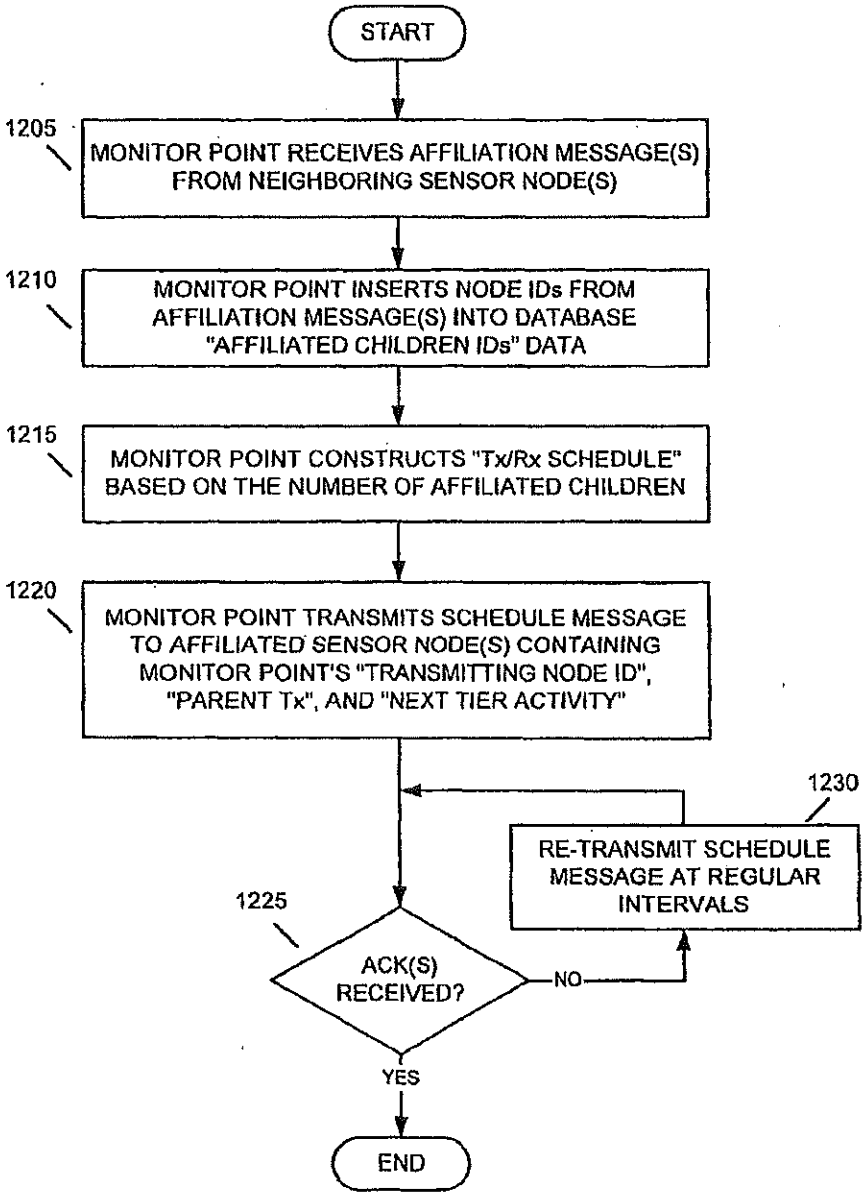


FIG 1 (PRIOR ART)

