EXHIBIT A-1 – HASTY

Invalidity Chart for U.S. Patent No. 10,051,556 Based On U.S. Patent No. 7,058,018

This chart is subject to all reservations, objections, and disclaimers in Cisco's Invalidity Contentions and any amendment, supplement, or modification thereof, which are incorporated herein by reference in their entirety.

U.S. Patent No. 7,058,018 ("Hasty") was filed on March 6, 2002 and issued on June 6, 2006. Thus, Hasty is prior art under at least pre-AIA 35 U.S.C. § 102(b). Hasty anticipates and/or renders obvious the Asserted Claims of U.S. Patent No. 10,051,556, at least as Cisco understands Golden Eye's application of the Asserted Claims in an effort to show infringement.

To the extent Golden Eye argues that any element below is not disclosed by Hasty, a person of ordinary skill in the art would have found it obvious to combine the teachings of Hasty with the background knowledge of a person of ordinary skill in the art and/or the additional references, and exemplary teachings, set forth in Cisco's Invalidity Contentions and accompanying charts. The chart below provides representative examples of where each element of each claim is found within Hasty. Citations are meant to be exemplary, not exhaustive, and Cisco reserves the right to identify and discuss additional portions of the reference in support of their contentions and/or to rebut arguments made by Golden Eye. Citations to figures, drawings, tables, and the like include reference to any accompanying or related text. All internal cross references are meant to incorporate the cross-referenced material as if fully set forth therein. Where Cisco states that Hasty "discloses" a limitation, that disclosure may be express, implicit, and/or inherent.

It is Cisco's position that Golden Eye's Infringement Contentions have not established that any accused product or service infringes any valid claim. Thus, Cisco's statements below should not be treated as an admission, implication, or suggestion that Cisco agrees with Golden Eye regarding either the scope, construction, or interpretation of any of the Asserted Claims or the infringement theories advanced by Golden Eye in its Infringement Contentions, including whether any Asserted Claim satisfies 35 U.S.C. §§ 101 or 112.

Golden Eye has yet to identify any limitation of the Asserted Claims that they contend is not anticipated and/or rendered obvious by Hasty. Cisco therefore expressly reserves the right to respond to any such contention, including by identifying additional obviousness combinations, if Golden Eye makes any such contention.

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Claim Element	Disclosure of Claim Element in Hasty
9[pre] A method for active scanning performed by an access point, the method comprising:	To the extent the preamble is limiting, Hasty discloses, either expressly or inherently, a method for active scanning performed by an access point. *See, e.g.*, An object of the present invention is to provide a system and method for computing the path loss along a link between nodes in a wireless ad-hoc communications network using transmitted power level information contained in a received data packet and the receive signal strength indication (RSSI) at which the data packet is received. Hasty at 2:47–53. Another object of the present invention is to provide a system and method for enabling a node, such as a mobile user terminal, in a wireless communications network, such as an 802.11 network, to compute the path loss along a link between itself and another node using the per-packet RSSI and the per-packet transmitted power level of data packets received and transmitted over that link, to thus determine the suitability of that link. Hasty at 2:54–61. A further object of the present invention is to provide a system and method that provides for improved communication between nodes in an ad-hoc wireless communications network, in particular, an 802.11 network, by allowing the nodes to select the path having the least loss as a medium for transporting packets. Hasty at 2:62–67.

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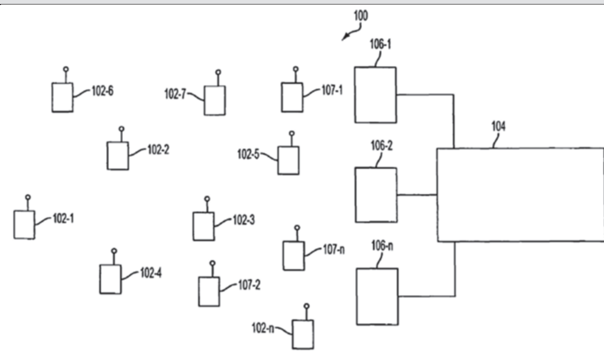
Claim Element	Disclosure of Claim Element in Hasty
	 FIG. 1 Hasty at Fig. 1. FIG. 1 is a block diagram illustrating an example of an ad-hoc packet-switched wireless communications network100 employing an embodiment of the present invention. Specifically, the network100 includes a plurality of mobile wireless user terminals 102-1 through 102-n (referred to generally as nodes or mobile nodes 102), and a fixed network104 having a plurality of access points 106-1, 106-2, . . . 106-n (referred to generally as nodes or access points 106), for providing the nodes 102 with access to the fixed network104. The fixed network104 includes, for example, a core local access network (LAN), and a plurality of servers and gateway routers, to thus provide the nodes 102 with access to other networks, such as other ad-hoc networks, the public switched telephone network (PSTN) and the Internet. The network100 further includes a plurality of fixed routers 107-1 through 107-n (referred to generally as nodes or fixed routers 107) for routing data packets between other nodes102, 106 or 107. Hasty at 3:50–67.

