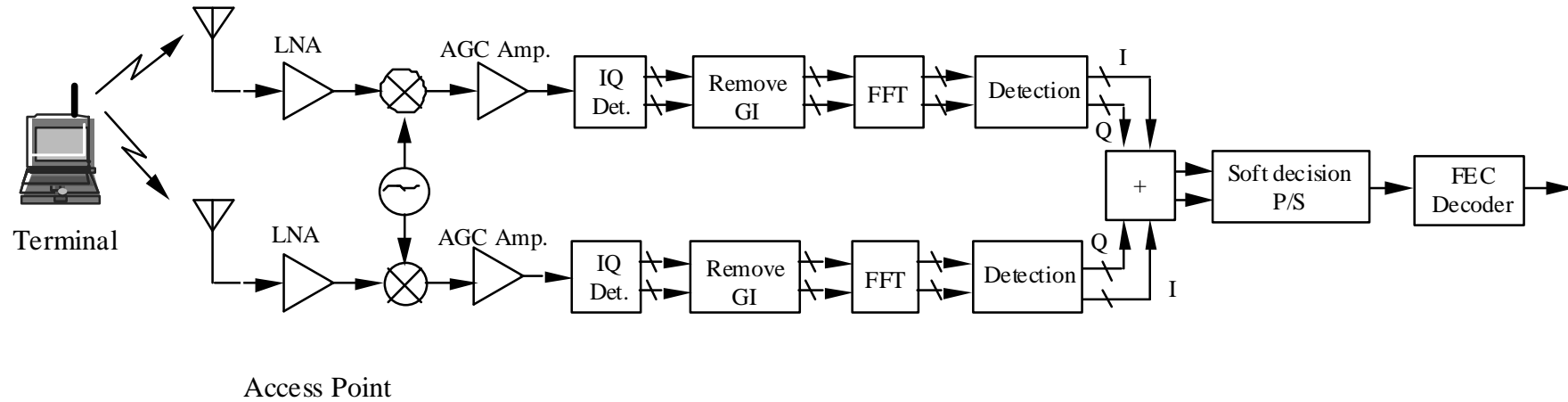


# Diversity gain of DQPSK-OFDM system

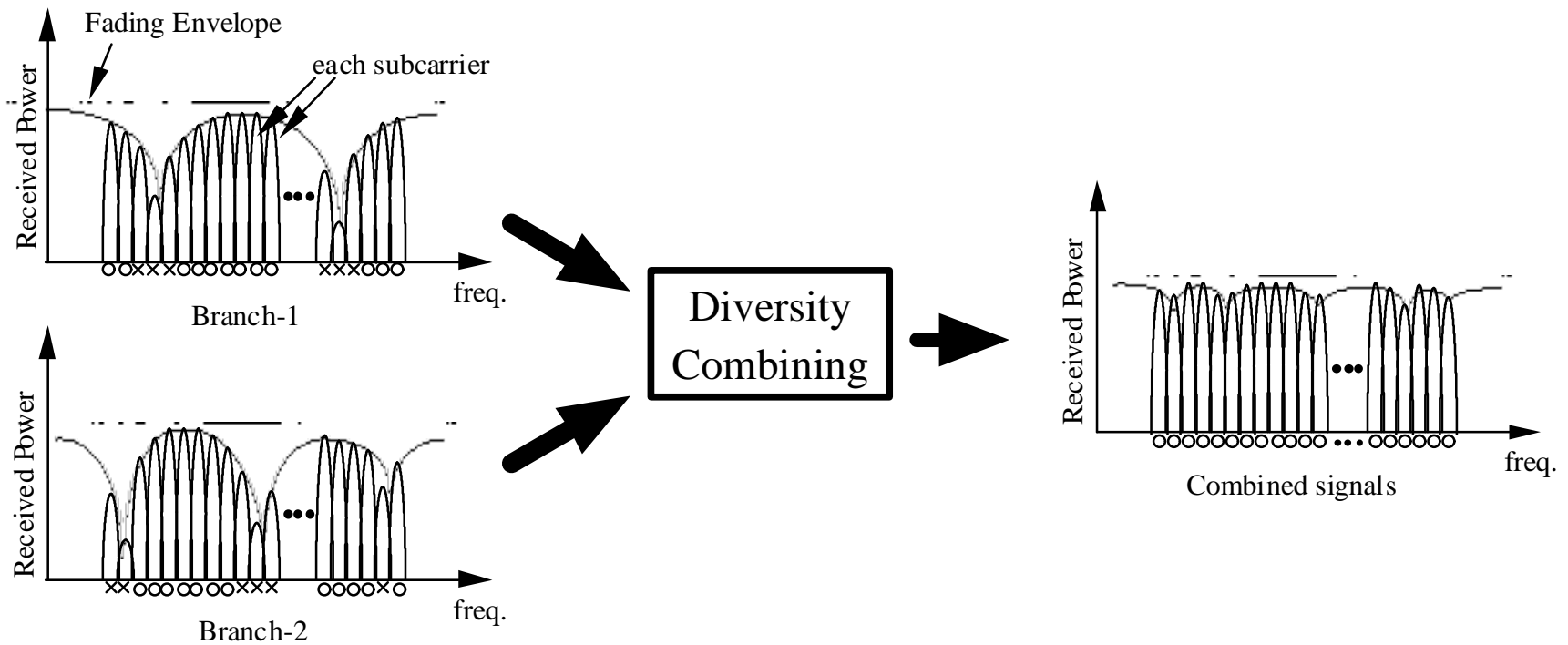
Masahiro, Hitoshi and Richard

NTT and Lucent

