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(54) **METHOD AND SYSTEM FOR DIGITAL CORRECTION FOR A DYNAMICALLY VARYING NON-LINEAR SYSTEM**

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ABSTRACT

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A system and method for digital correction for a dynamically varying non-linear system. The system includes a correction circuitry including at least one look-up table (LUT). The correction circuitry is configured to receive an input signal and modify the input signal to be processed by the non-linear system using at least one LUT to correct non-linearity incurred by the non-linear system. The at least one LUT is addressed by a magnitude or power of the input signal and a dynamically varying parameter associated with the input signal. The dynamically varying parameter may be one of average signal power of the input signal, a differential of the average power of the input signal, a directional beam index, or temperature.

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