

power value is modified and saved for use with the transmitting of the next review.

- 2) Forward Encode Algorithm: Once the forwarding node receives the bundle it will first examine its watch-list to determine if the bundle came from a node it is viewing.

Algorithm 2 Forward encode Algorithm with Communication Error Handling

```

1: Forward(current
Node, WatchedNode, Upstreamnode)
2: begin
3: icurrentNode; enc0; WLiWatchList
4: k WatchedNode; src0; j 0
5: Erxi, hIDclr, {msg}Ki ReceivePacket()
6: if IDclr2 WLi then
7: while(keyFound = 0) and (j <= thresHold) do
8: Ek
piFetchVirtualEnergy(i, IDclr, enc, src)
9: K ComputeKey(Ekpi, IDclr)
10: Pc RC4(K, IDclr)
11: Edec, MsgID decode(Pc, {msg}K)
12: if IDclr = MsgID then
13: keyFound true
14: else
15: j ++
16: Ek
piEk
pi - Etxi - Eenci - Erxi - Edec - 2 * Eai
17: end if
18: end while
19: if keyFound = true then
20: if j > 1 then
21: reEncode true
22: else
23: if Ebi > 0 then
24: reEncode true
25: else
26: reEncode false
27: end if
28: end if
29: if reEncode = true then
30: enc 1
31: EbiFetchVirtualEnergy(i, IDclr, enc, src)
32: K ComputeKey(Ebi, IDclr)
33: Pc RC4(K, IDclr)
34: Eenci, {msg}Pc encode(Pc, msg)
35: packet hIDclr, {msg}Pci
36: EtxiForwardaction()
37: EbiEbi - Etxi - Eenci - Erxi - Edec - 2 * Eai
38: else
39: Forwardaction() //Without any modification

```

```

40: end if
41: else
42: Dropaction() //Packet not valid
43: end if
44: else
45: Forwardaction() //Without any modification
46: end if

```

4. OPERATIONAL MODES OF UEBSK

The UEBSK method provides three protection services: Verification, integrity, and non-repudiation.

A. UEBSK-I

In the UEBSK-I functional method, all nodes observe their neighbors; whenever a bundle is obtained from a neighborsensor node, it is decoded and its validity and integrity are confirmed. Only genuine packages are submitted toward the sink. In this method, we believe there is a brief window of time at preliminary implementation that an enemy is not able to bargain the system. During this interval, route initialization details may be used by each node to its 1-hop others who live nearby in its watch-list.

B. UEBSK-II

In the UEBSK-II functional method, nodes in the network are designed to only observe some of the nodes in the system. Each node arbitrarily chooses r nodes to observe and shops the corresponding condition before implementation. Observe that in this plan, re-encoding is not done at sending nodes unless they are connecting the network.

5. PERFORMANCE ANALYSIS:

In this area we assess the potency of the UEBSK framework via both models and research.

A. Assumptions Due to the transmitted characteristics of the wi-fi method used in indicator systems, assailants may try to eavesdrop, identify, or provide incorrect information.

B. Simulation Parameters - The topology used for the simulation is proven in Figure 6, while the factors used in the simulation are summarized in Platforms III and IV. Nodes were allocated arbitrarily in the

