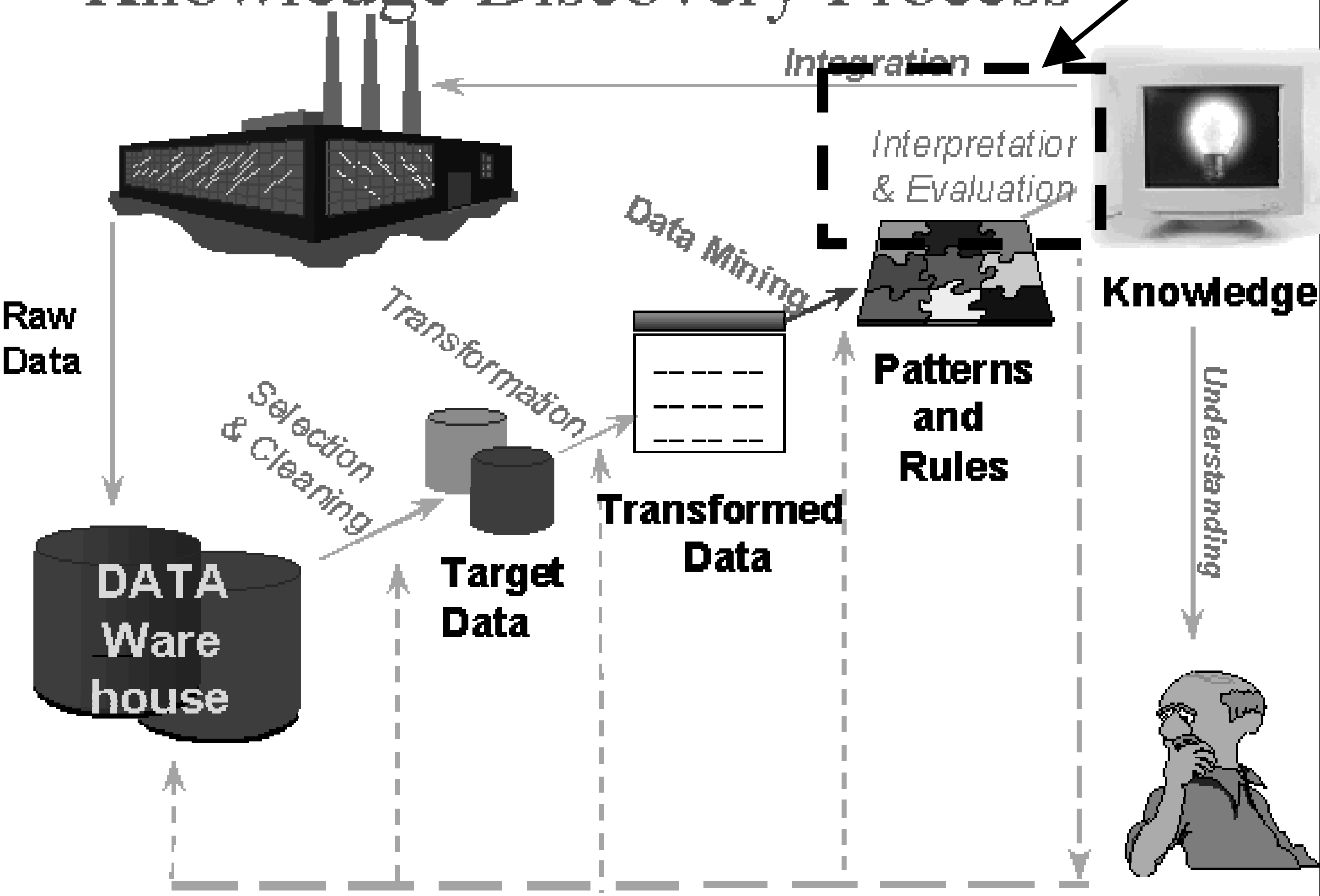
Knowledge Discovery Process



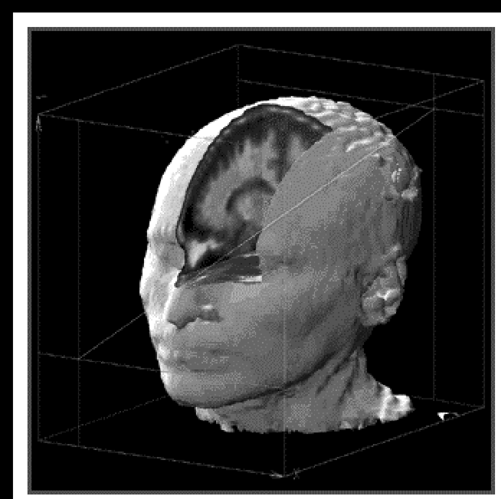
(C) 1998 Knowledge Stream Partners

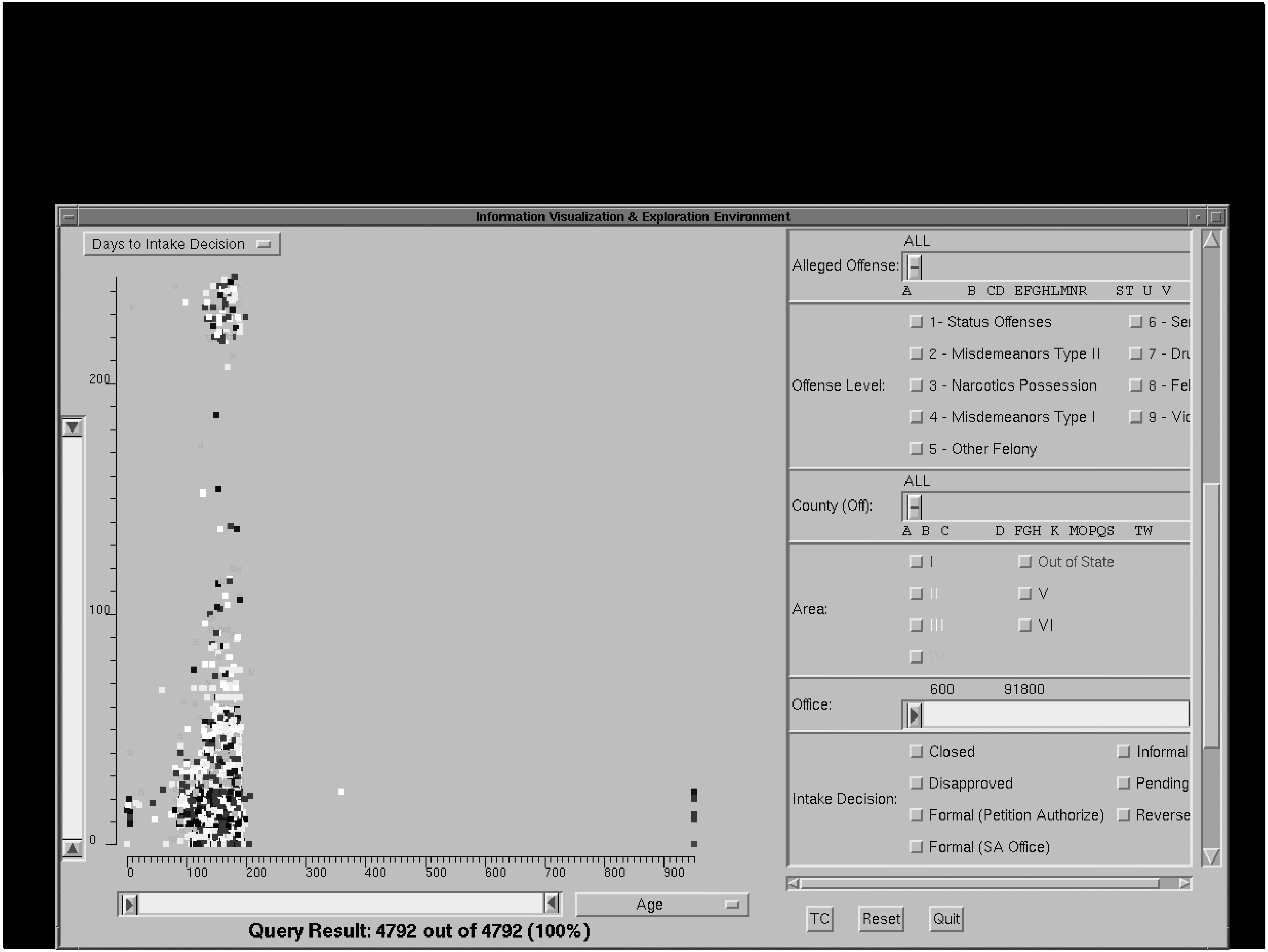
Shape

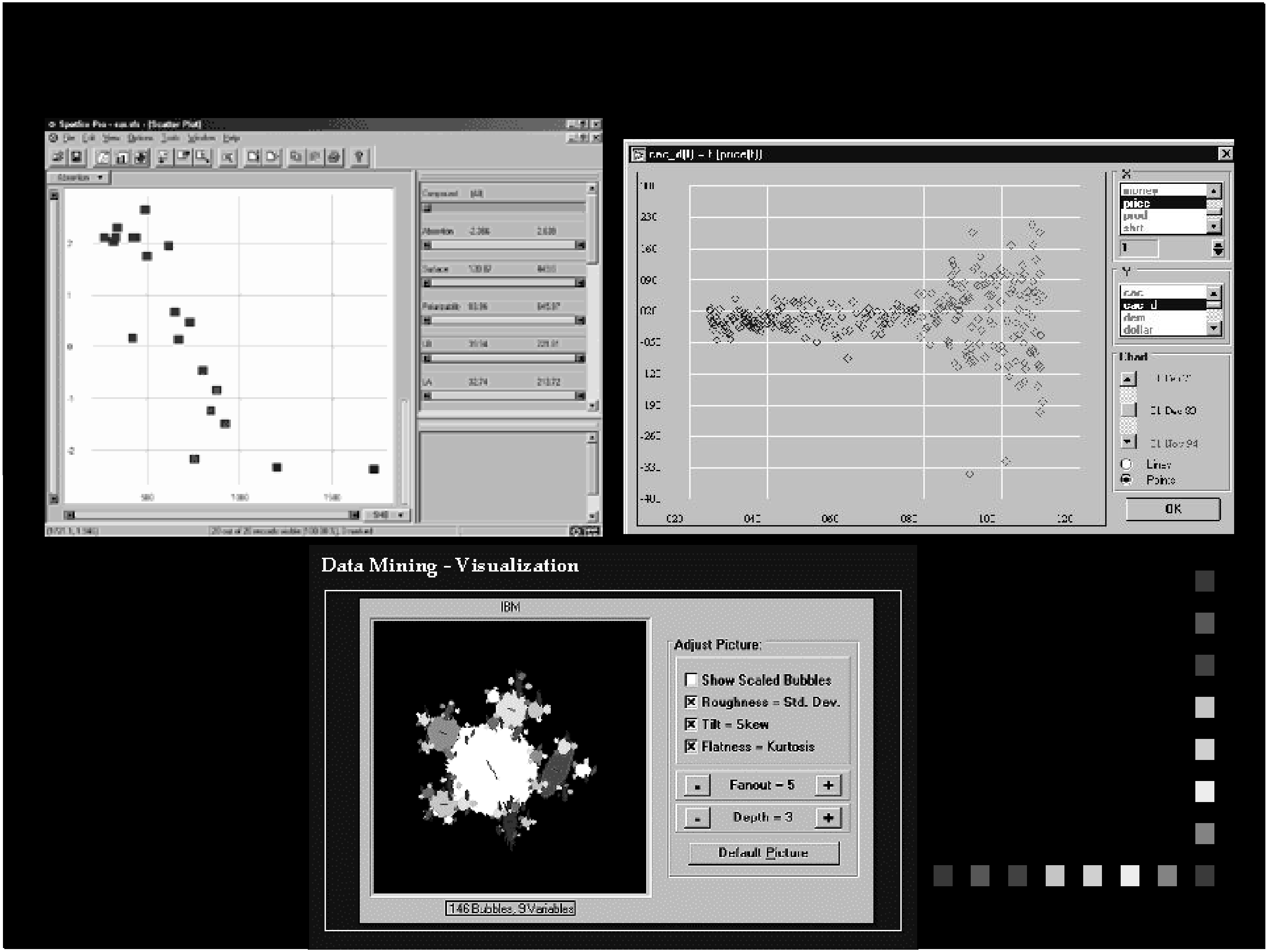
Sound

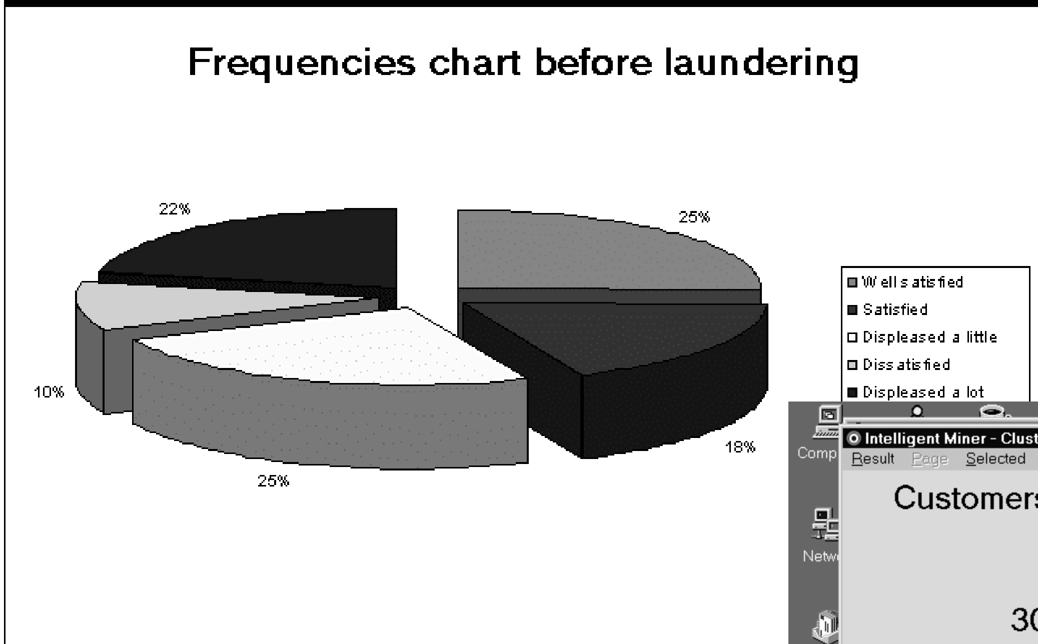
Color

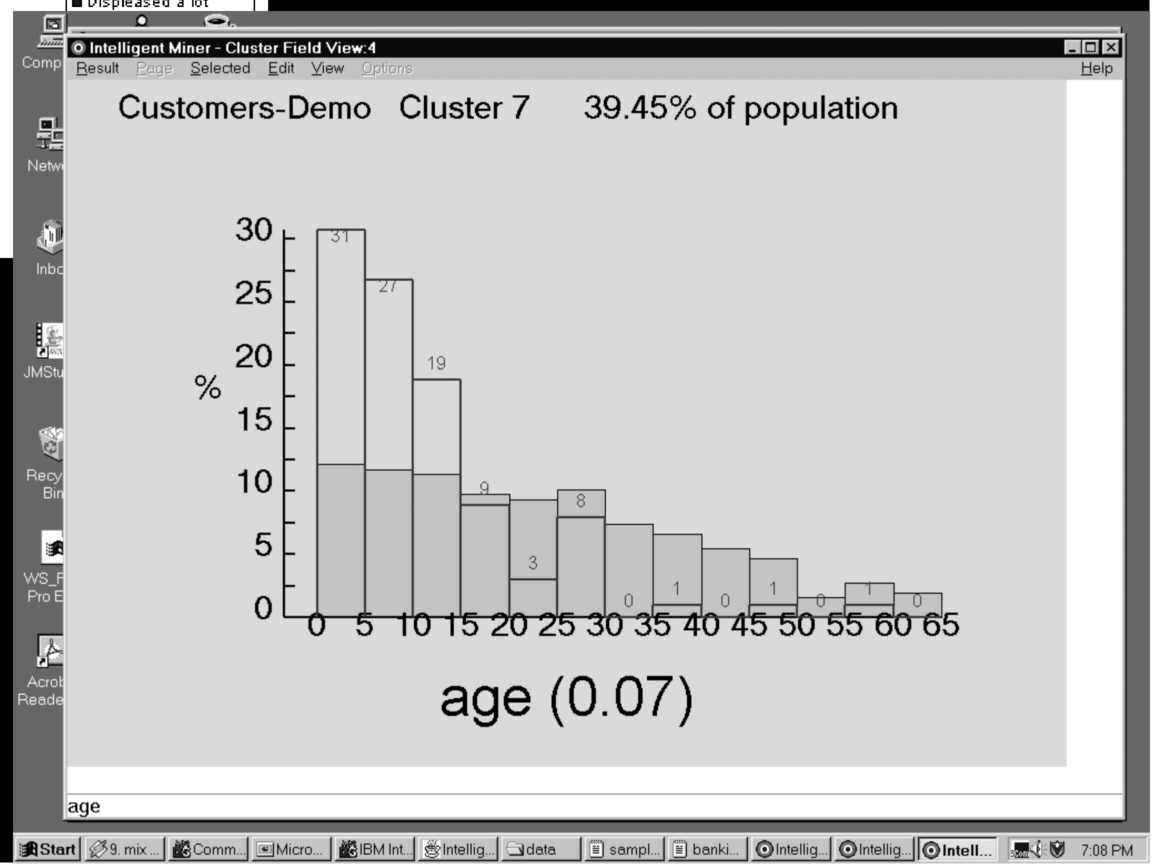
Animation

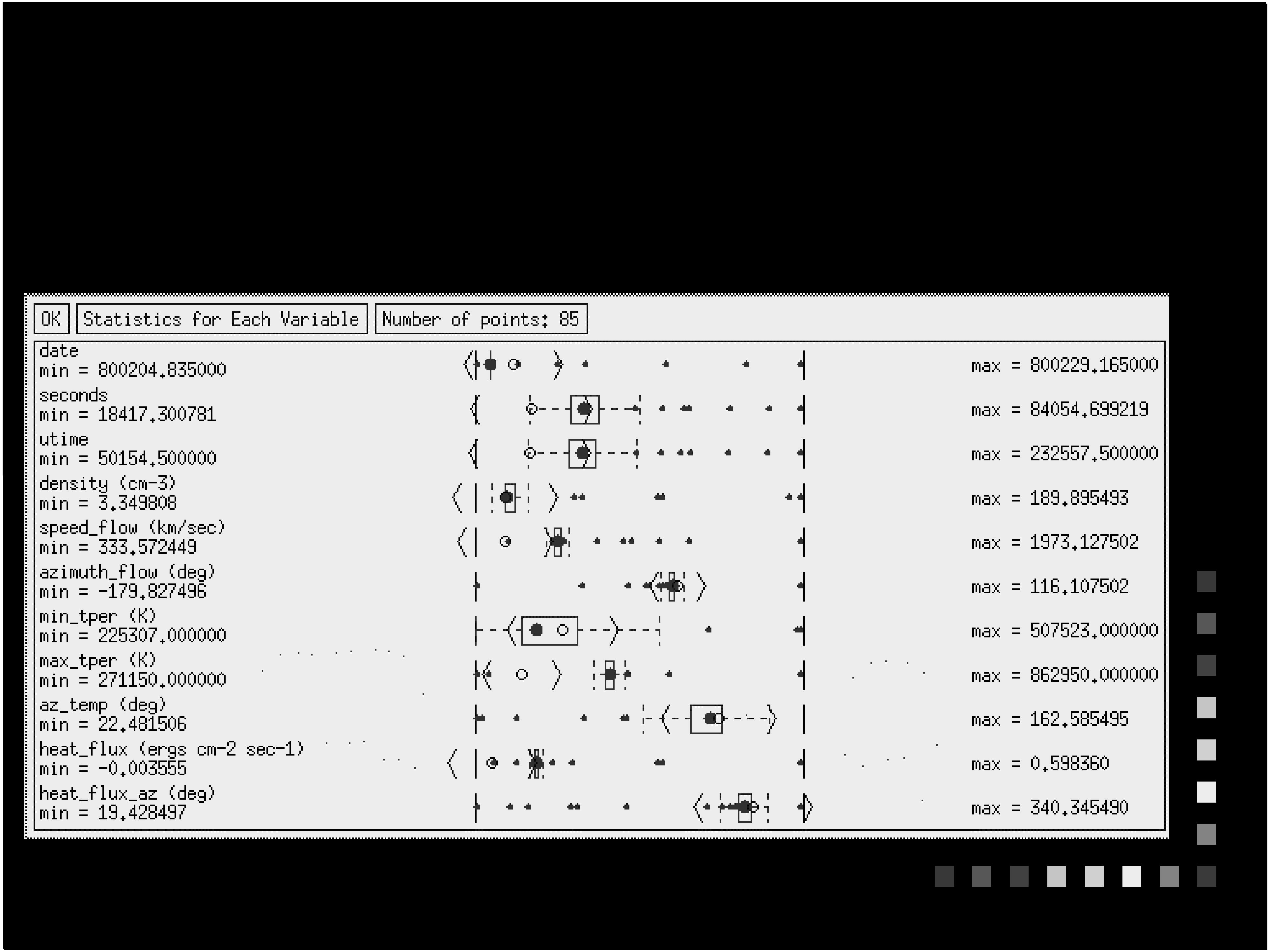


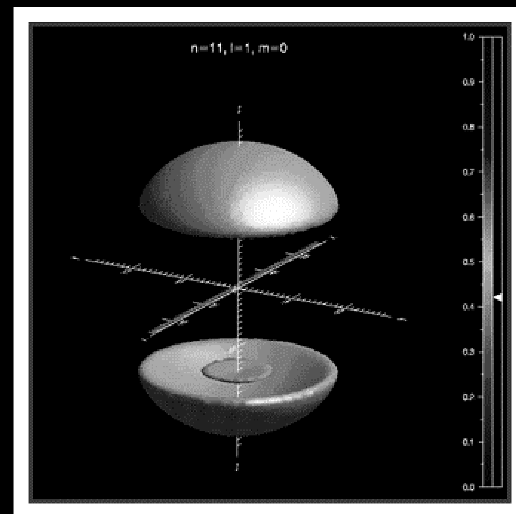

Information Visualization & Exploration Environment
Days to Intake Decision
200
100
0
0 100 200 300 400 500 600 700 800 900
Age
Query Result: 4792 out of 4792 (100%)
ALL
Alleged Offense:
A B CD EFGHLMNR ST U V
1- Status Offenses
2 - Misdemeanors Type II
3 - Narcotics Possession
4 - Misdemeanors Type I
5 - Other Felony
6 - Ser
7 - Dru
8 - Fel
9 - Vic
Offense Level:
ALL
County (Off):
A B C D FGH K MOPQS TW
Area:
I
II
III
Out of State
V
VI
Office:
600 91800
Intake Decision:
Closed
Disapproved
Formal (Petition Authorize)
Formal (SA Office)
Informal
Pending
Reverse
TC
Reset
Quit

