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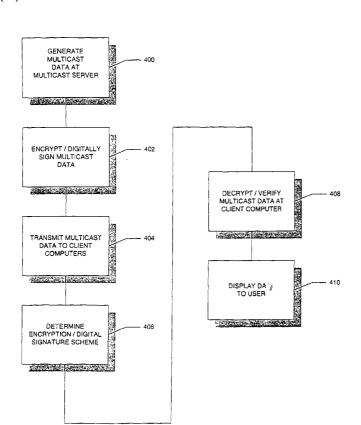
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[Continued on next page]

### (54) Title: METHOD AND APPARATUS FOR SECURELY PROVIDING BILLABLE MULTICAST DATA



(57) Abstract: The present invention comprises a method and apparatus for securely providing billable multicast data. The invention describes a solution that provides an architecture for enabling different types of security devices to operate interchangeably in very large consumer networks, corporate networks, for authentication and metered access to services, as well as payment. An embodiment of the invention comprises a mechanism for ensuring that only authorized parties may obtain access to a particular data stream. For example, the present invention provides a way build a restricted-channel system. In a restricted-channel system, a multicast server transmits encrypted information that can be deciphered by authorized multicast client programs or multicast client programs operating under authorized conditions. Access to the multicast data is allowed when the data is appropriately decrypted or otherwise verified and/or the payment is obtained from a portable device such as a smart card.

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C. DOCUMENTS CONSIDERED TO BE RELEVANT								
Category °	Citation of document, with indication, where appropriate, of the re	Relevant to claim No.						
X	WO 00 04718 A (BENARDEAU CHRISTIAN ;CANAL PLUS SA (FR); DAUVOIS JEAN LUC (FR)) 27 January 2000 (2000-01-27)		1-6, 9-15, 18-23,					
Υ	page 1, line 8 - line 22 	26,27 7,8,16, 17,24,25						
Y	EP 0 946 019 A (CANAL PLUS SA) 29 September 1999 (1999-09-29) column 1, line 26 - line 27; cla	7,8,16, 17,24,25						
	ner documents are listed in the continuation of box C.	Y Patent family members are listed in	n annex.					
° Special ca	tegories of cited documents :	"T" later document published after the interior	national filing date					
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## INTERNATIONAL SEARCH REPORT

Information on patent family members

Ir nal Application No PCT/US 01/21447

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
WO 0004718 A	27-01-2000	'AU	4642599 A	07-02-2000
		BR	9912091 A	03-04-2001
		CN	1317203 T	10-10-2001
		EP	1099348 A1	16-05-2001
		HR	20010033 A1	28-02-2002
		WO	0004718 A1	27-01-2000
		NO	20010227 A	15-03-2001
		PL	345531 A1	17-12-2001
		TR	200100571 T2	23-07-2001
EP 0946019 A	29-09-1999	EP	0946019 A1	29-09-1999
		AU	2851099 A	18-10-1999
		BR	9909073 A	05-12-2000
		CA	2324156 A1	30-09-1999
		CN	1301442 T	27-06-2001
		EP	1064754 A1	03-01-2001
		HR	20000598 A1	30-06-2001
		HU	0101641 A2	28-09-2001
		WO	9949614 A1	30-09-1999
		JP	2002508624 T	19-03-2002
		NO	20004765 A	24-11-2000
		PL	343076 A1	30-07-2001
		TR	200002732 T2	21-12-2000
		TR	200101213 T2	22-04-2002