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(54) **USER-FOCUSING TECHNIQUE FOR WIRELESS COMMUNICATION SYSTEMS**

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See application file for complete search history.

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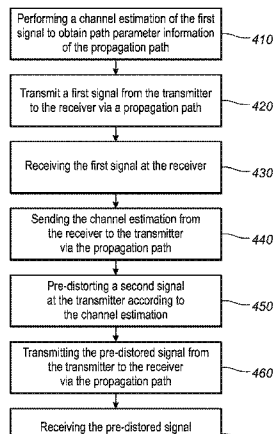
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(57) **ABSTRACT**

Systems and methods for wireless communication in a system including a transmitter, a receiver, and a plurality of propagation paths formed between the transmitter and the receiver which are capable of carrying a signal transmitted by the transmitter to the receiver. The method includes transmitting a first signal from the transmitter to the receiver via a propagation path of the plurality of propagation paths, receiving the first signal at the receiver, performing a channel estimation of the first signal to obtain path parameter information of the propagation path, sending the channel estimation from the receiver to the transmitter via the propagation path, pre-distorting a second signal at the transmitter according to the channel estimation, transmitting the predistorted signal from the transmitter to the receiver via the propagation path, and receiving the predistorted signal at the receiver.

25 Claims, 4 Drawing Sheets

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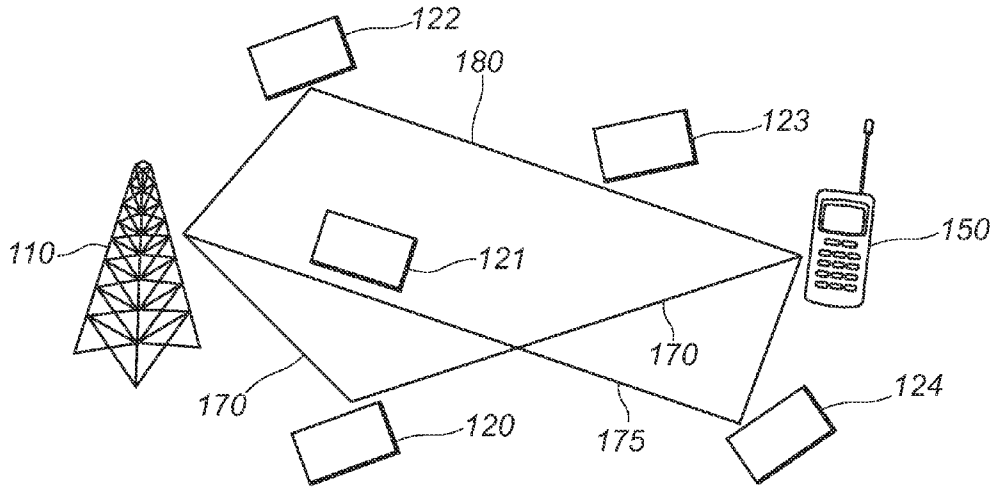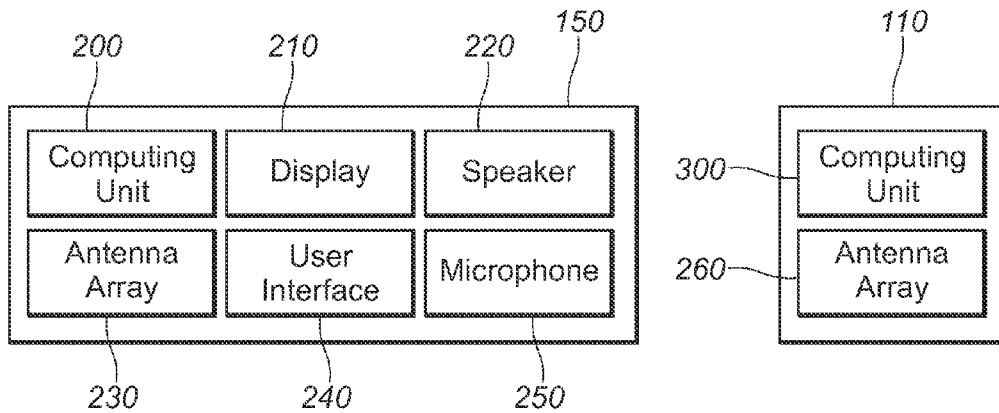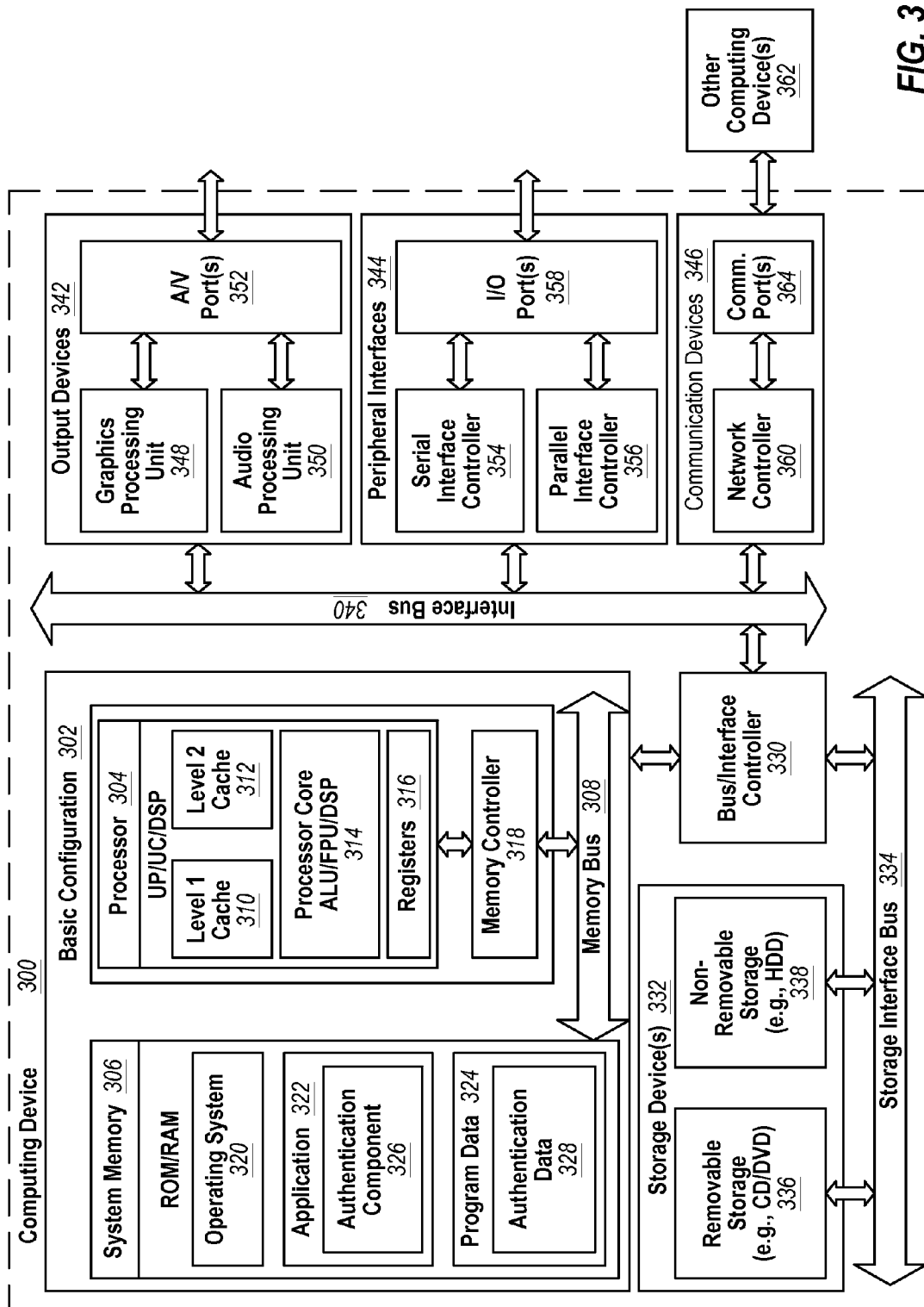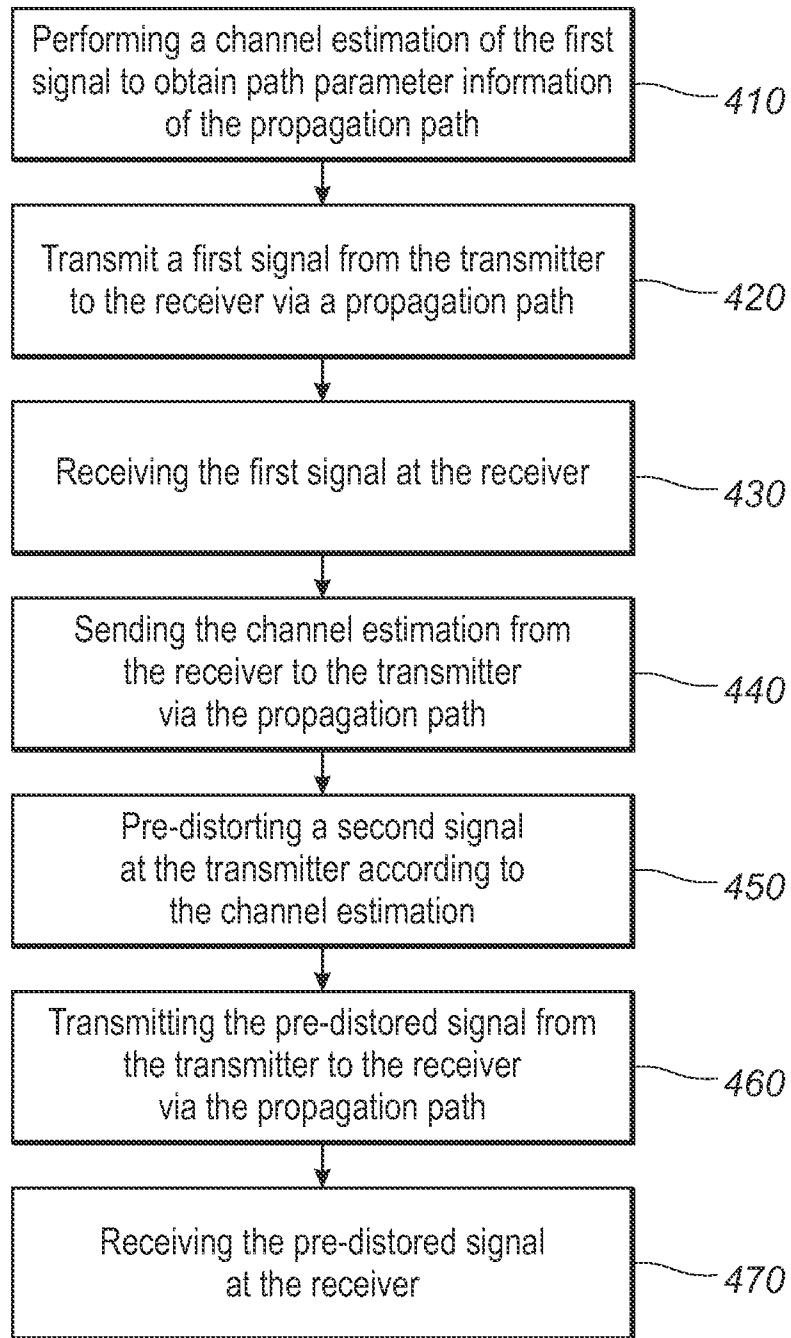
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FIG. 1

FIG. 2

FIG. 3

Performing a channel estimation of the first signal to obtain path parameter information of the propagation path —— 410

Transmit a first signal from the transmitter to the receiver via a propagation path —— 420

Receiving the first signal at the receiver —— 430

Sending the channel estimation from the receiver to the transmitter via the propagation path —— 440

Pre-distorting a second signal at the transmitter according to the channel estimation —— 450

Transmitting the pre-distored signal from the transmitter to the receiver via the propagation path —— 460

Receiving the pre-distored signal at the receiver —— 470

FIG. 4

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