/01/08
OOMS - MUSCAT/SEEB INTL.
AMSS Voice/Data
1/01/08
OOMS - MUSCAT/SEEB INTL.
GBAS
1/01/08
OOMS - MUSCAT/SEEB INTL.
SBAS-Ref
1/01/08
OOMS - MUSCAT/SEEB INTL.
SBAS-Mst
1/01/08
OOMS - MUSCAT/SEEB INTL.
ADS-B
1/01/08
OOMS - MUSCAT/SEEB INTL.
ADS-C (Workstation:
1/01/08
List of new technology equipment. To create a new equipment, click on the location column in front of the * sign

Step 3/6 : Add fleet and flight hours forecasts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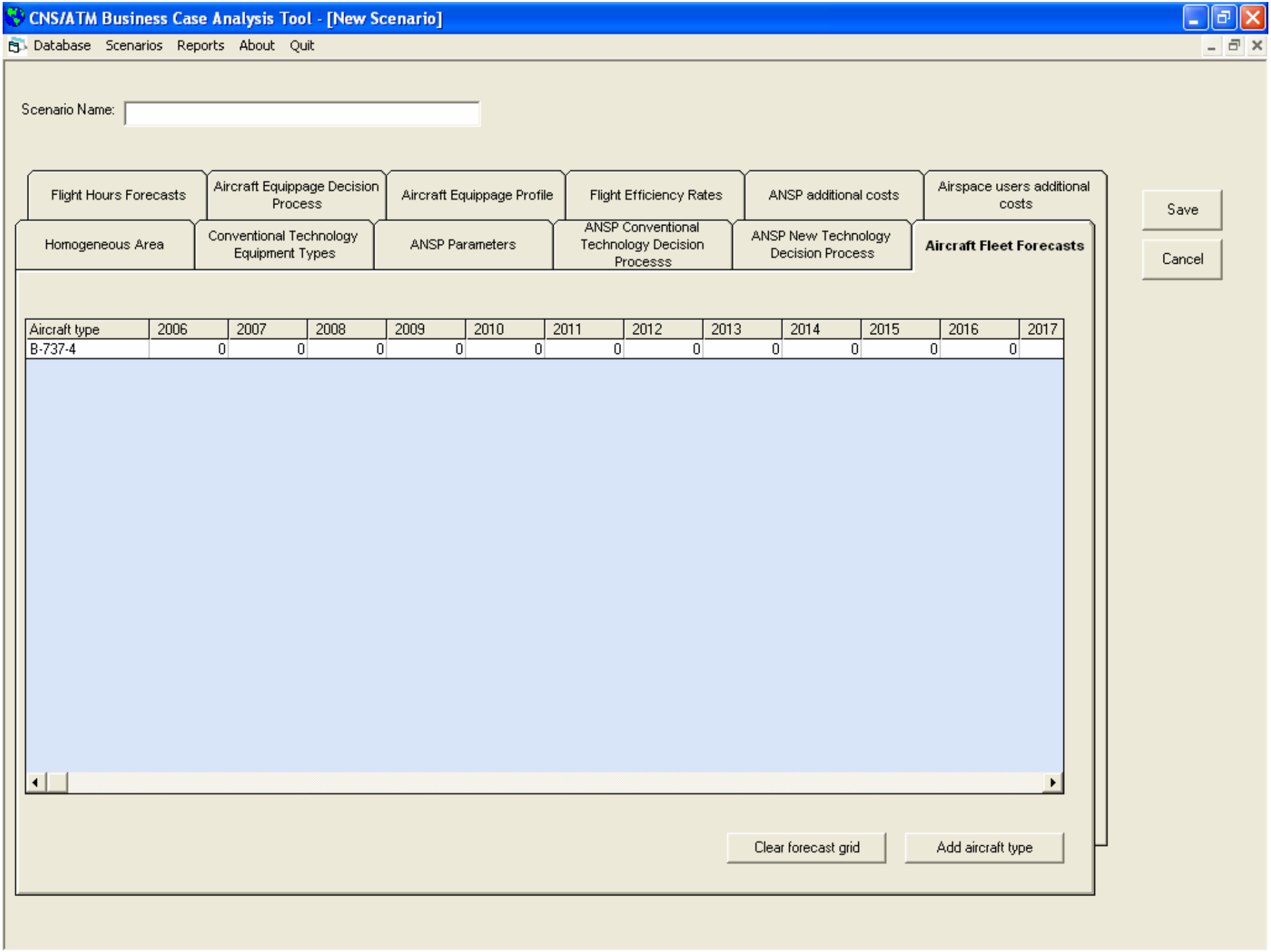
Reports
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Build forecast grid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Quit
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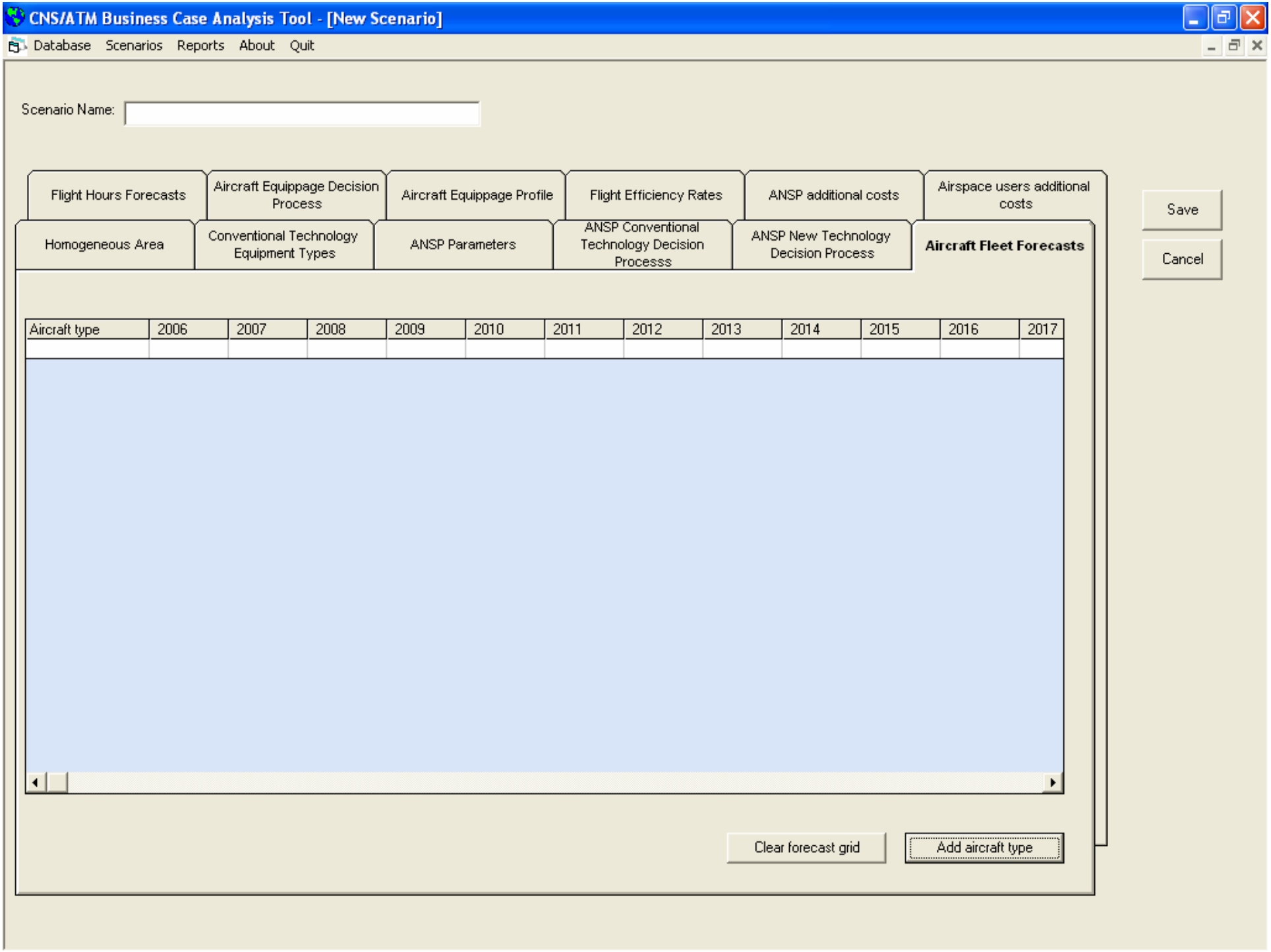
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Aircraft type
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
B-737-4
0
0
0
0
0
0
0
0
0
0
0
Clear forecast grid
Add aircraft type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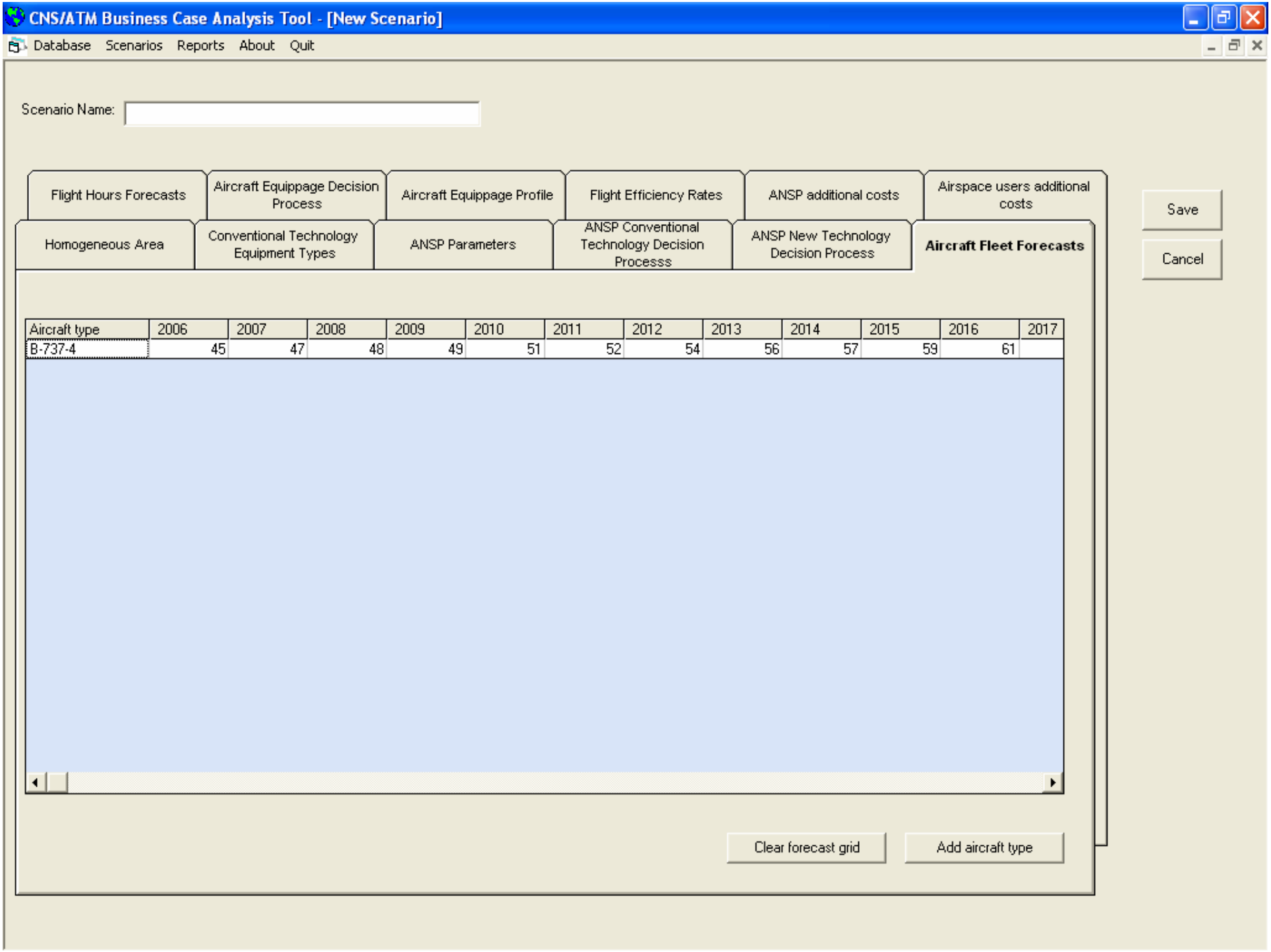
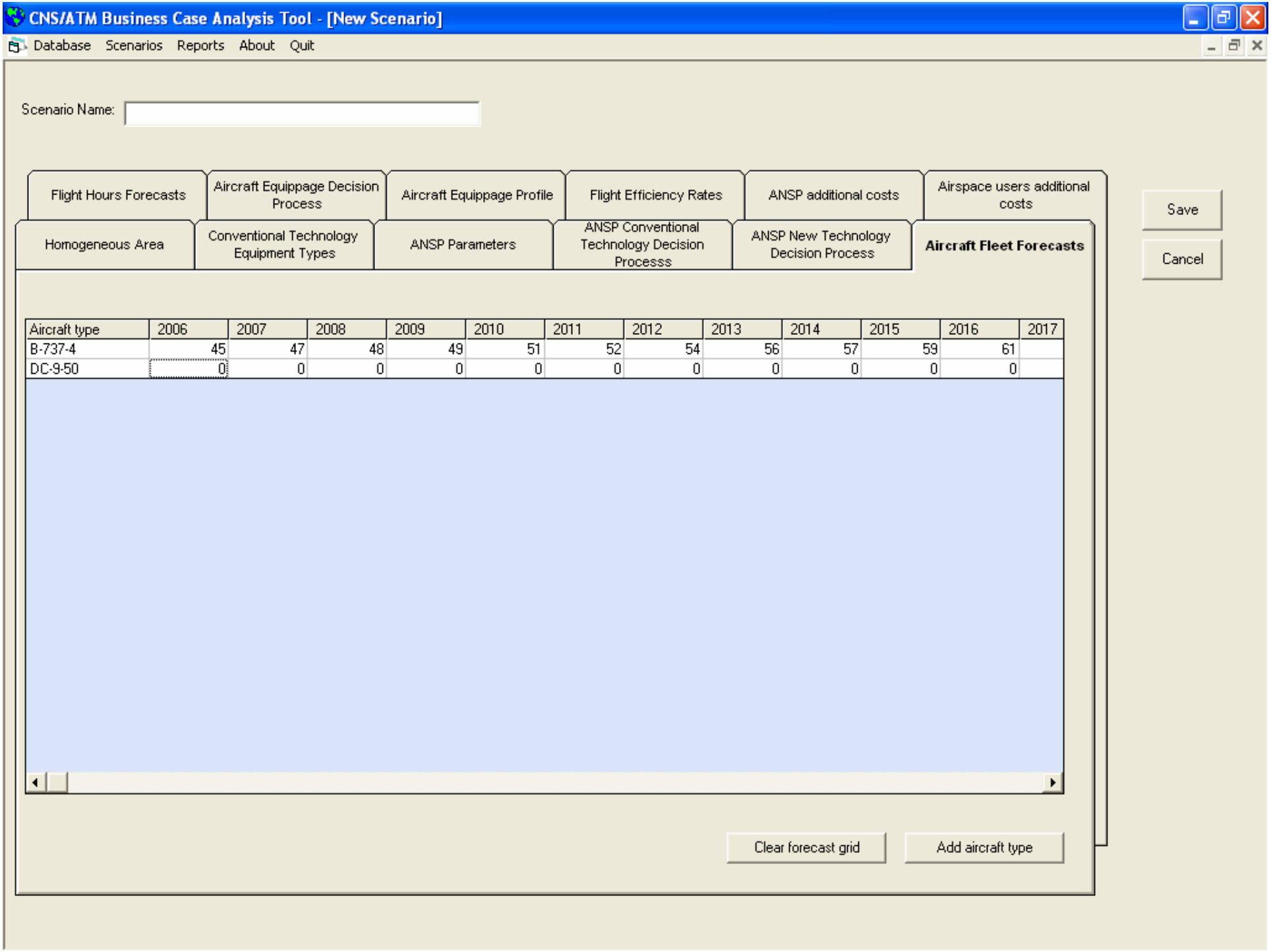
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Aircraft type
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Clear forecast grid
Add aircraft type


CNS/ATM Business Case Analysis Tool - [New Scenario]
Database
Scenarios
Reports
About
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Aircraft type
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
B-737-4
45
47
48
49
51
52
54
56
57
59
61
Clear forecast grid
Add aircraft type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Reports
About
Quit
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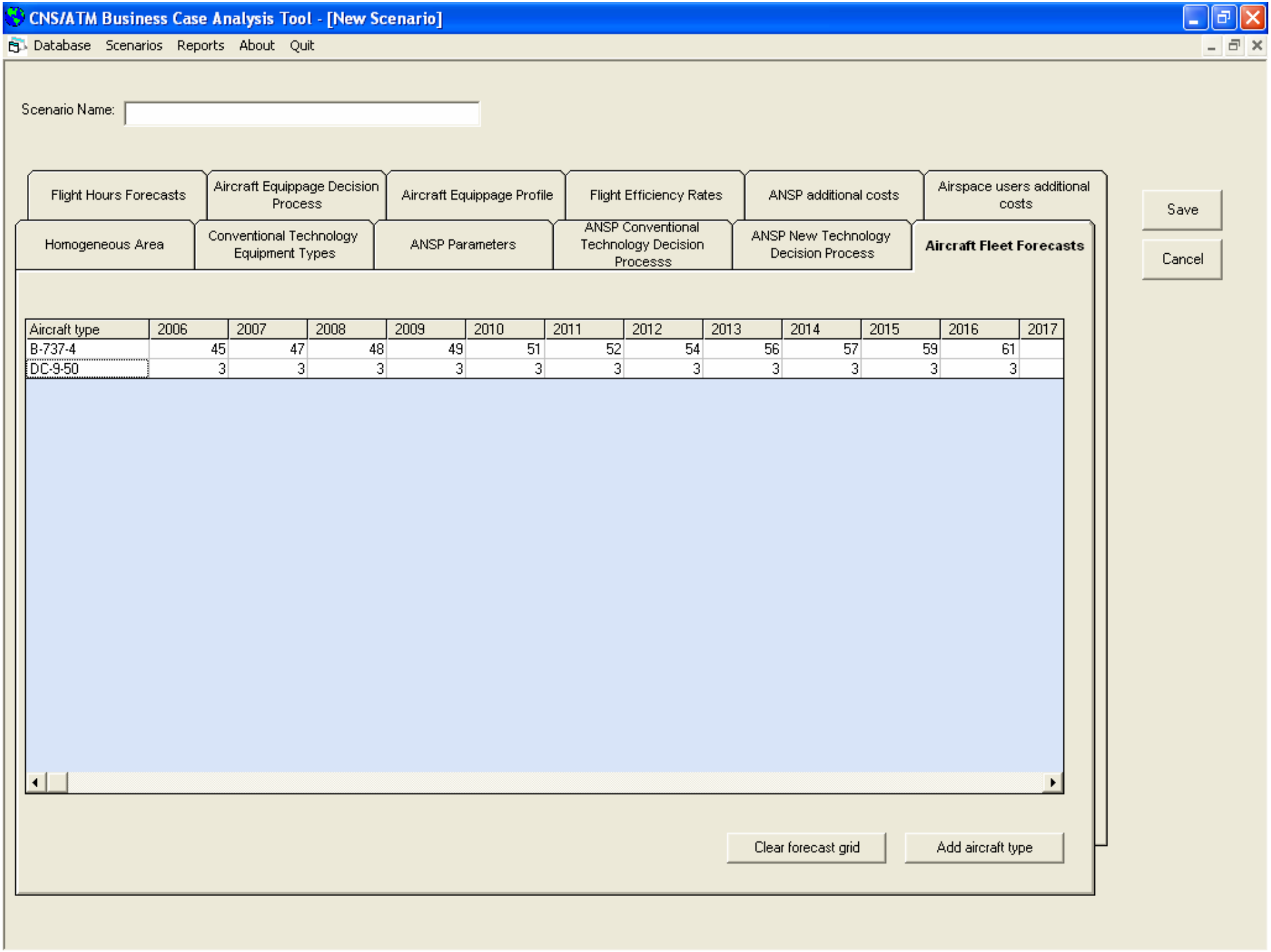
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Aircraft type 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
B-737-4 45 47 48 49 51 52 54 56 57 59 61
DC-9-50 0 0 0 0 0 0 0 0 0 0 0
Clear forecast grid
Add aircraft type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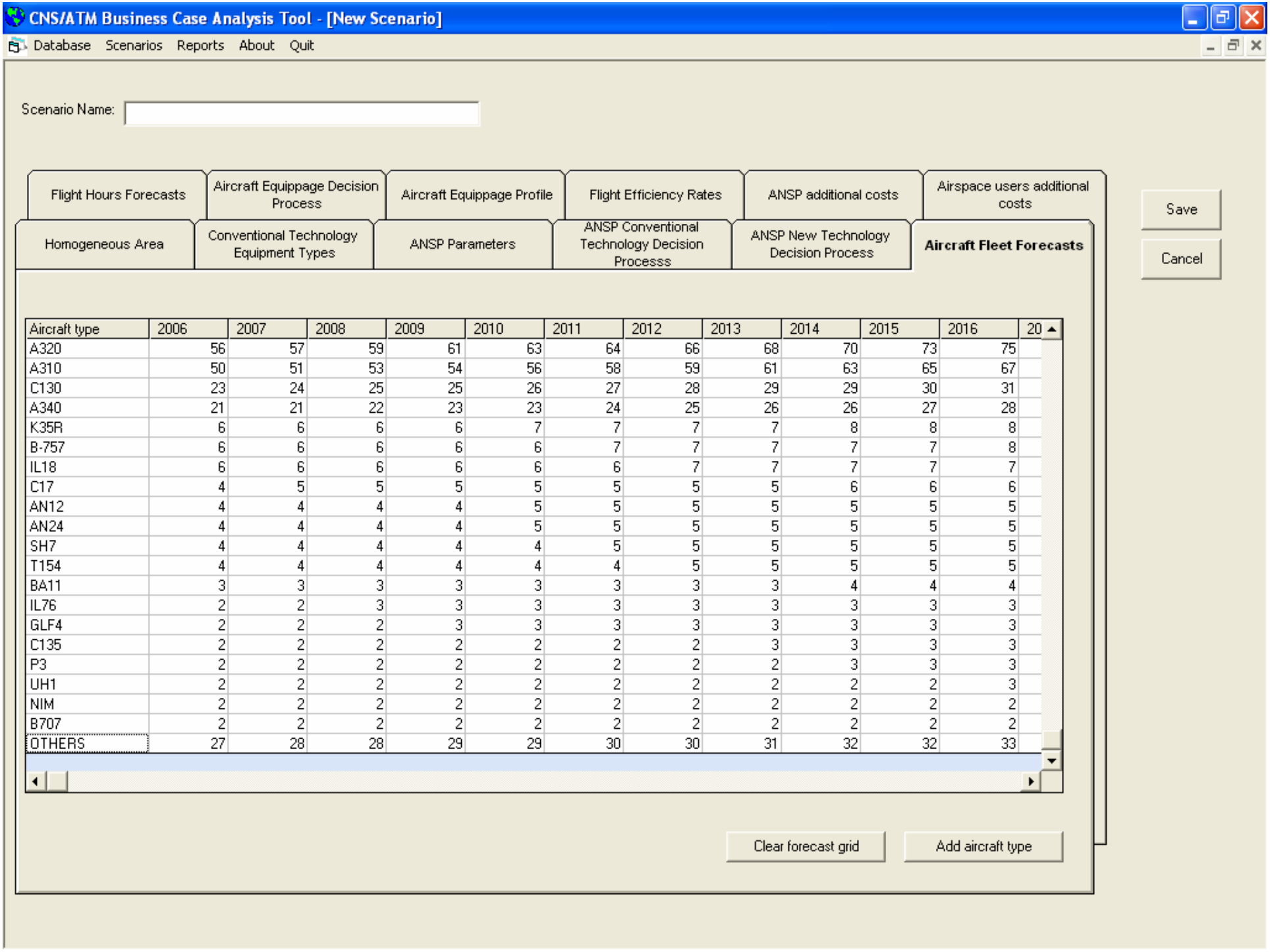
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Aircraft type 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
B-737-4 45 47 48 49 51 52 54 56 57 59 61
DC-9-50 3 3 3 3 3 3 3 3 3 3 3
Clear forecast grid
Add aircraft type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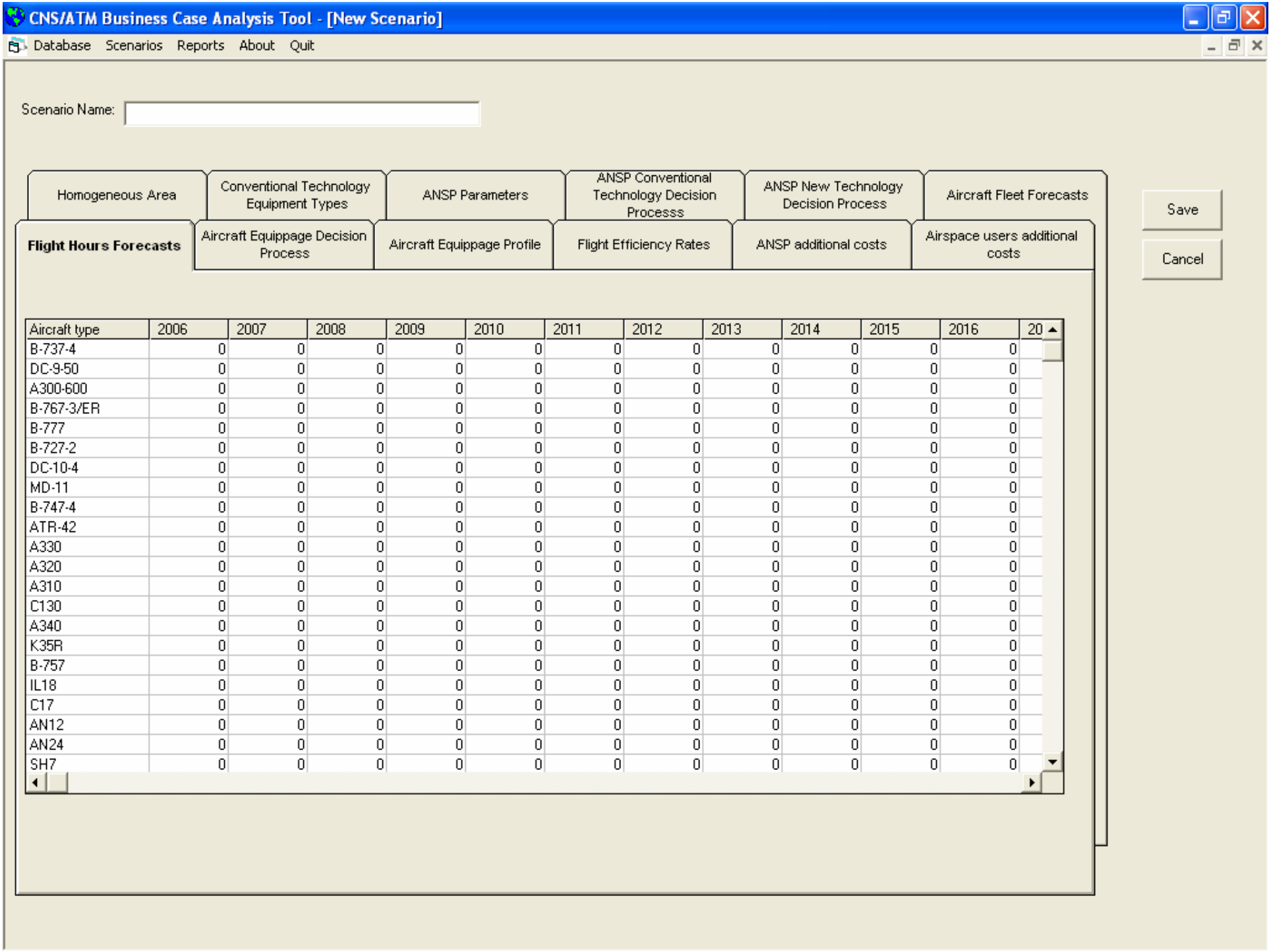
Quit
Scenario Name:
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Save
Cancel
Aircraft type 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 20
A320 56 57 59 61 63 64 66 68 70 73 75
A310 50 51 53 54 56 58 59 61 63 65 67
C130 23 24 25 25 26 27 28 29 29 30 31
A340 21 21 22 23 23 24 25 26 26 27 28
K35R 6 6 6 6 7 7 7 7 8 8 8
B-757 6 6 6 6 6 7 7 7 7 7 8
IL18 6 6 6 6 6 6 7 7 7 7 7
C17 4 5 5 5 5 5 5 5 6 6 6
AN12 4 4 4 4 5 5 5 5 5 5 5
AN24 4 4 4 4 5 5 5 5 5 5 5
SH7 4 4 4 4 4 5 5 5 5 5 5
T154 4 4 4 4 4 4 5 5 5 5 5
BA11 3 3 3 3 3 3 3 3 4 4 4
IL76 2 2 3 3 3 3 3 3 3 3 3
GLF4 2 2 2 3 3 3 3 3 3 3 3
C135 2 2 2 2 2 2 2 3 3 3 3
P3 2 2 2 2 2 2 2 2 3 3 3
UH1 2 2 2 2 2 2 2 2 2 2 3
NIM 2 2 2 2 2 2 2 2 2 2 2
B707 2 2 2 2 2 2 2 2 2 2 2
OTHERS 27 28 28 29 29 30 30 31 32 32 33
Clear forecast grid
Add aircraft type



