

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 May 2008 (29.05.2008)

PCT

(10) International Publication Number
WO 2008/062164 A3

- (51) International Patent Classification:
H04N 7/15 (2006.01) *G06F 15/163* (2006.01)
- (21) International Application Number:
PCT/GB2007/004404
- (22) International Filing Date:
19 November 2007 (19.11.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0623100.5 20 November 2006 (20.11.2006) GB
0623098.1 20 November 2006 (20.11.2006) GB
0623097.3 20 November 2006 (20.11.2006) GB
0623096.5 20 November 2006 (20.11.2006) GB

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, 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, LT, LU, LV, MC, MT, 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).

(71) Applicant (for all designated States except US): **CODIAN LIMITED** [GB/GB]; 14 Waterside Drive, Langley, Slough SL3 6EZ (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **EVANS, Simon, James, Winn** [GB/GB]; 1 Russett Gardens, Ruscombe, Berkshire RG10 9HB (GB).

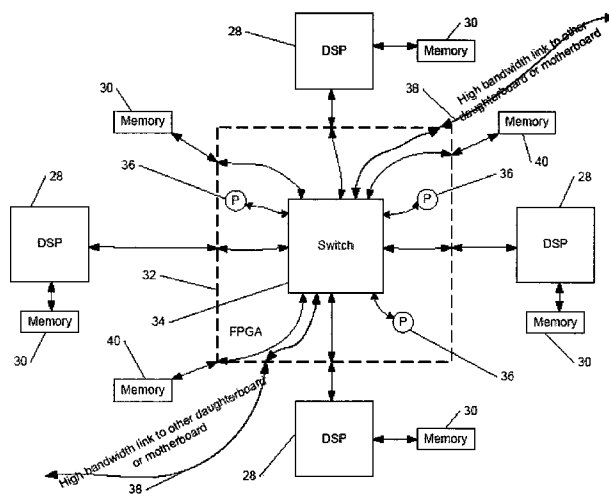
(74) Agent: **BRIDDES, Sam**; ONSAGERS LTD., c/o Innovation Norway, 5 Lower Regent Street, London SW1Y 4LR (GB).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
19 February 2009

(54) Title: **HARDWARE ARCHITECTURE FOR VIDEO CONFERENCING**



(57) Abstract: Video processing architectures, systems, and methods for a multipoint control unit are provided. In one example, a video processing system includes a motherboard and at least one daughterboard, each daughterboard having a plurality of processors interconnected via a daughterboard switch, where the daughterboard switch is configured to switch data between the plurality of processors and between the motherboard and daughterboard. The video processing system may further include a plurality of daughterboards each having an identical hardware and/or mechanical configuration. The plurality of daughterboards may be configured to be mechanically and electrically couplable together in any order, and may be stackable to form a series chain of daughterboards extending from the motherboard, each respective daughterboard switch being further configured to switch data to a daughterboard switch on another daughterboard to permit data flow along said series chain.

WO 2008/062164 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2007/004404

A. CLASSIFICATION OF SUBJECT MATTER
INV. H04N7/15 G06F15/163

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)
H04N G06F H04L

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)

EPQ-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 584 077 B1 (POLOMSKI MARK D [US]) 24 June 2003 (2003-06-24) abstract figures 2,3,5,6,11B,14 column 2, line 9 - line 53 column 4, line 64 - line 67 column 6, line 55 - column 9, line 5 column 12, line 8 - line 11 column 15, line 30 - line 35	1-13
A	US 5 175 824 A (SODERBERY ROBERT W [US] ET AL) 29 December 1992 (1992-12-29) figures 2,3 column 5, line 20 - line 50	1,6,7, 11,13
	-/-	

Further documents are listed in the continuation of Box C.

See patent family 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

9 December 2008

Date of mailing of the international search report

15/12/2008

Name and mailing address of the ISA/
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040.
Fax: (+31-70) 340-3016

Authorized officer

Bosch Vivancos, P

INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2007/004404

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 201 038 A (FIELDER DENNIS A [GB]) 6 April 1993 (1993-04-06) figure 2 column 5, line 6 - line 10	5, 12
X Y A	US 2004/015633 A1 (SMITH WINTHROP W [US]) 22 January 2004 (2004-01-22) abstract figure 1	14-19 20-23 24-27
A	US 2006/245379 A1 (ABUAN JOE [US] ET AL) 2 November 2006 (2006-11-02) the whole document	14-27
X Y A	US 6 442 758 B1 (JANG RAYMOND EDWARD [CA] ET AL) 27 August 2002 (2002-08-27) abstract figure 1 claim 29	14-19 20-23, 28-33 24-27
Y	US 6 760 776 B1 (GALLO ANTHONY MATTEO [US] ET AL) 6 July 2004 (2004-07-06) column 3, line 55 - column 4, line 40	28-33
A	US 5 999 981 A (WILLENZ AVIGDOR [IL] ET AL) 7 December 1999 (1999-12-07) the whole document	28-33

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2007/004404

Box No. 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:

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 No. 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 fees, this Authority did not invite payment of additional fees.
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 and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- 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: 1-13

Expandable interconnect for multipoint control units

2. claims: 14-27

Interconnect with processing capabilities for a multipoint control units

3. claims: 28-33

Intelligent switches for video conference

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/GB2007/004404
--

Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
US 6584077	B1	24-06-2003	NONE	
US 5175824	A	29-12-1992	NONE	
US 5201038	A	06-04-1993	NONE	
US 2004015633	A1	22-01-2004	NONE	
US 2006245379	A1	02-11-2006	NONE	
US 6442758	B1	27-08-2002	CA 2316738 A1	24-03-2001
US 6760776	B1	06-07-2004	NONE	
US 5999981	A	07-12-1999	IL 116986 A	31-01-2000