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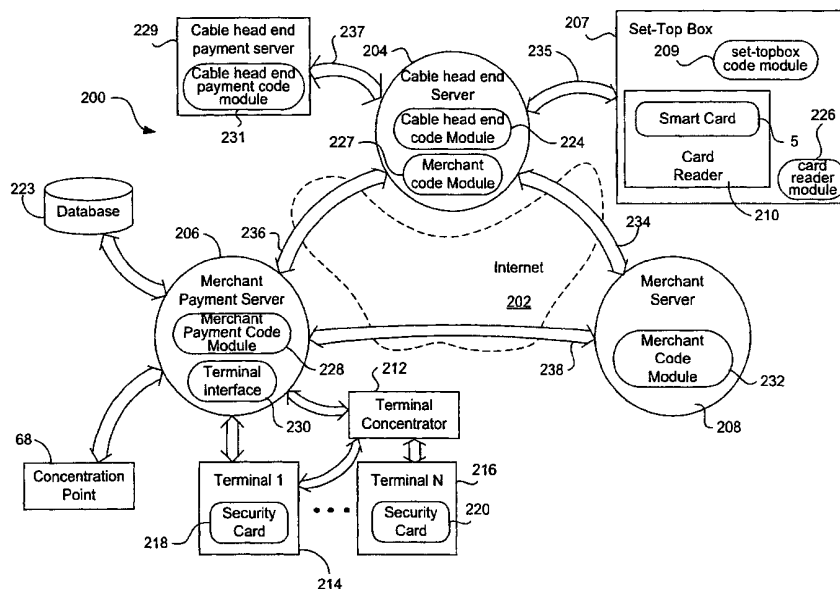
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(54) Title: CABLE TELEVISION PAYMENT AND LOAD SYSTEM USING SMART CARD



(57) Abstract: An architecture and system loads and uses a smart card for payment of goods and/or services purchased on-line over the Internet or directly from a cable provider. A set-top box module on a set-top box controls the interaction with a consumer and interfaces to a card reader which accepts a smart card. Debiting works in conjunction with a merchant server and a merchant payment server. In addition, debiting works in conjunction with a cable head end server and a cable head end payment server. Loading works in conjunction with a bank server and a load server. Alternatively, loading functions in conjunction with a load server when value is loaded from a pre-funded account. To load value, the cable head end server requests a load from a user account at the bank server or a pre-funded account at the load server.



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INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04N/173 G07F19/00		
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) IPC 7 H04N G07F		
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 practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 98 43427 A (CANAL+) 1 October 1998 (1998-10-01) page 2, line 18 - line 23 page 9, line 17 - line 19 page 20, line 14 - line 20 ---	1, 11, 16, 17
A	WO 00 04717 A (THOMSON) 27 January 2000 (2000-01-27) page 3, line 37 - page 4, line 2 page 5, line 34 - line 36 page 7, line 5 - line 9 page 7, line 34 - page 8, line 11 page 9, line 2 - line 3 ---	1, 11, 16, 17
P, A	WO 01 09851 A (VISA) 8 February 2001 (2001-02-08) abstract ---	1, 11, 16, 17
-/--		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
° Special categories of cited documents :		
A document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *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) *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 *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 *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 *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. *&* document member of the same patent family		
Date of the actual completion of the international search 11 December 2001		Date of mailing of the international search report 14. 01. 2002
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 Dockhorn, H

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, A	WO 01 08113 A (VISA) 1 February 2001 (2001-02-01) abstract ---	1, 11, 16, 17
X	US 5 790 677 A (FOX ET AL) 4 August 1998 (1998-08-04)	19, 26
Y	column 6, line 30 - line 35	20, 21
A	column 7, line 59 - line 67 column 19, line 38 - line 43 column 28, line 57 - line 65; figure 23 column 29, line 7 - column 10; figure 23 column 29, line 36 - line 67; figure 23 ---	30, 39
Y	US 5 883 810 A (FRANKLIN ET AL) 16 March 1999 (1999-03-16)	20, 21
A	column 1, line 19 - line 25 column 3, line 48 - column 4, line 5 ---	19, 26, 30, 39
A	US 5 392 353 A (MORALES) 21 February 1995 (1995-02-21) abstract ---	19, 26, 30, 39
A	WO 98 49658 A (VISA) 5 November 1998 (1998-11-05) abstract -----	19, 26, 30, 39

