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van Valkenburg et al.

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(54) **APPARATUS, AND ASSOCIATED METHOD,
FOR ROUTING PACKET DATA IN AN AD
HOC, WIRELESS COMMUNICATION
SYSTEM**

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EP 0 768 777 A2 4/1997
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(73) Assignee: **Nokia Corporation, Espoo (FI)**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(21) Appl. No.: **09/527,786**

D. Groten and J.R. Schmidt; "Bluetooth-based Mobile Ad Hoc Networks: Opportunities and Challenges for a Telecommunications Operator"; Vehicular Technology Conference on May 6-9, 2001; IEEE VTS 53rd, vol. 2, pp. 1134-1138.*

(22) Filed: **Mar. 17, 2000**

Y. Liu, M.J. Lee and T.N. Saadawi; "A Bluetooth scatternet-route structure for multihop ad hoc networks"; IEEE Journal on Selected Areas in Communications; vol. 21, Issue: 2, Feb. 2003; pp. 229-239.*

(51) **Int. Cl.**⁷ **H04Q 7/24**

(52) **U.S. Cl.** **370/338; 370/349; 455/507**

(58) **Field of Search** 370/320, 335,
370/338, 342, 349, 389-390, 392-393,
400-404, 475; 455/507, 517, 524, 525,
95

(List continued on next page.)

Primary Examiner—Chi Pham
Assistant Examiner—Thai Hoang

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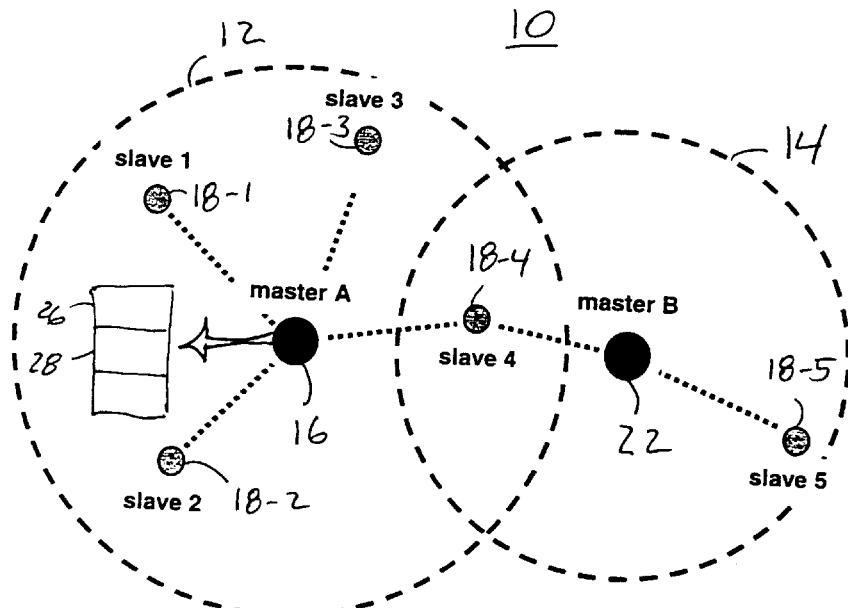
(57) **ABSTRACT**

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Apparatus, and an associated method, by which to route packets of data between a data source node and a data destination node in an ad hoc, wireless network, such as a Bluetooth scatternet. Data routing tables are provided to each node, and header information extracted from a packet header is used by such tables. Routing of a packet of data is effectuated in a hop-by-hop manner to effectuate the communication of the packet from the data source node to the data destination node.

