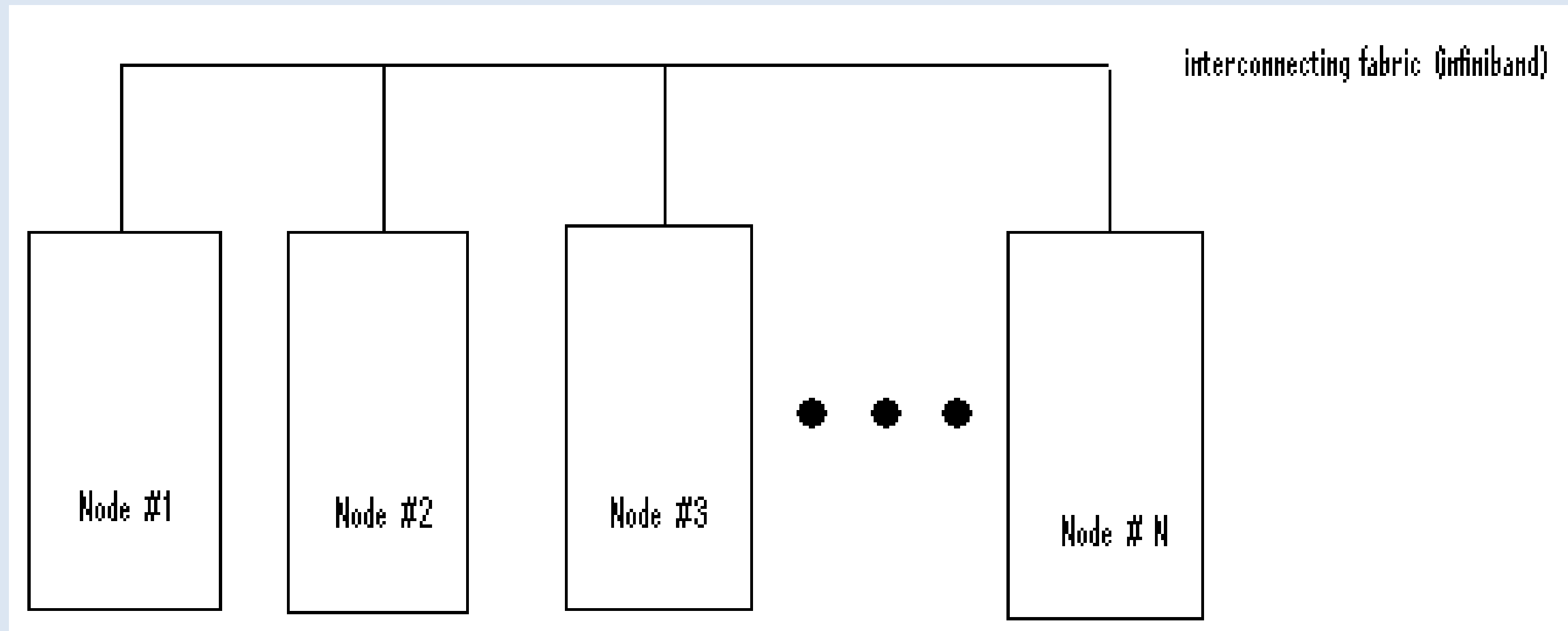


Raytheon Internship

Dan Evans

Year: Junior

Concentration: Electrical Engineering



Company Description: Raytheon is a American Defense contractor that concentrates on defense systems. It is probably most well known for its development of missiles.

Location: Surveillance and Sensors Center in Tewksbury, MA

Worked in: Internal Research and Development (IRAD)

Supervisor: Russell Dube

Project: Create a parameterized mathematical model of system behavior showing the utilization of each processing node as a function of time.

Learned:

-MATLAB

-Time Management

-Presentation Skills

```
D:\dansmatlab\wmltree\utilTimeFinal.m
File Edit Text Go Cell Tools Debug Desktop Window Help
- 1.0 + + 1.1 *
40 elseif minTime<0
41 disp('ERROR: minTime must be zero or positive')
42 return;
43 elseif maxTime<0 || maxTime<minTime
44 disp('ERROR: maxTime must be greater than the minTime')
45 return;
46 elseif stepTime<=0
47 disp('ERROR: timeStep must be positive')
48 return;
49 end
50
51 % setting the time
52 time = minTime:stepTime:maxTime;
53
54 % determine the dispatch rate whether it is calculated or is a given by t
55 % user instead
56 if dispatchRate2 == 0,
57 disp('The dispatch rate will be calculated from the critical path')
58 if processingNodes >= numberOfSubgraphs,
59 dispatchRate = floor(processingNodes/numberOfSubgraphs)/criticalPa
60 else
61 dispatchRate = 1/criticalPath;
62 end
63 else
64 dispatchRate = dispatchRate2;
65 end
66
67 N= zeros(length(time),processingNodes);
68 c=0;
69 z=1;
70 for t=time
71 if t >= c*1/dispatchRate,
72 if t == maxTime,
73 break;
74 end
75 for x=1:numberOfSubgraphs
76 for y:t:stepTime:(t+A(x))
77 j = round(y/stepTime+1);
78 if j <= length(time),
79 N(j,z) = N(j,z) + 100;
80 end
81 end
82 z = z + 1;
83 if z > processingNodes,
84 z = 1;
85 end
86 end
87 c = c + 1;
88 end
```

