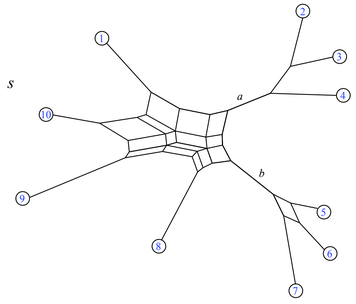
Starting with M (experimental) we use the formula to get W, and then use Neighbor-net to find the splits.



M =

-0.6684	0.0206	0.0103	0.1028	0.0524	0.0218	0.0073	0.1487	0.0271	0.3858
0.0206	-1.2011	0.3995	0.6612	0.0302	0.0126	0.0042	0.0621	0.0097	0.0400
0.0103	0.3995	-0.8003	0.3306	0.0151	0.0063	0.0021	0.0310	0.0049	0.0200
0.1028	0.6612	0.3306	-1.6940	0.1509	0.0629	0.0210	0.3104	0.0486	0.2000
0.0524	0.0302	0.0151	0.1509	-3.9248	2.8647	0.2882	0.5406	0.0698	0.1920
0.0218	0.0126	0.0063	0.0629	2.8647	-3.6397	0.4534	0.2252	0.0291	0.0800
0.0073	0.0042	0.0021	0.0210	0.2882	0.4534	-0.8489	0.0751	0.0097	0.0267
0.1487	0.0621	0.0310	0.3104	0.5406	0.2252	0.0751	-1.1942	0.3476	0.8438
0.0271	0.0097	0.0049	0.0486	0.0698	0.0291	0.0097	0.3476	-0.7598	0.5074
0.3858	0.0400	0.0200	0.2000	0.1920	0.0800	0.0267	0.8438	0.5074	-1.5994

That allows us to isolate the blobs. First we check the bridges a and b to see if they are real network features.
For potential bridge b the connections that suffice are those connections involving path 5--7, but involving
at most one node from {2,3,4}, since that cluster is also separated by a split.
Thus we check the circular minor (1 2 5; 9 8 7). Similarly for potential bridge a we check (10 1 2; 8 7 4) .

NumTerminals (6) =

0	0	1	1	2	2	3	3	4	4	5	5
0	0	0	0	1	1	2	2	3	3	4	4
0	0	0	0	1	1	2	2	3	3	4	4
0	0	0	0	0	0	1	1	2	2	3	3
0	0	0	0	0	0	1	1	2	2	3	3
0	0	0	0	0	0	0	0	1	1	2	2

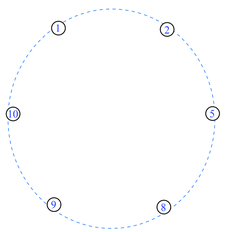
MaxRespected (S) =

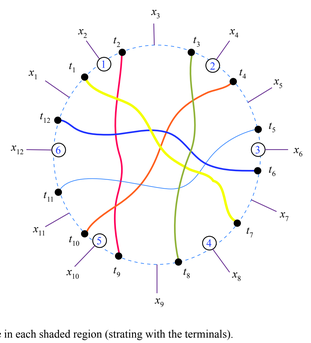
0	0	1	1	2	2	3	2	2	1	1	0
0	0	0	0	1	1	2	2	2	1	1	0
0	0	0	0	1	1	2	2	2	2	2	1
0	0	0	0	0	0	1	1	2	2	2	1
0	0	0	0	0	0	1	1	2	2	3	2
0	0	0	0	0	0	0	0	1	1	2	2

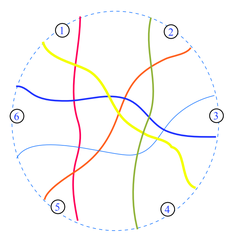
Re-entrants (S) =

0	0	0	0	0	0	0	1	2	3	4	5
0	0	0	0	0	0	0	0	1	2	3	4
0	0	0	0	0	0	0	0	1	1	2	3
0	0	0	0	0	0	0	0	0	0	1	2
0	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0