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Claim Element	Disclosure of Claim Element in Hasty
	As can be appreciated by one skilled in the art, the nodes102, 106 and 107 are capable of communicating with each other directly, or via one or more other nodes102, 106 or 107 operating as a router or routers for data packets being sent between nodes 102, as described in U.S. Pat. No. 5,943,322 to Mayor and in U.S. patent application Ser. Nos. 09/897,790, 09/815,157 and 09/815,164, referenced above. Specifically, as shown in FIG. 2, each node102, 106 and 107 includes a transceiver108 which is coupled to an antenna110 and is capable of receiving and transmitting signals, such as packetized data signals, to and from the node102, 106 or 107, under the control of a controller112. The packetized data signals can include, for example, voice, data or multimedia. Hasty at 4:1–14. Each node102, 106 and 107 further includes a memory114, such as a random access memory (RAM), that is capable of storing, among other things, routing information pertaining to itself and other nodes102, 106 or 107 in the network100. The nodes102, 106 and 107 exchange their respective routing information, referred to as routing advertisements or routing table information, with each other via a broadcasting mechanism periodically, for example, when a new node 102 enters the network100, or when existing nodes 102 in the network100 move. A node102, 106 or 107 will broadcast its routing table updates, and nearby nodes102, 106 or 107 will only receive the broadcast routing table updates if within broadcast range (e.g., radio frequency (RF) range) of the broadcasting node102, 106 or 107. For example, assuming that nodes 102-1, 102-2 and 102-7 are within the RF broadcast range of node 102-6, when node 102-6 broadcasts its routing table information, that information is received by nodes 102-1, 102-2 and 102-7. However, if nodes 102-3, 102-4 and 102-5 through 102-n are out of the broadcast range, none of those nodes will receive the broadcast routing table information from node 102-6. Hasty at 4:15–35. An example of the manner in which the integrity of a link is evaluated in accordance with an embodiment of the present invention will now be discussed with reference to FIGS. 1–4. Specifically, an embodiment of the present invention uses the available per-packet receive signal strength indication (RSSI) from an 802.11 physical layer combined with the per-packet transmitted power level to evaluate

Claim Element	Disclosure of Claim Element in Hasty
	the path loss along a link for a packet sent within the network100, which in this example is an 802.11 wireless network as discussed in the Background section above. Hasty at 4:36–45. The per-packet path loss is used as a metric that determines the integrity of a link between two 802.11-compliant nodes102, 106 or 107, as well as the probability that future packets will be successfully transmitted on the link between the two nodes. Routing algorithms in Layer II of the network100, which is known as the switching layer as can be appreciated by one skilled in the art, can use this probability to eliminate links that have a low probability of successful packet delivery. Hasty at 4:46–54. As shown in FIGS. 4 and 5, each node N0 through N3 in the network 100 periodically broadcasts routing advertisements to other nodes within its broadcast range. In this example, node N3 broadcasts routing advertisements to nodes N2 and N1 which are within the broadcast range of node N3. A broadcast routing advertisement includes information in its header pertaining to the transmit power level (TPL) in Decibels (Dbm). That is, prior to transmitting a packet, the controller 112 of node N3 causes this information to be included in the header of the packet. The RSSI is available from the 802.11 physical layer implementation Also, each node knows its receive sensitivity (RS), which is the lowest level signal strength at which a received signal containing a data packet can be received in order for the node to be able to successfully recover data from the received data packet. In other words, any signal received with a value less than the threshold RS value will be viewed as noise. The following equation represents an example of the manner in which the value of the link quality ratio (LQR) of the link from node N3 to node N2, and from node N3 to node N1, can be calculated that yields a ratio which can be used to measure the per packet link quality between wireless nodes in the network 100: LQR=1−(TPL(Dbm)−RSSI(Dbm))/(TPL(Dbm)−RS(Dbm)) Hasty at 4:65–5:23.

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Claim Element	Disclosure of Claim Element in Hasty
	To the extent Golden Eye argues that Hasty does not disclose this limitation, it would have been obvious in view of the knowledge of a person of ordinary skill in the art and in view of the reference(s) identified in Cisco's Invalidity Contentions and the associated Exhibits, incorporated by reference herein. A person of ordinary skill would have been motivated to combine Hasty with the identified reference(s) for the reasons discussed in the cover pleadings and associated Exhibits.
9[a] receiving, from a station, a probe request frame including information on a signal strength; and	Hasty discloses, either expressly or inherently, receiving, from a station, a probe request frame including information on a signal strength. *See, e.g.*, A system and method for evaluating at least one communication link between a transmitting node and a receiving node in a communications network, such as a wireless ad-hoc communications network in accordance with the 802.11 standard. The system and method perform the operation of assigning respective link quality values to the respective communication links based on a transmit power level (TPL) value at which the respective data packets were transmitted by the transmitting node over the respective links, a received sensitivity (RS) value of the receiving node receiving the data packets, and a receive signal strength indication (RSSI) value provided by the network for each respective link. The system and method can examine a content of a data packet being sent between the two nodes to determine the TPL, and can receive the RSSI value from a physical layer of the communications network. Accordingly, the system and method can determine which link that additional data packets are to be sent by the transmitting node to the receiving node via the communication link based on the link quality values. Specifically, the link having the highest link quality value is selected. Hasty at Abstract. An object of the present invention is to provide a system and method for computing the path loss along a link between nodes in a wireless ad-hoc communications network using transmitted power level information contained in a received data packet and the receive signal strength indication (RSSI) at which the data packet is received. Hasty at 2:47–53.

