Εργασία μέρος 2ο
πλη511

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Επεξήγηση και προσθήκες κώδικα

Στη δεύτερη φάση του project μας ζητήθηκε να κατασκευάσουμε μία λειτουργία εναλλαγής ερωτημάτων από το σταθμό βάσης. Αρχικά μας ζητάει στην πρώτη εποχή να εκτελείτε το πρόγραμμα όπως και στο πρώτο μέρος και από κάθε επόμενη εποχή το πρόγραμμα να ρίχνει ένα κέρμα και με πιθανότητα 10% να αλλάζει συναθροιστικη συνάρτηση. Αρχικά για για την υλοποίηση αυτό του κομματιού χρησιμοποιήθηκε ένας timer τον periodTimer που προϋπήρχε και στο πρώτο κομμάτι του project και όποιος το μόνο που έκανε στην πρώτη φάση τα να τυπώνει τον αριθμό της εποχής. Τώρα ξεκινώντας από τη δεύτερη εποχή (periodTimer.startPeriodicAt((-10000,TIMER_PERIOD_MILLI) το οποίο ξεκινάει από τη δεύτερη εποχή εφόσον έχουμε ορίσει ότι πρώτη εποχή θα ξεκινήσει στα -10000 λόγο του boot που κάνουν οι κόμβοι και ο timer αυτός καλείται μέσα στο Radiocontrol).Μέσα στον timer αυτόν ξεκινάει και όπου tos_node_id=0(δηλαδή ο σταθμός βάσης) χρησιμοποιεί μία μεταβλητή c η οποία με το rand παίρνει τυχαίες τιμές και τις οποίες εμείς με το module 10 τις περιορίζουμε να είναι από 0 έως 9 και για να έχουμε 10% πιθανότητα να αλλάξουμε συναθροιστικη συνάρτηση παίρνουμε ότι όταν το c=1 τότε καλούμαι τον RoutingMsgTimer(TIMER_FAST_PERIOD).
Οπότε όσο αυτή τη στιγμή έχουμε καταφέρει να δουλέψει η πρώτη εποχή όπως και το πρώτο κομμάτι του project και από τη δεύτερη και ύστερα με μία τυχαία μεταβλητή ο σταθμός βάσης με 10% να καλεί τον RoutingMsgTimer ώστε να διαλέξει μία νέα συναθροιστικη συνάρτηση και να στείλει νέο μήνυμα στο δίκτυο.
Μέσα στο RoutingMsgTimer βάζουμε μία καινούργια μεταβλητή η οποία είναι global την routingcounter η οποία κάνει αυτό που λέει το όνομά της δηλαδή μετράει πόσες φορές έχουμε κάνει routing και βάζουμε μία νέα συνθήκη η οποία λέει ότι όταν το routingcounter γίνει μεγαλύτερο ή ίσο του 2 δηλαδή κάνει routine δύο ή περισσότερες φορές τότε κράτα σε μία μεταβλητή previous_c την παλιά στην συναθροιστική συνάρτηση και για όσο η παλιά συναθροιστικη συνάρτηση και η καινούργια είναι ίσες ξανά κάλεσε το rand ώστε να δώσουμε νέο σύνολο συνάθροιστηκων συναρτήσεων. Έτσι αν ζητηθεί να ξαναγίνει routing μετά την πρώτη εποχή δηλαδή ο routingcounter <=2 τότε καλούμε νέο σύνολο συναρτήσεων και στέλνουμε ερώτημα στο δίκτυο αφού έτσι κι αλλιώς RoutingMsgTimer όταν τελειώνει καλεί την SendRoutingTask() η οποία θα στείλει το νέο ερώτημα στο δίκτυο.

Μέσα στην SendRoutingTask δεν αλλάζουμε τίποτα αλλάζουμε την receiveRoutingTask η οποία είναι η συνάρτηση που κατασκευάζει στην ουσία το δέντρο δηλαδή δίνει το Parent_ID και τις πληροφορίες στους κόμβους. Εχω αποφασίσει εξαρχής ότι το δέντρο δεν θα αλλάξει διότι δεν υπάρχει λόγος να αλλάξει. Δεν χρειάζεται ούτε να προσθέσουμε ούτε να αφαιρέσουμε κάποιον κόμβο, αυτό που θέλουμε ουσία είναι να αλλάξουμε τις πληροφορίες που θα πάρει ο κόμβος αυτός ώστε να υπολογίσει μία νέα συνάρτηση και όχι να αλλάξουμε των γονέα του. Άρα χρησιμοποιώ μία μεταβλητή ώστε να ξεχωρίσω την πρώτη εποχή από τις επόμενες την οποία τη χρησιμοποιούμε και μέσα στον SendMsgTimer και λέγεται finishedRouting και η οποία μας φανερώνει αν έχει τελειώσει το routing στην πρώτη εποχή. Η διαδικασία για την πρώτη εποχή(δηλαδη if(finishedRouting ==false)) γίνεται ακριβώς η ίδια με την πρώτη φάση του project δηλαδή οι κόμβοι παίρνουνε το γονιό τους και τις

πληροφορίες που χρειάζονται για τις συναρτήσεις και το tct. Όταν τελειώσει η πρώτη εποχή και ξανά καλεστεί routing σε αυτή την περίπτωση προσθέσαμε κώδικα στο receiveRoutingTask ο οποίος στην ουσία το μόνο που κάνει είναι να κρατάει το ίδιο δέντρο αλλά να μεταφέρει τα καινούργια δεδομένα για τις συναρτήσεις στους κόμβους καθώς και το καινούργιο tct που έχει οριστεί.Αυτό που κάνει στην ουσία είναι να βλέπει το legth του μηνύματος στην προηγούμενη εποχή(prev_length) και το length(len) του τωρινού μηνύματος στην εποχή που βρισκόμαστε και αν αυτά τα δύο είναι διαφορετικά τότε δίνει στο στον κόμβο της καινούργιες συναρτησεις και καλή ξανά RoutingMsgTimer ωστε να γίνει για όλους τους κόμβους όταν τα δύο length γίνουν ίσα τότε σταματάει να καλεί RoutingMsgTimer. Αυτό καλύπτει την περίπτωση που έχουμε διαφορετικά length από εποχή σε εποχή δηλαδή στην προηγούμενη εποχή είχαμε συνάρτηση max Or Count και στην επόμενη είχαμε Max and Count ή το αντίστροφο. Ενω όταν έχουμε από Max σε Count ή το αντίστροφο τότε έχουμε ίδια length ==3 αλλά διαφορετικά choice (ο πίνακας αποθηκεύουμε το νούμερο της συναθροιστικης συναρτήσεις) οπότε θέλουμε το prev_c το οποιο ειναι το choice[0] της προηγούμενης εποχής να γίνει ίσο με το τωρινό choice[0]. Οποτε καταλιγουμε με ενα if((prev_length!=len ||(prev_length==3 && len==3 &&prev_c!=choice[0])) &&TOS_NODE_ID !=0) . Και όσο ισχύει αυτό καλούμε τον RoutingMsgTimer με τα καινούργια δεδομένα μέχρι όλοι οι κόμβοι έχουν τα καινούργια δεδομένα και αυτό το if να μην ισχύει και να σταματήσει καλείται ο timer. Το TOS_NODE_ID δεν θέλουμε να είναι μηδέν γιατί έτσι κι αλλιώς δεν έχει αξία να δώσουμε στον κόμβο 0 τα καινούργια δεδομένα αφού είναι αυτός που ξεκινάει να τα διαμοιράζει οπότε τα περιέχει ήδη.Στη δική μου υλοποίηση δεν χρειάστηκε να αλλάξω το χρονισμό των κόμβων.

Παράδειγμα:

