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(12) EX PARTE REEXAMINATION CERTIFICATE (11180th)

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(54) **NETWORK SYSTEM AND OPTIONAL TETHERS**

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Related U.S. Application Data

(63) Continuation of application No. 13/370,918, filed on Feb. 10, 2012, now Pat. No. 8,942,107, which is a continuation of application No. 12/239,001, filed on Sep. 26, 2008, now Pat. No. 8,155,012, which is a continuation of application No. 10/668,708, filed on Sep. 23, 2003, now Pat. No. 7,457,250, which is a continuation of application No. 09/370,430, filed on Aug. 9, 1999, now Pat. No. 6,650,622, which is a continuation-in-part of application No. PCT/US99/07846, filed on Apr. 8, 1999.

(60) Provisional application No. 60/081,279, filed on Apr. 10, 1998.

(51) **Int. Cl.**

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H04B 3/54	(2006.01)
H01R 24/64	(2011.01)
H04L 1/24	(2006.01)
H01R 107/00	(2006.01)

(52) **U.S. Cl.**
CPC ***H04B 3/54*** (2013.01); ***H01R 24/64*** (2013.01); ***H04L 1/24*** (2013.01); *H01R 2107/00* (2013.01); *H04B 2203/547* (2013.01); *H04B 2203/5445* (2013.01); *H04B 2203/5458* (2013.01); *H04B 2203/5466* (2013.01); *H04B 2203/5491* (2013.01); *H04B 2203/5495* (2013.01)

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

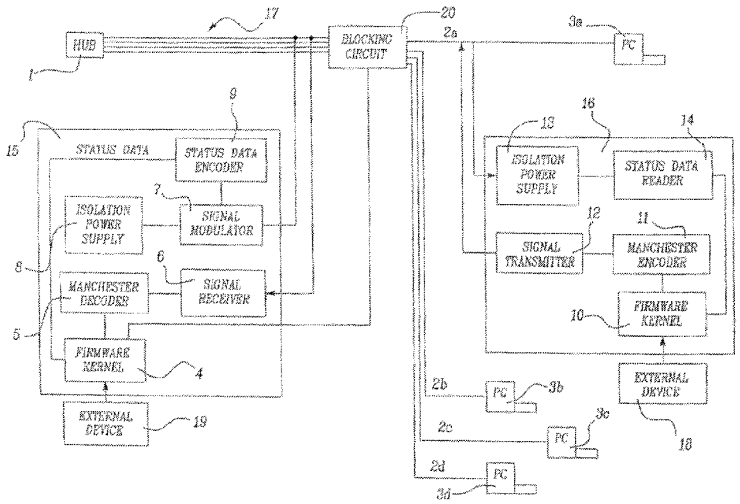
(56) **References Cited**

To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/013,802, please refer to the USPTO's public Patent Application Information Retrieval (PAIR) system under the Display References tab.

Primary Examiner — Roland Foster

(57) **ABSTRACT**

A BaseT Ethernet system having a piece of central network equipment, a piece of BaseT Ethernet terminal equipment, and data signaling pairs of conductors having first and second pairs used to carry BaseT Ethernet communication signals between the piece of central network equipment and the piece of BaseT Ethernet terminal equipment. The first and second pairs physically connect between the piece of BaseT Ethernet terminal equipment and the piece of central network equipment. The piece of central network equipment having at least one DC supply. The piece of BaseT Ethernet terminal equipment having at least one path to draw different magnitudes of current flow from the DC supply through a loop formed over at least one of the conductors of the first pair and at least one of the conductors of the second pair. The piece of central network equipment to detect at least two different magnitudes of the current flow through the loop.



EX PARTE REEXAMINATION CERTIFICATE

THE PATENT IS HEREBY AMENDED AS INDICATED BELOW.

Matter enclosed in heavy brackets [ ] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

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

The patentability of claims **1-72** is confirmed.

Claims **101-103** and **170-172** are cancelled.

Claims **73**, **145**, **146** and **219** are determined to be patentable as amended.

Claims **74-100**, **104-144**, **147-169** and **173-218**, dependent on an amended claim, are determined to be patentable.

73. A BaseT Ethernet system comprising:

Ethernet cabling having at least first and second individual pairs of conductors used to carry BaseT Ethernet communication signals, the at least first and second individual pairs of conductors physically connect between a piece of BaseT Ethernet terminal equipment and a piece of central network equipment, *the piece of central network equipment is a BaseT Ethernet hub*; the piece of central network equipment having at least one DC supply, the piece of BaseT Ethernet terminal equipment having at least one path to draw different magnitudes of current flow via the at least one DC supply through a loop formed over at least one of the conductors of the first pair of conductors and at least one of the conductors of the second pair of conductors, the piece of central network equipment to detect at least two different magnitudes of current flow through the loop.

145. The BaseT Ethernet system according to any one of claim **73**, **82-91**, **94-***100, 104***-107**, **108-121**, **127-132**, **134-139**, or **140-144** wherein the piece of BaseT Ethernet terminal equipment is a powered-off piece of BaseT Ethernet equipment.

146. A BaseT Ethernet system comprising:

Ethernet cabling having at least first and second pairs of conductors used to carry BaseT Ethernet communication signals, the at least first and second pairs of conductors physically connect between a piece of BaseT Ethernet terminal equipment and a piece of central network equipment, *the piece of central network equipment is a BaseT Ethernet hub,* the piece of central network equipment having at least one DC supply to provide at least one DC condition across at least one of the conductors of the first pair of conductors and at least one of the conductors of the second pairs of conductors, the piece of BaseT Ethernet terminal equipment having at least one path to change impedance within a loop formed over the at least one of the conductors of the first pair of conductors and the at least one of the conductors of the second pair of conductors by changing impedance within the at least one path in response to the at least one DC condition across the at least one path.

219. The BaseT Ethernet system according to any one of claim **146**, **150-152**, **155-158**, **161-165**, **168-***169, 173***-176**, **179-190**, **196-213**, or **214-218** wherein the piece of BaseT Ethernet terminal equipment is a powered-off piece of BaseT Ethernet equipment.

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