Aircraft type	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	20
B-737-4	0	0	0	0	0	0	0	0	0	0	0	
DC-9-50	0	0	0	0	0	0	0	0	0	0	0	
A300-600	0	0	0	0	0	0	0	0	0	0	0	
B-767-3/ER	0	0	0	0	0	0	0	0	0	0	0	
B-777	0	0	0	0	0	0	0	0	0	0	0	
B-727-2	0	0	0	0	0	0	0	0	0	0	0	
DC-10-4	0	0	0	0	0	0	0	0	0	0	0	
MD-11	0	0	0	0	0	0	0	0	0	0	0	
B-747-4	0	0	0	0	0	0	0	0	0	0	0	
ATR-42	0	0	0	0	0	0	0	0	0	0	0	
A330	0	0	0	0	0	0	0	0	0	0	0	
A320	0	0	0	0	0	0	0	0	0	0	0	
A310	0	0	0	0	0	0	0	0	0	0	0	
C130	0	0	0	0	0	0	0	0	0	0	0	
A340	0	0	0	0	0	0	0	0	0	0	0	
K35R	0	0	0	0	0	0	0	0	0	0	0	
B-757	0	0	0	0	0	0	0	0	0	0	0	
IL18	0	0	0	0	0	0	0	0	0	0	0	
C17	0	0	0	0	0	0	0	0	0	0	0	
AN12	0	0	0	0	0	0	0	0	0	0	0	
AN24	0	0	0	0	0	0	0	0	0	0	0	
SH7	0	0	0	0	0	0	0	0	0	0	0	

CNS/ATM Business Case Analysis Tool - [Scenario Manager]

Database Scenarios Reports About Quit

Scenario Name:

Homogeneous Area | Conventional Technology Equipment Types | ANSP Parameters | ANSP Conventional Technology Decision Processs | ANSP New Technology Decision Process | Aircraft Fleet Forecasts

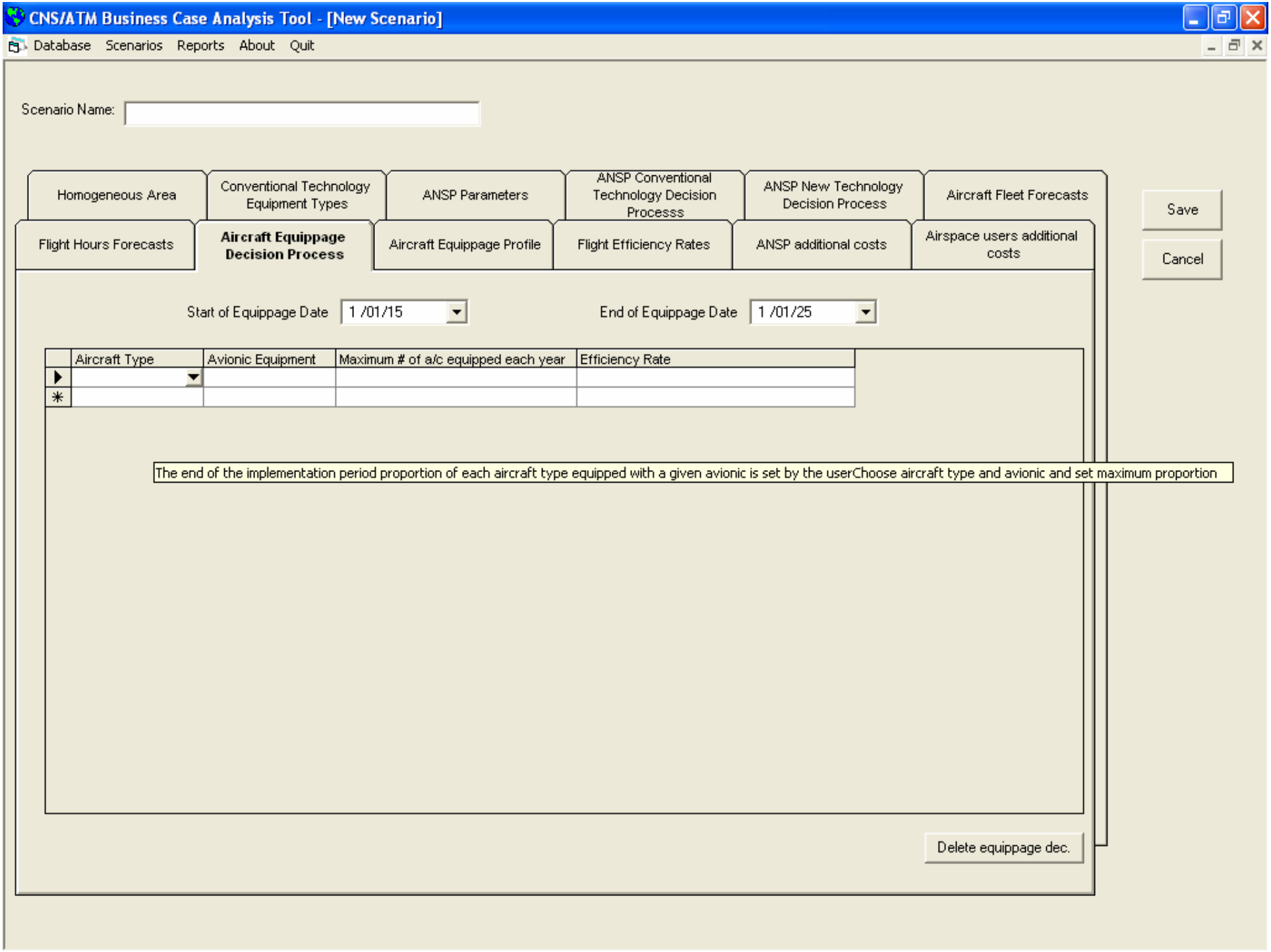
Flight Hours Forecasts | Aircraft Equippage Decision Process | Aircraft Equippage Profile | Flight Efficiency Rates | ANSP additional costs | Airspace users additional costs

Save

Cancel

Aircraft Type	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	20
B-737-4	32992	33981	35000	36051	37132	38245	39395	40576	41792	43045	44339	45
B-757	4152	4277	4405	4539	4675	4813	4957	5108	5260	5419	5580	57
DC-9-50	1888	1947	2004	2064	2125	2189	2256	2323	2392	2464	2539	26
A-300-600	23496	24203	24928	25676	26445	27237	28056	28899	29764	30659	31579	32
B-767-3/ER	30917	31844	32800	33784	34797	35843	36916	38024	39165	40340	41549	42
B-777	34290	35317	36379	37469	38595	39752	40944	42172	43437	44740	46083	47
B-727-2	1512	1556	1604	1652	1701	1752	1804	1859	1915	1972	2032	20
DC-10-4	6308	6496	6692	6892	7100	7312	7532	7757	7989	8229	10476	87
MD-11	6941	7149	7364	7587	7813	8048	8288	8539	8795	9059	9331	96
B-747-4	58731	60492	62308	64176	66101	68084	70128	72232	74397	76629	78931	81
OTHERS	19765	20160	20564	20976	21395	21821	22260	22704	23157	23621	24093	24
A330	49659	51146	52683	54261	55891	57565	59293	61072	62904	64792	66733	68
A320	40603	41820	43075	44365	45699	47068	48480	49936	51435	52976	54565	56
A310	36221	37309	38428	39581	40768	41992	43252	44549	45885	47261	48680	50
C130	16957	17467	17989	18531	19085	19659	20248	20856	21483	22125	22789	23
A340	15195	15651	16117	16603	17100	17613	18141	18685	19245	19824	20419	21
K35R	4340	4469	4604	4741	4884	5032	5181	5339	5499	5661	5832	60
IL18	4059	4180	4304	4435	4565	4704	4845	4989	5140	5293	5453	56
C17	3189	3285	3384	3485	3589	3699	3808	3923	4040	4163	4285	44
AN12	2965	3053	3147	3240	3339	3437	3540	3645	3756	3868	3984	41
AN24	2955	3043	3133	3228	3324	3424	3525	3632	3741	3853	3971	40
SH7	2900	2988	3076	3171	3264	3363	3464	3568	3675	3784	3899	40