D=3

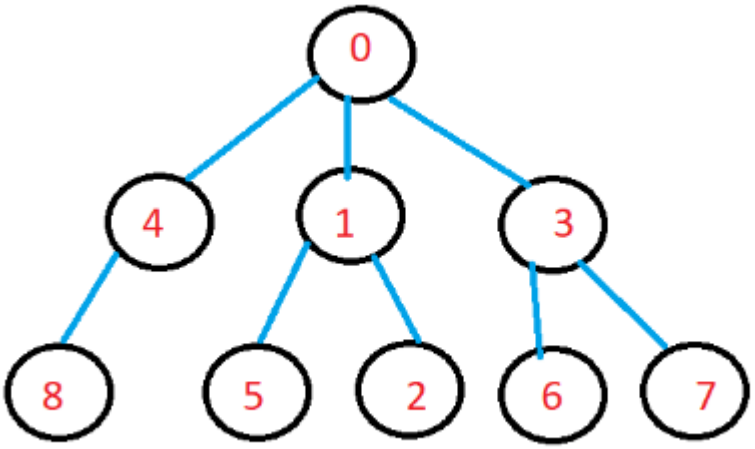
Στην πρώτη εποχή όπως φαίνεται:

```
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.000000010 DEBUG (8): Initialize child
0:0:10.195312510 DEBUG (0): RoutingMsgTimer fired!0:0:10.195312510 DEBUG (0): we have max&count
0:0:10.195312510 DEBUG (0): tct is:10
0:0:10.195312510 DEBUG (0): Sending RoutingMsg...
0:0:10.195312510 DEBUG (0): SendTask() posted!!
0:0:10.195312510 DEBUG (0): RoutingMsg enqueued successfully in SendingQueue!!!
0:0:10.195312520 DEBUG (0): sendRoutingTask(): Send returned success!!!
0:0:10.205001794 DEBUG (4): ### RoutingReceive.receive() start #####
0:0:10.205001794 DEBUG (4): Something received!!!  from 1  0
0:0:10.205001794 DEBUG (4): ### RoutingReceive.receive() end #####
0:0:10.205001794 DEBUG (1): ### RoutingReceive.receive() start #####
0:0:10.205001794 DEBUG (1): Something received!!!  from 1  0
0:0:10.205001794 DEBUG (1): ### RoutingReceive.receive() end #####
0:0:10.205001794 DEBUG (3): ### RoutingReceive.receive() start #####
0:0:10.205001794 DEBUG (3): Something received!!!  from 1  0
0:0:10.205001794 DEBUG (3): ### RoutingReceive.receive() end #####
0:0:10.205001804 DEBUG (4): ReceiveRoutingTask(): len=4
0:0:10.205001804 DEBUG (4): Now the node 4 have a parent with parentID 0 and currentdepth 10:0:10.205001804 DEBUG (1): ReceiveRouting
Task(): len=4
0:0:10.205001804 DEBUG (1): Now the node 1 have a parent with parentID 0 and currentdepth 10:0:10.205001804 DEBUG (3): ReceiveRouting
Task(): len=4
0:0:10.205001804 DEBUG (3): Now the node 3 have a parent with parentID 0 and currentdepth 10:0:10.205169640 DEBUG (0): Package sent T
rue
0:0:10.399414072 DEBUG (1): RoutingMsgTimer fired!0:0:10.399414072 DEBUG (1): Sending RoutingMsg...
0:0:10.399414072 DEBUG (1): SendTask() posted!!
0:0:10.399414072 DEBUG (1): RoutingMsg enqueued successfully in SendingQueue!!!
0:0:10.399414072 DEBUG (3): RoutingMsgTimer fired!0:0:10.399414072 DEBUG (3): Sending RoutingMsg...
0:0:10.399414072 DEBUG (3): SendTask() posted!!
0:0:10.399414072 DEBUG (3): RoutingMsg enqueued successfully in SendingQueue!!!
0:0:10.399414072 DEBUG (4): RoutingMsgTimer fired!0:0:10.399414072 DEBUG (4): Sending RoutingMsg...
0:0:10.399414072 DEBUG (4): SendTask() posted!!
0:0:10.399414072 DEBUG (4): RoutingMsg enqueued successfully in SendingQueue!!!
0:0:10.399414082 DEBUG (1): sendRoutingTask(): Send returned success!!!
0:0:10.399414082 DEBUG (3): sendRoutingTask(): Send returned success!!!
0:0:10.399414082 DEBUG (4): sendRoutingTask(): Send returned success!!!
0:0:10.400817883 DEBUG (5): ### RoutingReceive.receive() start #####
0:0:10.400817883 DEBUG (5): Something received!!!  from 257  1
```

```
0:0:10.400817883 DEBUG (5): ### RoutingReceive.receive() end #####
0:0:10.400817883 DEBUG (4): ### RoutingReceive.receive() start #####
0:0:10.400817883 DEBUG (4): Something received!!!  from 257  1
0:0:10.400817883 DEBUG (4): ### RoutingReceive.receive() end #####
0:0:10.400817883 DEBUG (3): ### RoutingReceive.receive() start #####
0:0:10.400817883 DEBUG (3): Something received!!!  from 257  1
0:0:10.400817883 DEBUG (3): ### RoutingReceive.receive() end #####
0:0:10.400817883 DEBUG (2): ### RoutingReceive.receive() start #####
0:0:10.400817883 DEBUG (2): Something received!!!  from 257  1
0:0:10.400817883 DEBUG (2): ### RoutingReceive.receive() end #####
0:0:10.400817883 DEBUG (0): ### RoutingReceive.receive() start #####
0:0:10.400817883 DEBUG (0): Something received!!!  from 257  1
0:0:10.400817883 DEBUG (0): ### RoutingReceive.receive() end #####
0:0:10.400817893 DEBUG (5): ReceiveRoutingTask(): len=4
0:0:10.400817893 DEBUG (5): Now the node 5 have a parent with parentID 1 and currentdepth 20:0:10.400817893 DEBUG (4): ReceiveRouting
Task(): len=4
0:0:10.400817893 DEBUG (4): the node 4 has already parent with parentID 0 and curdepth 10:0:10.400817893 DEBUG (3): ReceiveRoutingTas
k(): len=4
0:0:10.400817893 DEBUG (3): the node 3 has already parent with parentID 0 and curdepth 10:0:10.400817893 DEBUG (2): ReceiveRoutingTas
k(): len=4
0:0:10.400817893 DEBUG (2): Now the node 2 have a parent with parentID 1 and currentdepth 20:0:10.400817893 DEBUG (0): ReceiveRouting
Task(): len=4
0:0:10.400817893 DEBUG (0): the node 0 has already parent with parentID 0 and curdepth 00:0:10.400985728 DEBUG (1): Package sent True

0:0:10.404724110 DEBUG (7): ### RoutingReceive.receive() start #####
0:0:10.404724110 DEBUG (7): Something received!!!  from 257  3
0:0:10.404724110 DEBUG (7): ### RoutingReceive.receive() end #####
0:0:10.404724110 DEBUG (6): ### RoutingReceive.receive() start #####
0:0:10.404724110 DEBUG (6): Something received!!!  from 257  3
0:0:10.404724110 DEBUG (6): ### RoutingReceive.receive() end #####
0:0:10.404724110 DEBUG (4): ### RoutingReceive.receive() start #####
0:0:10.404724110 DEBUG (4): Something received!!!  from 257  3
0:0:10.404724110 DEBUG (4): ### RoutingReceive.receive() end #####
0:0:10.404724110 DEBUG (1): ### RoutingReceive.receive() start #####
0:0:10.404724110 DEBUG (1): Something received!!!  from 257  3
0:0:10.404724110 DEBUG (1): ### RoutingReceive.receive() end #####
0:0:10.404724110 DEBUG (0): ### RoutingReceive.receive() start #####
0:0:10.404724110 DEBUG (0): Something received!!!  from 257  3
0:0:10.404724110 DEBUG (0): ### RoutingReceive.receive() end #####
0:0:10.404724120 DEBUG (7): ReceiveRoutingTask(): len=4
0:0:10.404724120 DEBUG (7): Now the node 7 have a parent with parentID 3 and currentdepth 20:0:10.404724120 DEBUG (6): ReceiveRouting
Task(): len=4
0:0:10.404724120 DEBUG (6): Now the node 6 have a parent with parentID 3 and currentdepth 20:0:10.404724120 DEBUG (4): ReceiveRouting
Task(): len=4
0:0:10.404724120 DEBUG (4): the node 4 has already parent with parentID 0 and curdepth 10:0:10.404724120 DEBUG (1): ReceiveRoutingTas
k(): len=4
0:0:10.404724120 DEBUG (1): the node 1 has already parent with parentID 0 and curdepth 10:0:10.404724120 DEBUG (0): ReceiveRoutingTas
k(): len=4
0:0:10.404724120 DEBUG (0): the node 0 has already parent with parentID 0 and curdepth 00:0:10.404891956 DEBUG (3): Package sent True

0:0:10.407928437 DEBUG (8): ### RoutingReceive.receive() start #####
0:0:10.407928437 DEBUG (8): Something received!!!  from 257  4
0:0:10.407928437 DEBUG (8): ### RoutingReceive.receive() end #####
```

```
0:0:10.404724120 DEBUG (0): the node 0 has already parent with parentID 0 and curdepth 00:0:10.404891956 DEBUG (3): Package sent True

0:0:10.407928437 DEBUG (8): ### RoutingReceive.receive() start #####
0:0:10.407928437 DEBUG (8): Something received!!!  from 257  4
0:0:10.407928437 DEBUG (8): ### RoutingReceive.receive() end #####
0:0:10.407928437 DEBUG (7): ### RoutingReceive.receive() start #####
0:0:10.407928437 DEBUG (7): Something received!!!  from 257  4
0:0:10.407928437 DEBUG (7): ### RoutingReceive.receive() end #####
0:0:10.407928437 DEBUG (6): ### RoutingReceive.receive() start #####
0:0:10.407928437 DEBUG (6): Something received!!!  from 257  4
0:0:10.407928437 DEBUG (6): ### RoutingReceive.receive() end #####
0:0:10.407928437 DEBUG (5): ### RoutingReceive.receive() start #####
0:0:10.407928437 DEBUG (5): Something received!!!  from 257  4
0:0:10.407928437 DEBUG (5): ### RoutingReceive.receive() end #####
0:0:10.407928437 DEBUG (3): ### RoutingReceive.receive() start #####
0:0:10.407928437 DEBUG (3): Something received!!!  from 257  4
0:0:10.407928437 DEBUG (3): ### RoutingReceive.receive() end #####
0:0:10.407928437 DEBUG (2): ### RoutingReceive.receive() start #####
0:0:10.407928437 DEBUG (2): Something received!!!  from 257  4
0:0:10.407928437 DEBUG (2): ### RoutingReceive.receive() end #####
0:0:10.407928437 DEBUG (1): ### RoutingReceive.receive() start #####
0:0:10.407928437 DEBUG (1): Something received!!!  from 257  4
0:0:10.407928437 DEBUG (1): ### RoutingReceive.receive() end #####
0:0:10.407928437 DEBUG (0): ### RoutingReceive.receive() start #####
0:0:10.407928437 DEBUG (0): Something received!!!  from 257  4
0:0:10.407928437 DEBUG (0): ### RoutingReceive.receive() end #####
0:0:10.407928447 DEBUG (1): ReceiveRoutingTask(): len=4
0:0:10.407928447 DEBUG (1): the node 1 has already parent with parentID 0 and curdepth 10:0:10.407928447 DEBUG (0): ReceiveRoutingTas
k(): len=4
0:0:10.407928447 DEBUG (0): the node 0 has already parent with parentID 0 and curdepth 00:0:10.407928447 DEBUG (2): ReceiveRoutingTas
k(): len=4
0:0:10.407928447 DEBUG (2): the node 2 has already parent with parentID 1 and curdepth 20:0:10.407928447 DEBUG (3): ReceiveRoutingTas
k(): len=4
0:0:10.407928447 DEBUG (3): the node 3 has already parent with parentID 0 and curdepth 10:0:10.407928447 DEBUG (8): ReceiveRoutingTas
k(): len=4
0:0:10.407928447 DEBUG (8): Now the node 8 have a parent with parentID 4 and currentdepth 20:0:10.407928447 DEBUG (7): ReceiveRouting
Task(): len=4
0:0:10.407928447 DEBUG (7): the node 7 has already parent with parentID 3 and curdepth 20:0:10.407928447 DEBUG (5): ReceiveRoutingTas
k(): len=4
0:0:10.407928447 DEBUG (5): the node 5 has already parent with parentID 1 and curdepth 20:0:10.407928447 DEBUG (6): ReceiveRoutingTas
k(): len=4
0:0:10.407928447 DEBUG (6): the node 6 has already parent with parentID 3 and curdepth 20:0:10.408096283 DEBUG (4): Package sent True

0:0:10.595703135 DEBUG (2): RoutingMsgTimer fired!0:0:10.595703135 DEBUG (2): Sending RoutingMsg...
0:0:10.595703135 DEBUG (2): SendTask() posted!!
0:0:10.595703135 DEBUG (2): RoutingMsg enqueued successfully in SendingQueue!!!
0:0:10.595703135 DEBUG (5): RoutingMsgTimer fired!0:0:10.595703135 DEBUG (5): Sending RoutingMsg...
0:0:10.595703135 DEBUG (5): SendTask() posted!!
0:0:10.595703135 DEBUG (5): RoutingMsg enqueued successfully in SendingQueue!!!
0:0:10.595703145 DEBUG (2): sendRoutingTask(): Send returned success!!!
0:0:10.595703145 DEBUG (5): sendRoutingTask(): Send returned success!!!
0:0:10.599609385 DEBUG (6): RoutingMsgTimer fired!0:0:10.599609385 DEBUG (6): Sending RoutingMsg...
0:0:10.599609385 DEBUG (6): SendTask() posted!!
0:0:10.599609385 DEBUG (6): RoutingMsg enqueued successfully in SendingQueue!!!
```

