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<p>(21) International Application Number: PCT/IB99/01206</p> <p>(22) International Filing Date: 28 June 1999 (28.06.99)</p> <p>(30) Priority Data: 09/123,444 28 July 1998 (28.07.98) US</p> <p>(71) Applicant: KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).</p> <p>(71) Applicant (for SE only): PHILIPS AB [SE/SE]; Kottbygatan 7, Kista, S-164 85 Stockholm (SE).</p> <p>(72) Inventors: DIMITROVA, Nevenka; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). MCGEE, Thomas; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). ELENBAAS, Jan, H.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). LEYVI, Eugene; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). RAMSEY, Carolyn; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). BERKOWITZ, David; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).</p> <p>(74) Agent: FAESSEN, Louis, M., H.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).</p>		<p>(81) Designated States: JP, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).</p> <p>Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p> <p>(88) Date of publication of the international search report: 23 March 2000 (23.03.00)</p>
<p>(54) Title: APPARATUS AND METHOD FOR LOCATING A COMMERCIAL DISPOSED WITHIN A VIDEO DATA STREAM</p>		
<p>(57) Abstract</p>		
<p>A commercial detection apparatus includes a frame grab thread which acquires frames from an input data stream to be analyzed by a cut detector thread and a filter thread. A commercial detection thread determines whether a commercial has occurred from data created by the cut detector thread and the filter thread stored in a memory. A factor used by the commercial detection thread is whether a black frame has occurred. The input data stream is divided into a plurality of regions and then a maximum and minimum value for a section of these regions is determined and compared to one another. If the maximum and minimum values are close enough, and the maximum value is below a threshold, then the frame is deemed to be black. The commercial detection thread also looks at the average cut frame distance, cut rate, changes in the average cut frame distance, the absence of a logo, a commercial signature detection, brand name detection, a series of black frames preceding a high cut rate, similar frames located within a specified period of time before a frame being analyzed and character detection. During playback, the detected commercials are either skipped or substituted with alternate content.</p> <div style="text-align: center;"> <pre> graph LR 52 --> 56 56 --> 78 56 --> 58 50 --- 56 </pre> </div>		

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 99/01206

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H04N 5/76, H04N 5/91

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)

IPC7: H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 9608921 A1 (ARTHUR D. LITTLE ENTERPRISES, INC.), 21 March 1996 (21.03.96), page 5, line 10 - page 6, line 20; page 15, line 6 - page 18, line 5, figure 1	1-31
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A	US 5455630 A (ALAN MCFARLAND ET AL), 3 October 1995 (03.10.95), See whole document	1-31
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A	US 5151788 A (DIETER W. BLUM), 29 Sept 1992 (29.09.92), See whole document	1-31
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 Further documents are listed in the continuation of Box C. See patent family annex.

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Information on patent family members

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