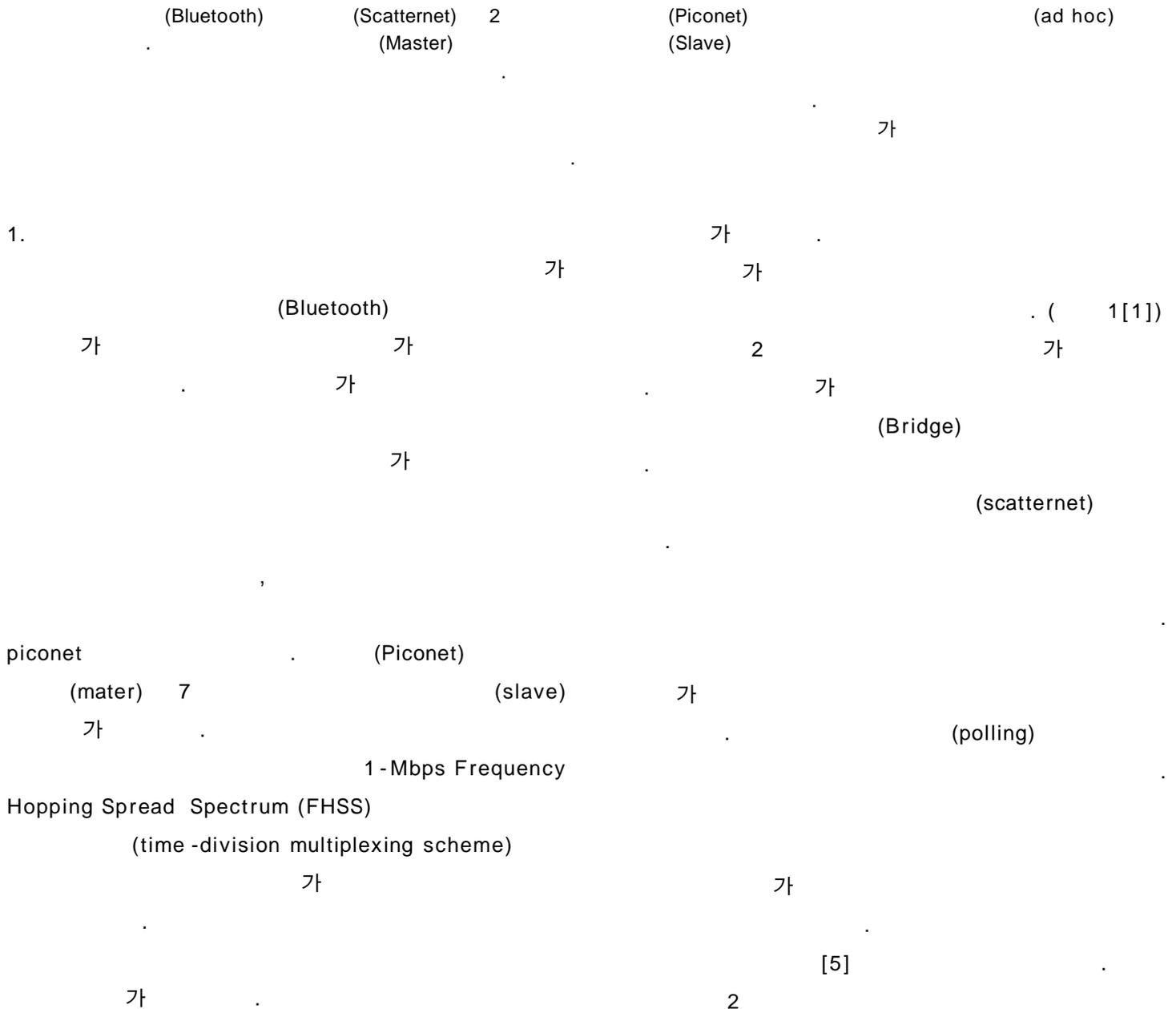


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Power-aware Bluetooth Piconet Master election Algorithm ^{*}

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4

n 가 가

2. /

k 가

Inquire Page

k

(Inquiry),

가

: 2nk

가

: 2k

(Page)

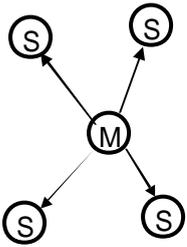
가 ,

n

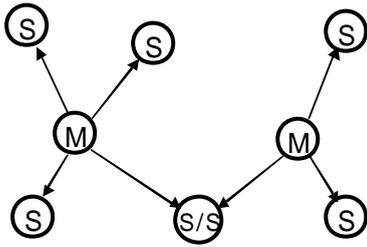
가 n

가 2

M : Master node
S : Slave node



(a) Piconet



(b) Scatternet

가

가

가

[4][6],

1

[2][3]

3.

가 가

connection

[1].

가

Active

가

3 가

(P)

가

(M)

(L)

가

가

$$E = P / (M * L)$$

(1.)

가 가

4

Bandwidth

(slot)

(Polling)

L (mW) 가 E E_{th} 가 E
 가 E_{th} + ? 가 가 E
 M 가 E_{th} +?? 가 E_{th}
 가 가
 가 inquiry 가
 1/E 가 page scan
 가 가 가
 가 page 가 가
 가 2 3 1 가 가
 $360\text{Wh} / (0.25\text{mW} * 10\text{s}) = 4 \text{ hour}$
 가 3 가
 가 가
 가 1 : 10

① P : 360 Wh
 L : 1mW
 E : 1 hour

② P : 18 Wh
 L : 0.1mW
 E : 0.5 hour

③ P : 360 Wh
 L : 0.25mW
 E : 4 hour

④ P : 180 Wh
 L : 1mW
 E : 0.5 hour

⑤ P : 180 Wh
 L : 0.25mW
 E : 2 hour

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2 가
 가
 가