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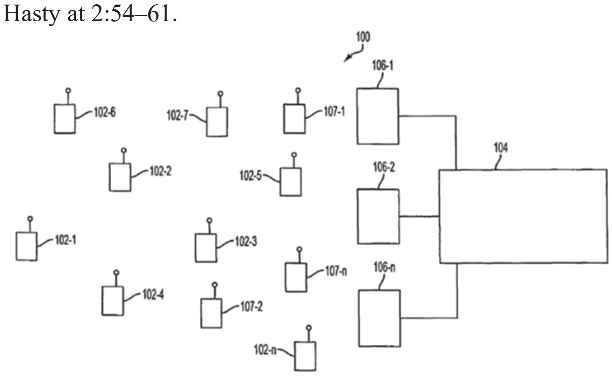
	Another object of the present invention is to provide a system and method for enabling a node, such as a mobile user terminal, in a wireless communications network, such as an 802.11 network, to compute the path loss along a link between itself and another node using the per-packet RSSI and the per-packet transmitted power level of data packets received and transmitted over that link, to thus determine the suitability of that link. Hasty at 2:54–61.  FIG. 1 Hasty at Fig. 1. FIG. 1 is a block diagram illustrating an example of an ad-hoc packet-switched wireless communications network100 employing an embodiment of the present invention. Specifically, the network100 includes a plurality of mobile wireless user terminals 102-1 through 102-n (referred to generally as nodes or mobile nodes 102), and a fixed network104 having a plurality of access points 106-1, 106-2, . . . 106-n (referred to generally as nodes or access points 106), for providing the nodes 102 with access to the fixed network104. The fixed network104 includes, for example, a core local access network (LAN), and a plurality of servers and gateway routers, to thus provide the nodes 102

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	with access to other networks, such as other ad-hoc networks, the public switched telephone network (PSTN) and the Internet. The network100 further includes a plurality of fixed routers 107-1 through 107-n (referred to generally as nodes or fixed routers 107) for routing data packets between other nodes102, 106 or 107. Hasty at 3:50–67. As can be appreciated by one skilled in the art, the nodes102, 106 and 107 are capable of communicating with each other directly, or via one or more other nodes102, 106 or 107 operating as a router or routers for data packets being sent between nodes 102, as described in U.S. Pat. No. 5,943,322 to Mayor and in U.S. patent application Ser. Nos. 09/897,790, 09/815,157 and 09/815,164, referenced above. Specifically, as shown in FIG. 2, each node102, 106 and 107 includes a transceiver108 which is coupled to an antenna110 and is capable of receiving and transmitting signals, such as packetized data signals, to and from the node102, 106 or 107, under the control of a controller112. The packetized data signals can include, for example, voice, data or multimedia. Hasty at 4:1–14. Each node102, 106 and 107 further includes a memory114, such as a random access memory (RAM), that is capable of storing, among other things, routing information pertaining to itself and other nodes102, 106 or 107 in the network100. The nodes102, 106 and 107 exchange their respective routing information, referred to as routing advertisements or routing table information, with each other via a broadcasting mechanism periodically, for example, when a new node 102 enters the network100, or when existing nodes 102 in the network100 move. A node102, 106 or 107 will broadcast its routing table updates, and nearby nodes102, 106 or 107 will only receive the broadcast routing table updates if within broadcast range (e.g., radio frequency (RF) range) of the broadcasting node102, 106 or 107. For example, assuming that nodes 102-1, 102-2 and 102-7 are within the RF broadcast range of node 102-6, when node 102-6 broadcasts its routing table information, that information is received by nodes 102-1, 102-2 and 102-7. However, if nodes 102-3, 102-4 and 102-5 through 102-n are out of the broadcast range, none of those nodes will receive the broadcast routing table information from node 102-6.

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	Hasty at 4:15–35. An example of the manner in which the integrity of a link is evaluated in accordance with an embodiment of the present invention will now be discussed with reference to FIGS. 1–4. Specifically, an embodiment of the present invention uses the available per-packet receive signal strength indication (RSSI) from an 802.11 physical layer combined with the per-packet transmitted power level to evaluate the path loss along a link for a packet sent within the network100, which in this example is an 802.11 wireless network as discussed in the Background section above. Hasty at 4:36–45. The per-packet path loss is used as a metric that determines the integrity of a link between two 802.11-compliant nodes102, 106 or 107, as well as the probability that future packets will be successfully transmitted on the link between the two nodes. Routing algorithms in Layer II of the network100, which is known as the switching layer as can be appreciated by one skilled in the art, can use this probability to eliminate links that have a low probability of successful packet delivery. Hasty at 4:46–54. As shown in FIGS. 4 and 5, each node N0 through N3 in the network 100 periodically broadcasts routing advertisements to other nodes within its broadcast range. In this example, node N3 broadcasts routing advertisements to nodes N2 and N1 which are within the broadcast range of node N3. A broadcast routing advertisement includes information in its header pertaining to the transmit power level (TPL) in Decibels (Dbm). That is, prior to transmitting a packet, the controller 112 of node N3 causes this information to be included in the header of the packet. The RSSI is available from the 802.11 physical layer implementation Also, each node knows its receive sensitivity (RS), which is the lowest level signal strength at which a received signal containing a data packet can be received in order for the node to be able to successfully recover data from the received data packet. In other words, any signal received with a value less than the threshold RS value will be viewed as noise. The following equation represents an example of the manner in which the value of the link quality ratio (LQR) of the link from node N3 to node N2, and from node N3 to node N1, can be calculated that yields a ratio which can be used to measure the per packet link quality between wireless nodes in the network 100:

