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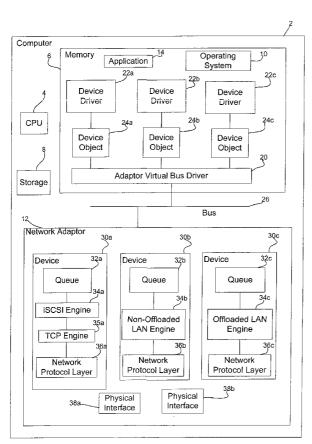
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(54) Title: METHOD, SYSTEM, AND PROGRAM FOR INTERFACING WITH A NETWORK ADAPTOR SUPPORTING A PLURALITY OF DEVICES



(57) Abstract: Provided are a method, system, and program for interfacing with device hardware supporting a plurality of devices. A device interface driver is initialized to represent the device hardware as a virtual bus to an operating system and to represent to the operating system each device supported in the device hardware as a device attached to the virtual bus. The device hardware is initialized and accessed to determine devices supported by the device hardware. One device object is generated for each determined device supported by the device hardware, wherein each generated device object represents the determined device to the operating system. The determined devices are reported to the operating system, wherein the operating system loads a device driver for each of the reported devices supported by the device hardware.

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GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G06F9/445 G06F13/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

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, WPI Data, COMPENDEX, INSPEC, IBM-TDB

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Х	US 5 655 148 A (RICHMAN ET AL) 5 August 1997 (1997-08-05)	1-5, 9-18, 22-32,
A	column 3, line 59 - column 4, line 5 column 4, line 6 - column 5, line 64 column 7, line 29 - line 48 column 25, line 66 - column 26, line 62 column 27, line 56 - column 28, line 51 column 33, line 10 - line 25 column 36, line 10 - line 16 column 44, line 65 - column 45, line 1 figures 4A-C,6,9,10,11A-B,14,18A,19A-B	36-40 6-8, 19-21, 33-35

X	Further	documents	are listed	in the	continuati	on of box	C.

χ Patent family members are listed in annex.

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Name and mailing address of the ISA

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C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	FC1/032004/030/5/
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WOLTHUSEN S D: "Goalkeeper: close-in interface protection" COMPUTER SECURITY APPLICATIONS CONFERENCE, 2003. PROCEEDINGS. 19TH ANNUAL 8-12 DEC. 2003, PISCATAWAY, NJ, USA, IEEE, 8 December 2003 (2003-12-08), pages 334-341, XP010675081 ISBN: 0-7695-2041-3	1,14,28
A	abstract	2-5, 9-18, 22-32, 36-40
	the whole document	
Α	US 6 009 480 A (PLESO ET AL) 28 December 1999 (1999-12-28)	1-5, 9-18, 22-32, 36-40
	abstract claims 1-29; figures 1,4,6-8,10	
A	"HORIZONTALLY OFFSET CRT FOR DIRECT CURRENT-COUPLED RESONANT FLYBACKDEFLECTION CIRCUITS" IBM TECHNICAL DISCLOSURE BULLETIN, IBM CORP. NEW YORK, US, vol. 38, no. 10, 1 October 1995 (1995-10-01), pages 441-444, XP000540553 ISSN: 0018-8689 the whole document	1-5, 9-18, 22-32, 36-40
A	"HARDWARE CONTENTION SERIALIZATION ALGORITHM" IBM TECHNICAL DISCLOSURE BULLETIN, IBM CORP. NEW YORK, US, vol. 38, no. 4, 1 April 1995 (1995-04-01), pages 73-77, XP000516077 ISSN: 0018-8689 the whole document	1-5, 9-18, 22-32, 36-40
A	EP 0 506 278 A (INTERNATIONAL BUSINESS MACHINES CORPORATION) 30 September 1992 (1992-09-30) abstract figures 1-3 claims 1-13 page 2, line 38 - line 55 page 3, line 34 - line 58 page 4, line 1 - page 5, line 9 page 5, line 25 - line 56	6-8, 19-21, 33-35

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ategory °	ation) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	I Data and A to all	
wedol)	onation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
	US 5 987 554 A (LIU ET AL) 16 November 1999 (1999-11-16) abstract figures 4a,b,5a,b,6a,b7a-c claims 1-4 column 13, line 14 - column 14, line 58	6-8, 19-21, 33-35	

Box II Observations where certain claims were found unsearchable (Continuation of item 2 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:
Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
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 III Observations where unity of invention is lacking (Continuation of item 3 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. X 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: 1-5, 9-18, 22-32, 36-40

Independent claim 1 refers to a method for interfacing a computer system with device hardware, dealing with the steps of hardware, software and driver initialisation, hardware access, collecting device information.

Dependent claims 2-5 and 9-13 define implementation details of the method of claim 1 relating to interfacing.

Claims 14-18, 22-32 and 36-40 correspond to claims 1-5 and 9-13 in different categories (system and article of manufacture)

2. claims: 6-8, 19-21 and 33-35

Dependent claims 6-8 extend the method of claim 1 with additional steps related to data communication as sending and receiving packages, queuing packages, transmitting processing notifications and invoking calls. Claims 19-21 and 33-35 correspond to claims 6-8 in different categories (system and article of manufacture)

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