

Wideband Probe

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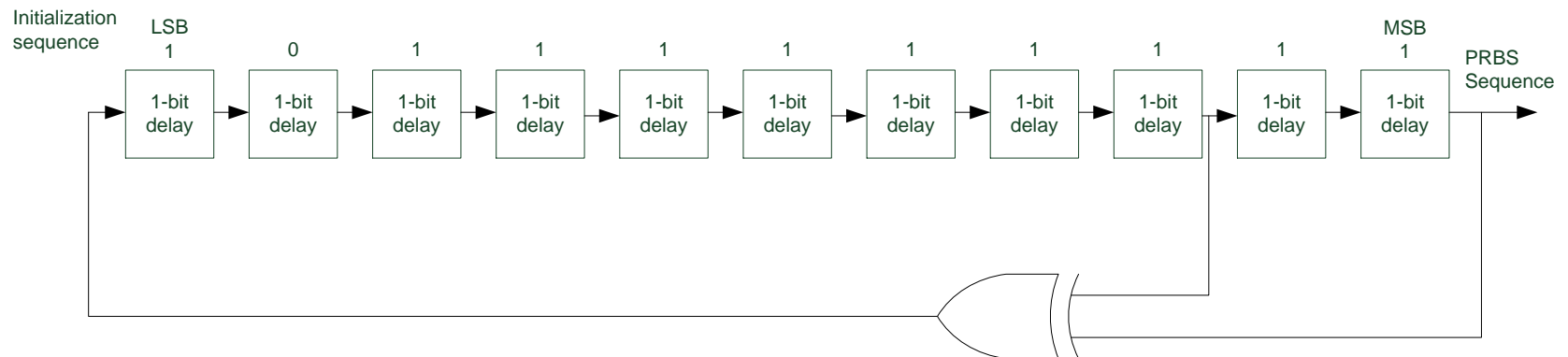
Rich Prodan, Broadcom

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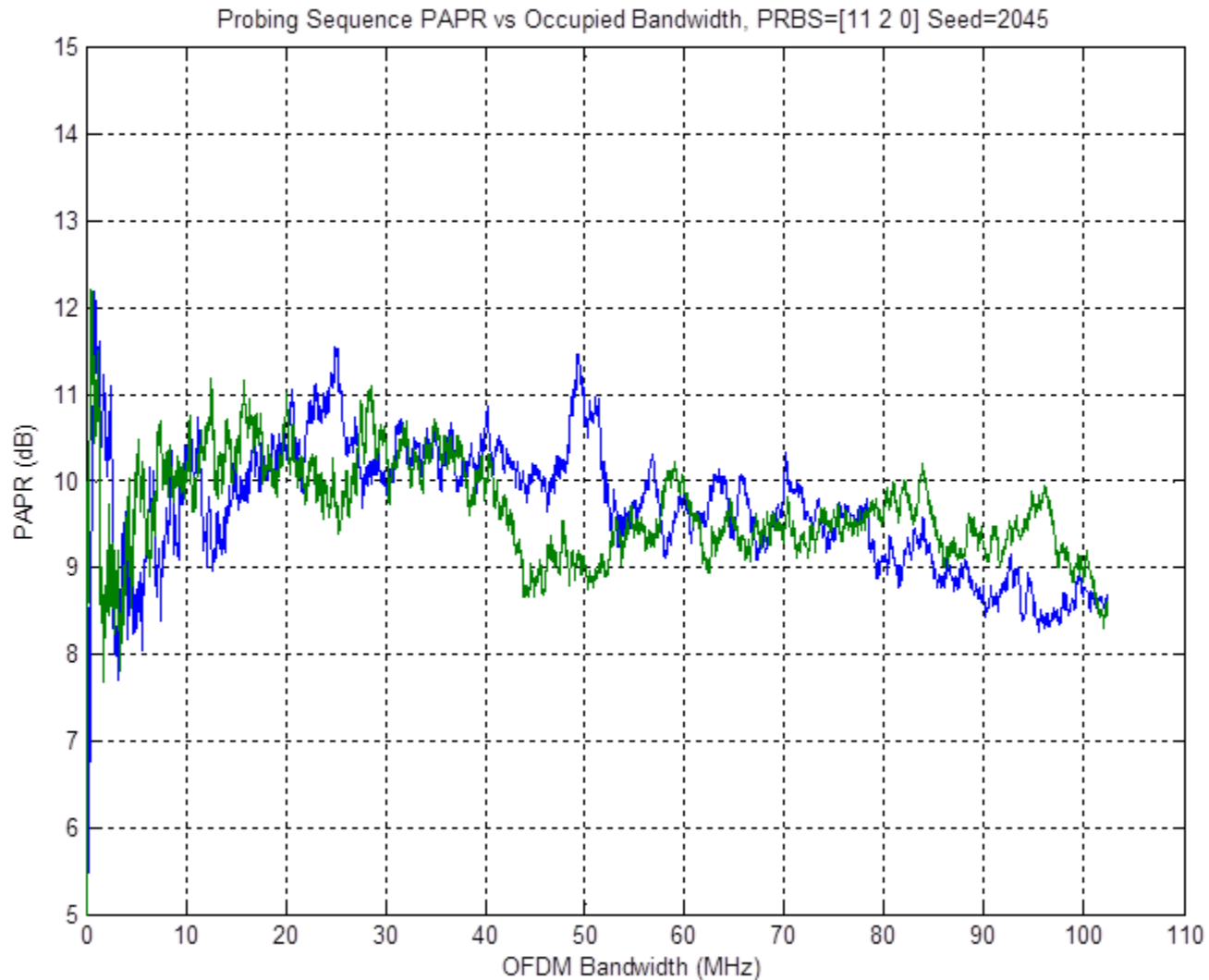
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Wideband Probe

- Polynomial : $X^{11} + X^2 + 1$, Seed = 2045 decimal
- BPSK mapping: $0 \rightarrow 1, 1 \rightarrow -1$
- Sequence mapped to subcarriers in increase frequency order and wrap around to negative frequencies at $N_{\text{fft}}/2$. First bit on first subcarrier at 0 Hz (center frequency).
- 2K FFT sequence
1 1 1 1 1 1 1 1 0 1 1 ... 1 0 0 0 0 0 0 0 1 0 1
- 4K FFT sequence
1 1 1 1 1 1 1 1 0 1 1 ... 0 0 0 0 0 0 0 1 0 1 1



PAPR of 2K (blue) and 4K (green) Probe



Power of Probe vs. Bandwidth

