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(54) Title: METHOD FOR RECOVERING THE DIGITAL ERROR OF A DIGITAL ARRAY ANTENNA AFTER POWERING IT OFF/ON AGAIN

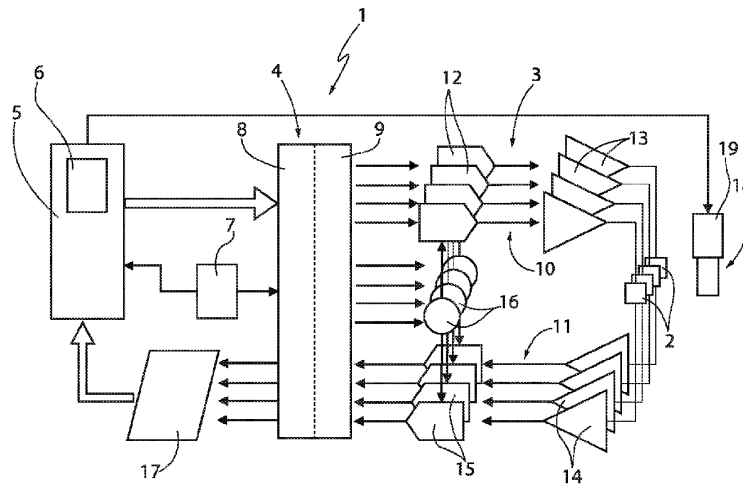


FIG.1

(57) Abstract: Method for recovering the digital error of a digital array antenna after powering it off/on again, the antenna (1) having a plurality of radiating elements (2), respective transmitting/receiving modules (3) operating at certain radio frequencies and a non-volatile memory (6), wherein at the end of a calibration of the antenna (1), for each radio frequency and each radiating element (2), a first and a second digital state (SCalRx, SCalTx) are acquired and recorded in the non-volatile memory (6) which are relative to the radio frequency in reception and, respectively, in transmission after powering the antenna (1) off and on again, for each radiating element (2), a third and a fourth digital state (SCurRx, SCurTx) are acquired which are relative to a certain test radio frequency in reception and, respectively, in transmission; for each radiating element (2), the third digital state (SCurRx) is compared with the first digital state (SCalRx) at the test radio frequency to determine first compensation coefficients (ΔtRx , $\Delta \phi Rx$) and the fourth digital state (SCurTx) is compared with the second digital state (SCalTx) at the test radio frequency to determine second compensation coefficients (ΔtTx , $\Delta \phi Tx$); the relative first compensation coefficients (ΔtRx , $\Delta \phi Rx$) in reception and the relative second compensation coefficients (ΔtTx , $\Delta \phi Tx$) in transmission are applied to each transmitting/receiving module (3).

[Continued on next page]

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