Algorithme en Phases pour l'Election dans un anneau bidirectionnel

To initiate an election (phase 0) :

```
send(ELECTION<my_id;0;1>) to LEFT and RIGHT ;
Become CANDIDATE ;
```

Upon receiving a message ELECTION $< j; k; d >$ **from LEFT (RIGHT) :**

```
if ((j > my_id) AND (d < 2^k)) then
   send(ELECTION<j;k;d+1>) to RIGHT (LEFT) ;
   Become PASSIVE ;
if ((j > my_id) AND (d = 2^k)) then
   send(REPLY<j;k>) to LEFT (RIGHT) ;
   Become PASSIVE ;
if (my_id = j) then become LEADER ;
```

Upon receiving a message REPLY$< j; k >$ **from LEFT (RIGHT) :**

```
if (my_id != j) then
   send(REPLY<j;k>) to RIGHT (LEFT) ;
else
   if (already received REPLY<j;k >)
      send(ELECTION<j;k+1;1>) to LEFT and RIGHT ;
```

NB : Dans le message $< j, k, d >$, j = valeur envoyer ; k = phase# ; d = distance ;