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(54) Title: A COLOR MANAGEMENT SYSTEM

(57) Abstract: The present invention is directed to a method, apparatus, and system for color management by a retailer. The method, for example, includes comprising the steps of: choosing an engineered color standard (ECS); communicating the ECS to a product vendor; having a product produced using the ECS; and controlling the product's color quality by comparing the ECS to the produced product. The ECS preferably comprises reflectance data and a dye specification.

INTERNATIONAL SEARCH REPORT

Interi al Application No PCT/TB 02/01814

a. classification of subject matter IPC 7 G01J3/46 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) G01J G06F 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 practical, search terms used) EPO-Internal, WPI Data, PAJ, COMPENDEX C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Category 9 Relevant to claim No. Α US 6 014 221 A (PLUDE JR HOWARD H) 1-7,9-1211 January 2000 (2000-01-11) abstract Α EP 0 484 564 A (KANSAI PAINT CO LTD) 1-7,9-1213 May 1992 (1992-05-13) figure 1 X, WO 99 26057 A (HILLCOAT DAVID ;OZBEY YALCIN (US); SHARPE JERRY (US)) 27 May 1999 (1999-05-27) page 9; figure 22 claim 27 Α 1 - 5.7Α US 6 190 170 B1 (ROBERTS MATTHEW R ET AL) 1 - 1220 February 2001 (2001-02-20) the whole document Further documents are listed in the continuation of box C. Patent family members are listed in annex. ° Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but "A" document defining the general state of the art which is not considered to be of particular relevance cited to understand the principle or theory underlying the invention earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or other means ments, such combination being obvious to a person skilled document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 10 March 2003 18/03/2003 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016 De Buyzer, H

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formation on patent family members

Intel al Application No
PCT/TB 02/01814

| | Patent document cited in search report | | Publication date | Patent family member(s) | | Publication date |
|--------|--|----|---------------------|--|---|--|
| US (| 6014221 | A | 11-01-2000 | NONE | | |
| EP (| 0484564 | A | 13-05-1992 | EP | 0484564 A1 | 13-05-1992 |
| WO - 9 | 9926057 | A | 27-05-1999 | WO US | 9926057 A1 6186403 B1 | 27-05-1999 13-02-2001 |
| US (| 6190170 | B1 | 20-02-2001 | AU BR EP US WO US US | 3883899 A 9910233 A 1076531 A1 2002064750 A1 9956658 A1 6328567 B1 6331113 B1 | 23-11-1999 09-01-2001 21-02-2001 30-05-2002 11-11-1999 11-12-2001 18-12-2001 |