### Block diagram of OFDM system with 2-branch MRC diversity reception

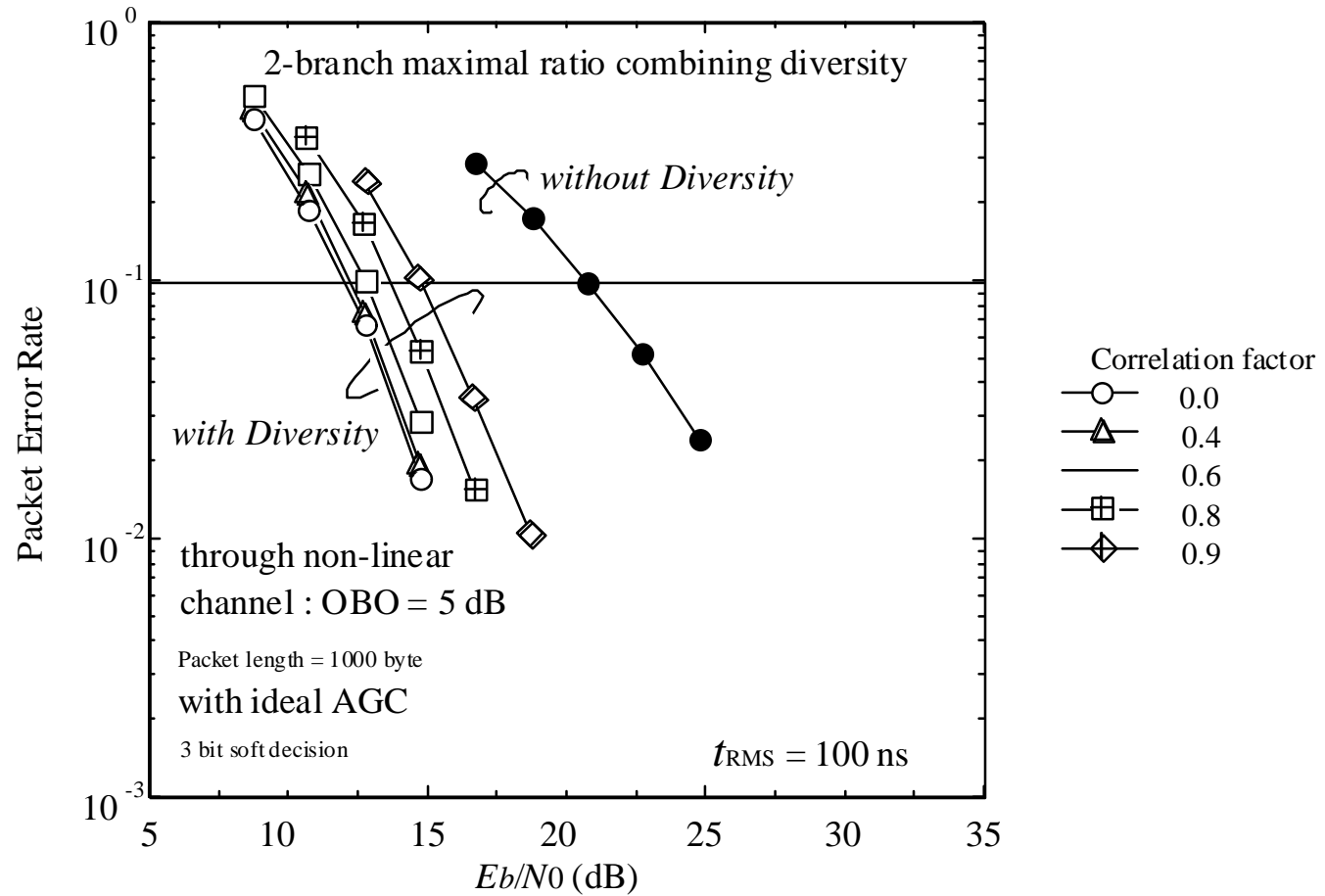


# SNR Improvement of Each Subcarrier by Diversity Combining



