Handwritten - marked-up original
For Minutes of Plenary of IEEE 802.11
read out and submitted to Committee Chair/Secretary
in Advance

IEEE 802.11 — 94/186
7/14/94

Response to IP FQPSK Issues by K. Feher:

6.3.1 Guidelines:

A patented technology may only be used when all of the following requirements can be met and documented:

(1) **"- The patent does not give undue preferred status to a company or a segment of the industry that would benefit by its incorporation"**

The IP property has been extensively discussed since July, 13, 1993 in the IEEE 802.11 body. All items AGREED - verified with IEEE headquarters.

(2) **"- The patent represents the best available technology"**

after review request by Plenary (7/14/94)

Demonstrated in 94/195 "Response to Plenary Request..." and unanimously approved [9:0:0] by the IR committee. The IR committee approved FQPSK because of its 6 dB to 15 dB more power efficient then any other alternative. In addition, FQPSK doubles the transmitted bit rate [capacity] compared to other alternatives for current IR technology. Documented in more than 30 IEEE 802.11 submissions by more than six organizations including three large corporations. Low cost chips are available from multiple sources ~~as reviewed in~~ [ref 94/51] as reviewed and submitted by IR and HS-FH, and ~~provides~~ more detail than any other modulation format and no [redacted] in accuracy's of frequently reported experimental/hardware/software/theory ~~was~~ were raised by 802.11. Several companies confirmed accuracy of low cost implemented specifications. Clams for 6 dB to 15 dB power advantage in terms of BER as a function of Eb/No are obtained also by comparing other sub committee standardization specifications.

FQPSK was disclosed in

KF [redacted] KF

(3) **"- The patent is accessible to all in the industry on a nondiscriminatory basis for a reasonable cost"**

Documented with this committee in acceptable formats, signed and submitted to 802.11 Chair Vic Hayes and IEEE Headquarters

(4) **"-There are no alternative methods or devices that can be used to meet the requirements of the standard without infringing on the patent"**

After extensive investigations it was concluded that

There are no known alternatives which satisfy the IR modulated specifications for the limited 30 MHz bandwidth and previous proposed alternatives did not provide the power efficiency nor BER advantages as offered by FQPSK.

(5) **"-There has been no coercion of a patent owner to provide that technology"**

There has be no coercion by the patent owner to provide technology, however in our opinion there has been coercion to provide technology without license

(6) **"-Adopting such technology is not in itself prohibitively costly or noncompetitive to a substantial part of the industry"**

KF Cost is minimal as disclosed. It has life time or annual cap option as well as per unit option. In all options cost is "nominal token" mearly sufficient to recover costs of developing technology.

and release it free" to IEEE - as only means to get it voted in

I request motion as stated to be presented by R. Sandahl before the break KR