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(12) **United States Patent**
Balassanian et al.

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(54) **METHOD AND SYSTEM SYNCHRONIZATION OF CONTENT RENDERING**

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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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(65) **Prior Publication Data**

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Related U.S. Application Data

(63) Continuation of application No. 12/710,146, filed on Feb. 22, 2010, now Pat. No. 8,406,257, which is a continuation of application No. 11/933,194, filed on Oct. 31, 2007, now abandoned, which is a continuation

(Continued)

(51) **Int. Cl.**

H04L 12/28	(2006.01)
H04L 12/24	(2006.01)
G06F 17/30	(2006.01)
H04N 5/765	(2006.01)
H04N 5/775	(2006.01)

(52) **U.S. Cl.**

CPC ***H04L 41/04*** (2013.01); ***G06F 17/30056*** (2013.01); ***H04N 5/765*** (2013.01); *H04N 5/775* (2013.01)

USPC **370/431**

(58) **Field of Classification Search**

CPC H04L 2007/04

USPC 370/431, 432, 464, 498, 503, 507–521; 709/219, 231–237, 248

See application file for complete search history.

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Primary Examiner — Dmitry H Levitan

(57) **ABSTRACT**

A method and system for synchronizing the rendering of content at various rendering devices. Each rendering device has a device time and a rendering time. The synchronization system designates one of the rendering devices as a master rendering device and designates all other rendering devices as slave rendering devices. Each slave rendering device adjusts the rendering of its content to keep it in synchronization with the rendering of the content at the master rendering device. The master rendering device sends a message with its rendering time and corresponding device time to the slave rendering devices. Each slave rendering device, upon receiving the message from the master rendering device, determines whether it is synchronized with the master rendering time. If not, the slave rendering device adjusts the rendering of its content to compensate for the difference between the master rendering time and the slave rendering time.

17 Claims, 10 Drawing Sheets

Table Domain Table 300

	301 Node ID	302 ST 1	303 RT 1	304 ST 2	305 RT 2	306 Diff
307	101	2000	1010	1015	2025	1000
308	102	2000	2510	2600	2120	-495

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Related U.S. Application Data

of application No. 10/322,335, filed on Dec. 17, 2002, now Pat. No. 7,391,791.

(60) Provisional application No. 60/341,574, filed on Dec. 17, 2001.

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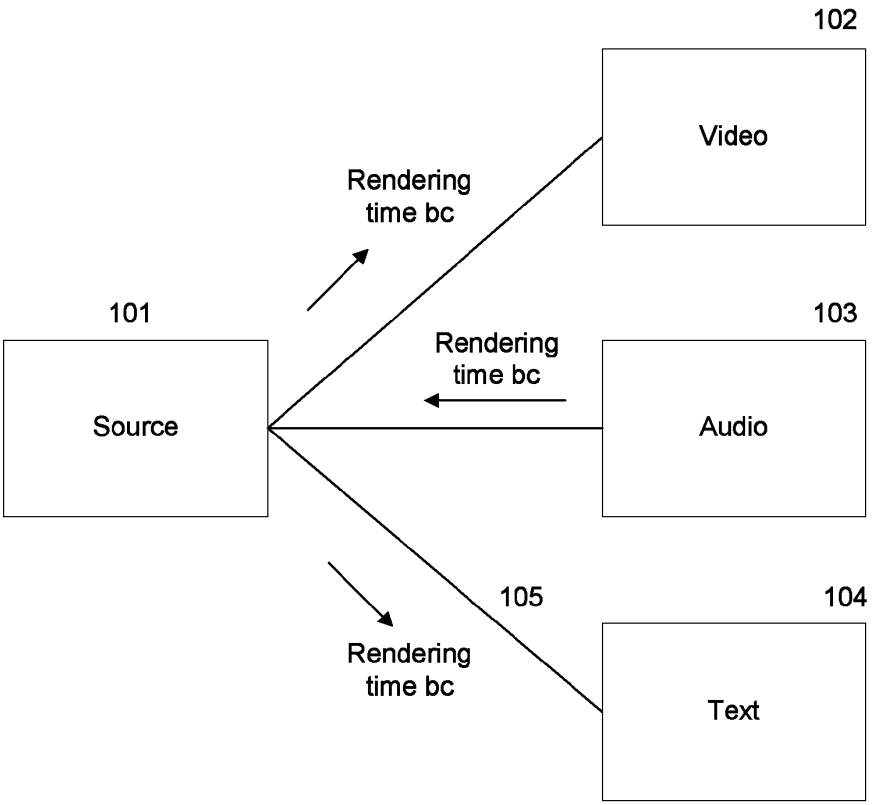

