

(12) United States Patent

Lerner et al.

(54) SYSTEM AND METHOD FOR VISUALLY IDENTIFYING SPEAKING PARTICIPANTS IN A MULTI-PARTICIPANT NETWORKED EVENT

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- (73) Assignee: Multitude, Inc., South San Francisco, CA (US)
- (*) Notice: Under 35 U.S.C. 154(b), the term of this patent shall be extended for 0 days.
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- (22) Filed: Dec. 17, 1999

Related U.S. Application Data

- (60) Provisional application No. 60/113,644, filed on Dec. 23, 1998.
- (51) Int. Cl.⁷ G06F 13/00

(56) References Cited

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U.S. PATENT DOCUMENTS

4,274,155 6/1981 Funderburk et al. .

(10) Patent No.: US 6,192,395 B1

(45) Date of Patent: Feb. 20, 2001

4,831,618		5/1989	Bruce .	
5,020,098		5/1991	Celli .	
5,559,875		9/1996	Bieselin et al	
5,619,555		4/1997	Fenton et al	
5,627,978	*	5/1997	Altom et al	395/330
5,668,863		9/1997	Bieselin et al	
5,710,591		1/1998	Bruno et al	
5,894,306		4/1999	Ichimura .	
5,991,385		11/1999	Dunn et al	
5,999,208	*	12/1999	McNerney et al	348/15

* cited by examiner

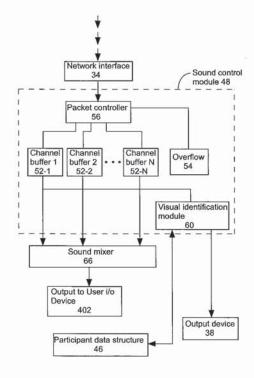
Primary Examiner-Viet D. Vu

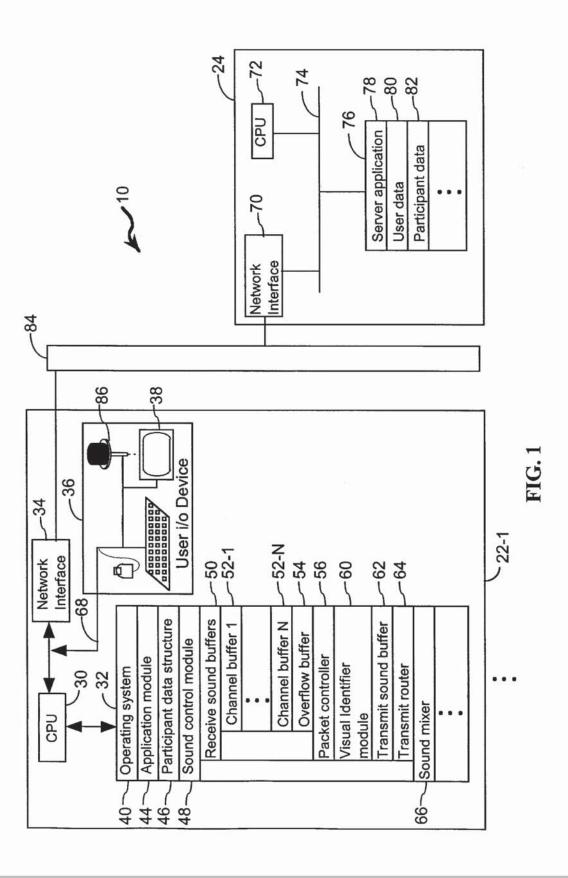
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(57) ABSTRACT

A method of visually identifying speaking participants in a multi-participant event such as an audio conference or an on-line game includes the step of receiving packets of digitized sound from a network connection. The identity of the participant associated with each packet is used to route the packet to a channel buffer or an overflow buffer. Each channel buffer may be assigned to a single participant in the multi-participant. A visual identifier module updates the visual identifier associated with participants that have been assigned a channel buffer. In some embodiments, the appearance of the visual identifier associated with the participant is dependent upon the differential of an acoustic parameter derived from content in the associated buffer channel and a reference value stored in a participant record.

25 Claims, 7 Drawing Sheets





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		46
202-1	Participant 1	
	Participant source identifier	204-1
202-2	Visual ID	206-1
	Visual ID window	208-1
	Visual ID position	210-1
	Visual ID state	212-1
	Participant 2	
	Participant source identifier	204-2
	Visual ID	206-2
	Visual ID window	208-2
	Visual ID position	210-2
	Visual ID state	212-2
	:	
202-N~_	Participant N	
i i i i i i i i i i i i i i i i i i i	Participant source identifier	204-N
	Visual ID	206-N
	Visual ID window	208-N
	Visual ID position	210-N
	Visual ID state	212-N

FIG. 2

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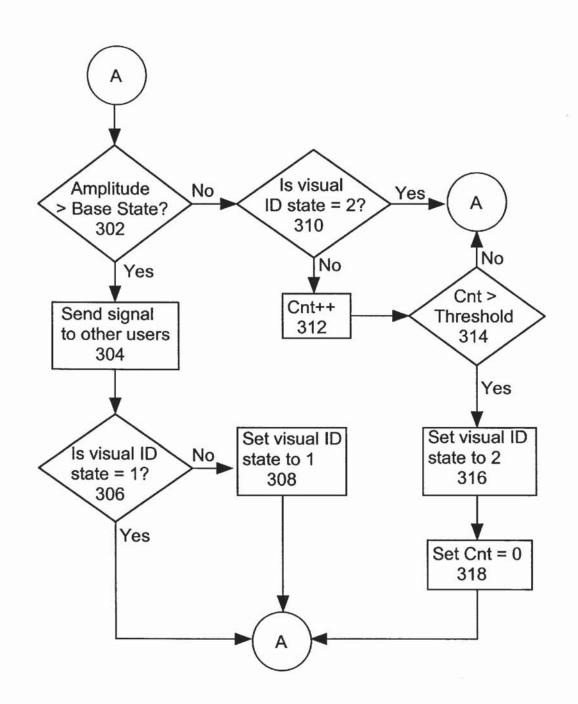
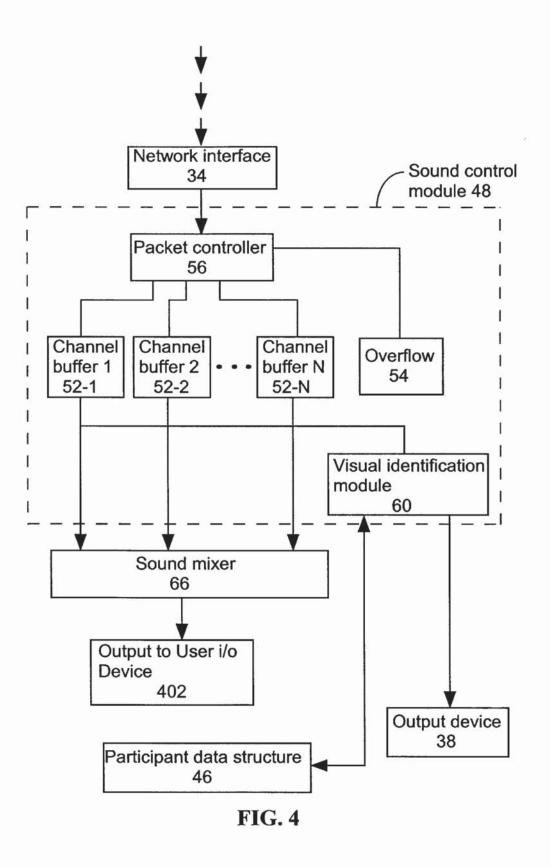


FIG. 3

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