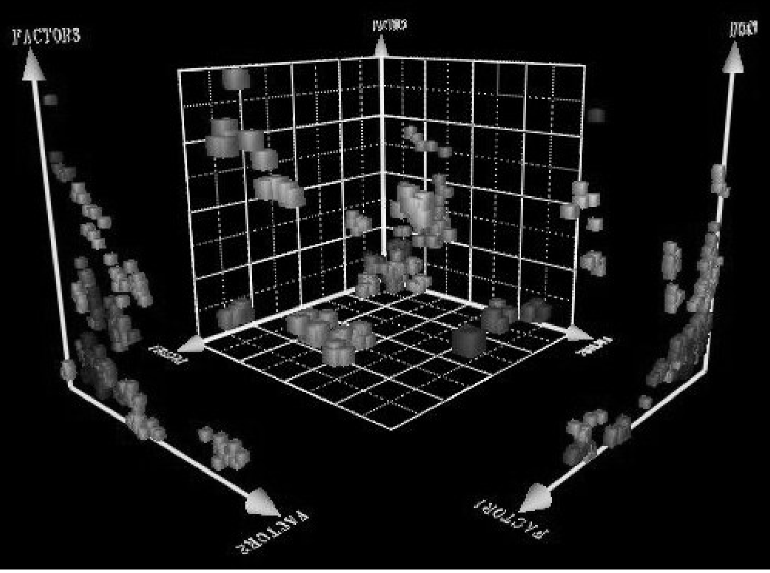

Data Mining - Visualization
IBM
Adjust Picture:
Show Scaled Bubbles
Roughness = Std. Dev.
Tilt = Skew
Flatness = Kurtosis
Fanout = 5
Depth = 3
Default Picture
146 Bubbles, 9 Variables
Chart
Lines
Points
OK


Frequencies chart before laundering
22%
25%
10%
25%
18%
Well satisfied
Satisfied
Displeased a little
Dissatisfied
Displeased a lot

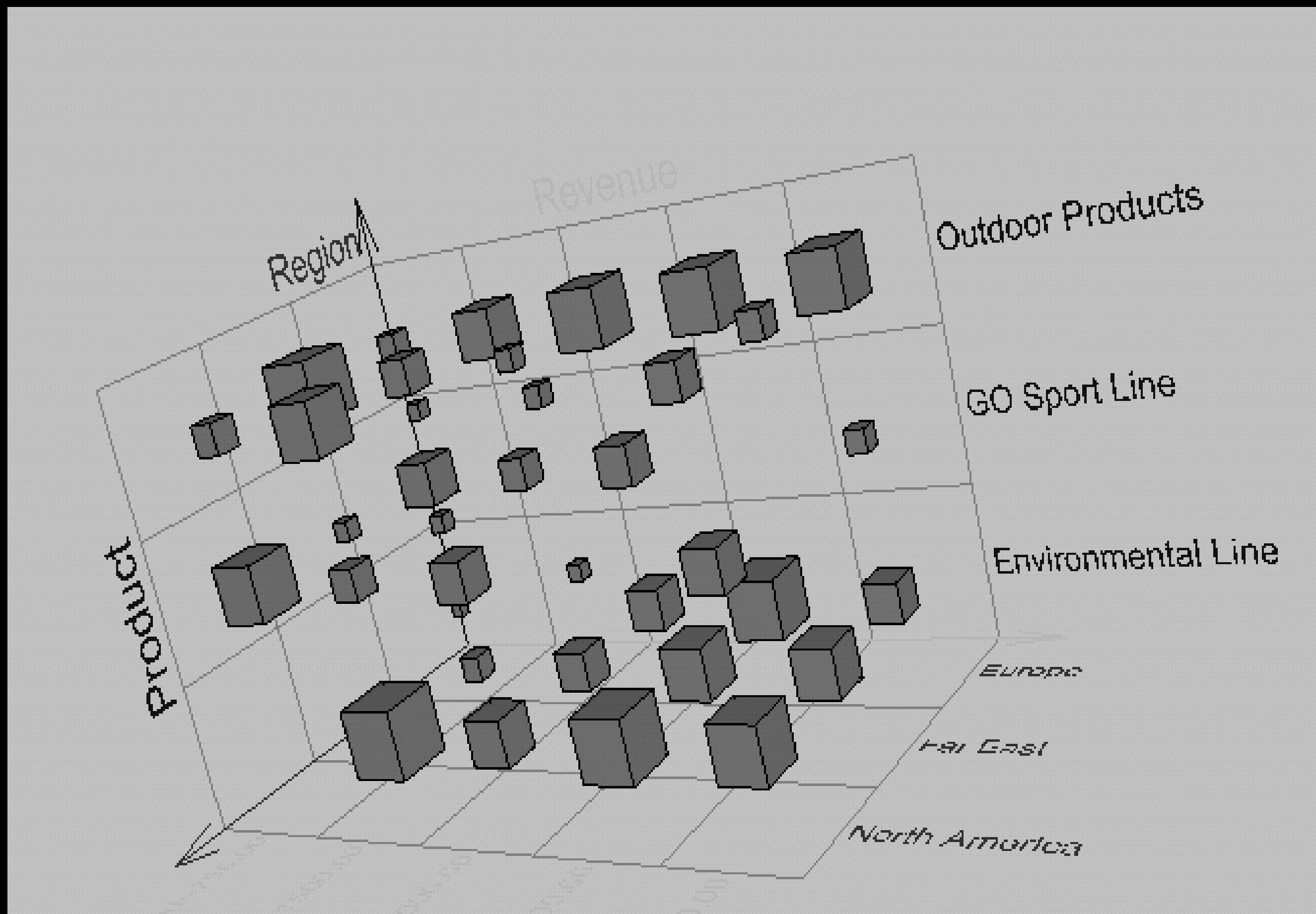

Intelligent Miner - Cluster Field View:4
Result Page Selected Edit View Options Help
Customers-Demo Cluster 7 39.45% of population
%
30
25
20
15
10
5
0
0 5 10 15 20 25 30 35 40 45 50 55 60 65
age (0.07)
age
Start
7:08 PM


OK
Statistics for Each Variable
Number of points: 85
date
min = 800204.835000
max = 800229.165000
seconds
min = 18417.300781
max = 84054.699219
utime
min = 50154.500000
max = 232557.500000
density (cm-3)
min = 3.349808
max = 189.895493
speed_flow (km/sec)
min = 333.572449
max = 1973.127502
azimuth_flow (deg)
min = -179.827496
max = 116.107502
min_tper (K)
min = 225307.000000
max = 507523.000000
max_tper (K)
min = 271150.000000
max = 862950.000000
az_temp (deg)
min = 22.481506
max = 162.585495
heat_flux (ergs cm-2 sec-1)
min = -0.003555
max = 0.598360
heat_flux_az (deg)
min = 19.428497
max = 340.345490

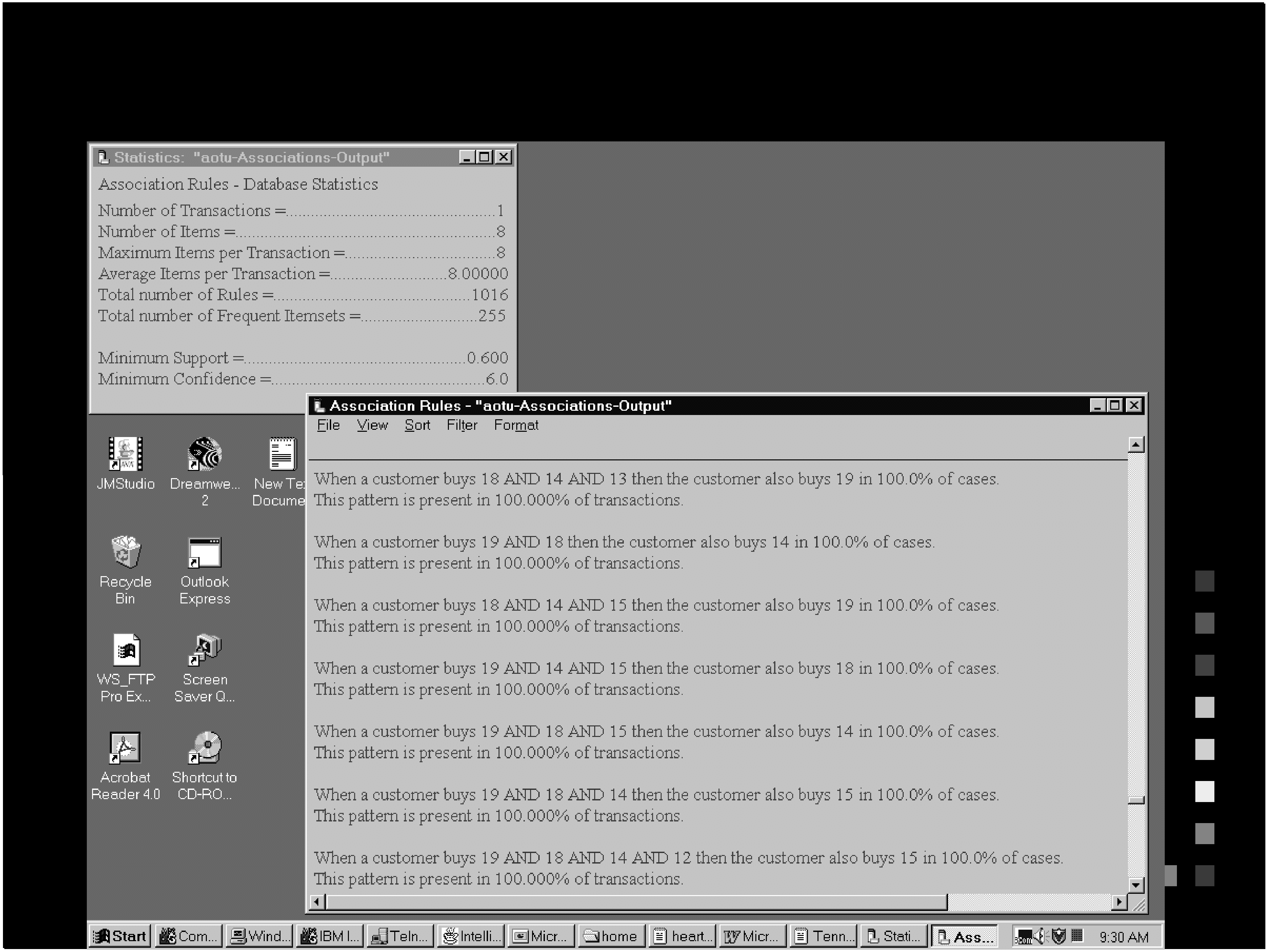

n=11, l=1, m=0

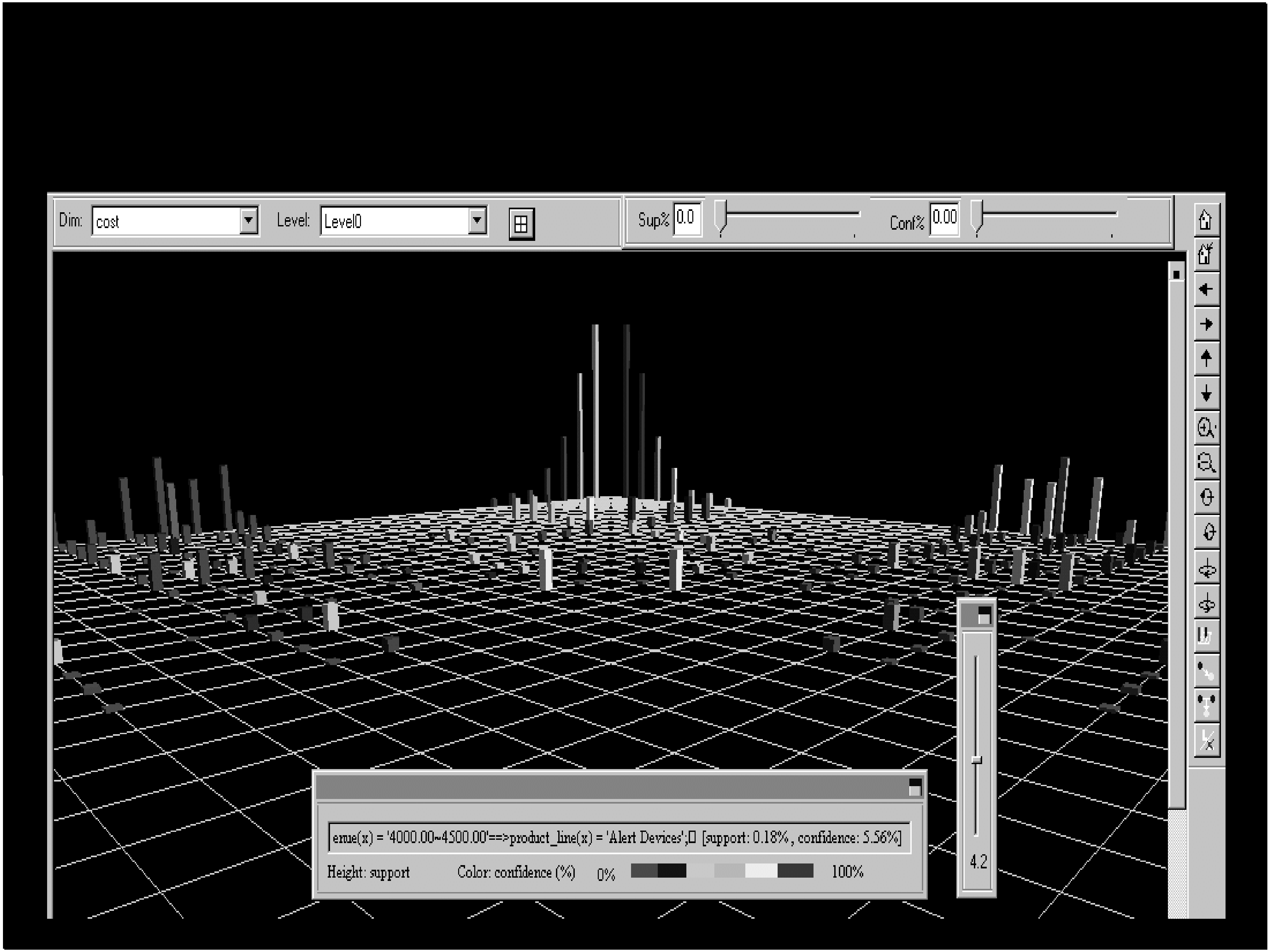

FACTOR3
FACTOR2
FACTOR1

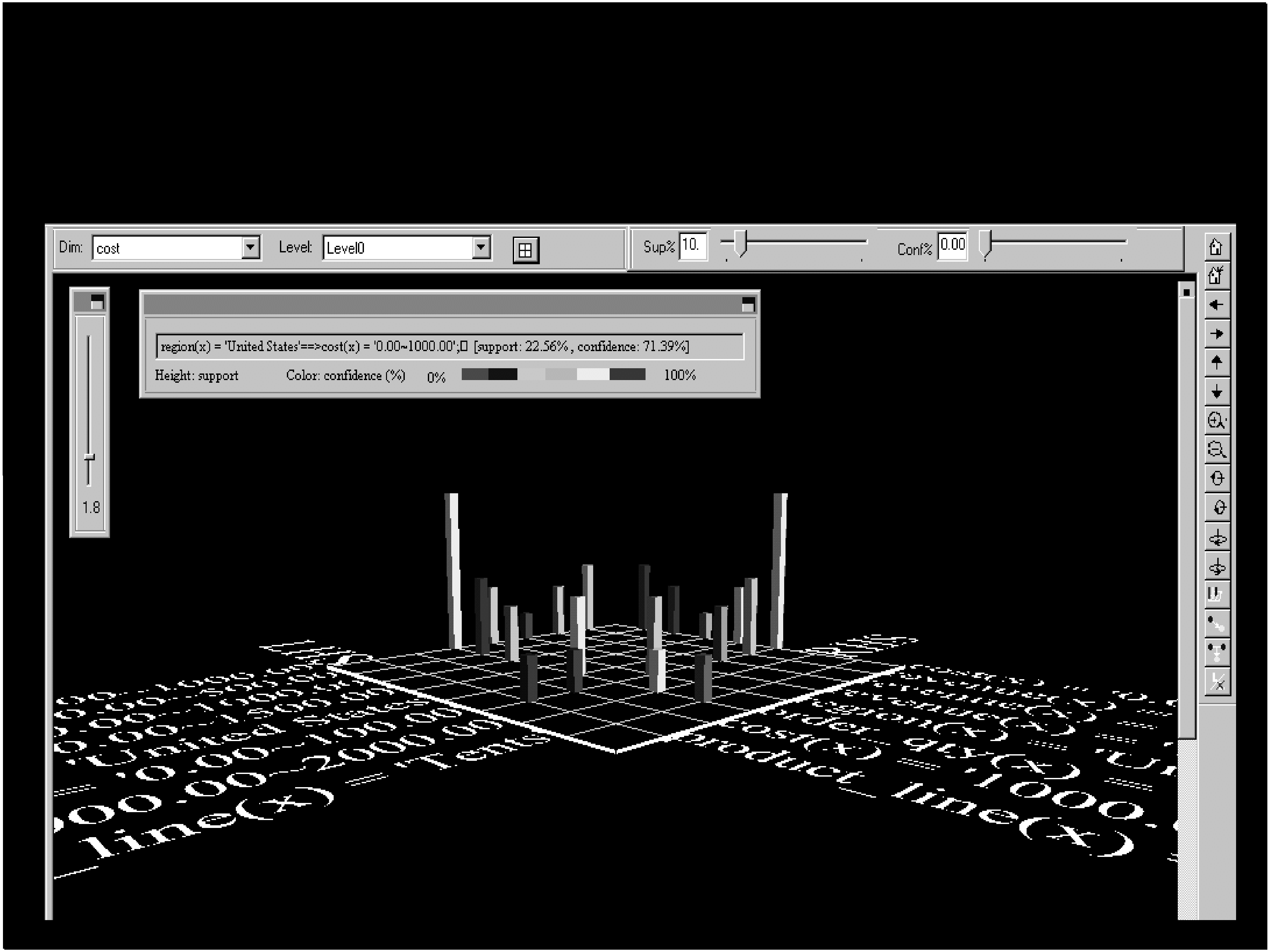
Date
Sun
Mon
Tue
Wed
Thu
Fri
Sat
Time - Hour
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
OK or Fail
Fail
OK
Fault Type
Call
Dial
Mail
Carrie
Reset
Ring
Conn
0 to 5
5 to 1
10 to 1
15 to 20
20 to 2
25 to 3
30 to
40 to