Step 3/7 : Make decisions on aircraft equippage and efficiency rates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Conventional Technology Equipment Types
ANSP Parameters
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ANSP New Technology Decision Process
Aircraft Fleet Forecasts
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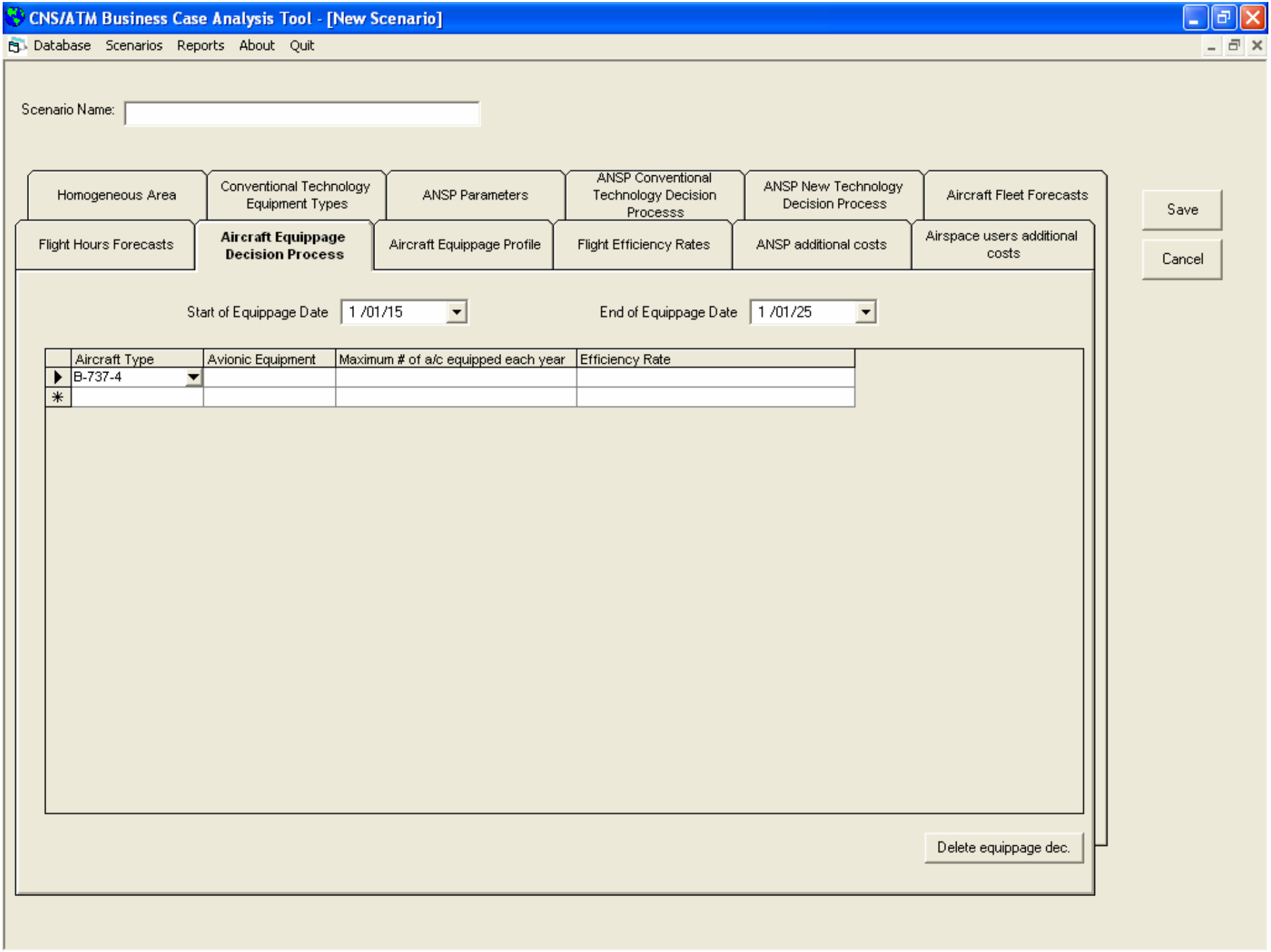
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Start of Equippage Date
1 /01/15
End of Equippage Date
1 /01/25
Aircraft Type
Avionic Equipment
Maximum # of a/c equipped each year
Efficiency Rate
The end of the implementation period proportion of each aircraft type equipped with a given avionic is set by the userChoose aircraft type and avionic and set maximum proportion
Delete equippage dec.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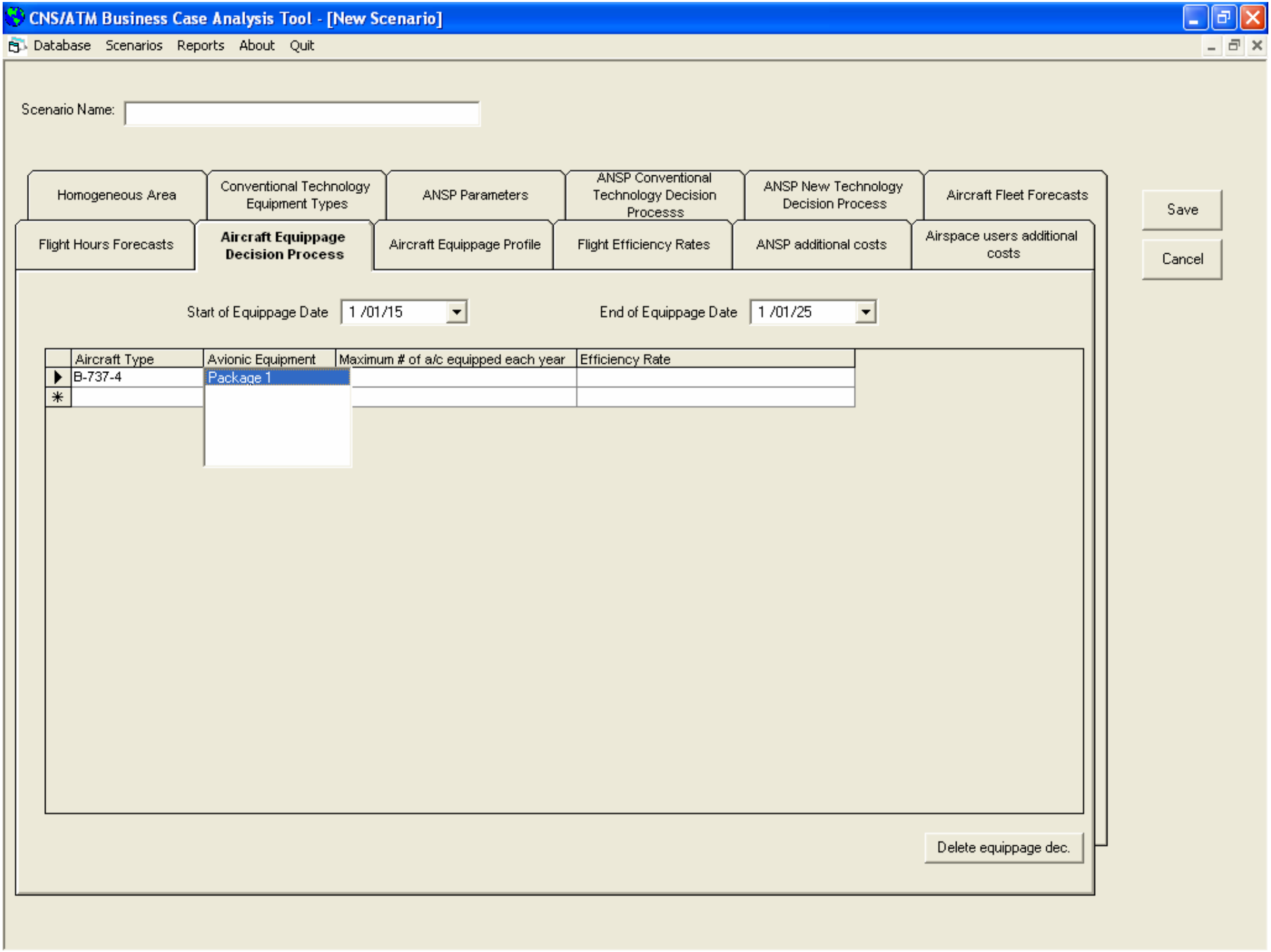
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Start of Equippage Date
1 /01/15
End of Equippage Date
1 /01/25
Aircraft Type
Avionic Equipment
Maximum # of a/c equipped each year
Efficiency Rate
B-737-4
Delete equippage dec.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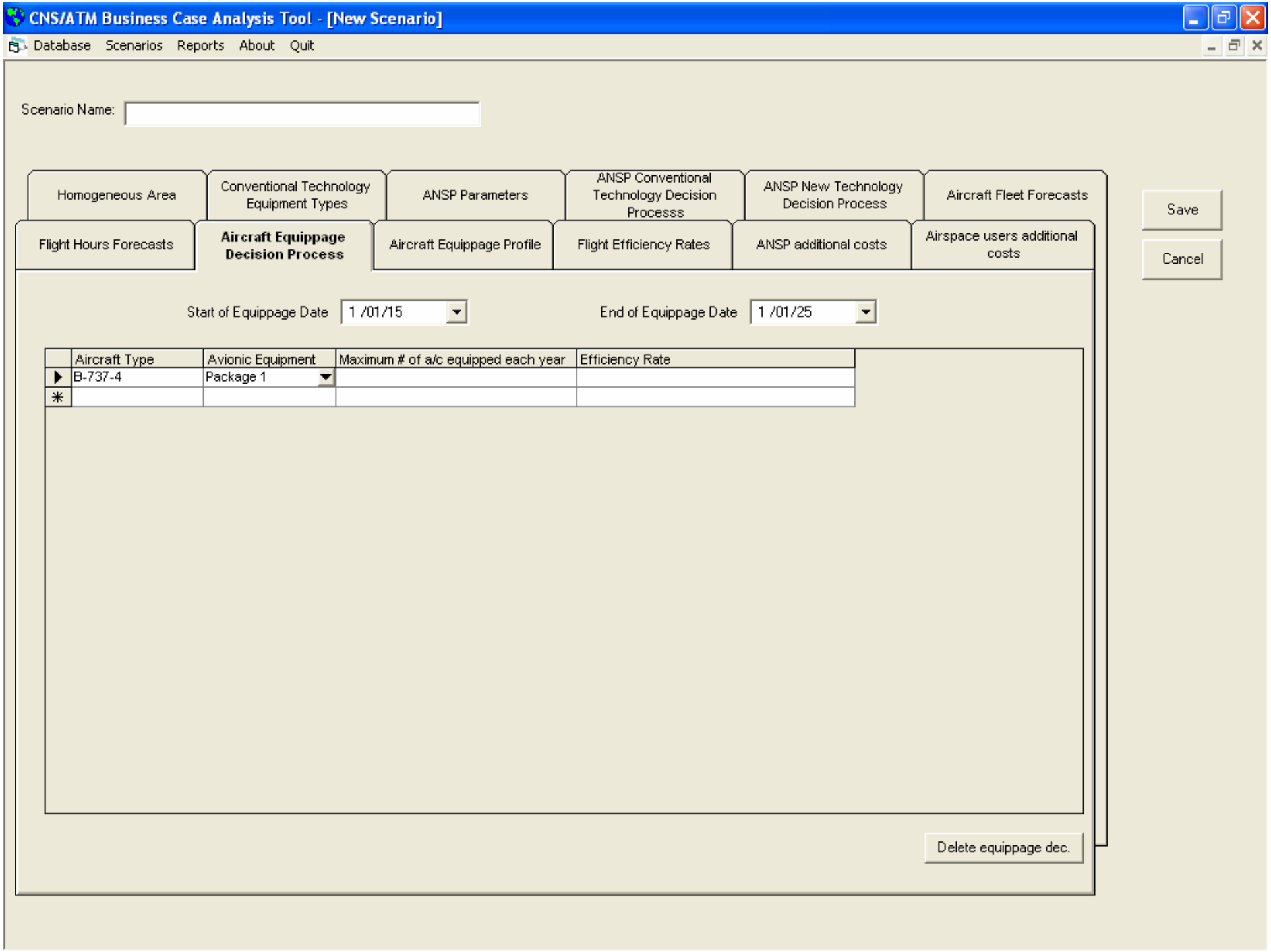
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Start of Equippage Date
1 /01/15
End of Equippage Date
1 /01/25
Aircraft Type
Avionic Equipment
Maximum # of a/c equipped each year
Efficiency Rate
B-737-4
Package 1
Delete equippage dec.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ANSP New Technology Decision Process
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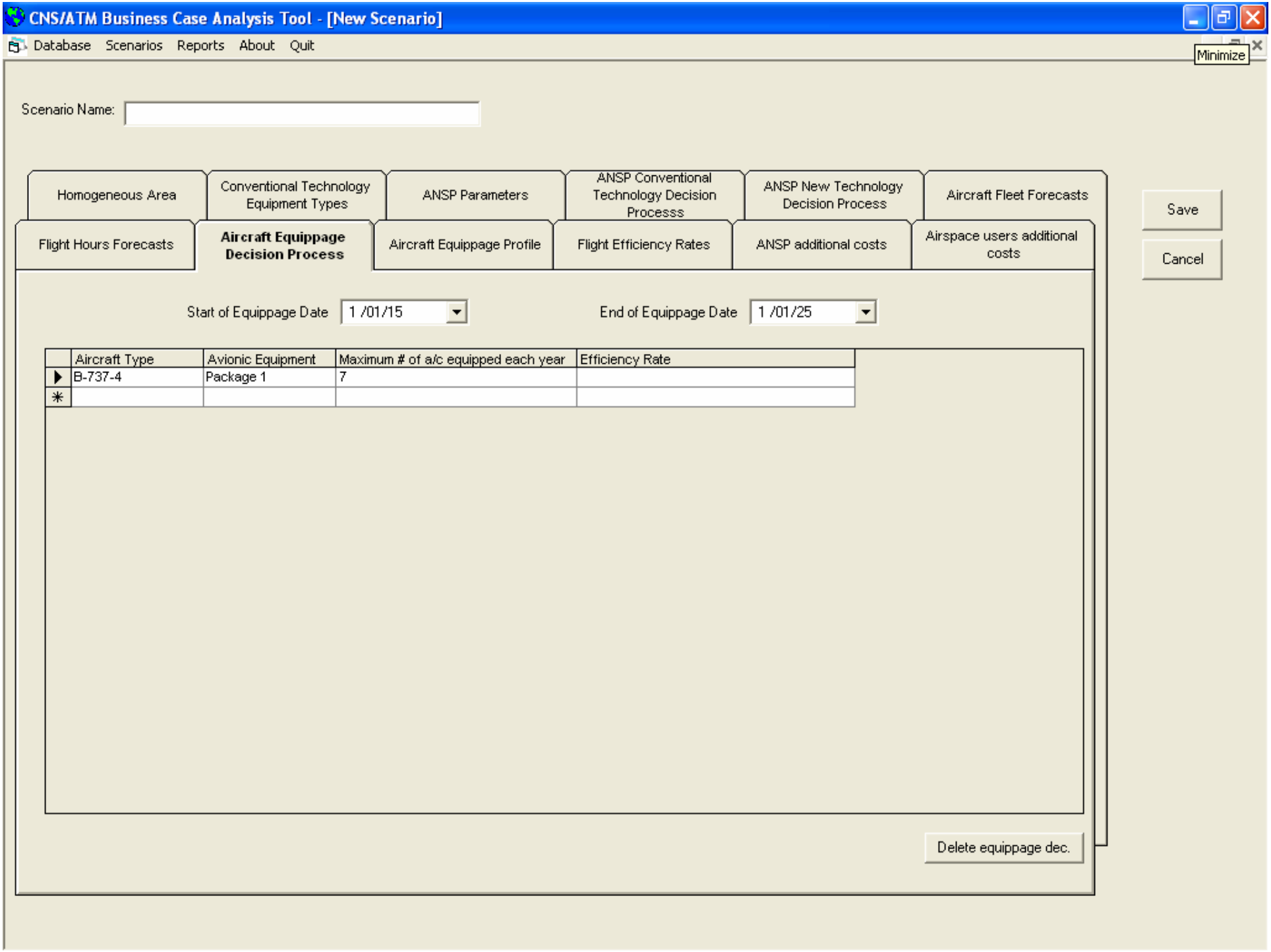
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Start of Equippage Date
1 /01/15
End of Equippage Date
1 /01/25
Aircraft Type
Avionic Equipment
Maximum # of a/c equipped each year
Efficiency Rate
B-737-4
Package 1
Delete equippage dec.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Quit
Minimize
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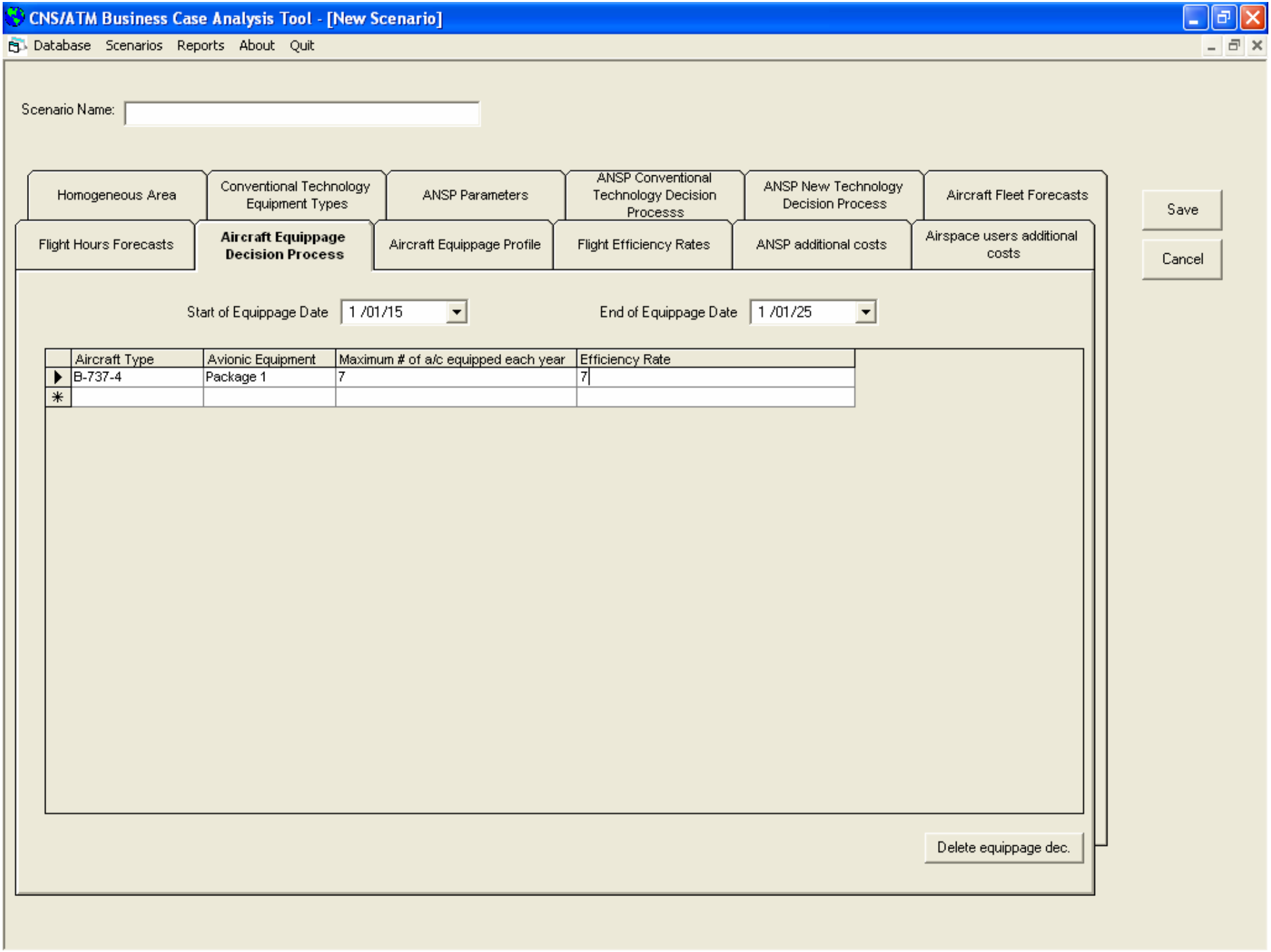
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Start of Equippage Date
1 /01/15
End of Equippage Date
1 /01/25
Aircraft Type
Avionic Equipment
Maximum # of a/c equipped each year
Efficiency Rate
B-737-4
Package 1
7
Delete equippage dec.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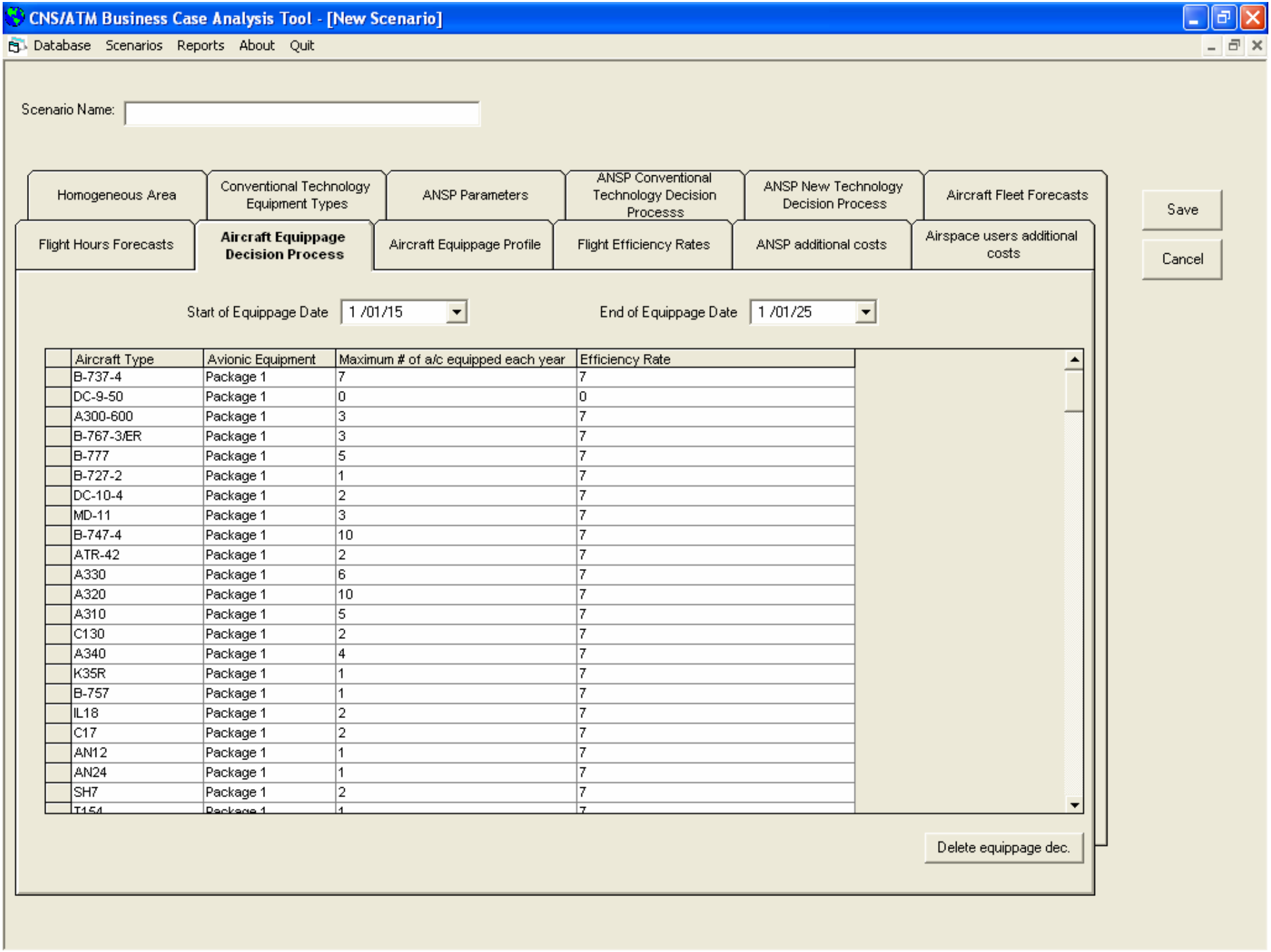
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Start of Equippage Date
1 /01/15
End of Equippage Date
1 /01/25
Aircraft Type
Avionic Equipment
Maximum # of a/c equipped each year
Efficiency Rate
B-737-4
Package 1
7
7
Delete equippage dec.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ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Start of Equippage Date
1 /01/15
End of Equippage Date
1 /01/25
Aircraft Type
Avionic Equipment
Maximum # of a/c equipped each year
Efficiency Rate
B-737-4 Package 1 7 7
DC-9-50 Package 1 0 0
A300-600 Package 1 3 7
B-767-3/ER Package 1 3 7
B-777 Package 1 5 7
B-727-2 Package 1 1 7
DC-10-4 Package 1 2 7
MD-11 Package 1 3 7
B-747-4 Package 1 10 7
ATR-42 Package 1 2 7
A330 Package 1 6 7
A320 Package 1 10 7
A310 Package 1 5 7
C130 Package 1 2 7
A340 Package 1 4 7
K35R Package 1 1 7
B-757 Package 1 1 7
IL18 Package 1 2 7
C17 Package 1 2 7
AN12 Package 1 1 7
AN24 Package 1 1 7
SH7 Package 1 2 7
Delete equippage dec.

CNS/ATM Business Case Analysis Tool - [New Scenario]

Database Scenarios Reports About Quit

Scenario Name:

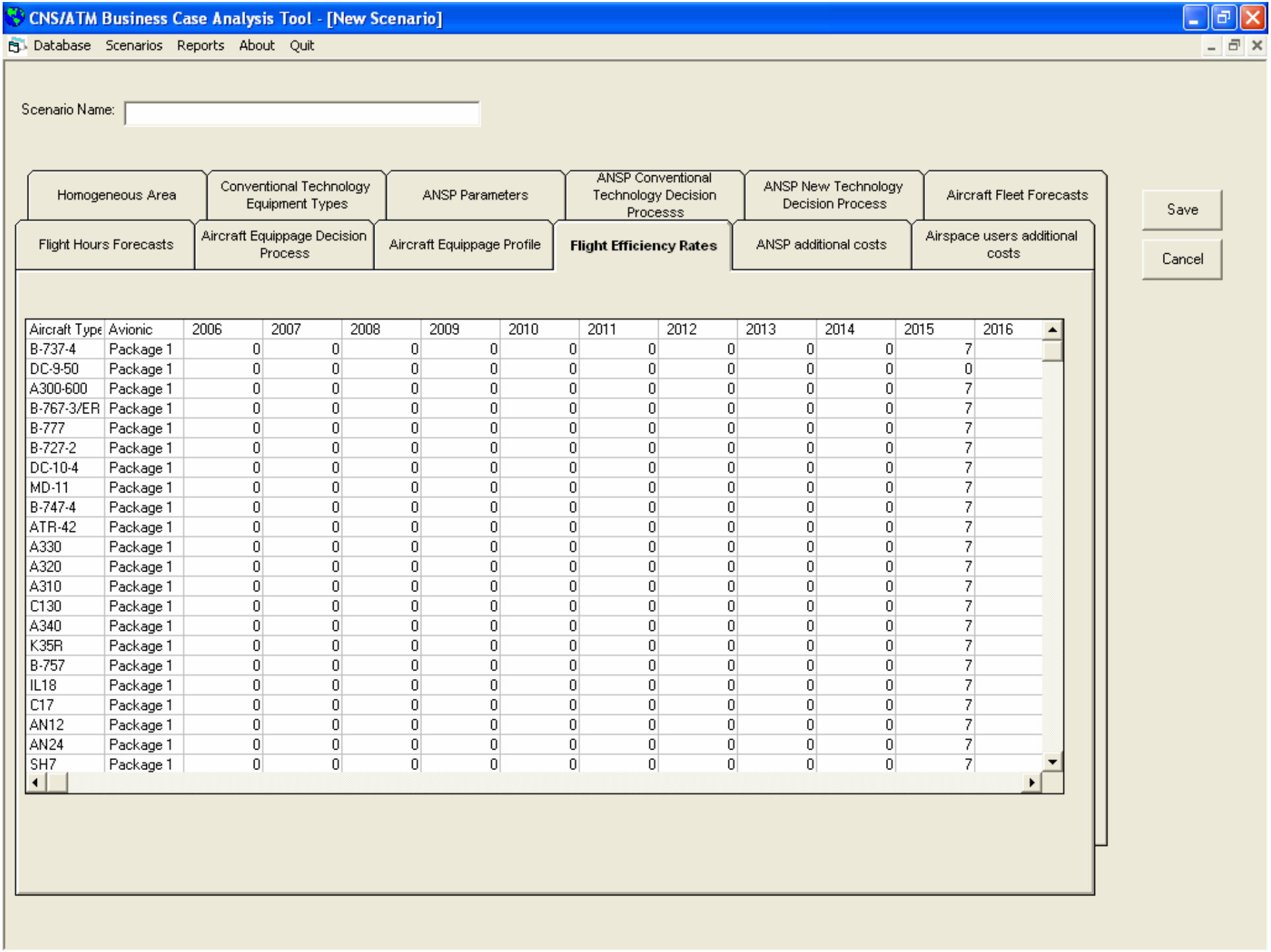
Homogeneous Area | Conventional Technology Equipment Types | ANSP Parameters | ANSP Conventional Technology Decision Processs | ANSP New Technology Decision Process | Aircraft Fleet Forecasts

Flight Hours Forecasts | Aircraft Equippage Decision Process | **Aircraft Equippage Profile** | Flight Efficiency Rates | ANSP additional costs | Airspace users additional costs

Save

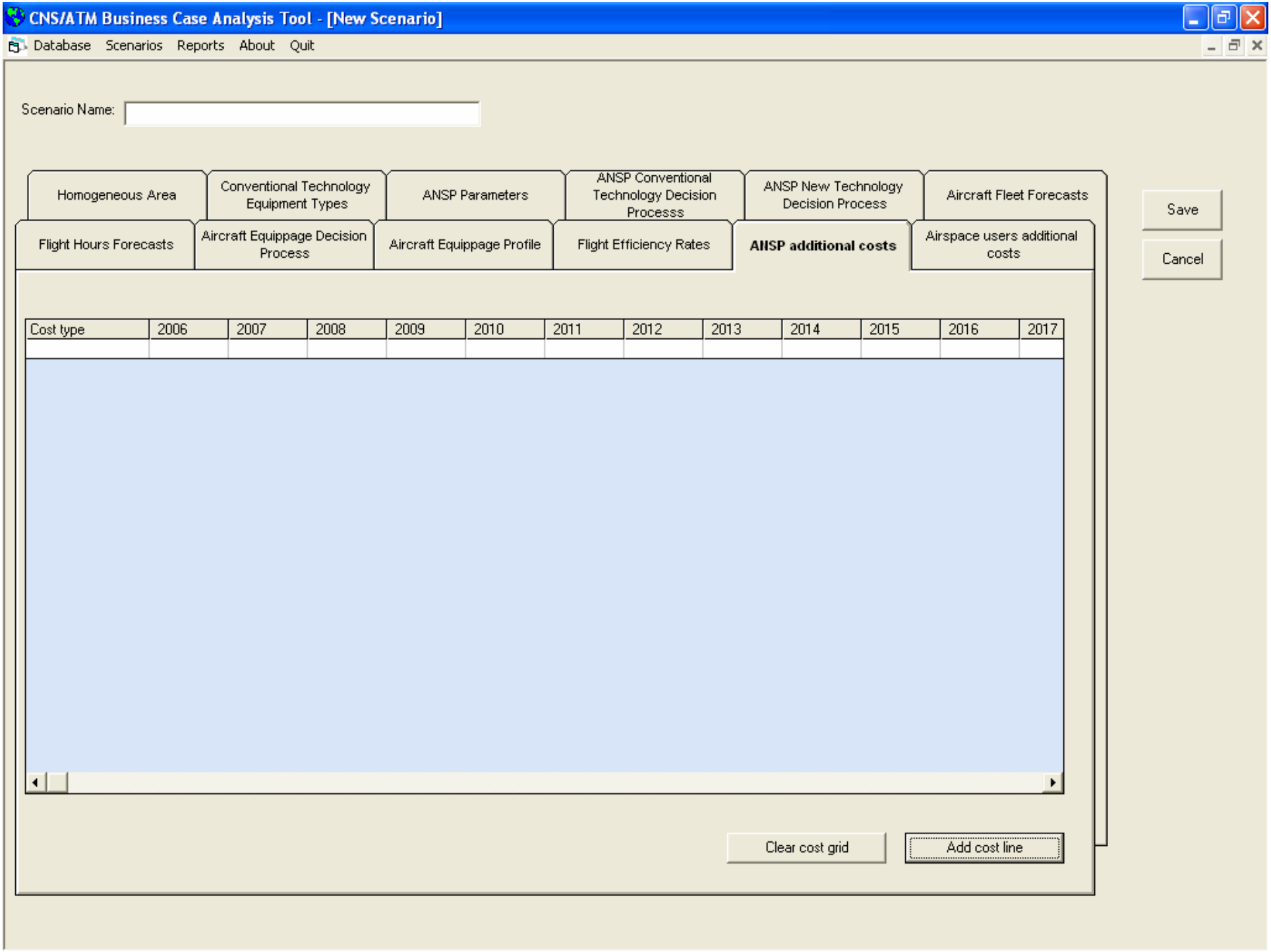
Cancel

Aircraft Type	Avionic	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
B-737-4	Package 1	0	0	0	0	0	0	0	0	0	7	
DC-9-50	Package 1	0	0	0	0	0	0	0	0	0	0	
A300-600	Package 1	0	0	0	0	0	0	0	0	0	3	
B-767-3/ER	Package 1	0	0	0	0	0	0	0	0	0	3	
B-777	Package 1	0	0	0	0	0	0	0	0	0	5	
B-727-2	Package 1	0	0	0	0	0	0	0	0	0	1	
DC-10-4	Package 1	0	0	0	0	0	0	0	0	0	2	
MD-11	Package 1	0	0	0	0	0	0	0	0	0	3	
B-747-4	Package 1	0	0	0	0	0	0	0	0	0	10	1
ATR-42	Package 1	0	0	0	0	0	0	0	0	0	2	
A330	Package 1	0	0	0	0	0	0	0	0	0	6	
A320	Package 1	0	0	0	0	0	0	0	0	0	10	1
A310	Package 1	0	0	0	0	0	0	0	0	0	5	
C130	Package 1	0	0	0	0	0	0	0	0	0	2	
A340	Package 1	0	0	0	0	0	0	0	0	0	4	
K35R	Package 1	0	0	0	0	0	0	0	0	0	1	
B-757	Package 1	0	0	0	0	0	0	0	0	0	1	
IL18	Package 1	0	0	0	0	0	0	0	0	0	2	
C17	Package 1	0	0	0	0	0	0	0	0	0	2	
AN12	Package 1	0	0	0	0	0	0	0	0	0	1	
AN24	Package 1	0	0	0	0	0	0	0	0	0	1	
SH7	Package 1	0	0	0	0	0	0	0	0	0	2	



