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(12) United States Patent

Pelland et al.

(54) WIRELESS EARPHONE THAT TRANSITIONS BETWEEN WIRELESS NETWORKS

(75) Inventors: Michael J. Pelland, Princeton, WI (US);

Michael J. Koss, River Hills, WI (US); Michael Sagan, Marshall, WI (US); Steven R. Reckamp, Crystal Lake, IL (US); Gregory J. Hallingstad, Madison, WI (US); Jeffrey K. Bovee, Lake Geneva, WI (US); Morgan J. Lowery,

DeForest, WI (US)

(73) Assignee: Koss Corporation, Milwaukee, WI (US)

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(56) References Cited

U.S. PATENT DOCUMENTS

5,784,685	\mathbf{A}	7/1998	Stanford et al.	
6,792,091	B2	9/2004	Lemchen et al.	
6,937,712	B2	8/2005	Lemchen et al.	
7,003,515	В1	2/2006	Glaser	
7,027,311	B2	4/2006	Vanderelli	
7,099,370	B2	8/2006	Takahashi	
7,120,388	B2	10/2006	Hall	
7,139,585	B2	11/2006	Hachimura et al.	
7,599,679	B2	10/2009	Awiszus	
		(Continued)		

FOREIGN PATENT DOCUMENTS

WO WO 2007/136620 A2 11/2007 (Continued)

OTHER PUBLICATIONS

Supplementary European Search Report for European Application No. 09731146.8 mailed Jun. 10, 2011, 7 pages.

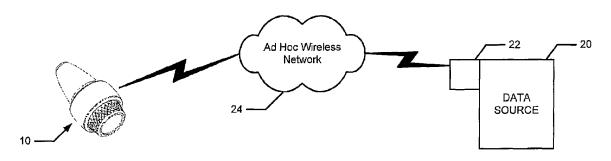
(Continued)

Primary Examiner — Kiet Doan (74) Attorney, Agent, or Firm — K&L Gates LLP

(57) ABSTRACT

A wireless earphone that comprises a transceiver circuit for receiving streaming audio from a data source over a local ad hoc wireless network. When the data source and the earphone are out of range, they transition automatically to an infrastructure wireless network. If there is no common infrastructure wireless network for both the data source and the speakerphone set, the earphone connects to a host server via an available wireless network.

33 Claims, 16 Drawing Sheets





Daga Exhibit 1008

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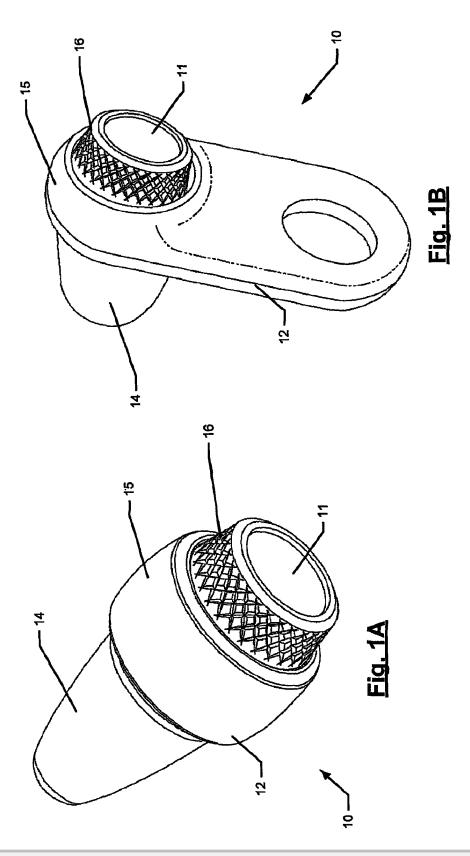
U.S. PATENT DOCUMENTS FOREIGN PATENT DOCUMENTS 4/2010 Rofougaran 455/73 7,697,899 B2* WO WO 2007/139578 A1 12/2007 7,764,775 B2 7,805,210 B2 7/2010 Tarkoff et al. WO WO 2008/054985 A2 5/2008 9/2010 Cucos WO 2009/086555 A1 WO 7/2009 2005/0064853 A1* 2005/0198233 A1 OTHER PUBLICATIONS 2006/0206487 A1 9/2006 Harada International Search Report for International Application No. PCT/ 2006/0212442 A1 9/2006 Conrad 2006/0212444 A1 9/2006 Handman US09/39754 mailed Jun. 11, 2009, 2 pages. 2007/0008984 A1 1/2007 Philips International Preliminary Examination Report for International 2007/0037615 A1 2/2007 Glezerman Application No. PCT/US09/39754 mailed Oct. 28, 2010, 8 pages. 2007/0049198 A1 3/2007 Walsh et al. Written Opinion of the International Searching Authority for Inter-Goldberg 2007/0116316 A1 5/2007 national Application No. PCT/US09/39754 mailed Jun. 11, 2009, 5 2007/0165875 A1 7/2007 Rezvani 2007/0230727 A1 10/2007 Sanguino 2008/0062939 A1 3/2008 Van Horn IT Review, "LTB 802.11 WiFi Headphones", http://itreview. 2008/0101279 A1 5/2008 Russell belproject.com/item/1536 accessed on Mar. 13, 2008 (4 pages). 2008/0291891 A1 11/2008 Jerlhagen

