

**FRACTIONAL N FREQUENCY SYNTHESIS WITH RESIDUAL ERROR
CORRECTION AND METHOD THEREOF**

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Abstract of the Disclosure

10 A frequency synthesizer (107) utilizes a variable oscillator (114) the
output of which is used as the frequency synthesizer output (115) and is fed to
a digital divider (108). The output of the digital divider (108) feeds one input
of a phase comparator (109). The other input of the phase comparator (109) is
fed from a reference oscillator (116). A phase comparator (109) output controls
the variable oscillator (114). The digital divider (108) has a division ratio that is
varied with time by a multi accumulator fractional N division system (112) such
15 that the effective division ratio may be varied by non-integer steps. Due to the
time varying division sequence applied to the digital divider (108) there is a
residual spurious level on the output signal (115). A second digital sequence
from the multiple accumulator fractional N division system (112) is generated to
reduce this spurious level and is applied to the output of the phase comparator
20 (109).

