EDN\_ECP\_summary

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1, Read in tables

rm(list=ls()) # clean up workspace  
path <- "/Users/xji3/GitFolders/EDN\_ECP/Summary/MG94"  
  
summary.list <- c("\_clock\_summary",  
 "\_nonclock\_summary",   
 "\_Force\_clock\_summary",   
 "\_Force\_nonclock\_summary"  
 )  
pair = c("EDN", "ECP")  
for (target.summary in summary.list){  
 summary\_file <- paste(path, "\_EDN\_ECP", target.summary, '.txt', sep = '')  
 all <- readLines(summary\_file, n = -1)  
 row.names <- strsplit(all[length(all)], ' ')[[1]][-1]  
 col.name <- paste("MG94\_EDN\_ECP", target.summary, sep = "")  
 summary\_mat <- as.matrix(read.table(summary\_file,   
 row.names = row.names,  
 col.names = col.name))  
 assign(paste("MG94", target.summary, sep = ""), summary\_mat)  
}  
ECP.EDN.MG94 <- cbind(MG94\_nonclock\_summary, MG94\_clock\_summary,   
 MG94\_Force\_nonclock\_summary, MG94\_Force\_clock\_summary)  
ECP.EDN.MG94

## MG94\_EDN\_ECP\_nonclock\_summary  
## length 1.570e+02  
## ll -1.701e+03  
## pi\_a 2.910e-01  
## pi\_c 2.434e-01  
## pi\_g 2.069e-01  
## pi\_t 2.587e-01  
## kappa 2.062e+00  
## omega 8.270e-01  
## tau 6.312e-01  
## (N0,N1) 1.991e-01  
## (N0,Tamarin) 3.253e-01  
## (N1,N2) 3.194e-02  
## (N1,Macaque) 1.565e-01  
## (N2,N3) 3.455e-02  
## (N2,Orangutan) 8.979e-02  
## (N3,Chimpanzee) 1.428e-02  
## (N3,Gorilla) 1.597e-02  
## (N0,N1,tau) 5.203e-01  
## (N0,Tamarin,tau) 0.000e+00  
## (N1,N2,tau) 4.162e-01  
## (N1,Macaque,tau) 3.748e-01  
## (N2,N3,tau) 4.485e-01  
## (N2,Orangutan,tau) 1.071e+00  
## (N3,Chimpanzee,tau) 4.868e-02  
## (N3,Gorilla,tau) 4.722e-01  
## (N0,N1,1->2) 2.592e+00  
## (N0,Tamarin,1->2) 0.000e+00  
## (N1,N2,1->2) 3.636e-01  
## (N1,Macaque,1->2) 1.513e+00  
## (N2,N3,1->2) 5.828e-01  
## (N2,Orangutan,1->2) 6.400e+00  
## (N3,Chimpanzee,1->2) 6.506e-02  
## (N3,Gorilla,1->2) 5.130e-02  
## (N0,N1,2->1) 2.592e+00  
## (N0,Tamarin,2->1) 0.000e+00  
## (N1,N2,2->1) 9.049e-01  
## (N1,Macaque,2->1) 5.101e+00  
## (N2,N3,2->1) 1.046e+00  
## (N2,Orangutan,2->1) 3.414e+00  
## (N3,Chimpanzee,2->1) 1.286e-02  
## (N3,Gorilla,2->1) 7.941e-01  
## (N0,N1,mut) 6.296e+01  
## (N0,Tamarin,mut) 5.116e+01  
## (N1,N2,mut) 1.046e+01  
## (N1,Macaque,mut) 5.231e+01  
## (N2,N3,mut) 1.122e+01  
## (N2,Orangutan,mut) 2.351e+01  
## (N3,Chimpanzee,mut) 5.281e+00  
## (N3,Gorilla,mut) 5.148e+00  
## MG94\_EDN\_ECP\_clock\_summary  
## length 1.570e+02  
## ll -1.704e+03  
## pi\_a 2.917e-01  
## pi\_c 2.427e-01  
## pi\_g 2.069e-01  
## pi\_t 2.587e-01  
## kappa 2.089e+00  
## omega 8.389e-01  
## tau 6.208e-01  
## (N0,N1) 1.961e-01  
## (N0,Tamarin) 3.269e-01  
## (N1,N2) 5.182e-02  
## (N1,Macaque) 1.250e-01  
## (N2,N3) 5.566e-02  
## (N2,Orangutan) 7.322e-02  
## (N3,Chimpanzee) 1.756e-02  
## (N3,Gorilla) 1.756e-02  
## (N0,N1,tau) 5.194e-01  
## (N0,Tamarin,tau) 0.000e+00  
## (N1,N2,tau) 4.911e-01  
## (N1,Macaque,tau) 3.374e-01  
## (N2,N3,tau) 4.106e-01  
## (N2,Orangutan,tau) 1.231e+00  
## (N3,Chimpanzee,tau) 6.297e-02  
## (N3,Gorilla,tau) 4.331e-01  
## (N0,N1,1->2) 2.515e+00  
## (N0,Tamarin,1->2) 0.000e+00  
## (N1,N2,1->2) 7.183e-01  
## (N1,Macaque,1->2) 1.003e+00  
## (N2,N3,1->2) 8.880e-01  
## (N2,Orangutan,1->2) 6.069e+00  
## (N3,Chimpanzee,1->2) 1.065e-01  
## (N3,Gorilla,1->2) 6.177e-02  
## (N0,N1,2->1) 2.515e+00  
