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Broadwin et al.

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(54) **INTERACTIVE TELEVISION SYSTEM AND METHOD FOR DISPLAYING WEB-LIKE STILLS WITH HYPERLINKS**

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This patent is subject to a terminal disclaimer.

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Related U.S. Application Data

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(51) **Int. Cl.**^{7} **H04N 7/173**
(52) **U.S. Cl.** **725/37**; 725/110; 725/67; 725/68
(58) **Field of Search** 348/7, 12, 13, 348/14, 473, 714; 455/4.2, 5.1; 345/327; 725/135, 138, 139, 141, 142, 134, 131, 114, 115, 116, 117, 87, 91, 100

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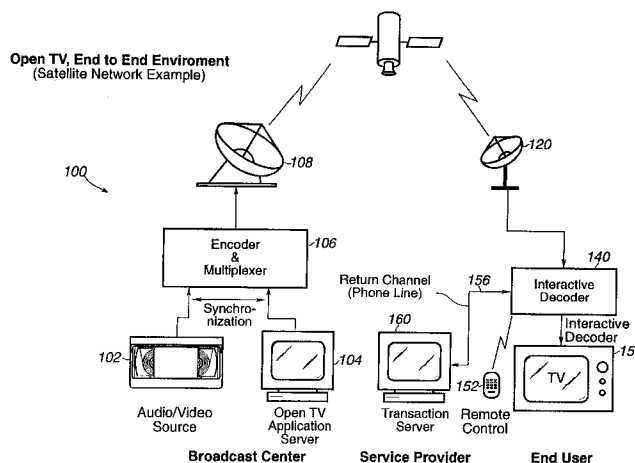|			
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(57) **ABSTRACT**

A system and method for displaying still video images related to video content in an interactive broadcast television system. The system and method of the present invention may also be used for simulating an Internet home page on an interactive television system. The present invention thus supports hyperlinked web-like navigational capabilities in an interactive television system. According to the method of the present invention, the video delivery system provides or broadcasts one or more audio/video channels each comprising video content and also provides or broadcasts at least one still image channel comprising a plurality of still video images, preferably MPEG-2 compressed still images. The user or viewer can select options displayed on the television screen to view desired information. When the set top box receives user input selecting an option to view one of the linked still images, the set top box captures the requested image from the still image broadcast channel, stores the image in memory, and displays the captured still video image corresponding to the selection. The still image being displayed may have associated interactive program content for displaying further selections, wherein these selections may be for viewing other images or content, for ordering information, or purchasing products. The user can thus selectively navigate between the video content and stills in a web-like hyperlinked fashion. In one embodiment, when a user is navigating through still images, the television program or video content which was being viewed is displayed in a small window overlaid on the still image being displayed. Also, when the set top box captures a requested image from the still image broadcast channel, the set top box preferably also pre-caches or pre-loads other related still images based on the probabilty that these related images will be subsequently requested by the user. The invention also includes an embodiment which provides user requested still images "on demand" on a dedicated "search" channel.