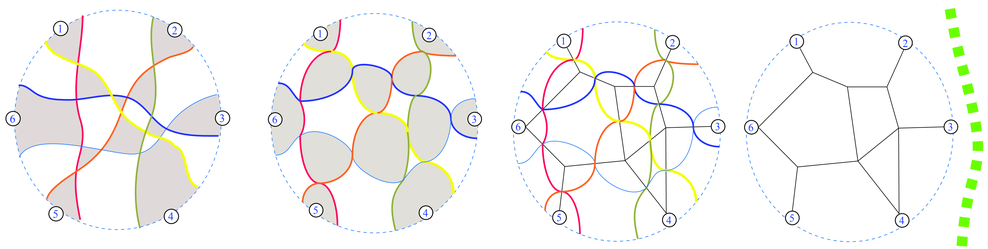
Now we find the blob of size 6. We choose a terminal connected by an internal path to each of its corners: here we
chose {1,2,5,8,9,10}. We relabel those as 1-6. We let P = W|{1,2,5,8,9,10}, restricted to those terminals. Then S is the response matrix
associated to P, and we use S to find the matrix MR = MaxRespected(S), where entry MR(i,j) is the size of the largest
k-connection that respects the cut from x_i to x_j. Then the matrix RE = Re-entrants(S) = NumTerminals(6)-MaxRespected(S)
and we draw the a strand from t_i to t_j when row i+1 differs first from row i in column j+1 of RE. Notice that all we need
to find are 5 strands, the last is determined.



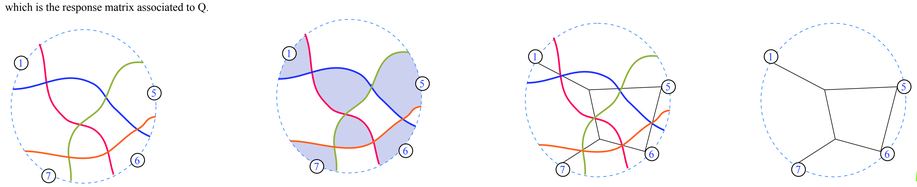




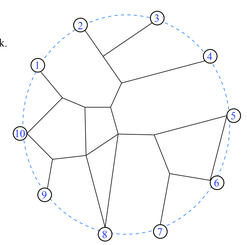
Next we draw the local network for the blob by placing a node in each shaded region (strating with the terminals).



The process is repeated for the size 4 blob, using the matrix Q which is W restricted to terminals{1,5,6,7}, and T
which is the response matrix associated to Q.



Finally the blobs and treelike portion are rejoined to see the full network.