## (N0,Tamarin,2->1) 0.000e+00  
## (N1,N2,2->1) 1.702e+00  
## (N1,Macaque,2->1) 3.727e+00  
## (N2,N3,2->1) 1.519e+00  
## (N2,Orangutan,2->1) 3.137e+00  
## (N3,Chimpanzee,2->1) 1.756e-02  
## (N3,Gorilla,2->1) 7.916e-01  
## (N0,N1,mut) 6.198e+01  
## (N0,Tamarin,mut) 5.142e+01  
## (N1,N2,mut) 1.399e+01  
## (N1,Macaque,mut) 4.851e+01  
## (N2,N3,mut) 1.245e+01  
## (N2,Orangutan,mut) 2.199e+01  
## (N3,Chimpanzee,mut) 5.204e+00  
## (N3,Gorilla,mut) 5.162e+00  
## MG94\_EDN\_ECP\_Force\_nonclock\_summary  
## length 1.570e+02  
## ll -1.714e+03  
## pi\_a 2.927e-01  
## pi\_c 2.426e-01  
## pi\_g 2.076e-01  
## pi\_t 2.570e-01  
## kappa 2.100e+00  
## omega 9.044e-01  
## tau 0.000e+00  
## (N0,N1) 1.440e-01  
## (N0,Tamarin) 3.556e-01  
## (N1,N2) 4.520e-02  
## (N1,Macaque) 1.778e-01  
## (N2,N3) 4.510e-02  
## (N2,Orangutan) 9.982e-02  
## (N3,Chimpanzee) 1.700e-02  
## (N3,Gorilla) 1.880e-02  
## (N0,N1,tau) 0.000e+00  
## (N0,Tamarin,tau) 0.000e+00  
## (N1,N2,tau) 0.000e+00  
## (N1,Macaque,tau) 0.000e+00  
## (N2,N3,tau) 0.000e+00  
## (N2,Orangutan,tau) 0.000e+00  
## (N3,Chimpanzee,tau) 0.000e+00  
## (N3,Gorilla,tau) 0.000e+00  
## (N0,N1,1->2) 0.000e+00  
## (N0,Tamarin,1->2) 0.000e+00  
## (N1,N2,1->2) 0.000e+00  
## (N1,Macaque,1->2) 0.000e+00  
## (N2,N3,1->2) 0.000e+00  
## (N2,Orangutan,1->2) 0.000e+00  
## (N3,Chimpanzee,1->2) 0.000e+00  
## (N3,Gorilla,1->2) 0.000e+00  
## (N0,N1,2->1) 0.000e+00  
## (N0,Tamarin,2->1) 0.000e+00  
## (N1,N2,2->1) 0.000e+00  
## (N1,Macaque,2->1) 0.000e+00  
## (N2,N3,2->1) 0.000e+00  
## (N2,Orangutan,2->1) 0.000e+00  
## (N3,Chimpanzee,2->1) 0.000e+00  
## (N3,Gorilla,2->1) 0.000e+00  
## (N0,N1,mut) 4.544e+01  
## (N0,Tamarin,mut) 5.598e+01  
## (N1,N2,mut) 1.427e+01  
## (N1,Macaque,mut) 5.609e+01  
## (N2,N3,mut) 1.422e+01  
## (N2,Orangutan,mut) 3.154e+01  
## (N3,Chimpanzee,mut) 5.353e+00  
## (N3,Gorilla,mut) 5.924e+00  
## MG94\_EDN\_ECP\_Force\_clock\_summary  
## length 1.570e+02  
## ll -1.717e+03  
## pi\_a 2.928e-01  
## pi\_c 2.421e-01  
## pi\_g 2.078e-01  
## pi\_t 2.573e-01  
## kappa 2.102e+00  
## omega 9.066e-01  
## tau 0.000e+00  
## (N0,N1) 1.400e-01  
## (N0,Tamarin) 3.579e-01  
## (N1,N2) 6.042e-02  
## (N1,Macaque) 1.480e-01  
## (N2,N3) 6.708e-02  
## (N2,Orangutan) 8.758e-02  
## (N3,Chimpanzee) 2.050e-02  
## (N3,Gorilla) 2.050e-02  
## (N0,N1,tau) 0.000e+00  
## (N0,Tamarin,tau) 0.000e+00  
## (N1,N2,tau) 0.000e+00  
## (N1,Macaque,tau) 0.000e+00  
## (N2,N3,tau) 0.000e+00  
## (N2,Orangutan,tau) 0.000e+00  
## (N3,Chimpanzee,tau) 0.000e+00  
## (N3,Gorilla,tau) 0.000e+00  
## (N0,N1,1->2) 0.000e+00  
## (N0,Tamarin,1->2) 0.000e+00  
## (N1,N2,1->2) 0.000e+00  
## (N1,Macaque,1->2) 0.000e+00  
## (N2,N3,1->2) 0.000e+00  
## (N2,Orangutan,1->2) 0.000e+00  
## (N3,Chimpanzee,1->2) 0.000e+00  
## (N3,Gorilla,1->2) 0.000e+00  
## (N0,N1,2->1) 0.000e+00  
## (N0,Tamarin,2->1) 0.000e+00  
## (N1,N2,2->1) 0.000e+00  
## (N1,Macaque,2->1) 0.000e+00  
## (N2,N3,2->1) 0.000e+00  
## (N2,Orangutan,2->1) 0.000e+00  
## (N3,Chimpanzee,2->1) 0.000e+00  
## (N3,Gorilla,2->1) 0.000e+00  
## (N0,N1,mut) 4.419e+01  
## (N0,Tamarin,mut) 5.636e+01  
## (N1,N2,mut) 1.585e+01  
## (N1,Macaque,mut) 5.462e+01  
## (N2,N3,mut) 1.573e+01  
## (N2,Orangutan,mut) 3.006e+01  
## (N3,Chimpanzee,mut) 5.300e+00  
## (N3,Gorilla,mut) 5.952e+00