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	LQR=1−(TPL(Dbm)−RSSI(Dbm))/(TPL(Dbm)−RS(Dbm)) Hasty at 4:65–5:23. 11. A method for evaluating at least one communication link between a transmitting node and a receiving node in a communications network, the method comprising: assigning a link quality value to said communication link based on a transit power level (TPL) value at which said data packet was transmitted by said transmitting node, a received sensitivity (RS) value of said receiving node receiving said data packet, and a receive signal strength indication (RSSI) value provided by said network; and wherein said assigning calculates said link quality value as a link quality ratio (LQR) represented by the equation LQR=1−(TPL−RSSI)/(TPL−RS). Hasty at Claim 11. To the extent Golden Eye argues that Hasty does not disclose this limitation, it would have been obvious in view of the knowledge of a person of ordinary skill in the art and in view of the reference(s) identified in Cisco's Invalidity Contentions and the associated Exhibits, incorporated by reference herein. A person of ordinary skill would have been motivated to combine Hasty with the identified reference(s) for the reasons discussed in the cover pleadings and associated Exhibits.
9[b] transmitting, to the station, a probe response frame in response to the probe request frame based on the information on the signal strength,	Hasty discloses, either expressly or inherently, transmitting, to the station, a probe response frame in response to the probe request frame based on the information on the signal strength. *See, e.g.*, A system and method for evaluating at least one communication link between a transmitting node and a receiving node in a communications network, such as a wireless ad-hoc communications network in accordance with the 802.11 standard. The system and method perform the operation of assigning respective link quality values to the respective communication links based on a transmit

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	power level (TPL) value at which the respective data packets were transmitted by the transmitting node over the respective links, a received sensitivity (RS) value of the receiving node receiving the data packets, and a receive signal strength indication (RSSI) value provided by the network for each respective link. The system and method can examine a content of a data packet being sent between the two nodes to determine the TPL, and can receive the RSSI value from a physical layer of the communications network. Accordingly, the system and method can determine which link that additional data packets are to be sent by the transmitting node to the receiving node via the communication link based on the link quality values. Specifically, the link having the highest link quality value is selected. Hasty at Abstract. An object of the present invention is to provide a system and method for computing the path loss along a link between nodes in a wireless ad-hoc communications network using transmitted power level information contained in a received data packet and the receive signal strength indication (RSSI) at which the data packet is received. Hasty at 2:47–53. Another object of the present invention is to provide a system and method for enabling a node, such as a mobile user terminal, in a wireless communications network, such as an 802.11 network, to compute the path loss along a link between itself and another node using the per-packet RSSI and the per-packet transmitted power level of data packets received and transmitted over that link, to thus determine the suitability of that link. Hasty at 2:54–61. FIG. 1 is a block diagram illustrating an example of an ad-hoc packet-switched wireless communications network100 employing an embodiment of the present invention. Specifically, the network100 includes a plurality of mobile wireless user terminals 102-1 through 102-n (referred to generally as nodes or mobile nodes 102), and a fixed network104 having a plurality of access points 106-1, 106-2, . . . 106-n (referred to generally as nodes or access points 106), for providing the nodes

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	102 with access to the fixed network104. The fixed network104 includes, for example, a core local access network (LAN), and a plurality of servers and gateway routers, to thus provide the nodes 102 with access to other networks, such as other ad-hoc networks, the public switched telephone network (PSTN) and the Internet. The network100 further includes a plurality of fixed routers 107-1 through 107-n (referred to generally as nodes or fixed routers 107) for routing data packets between other nodes102, 106 or 107. Hasty at 3:50–67. As can be appreciated by one skilled in the art, the nodes102, 106 and 107 are capable of communicating with each other directly, or via one or more other nodes102, 106 or 107 operating as a router or routers for data packets being sent between nodes 102, as described in U.S. Pat. No. 5,943,322 to Mayor and in U.S. patent application Ser. Nos. 09/897,790, 09/815,157 and 09/815,164, referenced above. Specifically, as shown in FIG. 2, each node102, 106 and 107 includes a transceiver108 which is coupled to an antenna110 and is capable of receiving and transmitting signals, such as packetized data signals, to and from the node102, 106 or 107, under the control of a controller112. The packetized data signals can include, for example, voice, data or multimedia. Hasty at 4:1–14. Each node102, 106 and 107 further includes a memory114, such as a random access memory (RAM), that is capable of storing, among other things, routing information pertaining to itself and other nodes102, 106 or 107 in the network100. The nodes102, 106 and 107 exchange their respective routing information, referred to as routing advertisements or routing table information, with each other via a broadcasting mechanism periodically, for example, when a new node 102 enters the network100, or when existing nodes 102 in the network100 move. A node102, 106 or 107 will broadcast its routing table updates, and nearby nodes102, 106 or 107 will only receive the broadcast routing table updates if within broadcast range (e.g., radio frequency (RF) range) of the broadcasting node102, 106 or 107. For example, assuming that nodes 102-1, 102-2 and 102-7 are within the RF broadcast range of node 102-6, when node 102-6 broadcasts its routing table information, that information is received by nodes 102-1, 102-2 and 102-7. However, if nodes 102-3, 102-4 and 102-5

