SG 9700860-7 RTMP copy

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : H04N 5/913, 7/169 — A1

(11) International Publication Number: WO 96/05698

(43) International Publication Date: 22 February 1996 (22.02.96)

(21) International Application Number: PCT/US95/09573

(22) International Filing Date: 27 July 1995 (27.07.95)

(30) Priority Data: 08/287,800 — 9 August 1994 (09.08.94) — US

(71) Applicant: MACROVISION CORPORATION [US/US]; 1341 Orleans Drive, Sunnyvale, CA 84089 (US).

(72) Inventor: RYAN, John, O.; 22015 Creekside Court, Cupertino, CA 95014 (US).

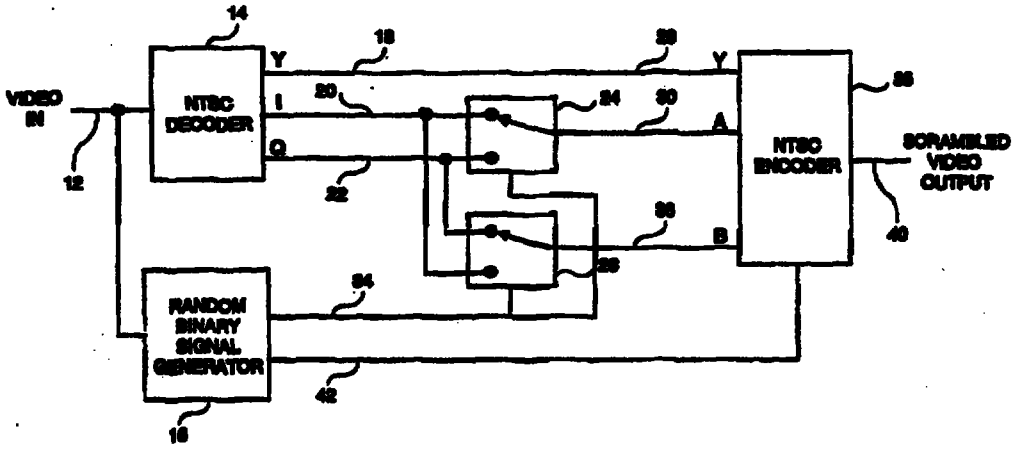
(74) Agent: BRILL, Gerow, D.; Macrovision Corporation, 1341 Orleans Drive, Sunnyvale, CA 84089 (US).

(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).

Published
With international search report.

① PCT Pub + SR
② IPER + Annexes

(54) Title: METHOD OF AND APPARATUS FOR SCRAMBLING A VIDEO SIGNAL WITH FULL NETWORK TRANSMISSION AND RECORDING CAPABILITY



(57) Abstract

A video scrambling and descrambling system that produces color video that is difficult or annoying to watch by randomly switching the color components of a component or composite video. In the scrambling portion, component or composite video (12) is decoded (14) into a luminance component (18) and its two color components (20, 22). A random switching signal (34) is generated (16) to randomly switch the relationship of the color component signals (20, 22). The randomly switched color component signals (30, 36) may be encoded (38) together with the luminance signal (18) to produce a component or composite video signal (40) that is scrambled. The random switching signal (42) is transmitted as part of the encoded signal or through a separate transmission channel such as a control track or radial track portion of a recording medium. A descrambling portion first separates (92) the scrambled component or composite video signal (90) into a luminance component (96) and two scrambled color components (98, 100). The random switching s ignal (106) that has been transmitted to the descrambler along with the scrambled video signal (90) is used to restore the original relationship between the color component signals (98, 100). The luminance component (96) as well as the two descrambled color components (108, 110) are then encoded (114) to produce a component or composite video (112) with the relationship between the color components restored to their respective original positions in the video signal. The method may be used in various transmission and recording formats.

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.

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

9700560-7