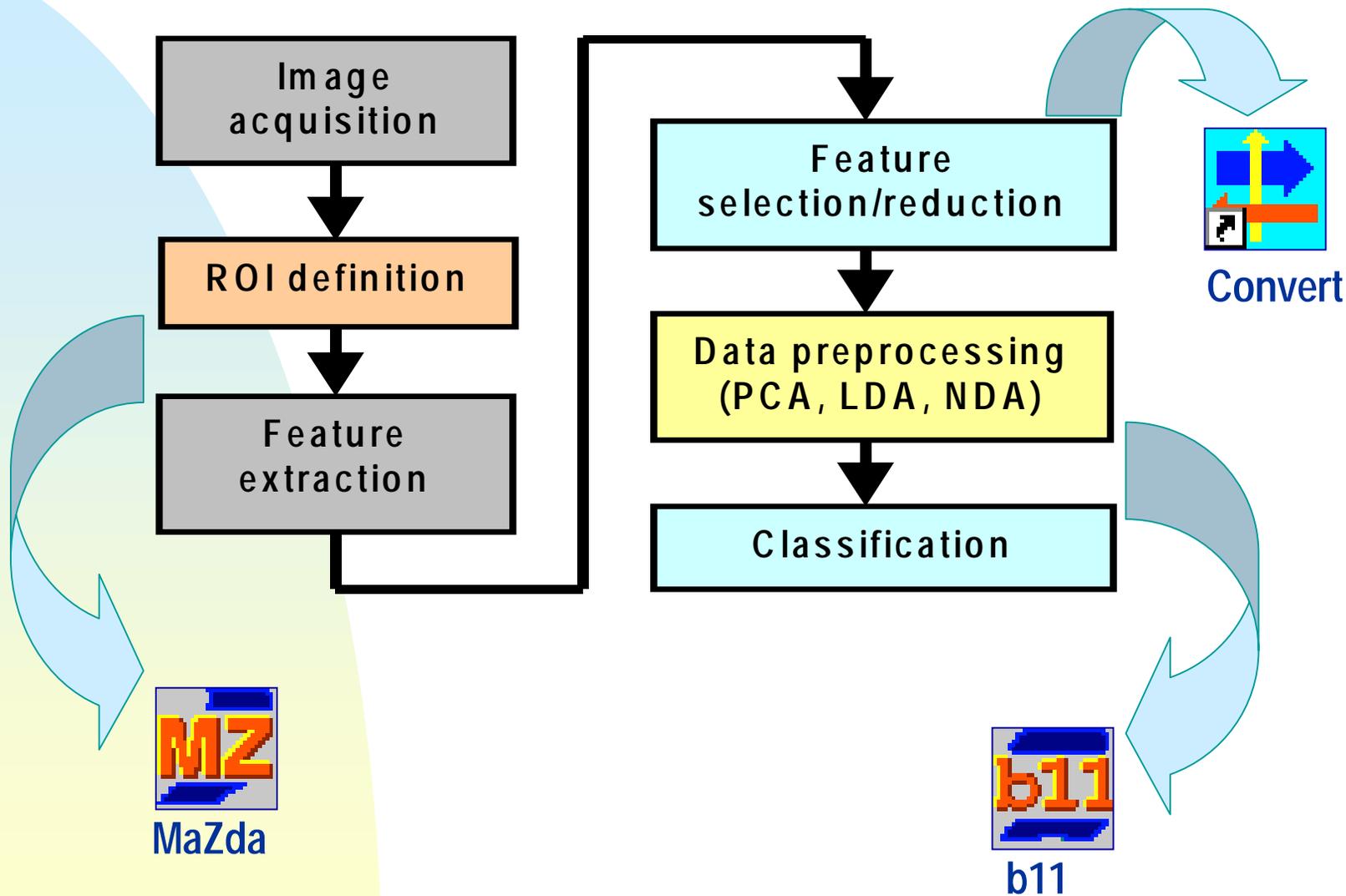


Functionality of B11 program

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Methods



```

b11 - m25.txt
Files Options Analysis Classification About Exit Help

Input (data)
*label
AR model, phantom image analysis
*features
1 teta1
2 teta2
3 teta3
4 teta4
5 sigma
*categories
1 Large-size bubbles
2 Glass beads
3 Medium-size bubbles
4 Small-size bubbles
5 Background noise
*data
1 3.004e-1 -5.460e-2 4.466e-1 4.100e-2 8.
1 2.936e-1 -4.150e-2 4.428e-1 7.440e-2 8.
1 3.630e-1 -7.520e-2 4.042e-1 5.020e-2 7.

Output (report)
* b11 report file [raw data analysis]
* Data file name: "m25.txt"
* Selected features [5 out of 5]
teta1 [#1/#1]; p.mean= 1.35928E-001, p.std= 1
teta2 [#2/#2]; p.mean=-4.31560E-002, p.std= 6
teta3 [#3/#3]; p.mean= 2.79588E-001, p.std= 1
teta4 [#4/#4]; p.mean= 2.06920E-002, p.std= 3
sigma [#5/#5]; p.mean= 9.08444E-001, p.std= 7
Feature vector standardized: NO
* Results [raw data analysis]
> Fisher coefficient, F = 40.0

```

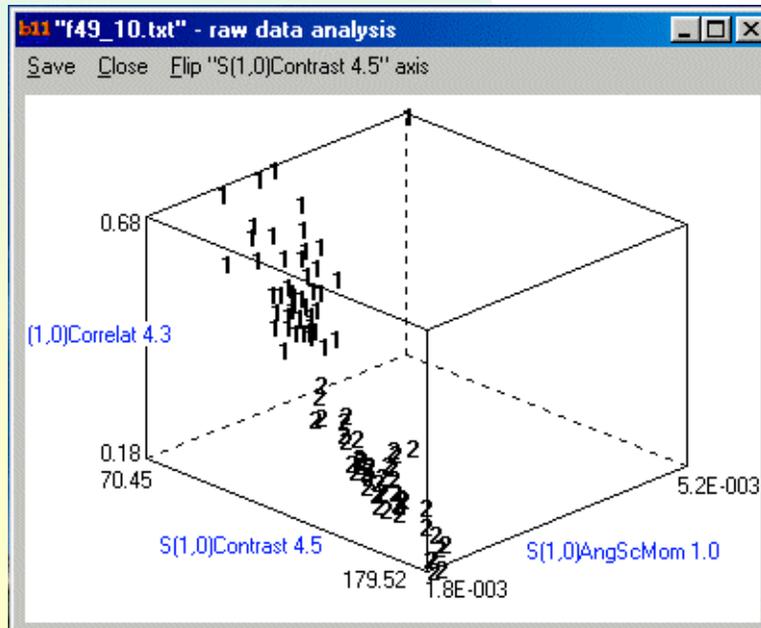
B11

Input

- (*.sel) files

Output

- text files,
- BMP graphs



Analysis,
classification

Methods

- data analysis: raw, PCA, LDA, NDA
- classification: k-NN, neural network

Feature selection box

- GrMean
- S(1, 0)SumVariance
- S(1, 0)DifEntrop
- S(0, 1)SumVariance
- S(1, -1)InvDfMom
- S(4, 4)DifVariance
- S(4, -4)SumAverg
- S(5, 0)DifVariance
- S(0, 5)Correlat

Neural network parameters

1st hidden layer <1..10>

2nd hidden layer <2..4>

backprop eta <0.01-0.99>

backprop iter.limit <50000..1000000>

optimization iter. limit <1..1000>

ation

ed category

OK