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	through 102-n are out of the broadcast range, none of those nodes will receive the broadcast routing table information from node 102-6. Hasty at 4:15–35. An example of the manner in which the integrity of a link is evaluated in accordance with an embodiment of the present invention will now be discussed with reference to FIGS. 1–4. Specifically, an embodiment of the present invention uses the available per-packet receive signal strength indication (RSSI) from an 802.11 physical layer combined with the per-packet transmitted power level to evaluate the path loss along a link for a packet sent within the network100, which in this example is an 802.11 wireless network as discussed in the Background section above. Hasty at 4:36–45. The per-packet path loss is used as a metric that determines the integrity of a link between two 802.11-compliant nodes 102, 106 or 107, as well as the probability that future packets will be successfully transmitted on the link between the two nodes. Routing algorithms in Layer II of the network 100, which is known as the switching layer as can be appreciated by one skilled in the art, can use this probability to eliminate links that have a low probability of successful packet delivery. Hasty at 4:46–54.

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	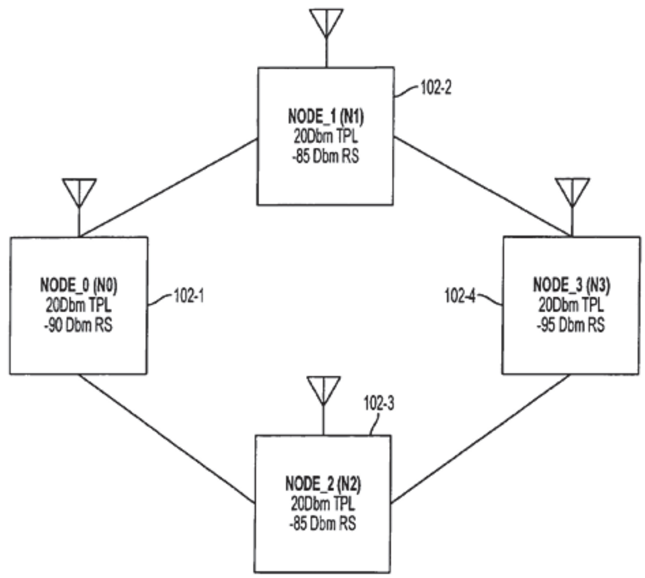 FIG. 3 Hasty at Fig. 3. Referring to FIG. 3, four nodes 102-1, 102-2, 102-3 and 102-4, which are also identified as nodes N0, N1, N2 and N3, respectively, are depicted as forming two routes. The first route comprises nodes N0, N1 and N3, while the second route comprises nodes N0, N2 and N3. In this example, node N0 is the origination node and node N34 is the destination node, while nodes N1 and N2 are intermediate nodes.

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	An example of the manner in which an embodiment of the present invention computes path loss will now be discussed in detail with respect to FIGS. 3–5. Hasty at 4:55–64. As shown in FIGS. 4 and 5, each node N0 through N3 in the network 100 periodically broadcasts routing advertisements to other nodes within its broadcast range. In this example, node N3 broadcasts routing advertisements to nodes N2 and N1 which are within the broadcast range of node N3. A broadcast routing advertisement includes information in its header pertaining to the transmit power level (TPL) in Decibels (Dbm). That is, prior to transmitting a packet, the controller 112 of node N3 causes this information to be included in the header of the packet. The RSSI is available from the 802.11 physical layer implementation Also, each node knows its receive sensitivity (RS), which is the lowest level signal strength at which a received signal containing a data packet can be received in order for the node to be able to successfully recover data from the received data packet. In other words, any signal received with a value less than the threshold RS value will be viewed as noise. The following equation represents an example of the manner in which the value of the link quality ratio (LQR) of the link from node N3 to node N2, and from node N3 to node N1, can be calculated that yields a ratio which can be used to measure the per packet link quality between wireless nodes in the network 100: LQR=1−(TPL(Dbm)−RSSI(Dbm))/(TPL(Dbm)−RS(Dbm)) Hasty at 4:65–5:23. In this example, each node N0 through N3 in FIG. 3 has a TPL value of 20 Dbm. Node N0 has an RS value of −90 Dbm, nodes N1 and N2 each have an RS value of −85 Dbm, and node N3 has an RS value of −95 Dbm. In this example, the RSSI for the link from node N3 to node N2 is −70 Dbm, and the RSSI for the link from node N3 to node N1 is −80 Dbm. Accordingly, applying the LQR equation to the TPL, RS and RSSI values at node N2, a LQR value can be calculated by the controller 112 of node N2 as follows: 1−[((20 Dbm−(−70 Dbm))/(20 Dbm−(−85 Dbm))]=0.142 LQR Hasty at 5:24–35.

