

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04L 9/00	A3	(11) International Publication Number: WO 96/42151 (43) International Publication Date: 27 December 1996 (27.12.96)
(21) International Application Number: PCT/US96/10257 (22) International Filing Date: 7 June 1996 (07.06.96) (30) Priority Data: 08/489,172 9 June 1995 (09.06.95) US (71) Applicant: THE DICE COMPANY [US/US]; P.O. Box 60471, Palo Alto, CA 94306-0471 (US). (72) Inventors: COOPERMAN, Marc, S.; 2929 Ramona, Palo Alto, CA 94306 (US). MOSKOWITZ, Scott, A.; Townhouse 4, 20191 East Country Club Drive, North Miami Beach, FL 33180 (US). (74) Agents: ALTMILLER, John, C. et al.; Kenyon & Kenyon, 1025 Connecticut Avenue, N.W., Washington, DC 20036 (US).		(81) Designated States: CA, CN, FI, JP, KR, SG, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 13 February 1997 (13.02.97)
(54) Title: STEGANOGRAPHIC METHOD AND DEVICE (57) Abstract An apparatus and method for encoding and decoding additional information into a stream of digitized samples in an integral manner. The information is encoded using special keys. The information is contained in the samples, not prepended or appended to the sample stream. The method makes it extremely difficult to find the information in the samples if the proper keys are not possessed by the decoder. The method does not cause a significant degradation to the sample stream. The method is used to establish ownership of copyrighted digital multimedia content and provide a disincentive to piracy of such material.		

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AM	Armenia	GB	United Kingdom	MW	Malawi
AT	Austria	GE	Georgia	MX	Mexico
AU	Australia	GN	Guinea	NE	Niger
BB	Barbados	GR	Greece	NL	Netherlands
BE	Belgium	HU	Hungary	NO	Norway
BF	Burkina Faso	IE	Ireland	NZ	New Zealand
BG	Bulgaria	IT	Italy	PL	Poland
BJ	Benin	JP	Japan	PT	Portugal
BR	Brazil	KE	Kenya	RO	Romania
BY	Belarus	KG	Kyrgyzstan	RU	Russian Federation
CA	Canada	KP	Democratic People's Republic of Korea	SD	Sudan
CF	Central African Republic	KR	Republic of Korea	SE	Sweden
CG	Congo	KZ	Kazakhstan	SG	Singapore
CH	Switzerland	LI	Liechtenstein	SI	Slovenia
CI	Côte d'Ivoire	LK	Sri Lanka	SK	Slovakia
CM	Cameroon	LR	Liberia	SN	Senegal
CN	China	LT	Lithuania	SZ	Swaziland
CS	Czechoslovakia	LU	Luxembourg	TD	Chad
CZ	Czech Republic	LV	Latvia	TG	Togo
DE	Germany	MC	Monaco	TJ	Tajikistan
DK	Denmark	MD	Republic of Moldova	TT	Trinidad and Tobago
EE	Estonia	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	UG	Uganda
FI	Finland	MN	Mongolia	US	United States of America
FR	France	MR	Mauritania	UZ	Uzbekistan
GA	Gabon			VN	Viet Nam

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US96/10257**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) :H04L 9/00

US CL :380/28

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. : 380/28; 340/825.34, 4, 23

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US, A, 4,908,873 (PHILIBERT et al) 13 MARCH 1990, See col. 5, lines 1-25.	1-32
A	US,A, 4,979,210 (NAGATA et al) 18 DECEMBER 1990, See Fig. 13.	1-32
A	US,A, 5,073,925 (NAGATA et al) 17 DECEMBER 1991, See Fig. 1.	1-32
A	US,A, 5,287,407 (HOLMES) 15 FEBRUARY 1994, See Fig. 1.	1-32
A	US,A, 5,365,586 (INDECK et al) 15 NOVEMBER 1994, See cols. 3 and 4.	1-32
A	US,A, 5,408,505 (INDECK et al) 18 APRIL 1995, See Fig. 4.	1-32

☒ Further documents are listed in the continuation of Box C.
 ☐ See patent family 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 cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*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
E earlier document published on or after the international filing date	*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 documents, such combination being obvious to a person skilled in the art
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)	*&* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

11 JUNE 1996

Date of mailing of the international search report

24 DEC 1996

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

SALVATORE CANGIALOSI

Telephone No. (703) 305-1837

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US96/10257

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US,A, 5,412,718 (NARASIMHALU et al) 02 MAY 1995, See Figs. 6A-6C	1-32