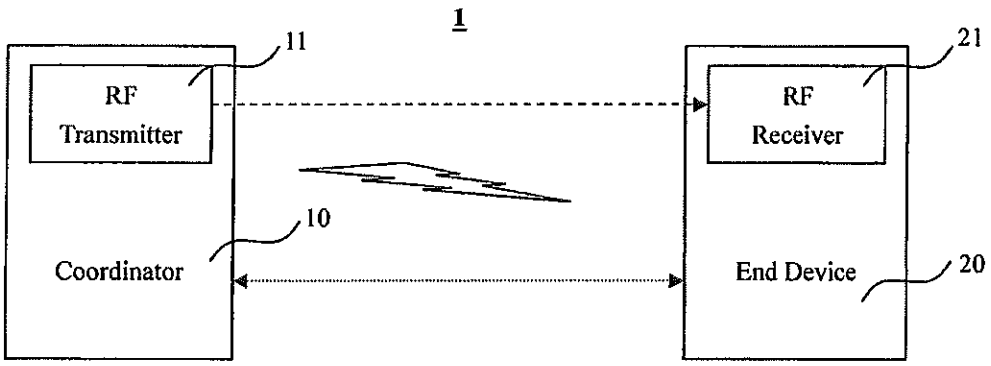

1
11
RF
Transmitter
21
RF
Receiver
10
Coordinator
End Device
20

FIG 2

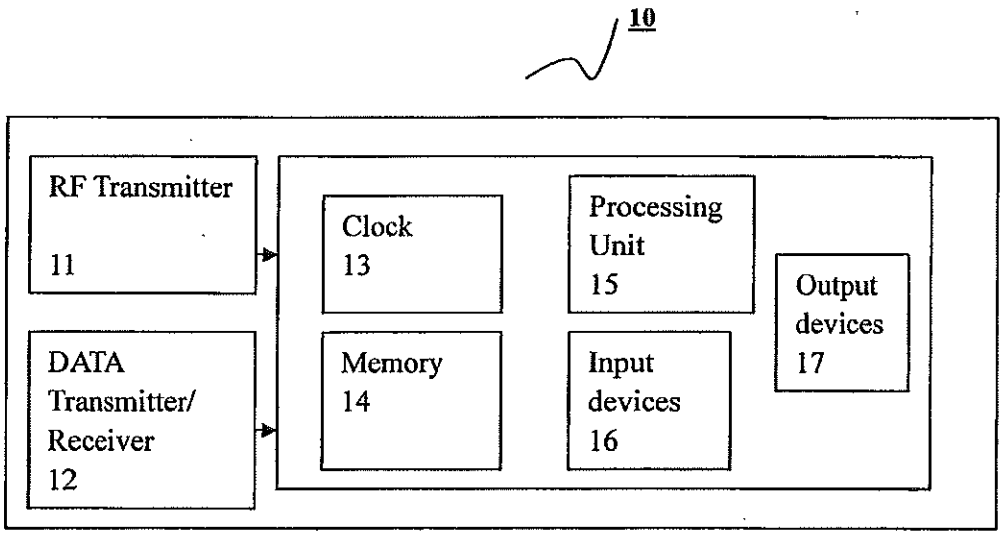

10
RF Transmitter
11
DATA
Transmitter/
Receiver
12
Clock
13
Memory
14
Processing
Unit
15
Input
devices
16
Output
devices
17