Aircraft Type	Avionic	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
B-737-4	Package 1	0	0	0	0	0	0	0	0	0	7	
DC-9-50	Package 1	0	0	0	0	0	0	0	0	0	0	
A300-600	Package 1	0	0	0	0	0	0	0	0	0	7	
B-767-3/ER	Package 1	0	0	0	0	0	0	0	0	0	7	
B-777	Package 1	0	0	0	0	0	0	0	0	0	7	
B-727-2	Package 1	0	0	0	0	0	0	0	0	0	7	
DC-10-4	Package 1	0	0	0	0	0	0	0	0	0	7	
MD-11	Package 1	0	0	0	0	0	0	0	0	0	7	
B-747-4	Package 1	0	0	0	0	0	0	0	0	0	7	
ATR-42	Package 1	0	0	0	0	0	0	0	0	0	7	
A330	Package 1	0	0	0	0	0	0	0	0	0	7	
A320	Package 1	0	0	0	0	0	0	0	0	0	7	
A310	Package 1	0	0	0	0	0	0	0	0	0	7	
C130	Package 1	0	0	0	0	0	0	0	0	0	7	
A340	Package 1	0	0	0	0	0	0	0	0	0	7	
K35R	Package 1	0	0	0	0	0	0	0	0	0	7	
B-757	Package 1	0	0	0	0	0	0	0	0	0	7	
IL18	Package 1	0	0	0	0	0	0	0	0	0	7	
C17	Package 1	0	0	0	0	0	0	0	0	0	7	
AN12	Package 1	0	0	0	0	0	0	0	0	0	7	
AN24	Package 1	0	0	0	0	0	0	0	0	0	7	
SH7	Package 1	0	0	0	0	0	0	0	0	0	7	

Step 3/8 : Add Additional costs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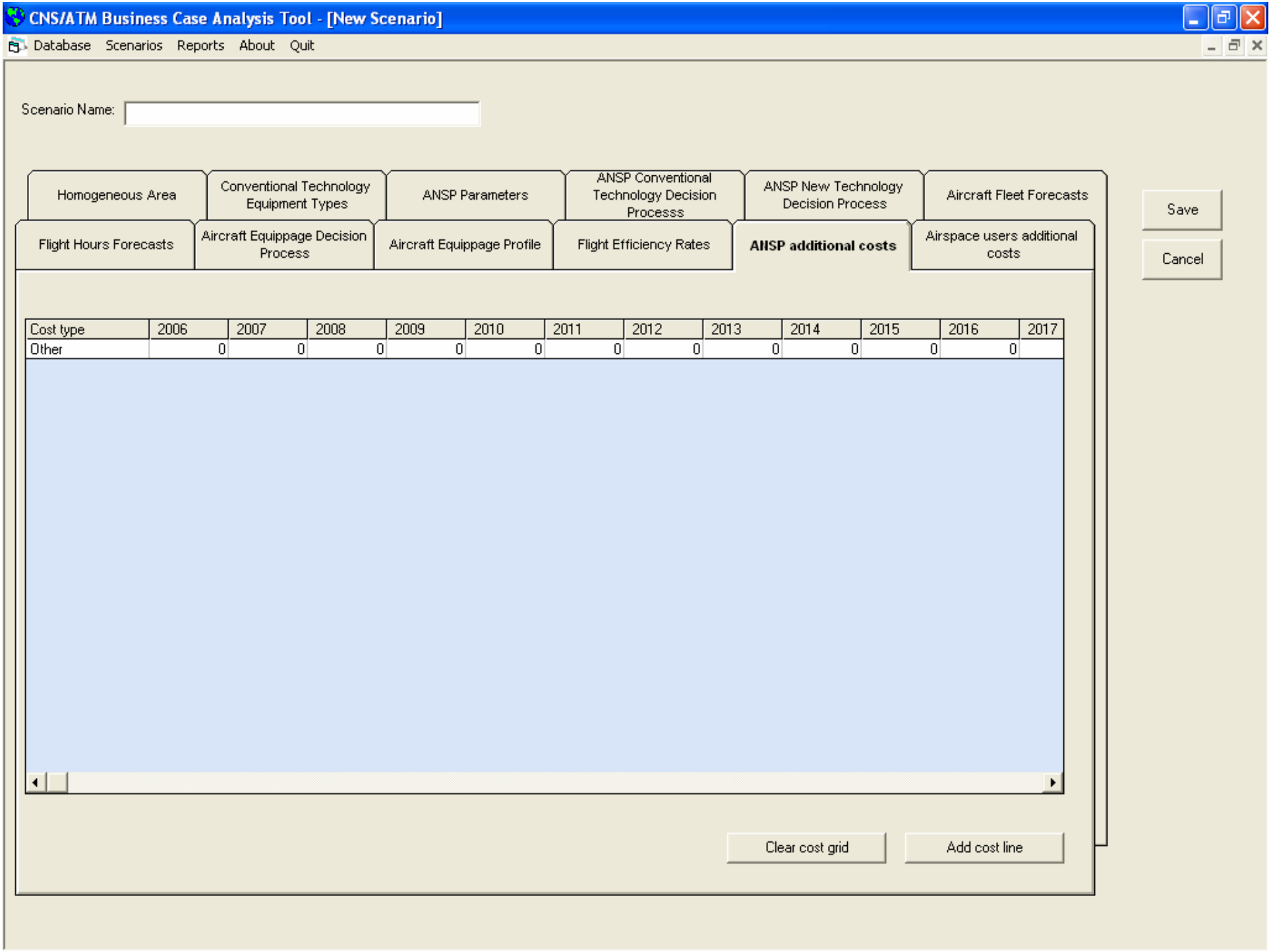
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Cost type
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Clear cost grid
Add cost line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Scenario Name:
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
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Aircraft Fleet Forecasts
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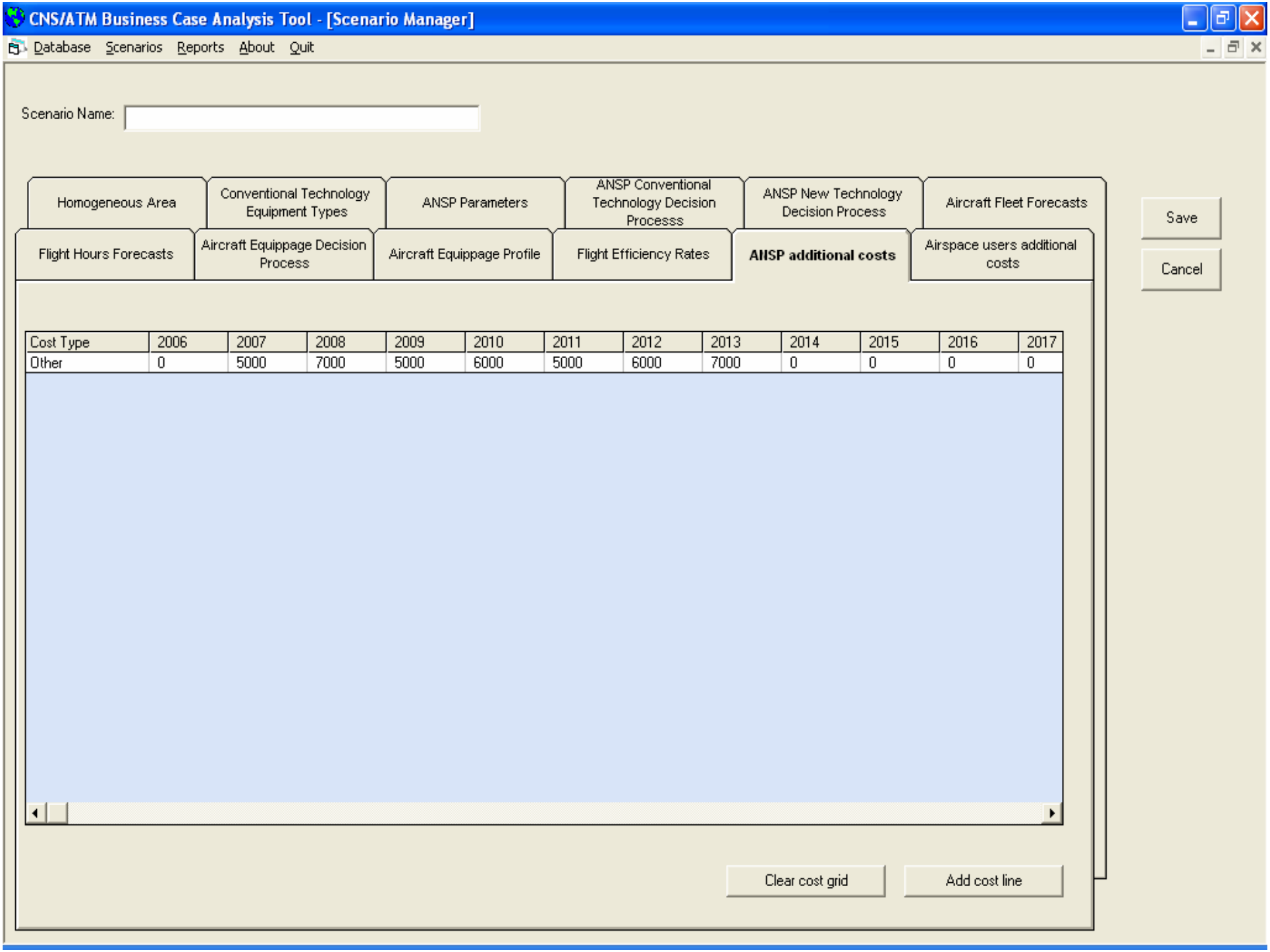
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Cost type
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Other
0
0
0
0
0
0
0
0
0
0
0
Clear cost grid
Add cost line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Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
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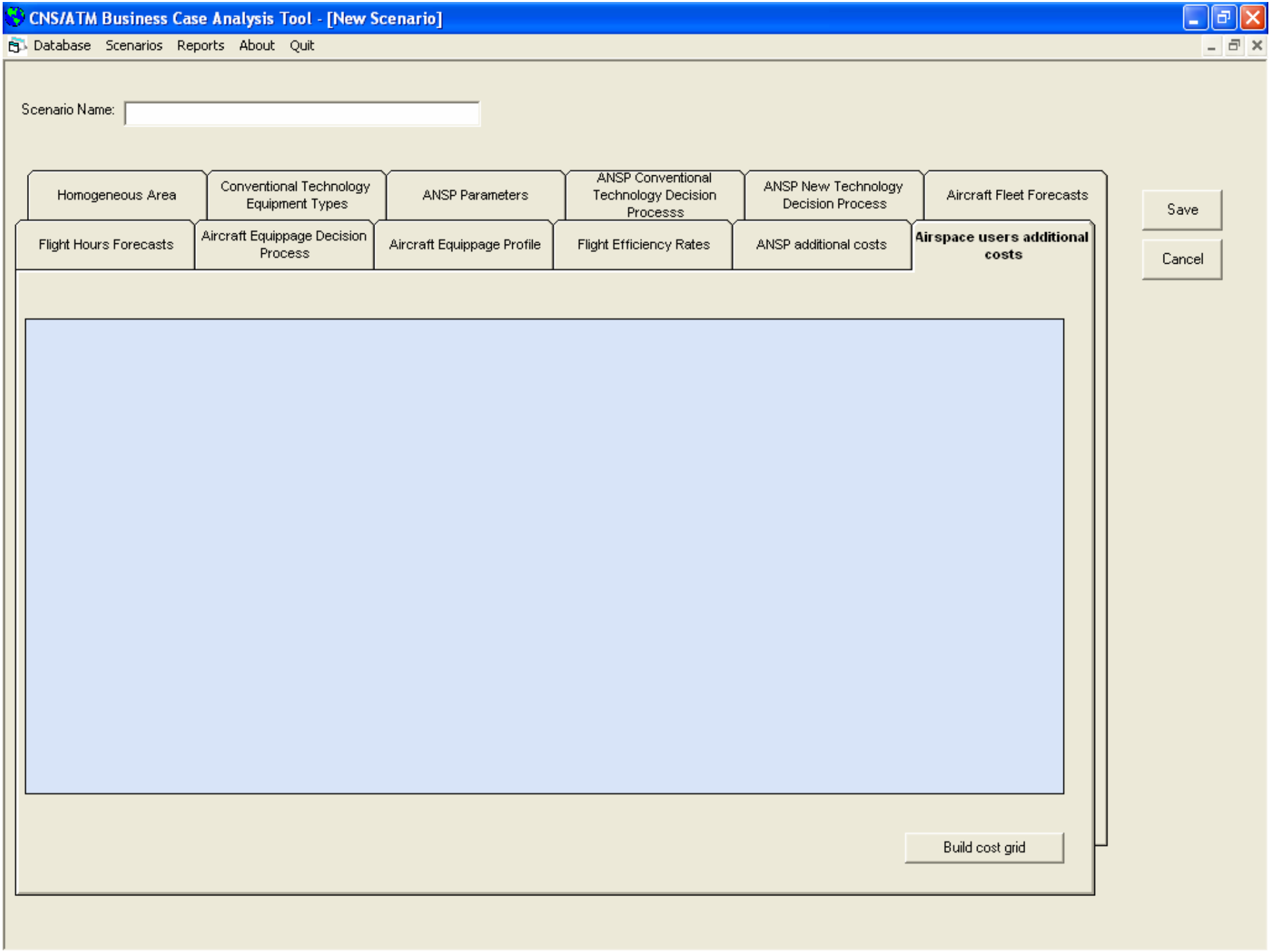
Clear cost grid
Add cost line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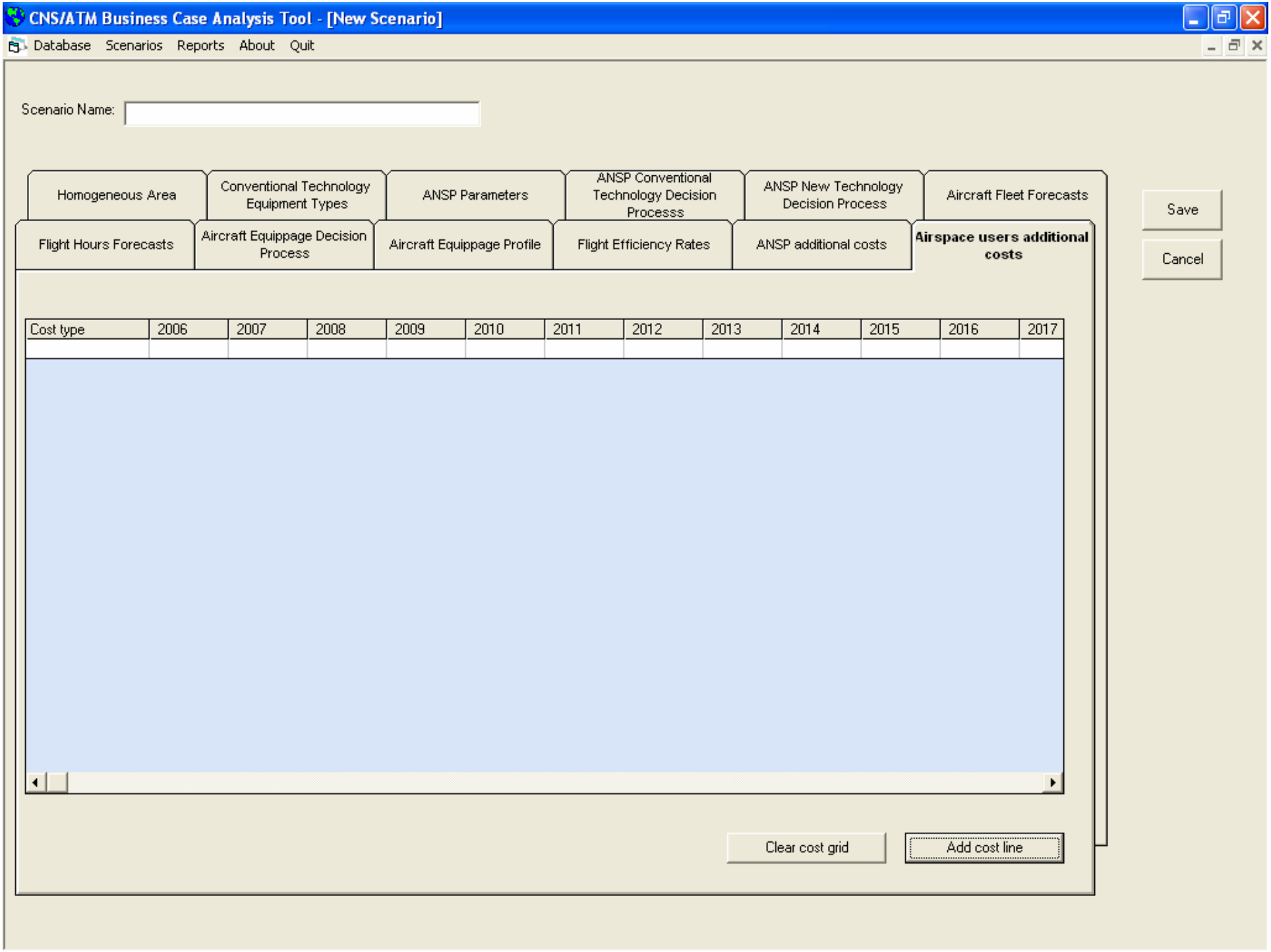
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Build cost grid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Reports
About
Quit
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Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
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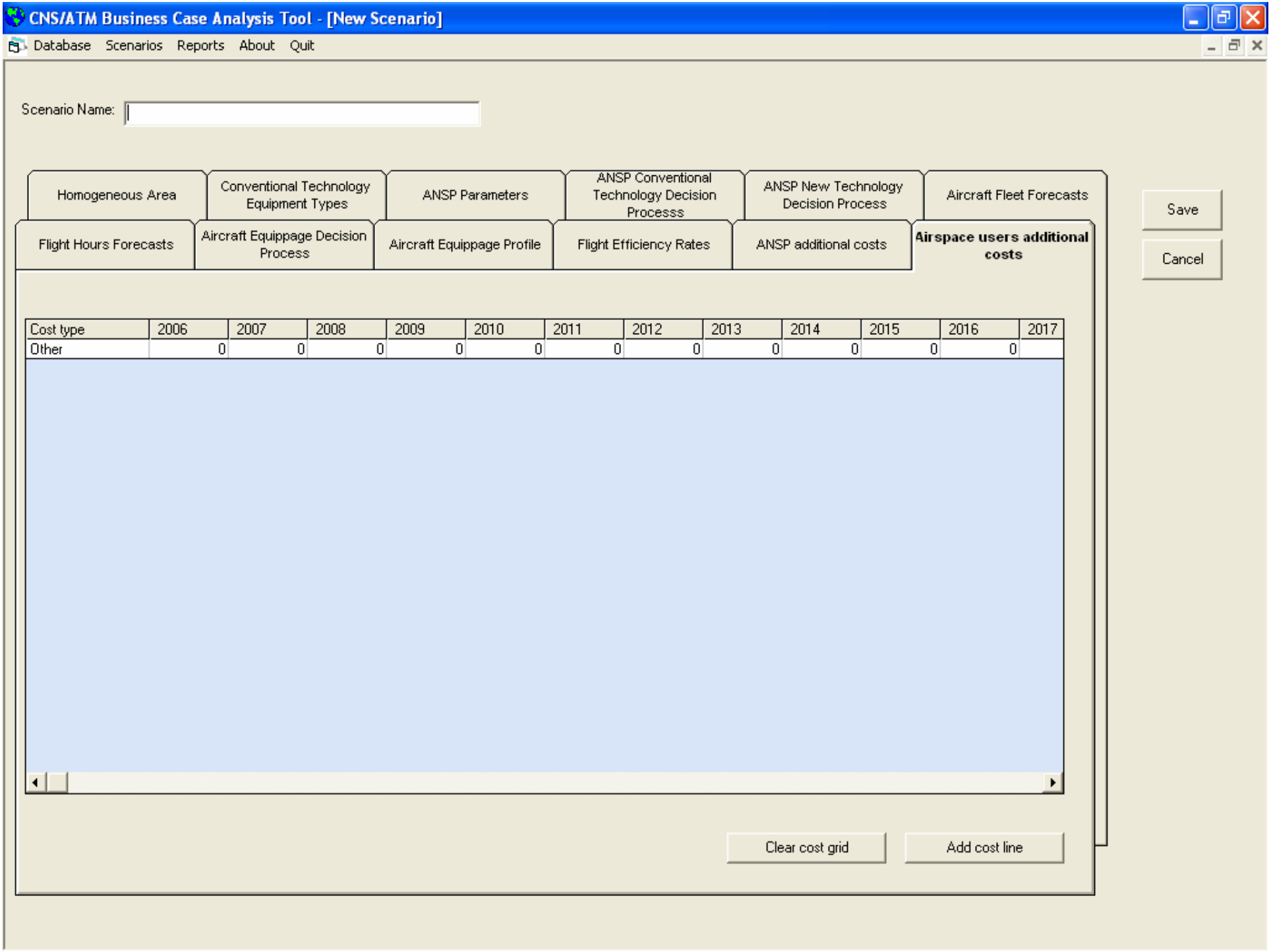
Cancel
Cost type
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Clear cost grid
Add cost line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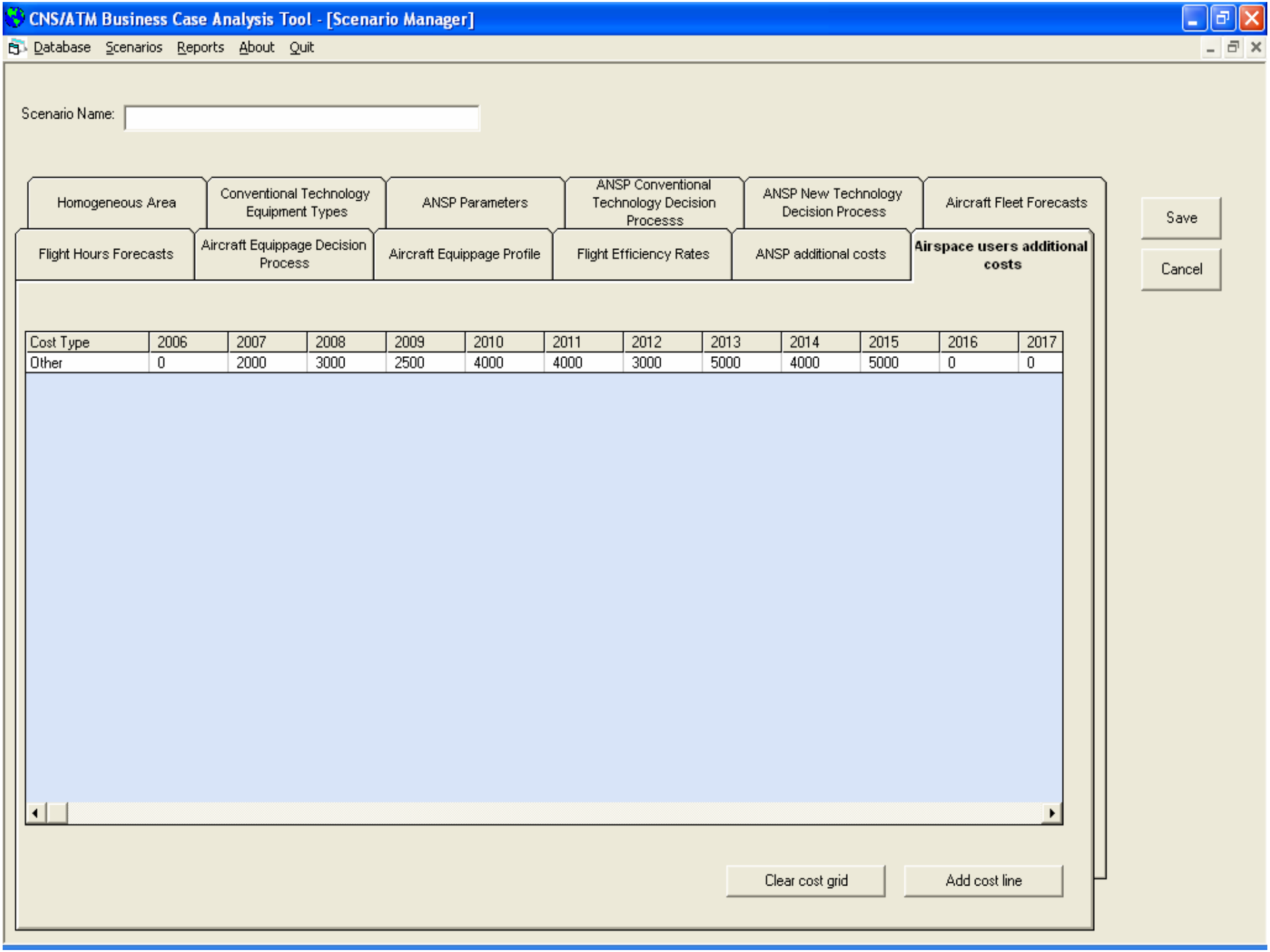
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Cost type
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Other
0
0
0
0
0
0
0
0
0
0
0
Clear cost grid
Add cost line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Reports
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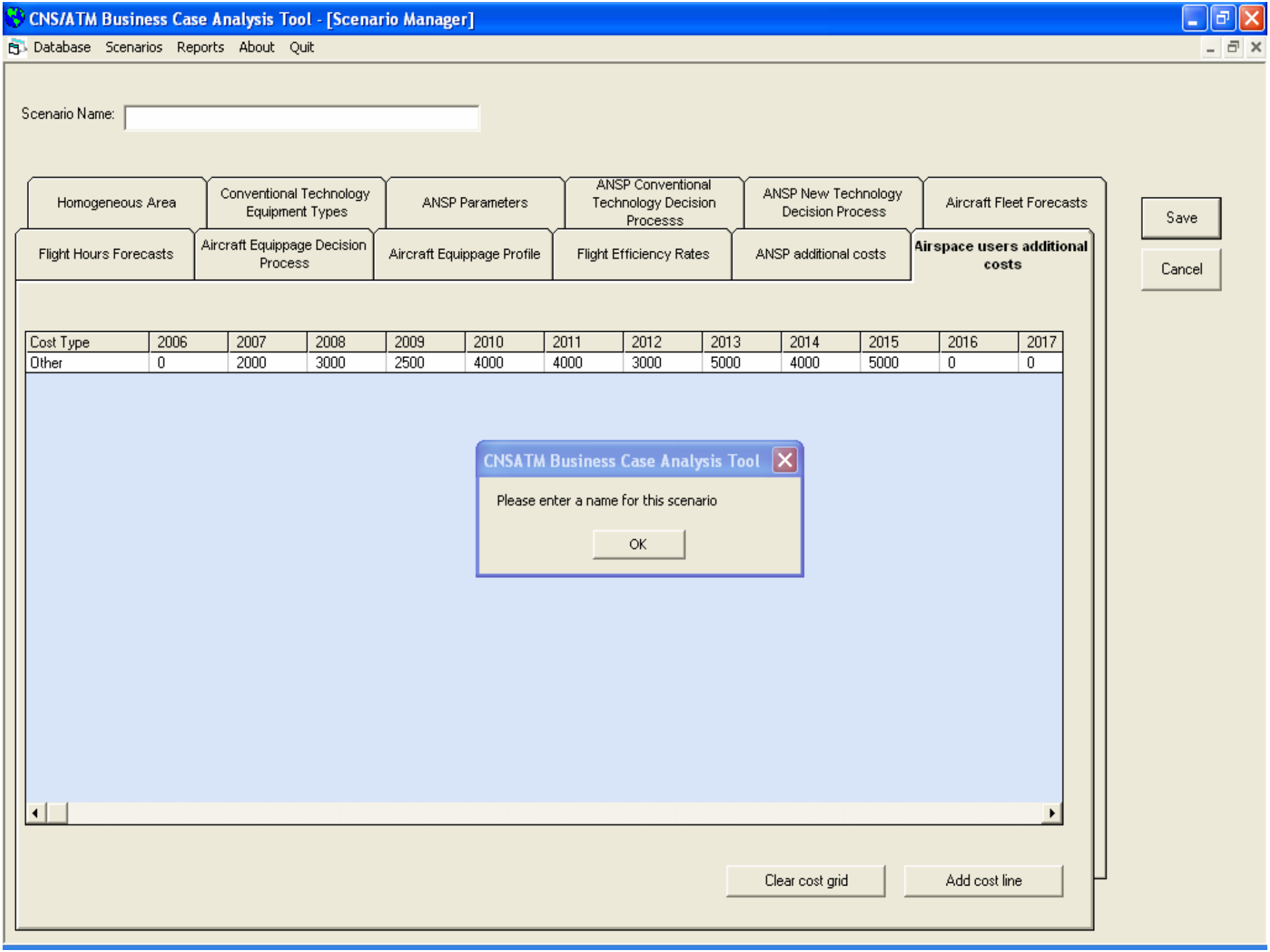
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Cost Type 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Other 0 2000 3000 2500 4000 4000 3000 5000 4000 5000 0 0
Clear cost grid
Add cost line