- Animation capabilities
- Rotation around all ax


Statistics: "aotu-Associations-Output"
Association Rules - Database Statistics
Number of Transactions = 1
Number of Items = 8
Maximum Items per Transaction = 8
Average Items per Transaction = 8.00000
Total number of Rules = 1016
Total number of Frequent Itemsets = 255
Minimum Support = 0.600
Minimum Confidence = 6.0
Association Rules - "aotu-Associations-Output"
File View Sort Filter Format
When a customer buys 18 AND 14 AND 13 then the customer also buys 19 in 100.0% of cases.
This pattern is present in 100.000% of transactions.
When a customer buys 19 AND 18 then the customer also buys 14 in 100.0% of cases.
This pattern is present in 100.000% of transactions.
When a customer buys 18 AND 14 AND 15 then the customer also buys 19 in 100.0% of cases.
This pattern is present in 100.000% of transactions.
When a customer buys 19 AND 14 AND 15 then the customer also buys 18 in 100.0% of cases.
This pattern is present in 100.000% of transactions.
When a customer buys 19 AND 18 AND 15 then the customer also buys 14 in 100.0% of cases.
This pattern is present in 100.000% of transactions.
When a customer buys 19 AND 18 AND 14 then the customer also buys 15 in 100.0% of cases.
This pattern is present in 100.000% of transactions.
When a customer buys 19 AND 18 AND 14 AND 12 then the customer also buys 15 in 100.0% of cases.
This pattern is present in 100.000% of transactions.
JMStudio
Dreamwe... 2
Recycle Bin
Outlook Express
WS_FTP Pro Ex...
Screen Saver Q...
Acrobat Reader 4.0
Shortcut to CD-RO...
Start
9:30 AM


Dim:
cost
Level:
Level0
Sup%
0.0
Conf%
0.00
4.2
enue(x) = '4000.00~4500.00'==>product_line(x) = 'Alert Devices'; [support: 0.18%, confidence: 5.56%]
Height: support
Color: confidence (%)
0%
100%



Dim: cost
Level: Level0
Sup% 10.
Conf% 0.00
region(x) = 'United States'==>cost(x) = '0.00~1000.00'; [support: 22.56%, confidence: 71.39%]
Height: support
Color: confidence (%)
0%
100%
1.8

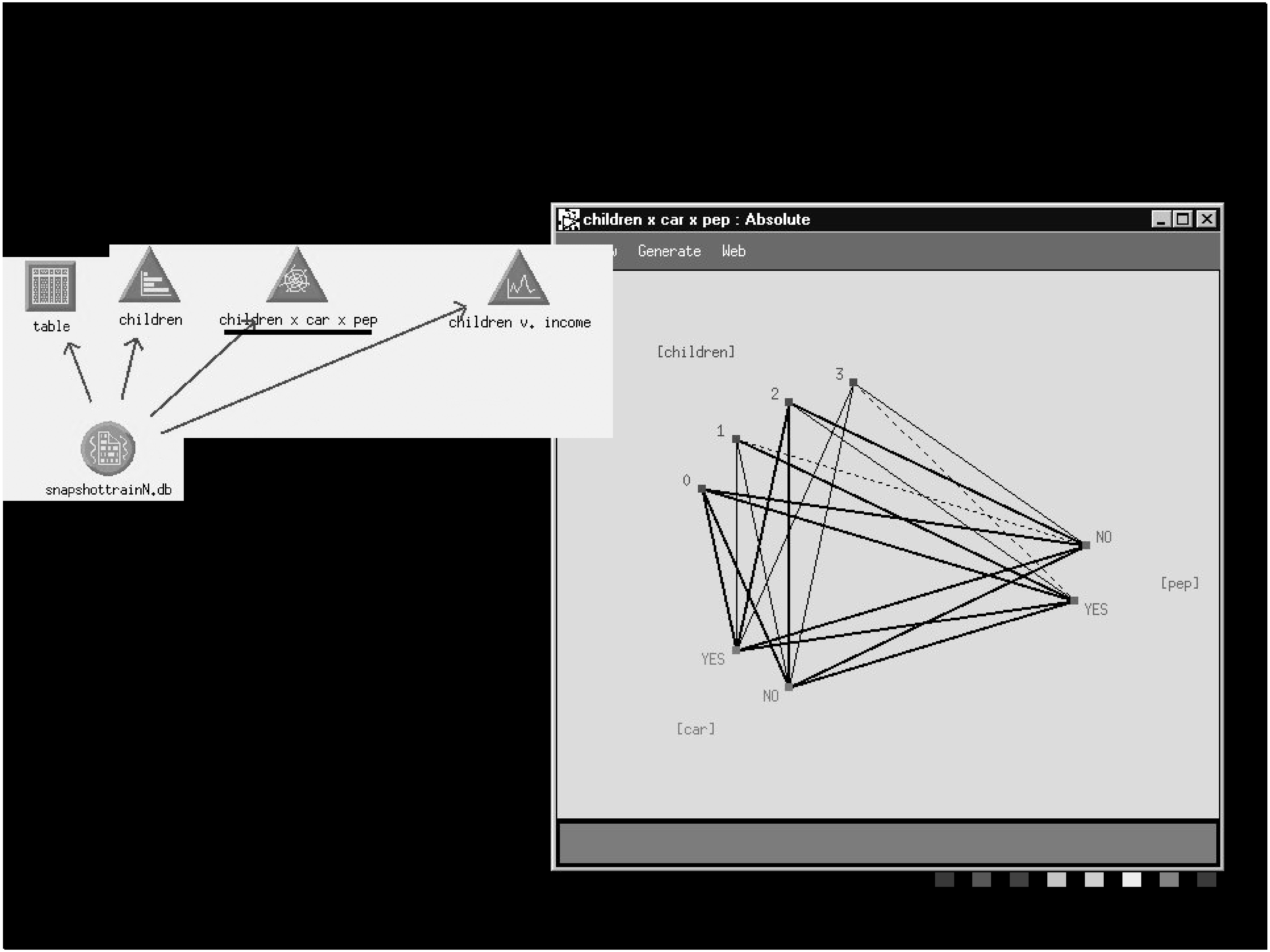


table
children
children x car x pep
children v. income
snapshottrainN.db
children x car x pep : Absolute
Generate
Web
[children]
3
2
1
0
NO
YES
[pep]
YES
NO
[car]

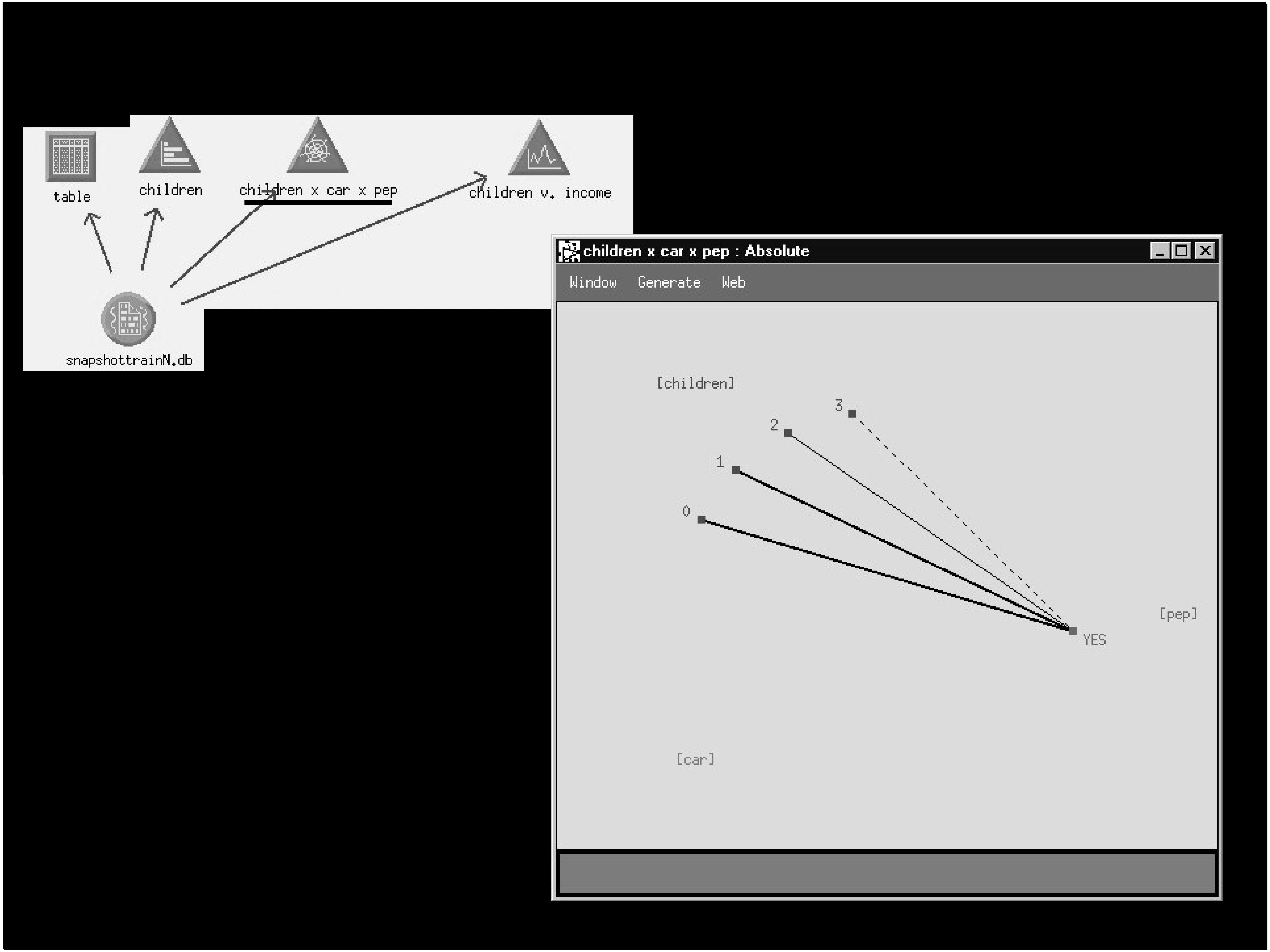
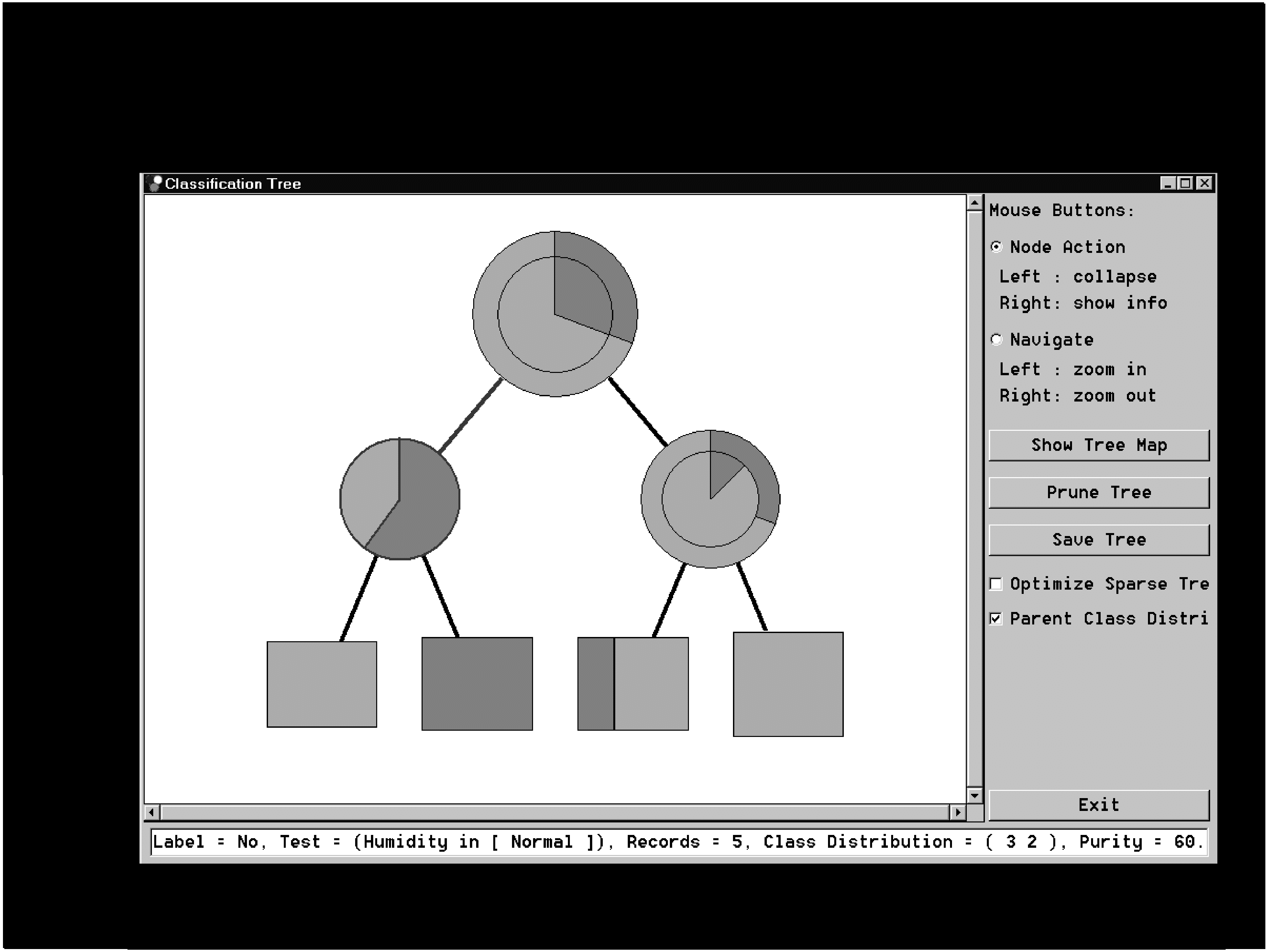
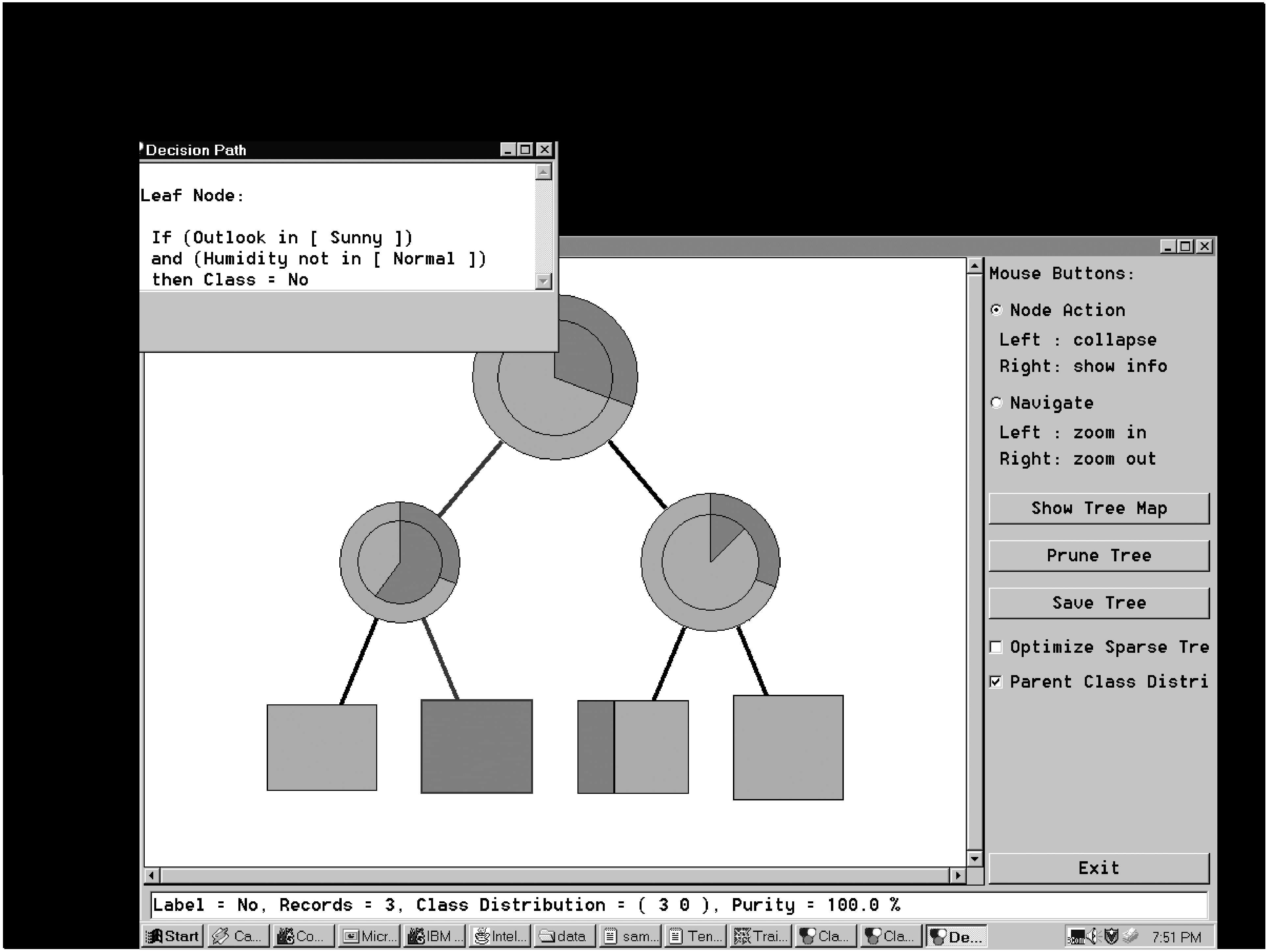
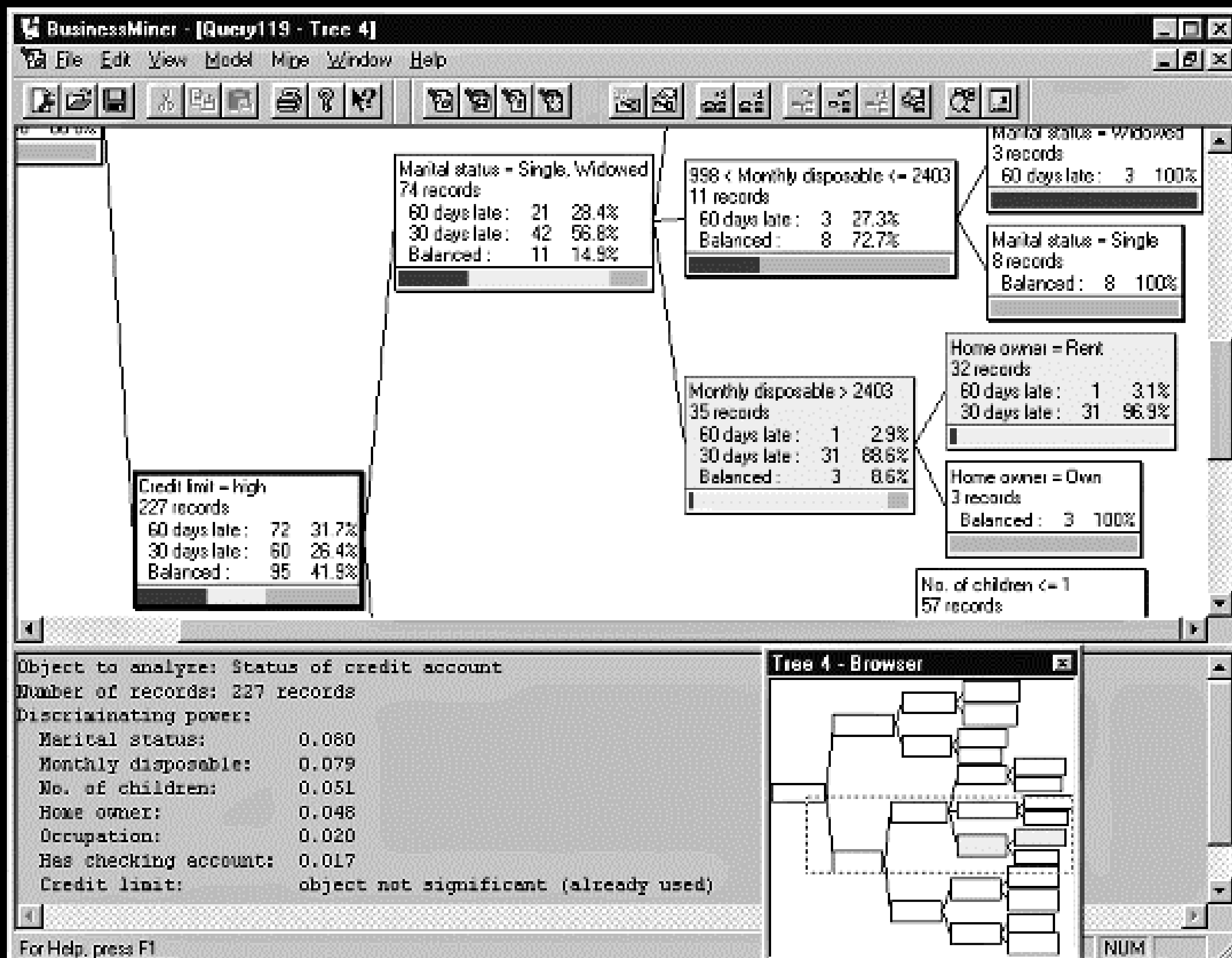