Fig. 1

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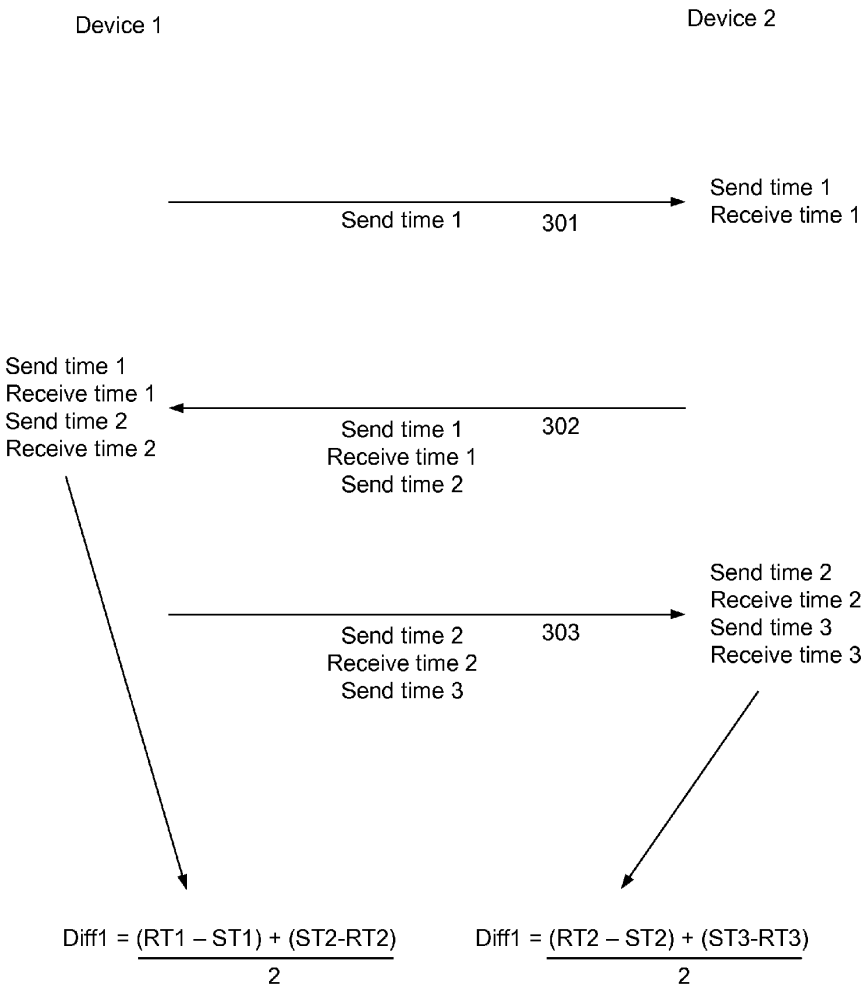

FIG. 2

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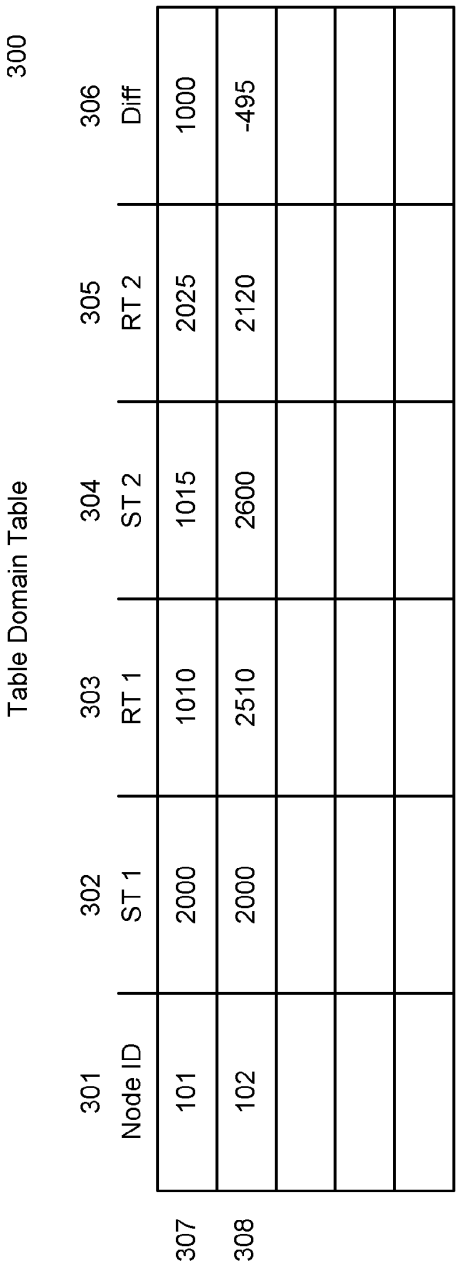

Fig. 3

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