Φτιάχνεται το παρακάτω δέντρο:



Και παίρνονται κανονικά οι μετρήσεις μέχρι την εποχή 20 όπου τυχαία καλείται η ρίζα να δώσει καινούργια συναθροιστικη συνάρτηση, παραθέτω την εποχή 19 και την εποχή 20 για να δείξω την αλλαγή καθώς και ότι στη 19 εποχή γίνεται κανονικά η μέτρηση με την προηγούμενη συναθροιστικη συνάρτηση:

```
0:8:47.578125010 DEBUG (0): #############ROUND  19 ########
0:9:16.292968760 DEBUG (2): NODE_ID=2, curdepth=2
0:9:16.292968760 DEBUG (2): Starting data transmition to parent!
0:9:16.292968760 DEBUG (2): measurment is:66
0:9:16.292968760 DEBUG (2): Msg enqueue successfully!!!1
0:9:16.292968770 DEBUG (2): the max is 66
0:9:16.292968770 DEBUG (2): the count is 1
0:9:16.292968770 DEBUG (2): max function:measurments  dont pass the tct!old measurment:72
0:9:16.292968770 DEBUG (2): count function:measurments  dont pass the tct!old measurment:1
0:9:16.292968770 DEBUG (2): dont send because of tct
0:9:16.298828135 DEBUG (5): NODE_ID=5, curdepth=2
0:9:16.298828135 DEBUG (5): Starting data transmition to parent!
0:9:16.298828135 DEBUG (5): measurment is:15
0:9:16.298828135 DEBUG (5): Msg enqueue successfully!!!1
0:9:16.298828145 DEBUG (5): the max is 15
0:9:16.298828145 DEBUG (5): the count is 1
0:9:16.298828145 DEBUG (5):  max function:measurments pass the tct!New measurment:15 prev:17
0:9:16.298828145 DEBUG (5): count function:measurments  dont pass the tct!old measurment:1
0:9:16.298828145 DEBUG (5): sendMessTask(): Send returned success!!!
0:9:16.300781260 DEBUG (6): NODE_ID=6, curdepth=2
0:9:16.300781260 DEBUG (6): Starting data transmition to parent!
0:9:16.300781260 DEBUG (6): measurment is:19
0:9:16.300781260 DEBUG (6): Msg enqueue successfully!!!1
0:9:16.300781270 DEBUG (6): the max is 19
0:9:16.300781270 DEBUG (6): the count is 1
0:9:16.300781270 DEBUG (6): max function:measurments  dont pass the tct!old measurment:19
0:9:16.300781270 DEBUG (6): count function:measurments  dont pass the tct!old measurment:1
0:9:16.300781270 DEBUG (6): dont send because of tct
0:9:16.302734385 DEBUG (7): NODE_ID=7, curdepth=2
0:9:16.302734385 DEBUG (7): Starting data transmition to parent!
0:9:16.302734385 DEBUG (7): measurment is:56
0:9:16.302734385 DEBUG (7): Msg enqueue successfully!!!1
0:9:16.302734395 DEBUG (7): the max is 56
0:9:16.302734395 DEBUG (7): the count is 1
0:9:16.302734395 DEBUG (7): max function:measurments  dont pass the tct!old measurment:59
0:9:16.302734395 DEBUG (7): count function:measurments  dont pass the tct!old measurment:1
0:9:16.302734395 DEBUG (7): dont send because of tct
0:9:16.303878775 DEBUG (1): ### MessReceive.receive() start #####
0:9:16.303878775 DEBUG (1): ### MessReceive.receive() end #####
0:9:16.303878785 DEBUG (1): receiveMessTask(): len=4
0:9:16.303878785 DEBUG (1): Received from Child :5 max:15
0:9:16.303878785 DEBUG (1): Received from Child :5 count:1
0:9:16.303878785 DEBUG (1): message receined from 5
0:9:16.304046620 DEBUG (5): Package sent True
0:9:16.304687510 DEBUG (8): NODE_ID=8, curdepth=2
0:9:16.304687510 DEBUG (8): Starting data transmition to parent!
0:9:16.304687510 DEBUG (8): measurment is:42
0:9:16.304687510 DEBUG (8): Msg enqueue successfully!!!1
0:9:16.304687520 DEBUG (8): the max is 42
0:9:16.304687520 DEBUG (8): the count is 1
0:9:16.304687520 DEBUG (8): max function:measurments  dont pass the tct!old measurment:45
0:9:16.304687520 DEBUG (8): count function:measurments  dont pass the tct!old measurment:1
0:9:16.304687520 DEBUG (8): dont send because of tct
0:9:16.486328135 DEBUG (1): NODE_ID=1, curdepth=1
0:9:16.486328135 DEBUG (1): Starting data transmition to parent!
0:9:16.486328135 DEBUG (1): measurment is:42
0:9:16.486328135 DEBUG (1): Msg enqueue successfully!!!1
0:9:16.486328145 DEBUG (1): child 2 has max 72
0:9:16.486328145 DEBUG (1): child 5 has max 15
0:9:16.486328145 DEBUG (1): the max is 72
0:9:16.486328145 DEBUG (1): child 2 has count 1
0:9:16.486328145 DEBUG (1): child 5 has count 1
0:9:16.486328145 DEBUG (1): the count is 3
0:9:16.486328145 DEBUG (1): max function:measurments  dont pass the tct!old measurment:72
0:9:16.486328145 DEBUG (1): count function:measurments  dont pass the tct!old measurment:3
0:9:16.486328145 DEBUG (1): dont send because of tct
0:9:16.490234385 DEBUG (3): NODE_ID=3, curdepth=1
0:9:16.490234385 DEBUG (3): Starting data transmition to parent!
0:9:16.490234385 DEBUG (3): measurment is:19
0:9:16.490234385 DEBUG (3): Msg enqueue successfully!!!1
0:9:16.490234395 DEBUG (3): child 6 has max 19
0:9:16.490234395 DEBUG (3): child 7 has max 59
0:9:16.490234395 DEBUG (3): the max is 59
0:9:16.490234395 DEBUG (3): child 6 has count 1
0:9:16.490234395 DEBUG (3): child 7 has count 1
0:9:16.490234395 DEBUG (3): the count is 3
0:9:16.490234395 DEBUG (3): max function:measurments  dont pass the tct!old measurment:59
0:9:16.490234395 DEBUG (3): count function:measurments  dont pass the tct!old measurment:3
0:9:16.490234395 DEBUG (3): dont send because of tct
0:9:16.492187510 DEBUG (4): NODE_ID=4, curdepth=1
0:9:16.492187510 DEBUG (4): Starting data transmition to parent!
0:9:16.492187510 DEBUG (4): measurment is:2
0:9:16.492187510 DEBUG (4): Msg enqueue successfully!!!1
0:9:16.492187520 DEBUG (4): child 8 has max 45
0:9:16.492187520 DEBUG (4): the max is 45
0:9:16.492187520 DEBUG (4): child 8 has count 1
0:9:16.492187520 DEBUG (4): the count is 2
0:9:16.492187520 DEBUG (4): max function:measurments  dont pass the tct!old measurment:45
```

```
0:9:16.492187520 DEBUG (4): count function:measurments  dont pass the tct!old measurment:2
0:9:16.492187520 DEBUG (4): dont send because of tct
0:9:16.679687510 DEBUG (0): NODE_ID=0, curdepth=0
0:9:16.679687510 DEBUG (0): measurment is:61
0:9:16.679687510 DEBUG (0): Msg enqueue successfully!!!1
0:9:16.679687520 DEBUG (0): child 1 has max 72
0:9:16.679687520 DEBUG (0): child 4 has max 45
0:9:16.679687520 DEBUG (0): child 3 has max 59
0:9:16.679687520 DEBUG (0): the max is 72
0:9:16.679687520 DEBUG (0): Final result of max function:72
0:9:16.679687520 DEBUG (0): child 1 has count 3
0:9:16.679687520 DEBUG (0): child 4 has count 2
0:9:16.679687520 DEBUG (0): child 3 has count 3
0:9:16.679687520 DEBUG (0): the count is 9
0:9:16.679687520 DEBUG (0): Final result of count function:9
0:9:16.875000010 DEBUG (0): ############ROUND  20 ########