Step 3/9 : Give the scenario a name


CNS/ATM Business Case Analysis Tool - [Scenario Manager]
Database
Scenarios
Reports
About
Quit
Scenario Name:
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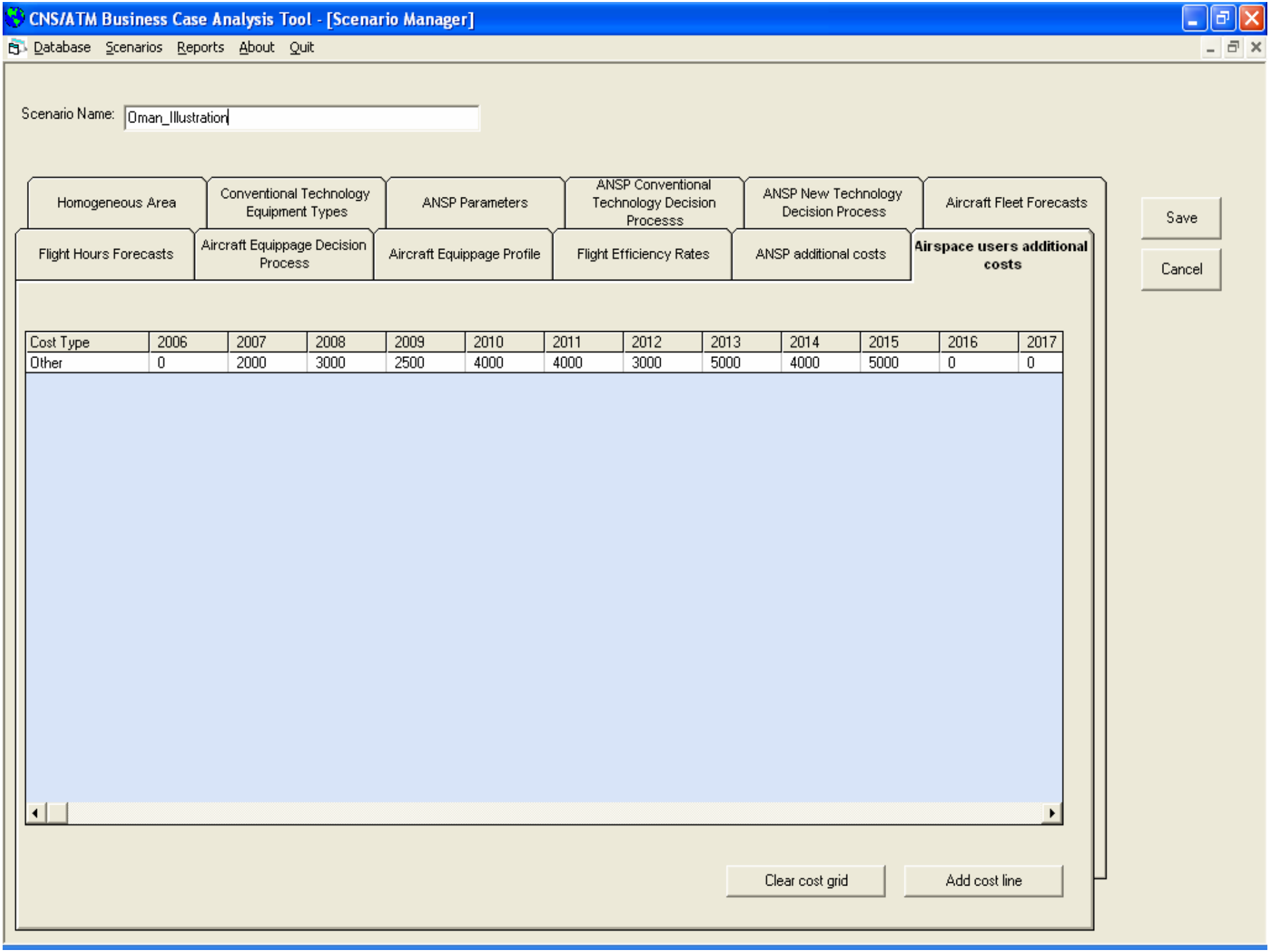
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Cost Type 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Other 0 2000 3000 2500 4000 4000 3000 5000 4000 5000 0 0
CNSATM Business Case Analysis Tool
Please enter a name for this scenario
OK
Clear cost grid
Add cost line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Reports
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Quit
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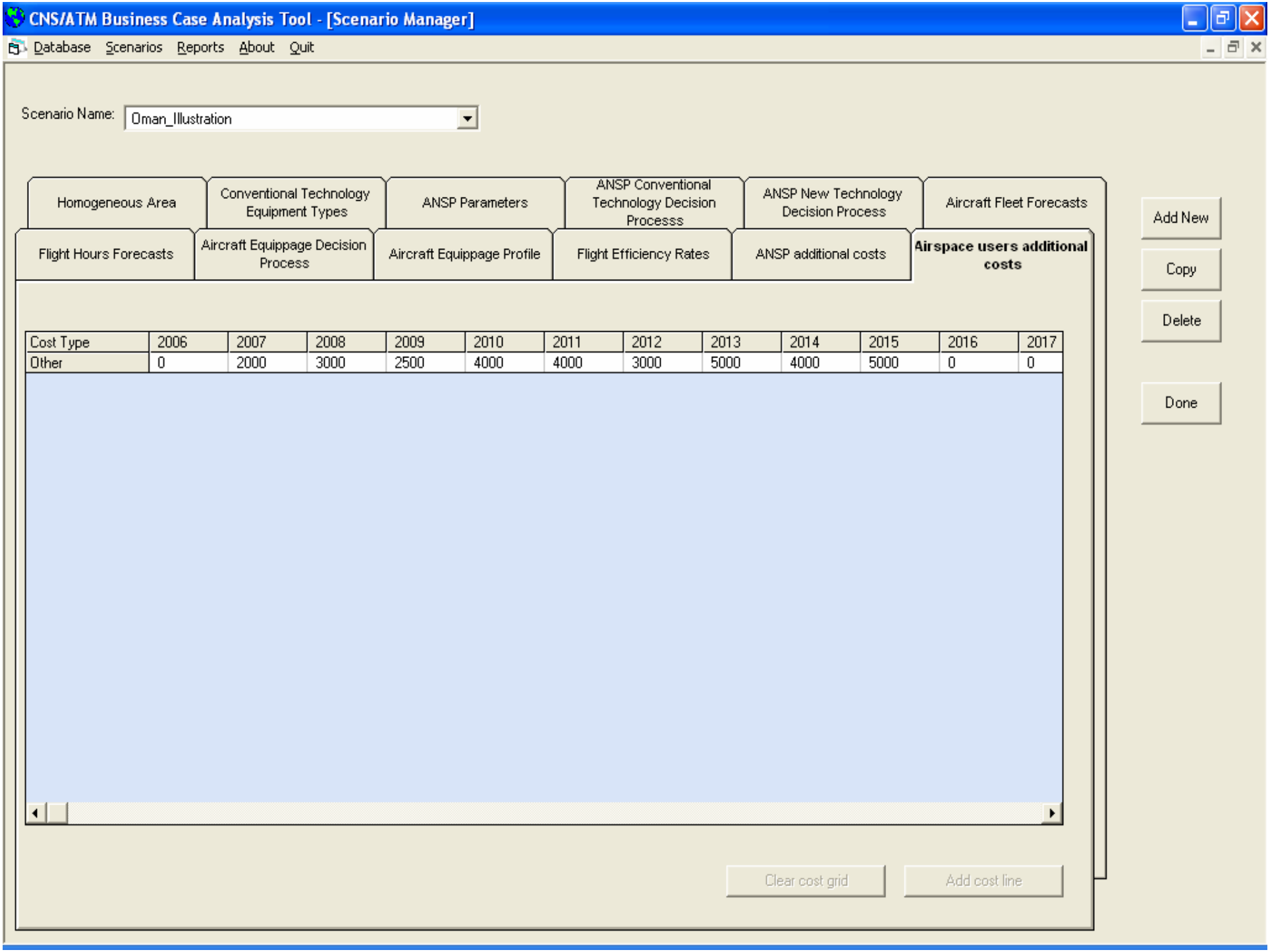
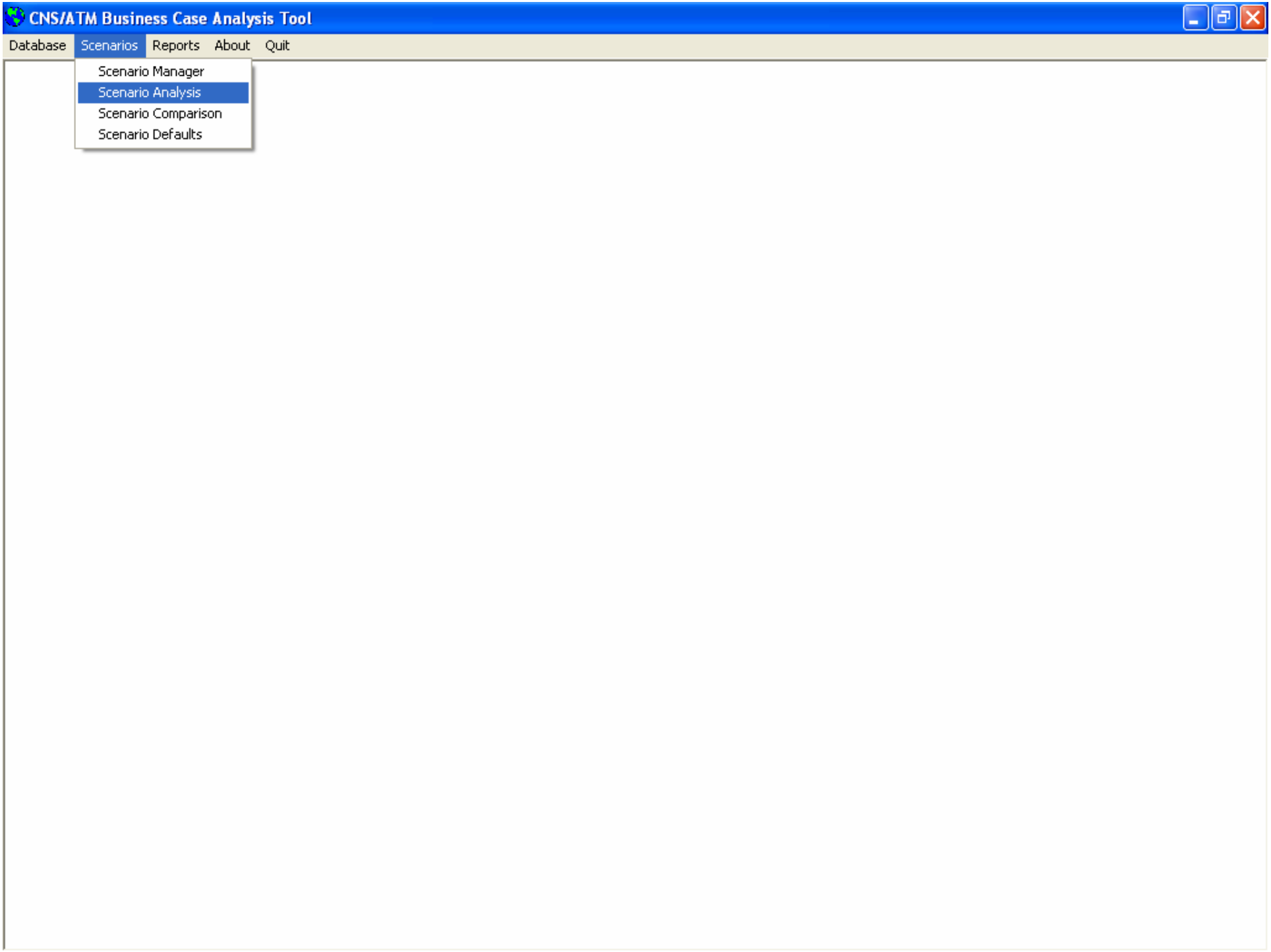
Homogeneous Area
Conventional Technology Equipment Types
ANSP Parameters
ANSP Conventional Technology Decision Processs
ANSP New Technology Decision Process
Aircraft Fleet Forecasts
Flight Hours Forecasts
Aircraft Equippage Decision Process
Aircraft Equippage Profile
Flight Efficiency Rates
ANSP additional costs
Airspace users additional costs
Save
Cancel
Cost Type 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Other 0 2000 3000 2500 4000 4000 3000 5000 4000 5000 0 0
Clear cost grid
Add cost line



Cost Type	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Other	0	2000	3000	2500	4000	4000	3000	5000	4000	5000	0	0

Step 4 : Scenario analysis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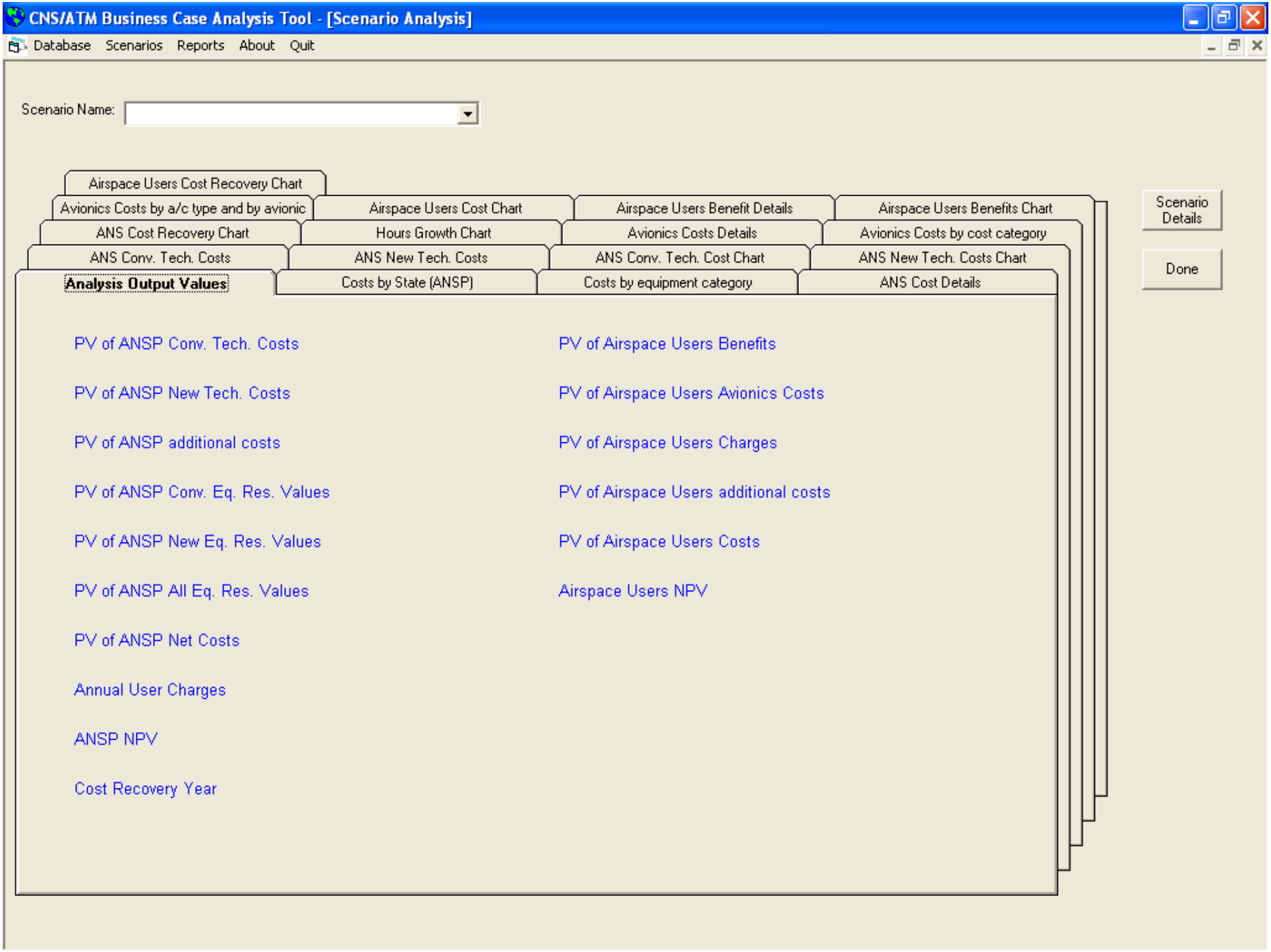
Reports
About
Quit
Scenario Manager
Scenario Analysis
Scenario Comparison
Scenario Defaults