Matlab

```
>> A=[-1 0 0 0 0 0 0 0 0 0; 0 -2 0 0 0 0 0 0 0 0; 0 0 -1 0 0 0 0 0 0 0; 0 0 0 -5 0 0 0 0 0 0; 0 0 0 0 -6 2 0 0 0 0; 0 0 0 0 2 -5 0 0 0 0; 0 0 0 0 0 0 -1 0 0 0; 0 0 0 0 0 0 0 -3 0 0; 0 0 0 0 0 0 0 0 -1 0; 0 0 0 0 0 0 0 0 0 -3]

A =

    -1     0     0     0     0     0     0     0     0     0
     0    -2     0     0     0     0     0     0     0     0
     0     0    -1     0     0     0     0     0     0     0
     0     0     0    -5     0     0     0     0     0     0
     0     0     0     0    -6     2     0     0     0     0
     0     0     0     0     2    -5     0     0     0     0
     0     0     0     0     0     0    -1     0     0     0
     0     0     0     0     0     0     0    -3     0     0
     0     0     0     0     0     0     0     0    -1     0
     0     0     0     0     0     0     0     0     0    -3

>> B=[1 0 0 0 0 0 0 0 0 0; 0 0 0 0 2 0 0 0 0 0; 0 0 0 0 1 0 0 0 0 0; 0 0 0 0 5 0 0 0 0 0; 0 0 0 0 0 4 0 0 0 0; 0 0 0 0 0 0 3 0 0 0; 0 0 0 0 0 0 0 1 0 0; 0 0 0 0 0 0 0 0 1 2; 0 0 0 0 0 0 0 0 0 1; 1 0 0 0 0 0 0 0 0 2]

B =

     1     0     0     0     0     0     0     0     0     0
     0     0     0     0     2     0     0     0     0     0
     0     0     0     0     1     0     0     0     0     0
     0     0     0     5     0     0     0     0     0     0
     0     0     0     0     0     4     0     0     0     0
     0     0     0     0     0     0     3     0     0     0
     0     0     0     0     0     0     0     1     0     0
     0     0     0     0     0     0     0     0     1     2
     0     0     0     0     0     0     0     0     0     1
     1     0     0     0     0     0     0     0     0     2

>> C=[-4 2 0 0 0 0 0 0 0 0; 2 -6 3 0 0 0 0 0 1 0; 0 3 -7 2 0 0 0 2 0 0; 0 0 2 -10 3 0 0 0 0 0; 0 0 0 3 -6 0 0 0 0 0; 0 0 0 0 0 -12 5 3 0 0; 0 0 0 0 0 5 -9 0 0 0; 0 0 2 0 0 3 0 -8 2 0; 0 1 0 0 0 0 0 0 2 -6 3; 0 0 0 0 0 0 0 0 3 -6]

C =

    -4     2     0     0     0     0     0     0     0     0
     2    -6     3     0     0     0     0     0     1     0
     0     3    -7     2     0     0     0     2     0     0
     0     0     2   -10     3     0     0     0     0     0
     0     0     0     3    -6     0     0     0     0     0
     0     0     0     0   -12     5     3     0     0     0
     0     0     0     0     5    -9     0     0     0     0
     0     0     2     0     0     3     0    -8     2     0
     0     1     0     0     0     0     0     2    -6     3
     0     0     0     0     0     0     0     3    -6     3

>> M=A-B*(C^(-1))*B'

M =

   -0.6684    0.0206    0.0103    0.1028    0.0524    0.0218    0.0073    0.1487    0.0271    0.3858
    0.0206   -1.2011    0.3995    0.6612    0.0302    0.0126    0.0042    0.0621    0.0097    0.0400
    0.0103    0.3995   -0.8003    0.3306    0.0151    0.0063    0.0021    0.0310    0.0049    0.0200
    0.1028    0.6612    0.3306   -1.6940    0.1509    0.0629    0.0210    0.3104    0.0486    0.2000
    0.0524    0.0302    0.0151    0.1509   -3.9248    2.8647    0.2882    0.5406    0.0698    0.1920
    0.0218    0.0126    0.0063    0.0629    2.8647   -3.6397    0.4534    0.2252    0.0291    0.0800
    0.0073    0.0042    0.0021    0.0210    0.2882    0.4534   -0.8489    0.0751    0.0097    0.0267
    0.1487    0.0621    0.0310    0.3104    0.5406    0.2252    0.0751   -1.1942    0.3476    0.8438
    0.0271    0.0097    0.0049    0.0486    0.0698    0.0291    0.0097    0.3476   -0.7598    0.5074
    0.3858    0.0400    0.0200    0.2000    0.1920    0.0800    0.0267    0.8438    0.5074   -1.5994

>> Z=pinv(-M)

Z =

    1.1665   -0.2478   -0.2478   -0.2478   -0.3919   -0.3919   -0.3919   -0.4640   -0.3788   -0.1971
   -0.2478    1.3071    0.8071    0.4738   -0.2969   -0.2969   -0.2969   -0.4323   -0.4541   -0.3854
   -0.2478    0.8071    1.8071    0.4738   -0.2969   -0.2969   -0.2969   -0.4323   -0.4541   -0.3854
   -0.2478    0.4738    0.4738    0.6738   -0.2969   -0.2969   -0.2969   -0.4323   -0.4541   -0.3854
   -0.3919   -0.2969   -0.2969   -0.2969    0.3359    0.2385    0.1736   -0.3996   -0.4803   -0.4509
   -0.3919   -0.2969   -0.2969   -0.2969    0.2385    0.4463    0.2515   -0.3996   -0.4803   -0.4509
   -0.3919   -0.2969   -0.2969   -0.2969    0.1736    0.2515    1.3035   -0.3996   -0.4803   -0.4509
   -0.4640   -0.4323   -0.4323   -0.4323   -0.3996   -0.3996   -0.3996   -0.1332   -0.4934   -0.4836
   -0.3788   -0.4541   -0.4541   -0.4541   -0.4803   -0.4803   -0.4803   -0.4934    0.7948   -0.2631
   -0.1971   -0.3854   -0.3854   -0.3854   -0.4509   -0.4509   -0.4509   -0.4836   -0.2631    0.0922

>> J=[1 1 1 1 1 1 1 1 1 1; 1 1 1 1 1 1 1 1 1 1; 1 1 1 1 1 1 1 1 1 1; 1 1 1 1 1 1 1 1 1 1; 1 1 1 1 1 1 1 1 1 1; 1 1 1 1 1 1 1 1 1 1; 1 1 1 1 1 1 1 1 1 1; 1 1 1 1 1 1 1 1 1 1; 1 1 1 1 1 1 1 1 1 1; 1 1 1 1 1 1 1 1 1 1]

J =

     1     1     1     1     1     1     1     1     1     1
     1     1     1     1     1     1     1     1     1     1
     1     1     1     1     1     1     1     1     1     1
     1     1     1     1     1     1     1     1     1     1
     1     1     1     1     1     1     1     1     1     1
     1     1     1     1     1     1     1     1     1     1
     1     1     1     1     1     1     1     1     1     1
     1     1     1     1     1     1     1     1     1     1
     1     1     1     1     1     1     1     1     1     1
     1     1     1     1     1     1     1     1     1     1

>> D=diag(diag(Z))

D =

    1.1665         0         0         0         0         0         0         0         0         0
         0    1.3071         0         0         0         0         0         0         0         0
         0         0    1.8071         0         0         0         0         0         0         0
         0         0         0    0.6738         0         0         0         0         0         0
         0         0         0         0    0.3359         0         0         0         0         0
         0         0         0         0         0    0.4463         0         0         0         0
         0         0         0         0         0         0    1.3035         0         0         0
         0         0         0         0         0         0         0   -0.1332         0         0
         0         0         0         0         0         0         0         0    0.7948         0
         0         0         0         0         0         0         0         0         0    0.0922
```