0:9:17.070312510 DEBUG (0): RoutingMsgTimer fired!0:9:17.070312510 DEBUG (0): we have max or count
0:9:17.070312510 DEBUG (0): tct is:10
0:9:17.070312510 DEBUG (0): Sending RoutingMsg...
0:9:17.070312510 DEBUG (0): SendTask() posted!!
0:9:17.070312510 DEBUG (0): RoutingMsg enqueued successfully in SendingQueue!!!
0:9:17.070312520 DEBUG (0): sendRoutingTask(): Send returned success!!!
0:9:17.072631842 DEBUG (4): ### RoutingReceive.receive() start #####
0:9:17.072631842 DEBUG (4): Something received!!!  from 2  0
0:9:17.072631842 DEBUG (4): ### RoutingReceive.receive() end #####
0:9:17.072631842 DEBUG (1): ### RoutingReceive.receive() start #####
0:9:17.072631842 DEBUG (1): Something received!!!  from 2  0
0:9:17.072631842 DEBUG (1): ### RoutingReceive.receive() end #####
0:9:17.072631842 DEBUG (3): ### RoutingReceive.receive() start #####
0:9:17.072631842 DEBUG (3): Something received!!!  from 2  0
0:9:17.072631842 DEBUG (3): ### RoutingReceive.receive() end #####
0:9:17.072631852 DEBUG (4): ReceiveRoutingTask(): len=3
0:9:17.072631852 DEBUG (4): the node1 4 has already parent with parentID 0 and curdepth 10:9:17.072631852 DEBUG (1): ReceiveRoutingTa
sk(): len=3
0:9:17.072631852 DEBUG (1): the node1 1 has already parent with parentID 0 and curdepth 10:9:17.072631852 DEBUG (3): ReceiveRoutingTa
sk(): len=3
0:9:17.072631852 DEBUG (3): the node1 3 has already parent with parentID 0 and curdepth 10:9:17.072799688 DEBUG (0): Package sent Tru
e
0:9:17.267578135 DEBUG (1): RoutingMsgTimer fired!0:9:17.267578135 DEBUG (1): Sending RoutingMsg...
0:9:17.267578135 DEBUG (1): SendTask() posted!!
0:9:17.267578135 DEBUG (1): RoutingMsg enqueued successfully in SendingQueue!!!
0:9:17.267578135 DEBUG (3): RoutingMsgTimer fired!0:9:17.267578135 DEBUG (3): Sending RoutingMsg...
0:9:17.267578135 DEBUG (3): SendTask() posted!!
0:9:17.267578135 DEBUG (3): RoutingMsg enqueued successfully in SendingQueue!!!
0:9:17.267578135 DEBUG (4): RoutingMsgTimer fired!0:9:17.267578135 DEBUG (4): Sending RoutingMsg...
0:9:17.267578135 DEBUG (4): SendTask() posted!!
0:9:17.267578135 DEBUG (4): RoutingMsg enqueued successfully in SendingQueue!!!
0:9:17.267578145 DEBUG (1): sendRoutingTask(): Send returned success!!!
0:9:17.267578145 DEBUG (3): sendRoutingTask(): Send returned success!!!
0:9:17.267578145 DEBUG (4): sendRoutingTask(): Send returned success!!!
0:9:17.270507815 DEBUG (8): ### RoutingReceive.receive() start #####
0:9:17.270507815 DEBUG (8): Something received!!!  from 258  4
0:9:17.270507815 DEBUG (8): ### RoutingReceive.receive() end #####
0:9:17.270507815 DEBUG (7): ### RoutingReceive.receive() start #####
```

```
0:9:17.267578135 DEBUG (3): SendTask() posted!!
0:9:17.267578135 DEBUG (3): RoutingMsg enqueued successfully in SendingQueue!!!
0:9:17.267578135 DEBUG (4): RoutingMsgTimer fired!0:9:17.267578135 DEBUG (4): Sending RoutingMsg...
0:9:17.267578135 DEBUG (4): SendTask() posted!!
0:9:17.267578135 DEBUG (4): RoutingMsg enqueued successfully in SendingQueue!!!
0:9:17.267578145 DEBUG (1): sendRoutingTask(): Send returned success!!!
0:9:17.267578145 DEBUG (3): sendRoutingTask(): Send returned success!!!
0:9:17.267578145 DEBUG (4): sendRoutingTask(): Send returned success!!!
0:9:17.270507815 DEBUG (8): ### RoutingReceive.receive() start #####
0:9:17.270507815 DEBUG (8): Something received!!!  from 258  4
0:9:17.270507815 DEBUG (8): ### RoutingReceive.receive() end #####
0:9:17.270507815 DEBUG (7): ### RoutingReceive.receive() start #####
0:9:17.270507815 DEBUG (7): Something received!!!  from 258  4
0:9:17.270507815 DEBUG (7): ### RoutingReceive.receive() end #####
0:9:17.270507815 DEBUG (6): ### RoutingReceive.receive() start #####
0:9:17.270507815 DEBUG (6): Something received!!!  from 258  4
0:9:17.270507815 DEBUG (6): ### RoutingReceive.receive() end #####
0:9:17.270507815 DEBUG (5): ### RoutingReceive.receive() start #####
0:9:17.270507815 DEBUG (5): Something received!!!  from 258  4
0:9:17.270507815 DEBUG (5): ### RoutingReceive.receive() end #####
0:9:17.270507815 DEBUG (1): ### RoutingReceive.receive() start #####
0:9:17.270507815 DEBUG (1): Something received!!!  from 258  4
0:9:17.270507815 DEBUG (1): ### RoutingReceive.receive() end #####
0:9:17.270507815 DEBUG (0): ### RoutingReceive.receive() start #####
0:9:17.270507815 DEBUG (0): Something received!!!  from 258  4
0:9:17.270507815 DEBUG (0): ### RoutingReceive.receive() end #####
0:9:17.270507815 DEBUG (3): ### RoutingReceive.receive() start #####
0:9:17.270507815 DEBUG (3): Something received!!!  from 258  4
0:9:17.270507815 DEBUG (3): ### RoutingReceive.receive() end #####
0:9:17.270507815 DEBUG (2): ### RoutingReceive.receive() start #####
0:9:17.270507815 DEBUG (2): Something received!!!  from 258  4
0:9:17.270507815 DEBUG (2): ### RoutingReceive.receive() end #####
0:9:17.270507825 DEBUG (3): ReceiveRoutingTask(): len=3
0:9:17.270507825 DEBUG (3): the node1 3 has already parent with parentID 0 and curdepth 10:9:17.270507825 DEBUG (2): ReceiveRoutingTa
sk(): len=3
0:9:17.270507825 DEBUG (2): the node1 2 has already parent with parentID 1 and curdepth 20:9:17.270507825 DEBUG (0): ReceiveRoutingTa
sk(): len=3
0:9:17.270507825 DEBUG (0): the node1 0 has already parent with parentID 0 and curdepth 00:9:17.270507825 DEBUG (1): ReceiveRoutingTa
sk(): len=3
0:9:17.270507825 DEBUG (1): the node1 1 has already parent with parentID 0 and curdepth 10:9:17.270507825 DEBUG (7): ReceiveRoutingTa
sk(): len=3
0:9:17.270507825 DEBUG (7): the node1 7 has already parent with parentID 3 and curdepth 20:9:17.270507825 DEBUG (8): ReceiveRoutingTa
sk(): len=3
0:9:17.270507825 DEBUG (8): the node1 8 has already parent with parentID 4 and curdepth 20:9:17.270507825 DEBUG (5): ReceiveRoutingTa
sk(): len=3
0:9:17.270507825 DEBUG (5): the node1 5 has already parent with parentID 1 and curdepth 20:9:17.270507825 DEBUG (6): ReceiveRoutingTa
sk(): len=3
0:9:17.270507825 DEBUG (6): the node1 6 has already parent with parentID 3 and curdepth 20:9:17.270675661 DEBUG (4): Package sent Tru
e
0:9:17.271881098 DEBUG (7): ### RoutingReceive.receive() start #####
0:9:17.271881098 DEBUG (7): Something received!!!  from 258  3
0:9:17.271881098 DEBUG (7): ### RoutingReceive.receive() end #####
0:9:17.271881098 DEBUG (6): ### RoutingReceive.receive() start #####
0:9:17.271881098 DEBUG (6): Something received!!!  from 258  3
```

