Wireless Personal Area Networking

IEEE 802.11 Study Group Report on Call for Applications September 16, 1998

The WPAN Study Group issued a Call for Applications (**doc.: IEEE 802.11-98/295**) on July 24, 1998.

During the interim meeting held during September 1998 in Westford, MA, six of the application submissions were presented to the study group.

Based upon these inputs, the study group selected a set of 15 categories which were deemed sufficient to capture and summarize these applications. Prior to and during the November meeting these categories will be refined, more thoroughly defined and prioritized.

Additionally, the capabilities of three candidate WLANs for use as WPAN were also shown using the same categories. These were shown as representative examples and there will be both corrections and additions to the list over time.

WPAN Application Summary

	# of Active devices in 1 PAN	Min. device	Attachment/Initialization	Data types	Link eff. Data throughput	Conn. to other n/w
Boeing	2 to 8	WinCE	Manual auth/auto attach	Data/VoIP	19.2 to 64 kbps	802.11/PCS
Fedex	6 to 16	Printer	Manual auth/auto attach	Data/Voice	19.2 kbps	Private and Public
Symbol/Wearable	8	Scanner	Manual	Data	19.2 kbps	802.11
TI	30-128	Graphing Calc/PDA	Manual auth/auto attach	Data	19.2 kbps	802.3/802.11
PED	8	Sensor	Manual auth/auto attach	Data	9.6 kbps	Yes
Bob O'hara	8	PDA	Manual auth/auto attach	Data/Voice	1 Mbps	Yes
HomeRF (SWAP CA	128	Cordless phone/Fridgepad	Manual auth/auto attach	Data/Voice	Total: 1 or 2 Mbps dynamic	802.3/PSTN
Bluetooth	8	Headset	Manual auth/auto attach	Data/Voice	Total: 1 Mbps dynamic	802.3/PSTN
802.11 FH	Unlimited	Handheld terminal	Manual auth/auto attach	Data/VoIP	Total: 1 or 2 Mbps dynamic	802.x

	Inter PAN conn	# PANs co-exist	Power	Range	Size	Speed	Topology	Encryption	IP support
Boeing	Yes	2	WinCE for 8 hrs	10-15m	1.5"x1.5" (Compact Flash)	10 mi/hr	Don't care	Yes	Yes
Fedex	No	30	30mW avg (10hr)	10m	.5"x1.0"	10 mi/hr	Peer-to-peer like		No
Symbol/Wearable	No	4 to 8	30 mA, 100 uA	10m	.5"x.5"	Don't Care	Don't care	No	No
TI	No	4	30 mA, 100 uA	10-15m	.5"x.5"	10 mi/hr	Master-Slave	No	No
PED	No	10	10-15 day batt	2m	.5"x.5" (4 oz. Wt)	N/A	Master-Slave	No	No
Bob O'hara	Yes (Manual)	20	WinCE for 8 hrs	10m	.5"x.5"	10 mi/hr	Don't care	Yes	Yes
HomeRF (SWAP CA)	Yes	10	300 mA	50m	.5"x1.0"	??	Peer-to-peer/M-S/CP	Yes	Yes
Bluetooth	Yes	10	30 mA, 0.3 mA	10m	.5"x.5"	??	Master-Slave	Yes	Yes
802.11 FH	No	15+	400 mA	50m	2"x3" (PC card)	11 mi/hr	Peer-to-peer/M-S/BSS	Yes	Yes

Submission   Slide 3   Bruce Kraemer, Harris Semiconductor