

## Phase 2

station 0 station 1 station 2  
|-----|-----|-----|-----> Network

each station can send at regular intervals but cannot send simultaneously since collision will occur.

On collision each station will wait a certain amount of time before retransmitting. The time is random. <--- three different algorithms can be used to determine the time

### Project parameters

lambda = arrival rate  
N = number of stations

### backoff algorithm parameters

#### Linear

on nth retry  $k = \min(n, 1024)$   $0 < x \leq R + 1$  x is a random int  
rand() [0, RANDOM] use modulus

#### Exponential

$k = \min(n, 10)$   
 $0 < x \leq 2^k + 1$

#### Random

$0 < x \leq 5$

### overall throughput

#### GEL

##### Events

Arrival --> time, station number

Slot --> time, slot number

ts > 1

|--> slot event 1, 2, 3...

#### init

1. generate arrival for a station
2. Generate slot event