20 Claims, 19 Drawing Sheets

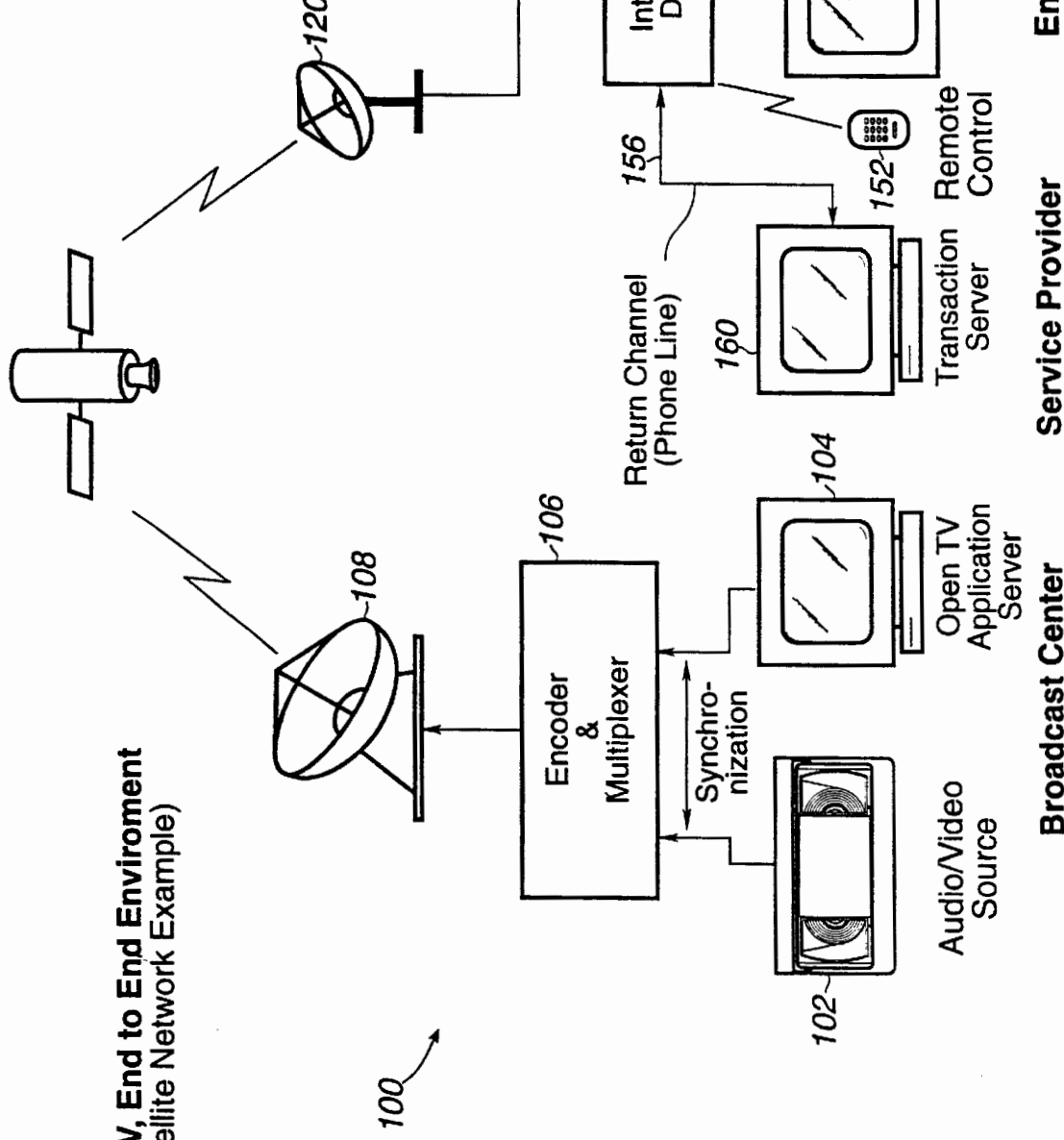
Open TV, End to End Enviroment
(Satellite Network Example)

Open TV, End to End Enviroment
(Satellite Network Example)

100

108

106
Encoder
&
Multiplexer

Synchro-
nization

104
Open TV
Application
Server

102
Audio/Video
Source

Broadcast Center

156

152 Remote
Control

Return Channel
(Phone Line)

160
Transaction
Server

Service Provider

Fig. 1

AVI
Signal

AVI
Signal

108

106

Encoder
&
Multiplexer

Synchro-
nization

Audio/Video
Source

102

104

Application
Server

Return Channel
(Phone Line)

160

156

Transaction
Server

152

Remote
Control

Service Provider

Broadcast Center

170

Remote
Network

Fig. 2

Return

Interactive Decoder

140

Broadcast Channel →

User Input →

Demultiplexer — 302

Open TV

Audio/Video

RAM — 312

Open TV Application

CPU — 314

304 — ROM — 316

Audio/Video Decoding Process

Open TV Operating System

322

Graphic On Screen Display

Audio/Video Output →

Fig. 3

Video Delivery
System

402— Video delivery system
provides a plurality of
channels each
comprising video content

