The interference may ruin an ongoing reception of the receiver. Therefore, it is vital that I introduce now the transmission time.

# Event attributes

* ID is an integer that the simulator chooses. They are unique consecutive numbers.

# Timing

The real expression is:

BP and SP are two inter-frame spaces where.

For simplicity, I will not consider BP or SP. Therefore, we have:

I will choose:

* . Therefore, a node picks a random back-off period between 0 and 4.
* DATA = 6
* ACK = 2

# Simulation planning

## Current simplifications

I will not simulate the more data flag or the More-To-Send packet. Therefore the delay between two packet transmissions

## Not to complicate unnecessarily

When a node receives a collision, it can automatically go to sleep until the next period.

When a node listens to another node's reception, it can assume that it lost the contention and it goes to sleep. Note that this is not true. Even if a node heard another node's transmission, it does not mean the parent will also hear it.

# DMAC's algorithm

Receive

Transmit

# Transmission of a packet

## Beginning of the transmission

### Impact on the intended recipient

When the leading edge of a packet reaches its destination:

* The destination sets the receiving flag.
* The destination schedules an "end-of-reception" event.

### Impact on interfering nodes

A transmission from A to B has a different effect in a node C within A's interference range:

### If C is backing off

C will delete its scheduled event.

C will schedule a transmission for the next period.

#### If C is sleeping and it has not scheduled to wake up before the end of A's transmission

We do nothing.

#### If C is receiving a packet from another node D

C will receive none of the transmissions from A and D. C reschedules an "end-of-reception" to

#### If C is transmitting a packet and it will finish transmitting before the end of A's transmission

C will record as ongoing interference the following:

* + Interference source
  + Time of end of interference.

Tier 1

Tier 2

Tier 0

5

Tier 3

### Impact on the transmitter

The transmitter schedules a Wait-For-ACK event.

## End of the transmission