2, Now show branch specific % changes due to IGC

ECP.EDN.MG94[18:25, ]/(ECP.EDN.MG94[42:49, ] + ECP.EDN.MG94[18:25, ])

## MG94\_EDN\_ECP\_nonclock\_summary  
## (N0,N1,tau) 0.008196  
## (N0,Tamarin,tau) 0.000000  
## (N1,N2,tau) 0.038279  
## (N1,Macaque,tau) 0.007113  
## (N2,N3,tau) 0.038425  
## (N2,Orangutan,tau) 0.043589  
## (N3,Chimpanzee,tau) 0.009135  
## (N3,Gorilla,tau) 0.084026  
## MG94\_EDN\_ECP\_clock\_summary  
## (N0,N1,tau) 0.008310  
## (N0,Tamarin,tau) 0.000000  
## (N1,N2,tau) 0.033907  
## (N1,Macaque,tau) 0.006906  
## (N2,N3,tau) 0.031926  
## (N2,Orangutan,tau) 0.053027  
## (N3,Chimpanzee,tau) 0.011956  
## (N3,Gorilla,tau) 0.077410  
## MG94\_EDN\_ECP\_Force\_nonclock\_summary  
## (N0,N1,tau) 0  
## (N0,Tamarin,tau) 0  
## (N1,N2,tau) 0  
## (N1,Macaque,tau) 0  
## (N2,N3,tau) 0  
## (N2,Orangutan,tau) 0  
## (N3,Chimpanzee,tau) 0  
## (N3,Gorilla,tau) 0  
## MG94\_EDN\_ECP\_Force\_clock\_summary  
## (N0,N1,tau) 0  
## (N0,Tamarin,tau) 0  
## (N1,N2,tau) 0  
## (N1,Macaque,tau) 0  
## (N2,N3,tau) 0  
## (N2,Orangutan,tau) 0  
## (N3,Chimpanzee,tau) 0  
## (N3,Gorilla,tau) 0

3, % changes due to IGC in all branches

colSums(ECP.EDN.MG94[18:25, ])/colSums(ECP.EDN.MG94[42:49, ] + ECP.EDN.MG94[18:25, ])

## MG94\_EDN\_ECP\_nonclock\_summary MG94\_EDN\_ECP\_clock\_summary   
## 0.01487 0.01555   
## MG94\_EDN\_ECP\_Force\_nonclock\_summary MG94\_EDN\_ECP\_Force\_clock\_summary   
## 0.00000 0.00000