

Table of Challenged Claims

1[pre]	A behavioral model of a nonlinear dynamic system, the model comprising:
1[a]	a first module characterizing dynamic nonlinear characteristics of the system, wherein the first module includes an input and an output; and
1[b]	a second module characterizing static nonlinear characteristics of the nonlinear system, wherein the second module includes an input and an output;
1[c]	wherein the first module is coupled to the second module.
2	The model of claim 1, wherein the first module is coupled to the second module such that an output of the first module is input to the second module.
3	The method of claim 1, wherein the second module is coupled to the first module such that an output of the second module is input to the first module.
4	The model of claim 1 wherein the first module comprises a nonlinear finite impulse response-based memory effect system and the second module comprises a look-up table-based nonlinear memoryless system.
5	The model of claim 1 wherein the first module is a dynamic weak nonlinear model and the second module is a static strong nonlinear model.
6	The model of claim 1 wherein the first module comprises a finite impulse response filter-based multi-branch nonlinear system and the second module comprises two look-up tables, each look-up table dependent on the magnitude of the input signal.

7[pre]	A predistorter for nonlinear wireless system, the predistorter comprising:
7[a]	a dynamic nonlinear predistorter module; and
7[b]	a static nonlinear predistorter module coupled to the dynamic nonlinear predistorter module such that an output of the dynamic nonlinear predistorter module is input to the static nonlinear predistorter module.
8	The predistorter of claim 7 wherein the dynamic nonlinear predistorter is a finite impulse response-based memory effect predistorter and the static nonlinear predistorter is a look-up table-based memoryless predistorter.
9	The predistorter of claim 7 wherein the dynamic nonlinear predistorter is a dynamic weak nonlinear predistorter and the static nonlinear predistorter is a static strong nonlinear predistorter.

10	The predistorter of claim 9 wherein the dynamic weak nonlinear predistorter is implemented as a finite impulse response filter-based multi-branch nonlinear structure embedded within a polynomial like series and the static strong nonlinear predistorter includes two look-up tables, each look-up table depends on the magnitude of a current input signal.
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11[pre]	A predistorter for nonlinear wireless system, the predistorter comprising:
11[a]	a static nonlinear predistorter module; and
11[b]	dynamic nonlinear predistorter module coupled to the static nonlinear predistorter module such that an output of the static nonlinear predistorter module is input to the dynamic nonlinear predistorter module.
12	The predistorter of claim 11 wherein the dynamic nonlinear predistorter module is a finite impulse response-based memory effect predistorter module and the static nonlinear predistorter is a look-up table-based memoryless predistorter module.
13	The predistorter of claim 11 wherein the dynamic nonlinear predistorter module is a dynamic weak nonlinear predistorter module and the static nonlinear predistorter is a static strong nonlinear predistorter module.
14	The predistorter of claim 12 wherein the dynamic weak nonlinear predistorter is implemented as a finite impulse response filter-based multi-branch nonlinear structure and the static strong nonlinear predistorter includes two look-up tables, each look-up table depends on the magnitude of a current input signal.

15[pre]	An augmented Wiener predistorter, the predistorter comprising:
15[a]	a dynamic nonlinear first order predistorter module; and
15[b]	a static nonlinear predistorter module coupled to the dynamic nonlinear predistorter module such that an output of the dynamic nonlinear predistorter module is input to the static nonlinear predistorter module.
16	The predistorter of claim 15 wherein the dynamic nonlinear predistorter is a finite impulse response-based memory effect predistorter and the static nonlinear predistorter is a look-up table-based memoryless predistorter.

17	The predistorter of claim 15 wherein the dynamic nonlinear predistorter is a dynamic weak nonlinear predistorter and the static nonlinear predistorter is a static strong nonlinear predistorter.
18	The predistorter of claim 17 wherein the dynamic weak nonlinear predistorter is implemented as a finite impulse response filter-based multi-branch nonlinear structure and the static strong nonlinear predistorter includes two look-up tables, each look-up table depends on the magnitude of a current input signal.

19[pre]	An augmented Hammerstein predistorter, the predistorter comprising:
19[a]	a static nonlinear predistorter module; and
19[b]	a dynamic nonlinear first order predistorter module coupled to the static nonlinear predistorter module such that an output of the static nonlinear predistorter module is input to the dynamic nonlinear predistorter module.
20	The predistorter of claim 19 wherein the dynamic nonlinear predistorter module is a finite impulse response-based memory effect predistorter module and the static nonlinear predistorter is a look-up table-based memoryless predistorter module.
21	The predistorter of claim 19 wherein the dynamic nonlinear predistorter module is a dynamic weak nonlinear predistorter module and the static nonlinear predistorter is a static strong nonlinear predistorter module.
22	The predistorter of claim 21 wherein the dynamic weak nonlinear predistorter is implemented as a finite impulse response filter-based multi-branch nonlinear structure and the static strong nonlinear predistorter includes two look-up tables, each look-up table depends on the magnitude of a current input signal.