17 Claims, 7 Drawing Sheets



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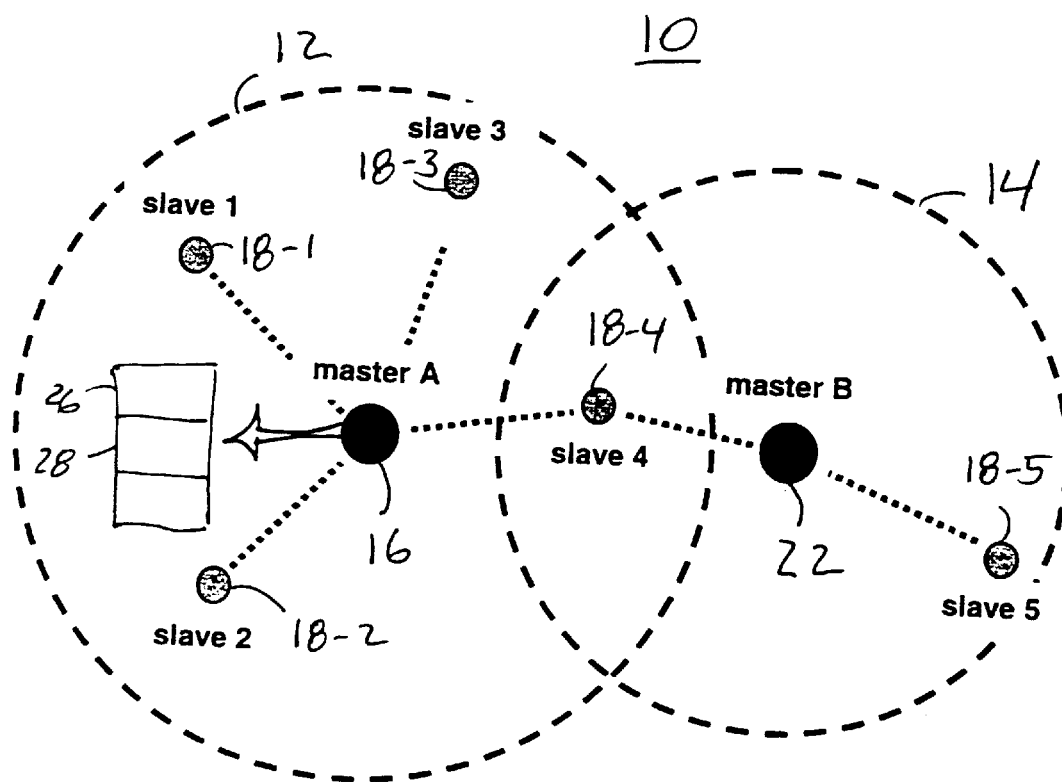


