(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 29 April 2004 (29.04.2004)

PCT

(10) International Publication Number WO 2004/036487 A3

(51) International Patent Classification⁷:

G06K 9/36

(21) International Application Number:

PCT/US2003/032563

- (22) International Filing Date: 15 October 2003 (15.10.2003)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/418,878

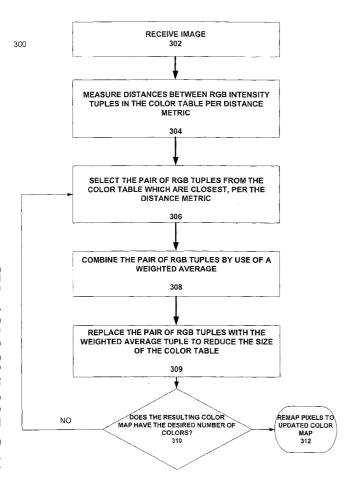
15 October 2002 (15.10.2002) US

- (71) Applicant (for all designated States except US): IN-GRIAN NETWORKS, INC. [US/US]; 475 Broadway Street, Redwood City, CA 94063 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): METZGER, Brian [US/US]; 1354 Kimberly Drive, San Jose, CA 95018 (US).

- (74) Agent: MEHRA, Shailesh; Perkins Coie LLP, 101 Jefferson Drive, Menlo Park, CA 94025 (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, EG, 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, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, 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, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR COMPRESSION OF IMAGE COLOR MAPS



(57) Abstract: Systems and methods for compressing color images while maintaining a high image quality are described. Such mechanisms combine colors which are closest to one another as measured by Euclidean distance (304). Such colors may be combined by taking a weighted average reflecting the frequency of the colors in a given image (308). This weighted average may be employed to replace the originally combined color in the appropriate regions of the image (309). The methods described are compatible with standard image formats and facilitate storage and encryption of large image files.

WO 2004/036487 A3



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

 $(88)\;\;Date\;of\;publication\;of\;the\;international\;search\;report:$

3 June 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.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/32563

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : G06K 9/36			
US CL : 382/166			
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)			
U.S.: 382/166, 240, 253			
The standard of the standard o			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Carlot and the second terms word			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) IEEE, ACM			
IDDE, ACM			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.
X	US 5,825,917 A (SUZUKI) 20 October 1998 (20.10.1998), column 10, lines 4-25.		35
	HS 5 142 272 A (VONDO) 25 August 1992 (25 09 1992)		1-35
A	US 5,142,272 A (KONDO) 25 August 1992 (25.08.1992).		1-35
Α	US 5,463,702 A (TRUEBLOOD) 31 October 1995 (31.10.1995).		1-35
A	US 5,557,712 A (GUAY) 17 September 1996 (17.09.1996).		1-35
A US 5,734,744A (WITTENSTEIN et al) 31 March 1998 (31.03.1998).		1-35	
A	US 2002/0012473 A1 (KONDO et al) 31 January 2002 (31.01.2002).		1-35
A	A US 5,764,235A (HUNT et al) 09 June 1998 (09.06.1998).		16-34
	•		ı
	•	·	·
Further documents are listed in the continuation of Box C. See patent family annex.			
		"T" later document published after the inte	mational filing date or priority
"A" document defining the general state of the art which is not considered to be		date and not in conflict with the applic	
of particular relevance		"X" document of particular relevance; the	claimed invention cannot be
"E" earlier ap	plication or patent published on or after the international filing date	considered novel or cannot be conside when the document is taken alone	red to involve an inventive step
"L" document which may throw doubts on priority claim(s) or which is cited to		"Y" document of particular relevance; the claimed invention cannot be	
establish specified)	the publication date of another citation or other special reason (as	considered to involve an inventive step	when the document is
"O" document referring to an oral disclosure, use, exhibition or other means		combined with one or more other such being obvious to a person skilled in th	
"P" document published prior to the international filing date but later than the		"&" document member of the same patent	family
priority date claimed			
Date of the a	actual completion of the international search	Date of mailing of the international sea	rch report
	004 (12.03.2004)	, 40 1111	
Trianto did maning address of the forth of		Authorized officer	ite-ples
Commissioner for Patents		Christopher T. Sukhaphadhana	
P.O. Box 1450 Alexandria, Virginia 22313-1450 Telephone No. 703-305-3800			
Facsimile No. (703)305-3230			

Form PCT/ISA/210 (second sheet) (July 1998)