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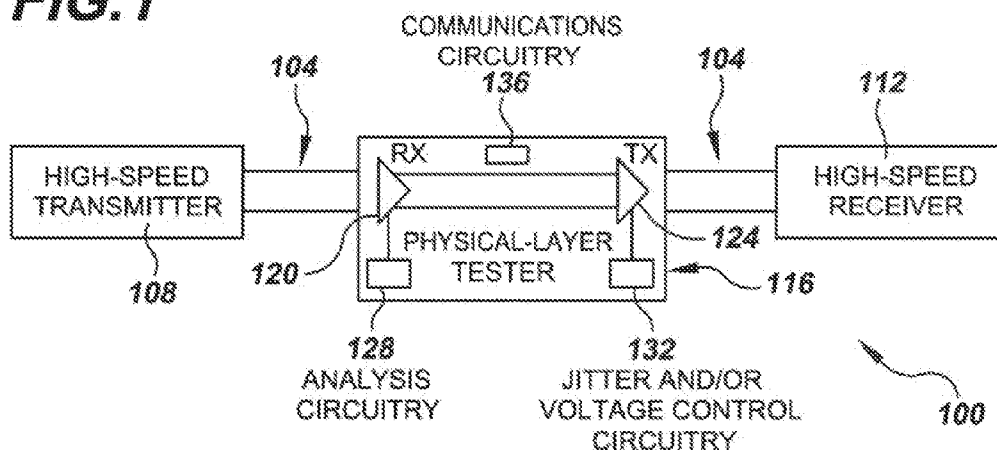
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(54) Title: PHYSICAL-LAYER TESTING OF HIGH-SPEED SERIAL LINKS IN THEIR MISSION ENVIRONMENTS

FIG. 1



(57) Abstract: A physical-layer tester for testing a high-speed serial link between a mission-environment transmitter and a mission-environment receiver. The tester includes a data path and a measurement path. The data path allows a data signal transmitted from the mission-environment transmitter to be passed through the tester to the mission-environment receiver. The measurement path includes circuitry for use in analyzing characteristics of the high-speed serial data traffic on the high-speed serial link. The tester is placed in the high-speed serial link and allows the link to be tested while live, mission-environment data is present on the link. Methods for implementing in-link testing are also disclosed.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H04L 12/26 (2008.04)

USPC - 370/241

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

USPC: 370/241

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
370/241; 702/118; 709/227,238,250

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST(PGPB, USPT, EPAB, JPAB); Google; Search Terms: tester, physical layer, physical layer tester, physical layer analyzer, serial data, receiver, transmitter, transmit, data path, measurement path, measurement, tester, analyzer, analysis, data, tester, serial data, serial link, serial, serializer, network testing

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2005/0286436 A1 (Flask) 29 December 2005 (29.12.2005), abstract, Fig 1, para. [0003], [0006]-[0007], [0009]-[0012], [0015], [0021], [0023], [0026], [0028], [0037], [0041], [0043], [0045], [0047], [0049]-[0052], [0055], [0058], [0061]-[0063], [0065], [0071], [0077], [0079], [0083], [0086], [0091], [0093], [0117], [0123], [0132], [0142], [0147], [0169], [0171], [0178], [0197], and [0211].	1, 7, 22, 30-31, 47-48, 50-54 ----- 2-6, 8-21, 23-29, 32-46, 49
Y	US 7,136,772 B2 (Duchi et al.) 14 November 2006 (14.11.2006), col 1, ln 37-46, ln 66-67, col 2, ln 31-32, ln 42-43, col 4, ln 38-43, col 5, ln 40-42, col 7, ln 9, ln 22-27, col 9, ln 5-21, and col 10, ln 19-20.	2-4, 32-35
Y	US 2005/0046584 A1 (Breed) 03 March 2005 (03.03.2005), abstract, Figs 9, 10(a)-(c), 12A, 12B, para. [0103], [0146], [0148], [0172], [0280], [0378], [0391], [0486], [0497], [0542], [0546], [1106], [1190], [1305], [1306], [1393], [1584], [1610], [1632], [1640], [1798], [2072], [2355], [2481], [2486], [2576], and [2879].	5-6, 8-21, 36-45
Y	US 2006/0139387 A1 (Silverbrook et al.) 29 June 2006 (29.06.2006), Figs 48, 190, para. [0103], [0139], [0417], [0420], [0582], [0602], [0644], [1235], [1604], [1619], [1639], [1652], [2017], [2025], [3202], [3956], [3992], [4297], [4530], [4537], [4821], [4917], [5046], [5066], and [5068].	23-29, 46, 49

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