

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
5 August 2004 (05.08.2004)

PCT

(10) International Publication Number
WO 2004/066511 A3

(51) International Patent Classification⁷: **H04B 17/00**,
15/00, 1/00

DICK, Stephen, G. [US/US]; 61 Bobann Drive, Nescon-
set, NY 11767 (US).

(21) International Application Number:
PCT/US2004/000526

(74) Agent: **WEINSTEIN, Louis**; Volpe And Koenig, P.C.,
United Plaza, Suite 1600, 30 South 17th Street, Philadel-
phia, PA 19103 (US).

(22) International Filing Date: 9 January 2004 (09.01.2004)

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/440,073 14 January 2003 (14.01.2003) US
10/729,332 5 December 2003 (05.12.2003) US

(71) Applicant (for all designated States except US): **INTER-
DIGITAL TECHNOLOGY CORPORATION** [US/US];
300 Delaware Avenue, Suite 527, Wilmington, DE 19801
(US).

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KWAK, Joseph**
[US/US]; 482 Degas Road, Bolingbrook, IL 60440 (US).

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR NETWORK MANAGEMENT USING PERCEIVED SIGNAL TO NOISE AND
INTERFERENCE INDICATOR

DATA RATE	MODE	FEC RATE	PPDU LENGTH	FER	PSNI
(Mbps/s)			(bytes)		
1	DSSS	no FEC	125	10% +/-0.2%	24 +/- 10
2	DSSS	no FEC	1250	10% +/-0.2%	49 +/- 10
5.5	HRDSSS	no FEC	1250	10% +/-0.2%	76 +/- 10
5.5	HRDSSS	1/2	1250	10% +/-0.2%	44 +/- 10
6	OFDM	1/2	1250	10% +/-0.2%	46 +/- 10
9	OFDM	3/4	1250	10% +/-0.2%	62 +/- 10
11	HRDSSS	no FEC	1250	10% +/-0.2%	94 +/- 10
11	HRDSSS	1/2	1250	10% +/-0.2%	62 +/- 10
12	OFDM	1/2	1250	10% +/-0.2%	64 +/- 10
18	OFDM	3/4	1250	10% +/-0.2%	80 +/- 10
24	OFDM	1/2	1250	10% +/-0.2%	106 +/- 10
36	OFDM	3/4	1250	10% +/-0.2%	122 +/- 10
48	OFDM	2/3	1250	10% +/-0.2%	155 +/- 10
54	OFDM	3/4	1250	10% +/-0.2%	160 +/- 10

(57) Abstract: Method and apparatus of network management using a perceived indicator to provide physical layer measurements in a multitude of stations in the network, either by way of radio frequency power, or observed signal to noise plus interference (PSNI) from each access point, to report the measurements, to collect the measurements, and using the reported PSNI values as a signal quality indicator of delivered bit error rate or frame error rate (FER) to evaluate, reconfigure, and manage multiple stations in order to optimize the network or network performance.

WO 2004/066511 A3



Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

4 August 2005