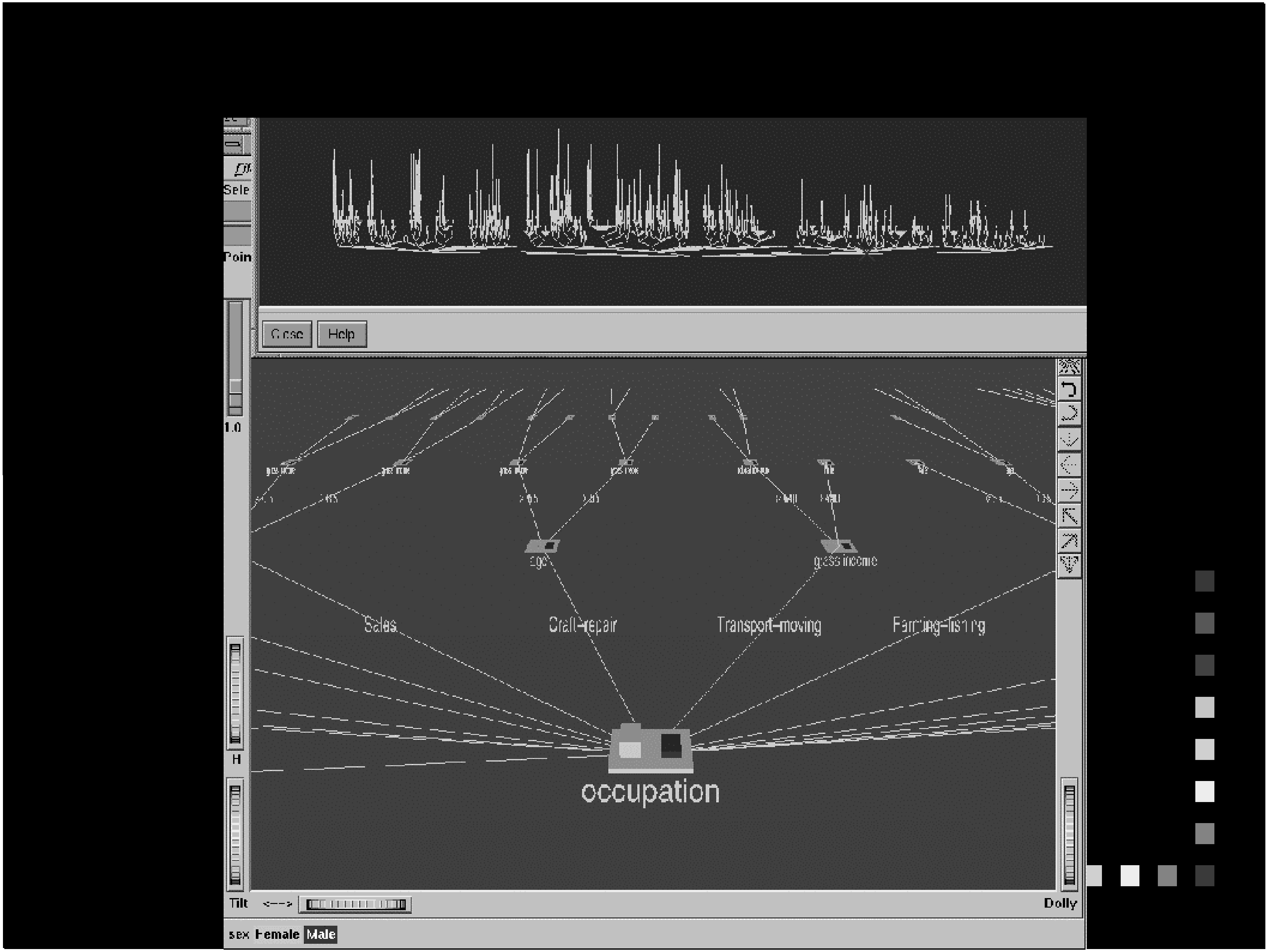
table
children
children x car x pep
children v. income
snapshottrainN.db
children x car x pep : Absolute
Window
Generate
Web
[children]
3
2
1
0
[pep]
YES
[car]


Classification Tree
Mouse Buttons:
Node Action
Left : collapse
Right: show info
Navigate
Left : zoom in
Right: zoom out
Show Tree Map
Prune Tree
Save Tree
Optimize Sparse Tre
Parent Class Distri
Exit
Label = No, Test = (Humidity in [Normal]), Records = 5, Class Distribution = (3 2), Purity = 60.

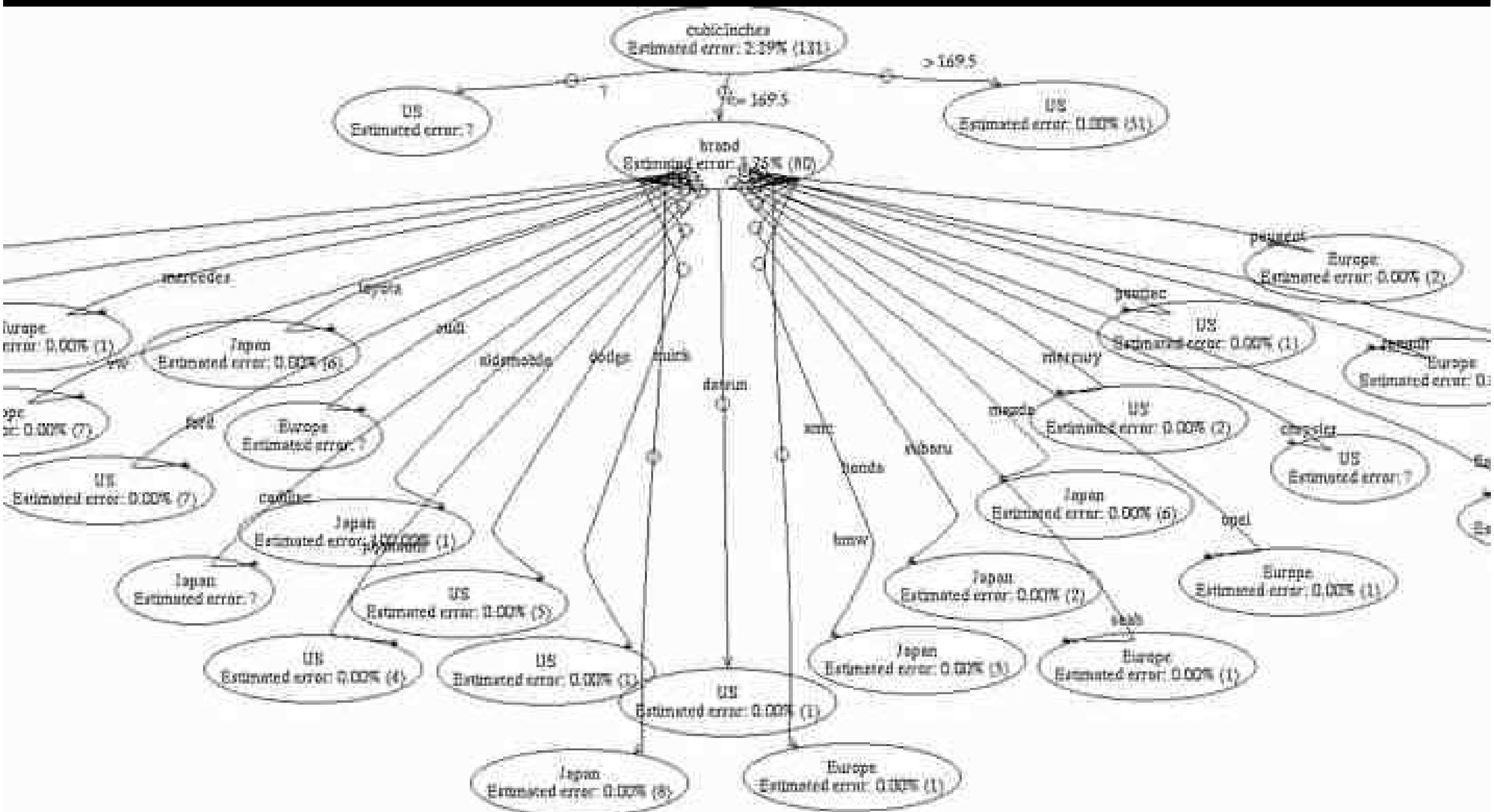

Decision Path
Leaf Node:
If (Outlook in [Sunny])
and (Humidity not in [Normal])
then Class = No
Mouse Buttons:
Node Action
Left : collapse
Right: show info
Navigate
Left : zoom in
Right: zoom out
Show Tree Map
Prune Tree
Save Tree
Optimize Sparse Tre
Parent Class Distri
Exit
Label = No, Records = 3, Class Distribution = (3 0), Purity = 100.0 %
Start
7:51 PM



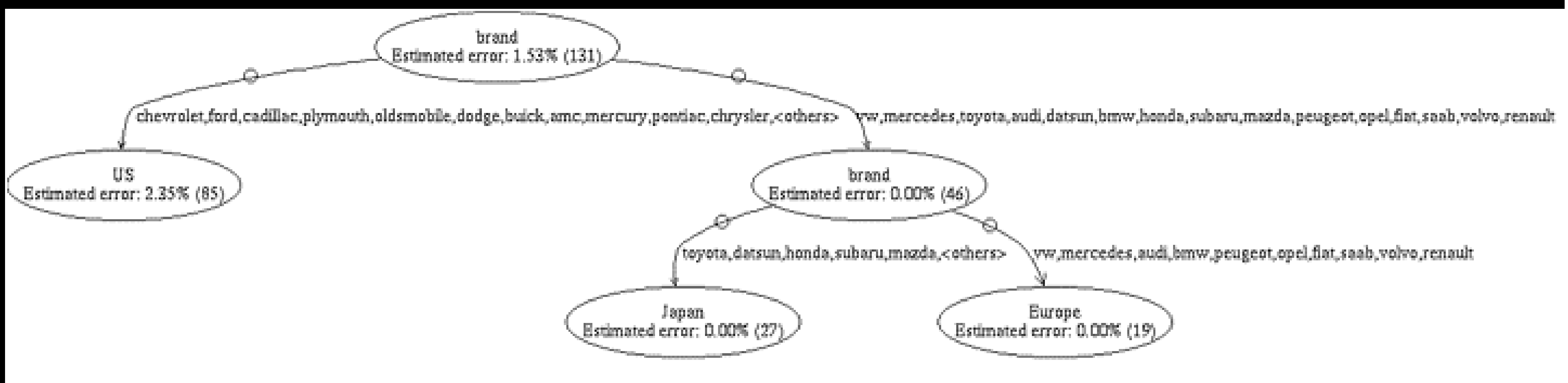
BusinessMiner - [Query119 - Tree 4]
File Edit View Model Mine Window Help
Marital status = Single, Widowed
74 records
60 days late : 21 28.4%
30 days late : 42 56.8%
Balanced : 11 14.9%
998 < Monthly disposable <= 2403
11 records
60 days late : 3 27.3%
Balanced : 8 72.7%
3 records
60 days late : 3 100%
Marital status = Single
8 records
Balanced : 8 100%
Home owner = Rent
32 records
60 days late : 1 3.1%
30 days late : 31 96.9%
Monthly disposable > 2403
35 records
60 days late : 1 2.9%
30 days late : 31 88.6%
Balanced : 3 8.6%
Home owner = Own
3 records
Balanced : 3 100%
Credit limit = high
227 records
60 days late : 72 31.7%
30 days late : 60 26.4%
Balanced : 95 41.9%
No. of children <= 1
57 records
Object to analyze: Status of credit account
Number of records: 227 records
Discriminating power:
Marital status: 0.080
Monthly disposable: 0.079
No. of children: 0.051
Home owner: 0.048
Occupation: 0.020
Has checking account: 0.017
Credit limit: object not significant (already used)
Tree 4 - Browser
For Help, press F1
NUM

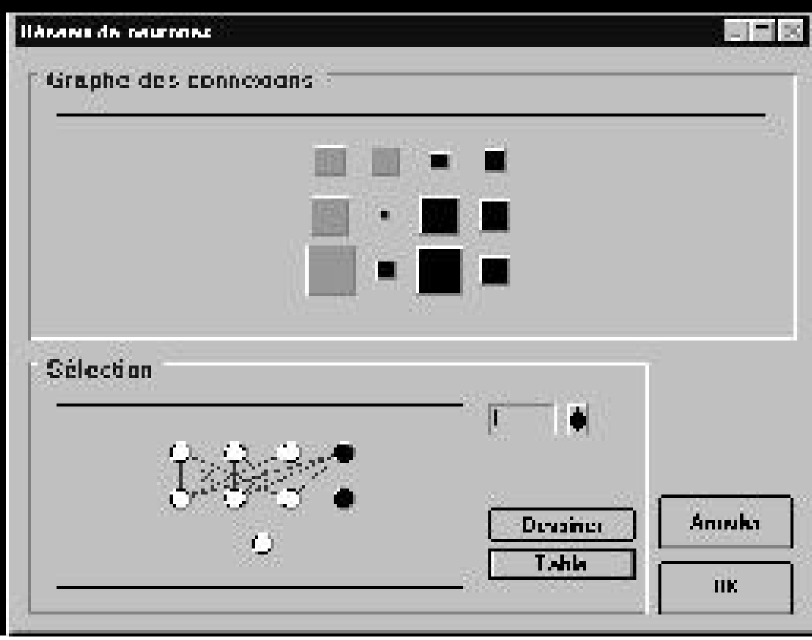


Close
Help
age
gross income
Sales
Craft-repair
Transport-moving
Farming-fishing
occupation
Tilt
Dolly
sex Female Male



cubicinches
Estimated error: 2.29% (131)
> 169.5
<= 169.5
?
US
Estimated error: ?
US
Estimated error: 0.00% (51)
brand
peugeot
Europe
Estimated error: 0.00% (2)
mercedes
toyota
audi
oldsmobile
dodge
buick
datsun
amc
honda
subaru
mercury
mazda
pontiac
chrysler
opel
saab
bmw
ford
cadillac
plymouth
vw
Japan
Estimated error: 0.00% (6)
Europe
Estimated error: ?
US
Estimated error: 0.00% (7)
Japan
Estimated error: 100.00% (1)
Japan
Estimated error: ?
US
Estimated error: 0.00% (5)
US
Estimated error: 0.00% (4)
US
Estimated error: 0.00% (1)
US
Estimated error: 0.00% (1)
Japan
Estimated error: 0.00% (8)
Europe
Estimated error: 0.00% (1)
Japan
Estimated error: 0.00% (3)
Europe
Estimated error: 0.00% (1)
Japan
Estimated error: 0.00% (2)
Japan
Estimated error: 0.00% (6)
Europe
Estimated error: 0.00% (1)
US
Estimated error: 0.00% (1)
US
Estimated error: 0.00% (2)
US
Estimated error: ?


brand
Estimated error: 1.53% (131)
chevrolet,ford,cadillac,plymouth,oldsmobile,dodge,buick,amc,mercury,pontiac,chrysler,<others>
vw,mercedes,toyota,audi,datsun,bmw,honda,subaru,mazda,peugeot,opel,fiat,saab,volvo,renault
US
Estimated error: 2.35% (85)
brand
Estimated error: 0.00% (46)
toyota,datsun,honda,subaru,mazda,<others>
vw,mercedes,audi,bmw,peugeot,opel,fiat,saab,volvo,renault
Japan
Estimated error: 0.00% (27)
Europe
Estimated error: 0.00% (19)