Στην εποχή 20 βλέπουμε ξεκάθαρα ότι το δέντρο παραμένει ίδιο αλλάζει το len και μαζί με αυτό αλλάζει και οι πληροφορίες μέσα στους κόμβους για τις συναρτήσεις και το tct διότι από Max and count πάει σε Max or count και πιο συγκεκριμένα σε Count

```
0:9:45.589843760 DEBUG (2): NODE_ID=2, curdepth=2
0:9:45.589843760 DEBUG (2): Starting data transmition to parent!
0:9:45.589843760 DEBUG (2): measurment is:67
0:9:45.589843760 DEBUG (2): Msg enqueue successfully!!!1
0:9:45.589843770 DEBUG (2): the count is 1
0:9:45.589843770 DEBUG (2): measurments pass the tct!New measurment:1
0:9:45.589843770 DEBUG (2): sendMessTask(): Send returned success!!!
0:9:45.593444823 DEBUG (1): ### MessReceive.receive() start #####
0:9:45.593444823 DEBUG (1): ### MessReceive.receive() end #####
0:9:45.593444833 DEBUG (1): receiveMessTask(): len=1
0:9:45.593444833 DEBUG (1): message receined from 2
0:9:45.593612669 DEBUG (2): Package sent True
0:9:45.595703135 DEBUG (5): NODE_ID=5, curdepth=2
0:9:45.595703135 DEBUG (5): Starting data transmition to parent!
0:9:45.595703135 DEBUG (5): measurment is:16
0:9:45.595703135 DEBUG (5): Msg enqueue successfully!!!1
0:9:45.595703145 DEBUG (5): the count is 1
0:9:45.595703145 DEBUG (5): measurments pass the tct!New measurment:1
0:9:45.595703145 DEBUG (5): sendMessTask(): Send returned success!!!
0:9:45.597656260 DEBUG (6): NODE_ID=6, curdepth=2
0:9:45.597656260 DEBUG (6): Starting data transmition to parent!
0:9:45.597656260 DEBUG (6): measurment is:20
0:9:45.597656260 DEBUG (6): Msg enqueue successfully!!!1
0:9:45.597656270 DEBUG (6): the count is 1
0:9:45.597656270 DEBUG (6): measurments pass the tct!New measurment:1
0:9:45.597656270 DEBUG (6): sendMessTask(): Send returned success!!!
0:9:45.599609385 DEBUG (7): NODE_ID=7, curdepth=2
0:9:45.599609385 DEBUG (7): Starting data transmition to parent!
0:9:45.599609385 DEBUG (7): measurment is:57
0:9:45.599609385 DEBUG (7): Msg enqueue successfully!!!1
0:9:45.599609395 DEBUG (7): the count is 1
0:9:45.599609395 DEBUG (7): measurments pass the tct!New measurment:1
0:9:45.599609395 DEBUG (7): sendMessTask(): Send returned success!!!
0:9:45.601562510 DEBUG (8): NODE_ID=8, curdepth=2
0:9:45.601562510 DEBUG (8): Starting data transmition to parent!
0:9:45.601562510 DEBUG (8): measurment is:43
0:9:45.601562510 DEBUG (8): Msg enqueue successfully!!!1
0:9:45.601562520 DEBUG (8): the count is 1
0:9:45.601562520 DEBUG (8): measurments pass the tct!New measurment:1
0:9:45.601562520 DEBUG (8): sendMessTask(): Send returned success!!!
0:9:45.604888882 DEBUG (1): ### MessReceive.receive() start #####
0:9:45.604888882 DEBUG (1): ### MessReceive.receive() end #####
0:9:45.604888892 DEBUG (1): receiveMessTask(): len=1
0:9:45.604888892 DEBUG (1): message receined from 5
0:9:45.605056728 DEBUG (5): Package sent True
0:9:45.608734086 DEBUG (6): Package sent True
0:9:45.608749357 DEBUG (7): Package sent True
0:9:45.611068690 DEBUG (4): ### MessReceive.receive() start #####
0:9:45.611068690 DEBUG (4): ### MessReceive.receive() end #####
0:9:45.611068700 DEBUG (4): receiveMessTask(): len=1
0:9:45.611068700 DEBUG (4): message receined from 8
```

```
0:9:45.611236536 DEBUG (8): Package sent True
0:9:45.783203135 DEBUG (1): NODE_ID=1, curdepth=1
0:9:45.783203135 DEBUG (1): Starting data transmition to parent!
0:9:45.783203135 DEBUG (1): measurment is:40
0:9:45.783203135 DEBUG (1): Msg enqueue successfully!!!1
0:9:45.783203145 DEBUG (1): child 2 has count 1
0:9:45.783203145 DEBUG (1): child 5 has count 1
0:9:45.783203145 DEBUG (1): the count is 3
0:9:45.783203145 DEBUG (1): measurments pass the tct!New measurment:3
0:9:45.783203145 DEBUG (1): sendMessTask(): Send returned success!!!
0:9:45.787109385 DEBUG (3): NODE_ID=3, curdepth=1
0:9:45.787109385 DEBUG (3): Starting data transmition to parent!
0:9:45.787109385 DEBUG (3): measurment is:19
0:9:45.787109385 DEBUG (3): Msg enqueue successfully!!!1
0:9:45.787109395 DEBUG (3): child 6 has count 1
0:9:45.787109395 DEBUG (3): child 7 has count 1
0:9:45.787109395 DEBUG (3): the count is 3
0:9:45.787109395 DEBUG (3): measurments pass the tct!New measurment:3
0:9:45.787109395 DEBUG (3): sendMessTask(): Send returned success!!!
0:9:45.787322994 DEBUG (0): ### MessReceive.receive() start #####
0:9:45.787322994 DEBUG (0): ### MessReceive.receive() end #####
0:9:45.787323004 DEBUG (0): receiveMessTask(): len=1
0:9:45.787323004 DEBUG (0): message receined from 1
0:9:45.787490839 DEBUG (1): Package sent True
0:9:45.789062510 DEBUG (4): NODE_ID=4, curdepth=1
0:9:45.789062510 DEBUG (4): Starting data transmition to parent!
0:9:45.789062510 DEBUG (4): measurment is:2
0:9:45.789062510 DEBUG (4): Msg enqueue successfully!!!1
0:9:45.789062520 DEBUG (4): child 8 has count 1
0:9:45.789062520 DEBUG (4): the count is 2
0:9:45.789062520 DEBUG (4): measurments pass the tct!New measurment:2
0:9:45.789062520 DEBUG (4): sendMessTask(): Send returned success!!!
0:9:45.792098990 DEBUG (0): ### MessReceive.receive() start #####
0:9:45.792098990 DEBUG (0): ### MessReceive.receive() end #####
0:9:45.792099000 DEBUG (0): receiveMessTask(): len=1
0:9:45.792099000 DEBUG (0): message receined from 3
0:9:45.792266835 DEBUG (3): Package sent True
0:9:45.798263516 DEBUG (0): ### MessReceive.receive() start #####
0:9:45.798263516 DEBUG (0): ### MessReceive.receive() end #####
0:9:45.798263526 DEBUG (0): receiveMessTask(): len=1
0:9:45.798263526 DEBUG (0): message receined from 4
0:9:45.798431362 DEBUG (4): Package sent True
0:9:45.976562510 DEBUG (0): NODE_ID=0, curdepth=0
0:9:45.976562510 DEBUG (0): measurment is:58
0:9:45.976562510 DEBUG (0): Msg enqueue successfully!!!1
0:9:45.976562520 DEBUG (0): child 1 has count 3
0:9:45.976562520 DEBUG (0): child 4 has count 2
0:9:45.976562520 DEBUG (0): child 3 has count 3
0:9:45.976562520 DEBUG (0): the count is 9
0:9:45.976562520 DEBUG (0): Final result of count function:9
```

Και βλέπουμε το count βγαίνει σωστό δηλαδή 9 οπως και το περιμέναμε εφόσον υπάρχουν 9 κόμβοι.