404— Video delivery system
provides at least one
channel
comprising a plurality of
still video images

Fig. 4

DOCKET ALARM
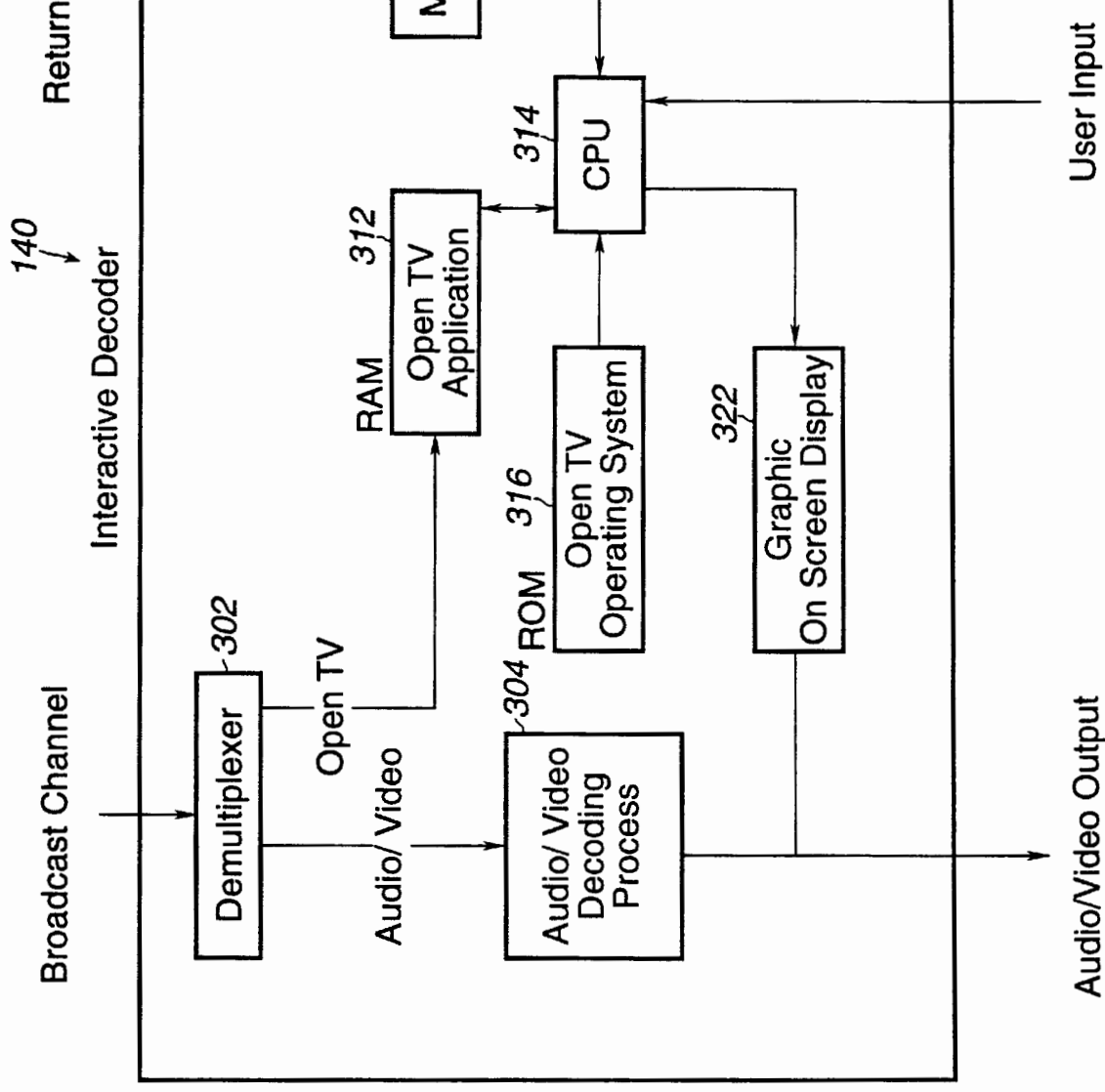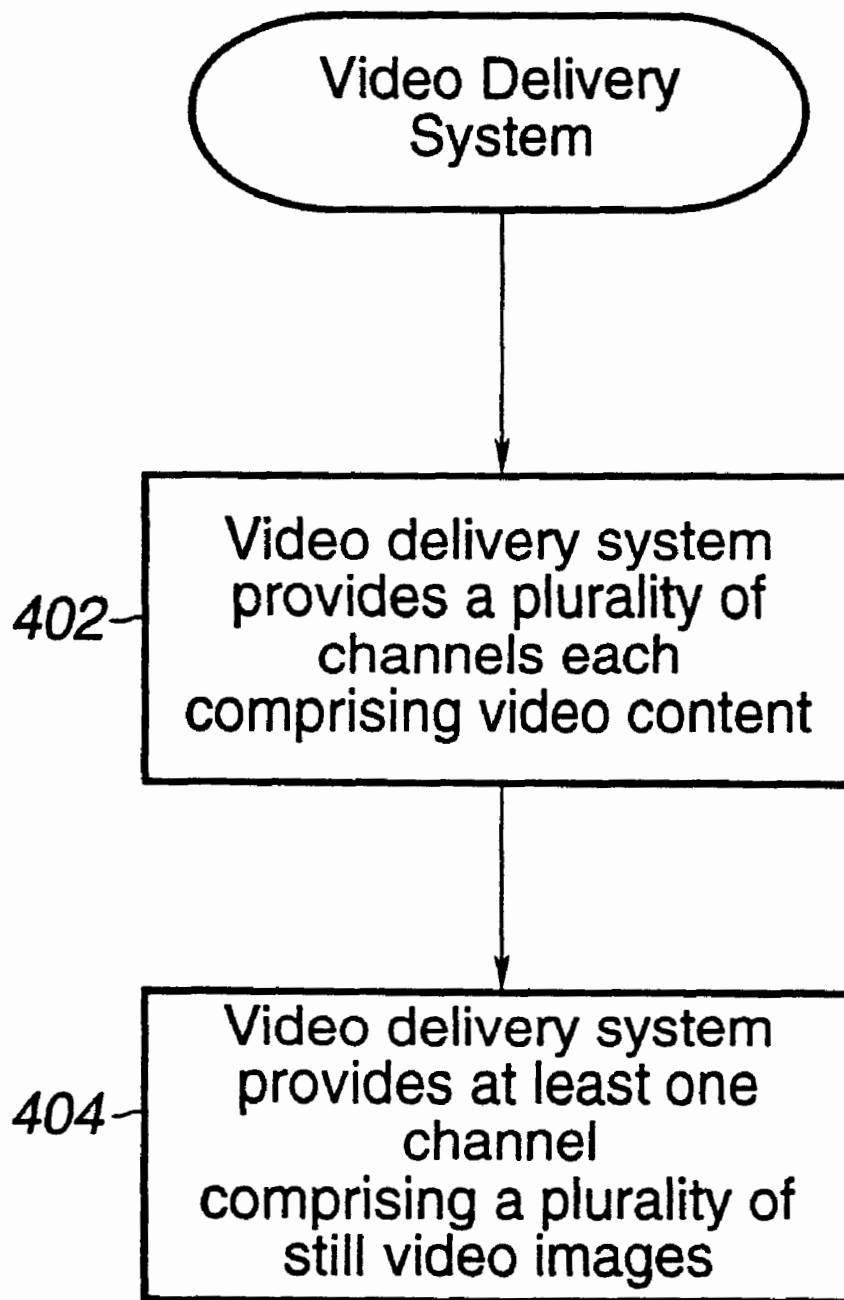
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