Graphe des connexions
Sélection
Dessiner
Table
Annuler
OK

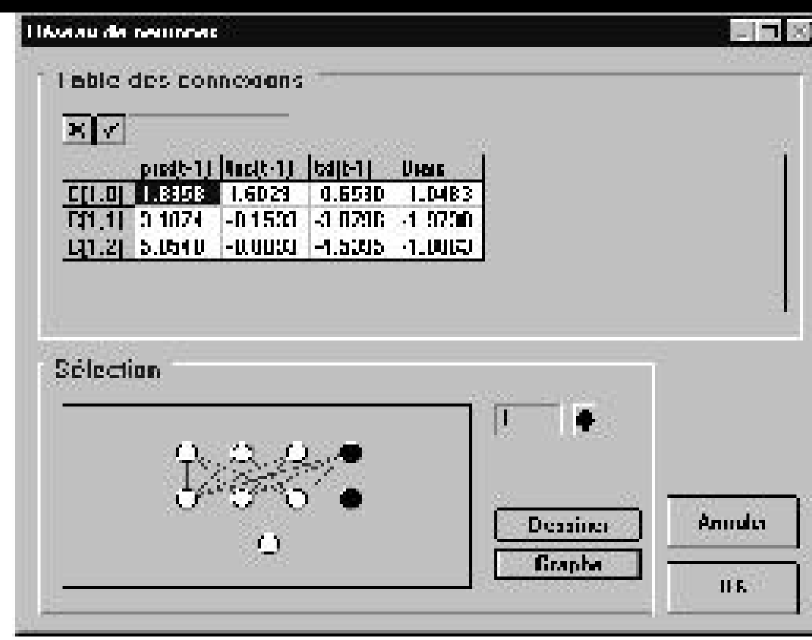
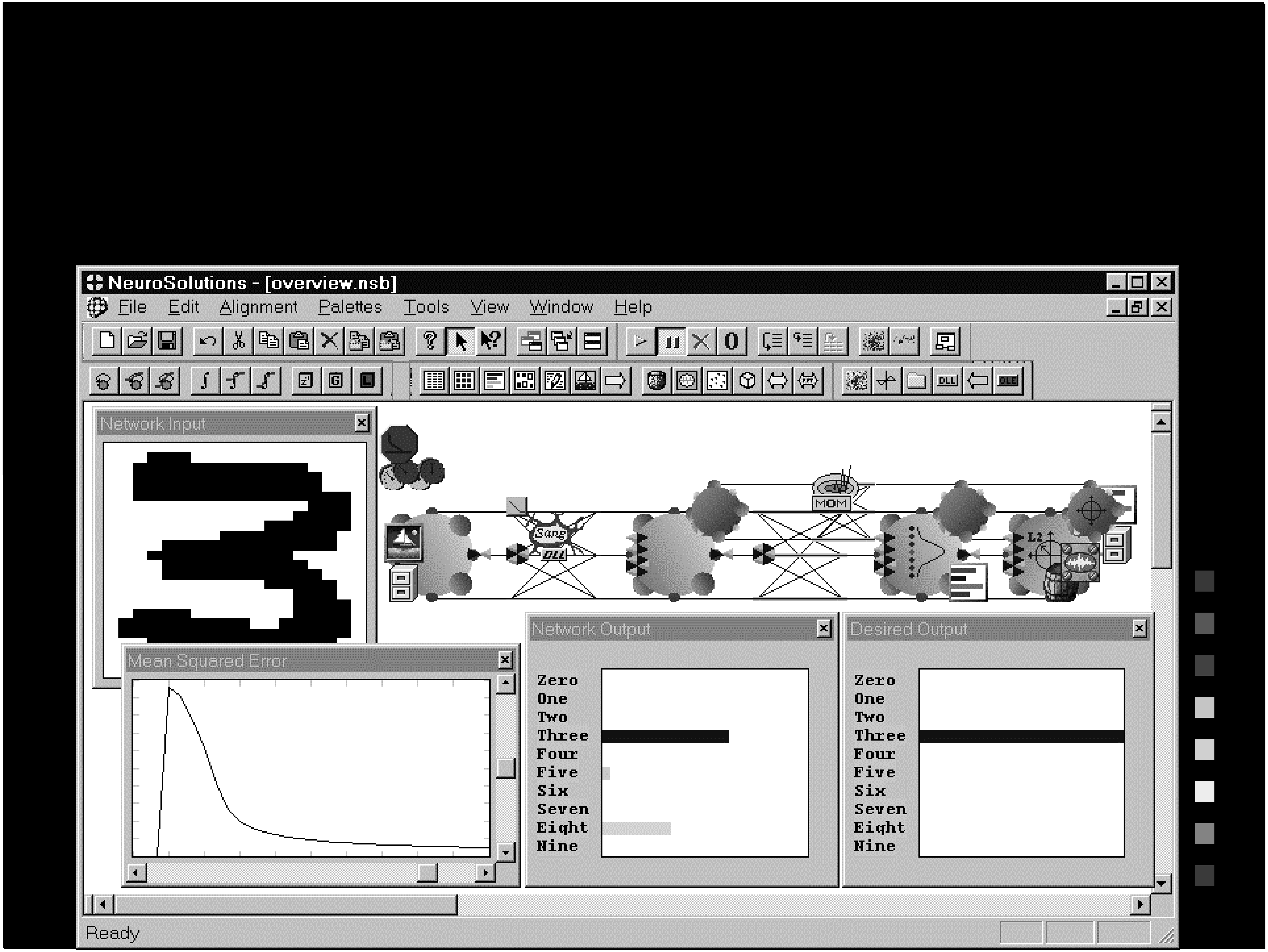
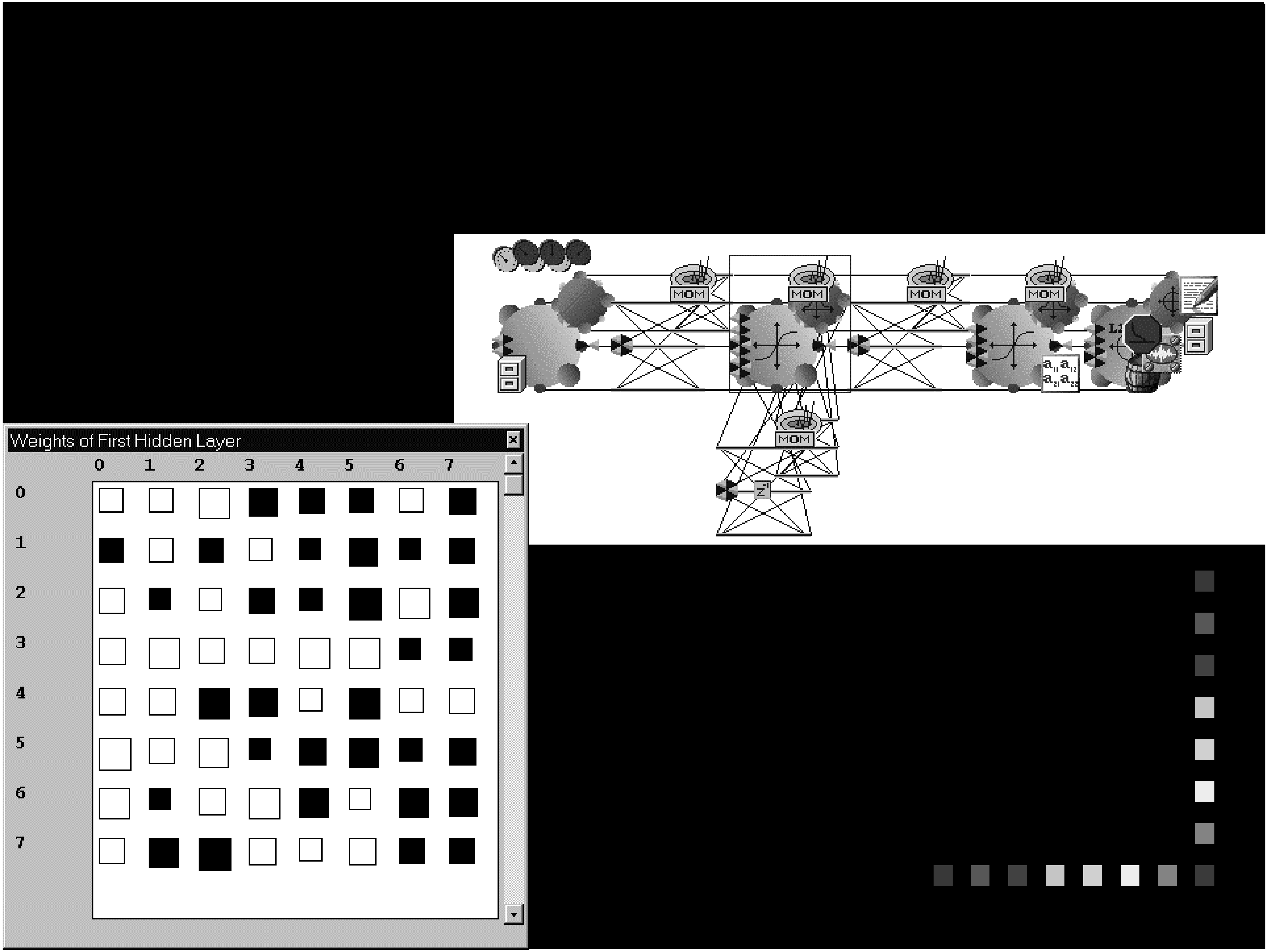


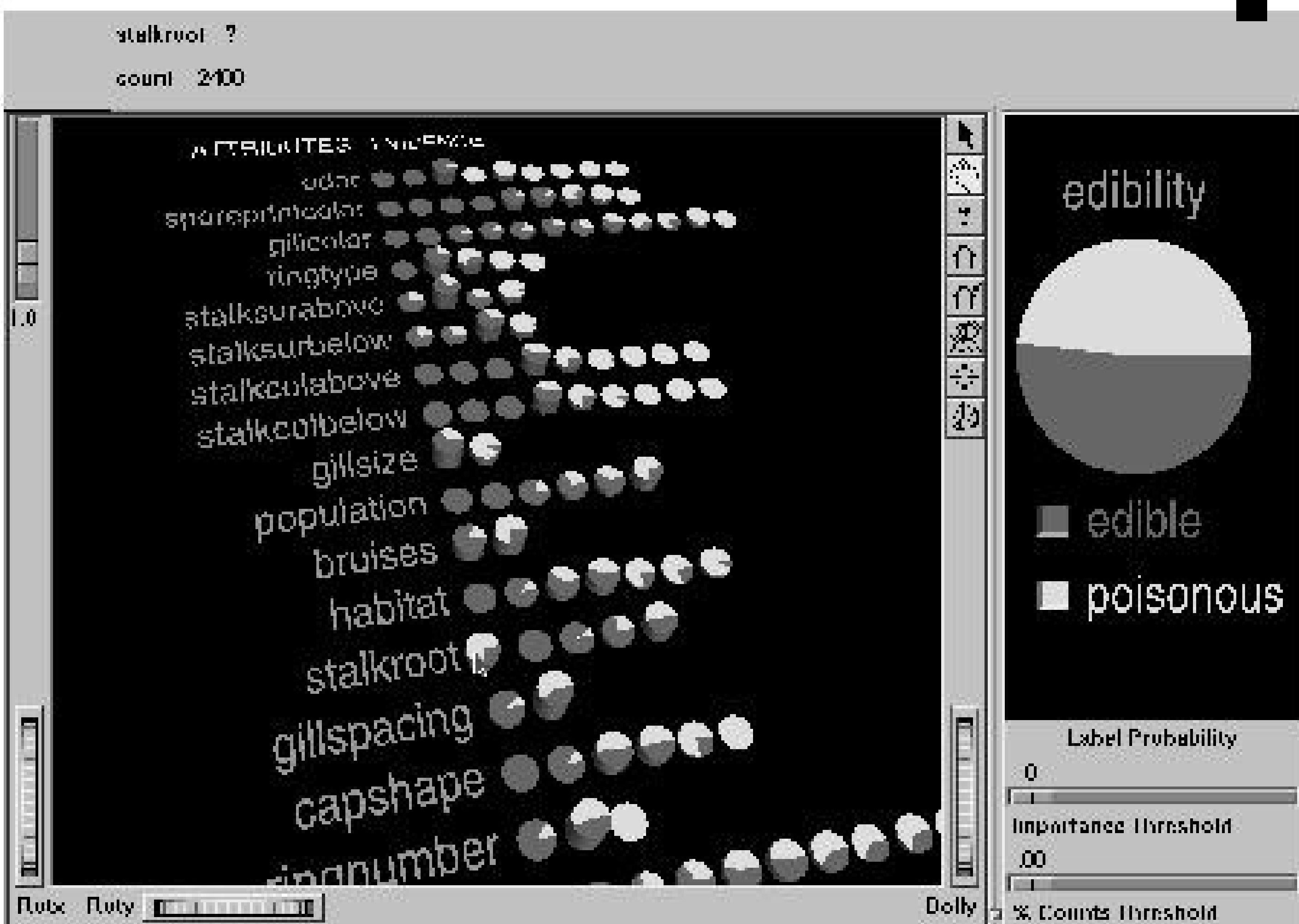
Table des connexions
Sélection
Dessiner
Graphe
Annuler
OK



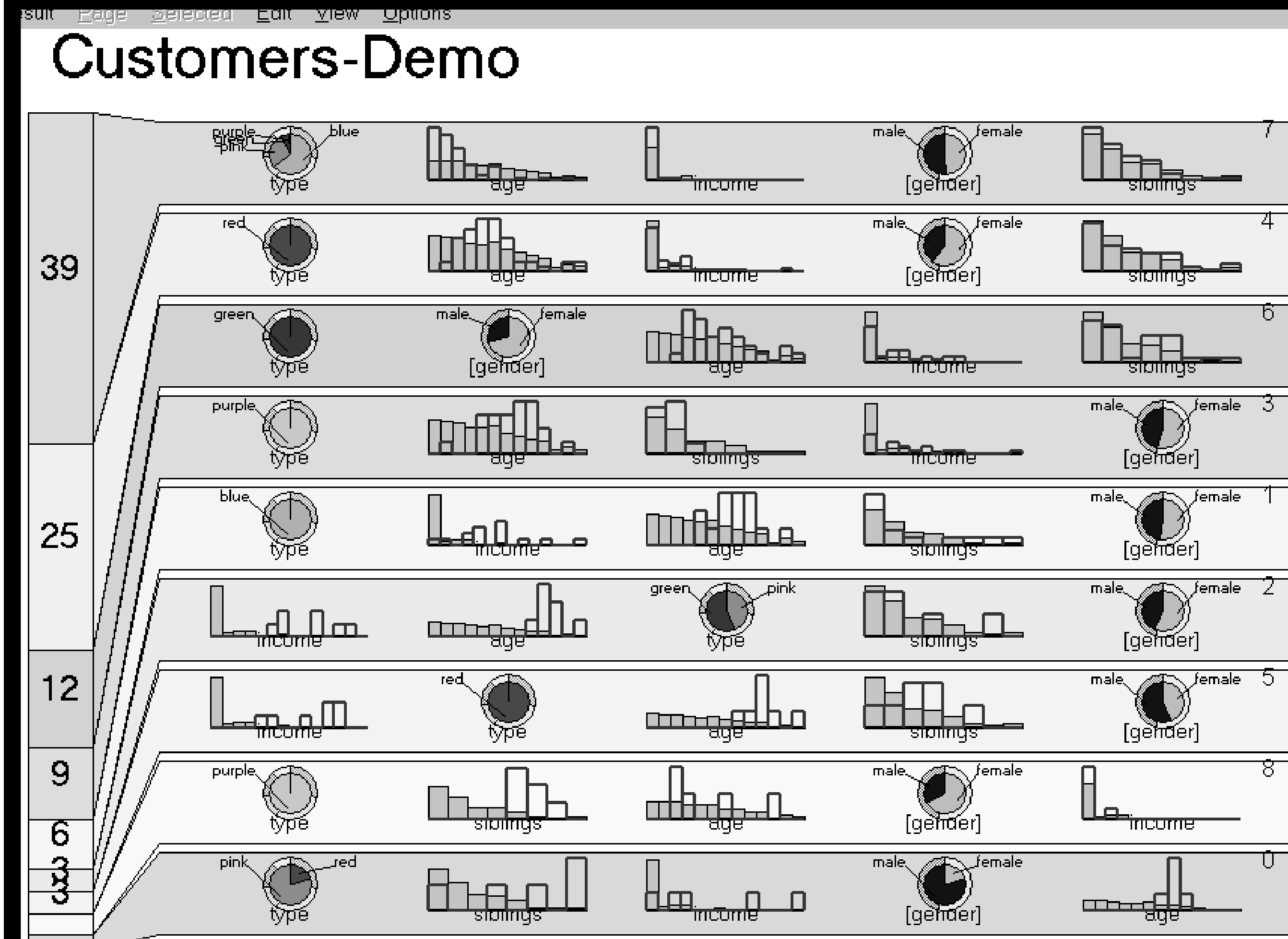
NeuroSolutions - [overview.nsb]
File Edit Alignment Palettes Tools View Window Help
Network Input
MOM
Mean Squared Error
Network Output
Zero
One
Two
Three
Four
Five
Six
Seven
Eight
Nine
Desired Output
Zero
One
Two
Three
Four
Five
Six
Seven
Eight
Nine
Ready



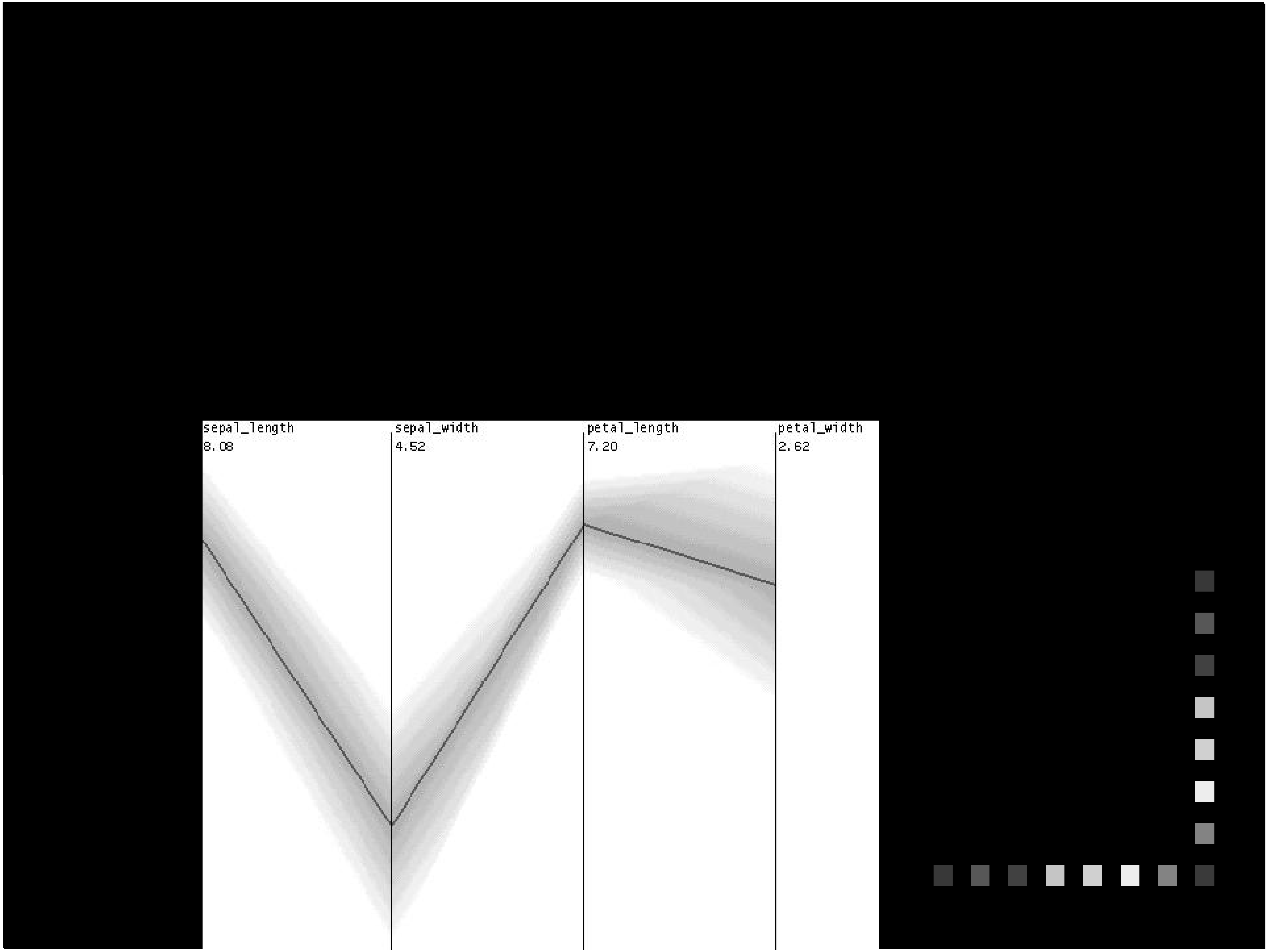
Weights of First Hidden Layer
0 1 2 3 4 5 6 7
0
1
2
3
4
5
6
7
MOM
MOM
MOM
MOM
MOM



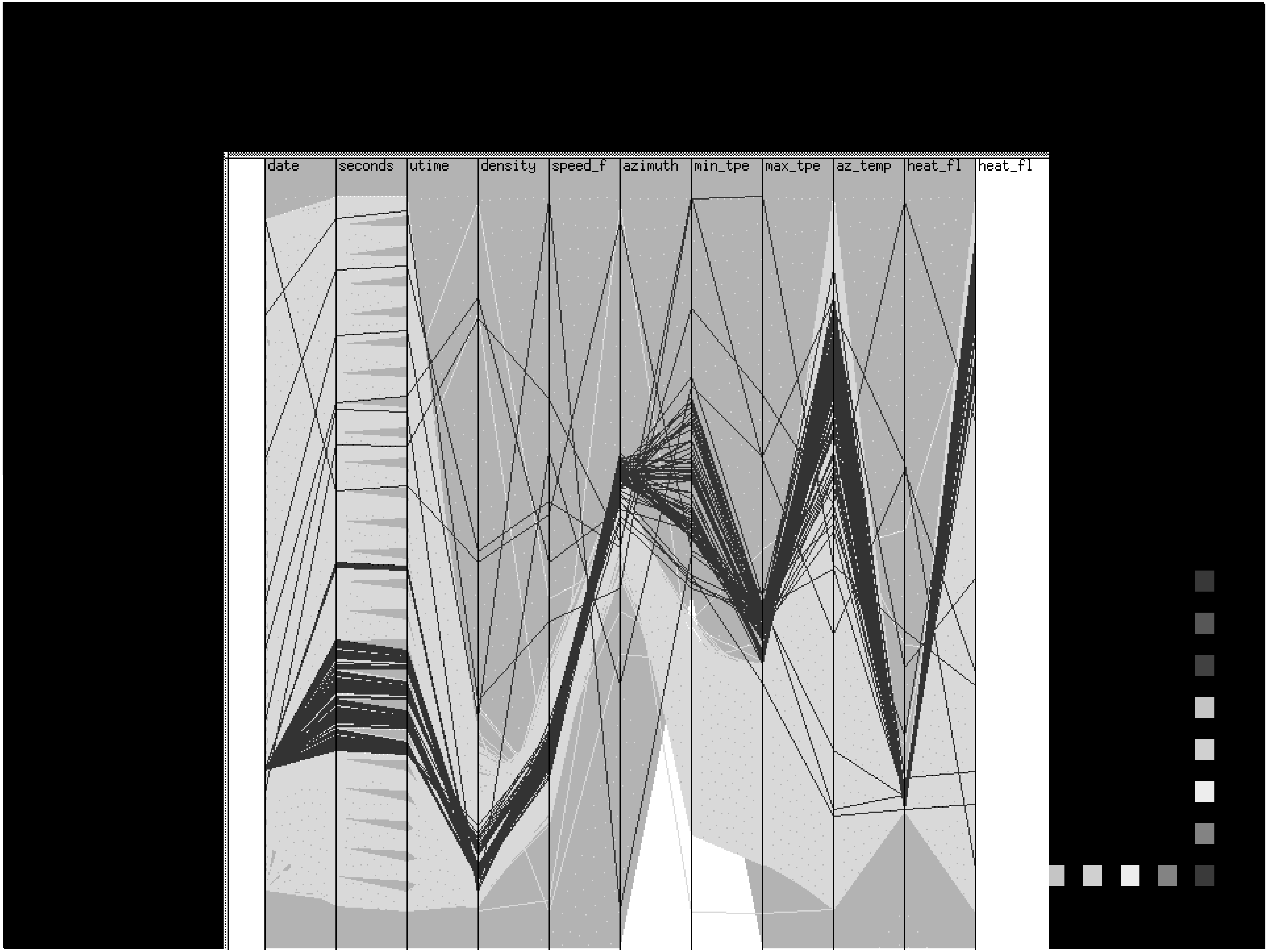
stalkroot ?
count 2400
ATTRIBUTES
odor
sporeprintcolor
gillcolor
ringtype
stalksurabove
stalksurbelow
stalkculabove
stalkcolbelow
gillsize
population
bruises
habitat
stalkroot
gillspacing
capshape
ringnumber
edibility
edible
poisonous
Label Probability
0
Importance Threshold
.00
% Counts Threshold
Dolly