Πιο κάτω στην εποχή 36 έχουμε άλλη αλλαγή συνάρτησης σε Max

```
0:17:5.429687520 DEBUG (0): Final result of count function:9
0:17:5.625000010 DEBUG (0): ############ROUND  36 ########
0:17:5.820312510 DEBUG (0): RoutingMsgTimer fired!0:17:5.820312510 DEBUG (0): we have max or count
0:17:5.820312510 DEBUG (0): tct is:10
0:17:5.820312510 DEBUG (0): Sending RoutingMsg...
0:17:5.820312510 DEBUG (0): SendTask() posted!!
0:17:5.820312510 DEBUG (0): RoutingMsg enqueued successfully in SendingQueue!!!
0:17:5.820312520 DEBUG (0): sendRoutingTask(): Send returned success!!!
0:17:5.826934795 DEBUG (4): ### RoutingReceive.receive() start #####
0:17:5.826934795 DEBUG (4): Something received!!!  from 1  0
0:17:5.826934795 DEBUG (4): ### RoutingReceive.receive() end #####
0:17:5.826934795 DEBUG (1): ### RoutingReceive.receive() start #####
0:17:5.826934795 DEBUG (1): Something received!!!  from 1  0
0:17:5.826934795 DEBUG (1): ### RoutingReceive.receive() end #####
0:17:5.826934795 DEBUG (3): ### RoutingReceive.receive() start #####
0:17:5.826934795 DEBUG (3): Something received!!!  from 1  0
0:17:5.826934795 DEBUG (3): ### RoutingReceive.receive() end #####
0:17:5.826934805 DEBUG (4): ReceiveRoutingTask(): len=3
0:17:5.826934805 DEBUG (4): the node1 4 has already parent with parentID 0 and curdepth 10:17:5.826934805 DEBUG (1): ReceiveRoutingTa
sk(): len=3
0:17:5.826934805 DEBUG (1): the node1 1 has already parent with parentID 0 and curdepth 10:17:5.826934805 DEBUG (3): ReceiveRoutingTa
sk(): len=3
0:17:5.826934805 DEBUG (3): the node1 3 has already parent with parentID 0 and curdepth 10:17:5.827102641 DEBUG (0): Package sent Tru
e
0:17:6.021484385 DEBUG (1): RoutingMsgTimer fired!0:17:6.021484385 DEBUG (1): Sending RoutingMsg...
0:17:6.021484385 DEBUG (1): SendTask() posted!!
0:17:6.021484385 DEBUG (1): RoutingMsg enqueued successfully in SendingQueue!!!
0:17:6.021484385 DEBUG (3): RoutingMsgTimer fired!0:17:6.021484385 DEBUG (3): Sending RoutingMsg...
0:17:6.021484385 DEBUG (3): SendTask() posted!!
0:17:6.021484385 DEBUG (3): RoutingMsg enqueued successfully in SendingQueue!!!
0:17:6.021484385 DEBUG (4): RoutingMsgTimer fired!0:17:6.021484385 DEBUG (4): Sending RoutingMsg...
0:17:6.021484385 DEBUG (4): SendTask() posted!!
0:17:6.021484385 DEBUG (4): RoutingMsg enqueued successfully in SendingQueue!!!
0:17:6.021484395 DEBUG (1): sendRoutingTask(): Send returned success!!!
0:17:6.021484395 DEBUG (3): sendRoutingTask(): Send returned success!!!
0:17:6.021484395 DEBUG (4): sendRoutingTask(): Send returned success!!!
0:17:6.027420029 DEBUG (8): ### RoutingReceive.receive() start #####
0:17:6.027420029 DEBUG (8): Something received!!!  from 257  4
0:17:6.027420029 DEBUG (8): ### RoutingReceive.receive() end #####
0:17:6.027420029 DEBUG (7): ### RoutingReceive.receive() start #####
0:17:6.027420029 DEBUG (7): Something received!!!  from 257  4
0:17:6.027420029 DEBUG (7): ### RoutingReceive.receive() end #####
0:17:6.027420029 DEBUG (6): ### RoutingReceive.receive() start #####
0:17:6.027420029 DEBUG (6): Something received!!!  from 257  4
```

```
0:17:6.021484385 DEBUG (1): RoutingMsg enqueued successfully in SendingQueue!!!
0:17:6.021484385 DEBUG (3): RoutingMsgTimer fired!0:17:6.021484385 DEBUG (3): Sending RoutingMsg...
0:17:6.021484385 DEBUG (3): SendTask() posted!!
0:17:6.021484385 DEBUG (3): RoutingMsg enqueued successfully in SendingQueue!!!
0:17:6.021484385 DEBUG (4): RoutingMsgTimer fired!0:17:6.021484385 DEBUG (4): Sending RoutingMsg...
0:17:6.021484385 DEBUG (4): SendTask() posted!!
0:17:6.021484385 DEBUG (4): RoutingMsg enqueued successfully in SendingQueue!!!
0:17:6.021484395 DEBUG (1): sendRoutingTask(): Send returned success!!!
0:17:6.021484395 DEBUG (3): sendRoutingTask(): Send returned success!!!
0:17:6.021484395 DEBUG (4): sendRoutingTask(): Send returned success!!!
0:17:6.027420029 DEBUG (8): ### RoutingReceive.receive() start #####
0:17:6.027420029 DEBUG (8): Something received!!!  from 257  4
0:17:6.027420029 DEBUG (8): ### RoutingReceive.receive() end #####
0:17:6.027420029 DEBUG (7): ### RoutingReceive.receive() start #####
0:17:6.027420029 DEBUG (7): Something received!!!  from 257  4
0:17:6.027420029 DEBUG (7): ### RoutingReceive.receive() end #####
0:17:6.027420029 DEBUG (6): ### RoutingReceive.receive() start #####
0:17:6.027420029 DEBUG (6): Something received!!!  from 257  4
0:17:6.027420029 DEBUG (6): ### RoutingReceive.receive() end #####
0:17:6.027420029 DEBUG (5): ### RoutingReceive.receive() start #####
0:17:6.027420029 DEBUG (5): Something received!!!  from 257  4
0:17:6.027420029 DEBUG (5): ### RoutingReceive.receive() end #####
0:17:6.027420029 DEBUG (0): ### RoutingReceive.receive() start #####
0:17:6.027420029 DEBUG (0): Something received!!!  from 257  4
0:17:6.027420029 DEBUG (0): ### RoutingReceive.receive() end #####
0:17:6.027420029 DEBUG (3): ### RoutingReceive.receive() start #####
0:17:6.027420029 DEBUG (3): Something received!!!  from 257  4
0:17:6.027420029 DEBUG (3): ### RoutingReceive.receive() end #####
0:17:6.027420029 DEBUG (2): ### RoutingReceive.receive() start #####
0:17:6.027420029 DEBUG (2): Something received!!!  from 257  4
0:17:6.027420029 DEBUG (2): ### RoutingReceive.receive() end #####
0:17:6.027420039 DEBUG (7): ReceiveRoutingTask(): len=3
0:17:6.027420039 DEBUG (7): the node1 7 has already parent with parentID 3 and curdepth 20:17:6.027420039 DEBUG (8): ReceiveRoutingTa
sk(): len=3
0:17:6.027420039 DEBUG (8): the node1 8 has already parent with parentID 4 and curdepth 20:17:6.027420039 DEBUG (0): ReceiveRoutingTa
sk(): len=3
0:17:6.027420039 DEBUG (0): the node1 0 has already parent with parentID 0 and curdepth 00:17:6.027420039 DEBUG (3): ReceiveRoutingTa
sk(): len=3
0:17:6.027420039 DEBUG (3): the node1 3 has already parent with parentID 0 and curdepth 10:17:6.027420039 DEBUG (2): ReceiveRoutingTa
sk(): len=3
0:17:6.027420039 DEBUG (2): the node1 2 has already parent with parentID 1 and curdepth 20:17:6.027420039 DEBUG (5): ReceiveRoutingTa
sk(): len=3
0:17:6.027420039 DEBUG (5): the node1 5 has already parent with parentID 1 and curdepth 20:17:6.027420039 DEBUG (6): ReceiveRoutingTa
sk(): len=3
0:17:6.027420039 DEBUG (6): the node1 6 has already parent with parentID 3 and curdepth 20:17:6.027587875 DEBUG (4): Package sent Tru
e
0:17:6.029373143 DEBUG (5): ### RoutingReceive.receive() start #####
0:17:6.029373143 DEBUG (5): Something received!!!  from 257  1
0:17:6.029373143 DEBUG (5): ### RoutingReceive.receive() end #####
0:17:6.029373143 DEBUG (4): ### RoutingReceive.receive() start #####
0:17:6.029373143 DEBUG (4): Something received!!!  from 257  1
0:17:6.029373143 DEBUG (4): ### RoutingReceive.receive() end #####
0:17:6.029373143 DEBUG (3): ### RoutingReceive.receive() start #####
0:17:6.029373143 DEBUG (3): Something received!!!  from 257  1
```

Πάλι βλέπουμε ότι κρατάμε το ίδιο ακριβώς δέντρο και ακριβώς το ίδιο len απλά θα αλλάξει το περιεχόμενο από count σε Max όπως φαίνεται παρακάτω :

```
0:17:34.339843760 DEBUG (2): NODE_ID=2, curdepth=2
0:17:34.339843760 DEBUG (2): Starting data transmition to parent!
0:17:34.339843760 DEBUG (2): measurment is:63
0:17:34.339843760 DEBUG (2): Msg enqueue successfully!!!1
0:17:34.339843770 DEBUG (2): the max is 63
0:17:34.339843770 DEBUG (2): measurments  dont pass the tct!old measurment:67
0:17:34.339843770 DEBUG (2): dont send because of tct
0:17:34.345703135 DEBUG (5): NODE_ID=5, curdepth=2
0:17:34.345703135 DEBUG (5): Starting data transmition to parent!
0:17:34.345703135 DEBUG (5): measurment is:17
0:17:34.345703135 DEBUG (5): Msg enqueue successfully!!!1
0:17:34.345703145 DEBUG (5): the max is 17
0:17:34.345703145 DEBUG (5): measurments  dont pass the tct!old measurment:16
0:17:34.345703145 DEBUG (5): dont send because of tct
0:17:34.347656260 DEBUG (6): NODE_ID=6, curdepth=2
0:17:34.347656260 DEBUG (6): Starting data transmition to parent!
0:17:34.347656260 DEBUG (6): measurment is:17
0:17:34.347656260 DEBUG (6): Msg enqueue successfully!!!1
0:17:34.347656270 DEBUG (6): the max is 17
0:17:34.347656270 DEBUG (6): measurments  dont pass the tct!old measurment:16
0:17:34.347656270 DEBUG (6): dont send because of tct
0:17:34.349609385 DEBUG (7): NODE_ID=7, curdepth=2
0:17:34.349609385 DEBUG (7): Starting data transmition to parent!
0:17:34.349609385 DEBUG (7): measurment is:79
0:17:34.349609385 DEBUG (7): Msg enqueue successfully!!!1
0:17:34.349609395 DEBUG (7): the max is 79
0:17:34.349609395 DEBUG (7): measurments  dont pass the tct!old measurment:77
0:17:34.349609395 DEBUG (7): dont send because of tct
0:17:34.351562510 DEBUG (8): NODE_ID=8, curdepth=2
0:17:34.351562510 DEBUG (8): Starting data transmition to parent!
0:17:34.351562510 DEBUG (8): measurment is:41
0:17:34.351562510 DEBUG (8): Msg enqueue successfully!!!1
0:17:34.351562520 DEBUG (8): the max is 41
0:17:34.351562520 DEBUG (8): measurments pass the tct!New measurment:41
0:17:34.351562520 DEBUG (8): sendMessTask(): Send returned success!!!
0:17:34.355514524 DEBUG (4): ### MessReceive.receive() start #####
0:17:34.355514524 DEBUG (4): ### MessReceive.receive() end #####
0:17:34.355514534 DEBUG (4): receiveMessTask(): len=1
0:17:34.355514534 DEBUG (4): message receined from 8
0:17:34.355682369 DEBUG (8): Package sent True
0:17:34.533203135 DEBUG (1): NODE_ID=1, curdepth=1
0:17:34.533203135 DEBUG (1): Starting data transmition to parent!
0:17:34.533203135 DEBUG (1): measurment is:41
0:17:34.533203135 DEBUG (1): Msg enqueue successfully!!!1
0:17:34.533203145 DEBUG (1): child 2 has max 67
0:17:34.533203145 DEBUG (1): child 5 has max 16
0:17:34.533203145 DEBUG (1): the max is 67
0:17:34.533203145 DEBUG (1): measurments  dont pass the tct!old measurment:67
0:17:34.533203145 DEBUG (1): dont send because of tct
0:17:34.537109385 DEBUG (3): NODE_ID=3, curdepth=1
0:17:34.537109385 DEBUG (3): Starting data transmition to parent!
```

```
0:17:34.533203135 DEBUG (1): Msg enqueue successfully!!!1
0:17:34.533203145 DEBUG (1): child 2 has max 67
0:17:34.533203145 DEBUG (1): child 5 has max 16
0:17:34.533203145 DEBUG (1): the max is 67
0:17:34.533203145 DEBUG (1): measurments  dont pass the tct!old measurment:67
0:17:34.533203145 DEBUG (1): dont send because of tct
0:17:34.537109385 DEBUG (3): NODE_ID=3, curdepth=1
0:17:34.537109385 DEBUG (3): Starting data transmition to parent!
0:17:34.537109385 DEBUG (3): measurment is:19
0:17:34.537109385 DEBUG (3): Msg enqueue successfully!!!1
0:17:34.537109395 DEBUG (3): child 6 has max 16
0:17:34.537109395 DEBUG (3): child 7 has max 77
0:17:34.537109395 DEBUG (3): the max is 77
0:17:34.537109395 DEBUG (3): measurments  dont pass the tct!old measurment:77
0:17:34.537109395 DEBUG (3): dont send because of tct
0:17:34.539062510 DEBUG (4): NODE_ID=4, curdepth=1
0:17:34.539062510 DEBUG (4): Starting data transmition to parent!
0:17:34.539062510 DEBUG (4): measurment is:2
0:17:34.539062510 DEBUG (4): Msg enqueue successfully!!!1
0:17:34.539062520 DEBUG (4): child 8 has max 41
0:17:34.539062520 DEBUG (4): the max is 41
0:17:34.539062520 DEBUG (4): measurments pass the tct!New measurment:41
0:17:34.539062520 DEBUG (4): sendMessTask(): Send returned success!!!
0:17:34.542892454 DEBUG (0): ### MessReceive.receive() start #####
0:17:34.542892454 DEBUG (0): ### MessReceive.receive() end #####
0:17:34.542892464 DEBUG (0): receiveMessTask(): len=1
0:17:34.542892464 DEBUG (0): message receined from 4
0:17:34.543060299 DEBUG (4): Package sent True
0:17:34.726562510 DEBUG (0): NODE_ID=0, curdepth=0
0:17:34.726562510 DEBUG (0): measurment is:57
0:17:34.726562510 DEBUG (0): Msg enqueue successfully!!!1
0:17:34.726562520 DEBUG (0): child 1 has max 67
0:17:34.726562520 DEBUG (0): child 4 has max 41
0:17:34.726562520 DEBUG (0): child 3 has max 77
0:17:34.726562520 DEBUG (0): the max is 77
0:17:34.726562520 DEBUG (0): Final result of MAX function:77
```

