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Псевдокод алгоритму HS:

u // UID of process

send+ //data, which will sent to right neighbour

send- //data, which will sent to left neighbour

status // {unknown, leader}

direction // {LEFT, RIGHT}, inverse(LEFT) = RIGHT, inverse(RIGHT) = LEFT

phase //number of phase

returned_from_left //message returned back to sender from left neighbour

returned_from_right //message returned back to sender from right neighbour

```
Process i (u, send+, send-, status, phase, returned_from_left,
returned_from_right) {
    phase := 0
    u := UID
    status := unknown
    returned_from_left := false
    returned_from_right := false

    do {
        hops_count := 2 ** phase
        send+ := u
        send- := i

        send (send+, hops_count, RIGHT)
        send (send-, hops_count, LEFT)
```

```
        ACCEPT:
            (v, h, d) //value, hops count, direction

            if h = 1 and v = u {
                if d = LEFT {
                    returned_from_right := true
                }
                else {
                    returned_from_left := true
                }

                if returned_from_left and returned_from_right {
                    phase += 1
                    return
                }

            }

            if v > u and h > 1 {
                send (v, h - 1, d)
            } else if v > u and h = 1 {
                send (v, 1, inverse(d))
            } else if v = u {
                status := leader
            }
    }
}
```