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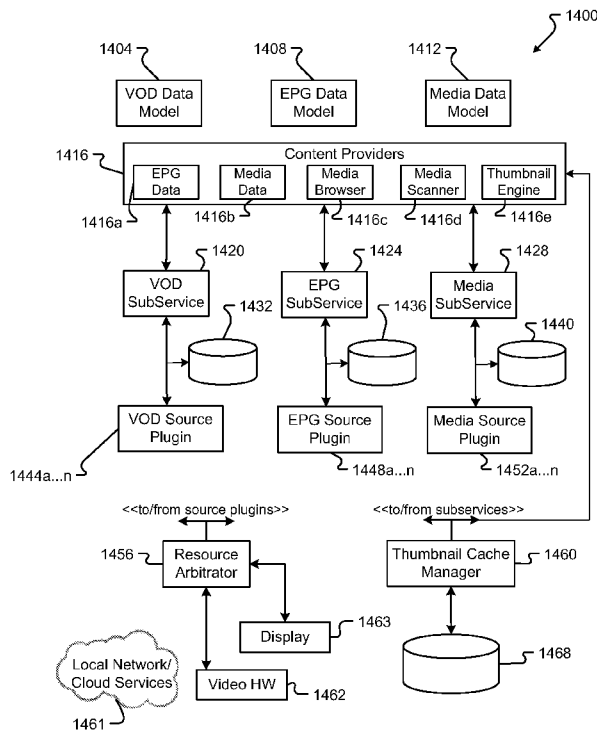
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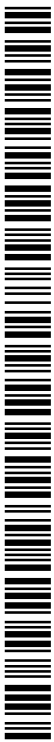
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(54) Title: DATA SERVICE FUNCTION



(57) Abstract: A data service function for an intelligent television (TV) includes a source plugin that communicates with and receives data from an external content provider and processes the received data into a data model format. The data service function further includes a subservice corresponding to the source plugin, the subservice communicates with and provides the converted data as content to the Intelligent TV. Data formats include video-on-demand, electronic programming guide, and media. The data service function further includes a database to store the received data or the converted data, a resource arbitrator to provide access to the subservice to provide content to the various hardware of the Intelligent TV, and a thumbnail cache manager to manage thumbnail images associated with the received data and to store the thumbnail images in a storage of the Intelligent TV.





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A. CLASSIFICATION OF SUBJECT MATTER
 IPC(8) - H04N 21/2343 (2014.01)
 USPC - 348/E5.002; 725/37
 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)
 IPC(8) Classification(s): H04N 21/2343, 21/436, 19/00 (2014.01)
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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); ProQuest; IEEE; Google/Google Scholar
 Keywords: Video on Demand, Intelligent TV, Set top box, Convert, Content Provider, Plug In

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X - Y	US 2012/0086857 A1 (KIM, S. et al.), 12 April 2012; paragraphs [0065], [0066], [0083], [0097], [0110], [0175], [0176]	1-3, 5-6, 8-9, 12-18 ----- 4, 7, 10-11, 19-20
Y	US 2012/0176546 A1 (YOON, J.), 12 July 2012; paragraphs [0339], [0341]	4
Y	WO 99/35849 A1 (WUGOFSKI, T.) 15 July 1999; page 8, lines 23-29	7
Y	US 2011/0125755 A1 (KAILA, A. et al.), 26 May 2011; paragraphs [0015], [0026], [0047], [0059]	10-11, 19-20
Y	US 2006/0064716 A1 (SULL, S. et al.), 23 March 2006; claims 1, 7, paragraph [0245]	10-11, 19-20

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* Special categories of cited documents:

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"P" document published prior to the international filing date but later than the priority date claimed	

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