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/07615

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-18

Smart card loading system

2. Claims: 19-48

Smart card payment system

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/07615

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9843427	A	01-10-1998	WO 9843427 A1	01-10-1998
			AU 2771097 A	20-10-1998
			EP 0968608 A1	05-01-2000
			HU 0002384 A2	28-10-2000
			JP 2001517409 T	02-10-2001
			NO 994541 A	22-11-1999
			PL 335584 A1	08-05-2000
			AU 2770697 A	20-10-1998
			AU 739663 B2	18-10-2001
			AU 7038198 A	20-10-1998
			AU 740224 B2	01-11-2001
			BR 9714603 A	16-05-2000
			BR 9808283 A	16-05-2000
			BR 9808288 A	16-05-2000
			CN 1254472 A	24-05-2000
			CN 1260056 A	12-07-2000
			CN 1254477 A	24-05-2000
			CN 1254478 A	24-05-2000
			CN 1254469 A	24-05-2000
			CN 1254423 A	24-05-2000
			CN 1262754 A	09-08-2000
			CN 1254473 A	24-05-2000
			CN 1254422 A	24-05-2000
			CN 1254475 A	24-05-2000
			CN 1254476 A	24-05-2000
			CN 1254474 A	24-05-2000
			CN 1255266 T	31-05-2000
			CN 1255212 T	31-05-2000
			CN 1255268 T	31-05-2000
			CN 1257630 T	21-06-2000
			WO 9843425 A1	01-10-1998
			WO 9843426 A1	01-10-1998
			WO 9843162 A1	01-10-1998
WO 9843431 A1	01-10-1998			
WO 9843248 A1	01-10-1998			
WO 9843165 A1	01-10-1998			
WO 9843415 A1	01-10-1998			
WO 9843172 A2	01-10-1998			
WO 9843433 A1	01-10-1998			
WO 9843437 A1	01-10-1998			
WO 9843167 A1	01-10-1998			
WO 9843428 A1	01-10-1998			
WO 9843421 A1	01-10-1998			
EP 0872798 A1	21-10-1998			
EP 0866611 A1	23-09-1998			
EP 0866616 A1	23-09-1998			
EP 0866613 A1	23-09-1998			
EP 1055176 A2	29-11-2000			
EP 0968610 A1	05-01-2000			
WO 0004717	A	27-01-2000	AU 5316799 A	07-02-2000
			CN 1317202 T	10-10-2001
			EP 1097589 A1	09-05-2001
			WO 0004717 A1	27-01-2000
WO 0109851	A	08-02-2001	AU 6370200 A	19-02-2001
			WO 0109851 A1	08-02-2001

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/US 01/07615

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0108113	A	01-02-2001	AU 6491800 A WO 0108113 A1	13-02-2001 01-02-2001
US 5790677	A	04-08-1998	NONE	
US 5883810	A	16-03-1999	NONE	
US 5392353	A	21-02-1995	US 5663757 A US 5101267 A AU 634242 B2 AU 5693790 A CA 2018539 A1 CN 1048136 A ,B CS 9002906 A2 EP 0402809 A2 IE 902108 A1 IL 94519 A JP 3064286 A NO 176299 B NZ 233837 A PT 94361 A US 5257099 A US 5223923 A	02-09-1997 31-03-1992 18-02-1993 20-12-1990 13-12-1990 26-12-1990 12-11-1991 19-12-1990 02-01-1991 08-07-1993 19-03-1991 28-11-1994 28-04-1992 31-12-1991 26-10-1993 29-06-1993
WO 9849658	A	05-11-1998	US 6282522 B1 AU 7272698 A EP 1003139 A2 EP 1023705 A1 WO 9849658 A1 US 6105008 A	28-08-2001 24-11-1998 24-05-2000 02-08-2000 05-11-1998 15-08-2000