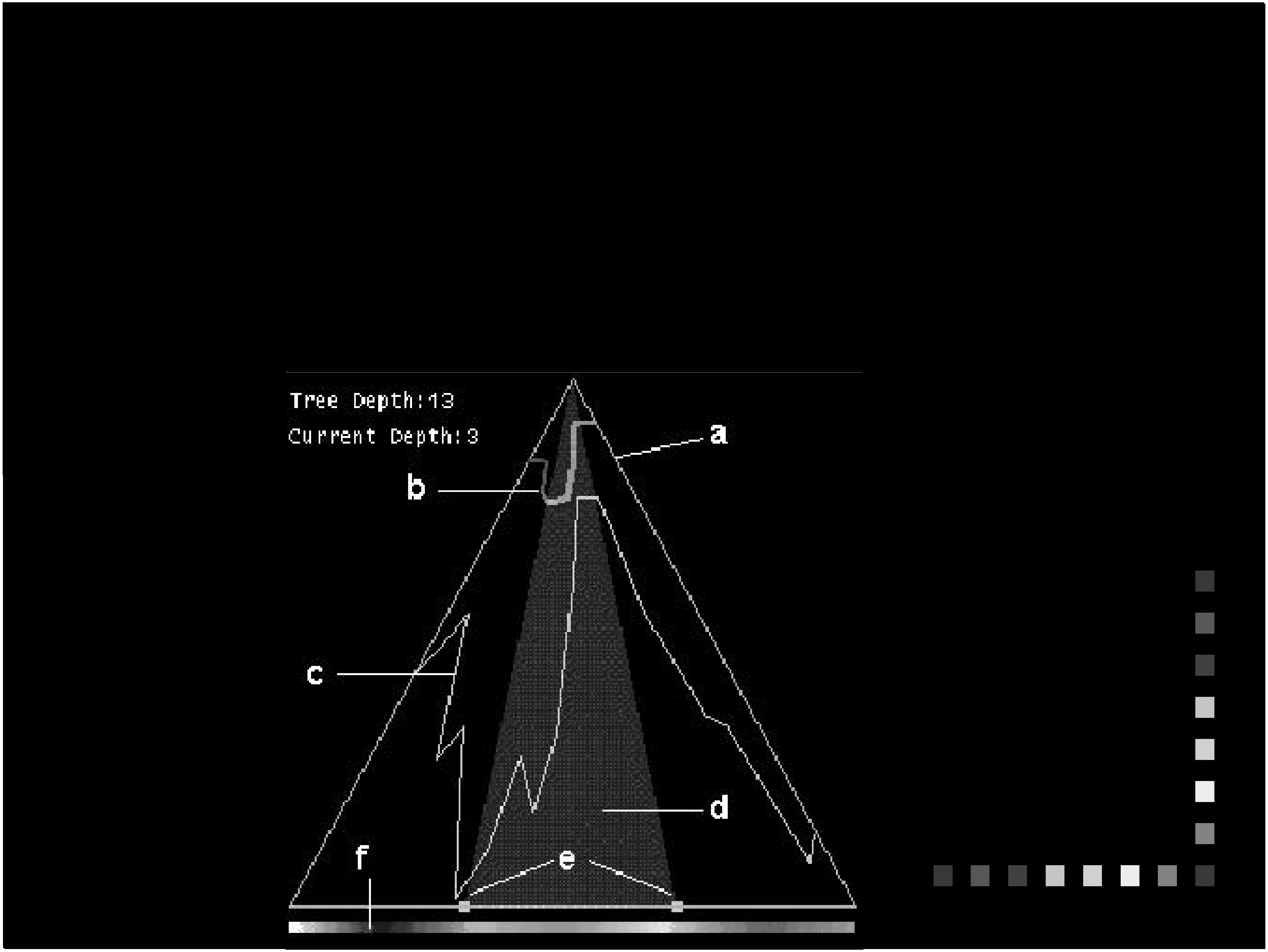
Edit View Options
Customers-Demo
39
25
12
9
6
3
3
7
4
6
3
1
2
5
8
0
type
age
income
[gender]
siblings
purple
green
pink
blue
red
male
female



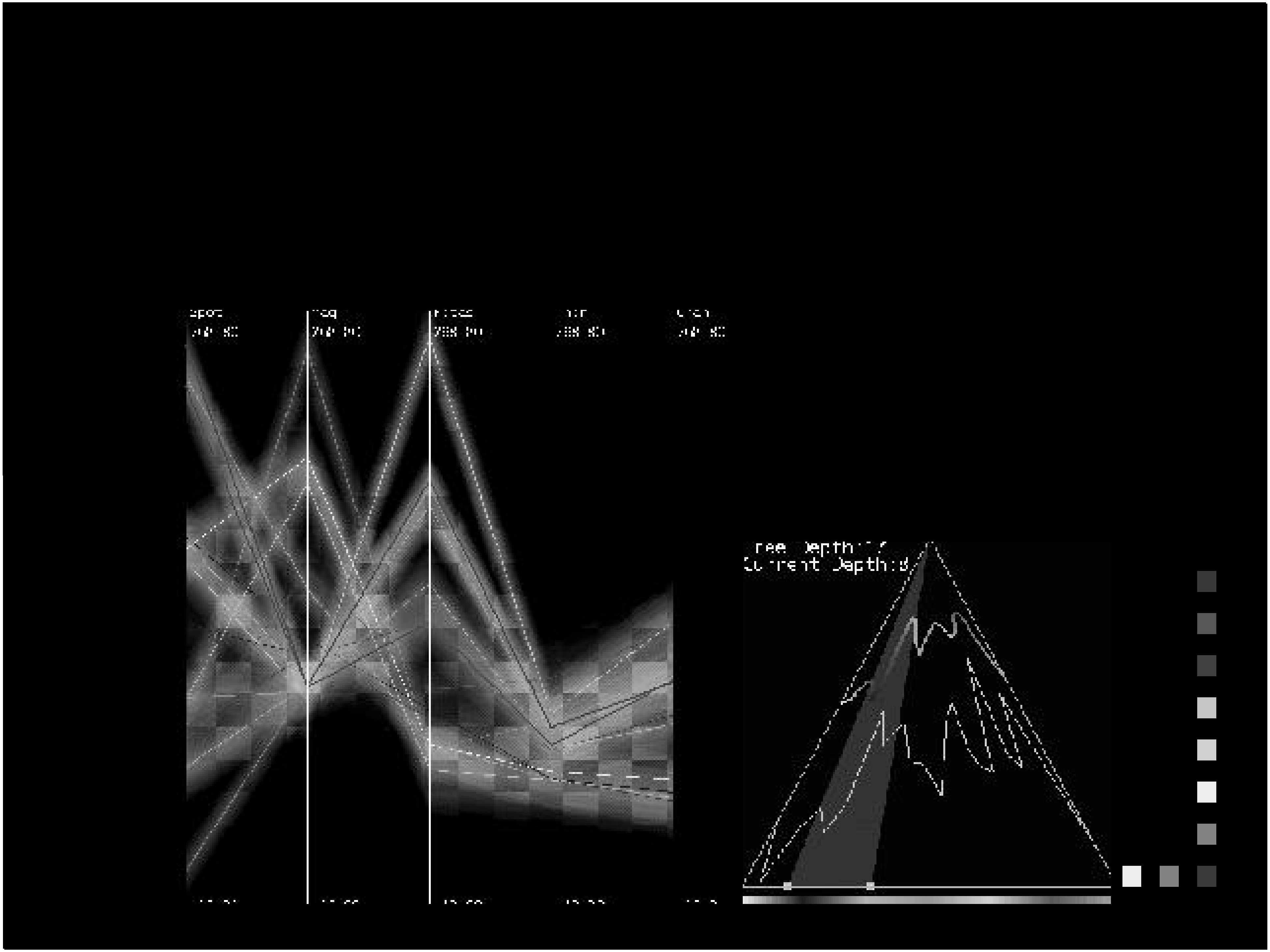
sepal_length
8.08
sepal_width
4.52
petal_length
7.20
petal_width
2.62

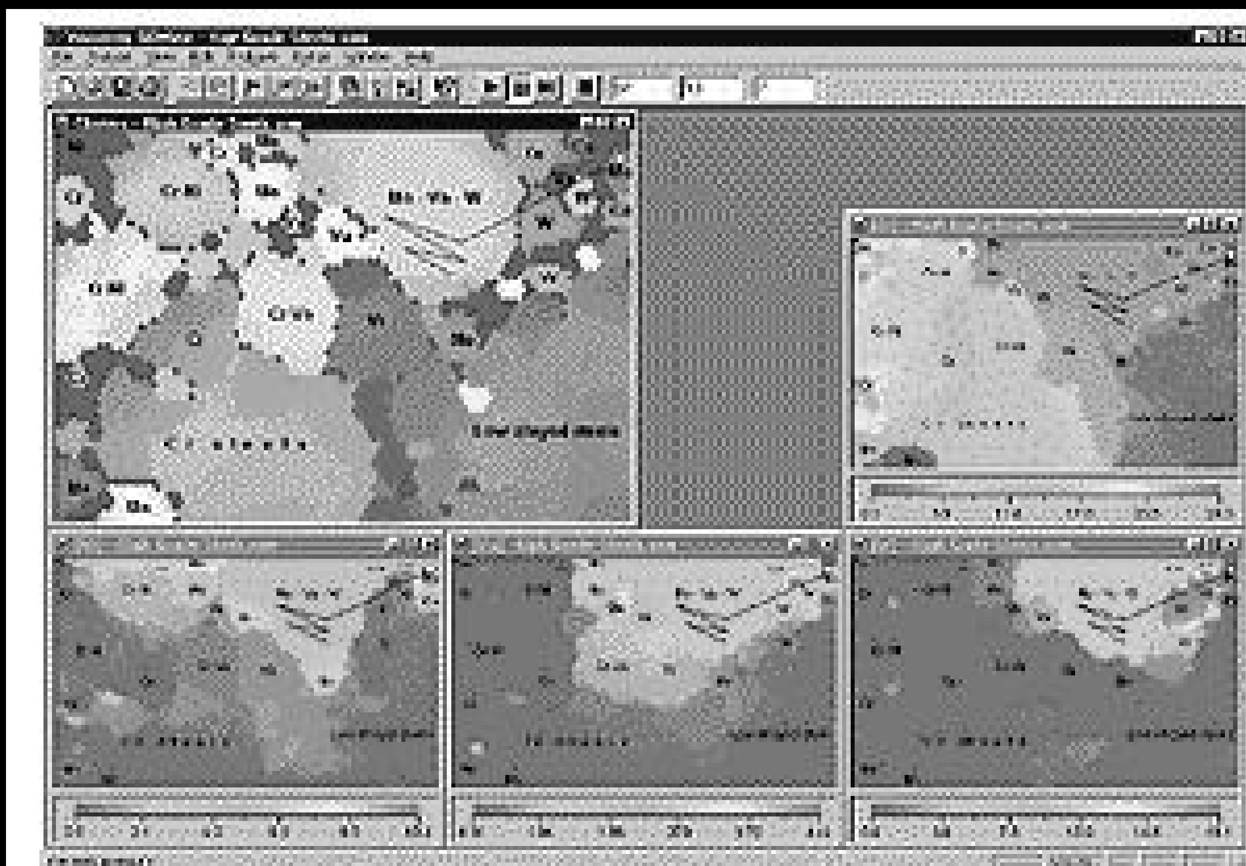


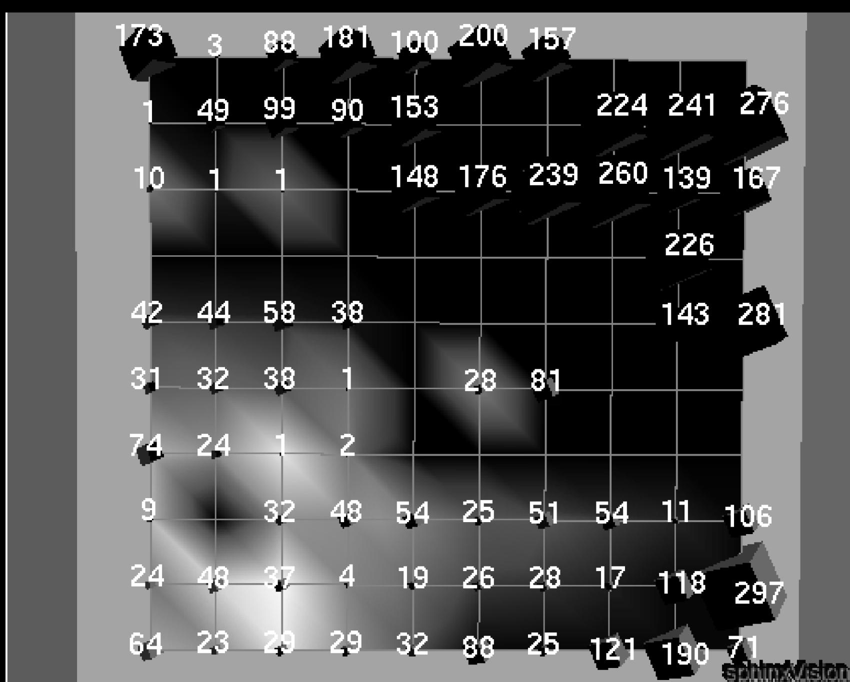
date
seconds
utime
density
speed_f
azimuth
min_tpe
max_tpe
az_temp
heat_fl
heat_fl

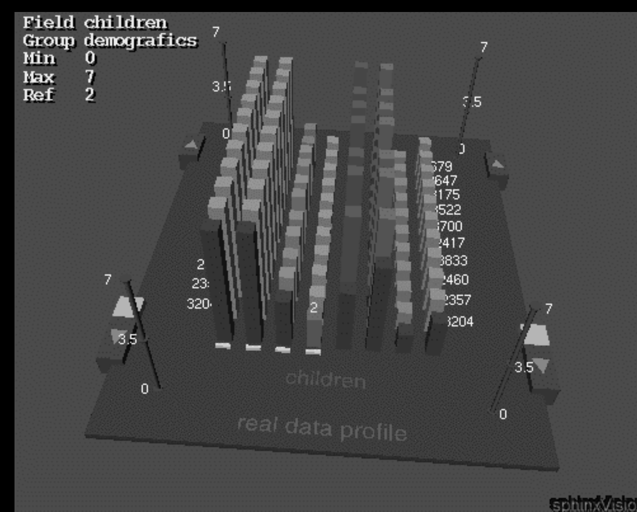


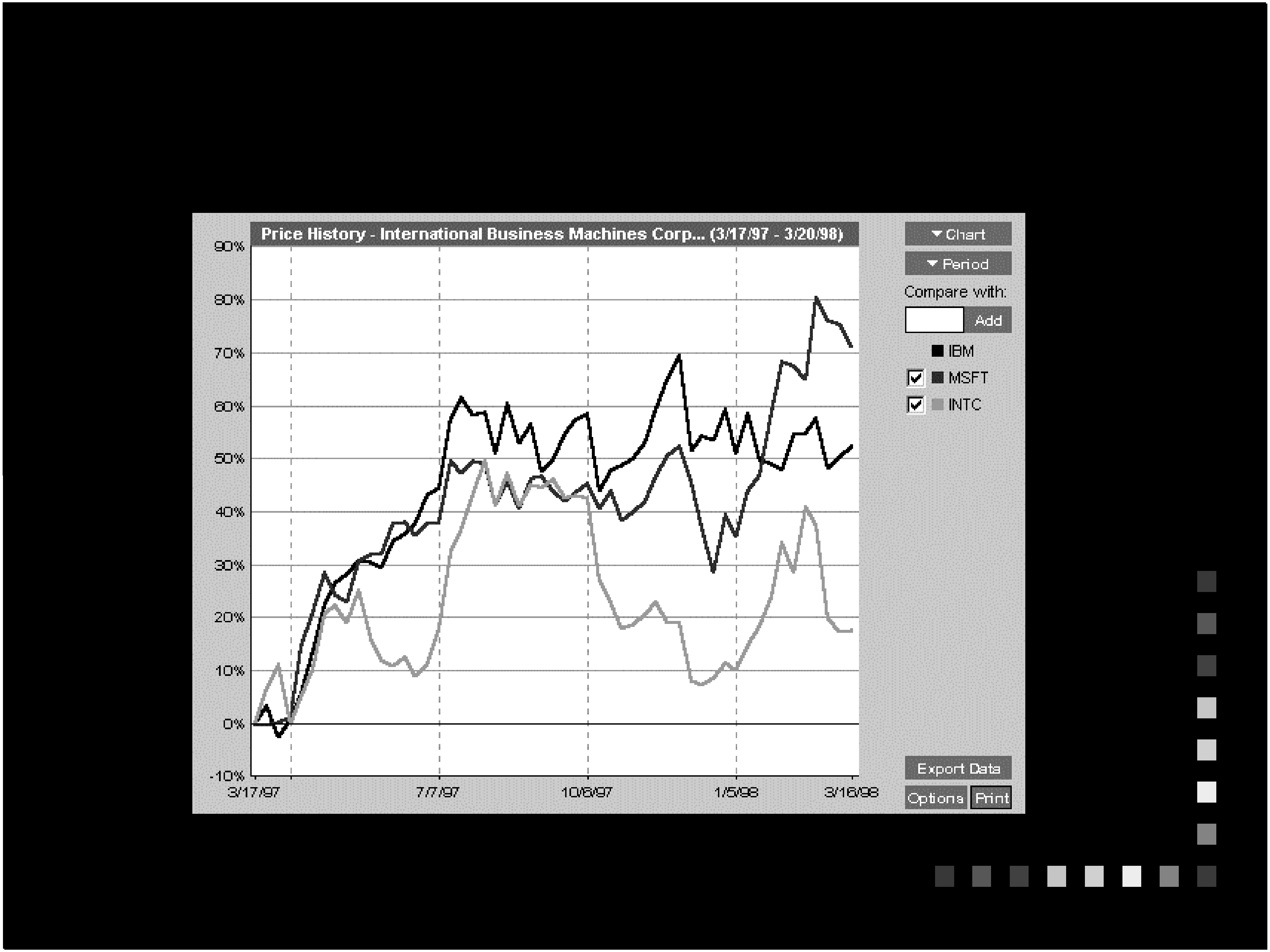
Tree Depth:13
Current Depth:3
a
b
c
d
e
f