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	The RSSI value for the link between nodes N3 and N2 is −80 Dbm. Applying the LQR equation as shown results in: 1−[((20 Dbm−(−80 Dbm))/(20 Dbm−(−85 Dbm))]=0.048 LQR Hasty at 5:36–40. As indicated, the route from node N3 to node N1 has a higher LQR value that the route from node N3 to node N2, which indicates that the route from node N3 to node N1 has a higher integrity level and there is thus a higher probability that future packets taking this route will have better success than if they took the route from node N3 to node N2. As further shown in FIGS. 4 and 5, node N1 broadcasts a routing advertisement to nodes N0 and N3 which are in the broadcast range of node N1. Nodes N0 and N3 calculate the respective LQR based on these received routing advertisements in the manner described above. It is further noted that the routing advertisements broadcast by node N1 includes information pertaining to the calculated LQR for the link from node N3 to node N1. Node N2 also broadcasts a routing advertisement to nodes N0 and N3 which are in the broadcast range of node N2. It is further noted that the routing advertisements broadcast by node N2 includes information pertaining to the calculated LQR for the link from node N3 to node N2. Hasty at 5:41–59. The respective controllers 112 of nodes N0 and N3 thus calculate the respective LQR based on these received routing advertisements in the manner described above. It is also noted that node N0 is not shown as broadcasting any routing advertisements to any of the nodes within its broadcast range because, as discussed above, node N0 in this example is an origination node that sends a data packet to a destination node N3, and thus its routing advertisements are irrelevant for purposes of this description. However, like all nodes, node N0 would broadcast routing advertisements to the nodes in its broadcast range. Hasty at 5:60–6:3. Furthermore, because node N0 is the origination node in this example, and is sending a data packet to destination node N3, the controller 112 of node N0 also calculates the aggregate link quality ratio

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	(ALQR) for the two paths, namely, the path including nodes N0, N1 and N3, and the path including nodes N0, N1 and N3. Hence, node 0 calculates the ALQR for the path including nodes N0, N1 and N3 by adding the LQRs for the links N3 to N1 and NI to N0 as calculated above. The ALQR for this path is calculated to be 0.135 as shown in FIG. 5. Similarly, node 0 calculates the ALQR for the path including nodes N0, N2 and N3 by adding the LQRs for the links N3 to N2 and N2 to N0 as calculated above. The ALQR for this path is calculated to be 0.324 as shown in FIG. 5. Assuming that all other variables are equal, the controller 112 of node N0 chooses the path having the highest ALQR, namely, the path including nodes N0, N2 and N3. Hasty at 6:4–20. As noted before, the check for LQR is done with the delivery of each packet. Thus, the technique according to the embodiment of the present invention described above provides a means of determining the best route on a continuous basis. Therefore, the mobility of the nodes 102 does not have a major effect on the quality of packet transmission for the wireless network 100. Furthermore, a running average of the LQR can be maintained by the source node N0 to determine the probable link reliability and can be used in determining which potential route to select. That is, over time, the LQR of the respective links can be accumulated to provide a more statistically meaningful measure of the quality of the links. Hasty at 6:21–32. To the extent Golden Eye argues that Hasty does not disclose this limitation, it would have been obvious in view of the knowledge of a person of ordinary skill in the art and in view of the reference(s) identified in Cisco's Invalidity Contentions and the associated Exhibits, incorporated by reference herein. A person of ordinary skill would have been motivated to combine Hasty with the identified reference(s) for the reasons discussed in the cover pleadings and associated Exhibits.
9[c] wherein an access of the station to the access point is based on the probe response frame and a	Hasty discloses, either expressly or inherently, an access of the station to the access point is based on the probe response frame and a maximum probe response time. *See, e.g.*,

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Claim Element	Disclosure of Claim Element in Hasty
maximum probe response time.	A system and method for evaluating at least one communication link between a transmitting node and a receiving node in a communications network, such as a wireless ad-hoc communications network in accordance with the 802.11 standard. The system and method perform the operation of assigning respective link quality values to the respective communication links based on a transmit power level (TPL) value at which the respective data packets were transmitted by the transmitting node over the respective links, a received sensitivity (RS) value of the receiving node receiving the data packets, and a receive signal strength indication (RSSI) value provided by the network for each respective link. The system and method can examine a content of a data packet being sent between the two nodes to determine the TPL, and can receive the RSSI value from a physical layer of the communications network. Accordingly, the system and method can determine which link that additional data packets are to be sent by the transmitting node to the receiving node via the communication link based on the link quality values. Specifically, the link having the highest link quality value is selected. Hasty at Abstract. As shown in FIGS. 4 and 5, each node N0 through N3 in the network 100 periodically broadcasts routing advertisements to other nodes within its broadcast range. In this example, node N3 broadcasts routing advertisements to nodes N2 and N1 which are within the broadcast range of node N3. A broadcast routing advertisement includes information in its header pertaining to the transmit power level (TPL) in Decibels (Dbm). That is, prior to transmitting a packet, the controller 112 of node N3 causes this information to be included in the header of the packet. The RSSI is available from the 802.11 physical layer implementation Also, each node knows its receive sensitivity (RS), which is the lowest level signal strength at which a received signal containing a data packet can be received in order for the node to be able to successfully recover data from the received data packet. In other words, any signal received with a value less than the threshold RS value will be viewed as noise. The following equation represents an example of the manner in which the value of the link quality ratio (LQR) of the link from node N3 to node N2, and from node N3 to node N1, can be calculated that yields a ratio which can be used to measure the per packet link quality between wireless nodes in the network 100: LQR=1−(TPL(Dbm)−RSSI(Dbm))/(TPL(Dbm)−RS(Dbm)) Hasty at 4:65–5:23.