CNS/ATM Business Case Analysis Tool - [Scenario Analysis]
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Reports
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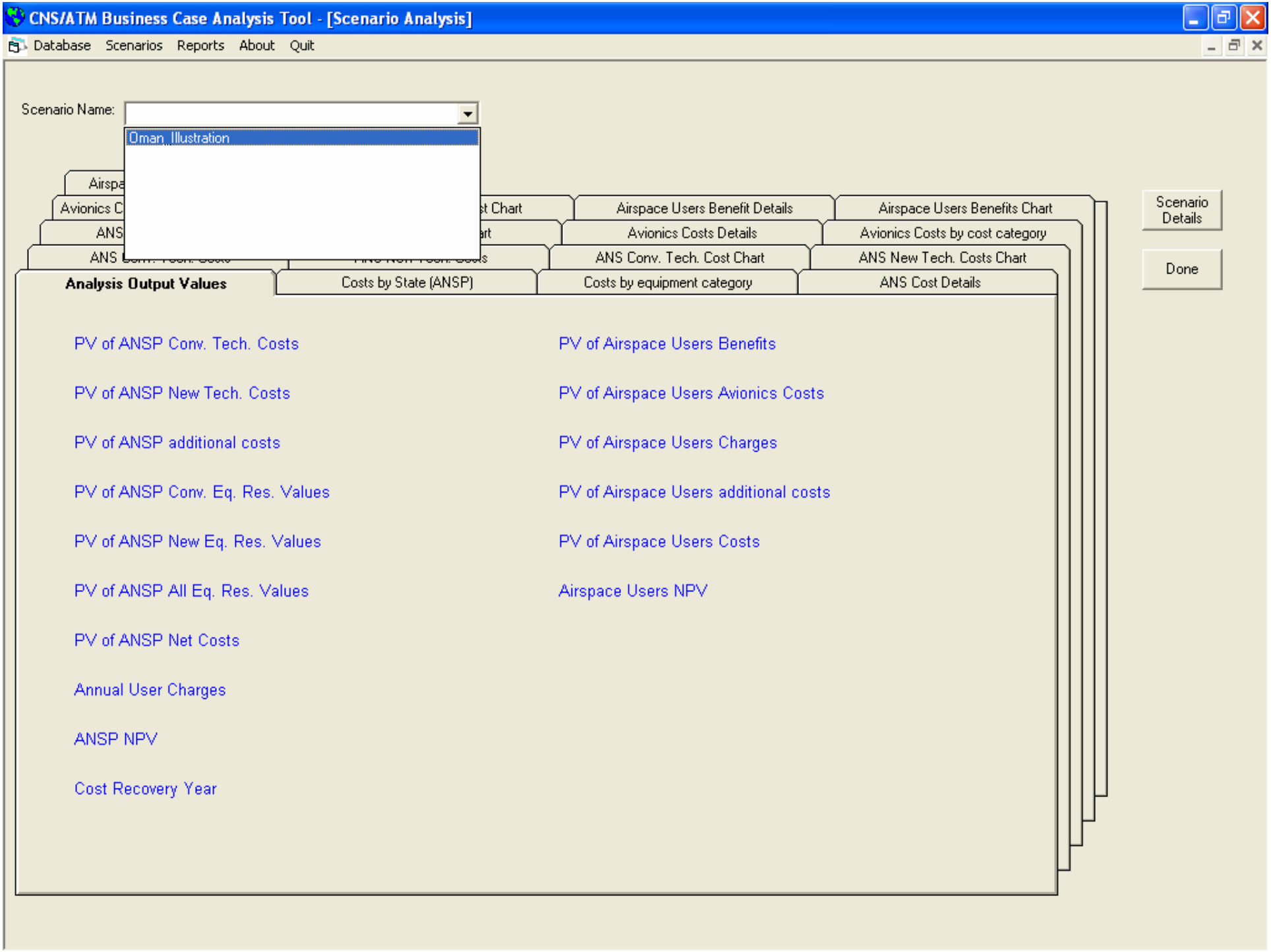
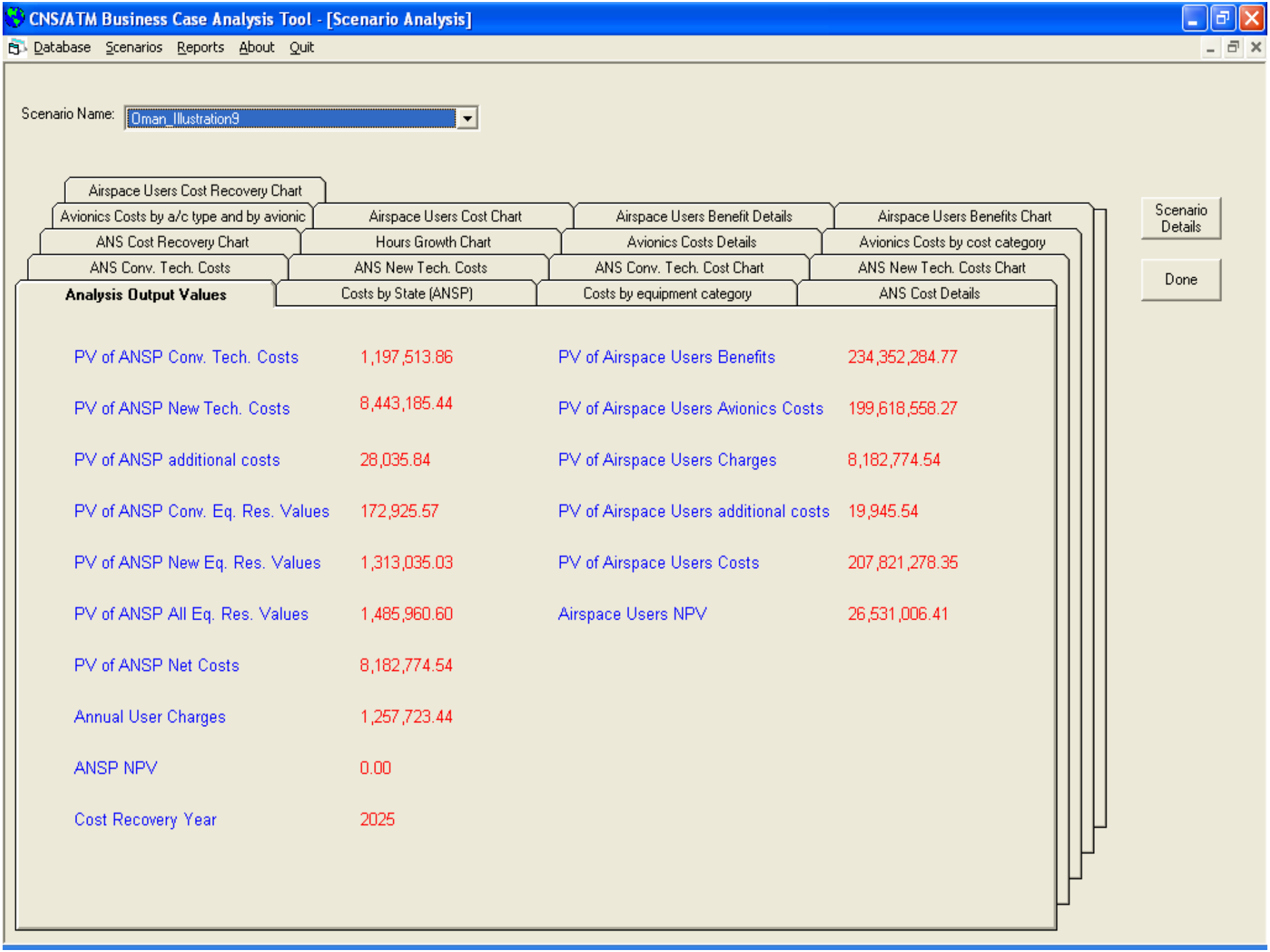
Quit
Scenario Name:
Airspace Users Cost Recovery Chart
Avionics Costs by a/c type and by avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
PV of ANSP Conv. Tech. Costs
PV of ANSP New Tech. Costs
PV of ANSP additional costs
PV of ANSP Conv. Eq. Res. Values
PV of ANSP New Eq. Res. Values
PV of ANSP All Eq. Res. Values
PV of ANSP Net Costs
Annual User Charges
ANSP NPV
Cost Recovery Year
PV of Airspace Users Benefits
PV of Airspace Users Avionics Costs
PV of Airspace Users Charges
PV of Airspace Users additional costs
PV of Airspace Users Costs
Airspace Users NPV
Scenario Details
Done

Step 4/1 : Select Scenario


CNS/ATM Business Case Analysis Tool - [Scenario Analysis]
Database
Scenarios
Reports
About
Quit
Scenario Name:
Oman_Illustration
Airspace Users Benefit Details
Airspace Users Benefits Chart
Avionics Costs Details
Avionics Costs by cost category
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
Scenario Details
Done
PV of ANSP Conv. Tech. Costs
PV of ANSP New Tech. Costs
PV of ANSP additional costs
PV of ANSP Conv. Eq. Res. Values
PV of ANSP New Eq. Res. Values
PV of ANSP All Eq. Res. Values
PV of ANSP Net Costs
Annual User Charges
ANSP NPV
Cost Recovery Year
PV of Airspace Users Benefits
PV of Airspace Users Avionics Costs
PV of Airspace Users Charges
PV of Airspace Users additional costs
PV of Airspace Users Costs
Airspace Users NPV

Output results/1 : Analysis Output Values


CNS/ATM Business Case Analysis Tool - [Scenario Analysis]
Database
Scenarios
Reports
About
Quit
Scenario Name:
Oman_Illustration9
Airspace Users Cost Recovery Chart
Avionics Costs by a/c type and by avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
PV of ANSP Conv. Tech. Costs 1,197,513.86
PV of ANSP New Tech. Costs 8,443,185.44
PV of ANSP additional costs 28,035.84
PV of ANSP Conv. Eq. Res. Values 172,925.57
PV of ANSP New Eq. Res. Values 1,313,035.03
PV of ANSP All Eq. Res. Values 1,485,960.60
PV of ANSP Net Costs 8,182,774.54
Annual User Charges 1,257,723.44
ANSP NPV 0.00
Cost Recovery Year 2025
PV of Airspace Users Benefits 234,352,284.77
PV of Airspace Users Avionics Costs 199,618,558.27
PV of Airspace Users Charges 8,182,774.54
PV of Airspace Users additional costs 19,945.54
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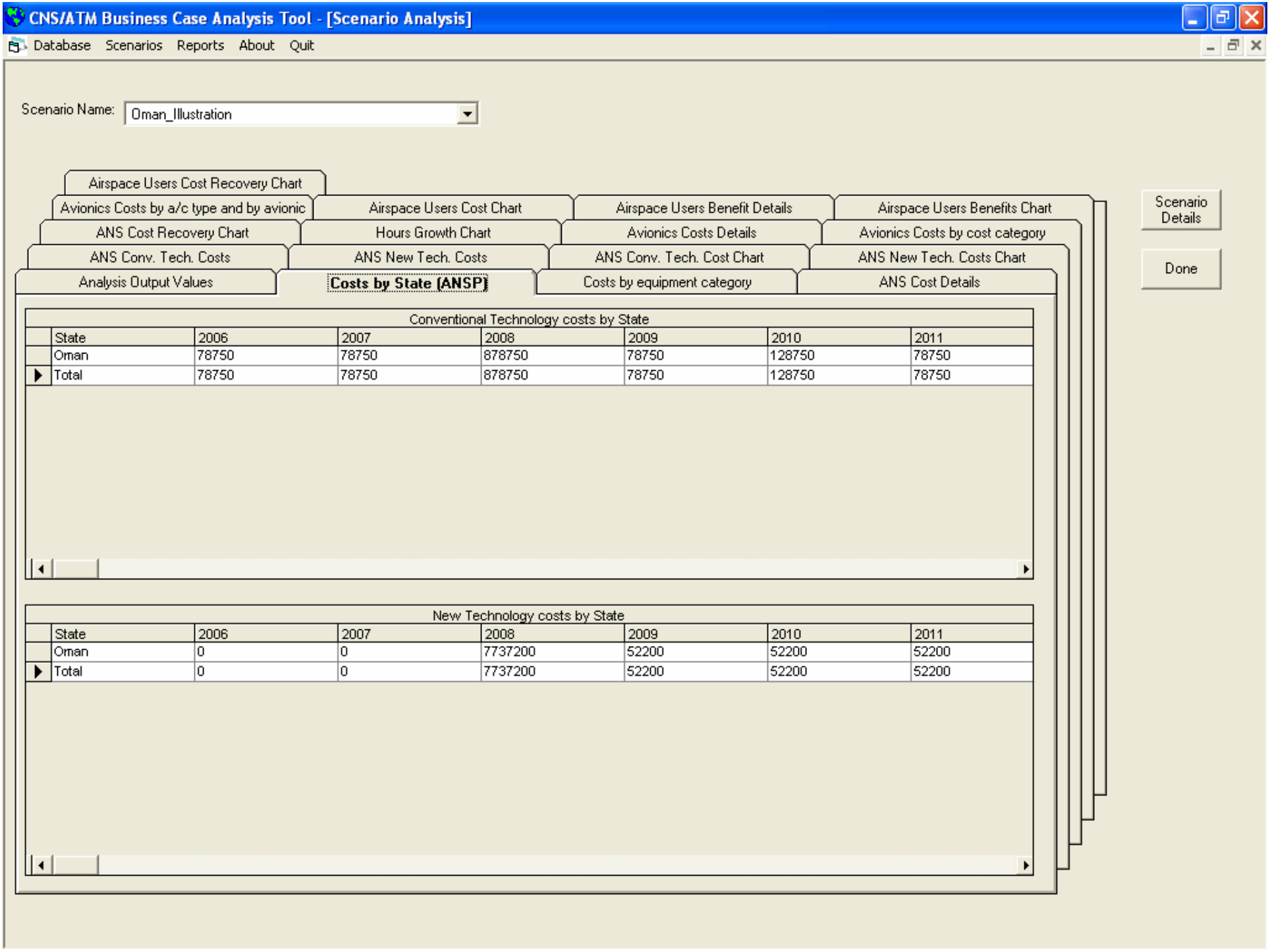
Airspace Users NPV 26,531,006.41
Scenario Details
Done

Output results/2 : Costs by State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Database
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Reports
About
Quit
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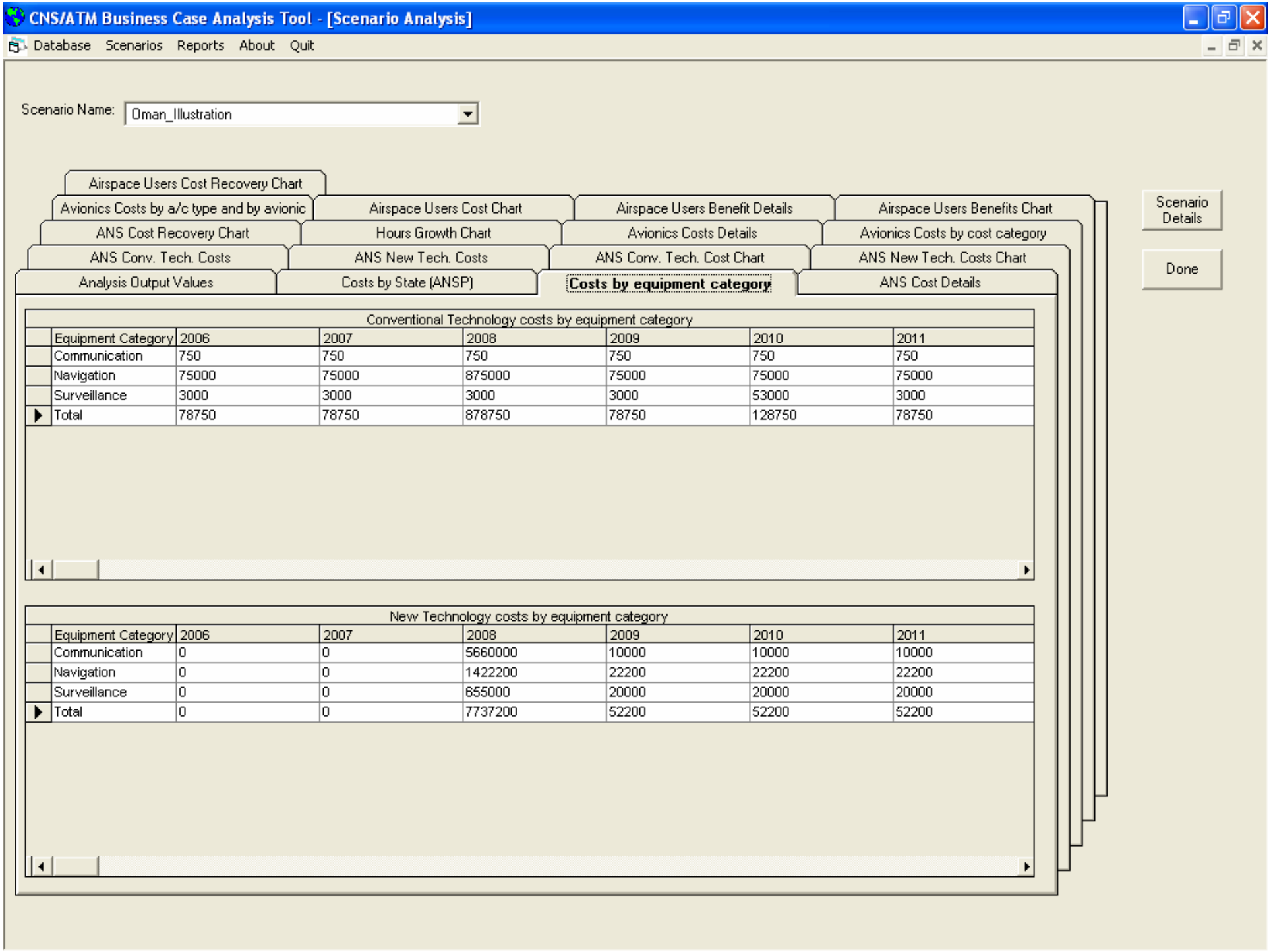
Airspace Users Cost Recovery Chart
Avionics Costs by a/c type and by avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
Scenario Details
Done
Conventional Technology costs by State
State 2006 2007 2008 2009 2010 2011
Oman 78750 78750 878750 78750 128750 78750
Total 78750 78750 878750 78750 128750 78750
New Technology costs by State
State 2006 2007 2008 2009 2010 2011
Oman 0 0 7737200 52200 52200 52200
Total 0 0 7737200 52200 52200 52200

Output results/3 : Service provider costs by equipment category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Scenarios
Reports
About
Quit
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Oman_Illustration
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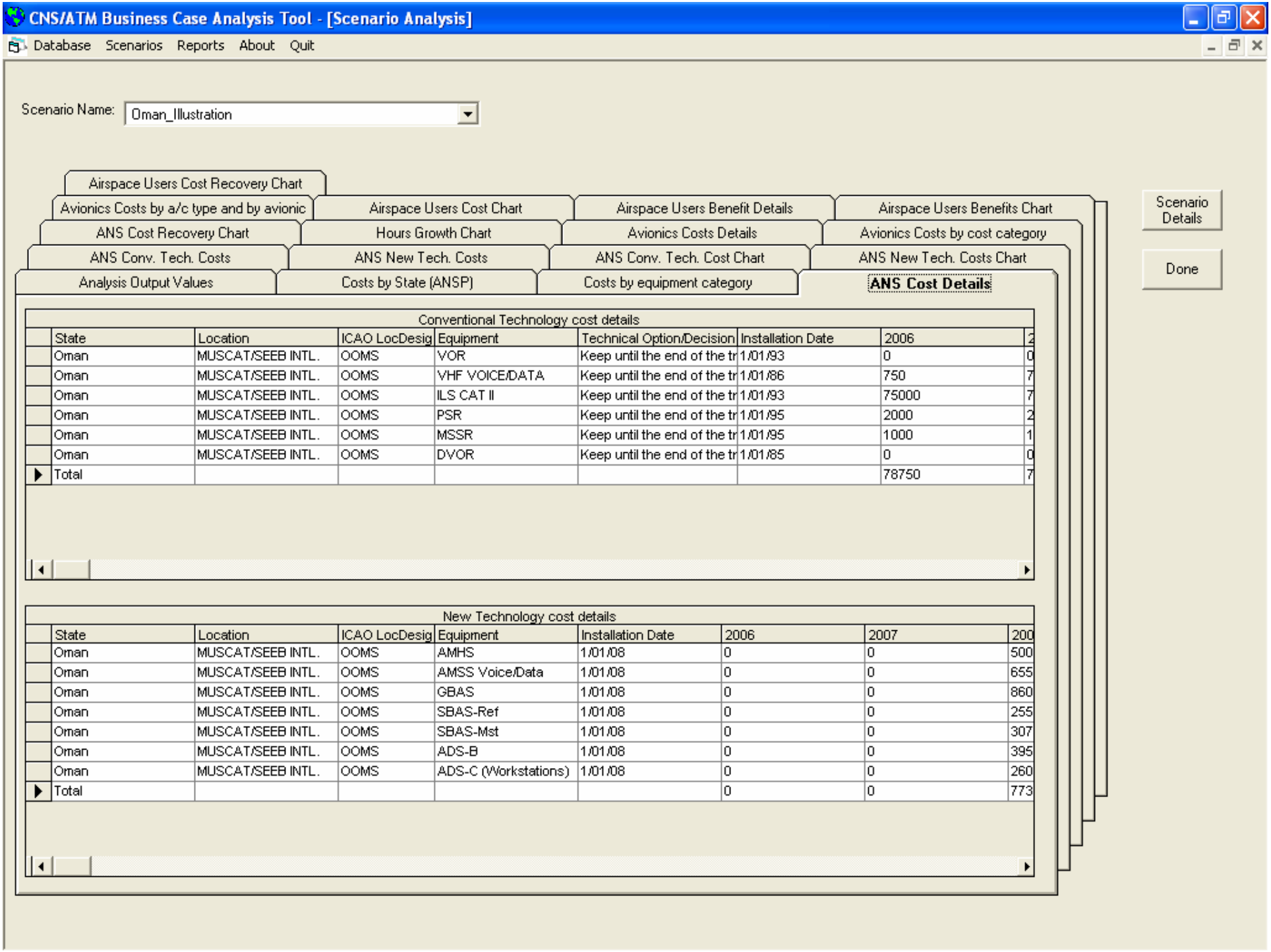
Avionics Costs by a/c type and by avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
Scenario Details
Done
Conventional Technology costs by equipment category
Equipment Category 2006 2007 2008 2009 2010 2011
Communication 750 750 750 750 750 750
Navigation 75000 75000 875000 75000 75000 75000
Surveillance 3000 3000 3000 3000 53000 3000
Total 78750 78750 878750 78750 128750 78750
New Technology costs by equipment category
Equipment Category 2006 2007 2008 2009 2010 2011
Communication 0 0 5660000 10000 10000 10000
Navigation 0 0 1422200 22200 22200 22200
Surveillance 0 0 655000 20000 20000 20000
Total 0 0 7737200 52200 52200 52200

Output results/4 : Service provider cost details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Avionics Costs by a/c type and by avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
Scenario Details
Done
Conventional Technology cost details
State Location ICAO LocDesig Equipment Technical Option/Decision Installation Date 2006
Oman MUSCAT/SEEB INTL. OOMS VOR Keep until the end of the tr 1/01/93 0
Oman MUSCAT/SEEB INTL. OOMS VHF VOICE/DATA Keep until the end of the tr 1/01/86 750
Oman MUSCAT/SEEB INTL. OOMS ILS CAT II Keep until the end of the tr 1/01/93 75000
Oman MUSCAT/SEEB INTL. OOMS PSR Keep until the end of the tr 1/01/95 2000
Oman MUSCAT/SEEB INTL. OOMS MSSR Keep until the end of the tr 1/01/95 1000
Oman MUSCAT/SEEB INTL. OOMS DVOR Keep until the end of the tr 1/01/85 0
Total 78750
New Technology cost details
State Location ICAO LocDesig Equipment Installation Date 2006 2007
Oman MUSCAT/SEEB INTL. OOMS AMHS 1/01/08 0 0
Oman MUSCAT/SEEB INTL. OOMS AMSS Voice/Data 1/01/08 0 0
Oman MUSCAT/SEEB INTL. OOMS GBAS 1/01/08 0 0
Oman MUSCAT/SEEB INTL. OOMS SBAS-Ref 1/01/08 0 0
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Oman MUSCAT/SEEB INTL. OOMS ADS-B 1/01/08 0 0
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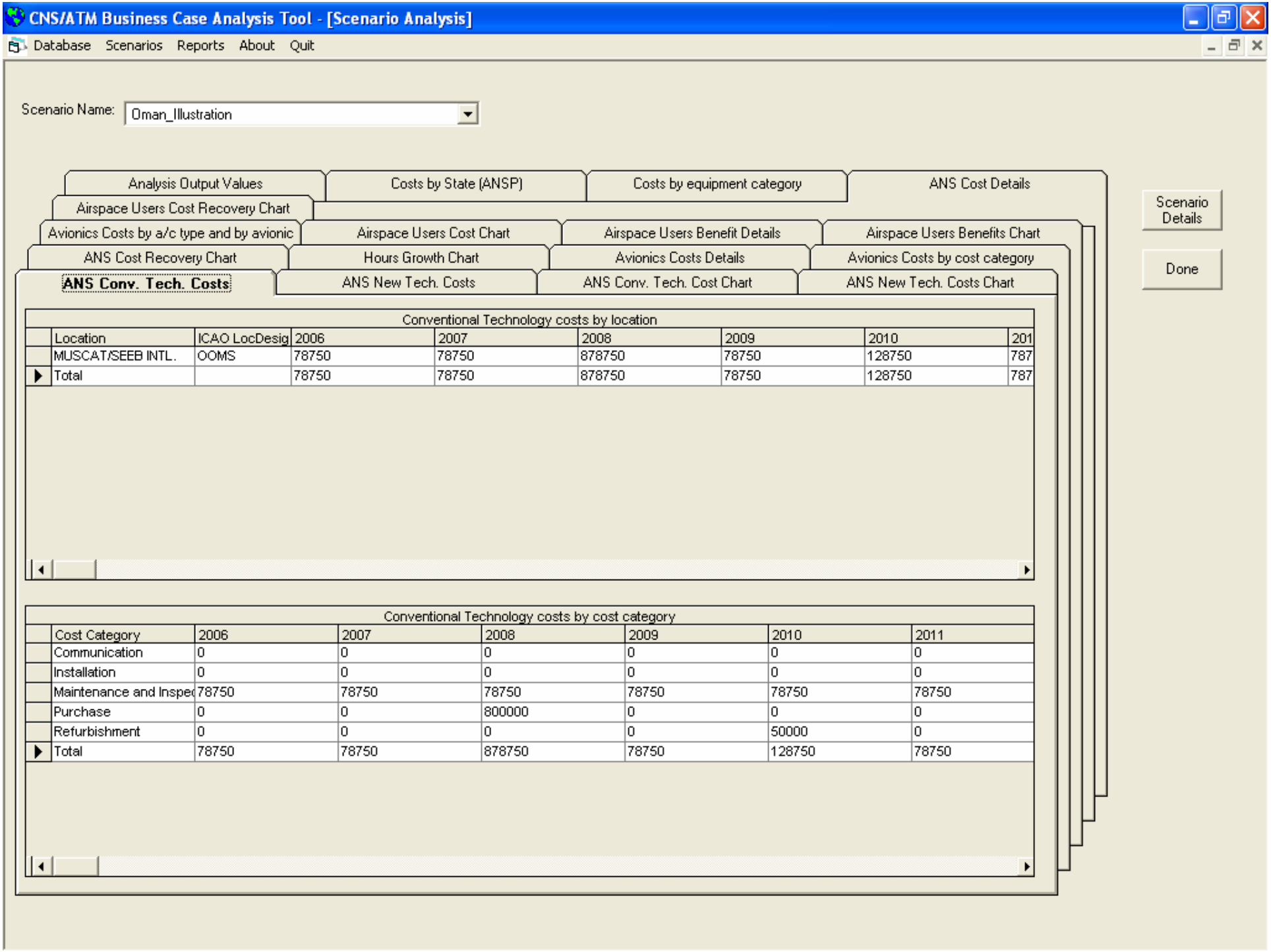
Total 0 0