Ας μείνουμε λίγο στο κομμάτι του Max για να δούμε ότι εκτελείται σωστά έχουμε Max συνάρτηση με τη tct 10%

Αρχικά όπως φαίνεται έχουμε Node 2 με μέτρηση 63 όμως δεν περνάει και κρατάμε την παλιά λόγω ότι η παλιά είναι 67 και δεν ξεπερνάει το tct. το ίδιο ισχύει και για το Node 5 όπου το measurement είναι 16 αλλά κρατάμε το παλιό που είναι 17 λόγω του tct. Και για το 6 είναι 17 για τον ίδιο ακριβώς λόγο. Ακριβώς το ίδιο και για το 7 το οποίο έχει μετρήσει 79 αλλά κρατάμε την παλιά δηλαδή 77 λόγω του tct. ο κόμβος 8 έχει την ίδια μέτρηση με την παλιά δηλαδή 41.Για τον κόμβο 1 και 3 ισχύει ακριβώς ότι και παραπάνω δηλαδή κρατάνε τις παλιές τους μετρήσεις που είναι 67 και 77 αντίστοιχα. Ενώ Κόμβος 8 παίρνει καινούργια μέτρηση ίσον με δύο και το Max του είναι του κόμβου 8 ,που είναι παιδί του, και είναι 41. Οπότε καταλήγουμε στη βάση όπου έχει παιδιά τον κόμβο 1, 4 και 3 και έχουν Max 67 41 και 77 αντίστοιχα η καινούργια μέτρηση του κόμβου είναι 57 οπότε το τελικό Max βγαίνει σωστά που είναι 77 προφανώς.
Αυτό είναι ένα παράδειγμα για να δείξουμε ότι τυχαία σε κάποιες χρονικές στιγμές μέσα στις 40 εποχές που τρέχει το πρόγραμμα καλείται ξανά την αρχή routing και οι κόμβοι παίρνουν και υπολογίζω σωστά καινούργιες συναθροιστικες συναρτήσεις χωρίς να γίνεται λάθος ή να υπάρχει επιπλέον πληροφορία.
Δεν φτιάξαμε καμία νέα δομή κράτησαν ακριβώς τις ίδιες με το πρώτο μέρος και το πολύ που προσθέσαμε είναι αυτά που προαναφέρθηκαν παραπάνω.
Για να δείξουμε ότι δουλεύει και για μεγαλύτερο D από την 3 βάζουμε το D =7 και τρέχουμε το πρόγραμμα και βλέπουμε ότι τρέχει κανονικά και ότι στο round 3 αλλάζει τη συναθροιστικη του συνάρτηση:

```
0:3:54.414062510 DEBUG (0): Msg enqueue successfully!!!1
0:3:54.414062520 DEBUG (0): child 1 has max 76
0:3:54.414062520 DEBUG (0): child 7 has max 78
0:3:54.414062520 DEBUG (0): child 8 has max 62
0:3:54.414062520 DEBUG (0): the max is 78
0:3:54.414062520 DEBUG (0): Final result of max function:78
0:3:54.414062520 DEBUG (0): child 1 has count 21
0:3:54.414062520 DEBUG (0): child 7 has count 20
0:3:54.414062520 DEBUG (0): child 8 has count 6
0:3:54.414062520 DEBUG (0): the count is 48
0:3:54.414062520 DEBUG (0): Final result of count function:48
0:3:54.609375010 DEBUG (0): ############ROUND  9 ########
0:3:54.804687510 DEBUG (0): RoutingMsgTimer fired!0:3:54.804687510 DEBUG (0): we have max or count
0:3:54.804687510 DEBUG (0): tct is:15
0:3:54.804687510 DEBUG (0): Sending RoutingMsg...
0:3:54.804687510 DEBUG (0): SendTask() posted!!
0:3:54.804687510 DEBUG (0): RoutingMsg enqueued successfully in SendingQueue!!!
0:3:54.804687520 DEBUG (0): sendRoutingTask(): Send returned success!!!
0:3:54.807891847 DEBUG (8): ### RoutingReceive.receive() start #####
0:3:54.807891847 DEBUG (8): Something received!!!  from 2  0
0:3:54.807891847 DEBUG (8): ### RoutingReceive.receive() end #####
0:3:54.807891847 DEBUG (7): ### RoutingReceive.receive() start #####
0:3:54.807891847 DEBUG (7): Something received!!!  from 2  0
0:3:54.807891847 DEBUG (7): ### RoutingReceive.receive() end #####
0:3:54.807891847 DEBUG (1): ### RoutingReceive.receive() start #####
0:3:54.807891847 DEBUG (1): Something received!!!  from 2  0
0:3:54.807891847 DEBUG (1): ### RoutingReceive.receive() end #####
0:3:54.807891857 DEBUG (8): ReceiveRoutingTask(): len=3
0:3:54.807891857 DEBUG (8): the node1 8 has already parent with parentID 0 and curdepth 10:3:54.807891857 DEBUG (7): ReceiveRoutingTa
sk(): len=3
0:3:54.807891857 DEBUG (7): the node1 7 has already parent with parentID 0 and curdepth 10:3:54.807891857 DEBUG (1): ReceiveRoutingTa
sk(): len=3
0:3:54.807891857 DEBUG (1): the node1 1 has already parent with parentID 0 and curdepth 10:3:54.808059692 DEBUG (0): Package sent Tru
e
0:3:55.002929697 DEBUG (1): RoutingMsgTimer fired!0:3:55.002929697 DEBUG (1): Sending RoutingMsg...
0:3:55.002929697 DEBUG (1): SendTask() posted!!
0:3:55.002929697 DEBUG (1): RoutingMsg enqueued successfully in SendingQueue!!!
0:3:55.002929698 DEBUG (7): RoutingMsgTimer fired!0:3:55.002929698 DEBUG (7): Sending RoutingMsg...
0:3:55.002929698 DEBUG (7): SendTask() posted!!
0:3:55.002929698 DEBUG (7): RoutingMsg enqueued successfully in SendingQueue!!!
0:3:55.002929698 DEBUG (8): RoutingMsgTimer fired!0:3:55.002929698 DEBUG (8): Sending RoutingMsg...
0:3:55.002929698 DEBUG (8): SendTask() posted!!
0:3:55.002929698 DEBUG (8): RoutingMsg enqueued successfully in SendingQueue!!!
0:3:55.002929707 DEBUG (1): sendRoutingTask(): Send returned success!!!
```

```
0:3:55.002929698 DEBUG (7): SendTask() posted!!
0:3:55.002929698 DEBUG (7): RoutingMsg enqueued successfully in SendingQueue!!!
0:3:55.002929698 DEBUG (8): RoutingMsgTimer fired!0:3:55.002929698 DEBUG (8): Sending RoutingMsg...
0:3:55.002929698 DEBUG (8): SendTask() posted!!
0:3:55.002929698 DEBUG (8): RoutingMsg enqueued successfully in SendingQueue!!!
0:3:55.002929707 DEBUG (1): sendRoutingTask(): Send returned success!!!
0:3:55.002929708 DEBUG (7): sendRoutingTask(): Send returned success!!!
0:3:55.002929708 DEBUG (8): sendRoutingTask(): Send returned success!!!
0:3:55.009750347 DEBUG (16): ### RoutingReceive.receive() start #####
0:3:55.009750347 DEBUG (16): Something received!!!  from 258  8
0:3:55.009750347 DEBUG (16): ### RoutingReceive.receive() end #####
0:3:55.009750347 DEBUG (15): ### RoutingReceive.receive() start #####
0:3:55.009750347 DEBUG (15): Something received!!!  from 258  8
0:3:55.009750347 DEBUG (15): ### RoutingReceive.receive() end #####
0:3:55.009750347 DEBUG (14): ### RoutingReceive.receive() start #####
0:3:55.009750347 DEBUG (14): Something received!!!  from 258  8
0:3:55.009750347 DEBUG (14): ### RoutingReceive.receive() end #####
0:3:55.009750347 DEBUG (0): ### RoutingReceive.receive() start #####
0:3:55.009750347 DEBUG (0): Something received!!!  from 258  8
0:3:55.009750347 DEBUG (0): ### RoutingReceive.receive() end #####
0:3:55.009750347 DEBUG (7): ### RoutingReceive.receive() start #####
0:3:55.009750347 DEBUG (7): Something received!!!  from 258  8
0:3:55.009750347 DEBUG (7): ### RoutingReceive.receive() end #####
0:3:55.009750347 DEBUG (2): ### RoutingReceive.receive() start #####
0:3:55.009750347 DEBUG (2): Something received!!!  from 258  8
0:3:55.009750347 DEBUG (2): ### RoutingReceive.receive() end #####
