Test 1

Packet size =48 bits

Packet rate = 6500 packets/s (effective max for this packet size)

99% error free packets @ 15 cm

98% error free packets @ 3 ft

Data rate = 48 \* 6500 = 312 kbps

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Packet size = 96 bits

Packet rate = 6500 packets/s (effective max for this packet size)

99% error free packets @ 15 cm

98% error free packets @ 3 ft

Data rate = 96 \* 6500 = 624 kbps

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Packet size = 144 bits

Packet rate = 6500 packets/s (effective max for this packet size)

98% error free packets @ 15 cm

95% error free packets @ 3 ft

Data rate = 144 \* 6500 = 936 kbps

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Packet size = 192 bits

Packet rate = 6500 packets/s (effective max for this packet size)

97% error free packets @ 15 cm

95% error free packets @ 3 ft

Data rate = 192 \* 6500 = 1.248 Mbps

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Packet size = 240 bits

Packet rate = 6000 packets/s (effective max for this packet size)

95% error free packets @ 15 cm

93% error free packets @ 3 ft

Data rate = 240 \* 6000 = 1.440 Mbps

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Packet size = 320 bits

Packet rate = 4900 packets/s (effective max for this packet size)

94% error free packets @ 15 cm

91% error free packets @ 3 ft

Data rate = 320 \* 4900 = 1.568 Mbps

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Packet size = 384 bits

Packet rate = 4500 packets/s (effective max for this packet size)

93% error free packets @ 15 cm

87% error free packets @ 3 ft

Data rate = 384 \* 4500 = 1.72 Mbps

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Packet size = 560 bits

Packet rate = 3600 packets/s (effective max for this packet size)

88% error free packets @ 15 cm

81% error free packets @ 3 ft

Data rate = 560 \* 3600 = 2.016 Mbps

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Packet size = 1024 bits

Packet rate = 2500 packets/s (effective max for this packet size)

76% error free packets @ 15 cm

45% error free packets @ 3 ft

Data rate = 1024 \* 2500 = 2.56 Mbps

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Packet size =1536 bits

Packet rate = 380 packets/s (effective max for this s packet size)

55% error free packets @ 15 cm

28% error free packets @ 3 ft

Data rate = 1536 \* 380 = 583 kbps

NOT WORKING (TX board crash) data irrelevant

Conclusion:

Highest raw data rate possible right now is around 2.56 Mbps with bad BER and great link deterioration over range.

BER is better around 1Mbps.

Higher packet size introduces more error and cause a greater BER deterioration over range.

Lower packet size causes more power consumption and prevents us from reaching higher data rate.