FIG 3

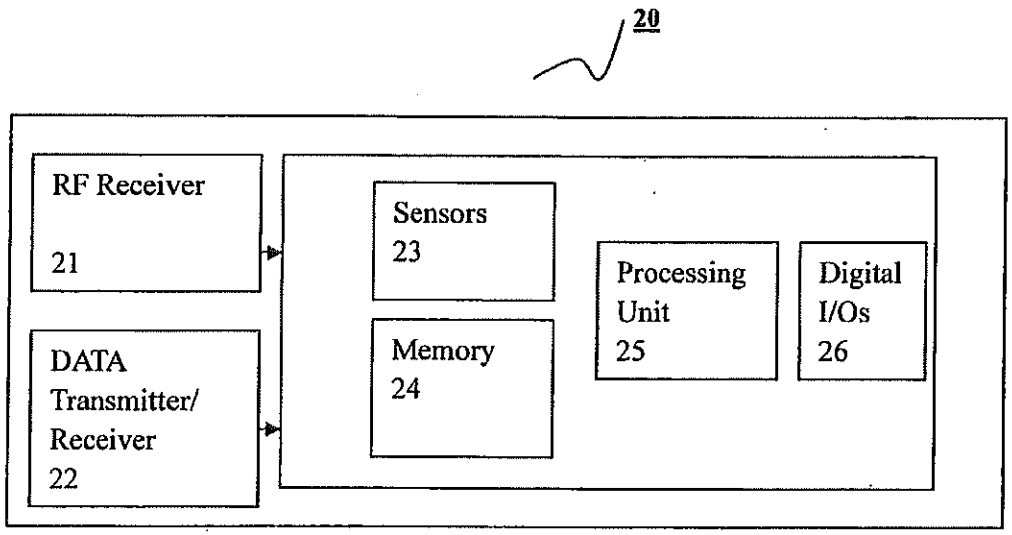

20
RF Receiver
21
DATA
Transmitter/
Receiver
22
Sensors
23
Memory
24
Processing
Unit
25
Digital
I/Os
26

FIG 4

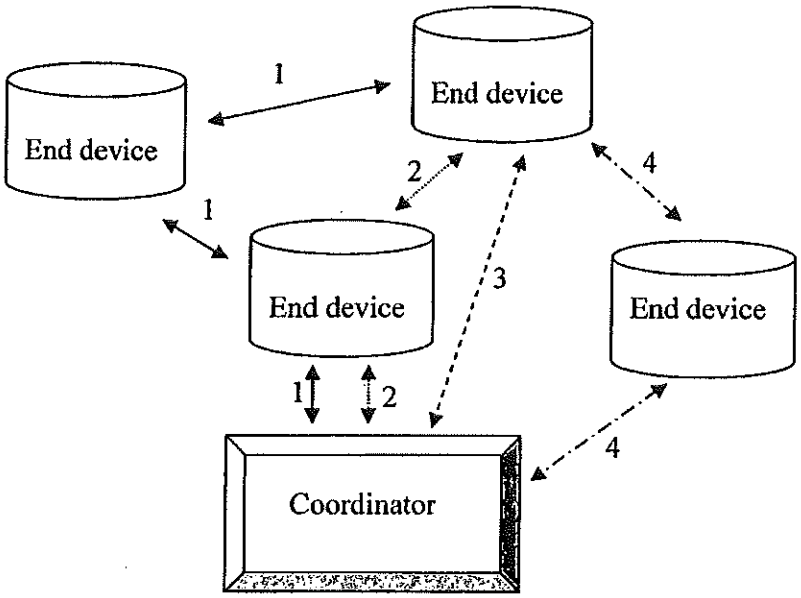

End device
End device
End device
End device
End device
Coordinator
1
1
2
3
4
1
2
4

FIG 5

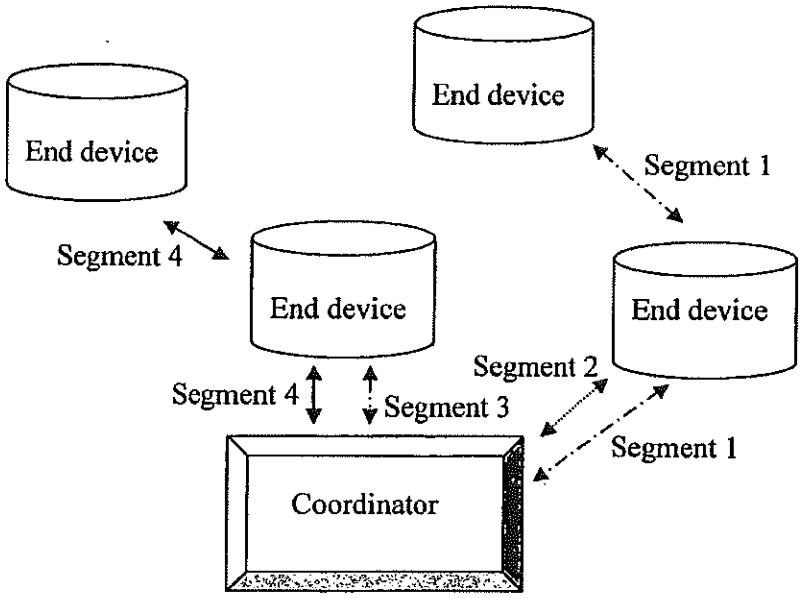

End device
End device
End device
End device
End device
Coordinator
Segment 1
Segment 4
Segment 4
Segment 3
Segment 2
Segment 1

