PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶:

H04B 1/66

A3

(11) International Publication Number: WO 98/33284

(43) International Publication Date: 30 July 1998 (30.07.98)

(21) International Application Number: PCT/GB98/00226

(22) International Filing Date: 27 January 1998 (27.01.98)

(30) Priority Data: 9701616.6 27 January 1997 (27.01.97) GB

(71) Applicant (for all designated States except US): BRITISH BROADCASTING CORPORATION [GB/GB]; Broadcasting House, London W1A 1AA (GB).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): WELLS, Nicholas, Dominic [GB/GB]; 17 Wellington Road, Brighton, East Sussex BN2 3AB (GB). MASON, Andrew, James [GB/GB]; 1 Meadow Way, Reigate, Surrey RH2 8DP (GB). FLETCHER, John, Andrew [GB/GB]; 39 Holly Road, Reigate, Surrey RH2 7LU (GB). MCPARLAND, Andrew, Kevin [GB/GB]; 3 Kingsley Road, Horley, Surrey RH6 8HP (GB).
- (74) Agents: KAZI, Ilya et al.; Mathys & Squire, 100 Grays Inn Road, London WC1X 8AL (GB).

(81) Designated States: AU, CA, JP, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published

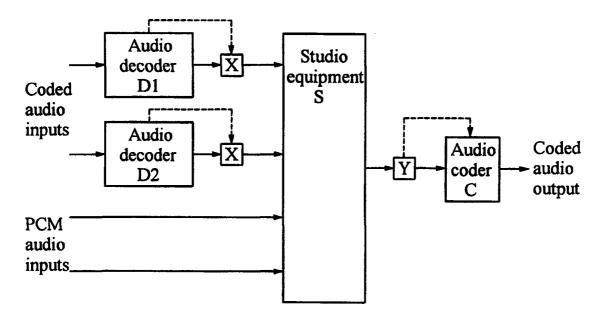
With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(88) Date of publication of the international search report:

14 January 1999 (14.01.99)

(54) Title: AUDIO COMPRESSION



(57) Abstract

An auxiliary data signal is derived from a received compression encoded audio signal during decoding of the signal and communicated with the decoded audio signal for use in re–encoding the signal. The auxiliary data signal may be communicated integrally with the audio signal, for example in the least significant bits, or may follow a different path. The provision of the auxiliary data signal may enable more transparent decoding and re–coding processes to take place, by allowing the coding decision to match the coding decisions originally used; this can alleviate problems with quality reduction arising from cascaded decoding and re–coding processes.

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.

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

INTERNATIONAL SEARCH REPORT

Inter al Application No PCT/GB 98/00226

		10	1/GB 98/UU220	
A. CLASS IPC 6	SIFICATION OF SUBJECT MATTER H04B1/66	•		
According	to International Patent Classification(IPC) or to both national classific	cation and IPC		
B. FIELDS	S SEARCHED			
Minimum of IPC 6	documentation searched (classification system followed by classificat HO4B HO4H	ion symbols)		
Document	ation searched other than minimum documentation to the extent that s	such documents are included in	the fields searched	
Electronic	data base consulted during the international search (name of data ba	ase and, where practical, search	terms used)	
C. DOCUN	MENTS CONSIDERED TO BE RELEVANT			
Category		levant passages	Relevant to claim No.	
A	US 5 570 363 A (HOLM ROBERT E) 29 October 1996 see column 1, line 50 - column 1	, line 64	1,6	
A	US 5 451 954 A (DAVIS MARK F ET 19 September 1995 see abstract; figures 1,2 see column 7, line 35 - column 8	-,	1,6,11	
A	"ERROR CORRECTION IN A HIDDEN C TRANSMISSION SYSTEM" RESEARCH DISCLOSURE, no. 375, July 1995, page 498/499 XP000524820 see the whole document	HANNEL	1,6,11	
A	EP 0 423 050 A (FRANCE ETAT) 17 see abstract; figure 1	April 1991 -/	1,6,10	
X Fur	ther documents are listed in the continuation of box C.	Y Patent family member	rs are listed in annex.	
"A" docum consi "E" earlier filing "L" docum which citatic "O" docum other "P" docum	ategories of cited documents: nent defining the general state of the art which is not dered to be of particular relevance document but published on or after the international date ent which may throw doubts on priority claim(s) or his cited to establish the publication date of another on or other special reason (as specified) ent referring to an oral disclosure, use, exhibition or means then priority date claimed.	or priority date and not in cited to understand the prinvention "X" document of particular relecannot be considered not involve an inventive step "Y" document of particular relecannot be considered to indocument is combined with	vel or cannot be considered to when the document is taken alone evance; the claimed invention involve an inventive step when the ith one or more other such docubeing obvious to a person skilled	
Date of the	actual completion of theinternational search	Date of mailing of the inter		
	November 1998	16/11/1998		
Name and	mailing address of the ISA 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	Authorized officer Van Roost, L		

1

INTERNATIONAL SEARCH REPORT

Inter Nal Application No PCT/GB 98/00226

C.(Continuat	ion) DOCUMENTS CONSIDERED TO BE RELEVANT	101/00 90	
	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.
A	EP 0 640 909 A (TEXAS INSTRUMENTS INC) 1 March 1995 see abstract; figure 1		1,5,6,9

1

INTERNATIONAL SEARCH REPORT

information on patent family members

Inte. Ial Application No PCT/GB 98/00226

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5570363	Α	29-10-1996	NONE	
US 5451954	A	19-09-1995	NONE	
EP 0423050	A	17-04-1991	FR 2653280 A DE 69015105 D DE 69015105 T JP 3167927 A US 5185800 A	19-04-1991 26-01-1995 20-07-1995 19-07-1991 09-02-1993
EP 0640909	Α	01-03-1995	US 5568495 A	22-10-1996