FIG. 1

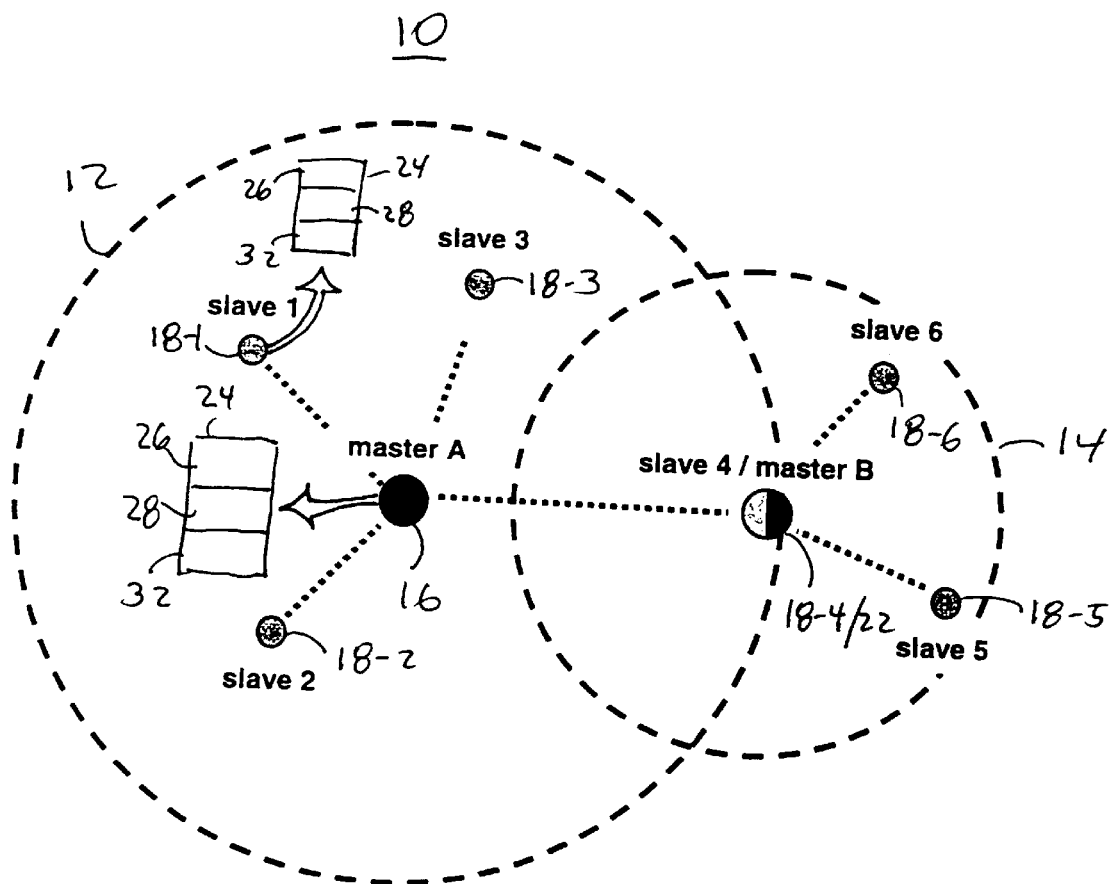


FIG. 2

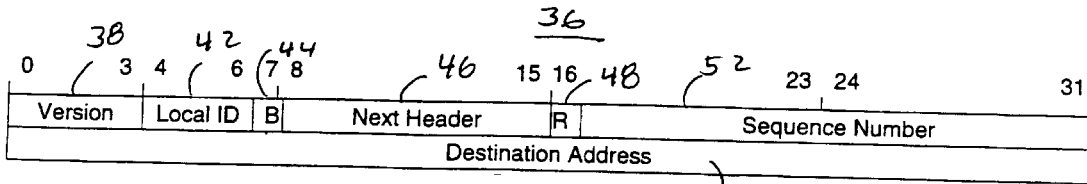


FIG. 3

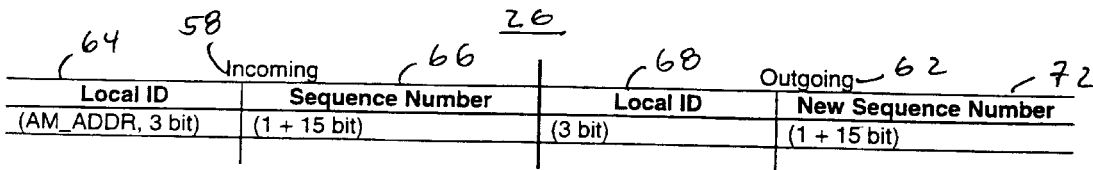


FIG. 4

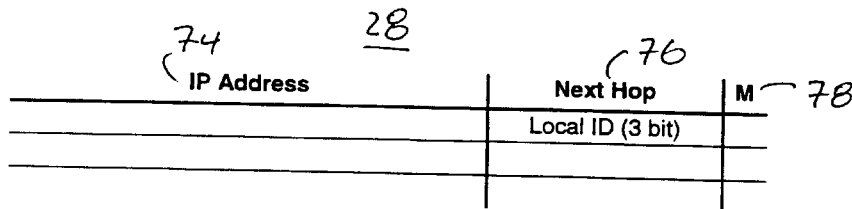


FIG. 5

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