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(54) Title: ADAPTIVE BIT RATE TRANSCODE AND CACHING FOR OFF AIR TELEVISION PROGRAMMING DELIVERY

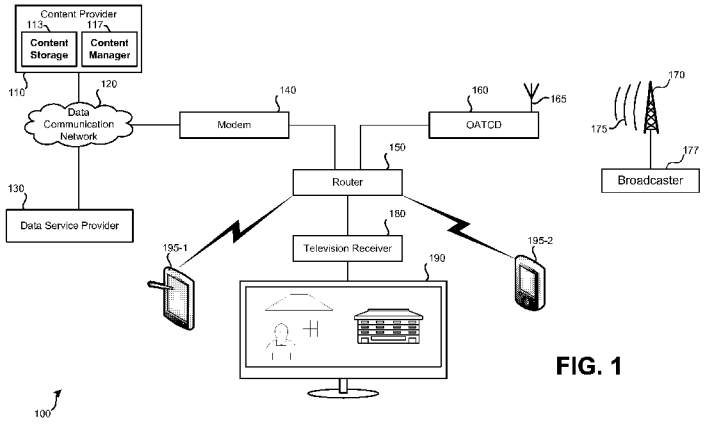


FIG. 1

(57) Abstract: Techniques are disclosed for capturing, transcoding, and caching off-air programming at a location local to the consumer. According to certain embodiments, a device is provided that receives off-air (e.g., broadcast) and/or cable (e.g. ClearQAM) programming via one or more antennas and caches the programming in various streams having various bit rates for later viewing using, for example, Adaptive Bit Rate (ABR) streaming. Such a device can be incorporated in a larger system that can stream content via a data communication network (e.g., the Internet) and the device in a seamless manner. The device also can be controlled by a remote system via the data communication network, and further can be configured to stream content to a remote device via the data communication network.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 15/16, 15/163 (2013.01)
USPC - 375/240.02, 709/206, 209, 227, 231; 725/59, 93
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); IP.com; Google Scholar/Google Patent; IEEE.org; adapt*, bitrate, bit*, transcot*, schedule, program,determine,video, demand, video on demand, send, program, tv, television, antenna, off air, cache

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0136231 A1 (LEATHERBURY, R et al.) September 26, 2002, paragraphs [0023]-[0025], [0036], [0048]-[0052], [0057]-[0062]	1-24
A	US 8,290,0038 B1 (WANG, H et al.) October 16, 2012, entire document	1-24
A	US 2012/0314761 A1 (MELNYK,M et al.) December 13,2012	1-24

☐ Further documents are listed in the continuation of Box C. ☐

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