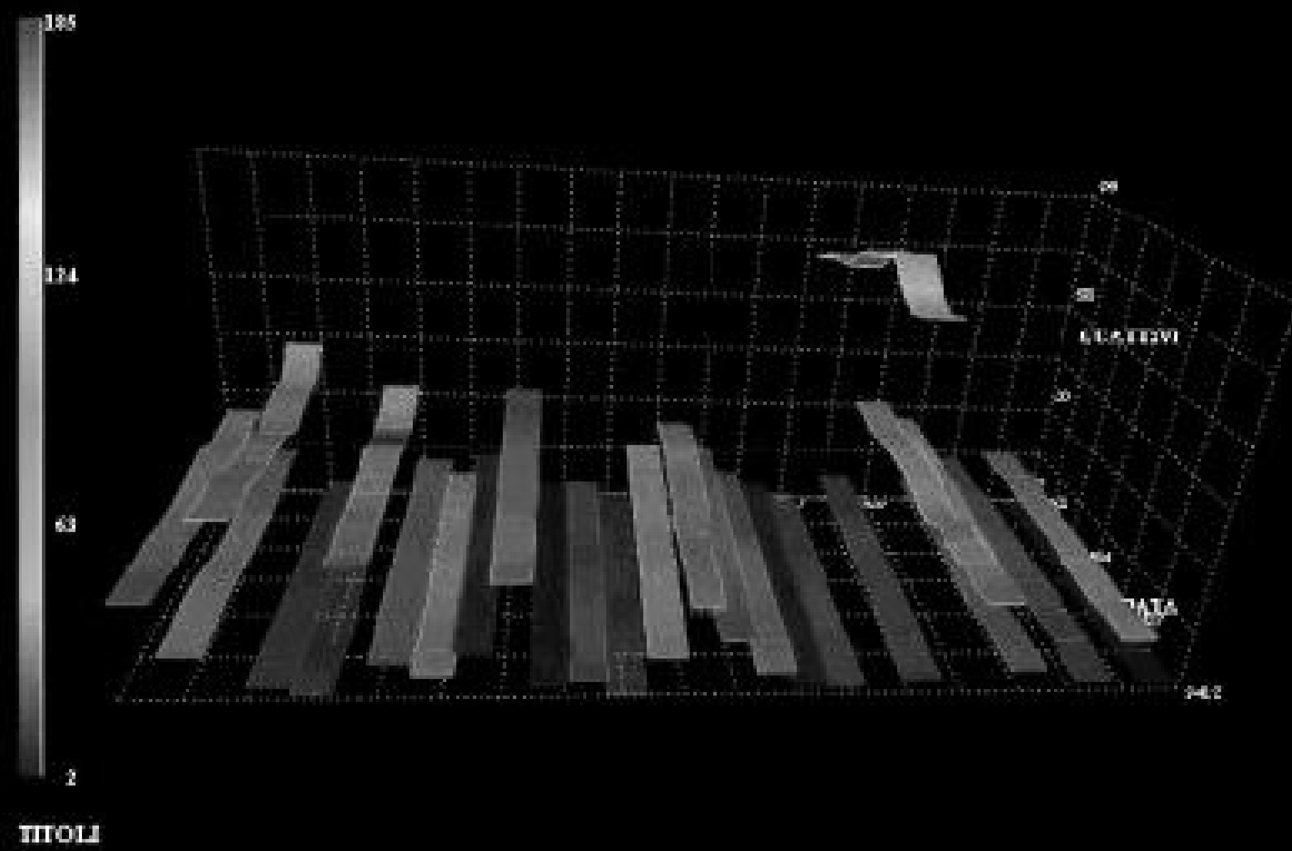


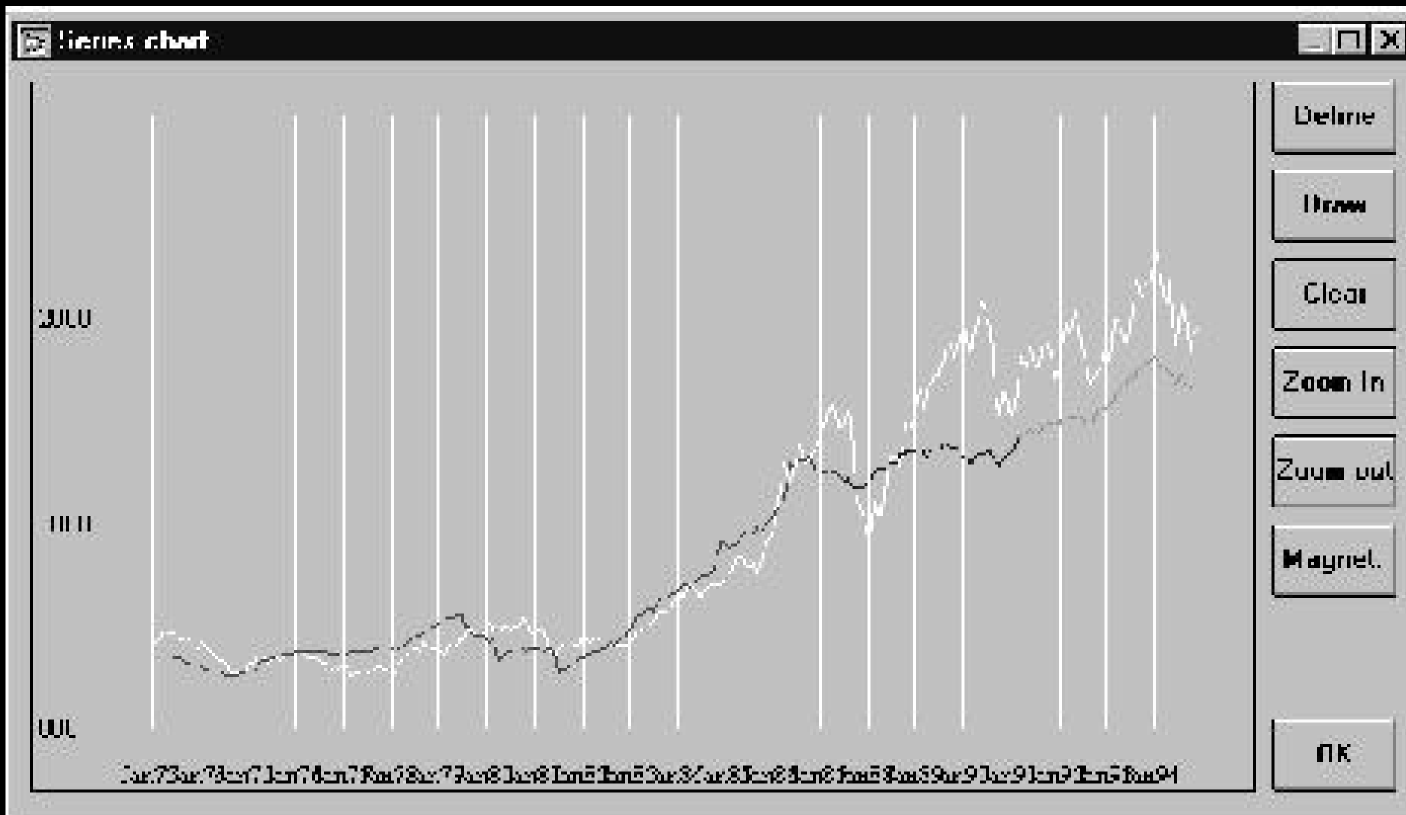



173 3 88 181 100 200 157
1 49 99 90 153 224 241 276
10 1 1 148 176 239 260 139 167
226
42 44 58 38 143 281
31 32 38 1 28 81
74 24 1 2
9 32 48 54 25 51 54 11 106
24 48 37 4 19 26 28 17 118 297
64 23 29 29 32 88 25 121 190 71
sphinxVision

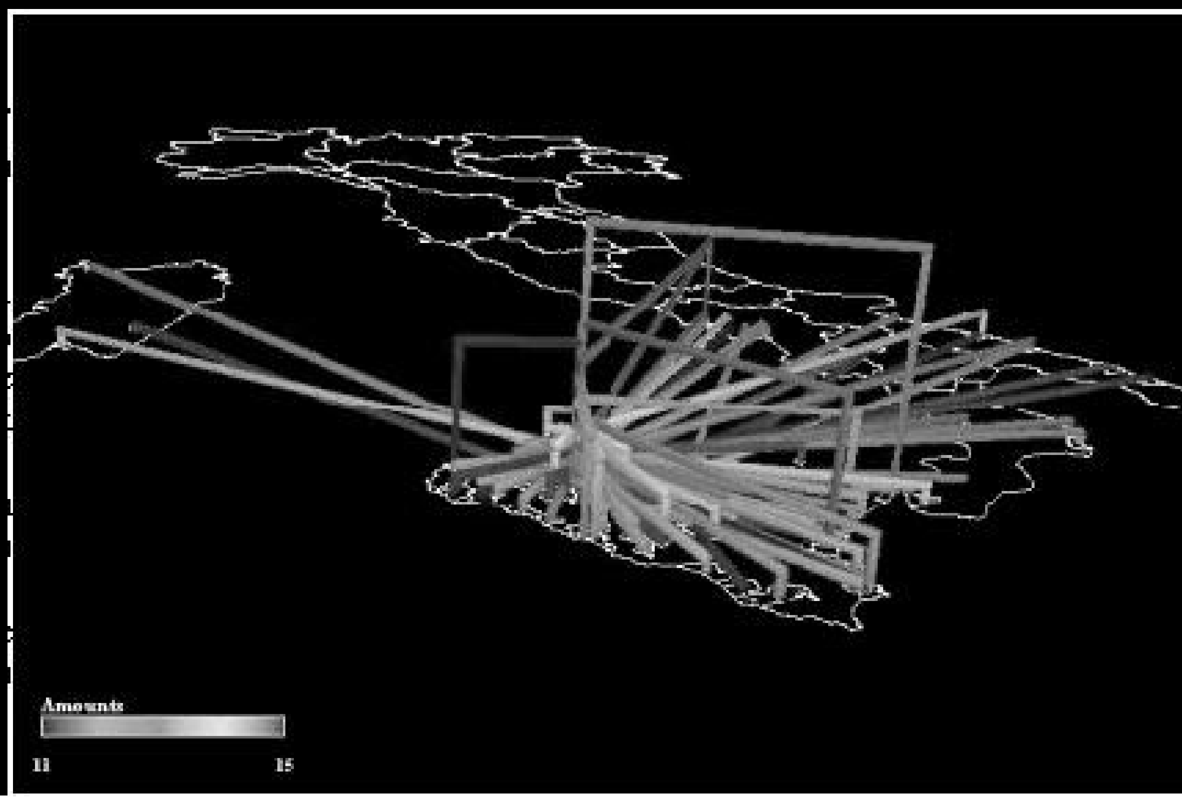

Field children
Group demografics
Min 0
Max 7
Ref 2
children
real data profile
sphinxVision

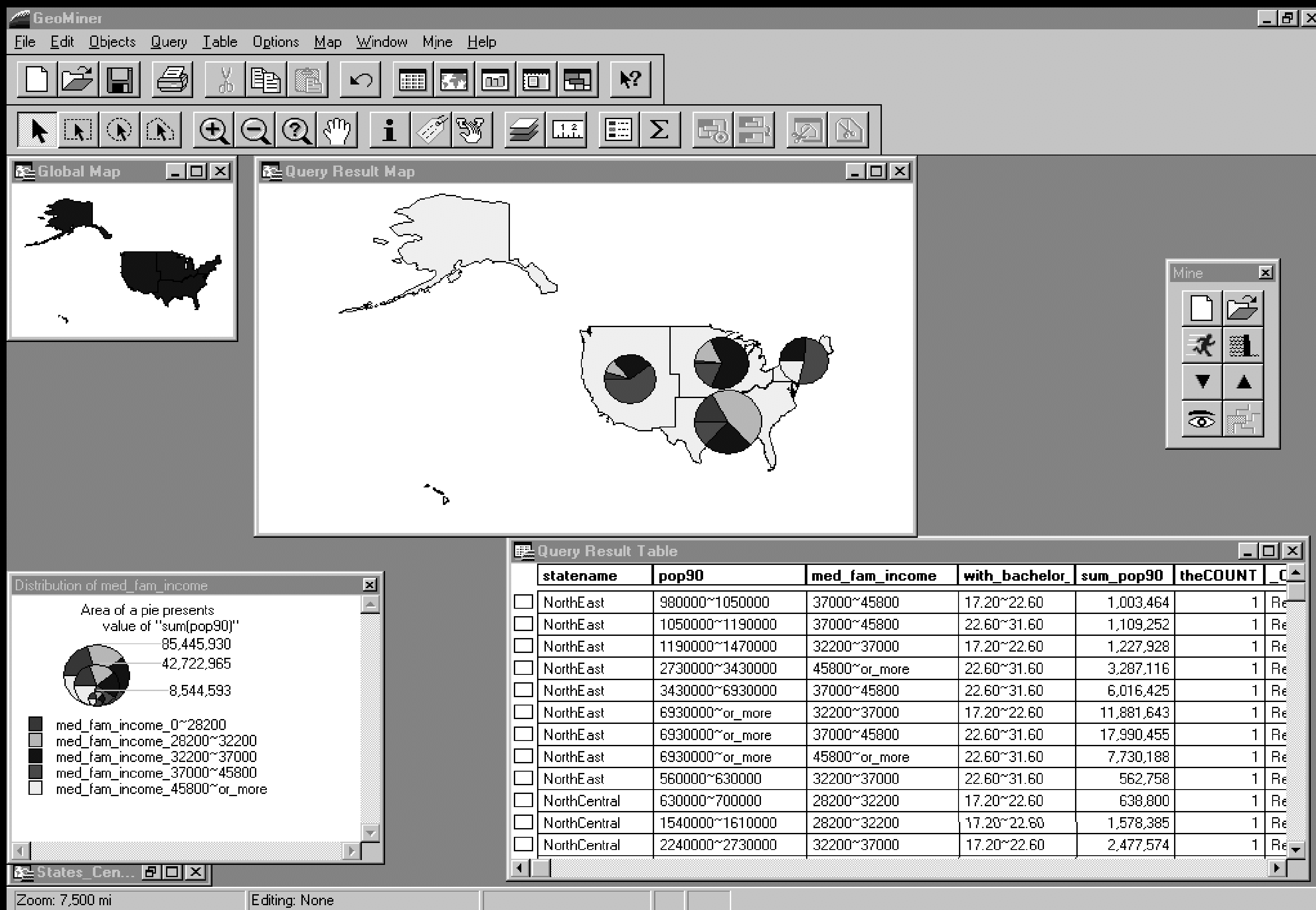

Price History - International Business Machines Corp... (3/17/97 - 3/20/98)
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
-10%
3/17/97
7/7/97
10/6/97
1/5/98
3/16/98
Chart
Period
Compare with:
Add
IBM
MSFT
INTC
Export Data
Options
Print


185
124
63
2
TITOLI
DATA



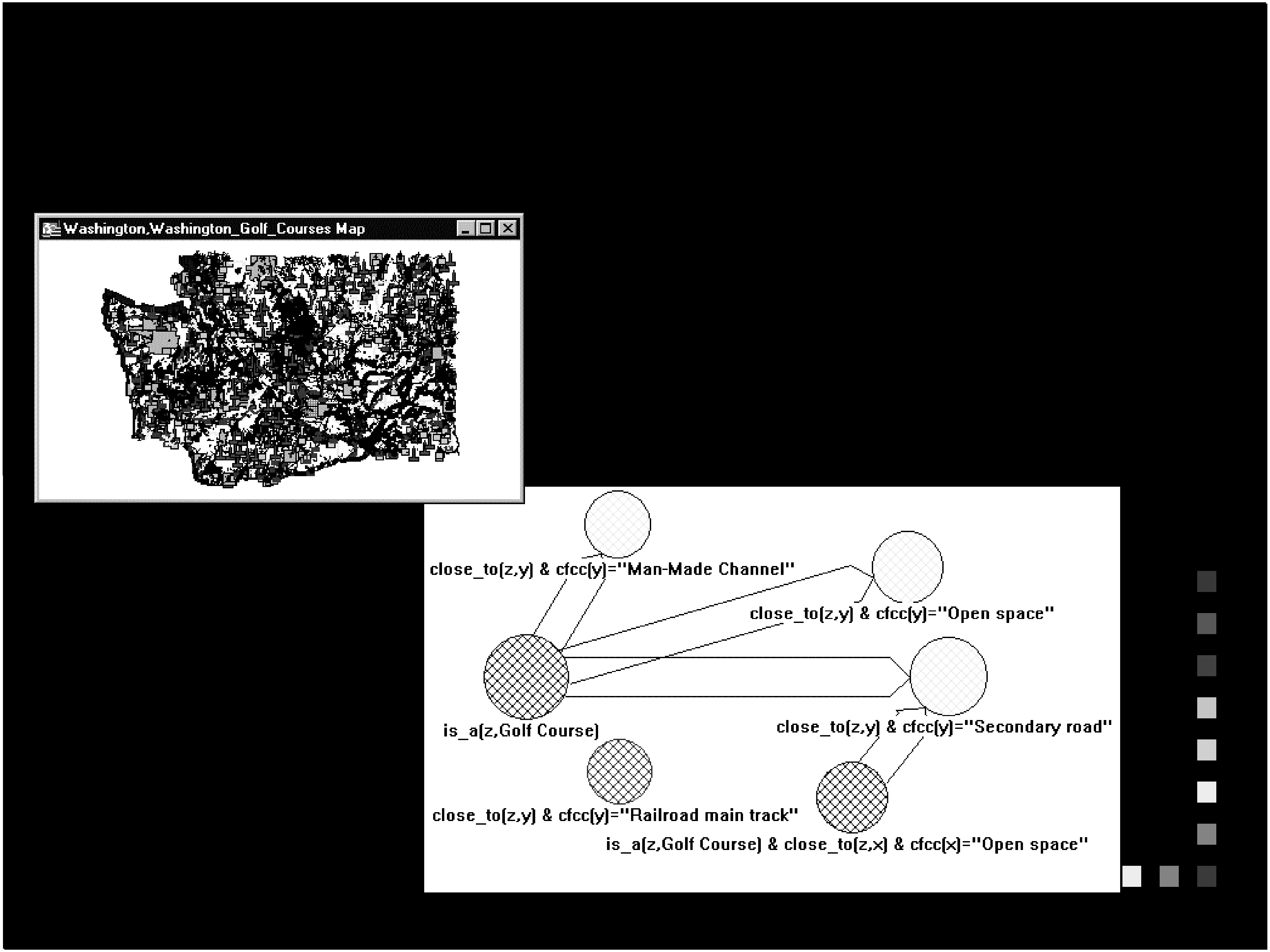
Series chart
Define
Draw
Clear
Zoom In
Zoom out
Magnet.
OK


Amounts
11
15

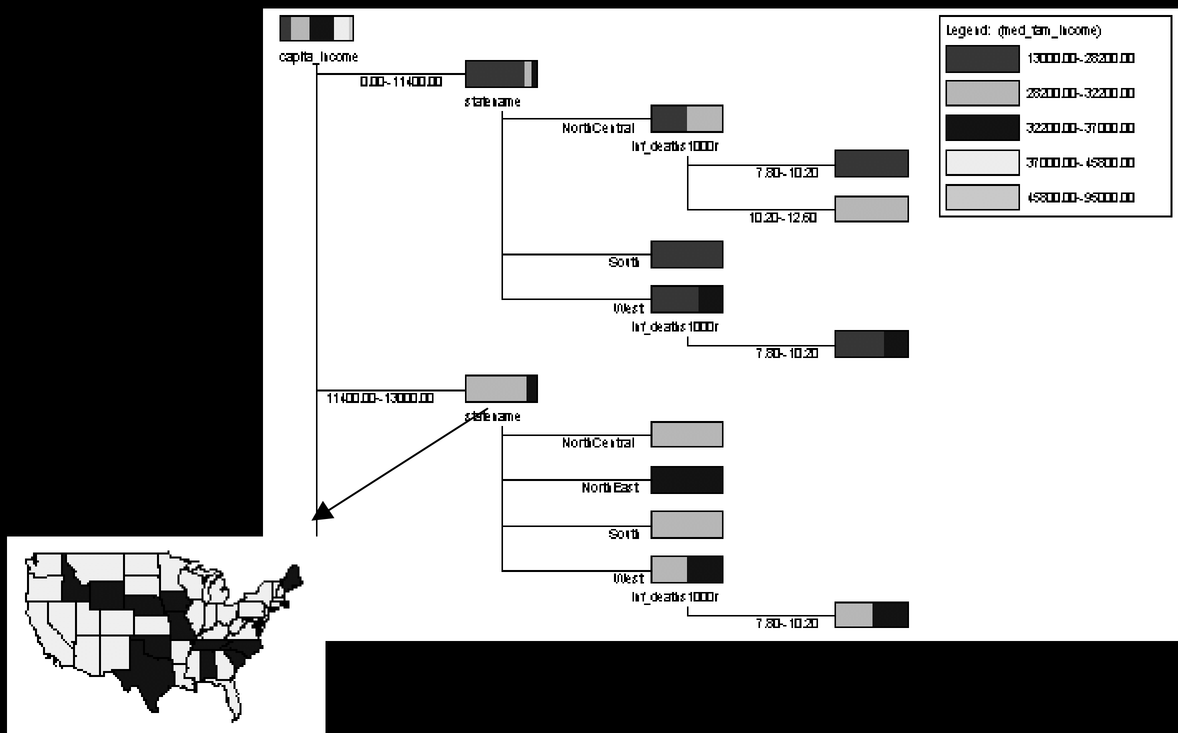

GeoMiner
File Edit Objects Query Table Options Map Window Mine Help
Global Map
Query Result Map
Mine
Distribution of med_fam_income
Area of a pie presents
value of "sum(pop90)"
85,445,930
42,722,965
8,544,593
med_fam_income_0~28200
med_fam_income_28200~32200
med_fam_income_32200~37000
med_fam_income_37000~45800
med_fam_income_45800~or_more
Query Result Table

	statename	pop90	med_fam_income	with_bachelor_	sum_pop90	theCOUNT	_C
	NorthEast	980000~1050000	37000~45800	17.20~22.60	1,003,464	1	Re
	NorthEast	1050000~1190000	37000~45800	22.60~31.60	1,109,252	1	Re
	NorthEast	1190000~1470000	32200~37000	17.20~22.60	1,227,928	1	Re
	NorthEast	2730000~3430000	45800~or_more	22.60~31.60	3,287,116	1	Re
	NorthEast	3430000~6930000	37000~45800	22.60~31.60	6,016,425	1	Re
	NorthEast	6930000~or_more	32200~37000	17.20~22.60	11,881,643	1	Re
	NorthEast	6930000~or_more	37000~45800	22.60~31.60	17,990,455	1	Re
	NorthEast	6930000~or_more	45800~or_more	22.60~31.60	7,730,188	1	Re
	NorthEast	560000~630000	32200~37000	22.60~31.60	562,758	1	Re
	NorthCentral	630000~700000	28200~32200	17.20~22.60	638,800	1	Re
	NorthCentral	1540000~1610000	28200~32200	17.20~22.60	1,578,385	1	Re
	NorthCentral	2240000~2730000	32200~37000	17.20~22.60	2,477,574	1	Re