# Packet Error Rate in Multipath Propagation with AWGN

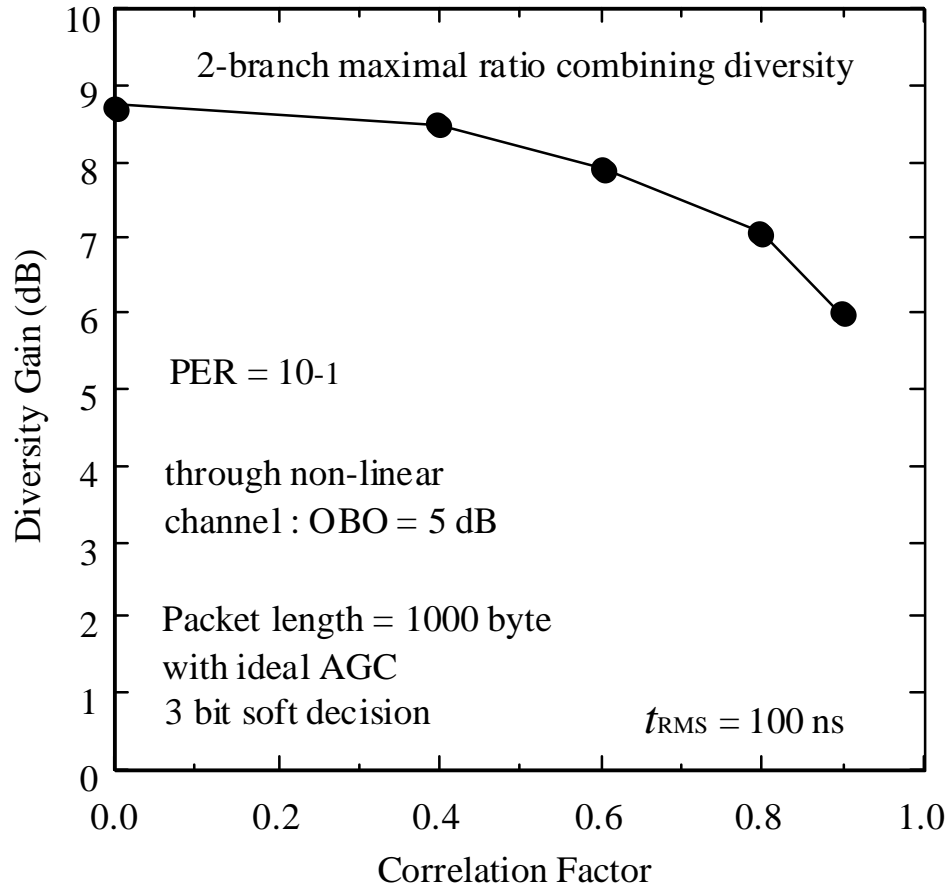
(DQPSK-OFDM Information data rate = 15 Mbit/s, Coding rate = 3/4)