Output results/5 : Conventional technology costs by location and by cost category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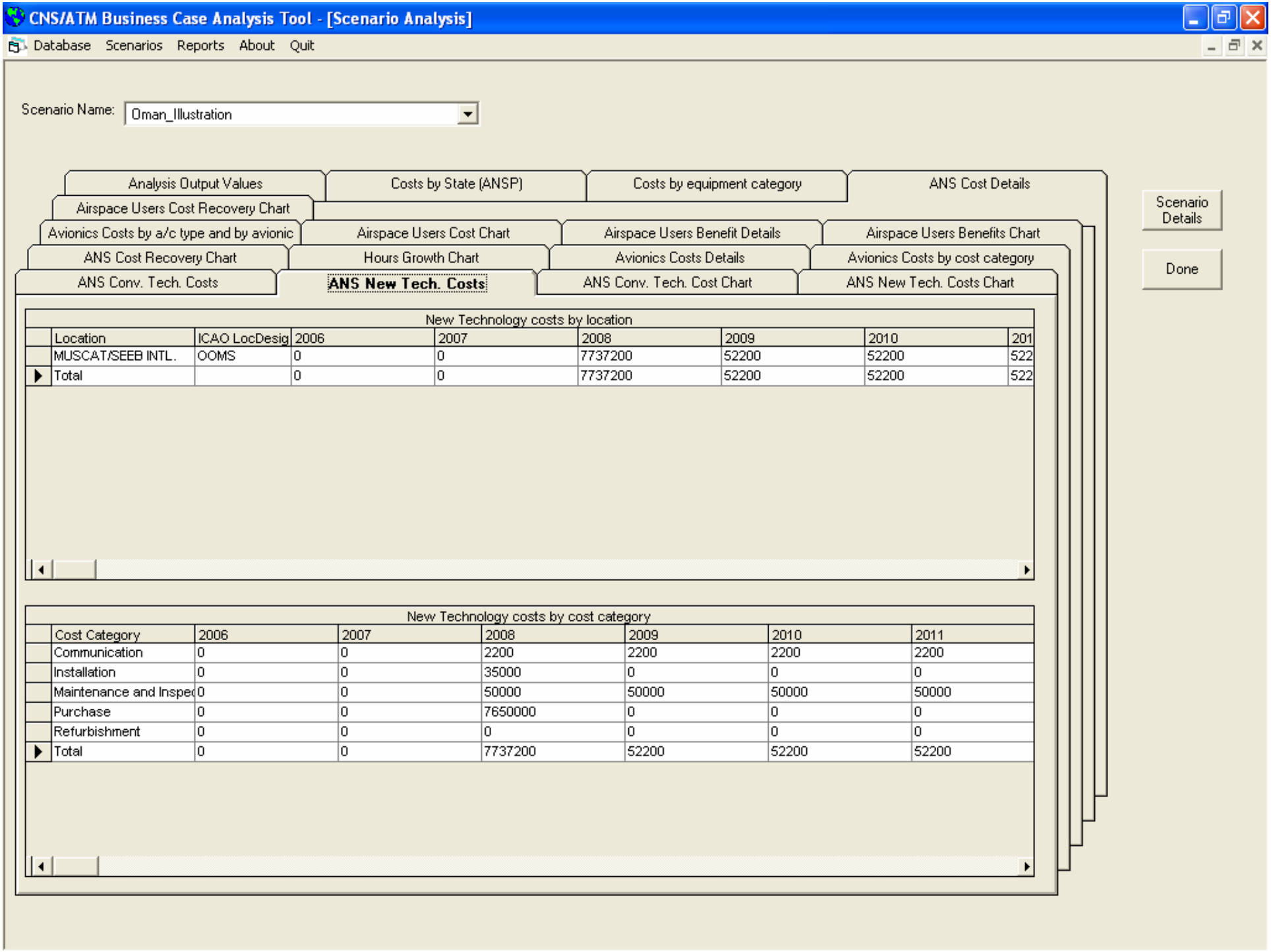
Costs by equipment category
ANS Cost Details
Airspace Users Cost Recovery Chart
Avionics Costs by a/c type and by avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Scenario Details
Done
Conventional Technology costs by location
Location
ICAO LocDesig
2006
2007
2008
2009
2010
201
MUSCAT/SEEB INTL.
OOMS
78750
78750
878750
78750
128750
787
Total
78750
78750
878750
78750
128750
787
Conventional Technology costs by cost category
Cost Category
2006
2007
2008
2009
2010
2011
Communication
0
0
0
0
0
0
Installation
0
0
0
0
0
0
Maintenance and Inspec
78750
78750
78750
78750
78750
78750
Purchase
0
0
800000
0
0
0
Refurbishment
0
0
0
0
50000
0
Total
78750
78750
878750
78750
128750
78750

Output results/6 : New technology costs by location and by cost category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Reports
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Quit
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Oman_Illustration
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
Airspace Users Cost Recovery Chart
Avionics Costs by a/c type and by avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Scenario Details
Done
New Technology costs by location
Location
ICAO LocDesig
2006
2007
2008
2009
2010
201
MUSCAT/SEEB INTL.
OOMS
0
0
7737200
52200
52200
522
Total
0
0
7737200
52200
52200
522
New Technology costs by cost category
Cost Category
2006
2007
2008
2009
2010
2011
Communication
0
0
2200
2200
2200
2200
Installation
0
0
35000
0
0
0
Maintenance and Inspec
0
0
50000
50000
50000
50000
Purchase
0
0
7650000
0
0
0
Refurbishment
0
0
0
0
0
0
Total
0
0
7737200
52200
52200
52200

Output results/7 : Conventional technology cost chart

CNS/ATM Business Case Analysis Tool - [Scenario Analysis]

Database Scenarios Reports About Quit

Scenario Name: Oman_Illustration

Analysis Output Values | Costs by State (ANSP) | Costs by equipment category | ANS Cost Details

Airspace Users Cost Recovery Chart

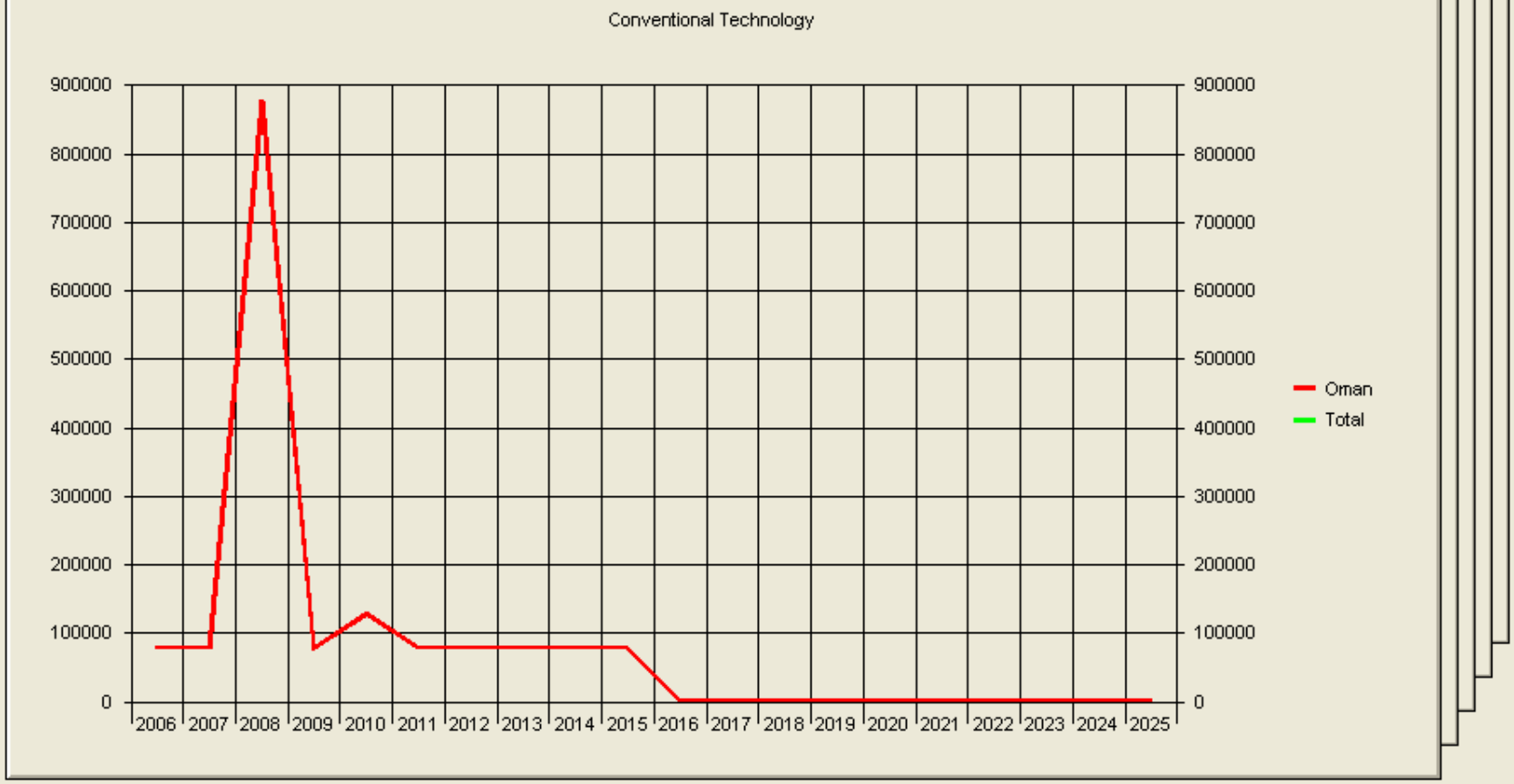
Avionics Costs by a/c type and by avionic | Airspace Users Cost Chart | Airspace Users Benefit Details | Airspace Users Benefits Chart

ANS Cost Recovery Chart | Hours Growth Chart | Avionics Costs Details | Avionics Costs by cost category

ANS Conv. Tech. Costs | ANS New Tech. Costs | **ANS Conv. Tech. Cost Chart** | ANS New Tech. Costs Chart

Scenario Details

Done



Output results/8 : New technology cost chart

CNS/ATM Business Case Analysis Tool - [Scenario Analysis]

Database Scenarios Reports About Quit

Scenario Name: Oman_Illustration

Analysis Output Values | Costs by State (ANSP) | Costs by equipment category | ANS Cost Details

Airspace Users Cost Recovery Chart

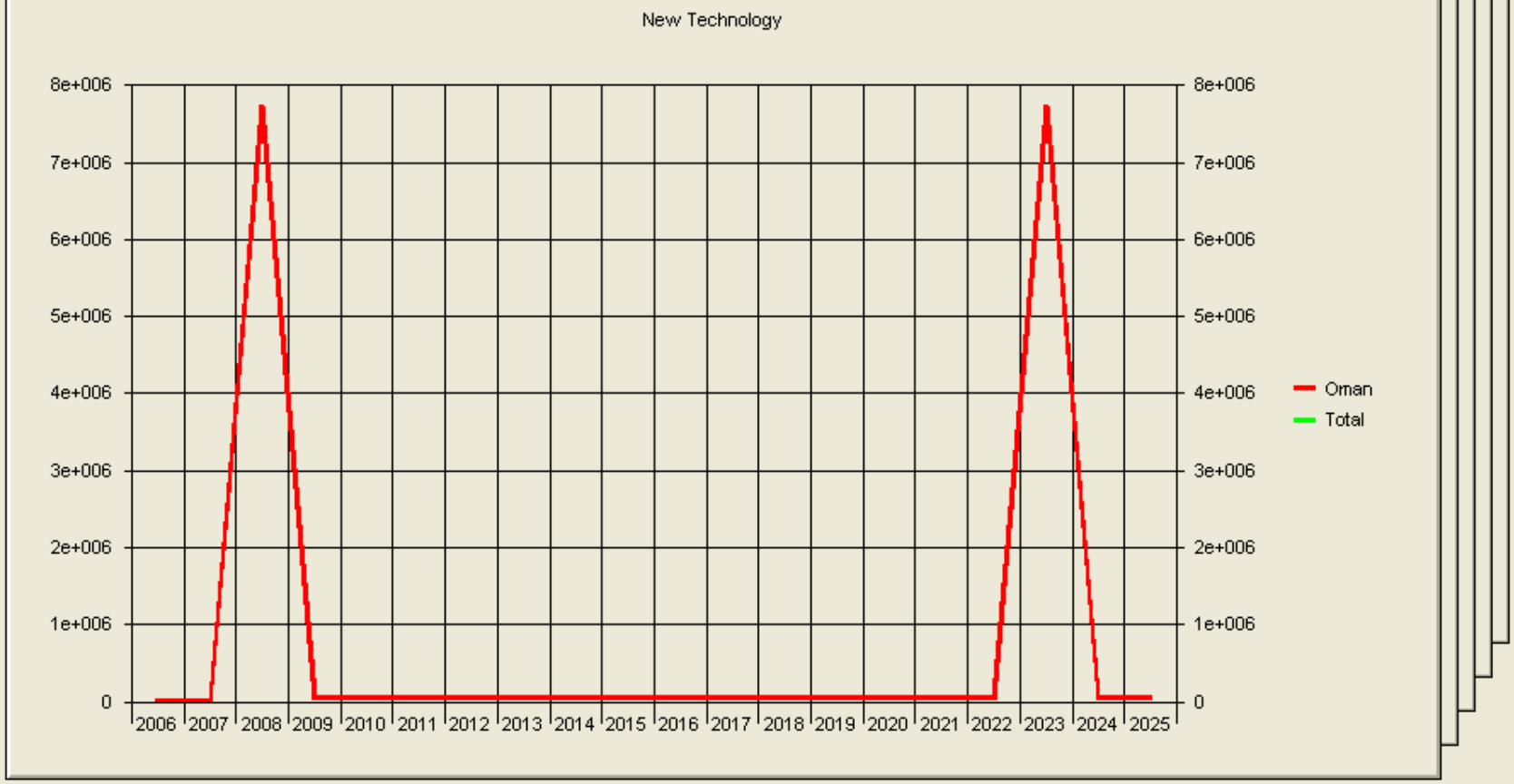
Avionics Costs by a/c type and by avionic | Airspace Users Cost Chart | Airspace Users Benefit Details | Airspace Users Benefits Chart

ANS Cost Recovery Chart | Hours Growth Chart | Avionics Costs Details | Avionics Costs by cost category

ANS Conv. Tech. Costs | ANS New Tech. Costs | ANS Conv. Tech. Cost Chart | **ANS New Tech. Costs Chart**

Scenario Details

Done



Output results/9 : Service provider recovery chart

CNS/ATM Business Case Analysis Tool - [Scenario Analysis]

Database Scenarios Reports About Quit

Scenario Name: Oman_Illustration

ANS Conv. Tech. Costs | ANS New Tech. Costs | ANS Conv. Tech. Cost Chart | ANS New Tech. Costs Chart

Analysis Output Values | Costs by State (ANSP) | Costs by equipment category | ANS Cost Details

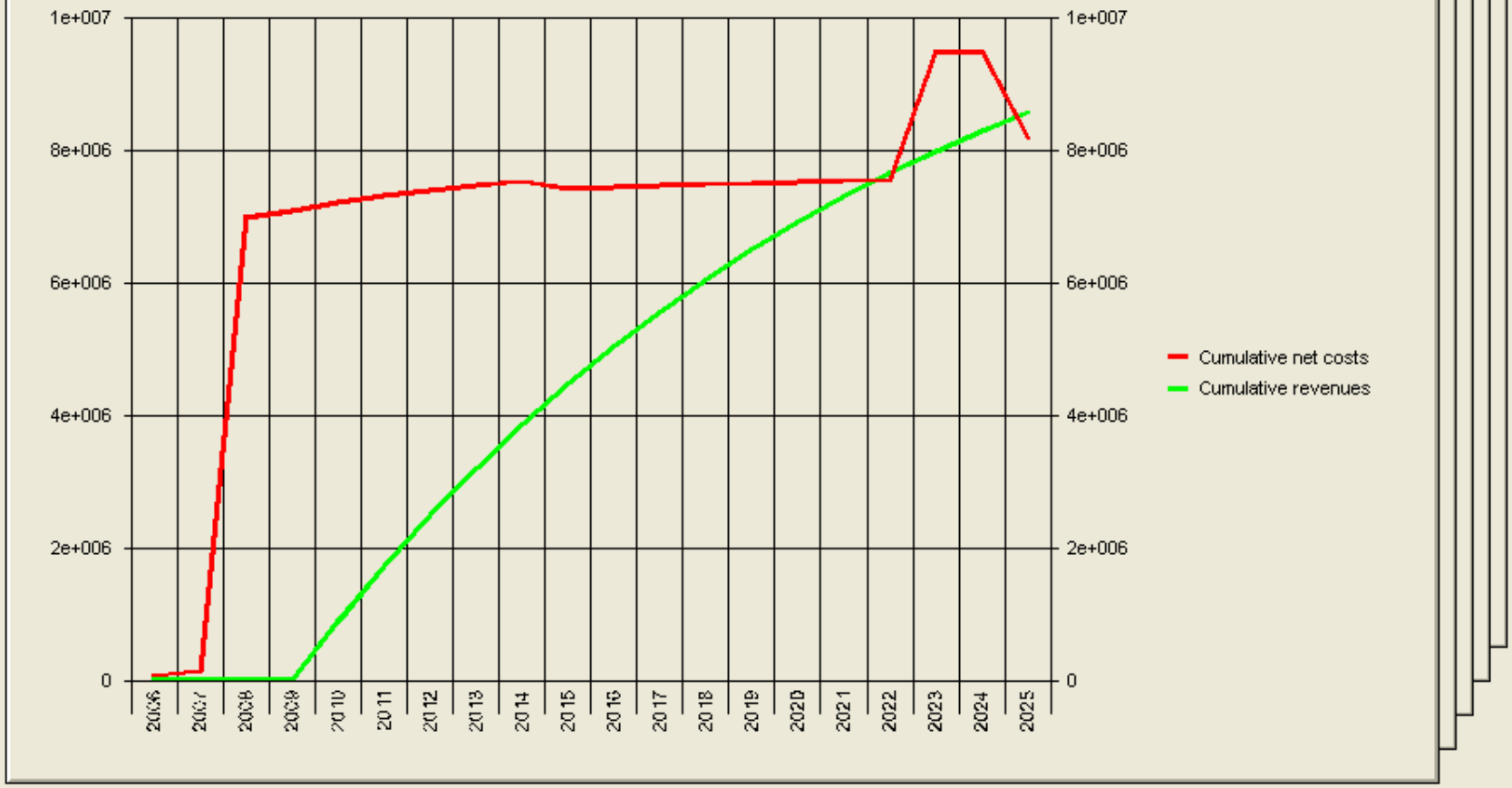
Airspace Users Cost Recovery Chart

Avionics Costs by a/c type and by avionic | Airspace Users Cost Chart | Airspace Users Benefit Details | Airspace Users Benefits Chart

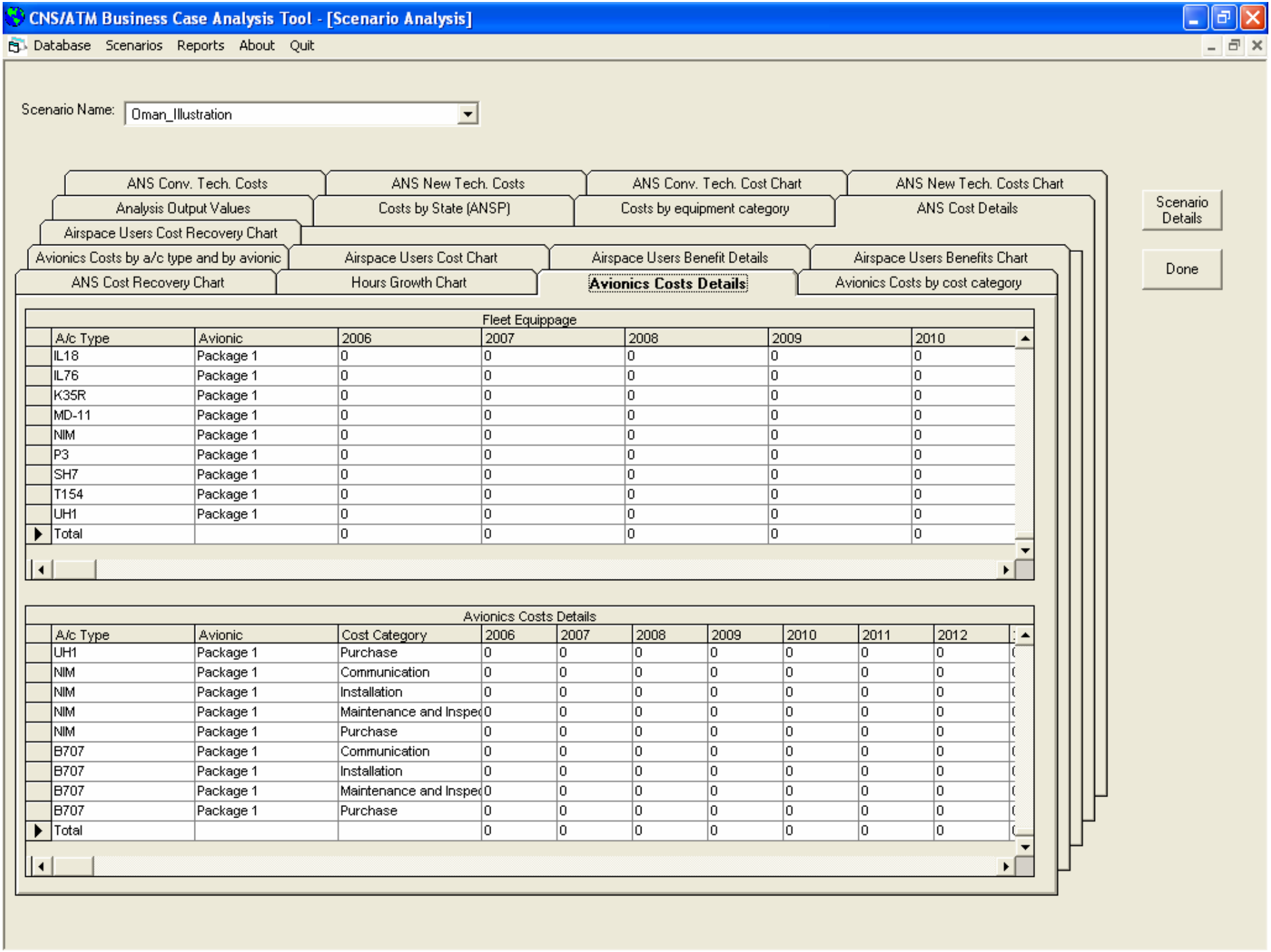
ANS Cost Recovery Chart | Hours Growth Chart | Avionics Costs Details | Avionics Costs by cost category

