



US008825449B2

(12) **United States Patent**  
**Cheng**

(10) **Patent No.:** US 8,825,449 B2  
(45) **Date of Patent:** Sep. 2, 2014

(54) **STRUCTURE AND METHOD OF DATA SYNCHRONIZATION FOR MULTI MEASURING APPARATUS**

USPC ..... 702/189; 370/320, 318, 317, 335;  
324/713

See application file for complete search history.

(75) Inventor: **Chiu-Hao Cheng**, New Taipei (TW)

(56) **References Cited**

(73) Assignee: **Zeroplus Technology Co., Ltd**, New Taipei (TW)

**U.S. PATENT DOCUMENTS**

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 470 days.

- 3,742,290 A \* 6/1973 Uchida ..... 327/93
- 4,566,093 A \* 1/1986 Diaz ..... 370/248
- 6,804,636 B2 \* 10/2004 Senta et al. ..... 703/13
- 7,355,378 B2 \* 4/2008 Rottacker et al. ..... 324/76.42
- 7,376,095 B2 \* 5/2008 Bae et al. ..... 370/320
- 7,920,601 B2 \* 4/2011 Andrus et al. ..... 370/518
- 8,433,532 B2 \* 4/2013 LeBrun ..... 702/67
- 8,542,005 B2 \* 9/2013 Kharrati et al. ..... 324/121 R
- 2002/0022939 A1 \* 2/2002 Senta et al. ..... 702/123
- 2003/0039222 A1 \* 2/2003 Bae et al. ..... 370/320
- 2006/0114978 A1 \* 6/2006 Rottacker et al. ..... 375/226
- 2010/0052653 A1 \* 3/2010 LeBrun ..... 324/76.47
- 2010/0057388 A1 \* 3/2010 LeBrun ..... 702/67
- 2011/0267036 A1 \* 11/2011 Kharrati et al. ..... 324/121 R

(21) Appl. No.: **13/348,756**

\* cited by examiner

(22) Filed: **Jan. 12, 2012**

**Primary Examiner — Carol S Tsai**

(65) **Prior Publication Data**

(74) **Attorney, Agent, or Firm — Chun-Ming Shih**

US 2012/0191418 A1 Jul. 26, 2012

(57) **ABSTRACT**

(30) **Foreign Application Priority Data**

Jan. 12, 2011 (TW) ..... 100101032 A

(51) **Int. Cl.**

- G06F 15/00** (2006.01)
- G01R 31/317** (2006.01)
- G01R 31/319** (2006.01)
- G01R 13/02** (2006.01)
- G05B 19/042** (2006.01)
- H04L 7/00** (2006.01)

(52) **U.S. Cl.**

- CPC .... **G01R 31/31726** (2013.01); **G01R 31/31922** (2013.01); **G01R 13/2018** (2013.01); **H04L 7/0012** (2013.01); **G01R 13/0254** (2013.01); **G05B 19/0426** (2013.01)

USPC ..... 702/189; 370/320; 370/318; 370/317; 370/335; 324/713

(58) **Field of Classification Search**

- CPC ..... G01R 31/31726; G01R 13/0254; G01R 13/0218; G01R 31/31922; G01R 31/31937; G01R 13/342; G05B 19/0426; G05B 2219/23446; H04B 7/022; H04B 1/7117; H04B 2201/70701; H04B 17/006; H04L 7/0012

**12 Claims, 7 Drawing Sheets**