FIG 6

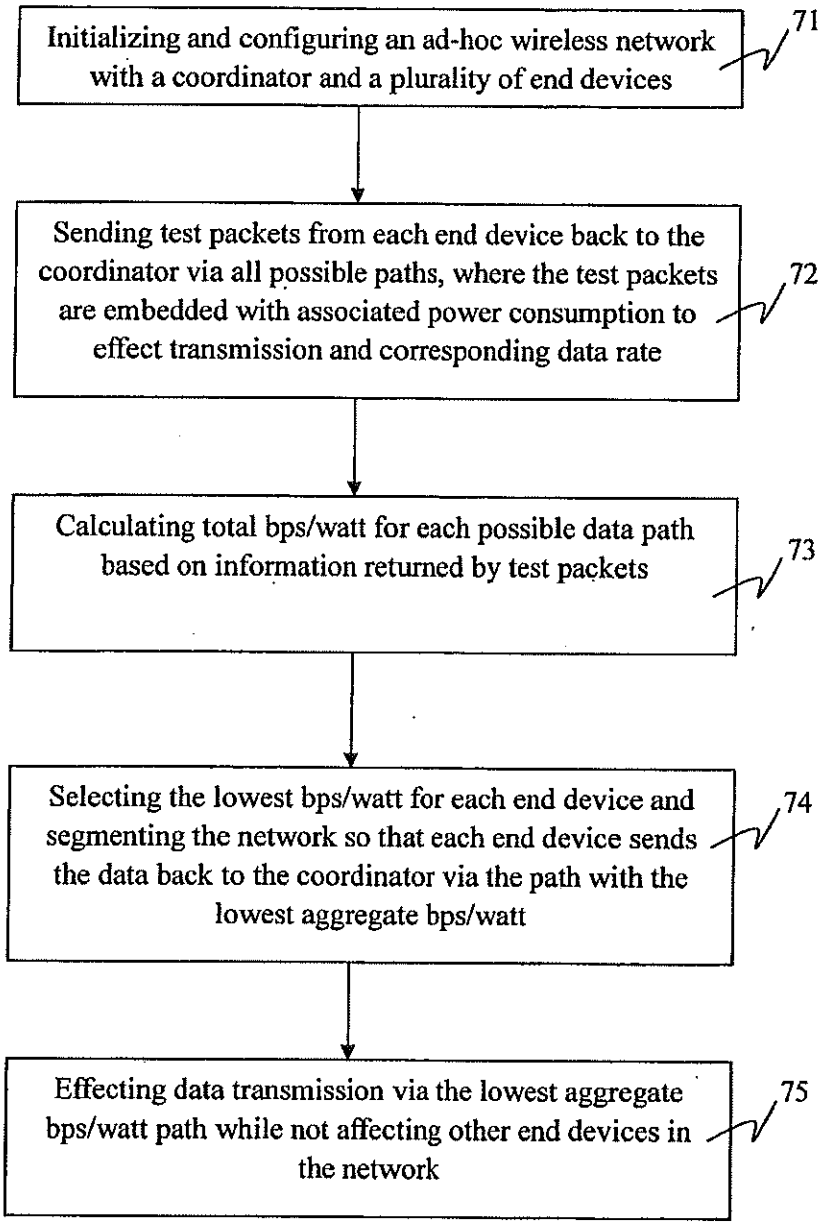

Initializing and configuring an ad-hoc wireless network with a coordinator and a plurality of end devices
71
Sending test packets from each end device back to the coordinator via all possible paths, where the test packets are embedded with associated power consumption to effect transmission and corresponding data rate
72
Calculating total bps/watt for each possible data path based on information returned by test packets
73
Selecting the lowest bps/watt for each end device and segmenting the network so that each end device sends the data back to the coordinator via the path with the lowest aggregate bps/watt
74
Effecting data transmission via the lowest aggregate bps/watt path while not affecting other end devices in the network
75

FIG 7

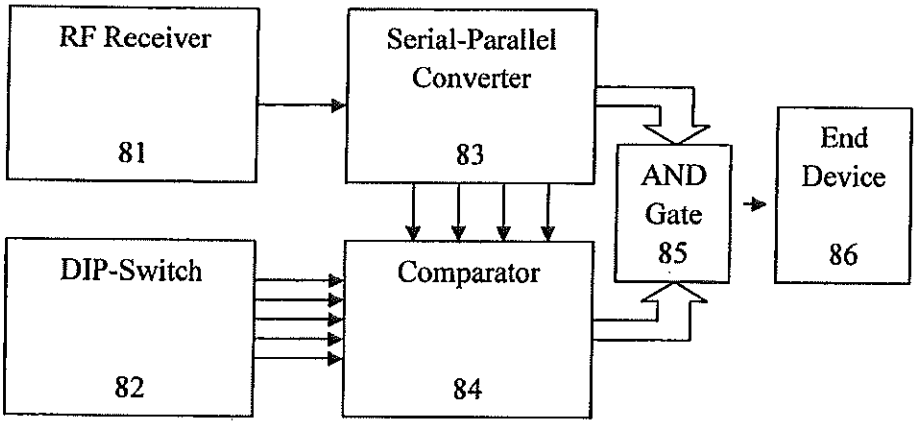

RF Receiver
81
Serial-Parallel Converter
83
AND Gate
85
End Device
86
DIP-Switch
82
Comparator
84

FIG 8