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	In this example, each node N0 through N3 in FIG. 3 has a TPL value of 20 Dbm. Node N0 has an RS value of −90 Dbm, nodes N1 and N2 each have an RS value of −85 Dbm, and node N3 has an RS value of −95 Dbm. In this example, the RSSI for the link from node N3 to node N2 is −70 Dbm, and the RSSI for the link from node N3 to node N1 is −80 Dbm. Accordingly, applying the LQR equation to the TPL, RS and RSSI values at node N2, a LQR value can be calculated by the controller 112 of node N2 as follows: 1−[((20 Dbm−(−70 Dbm))/(20 Dbm−(−85 Dbm))]=0.142 LQR Hasty at 5:24–35. The RSSI value for the link between nodes N3 and N2 is −80 Dbm. Applying the LQR equation as shown results in: 1−[((20 Dbm−(−80 Dbm))/(20 Dbm−(−85 Dbm))]=0.048 LQR Hasty at 5:36–40. As indicated, the route from node N3 to node N1 has a higher LQR value that the route from node N3 to node N2, which indicates that the route from node N3 to node N1 has a higher integrity level and there is thus a higher probability that future packets taking this route will have better success than if they took the route from node N3 to node N2. As further shown in FIGS. 4 and 5, node N1 broadcasts a routing advertisement to nodes N0 and N3 which are in the broadcast range of node N1. Nodes N0 and N3 calculate the respective LQR based on these received routing advertisements in the manner described above. It is further noted that the routing advertisements broadcast by node N1 includes information pertaining to the calculated LQR for the link from node N3 to node N1. Node N2 also broadcasts a routing advertisement to nodes N0 and N3 which are in the broadcast range of node N2. It is further noted that the routing advertisements broadcast by node N2 includes information pertaining to the calculated LQR for the link from node N3 to node N2. Hasty at 5:41–59. The respective controllers 112 of nodes N0 and N3 thus calculate the respective LQR based on these received routing advertisements in the manner described above. It is also noted that node N0 is not

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	shown as broadcasting any routing advertisements to any of the nodes within its broadcast range because, as discussed above, node N0 in this example is an origination node that sends a data packet to a destination node N3, and thus its routing advertisements are irrelevant for purposes of this description. However, like all nodes, node N0 would broadcast routing advertisements to the nodes in its broadcast range. Hasty at 5:60–6:3. Furthermore, because node N0 is the origination node in this example, and is sending a data packet to destination node N3, the controller 112 of node N0 also calculates the aggregate link quality ratio (ALQR) for the two paths, namely, the path including nodes N0, N1 and N3, and the path including nodes N0, N1 and N3. Hence, node 0 calculates the ALQR for the path including nodes N0, N1 and N3 by adding the LQRs for the links N3 to N1 and NI to N0 as calculated above. The ALQR for this path is calculated to be 0.135 as shown in FIG. 5. Similarly, node 0 calculates the ALQR for the path including nodes N0, N2 and N3 by adding the LQRs for the links N3 to N2 and N2 to N0 as calculated above. The ALQR for this path is calculated to be 0.324 as shown in FIG. 5. Assuming that all other variables are equal, the controller 112 of node N0 chooses the path having the highest ALQR, namely, the path including nodes N0, N2 and N3. Hasty at 6:4–20. As noted before, the check for LQR is done with the delivery of each packet. Thus, the technique according to the embodiment of the present invention described above provides a means of determining the best route on a continuous basis. Therefore, the mobility of the nodes 102 does not have a major effect on the quality of packet transmission for the wireless network 100. Furthermore, a running average of the LQR can be maintained by the source node N0 to determine the probable link reliability and can be used in determining which potential route to select. That is, over time, the LQR of the respective links can be accumulated to provide a more statistically meaningful measure of the quality of the links. Hasty at 6:21–32.

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	To the extent Golden Eye argues that Hasty does not disclose this limitation, it would have been obvious in view of the knowledge of a person of ordinary skill in the art and in view of the reference(s) identified in Cisco's Invalidity Contentions and the associated Exhibits, incorporated by reference herein. A person of ordinary skill would have been motivated to combine Hasty with the identified reference(s) for the reasons discussed in the cover pleadings and associated Exhibits.
11[pre] An access point configured to perform an active scanning, the access point comprising:	*See* 9[pre] above.
11[a] a transceiver; and	Hasty discloses, either expressly or inherently, an access point comprising a transceiver. *See, e.g.*, As can be appreciated by one skilled in the art, the nodes 102, 106 and 107 are capable of communicating with each other directly, or via one or more other nodes 102, 106 or 107 operating as a router or routers for data packets being sent between nodes 102, as described in U.S. Pat. No. 5,943,322 to Mayor and in U.S. patent application Ser. Nos. 09/897,790, 09/815,157 and 09/815,164, referenced above. Specifically, as shown in FIG. 2, each node 102, 106 and 107 includes a transceiver 108 which is coupled to an antenna 110 and is capable of receiving and transmitting signals, such as packetized data signals, to and from the node 102, 106 or 107, under the control of a controller 112. The packetized data signals can include, for example, voice, data or multimedia. Hasty at 4:1–14.