SplitsTree

```
#NEXUS[!Example of distance data.]
BEGIN taxa;   DIMENSIONS ntax=10;TAXLABELS [1] one [2] two [3] three [4] four [5] five [6] six [7] seven [8] eight

[9] nine [10] ten;
END;
BEGIN distances;   DIMENSIONS ntax=10;
 FORMAT      triangle=LOWER
diagonal      labels
missing=?   ;
MATRIX
one       0
two   2.9693       0
three   3.4693   1.5000       0
four   2.3359   1.0333   1.5333       0
five   2.2863   2.2370   2.7370   1.6036       0
six   2.3967   2.3474   2.8474   1.7140   0.3052       0
seven   3.2538   3.2045   3.7045   2.5712   1.2922   1.2468       0
eight   1.9612   2.0386   2.5386   1.4052   1.0019   1.1123   1.9694       0
nine   2.7189   3.0102   3.5102   2.3769   2.0914   2.2018   3.0589   1.6485       0
ten   1.6528   2.1701   2.6701   1.5368   1.3299   1.4403   2.2975   0.9263   1.4132       0;
END;
```

```
>> W=D*J+J*D-2*Z

W =

         0    2.9693    3.4693    2.3359    2.2863    2.3967    3.2538    1.9612    2.7189    1.6528
    2.9693         0    1.5000    1.0333    2.2370    2.3474    3.2045    2.0386    3.0102    2.1701
    3.4693    1.5000         0    1.5333    2.7370    2.8474    3.7045    2.5386    3.5102    2.6701
    2.3359    1.0333    1.5333         0    1.6036    1.7140    2.5712    1.4052    2.3769    1.5368
    2.2863    2.2370    2.7370    1.6036         0    0.3052    1.2922    1.0019    2.0914    1.3299
    2.3967    2.3474    2.8474    1.7140    0.3052         0    1.2468    1.1123    2.2018    1.4403
    3.2538    3.2045    3.7045    2.5712    1.2922    1.2468         0    1.9694    3.0589    2.2975
    1.9612    2.0386    2.5386    1.4052    1.0019    1.1123    1.9694         0    1.6485    0.9263
    2.7189    3.0102    3.5102    2.3769    2.0914    2.2018    3.0589    1.6485         0    1.4132
    1.6528    2.1701    2.6701    1.5368    1.3299    1.4403    2.2975    0.9263    1.4132         0

>> format long
>> W

W =

 Columns 1 through 7

                   0   2.969250363901018   3.469250363901019   2.335917030567686   2.286269589217186   2.396659199606797   3.253802056749655
   2.969250363901016                   0   1.500000000000002   1.033333333333333   2.236961001153138   2.347350611542748   3.204493468685606
   3.469250363901017   1.499999999999998                   0   1.533333333333334   2.736961001153140   2.847350611542750   3.704493468685607
   2.335917030567684   1.033333333333333   1.533333333333334                   0   1.603627667819806   1.714017278209417   2.571160135352274
   2.286269589217186   2.236961001153141   2.736961001153142   1.603627667819807                   0   0.305194805194805   1.292207792207792
   2.396659199606797   2.347350611542751   2.847350611542751   1.714017278209417   0.305194805194805                   0   1.246753246753247
   3.253802056749654   3.204493468685609   3.704493468685608   2.571160135352274   1.292207792207792   1.246753246753246                   0
   1.961244541484715   2.038573500805821   2.538573500805823   1.405240174672489   1.001880942928977   1.111270553318588   1.969413410461446
   2.718886462882094   3.010189228529838   3.510189228529838   2.071400593583998   2.071400593583999   2.201790203973609   3.058933061116466
   1.652838427947597   2.170123726346433   2.670123726346434   1.536790939031101   1.329937711487929   1.440327321877540   2.297470179020397

 Columns 8 through 10

   1.961244541484716   2.718886462882095   1.652838427947598
   2.038573500805820   3.010189228529839   2.170123726346431
   2.538573500805822   3.510189228529840   2.670123726346432
