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# (12) United States Patent

### Vallone et al.

### (54) MULTIMEDIA VISUAL PROGRESS INDICATION SYSTEM

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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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- (22) Filed: Mar. 30, 2000

### **Related U.S. Application Data**

- (60) Provisional application No. 60/127,178, filed on Mar. 30, 1999.
- (51) Int. Cl.<sup>7</sup> ..... H04N 5/91

### (56) References Cited

### U.S. PATENT DOCUMENTS

4,600,989 A	7/1986	Schwartz et al 364/200
5,063,547 A	11/1991	Custers et al 369/32
5,206,738 A	* 4/1993	Nishigaki et al 386/9
5,502,504 A	3/1996	Marshall et al 348/565
5,513,306 A	* 4/1996	Mills et al 715/530
5,701,383 A	* 12/1997	Russo et al 386/46
5,710,601 A	1/1998	Marshall et al 348/564
5,878,186 A	3/1999	Bennett et al 386/85
5,903,264 A	* 5/1999	Moeller et al 345/719

#### FOREIGN PATENT DOCUMENTS

EP	0 435 370 A2	7/1991	H03J/9/06
EP	0 691 651 A1	1/1996	G11B/27/34
EP	0 764 951 A1	3/1997	G11B/27/034
EP	0 889 649 A2	1/1999	H04N/5/775

### (10) Patent No.: US 6,847,778 B1 (45) Date of Patent: Jan. 25, 2005

EP	0 898 279 A2	2/1999	G11B/27/10
EP	0 889 649 A3	8/1999	H04N/5/775
WO	93/08664	4/1993	H04N/5/78
WO	94/14282	6/1994	H04N/7/16
WO	96/38008	11/1996	H04N/7/52
WO	98/12872	3/1998	H04N/5/44

\* cited by examiner

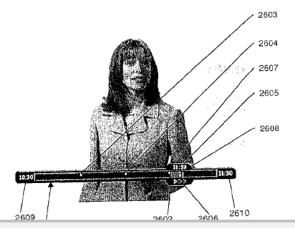
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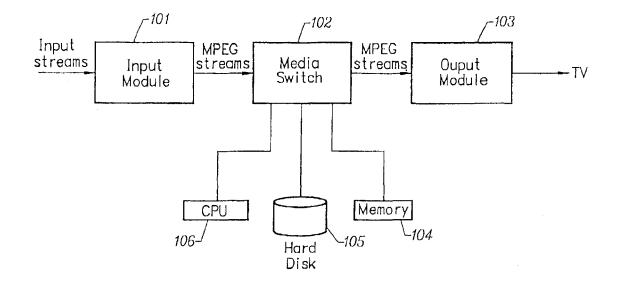
### (57) ABSTRACT

A multimedia visual progress indication system that provides a trick play bar that is overlaid onto the program material or displayed on a dedicated display. A cache bar inside of the trick play bar indicates the length of a recording session or the length of stored program material and expands to the right when material is being recorded. Every half hour (or selected increment), the cache bar slides to the left. Time marks are displayed inside the trick play bar giving the user a visual reference point from which to judge the current time and visual time reference points. The time marks are in any increment of time needed. The total length of the stored program material or next time or counter increment in the recording cycle is displayed on the right hand end of the trick play bar. A position indicator moves within the trick play bar and tells the user visually where his current position is within the program material. A slider moves along the trick play bar and on top of the cache bar and is linked to the position indicator and can be moved anywhere within the cache bar by the user. The slider displays the numeric time or counter mark of the current position. A mode indicator is positioned below the slider and follows the slider's movement and displays whether the user is in play, record, pause, slow play, fast play, fast forward (1x, 2x, and 3x), slow reverse play, slow reverse, and fast reverse  $(1\times, 2\times, \text{and } 3\times)$ modes. The  $1\times$ ,  $2\times$ , and  $3\times$  speeds are adjustable by the system to be any variable desired (e.g., 2x, 16x, and 32x). The trick play bar and its associated components are displayed for a predetermined time period when overlaid onto the program material.

### 39 Claims, 34 Drawing Sheets



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*FIG.* 1

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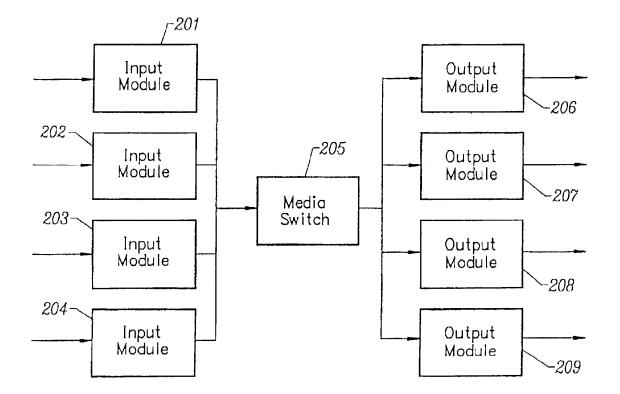


FIG. 2

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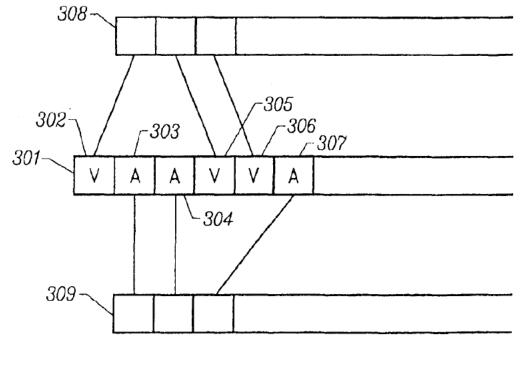
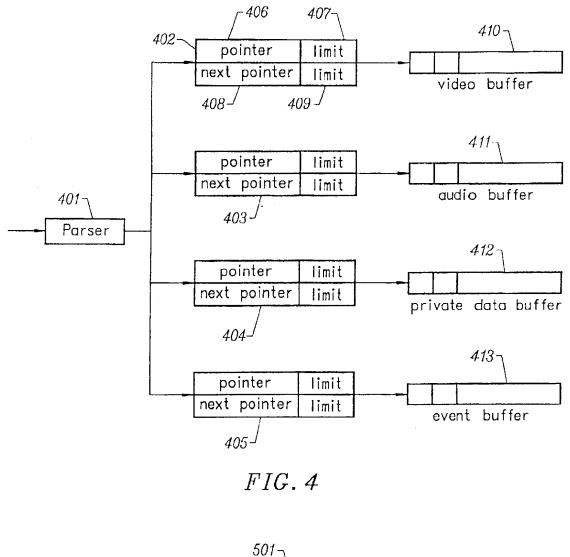
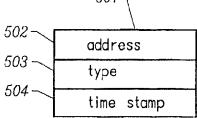


FIG. 3

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*FIG*. 5

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