



US007096242C1

# (12) INTER PARTES REEXAMINATION CERTIFICATE (540th)

## United States Patent

Wilber

(10) Number: **US 7,096,242 C1**

(45) Certificate Issued: **Feb. 22, 2013**

(54) **RANDOM NUMBER GENERATOR AND GENERATION METHOD**

(58) **Field of Classification Search** ..... None  
See application file for complete search history.

(75) Inventor: **Scott A. Wilber**, Boulder, CO (US)

(56) **References Cited**

(73) Assignee: **Quantum World Corporation**, Roswell, NM (US)

To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 95/000,351, please refer to the USPTO's public Patent Application Information Retrieval (PAIR) system under the Display References tab.

### Reexamination Request:

No. 95/000,351, Feb. 21, 2008

*Primary Examiner* — Anjan Deb

### Reexamination Certificate for:

Patent No.: **7,096,242**  
Issued: **Aug. 22, 2006**  
Appl. No.: **10/173,520**  
Filed: **Jun. 17, 2002**

(57) **ABSTRACT**

An RNG circuit is connected to the parallel port of a computer. The circuit includes a flat source of white noise and a CMOS amplifier circuit compensated in the high frequency range. A low-frequency cut-off is selected to maintain high band-width yet eliminate the 1/f amplifier noise tail. A CMOS comparator with a 10 nanosecond rise time converts the analog signal to a binary one. A shift register converts the serial signal to a 4-bit parallel one at a sample rate selected at the knee of the serial dependence curve. Two levels of XOR defect correction produce a BRS at 20 kHz, which is converted to a 4-bit parallel word, latched and buffered. The entire circuit is powered from the data pins of the parallel port. A device driver interface in the computer operates the RNG. The randomness defects with various levels of correction and sample rates are calculated and the RNG is optimized before manufacture.

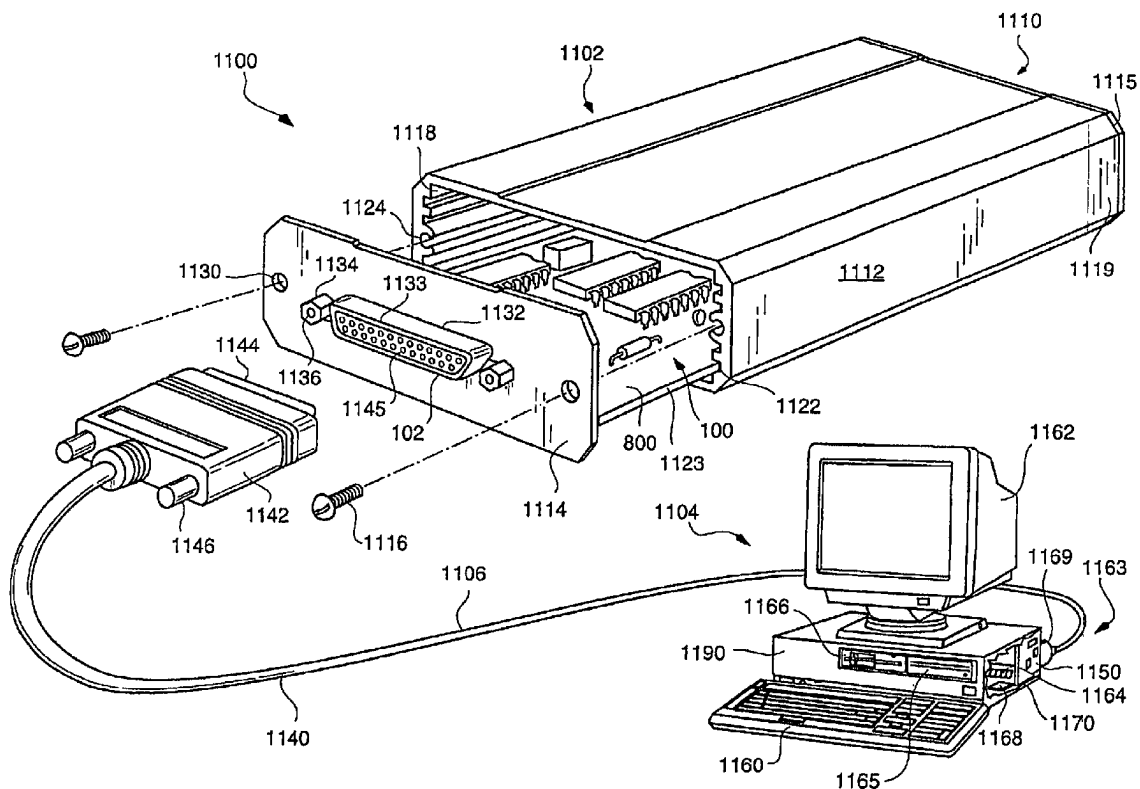
Certificate of Correction issued Oct. 9, 2007.

### Related U.S. Application Data

(62) Division of application No. 09/699,523, filed on Oct. 30, 2000, now Pat. No. 6,763,364, which is a division of application No. 08/388,631, filed on Feb. 14, 1995, now Pat. No. 6,324,558.

(51) **Int. Cl.**  
**G06F 7/58** (2006.01)

(52) **U.S. Cl.** ..... **708/255**



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**INTER PARTES  
REEXAMINATION CERTIFICATE  
ISSUED UNDER 35 U.S.C. 316**

THE PATENT IS HEREBY AMENDED AS  
INDICATED BELOW.

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AS A RESULT OF REEXAMINATION, IT HAS BEEN  
DETERMINED THAT:

The patentability of claims 22-25 is confirmed.

5 Claims 1-21 are cancelled.

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