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	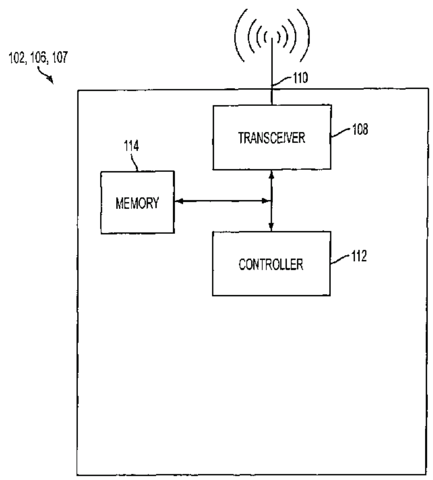 FIG. 2 Hasty at Fig. 2. To the extent Golden Eye argues that Hasty does not disclose this limitation, it would have been obvious in view of the knowledge of a person of ordinary skill in the art and in view of the reference(s) identified in Cisco's Invalidity Contentions and the associated Exhibits, incorporated by reference herein. A person of ordinary skill would have been motivated to combine Hasty with the identified reference(s) for the reasons discussed in the cover pleadings and associated Exhibits.
11[b] a processor, a	Hasty discloses, either expressly or inherently, an access point comprising a processor.

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	See, e.g., As can be appreciated by one skilled in the art, the nodes 102, 106 and 107 are capable of communicating with each other directly, or via one or more other nodes 102, 106 or 107 operating as a router or routers for data packets being sent between nodes 102, as described in U.S. Pat. No. 5,943,322 to Mayor and in U.S. patent application Ser. Nos. 09/897,790, 09/815,157 and 09/815,164, referenced above. Specifically, as shown in FIG. 2, each node 102, 106 and 107 includes a transceiver 108 which is coupled to an antenna 110 and is capable of receiving and transmitting signals, such as packetized data signals, to and from the node 102, 106 or 107, under the control of a controller 112. The packetized data signals can include, for example, voice, data or multimedia. Hasty at 4:1–14.

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	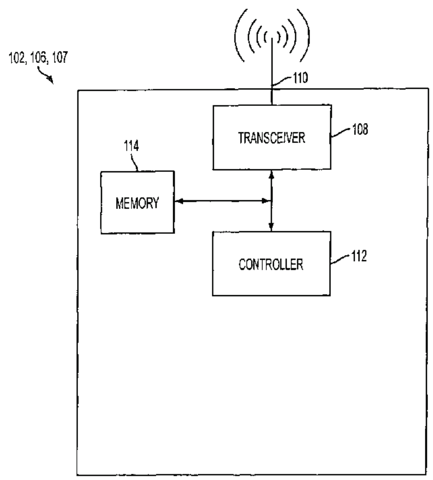 FIG. 2 Hasty at Fig. 2. The respective controllers 112 of nodes N0 and N3 thus calculate the respective LQR based on these received routing advertisements in the manner described above. It is also noted that node N0 is not shown as broadcasting any routing advertisements to any of the nodes within its broadcast range because, as discussed above, node N0 in this example is an origination node that sends a data packet to a destination node N3, and thus its routing advertisements are irrelevant for purposes of this description. However, like all nodes, node N0 would broadcast routing advertisements to the nodes in its broadcast range.

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	Hasty at 5:60-6:3. Furthermore, because node N0 is the origination node in this example, and is sending a data packet to destination node N3, the controller 112 of node N0 also calculates the aggregate link quality ratio (ALQR) for the two paths, namely, the path including nodes N0, N1 and N3, and the path including nodes N0, N1 and N3. Hence, node 0 calculates the ALQR for the path including nodes N0, N1 and N3 by adding the LQRs for the links N3 to N1 and NI to N0 as calculated above. The ALQR for this path is calculated to be 0.135 as shown in FIG. 5. Similarly, node 0 calculates the ALQR for the path including nodes N0, N2 and N3 by adding the LQRs for the links N3 to N2 and N2 to N0 as calculated above. The ALQR for this path is calculated to be 0.324 as shown in FIG. 5. Assuming that all other variables are equal, the controller 112 of node N0 chooses the path having the highest ALQR, namely, the path including nodes N0, N2 and N3 Hasty at 6:4–20. 1. A system, adapted for use in a communications network, for evaluating at least one communication link between a transmitting node and a receiving node in the communications network, the system comprising: a processor for assigning a link quality value to said communication link based on a transmit power level (TPL) value at which said data packet was transmitted by said transmitting node, a received sensitivity (RS) value of said receiving node receiving said data packet, and a receive signal strength indication (RSSI) value provided by said network; and wherein said processor calculates said link quality value as a link quality ratio (LQR) represented by the equation LQR=1−(TPL−RSSI)/(TPL−RS). Hasty at Claim 1. *See also* Claims 2–10, 31–36. To the extent Golden Eye argues that Hasty does not disclose this limitation, it would have been obvious in view of the knowledge of a person of ordinary skill in the art and in view of the

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	reference(s) identified in Cisco's Invalidity Contentions and the associated Exhibits, incorporated by reference herein. A person of ordinary skill would have been motivated to combine Hasty with the identified reference(s) for the reasons discussed in the cover pleadings and associated Exhibits.
11[c] wherein the processor is configured to:	*See* 11[b] above.
11[d] cause the transceiver to receive, from a station, a probe request frame including information on a signal strength; and	*See* 9[a], 11[a] above.
11[e] cause the transceiver to transmit, to the station, a probe response frame in response to the probe request frame based on the information on the signal strength,	*See* 9[b], 11[a] above.
11[f] wherein an access of the station to the access point is based on the probe response frame and a maximum probe response time.	*See* 9[c] above.