* cited by examiner

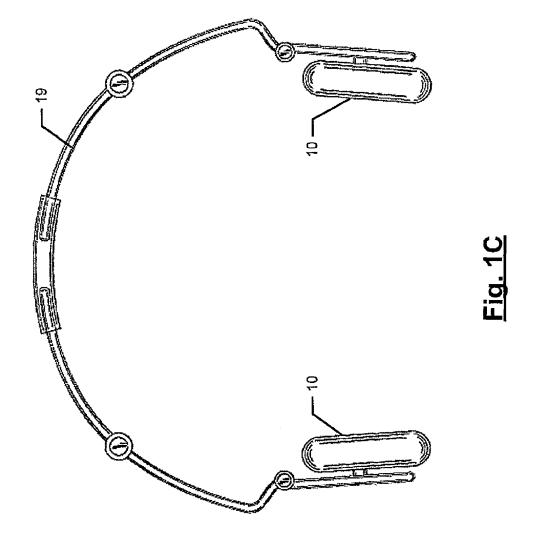


2010/0246788 A1

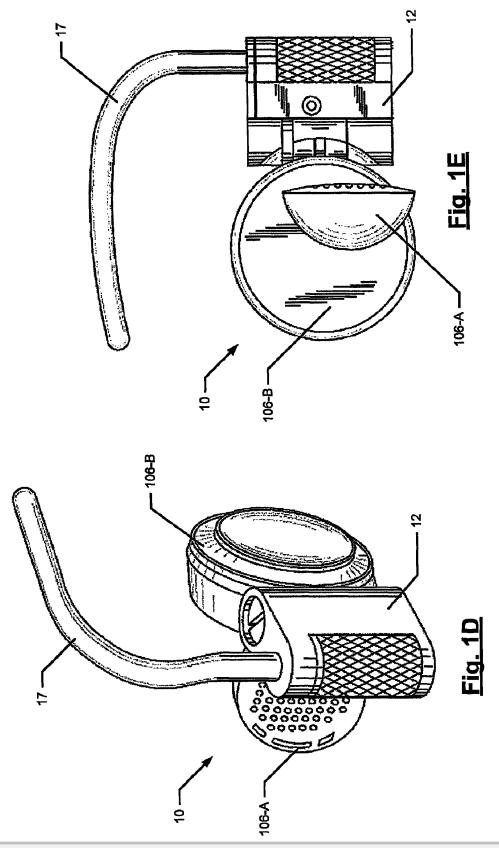
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