Packet Error Rate versus  $E_b/N_0$

# Diversity Gain in Multipath Propagation with AWGN

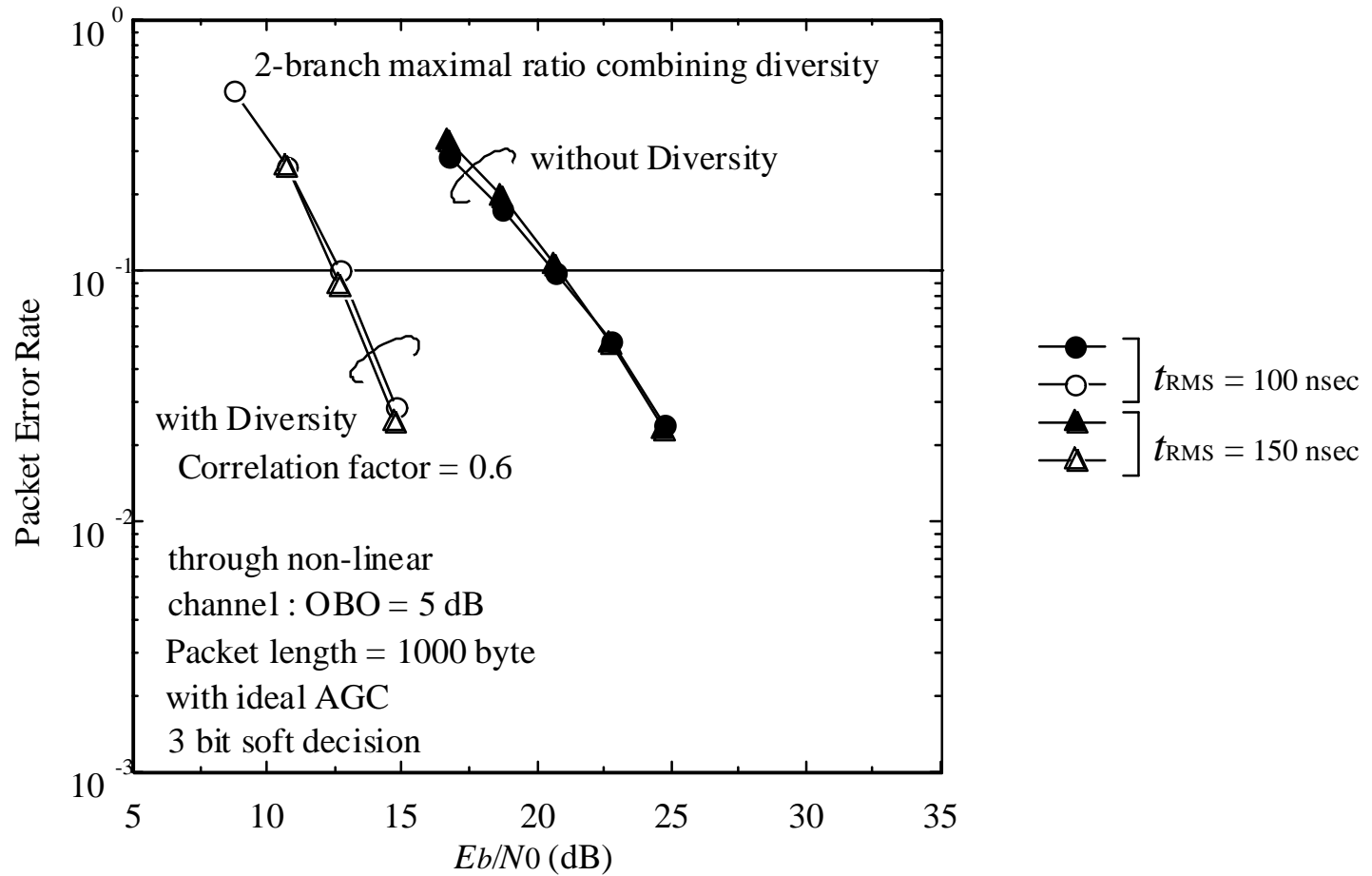
(DQPSK-OFDM Information data rate = 15 Mbit/s, Coding rate = 3/4)



Diversity Gain versus Correlation Factor

# Packet Error Rate in Multipath Propagation with AWGN

(DQPSK-OFDM Information data rate = 15 Mbit/s, Coding rate = 3/4)



Packet Error Rate versus  $E_b/N_0$

# Conclusion

More than 8 dB diversity gain is obtained when 2-branch MRC diversity reception of the DQPSK-OFDM system is employed in practical environment.