(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
21 May 2004 (21.05.2004)

PCT

(10) International Publication Number
WO 2004/042507 A3

(51) International Patent Classification[7]: G06F 15/00, 17/00

(21) International Application Number: PCT/US2003/034048

(22) International Filing Date: 24 October 2003 (24.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/422,760 31 October 2002 (31.10.2002) US

(71) Applicant *(for all designated States except US)*: **ARIZAN CORPORATION** [US/US]; 5775 Glenridge Drive, Suite 150, Building C, Atlanta, GA 30328 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **YUAN, Jianwei** [CN/US]; 840 Hollington Court, Cumming, GA 30041 (US). **SYLTHE, Olav, A.** [NO/US]; 4867 Ashford Dunwoody Road #6208, Atlanta, GE 30338 (US).

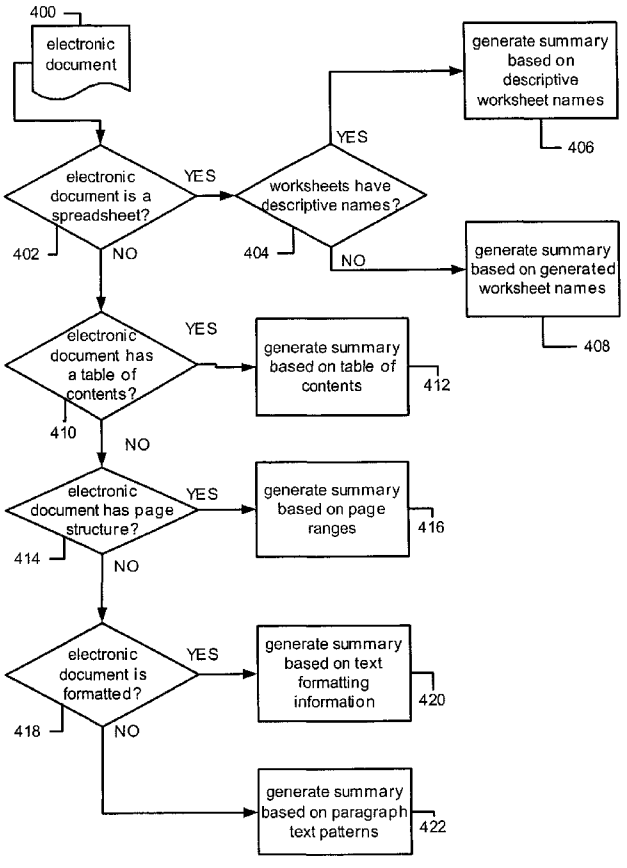
(74) Agent: **JONES, Day**; 901 Lakeside Avenue/North Point, Cleveland, OH 44114 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

[Continued on next page]

(54) Title: METHODS AND APPARATUS FOR SUMMARIZING DOCUMENT CONTENT FOR MOBILE COMMUNICATION DEVICES



(57) Abstract: A document summary which includes an assemblage of a plurality of summary entries is generated for an electronic document (400). In the generation of the document summary, a content structure or properties within the electronic document are analyzed. The plurality of summary entries are selected from the contents of the electronic document based on the analysis of the content structure or properties. The content structure within the electronic document may include a table of contents (410), a plurality of spreadsheet worksheets (402), a plurality of document pages (414), etc. The content properties within the electronic document may include text formatting (420), paragraph formatting (422), paragraph sizing (422), etc. Preferably, the best available content structure or properties within the electronic document is identified and utilized in the selection of the plurality of summary entries (406, 408, 412, 416, 420, 422). The document summary is provided to a mobile communication device in response to a request for the electronic document.

WO 2004/042507 A3

SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
8 July 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.