IEEE P802.11
Wireless LANs

TGb proposal comparison matrix

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This document is a comparative matrix of the modulation techniques being consideration by the TGb (high data rate 2.4GHz PHY) subgroup. The basis of this matrix is the evaluation criteria described in document "97157r1.doc". Document "9854.doc" describes how this matrix will be used in the selection process.

The proposers will complete this matrix for each individual proposal as well as for any derivative proposals that makes performance, complexity and interoperability tradeoffs.

Several requested matrix entries require textual descriptions or verbal explanations. In those cases, the proposers are encouraged to give brief descriptions and references to any other pertinent submissions.

General description:

	Golden Bridge	Harris	KDD	Lucent	MicriLor	Raytheon
Modulation Technique						
Data Rate(s)						
Sensitivity						
Reference submissions						

Receiver structure:

	Golden Bridge	Harris	KDD	Lucent	MicriLor	Raytheon
Receiver structure description						
RF/IF complexity relative to current low rate PHYs.						
Baseband processing complexity. relative to current low rate PHYs. (Gate Count, MIPS)						
Equalizer Complexity and performance impact (if applicable).						
Antenna Diversity and performance impact.						

Multipath and Noise performance:

	Golden Bridge	Harris	KDD	Lucent	MicriLor	Raytheon
Graph of PER vs. multipath rms delay spread (no noise). Delay spread @ 10% PER for 64 and 1000 byte packets.						
Graph of PER vs. thermal noise w/ multipath @ 10% PER. Eb/No @ 20% PER for 64 and 1000 byte packets.						
Graph of PER vs. thermal noise (no multipath). Eb/No @ 10% PER for 64 and 1000 byte packets.						

Carrier and Data frequency accuracy:

	Golden Bridge	Harris	KDD	Lucent	MicriLor	Raytheon
Required Carrier frequency accuracy.						
Degradation at worst case carrier frequency offset.						
Data clock frequency accuracy.						
Degradation at worst case data clock frequency offset.						

Overhead related parameters:

	Golden Bridge	Harris	KDD	Lucent	MicriLor	Raytheon
Preamble length						
Does the preamble length include receive antenna diversity? Yes or no.						
Does the preamble length include equalizer training? Yes or no.						
Slot time.						
CCA mechanism description.						
Co-Channel signal detection time.						
RX/TX turnaround time.						
SIFS.						

Spectral efficiency, Cell density related parameters:

	Golden Bridge	Harris	KDD	Lucent	MicriLor	Raytheon
Channelization scheme						
Cell planing scheme						
Adjacent channel interference rejection.						
Co-channel interference rejection.						
S/J where CW interference gives 10% PER.						
Other interference immunity tests.						
Co-Channel signal detection time.						
Total number of channels in 2.4GHz band.						
Aggregate throughput.						

Misc. critical performance factors:

	Golden Bridge	Harris	KDD	Lucent	MicriLor	Raytheon
Phase noise sensitivity						
RF PA backoff						
DC power consumption						

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Intellectual property:

	Golden Bridge	Harris	KDD	Lucent	MicriLor	Raytheon
Has the submission of the required IEEE letter covering IP been made? Yes or No						
Applicable patent numbers						
Point of contact						

Interoperability and Coexistence:

	Golden Bridge	Harris	KDD	Lucent	MicriLor	Raytheon
Interoperability / Co-existence strategy with current low rate PHYs						
Is the proposal Interoperable at the data level?						
Is the proposal Interoperable at the antenna level?						
Performance penalty due to Interoperability / Coexistence.						