Algorithm – Reliable Broadcast

Algorithm 1 Lazy Reliable Broadcast

Implements: 
ReliableBroadcast, instance rb.

Uses: 
BestEffortBroadcast, instance beb.
PerfectFailureDetector, instance P.

1: upon event (Init) do
2: delivered := ∅
3: correct := Π
4: for all q ∈ Π do
5: from[q] := ∅
6: upon event (rb, Broadcast | m) do
7: trigger (beb, Broadcast | [DATA, self, m])
8: upon event (beb, Deliver | p, [DATA, s, m]) do
9: if m /∈ from[s] then
10: trigger (rb, Deliver | s, m)
11: from := from ∪ {m}
12: if s /∈ correct then
13: trigger (beb, Broadcast | [DATA, s, m])
14: upon event (P, Crash | p) do
15: correct := correct \ {p}
16: for all m ∈ from[p] do
17: trigger (beb, Broadcast | [DATA, p, m])
Algorithm 2 Eager Reliable Broadcast

Implements:

ReliableBroadcast, instance rb.

Uses:

BestEffortBroadcast, instance beb.

1: upon event ( Init ) do
2:    delivered := ∅
3: upon event ( rb, Broadcast | m ) do
4:    trigger ( beb, Broadcast | [DATA, self, m] )
5: upon event ( beb, Deliver | p, [DATA, s, m] ) do
6:    if m /∈ delivered then
7:        delivered := delivered ∪ {m}
8:    trigger ( rb, Deliver | s, m )
9:    trigger ( beb, Broadcast | [DATA, s, m] )