Scenario Details

Done



Output results/10 : Avionics cost details


CNS/ATM Business Case Analysis Tool - [Scenario Analysis]
Database
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Reports
About
Quit
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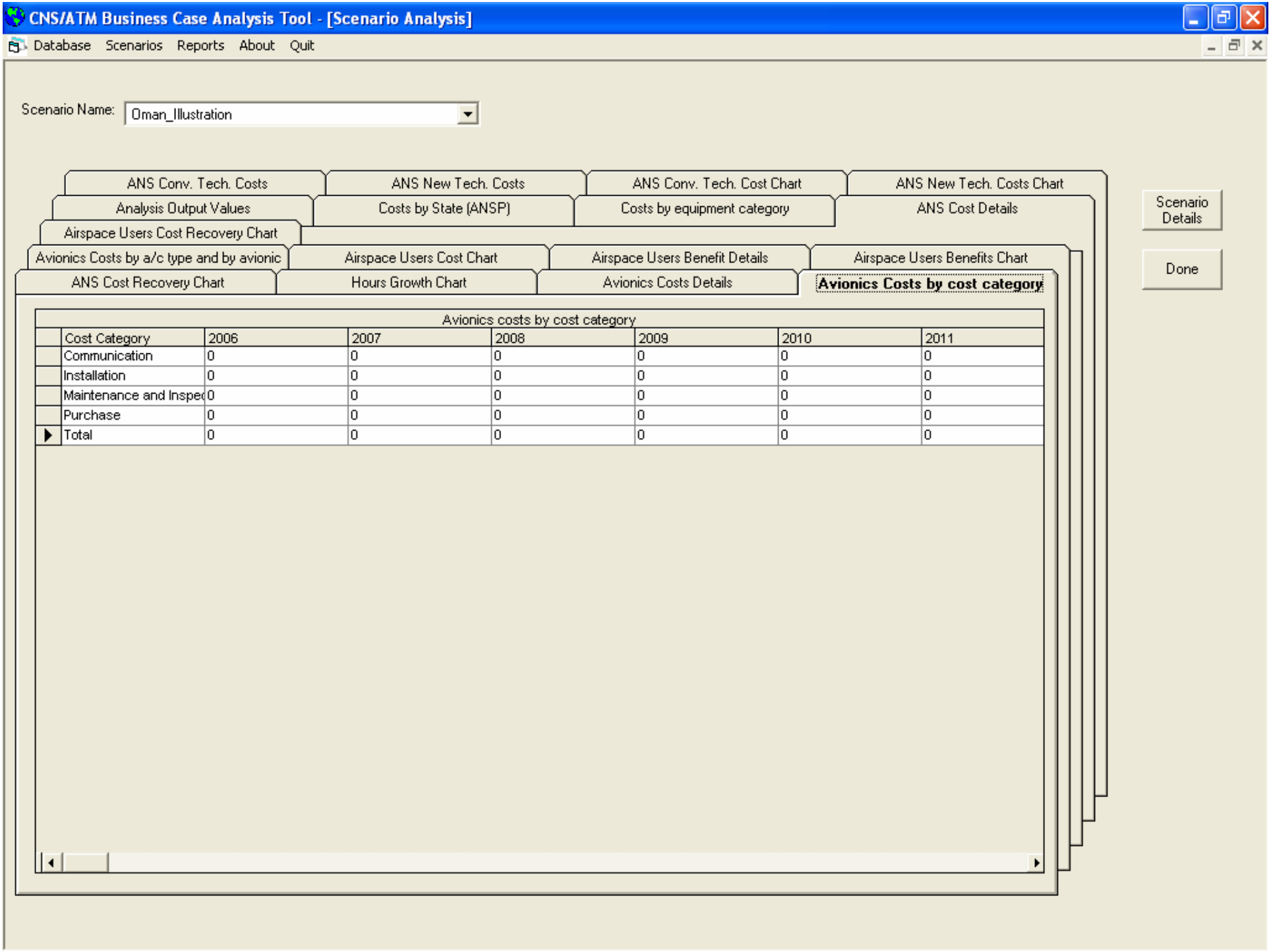
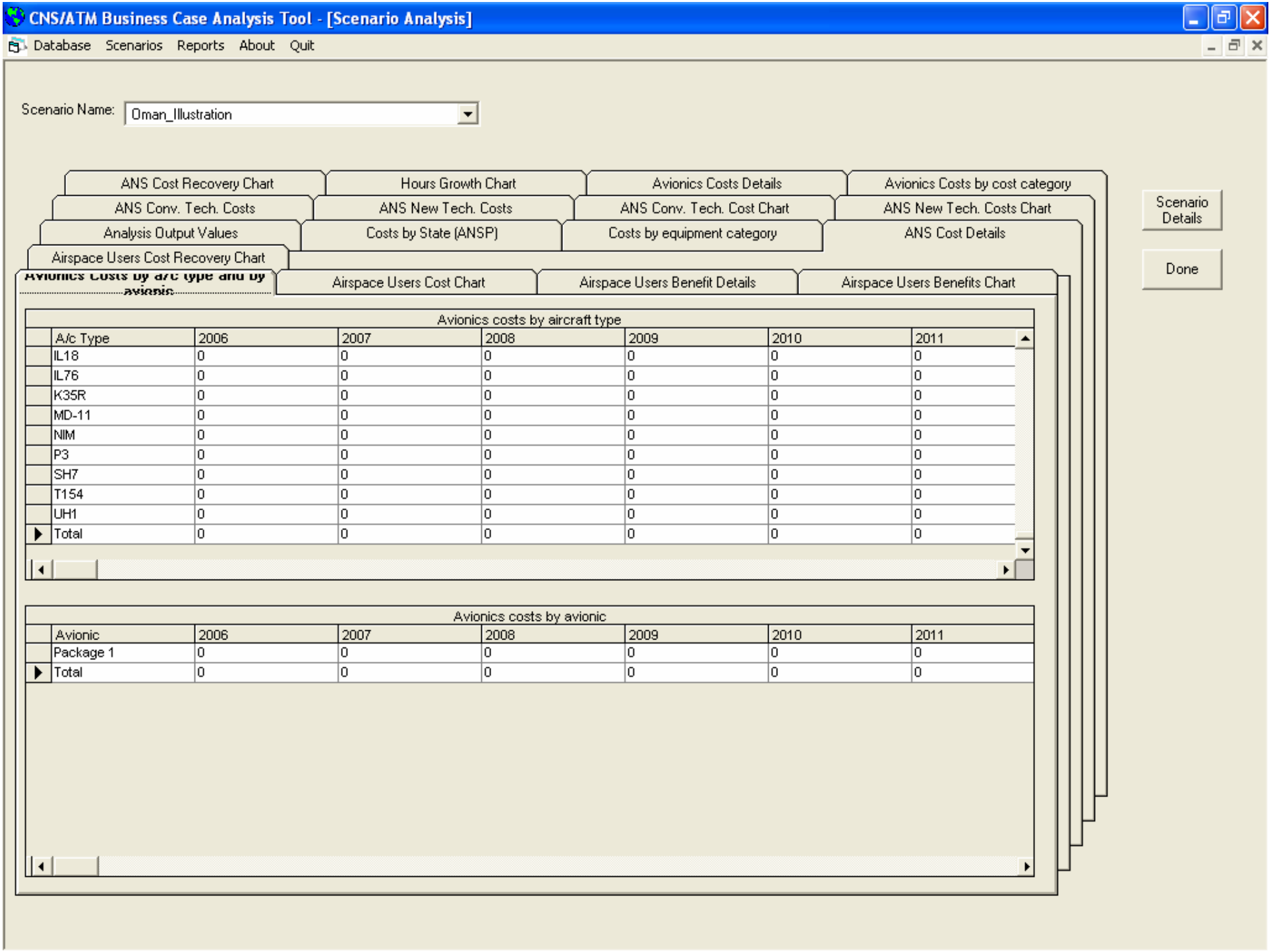
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
Airspace Users Cost Recovery Chart
Avionics Costs by a/c type and by avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
Scenario Details
Done
Fleet Equippage
A/c Type
Avionic
2006
2007
2008
2009
2010
IL18 Package 1 0 0 0 0 0
IL76 Package 1 0 0 0 0 0
K35R Package 1 0 0 0 0 0
MD-11 Package 1 0 0 0 0 0
NIM Package 1 0 0 0 0 0
P3 Package 1 0 0 0 0 0
SH7 Package 1 0 0 0 0 0
T154 Package 1 0 0 0 0 0
UH1 Package 1 0 0 0 0 0
Total 0 0 0 0 0
Avionics Costs Details
A/c Type
Avionic
Cost Category
2006
2007
2008
2009
2010
2011
2012
UH1 Package 1 Purchase 0 0 0 0 0 0 0
NIM Package 1 Communication 0 0 0 0 0 0 0
NIM Package 1 Installation 0 0 0 0 0 0 0
NIM Package 1 Maintenance and Inspec 0 0 0 0 0 0 0
NIM Package 1 Purchase 0 0 0 0 0 0 0
B707 Package 1 Communication 0 0 0 0 0 0 0
B707 Package 1 Installation 0 0 0 0 0 0 0
B707 Package 1 Maintenance and Inspec 0 0 0 0 0 0 0
B707 Package 1 Purchase 0 0 0 0 0 0 0
Total 0 0 0 0 0 0 0

Output results/11 : Avionics costs by cost category


CNS/ATM Business Case Analysis Tool - [Scenario Analysis]
Database
Scenarios
Reports
About
Quit
Scenario Name:
Oman_Illustration
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
Airspace Users Cost Recovery Chart
Avionics Costs by a/c type and by avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
Scenario Details
Done
Avionics costs by cost category
Cost Category
2006
2007
2008
2009
2010
2011
Communication
Installation
Maintenance and Inspec
Purchase
Total
0

Output results/12 : Avionics costs by aircraft type and by avionic type


CNS/ATM Business Case Analysis Tool - [Scenario Analysis]
Database
Scenarios
Reports
About
Quit
Scenario Name:
Oman_Illustration
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
Airspace Users Cost Recovery Chart
Avionics Costs by a/c type and by Avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
Scenario Details
Done
Avionics costs by aircraft type
A/c Type 2006 2007 2008 2009 2010 2011
IL18 0 0 0 0 0 0
IL76 0 0 0 0 0 0
K35R 0 0 0 0 0 0
MD-11 0 0 0 0 0 0
NIM 0 0 0 0 0 0
P3 0 0 0 0 0 0
SH7 0 0 0 0 0 0
T154 0 0 0 0 0 0
UH1 0 0 0 0 0 0
Total 0 0 0 0 0 0
Avionics costs by avionic
Avionic 2006 2007 2008 2009 2010 2011
Package 1 0 0 0 0 0 0
Total 0 0 0 0 0 0

Output results/13 : Airspace users costs chart

CNS/ATM Business Case Analysis Tool - [Scenario Analysis]

Database Scenarios Reports About Quit

Scenario Name: Oman_Illustration

ANS Cost Recovery Chart | Hours Growth Chart | Avionics Costs Details | Avionics Costs by cost category

ANS Conv. Tech. Costs | ANS New Tech. Costs | ANS Conv. Tech. Cost Chart | ANS New Tech. Costs Chart

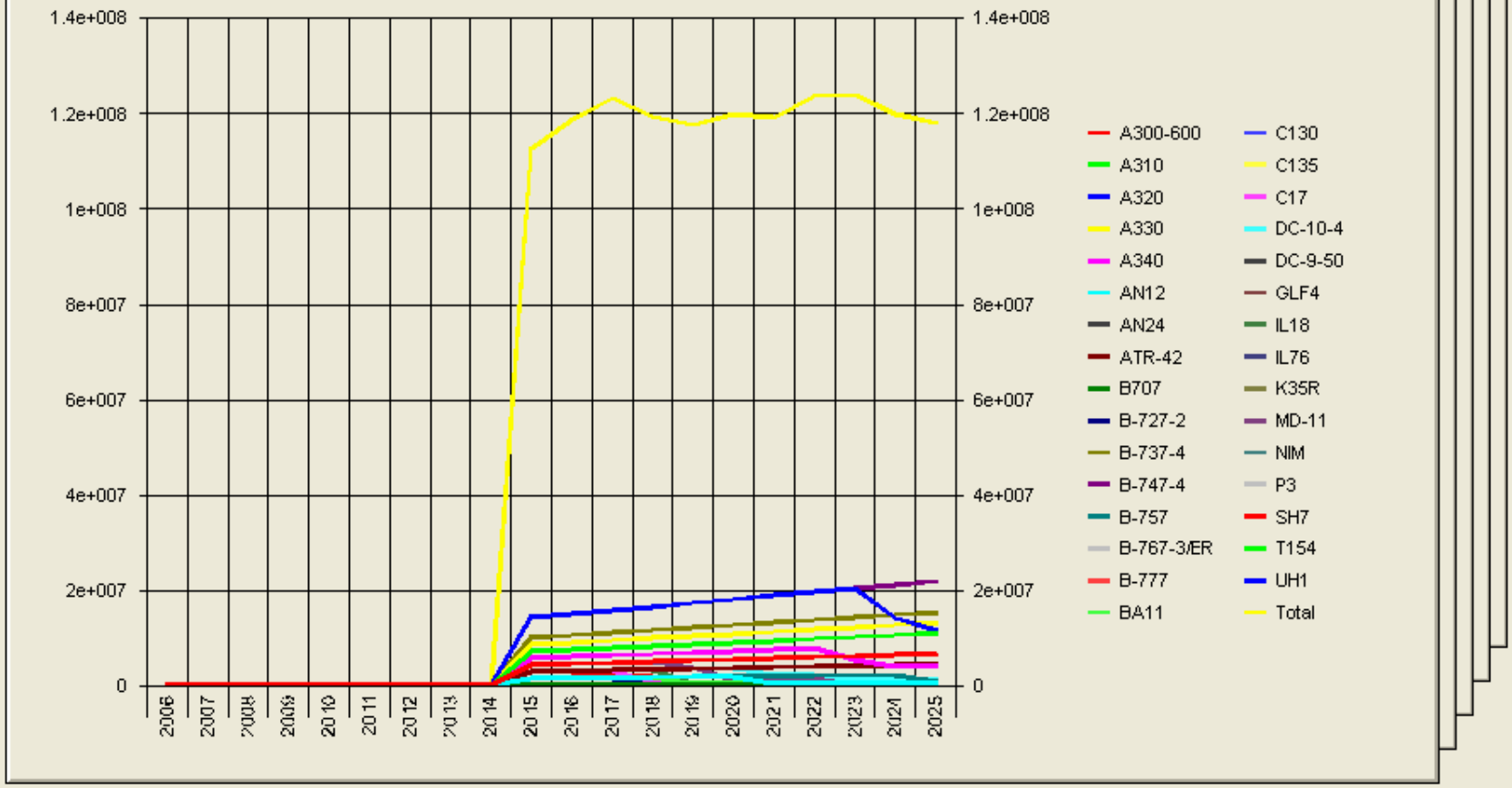
Analysis Output Values | Costs by State (ANSP) | Costs by equipment category | ANS Cost Details

Airspace Users Cost Recovery Chart

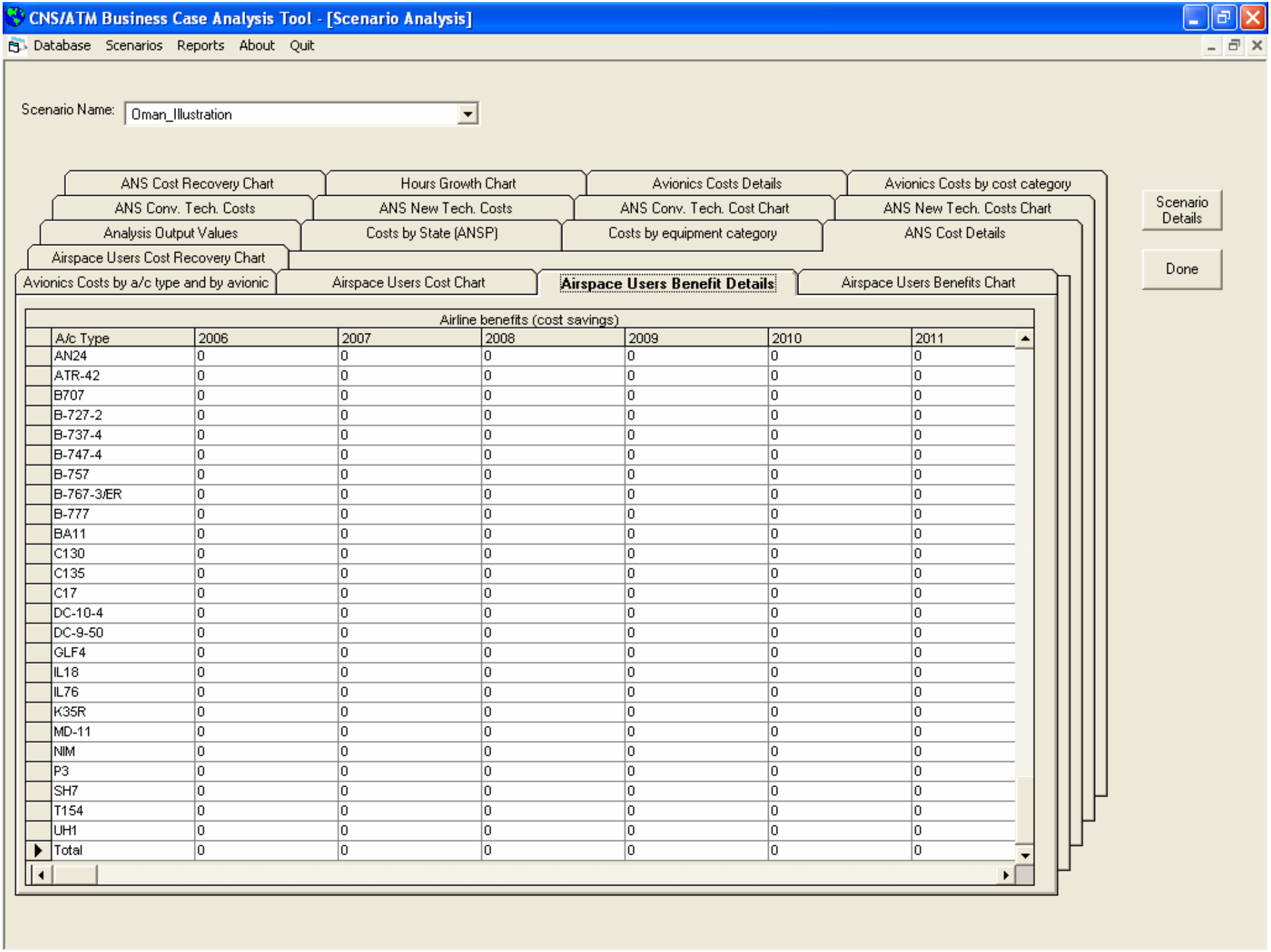
Avionics Costs by a/c type and by avionic | **Airspace Users Cost Chart** | Airspace Users Benefit Details | Airspace Users Benefits Chart

Scenario Details

Done



Output results/14 : Airspace users benefits details


CNS/ATM Business Case Analysis Tool - [Scenario Analysis]
Database
Scenarios
Reports
About
Quit
Scenario Name:
Oman_Illustration
ANS Cost Recovery Chart
Hours Growth Chart
Avionics Costs Details
Avionics Costs by cost category
ANS Conv. Tech. Costs
ANS New Tech. Costs
ANS Conv. Tech. Cost Chart
ANS New Tech. Costs Chart
Analysis Output Values
Costs by State (ANSP)
Costs by equipment category
ANS Cost Details
Airspace Users Cost Recovery Chart
Avionics Costs by a/c type and by avionic
Airspace Users Cost Chart
Airspace Users Benefit Details
Airspace Users Benefits Chart
Scenario Details
Done
Airline benefits (cost savings)
A/c Type
2006
2007
2008
2009
2010
2011
AN24 0 0 0 0 0 0
ATR-42 0 0 0 0 0 0
B707 0 0 0 0 0 0
B-727-2 0 0 0 0 0 0
B-737-4 0 0 0 0 0 0
B-747-4 0 0 0 0 0 0
B-757 0 0 0 0 0 0
B-767-3/ER 0 0 0 0 0 0
B-777 0 0 0 0 0 0
BA11 0 0 0 0 0 0
C130 0 0 0 0 0 0
C135 0 0 0 0 0 0
C17 0 0 0 0 0 0
DC-10-4 0 0 0 0 0 0
DC-9-50 0 0 0 0 0 0
GLF4 0 0 0 0 0 0
IL18 0 0 0 0 0 0
IL76 0 0 0 0 0 0
K35R 0 0 0 0 0 0
MD-11 0 0 0 0 0 0
NIM 0 0 0 0 0 0
P3 0 0 0 0 0 0
SH7 0 0 0 0 0 0
T154 0 0 0 0 0 0
UH1 0 0 0 0 0 0
Total 0 0 0 0 0 0

Output results/15 : Airspace users benefits chart

CNS/ATM Business Case Analysis Tool - [Scenario Analysis]

Database Scenarios Reports About Quit

Scenario Name: Oman_Illustration

ANS Cost Recovery Chart | Hours Growth Chart | Avionics Costs Details | Avionics Costs by cost category

ANS Conv. Tech. Costs | ANS New Tech. Costs | ANS Conv. Tech. Cost Chart | ANS New Tech. Costs Chart

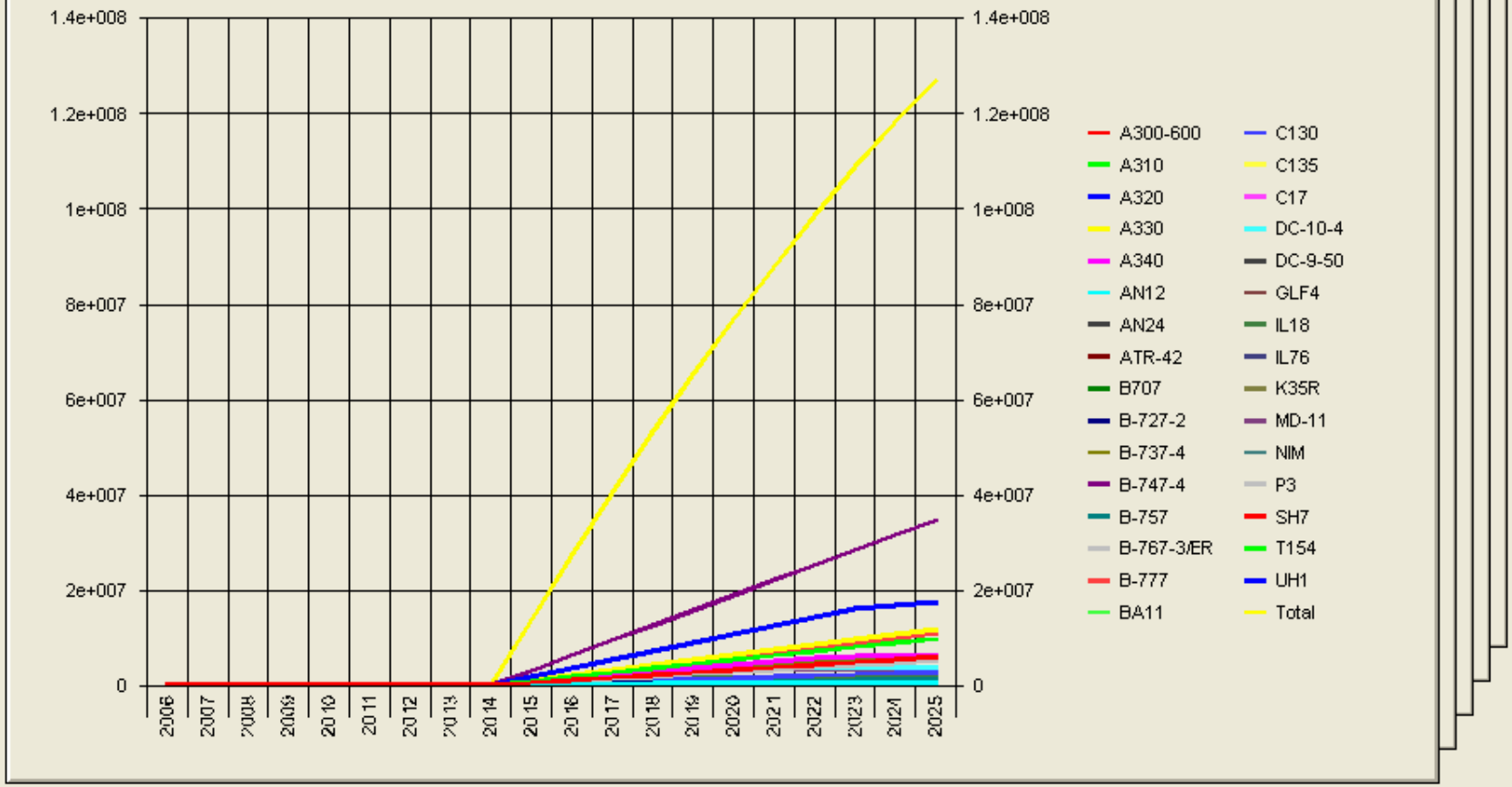
Analysis Output Values | Costs by State (ANSP) | Costs by equipment category | ANS Cost Details

Airspace Users Cost Recovery Chart

Avionics Costs by a/c type and by avionic | Airspace Users Cost Chart | Airspace Users Benefit Details | **Airspace Users Benefits Chart**

Scenario Details

Done



Output results/16 : Airspace users cost recovery chart

CNS/ATM Business Case Analysis Tool - [Scenario Analysis]

Database Scenarios Reports About Quit

Scenario Name: Oman_Illustration9

Avionics Costs by a/c type and by avionic | Airspace Users Cost Chart | Airspace Users Benefit Details | Airspace Users Benefits Chart

ANS Cost Recovery Chart | Hours Growth Chart | Avionics Costs Details | Avionics Costs by cost category

ANS Conv. Tech. Costs | ANS New Tech. Costs | ANS Conv. Tech. Cost Chart | ANS New Tech. Costs Chart

Analysis Output Values | Costs by State (ANSP) | Costs by equipment category | ANS Cost Details

Airspace Users Cost Recovery Chart

Scenario Details

Done