0:3:55.009750357 DEBUG (16): ReceiveRoutingTask(): len=3
0:3:55.009750357 DEBUG (16): the node1 16 has already parent with parentID 8 and curdepth 20:3:55.009750357 DEBUG (15): ReceiveRoutin
gTask(): len=3
0:3:55.009750357 DEBUG (15): the node1 15 has already parent with parentID 7 and curdepth 20:3:55.009750357 DEBUG (0): ReceiveRouting
Task(): len=3
0:3:55.009750357 DEBUG (0): the node1 0 has already parent with parentID 0 and curdepth 00:3:55.009750357 DEBUG (7): ReceiveRoutingTa
sk(): len=3
0:3:55.009750357 DEBUG (7): the node1 7 has already parent with parentID 0 and curdepth 10:3:55.009750357 DEBUG (2): ReceiveRoutingTa
sk(): len=3
0:3:55.009750357 DEBUG (2): the node1 2 has already parent with parentID 1 and curdepth 20:3:55.009750357 DEBUG (14): ReceiveRoutingT
ask(): len=3
0:3:55.009750357 DEBUG (14): the node1 14 has already parent with parentID 7 and curdepth 20:3:55.009918192 DEBUG (8): Package sent T
rue
0:3:55.011550873 DEBUG (15): ### RoutingReceive.receive() start #####
0:3:55.011550873 DEBUG (15): Something received!!!  from 258  7
0:3:55.011550873 DEBUG (15): ### RoutingReceive.receive() end #####
0:3:55.011550873 DEBUG (0): ### RoutingReceive.receive() start #####
0:3:55.011550873 DEBUG (0): Something received!!!  from 258  7
0:3:55.011550873 DEBUG (0): ### RoutingReceive.receive() end #####
0:3:55.011550873 DEBUG (14): ### RoutingReceive.receive() start #####
0:3:55.011550873 DEBUG (14): Something received!!!  from 258  7
0:3:55.011550873 DEBUG (14): ### RoutingReceive.receive() end #####
0:3:55.011550873 DEBUG (8): ### RoutingReceive.receive() start #####
0:3:55.011550873 DEBUG (8): Something received!!!  from 258  7
0:3:55.011550873 DEBUG (8): ### RoutingReceive.receive() end #####
0:3:55.011550883 DEBUG (15): ReceiveRoutingTask(): len=3
0:3:55.011550883 DEBUG (15): the node1 15 has already parent with parentID 7 and curdepth 20:3:55.011550883 DEBUG (0): ReceiveRouting
Task(): len=3
```

```
0:3:55.011550873 DEBUG (0): ### RoutingReceive.receive() start #####
0:3:55.011550873 DEBUG (0): Something received!!!  from 258  7
0:3:55.011550873 DEBUG (0): ### RoutingReceive.receive() end #####
0:3:55.011550873 DEBUG (14): ### RoutingReceive.receive() start #####
0:3:55.011550873 DEBUG (14): Something received!!!  from 258  7
0:3:55.011550873 DEBUG (14): ### RoutingReceive.receive() end #####
0:3:55.011550873 DEBUG (8): ### RoutingReceive.receive() start #####
0:3:55.011550873 DEBUG (8): Something received!!!  from 258  7
0:3:55.011550873 DEBUG (8): ### RoutingReceive.receive() end #####
0:3:55.011550883 DEBUG (15): ReceiveRoutingTask(): len=3
0:3:55.011550883 DEBUG (15): the node1 15 has already parent with parentID 7 and curdepth 20:3:55.011550883 DEBUG (0): ReceiveRouting
Task(): len=3
0:3:55.011550883 DEBUG (0): the node1 0 has already parent with parentID 0 and curdepth 00:3:55.011550883 DEBUG (14): ReceiveRoutingT
ask(): len=3
0:3:55.011550883 DEBUG (14): the node1 14 has already parent with parentID 7 and curdepth 20:3:55.011550883 DEBUG (8): ReceiveRouting
Task(): len=3
0:3:55.011550883 DEBUG (8): the node1 8 has already parent with parentID 0 and curdepth 10:3:55.011718719 DEBUG (7): Package sent Tru
e
0:3:55.013824419 DEBUG (9): ### RoutingReceive.receive() start #####
0:3:55.013824419 DEBUG (9): Something received!!!  from 258  1
0:3:55.013824419 DEBUG (9): ### RoutingReceive.receive() end #####
0:3:55.013824419 DEBUG (8): ### RoutingReceive.receive() start #####
0:3:55.013824419 DEBUG (8): Something received!!!  from 258  1
0:3:55.013824419 DEBUG (8): ### RoutingReceive.receive() end #####
0:3:55.013824419 DEBUG (0): ### RoutingReceive.receive() start #####
0:3:55.013824419 DEBUG (0): Something received!!!  from 258  1
0:3:55.013824419 DEBUG (0): ### RoutingReceive.receive() end #####
0:3:55.013824419 DEBUG (7): ### RoutingReceive.receive() start #####
0:3:55.013824419 DEBUG (7): Something received!!!  from 258  1
0:3:55.013824419 DEBUG (7): ### RoutingReceive.receive() end #####
0:3:55.013824419 DEBUG (2): ### RoutingReceive.receive() start #####
0:3:55.013824419 DEBUG (2): Something received!!!  from 258  1
0:3:55.013824419 DEBUG (2): ### RoutingReceive.receive() end #####
0:3:55.013824429 DEBUG (9): ReceiveRoutingTask(): len=3
0:3:55.013824429 DEBUG (9): the node1 9 has already parent with parentID 1 and curdepth 20:3:55.013824429 DEBUG (8): ReceiveRoutingTa
sk(): len=3
0:3:55.013824429 DEBUG (8): the node1 8 has already parent with parentID 0 and curdepth 10:3:55.013824429 DEBUG (0): ReceiveRoutingTa
sk(): len=3
0:3:55.013824429 DEBUG (0): the node1 0 has already parent with parentID 0 and curdepth 00:3:55.013824429 DEBUG (7): ReceiveRoutingTa
sk(): len=3
0:3:55.013824429 DEBUG (7): the node1 7 has already parent with parentID 0 and curdepth 10:3:55.013824429 DEBUG (2): ReceiveRoutingTa
sk(): len=3
0:3:55.013824429 DEBUG (2): the node1 2 has already parent with parentID 1 and curdepth 20:3:55.013992265 DEBUG (1): Package sent Tru
e
0:3:55.204101572 DEBUG (2): RoutingMsgTimer fired!0:3:55.204101572 DEBUG (2): Sending RoutingMsg...
0:3:55.204101572 DEBUG (2): SendTask() posted!!
0:3:55.204101572 DEBUG (2): RoutingMsg enqueued successfully in SendingQueue!!!
0:3:55.204101573 DEBUG (14): RoutingMsgTimer fired!0:3:55.204101573 DEBUG (14): Sending RoutingMsg...
0:3:55.204101573 DEBUG (14): SendTask() posted!!
0:3:55.204101573 DEBUG (14): RoutingMsg enqueued successfully in SendingQueue!!!
0:3:55.204101574 DEBUG (15): RoutingMsgTimer fired!0:3:55.204101574 DEBUG (15): Sending RoutingMsg...
0:3:55.204101574 DEBUG (15): SendTask() posted!!
0:3:55.204101574 DEBUG (15): RoutingMsg enqueued successfully in SendingQueue!!!
0:3:55.204101574 DEBUG (16): RoutingMsgTimer fired!0:3:55.204101574 DEBUG (16): Sending RoutingMsg...
```

Φτιάχνεται κανονικά το δέντρο οπότε δουλεύει και για μεγαλύτερα D. Αυτό που θα ήθελα να τα αναφέρω και ίσως μπερδέψει αυτόν που θα διαβάσει την αναφορά, γράφει στα παραδείγματα node1 9 has already parent…. το node1 είναι λέξη της πρότασης και έχει μπει κατά λάθος και το παρατήρησα αφού τελείωσα την αναφορά έχει σβηστεί από τον κώδικα πλέον απλά δεν θα θελα να αφαιρεθούν βαθμοί για μη κατανόηση. Απλά έγινε κάποιο τυπογραφικό λάθος την ώρα που έγραφα τον κώδικα.

Κατανομή εργασιών:

Την δεύτερη φάση την υλοποίησα μόνη μου.