```
> library(partitions)
> library(reshape2)
> library(gdxrrw)
> #igdx("C:/Program Files (x86)/GAMS23.5")
> igdx("C:/GAMS/win64/24.4")
The GDX library has been loaded
GDX library load path: C:/GAMS/win64/24.4
> n=rgdx.scalar("C:/Users/marco/Documents/gamsdir/rprojdir/countryn.gdx","n")
> c=parts(n)
> c1=as.matrix(c)
> pn=ncol(c1)
> suf=seq(1:pn)
> pre="par"
> partn=paste(pre,suf,sep="")
> cs=nrow(c1)
> sufc=seq(1:cs)
> prec="coas"
> coals=paste(prec,sufc,sep="")
> colnames(c1)=partn
> rownames(c1)=coals
> spdef<- list(name='pn',uels=list(partn),dim=1,form='full',type='set',ts='partitions')
> cddef=  list(name='cn',uels=list(coals),dim=1,form='full',type='set',ts='coalitions in partitions')
> cpmat= list(name='pc',
val=c1,uels=list(coals,partn),dim=2,form='full',type='parameter',ts='partitions coalitions matrix')
> wgdx.lst("C:/Users/marco/Documents/gamsdir/rprojdir/parti.gdx", list(spdef,cddef,cpmat))
> q("yes")
--- analyticp3.gms(28) 2 Mb
--- GDXin=C:\Users\marco\Documents\gamsdir\rprojdir\parti.gdx
--- analyticp3.gms(224) 3 Mb
--- Starting execution: elapsed 0:00:02.334
--- analyticp3.gms(133) 17 Mb
--- Generating MCP model partem
--- analyticp3.gms(136) 147 Mb
---   285,120 rows  285,120 columns  1,948,320 non-zeroes
---   1 nl-code  0 nl-non-zeroes
--- analyticp3.gms(136) 145 Mb
--- Executing PATH: elapsed 0:00:06.255
--- analyticp3.gms(136) 145 Mb
Reading dictionary...
Reading row data...
Evaluating functions...
Checking model...
Calculating Jacobian...

PATH            Jul  4, 2010 23.5.1 WIN 18414.18495 VS8 x86/MS Windows

285120 row/cols, 1948320 non-zeros, 0.00% dense.

Path 4.7.02 (Fri Jul 02 05:30:27 2010)
Written by Todd Munson, Steven Dirkse, and Michael Ferris

MCPR: Zero:     0 Single: 237600 Double:     0 Forced:     0
```

Preprocessed size : 47520

INITIAL POINT STATISTICS
Maximum of X. . . . . 2.5000e+001 var: (em(p1,i1,coas1,par1))
Maximum of F. . . . . 4.3204e+000 eqn: (opt(p1,i1,coas1,par11))
Maximum of Grad F . . . . . 2.0098e-001 eqn: (opt(p1,i2,coas1,par1))
var: (em(p1,i2,coas1,par1))

INITIAL JACOBIAN NORM STATISTICS
Maximum Row Norm. . . . . 2.6859e-001 eqn: (opt(p1,i2,coas1,par1))
Minimum Row Norm. . . . . 1.4719e-001 eqn: (opt(p1,i1,coas1,par11))
Maximum Column Norm . . . . . 2.6859e-001 var: (em(p1,i2,coas1,par1))
Minimum Column Norm . . . . . 1.4726e-001 var: (em(p1,i1,coas1,par11))

Crash Log
major func diff size residual step prox (label)
0 0 6.8069e+002 0.0e+000 (opt(p1,i1,coas1,par11))
1 1 0 47520 2.3719e-013 1.0e+000 0.0e+000 (opt(p418,i2,coas1,par6))
pn_search terminated: no basis change.

Major Iteration Log
major minor func grad residual step type prox inorm (label)
0 0 2 2 2.3719e-013 I 0.0e+000 4.4e-015 (opt(p418,i2,coa)

FINAL STATISTICS
Inf-Norm of Complementarity . . 1.7377e-013 eqn: (opt(p479,i2,coas1,par9))
Inf-Norm of Normal Map. . . . . 4.4409e-015 eqn: (opt(p418,i2,coas1,par6))
Inf-Norm of Minimum Map . . . . 7.1054e-015 eqn: (opt(p17,i2,coas1,par6))
Inf-Norm of Fischer Function. . 4.4409e-015 eqn: (opt(p418,i2,coas1,par6))
Inf-Norm of Grad Fischer Fcn. . 8.0780e-016 eqn: (opt(p141,i1,coas1,par2))
Two-Norm of Grad Fischer Fcn. . 4.0028e-014

FINAL POINT STATISTICS
Maximum of X. . . . . 5.5938e+001 var: (em(p154,i6,coas2,par2))
Maximum of F. . . . . 4.4409e-015 eqn: (opt(p418,i2,coas1,par6))
Maximum of Grad F . . . . . 2.0098e-001 eqn: (opt(p1,i2,coas1,par1))
var: (em(p1,i2,coas1,par1))

** EXIT - solution found.

Major Iterations. . . . 0
Minor Iterations. . . . 0
Restarts. 0
Crash Iterations. . . . 1
Gradient Steps. 0
Function Evaluations. . 2
Gradient Evaluations. . 2
Total Time. 0.651000
Residual. 2.371852e-013
Postsolved residual: 2.3719e-013

--- Restarting execution

--- analyticp3.gms(136) 0 Mb
--- Reading solution for model partem
--- analyticp3.gms(136) 53 Mb
--- Executing after solve: elapsed 0:00:10.874
--- analyticp3.gms(138) 54 Mb
*** Status: Normal completion
--- Job analyticp3.gms Stop 12/22/15 19:31:11 elapsed 0:00:10.974