

- The procedures of DMAC[1] are "atomic" i.e., they are not interruptible.
- At clustering set up time or when a node is added to a network its variables *Clusterhead*, *Ch(-)* and *Cluster(-)* are initialized to nil or false.

### INIT:

At the clustering set up, or when a node  $v$  is added to the network, it executes the procedure Init in order to determine its role. If among its neighbours there is at least a clusterhead with a bigger weight than  $v$  will join it. Otherwise it will be a clusterhead.

PROCEDURE INIT;

**begin**

**if**  $\{z \in \Gamma(v) : w_z > w_v \wedge Ch(z) \neq \phi\}$

**then begin**

$x := \max_{w_v} \{z : Ch(z)\};$

**send** JOIN( $v, x$ );

$Clusterhead := x;$

**end**

**else begin**

**send** CH( $v$ );

$CH(v) := \text{true};$

$Clusterhead := v;$

$Cluster(v) := \{v\};$

**end**

**end**

### LINK FAILURE :

Whenever made aware of the failure of the link with a node  $u$ , node  $v$  checks if its own role is clusterhead and if  $u$  used to belong to its cluster. If this is the case  $v$  removes  $u$  from the  $Cluster(v)$ . If  $v$  is an ordinary node and  $u$  was its clusterhead then it is necessary to determine a new role for  $v$ . To this aim,  $v$  checks if there exists at least a clusterhead  $z \in \Gamma(v)$  such that  $w_z > w_v$ .