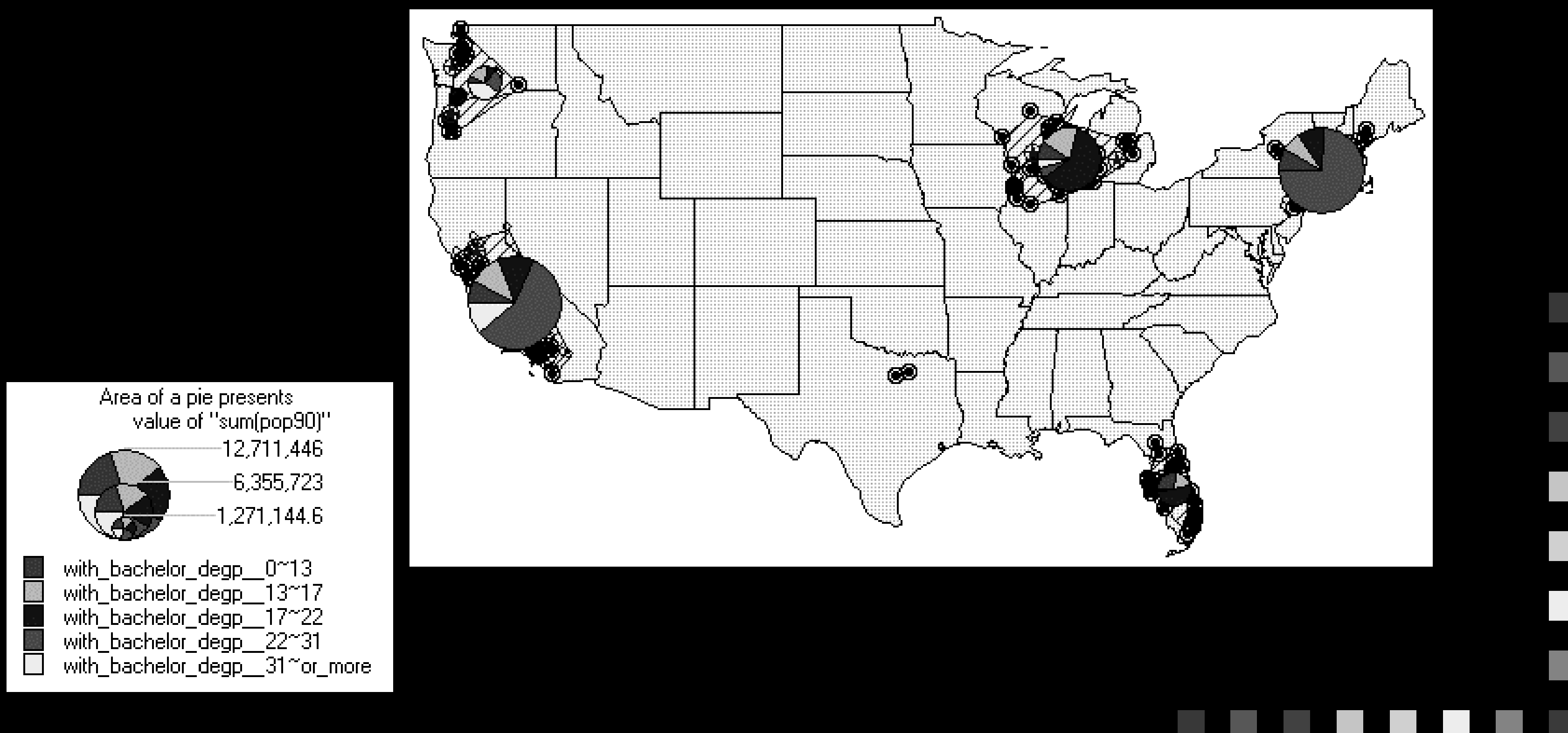
States_Cen...
Zoom: 7,500 mi
Editing: None

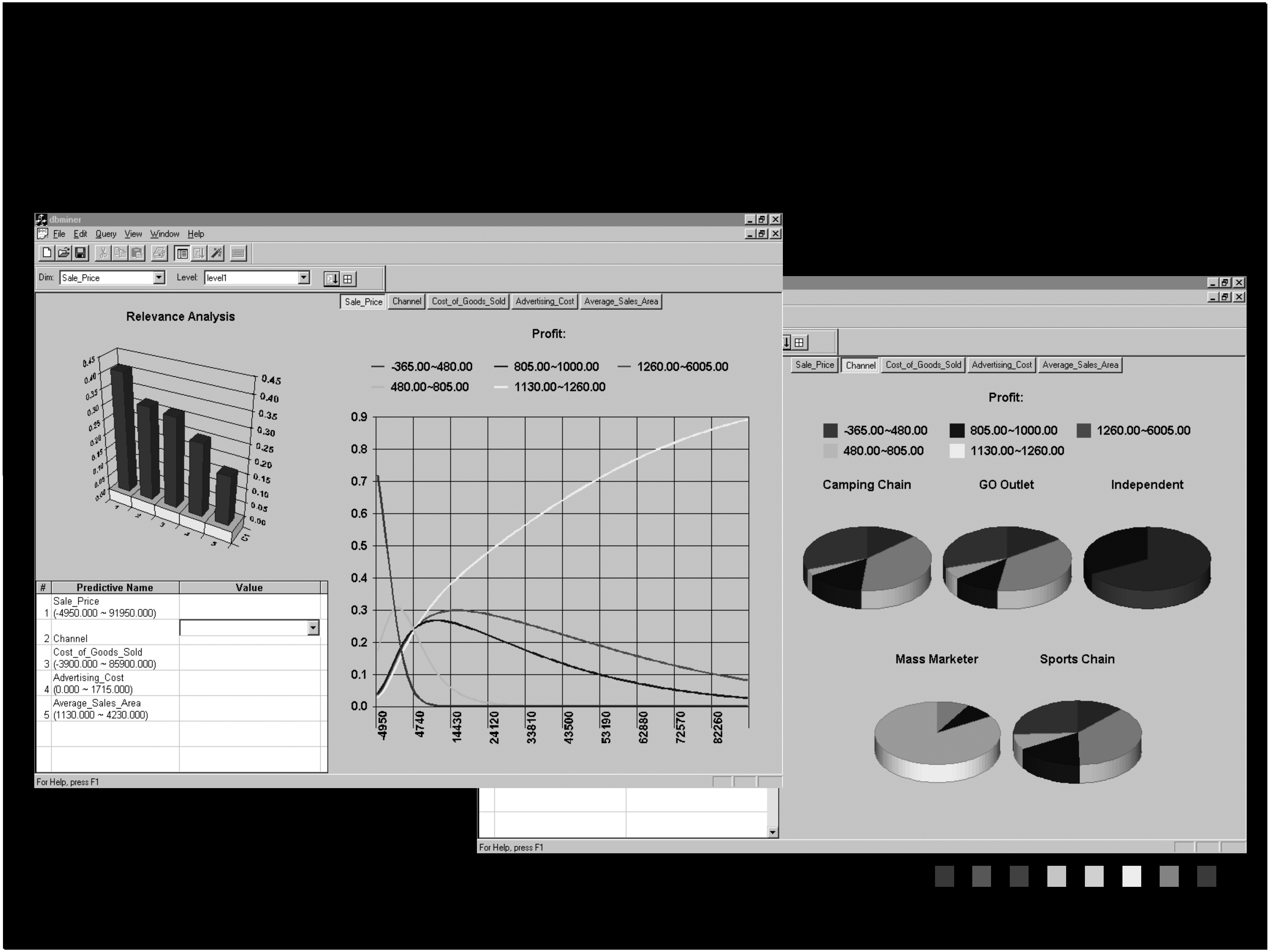


Washington,Washington_Golf_Courses Map
close_to(z,y) & cfcc(y)="Man-Made Channel"
close_to(z,y) & cfcc(y)="Open space"
is_a(z,Golf Course)
close_to(z,y) & cfcc(y)="Secondary road"
close_to(z,y) & cfcc(y)="Railroad main track"
is_a(z,Golf Course) & close_to(z,x) & cfcc(x)="Open space"

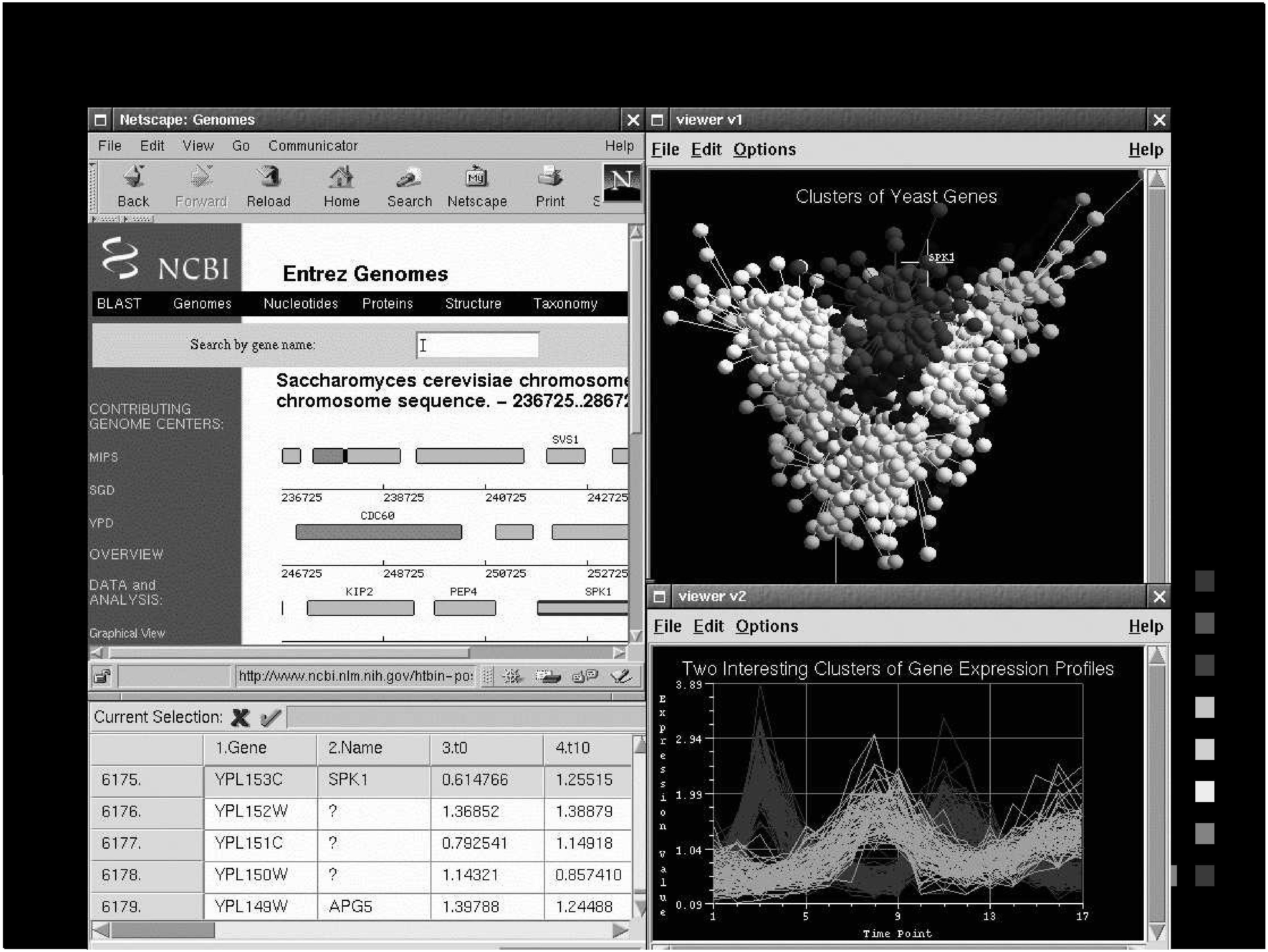


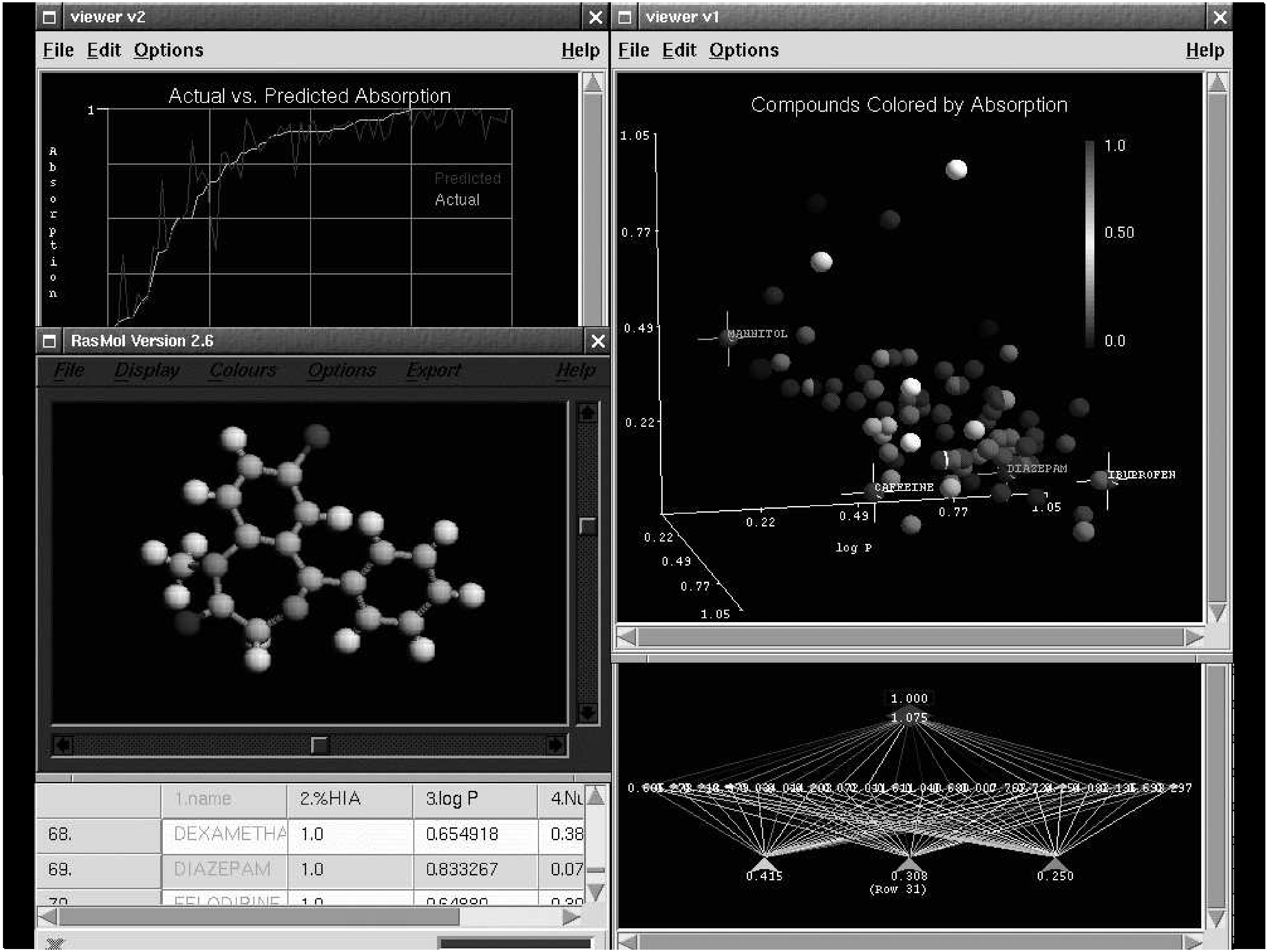
capita_income
0.00~11400.00
statename
NorthCentral
inf_deaths1000r
7.80~10.20
10.20~12.60
South
West
inf_deaths1000r
7.80~10.20
11400.00~13000.00
statename
NorthCentral
NorthEast
South
West
inf_deaths1000r
7.80~10.20
Legend: (med_fam_income)
13000.00~28200.00
28200.00~32200.00
32200.00~37000.00
37000.00~45800.00
45800.00~95000.00


Area of a pie presents
value of "sum(pop90)"
12,711,446
6,355,723
1,271,144.6
with_bachelor_degp__0~13
with_bachelor_degp__13~17
with_bachelor_degp__17~22
with_bachelor_degp__22~31
with_bachelor_degp__31~or_more


dbminer
File Edit Query View Window Help
Dim: Sale_Price
Level: level1
Sale_Price
Channel
Cost_of_Goods_Sold
Advertising_Cost
Average_Sales_Area
Relevance Analysis
Profit:
-365.00~480.00
805.00~1000.00
1260.00~6005.00
480.00~805.00
1130.00~1260.00
Predictive Name Value
1 Sale_Price (-4950.000 ~ 91950.000)
2 Channel
3 Cost_of_Goods_Sold (-3900.000 ~ 85900.000)
4 Advertising_Cost (0.000 ~ 1715.000)
5 Average_Sales_Area (1130.000 ~ 4230.000)
-4950
4740
14430
24120
33810
43500
53190
62880
72570
82260
For Help, press F1
Camping Chain
GO Outlet
Independent
Mass Marketer
Sports Chain

Profit v. %Sent
Window
Generate
Profit
1000
500
0
50
100
%Sent


Netscape: Genomes
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print
NCBI
Entrez Genomes
BLAST Genomes Nucleotides Proteins Structure Taxonomy
Search by gene name:
Saccharomyces cerevisiae chromosome
chromosome sequence. – 236725..28672
CONTRIBUTING GENOME CENTERS:
MIPS
SGD
YPD
OVERVIEW
DATA and ANALYSIS:
Graphical View
SVS1
236725 238725 240725 242725
CDC60
246725 248725 250725 252725
KIP2 PEP4 SPK1
http://www.ncbi.nlm.nih.gov/htbin-po:
Current Selection:
1.Gene 2.Name 3.t0 4.t10
6175. YPL153C SPK1 0.614766 1.25515
6176. YPL152W ? 1.36852 1.38879
6177. YPL151C ? 0.792541 1.14918
6178. YPL150W ? 1.14321 0.857410
6179. YPL149W APG5 1.39788 1.24488
viewer v1
File Edit Options Help
Clusters of Yeast Genes
SPK1
viewer v2
File Edit Options Help
Two Interesting Clusters of Gene Expression Profiles
Expression Value
3.89
2.94
1.99
1.04
0.09
1 5 9 13 17
Time Point


viewer v2
File Edit Options Help
Actual vs. Predicted Absorption
Absorption
Predicted
Actual
RasMol Version 2.6
File Display Colours Options Export Help
1.name
2.%HIA
3.log P
68.
DEXAMETHA
1.0
0.654918
69.
DIAZEPAM
1.0
0.833267
viewer v1
File Edit Options Help
Compounds Colored by Absorption
1.0
0.50
0.0
MANNITOL
CAFFEINE
DIAZEPAM
IBUPROFEN
log P
1.05
0.77
0.49
0.22
1.000
1.075
0.415
0.308
(Row 31)
0.250


Partek Image Viewer
viewer v1
File Edit Options Help
PCA Mapped Surveillance Data
1696
1180
Animal
Human
Other
5.50
3.05
0.60
PC #2 13.7%
-1.850
-1.750
1.50
4.75
8.00
PC #1 38.6%
spr s1 (final)
File Edit Filter Transform View Select Calculate Help
Data File e/partek/nfs/data/SEI/SEI5/final
Rows 4547
Columns 16
Auto-Advance
By Row
By Column
Current Selection:
1.Reference
2.Sample Fra
3.Class
4.Segmentati
1696. 6a42141 6a42169 Human 1
1697. 0a23500 0a23949 Animal Dog
1698. 2a19779 2a19984 Animal Bird
viewer v2
File Edit Options Help
Zoom
x y z
Reset
Neural Net Surveillance Classifier
0.000 1.000 0.000
0.022 0.948 0.030
2.942 3.183 1.841 0.812 3.106 -1.001 0.843 -0.924 -0.494 -0.218
(Row 1696)