   1.405240174672488   2.376855895196507   1.536790939031099
   1.001880942928977   2.091400593583999   1.329937711487929
   1.111270553318587   2.201790203973609   1.440327321877539
   1.969413410461444   3.058933061116466   2.297470179020396
                   0   1.648471615720524   0.926310043668122
   1.648471615720523                   0   1.413209606986899
   0.926310043668121   1.413209606986900                   0

>> format short

P =

    0.0000    2.9693    2.2863    1.9612    2.7189    1.6528
    2.9693    0.0000    2.2370    2.0386    3.0102    2.1701
    2.2863    2.2370    0.0000    1.0019    2.0914    1.3299
    1.9612    2.0386    1.0019    0.0000    1.6485    0.9263
    2.7189    3.0102    2.0914    1.6485    0.0000    1.4132
    1.6528    2.1701    1.3299    0.9263    1.4132    0.0000

>> J=[1 1 1 1 1 1; 1 1 1 1 1 1; 1 1 1 1 1 1; 1 1 1 1 1 1; 1 1 1 1 1 1; 1 1 1 1 1 1]

J =

     1     1     1     1     1     1
     1     1     1     1     1     1
     1     1     1     1     1     1
     1     1     1     1     1     1
     1     1     1     1     1     1
     1     1     1     1     1     1

>> S=pinv(.5*(P-(1/6)*(P*J+J*P)+(trace(P*J))/36)*J))

S =

   -0.6653    0.0770    0.0770    0.1186    0.0194    0.3734
    0.0770   -0.5699    0.1578    0.1836    0.0248    0.1267
    0.0770    0.1578   -1.1711    0.6513    0.0694    0.2157
    0.1186    0.1836    0.6513   -1.7491    0.2257    0.5699
    0.0194    0.0248    0.0694    0.2257   -0.7862    0.4470
    0.3734    0.1267    0.2157    0.5699    0.4470   -1.7326

>> format long
>> S

S =

  -0.665327287290690   0.077002490404231   0.076983929922219   0.118592406040652   0.019358582738092   0.373389878185495
   0.077002490404231  -0.569905786993309   0.157778945484152   0.183649782677378   0.024824026007772   0.126650542419775
   0.076983929922219   0.157778945484152  -1.171146617084058   0.651314535827093   0.069361758642792   0.215707447207803
   0.118592406040654   0.183649782677379   0.651314535827093  -1.749136525131306   0.225662464848509   0.569917335737672
   0.019358582738092   0.024824026007772   0.069361758642792   0.225662464848509  -0.786188471658419   0.446981639421254
   0.373389878185494   0.126650542419775   0.215707447207802   0.569917335737673   0.446981639421254  -1.732646842971999

Q =

                   0   2.286269589217186   2.396659199606797   3.253802056749655
   2.286269589217186                   0   0.305194805194805   1.292207792207792
   2.396659199606797   0.305194805194805                   0   1.246753246753247
   3.253802056749654   1.292207792207792   1.246753246753246                   0

J =

     1     1     1     1
     1     1     1     1
     1     1     1     1
     1     1     1     1

>> T=pinv(.5*(Q-(1/4)*(Q*J+J*Q)+(trace(Q*J)/16)*J))

T =

  -0.445298393444141   0.286263252928376   0.119276355386824   0.039758785128941
   0.286263252928376  -3.612597805453960   2.994750914394186   0.331583638131394
   0.119276355386824   2.994750914394186  -3.585520452335756   0.471493182554749
   0.039758785128941   0.331583638131392   0.471493182554751  -0.842835605815084

T =

   -0.4453    0.2863    0.1193    0.0398
    0.2863   -3.6126    2.9948    0.3316
    0.1193    2.9948   -3.5855    0.4715
    0.0398    0.3316    0.4715   -0.8428

>> 0.039758785128941*2.994750914394186 - 0.119276355386824*0.331583638131394

ans =

    0.0795

>> 0.286263252928376*0.471493182554749 - 0.119276355386824*0.331583638131394

ans =

    0.0954
```