



## (51) International Patent Classification:

*H05K 5/02* (2006.01) *G06K 19/077* (2006.01)  
*H01R 13/453* (2006.01) *H01R 13/44* (2006.01)

## (21) International Application Number:

PCT/US2012/071939

## (22) International Filing Date:

28 December 2012 (28.12.2012)

## (25) Filing Language:

English

## (26) Publication Language:

English

## (30) Priority Data:

61/581,737 30 December 2011 (30.12.2011)

US

(71) **Applicant** (for AG, BB, BR, BZ, CA, CL, CO, CR, DM, DO, EC, GD, GT, HN, KN, LC, MX, NI, PE, SV, TT, VC only): **VASCO DATA SECURITY, INC.** [US/US]; 1901 South Meyers Road, Suite 210, Oakbrook Terrace, IL 60181 (US).

(71) **Applicant** (for all designated States except AG, BB, BN, BR, BZ, CA, CL, CO, CR, CU, DM, DO, EC, GD, GT, HN, KN, KP, LC, MX, NI, PA, PE, SV, SY, TT, US, VC): **VASCO DATA SECURITY INTERNATIONAL GMBH** [CH/CH]; World-Wide Business Center, Balz-Zimmermannstrasse 7, CH-8152 Glattbrugg (CH).

(72) **Inventors**: **AGREDA DE RO, Maya**; Capiaumontstraat 37, B-2600 Berchem (BE). **WALTNIEL, Rudy**; Valkstraat 15, B-9470 Denderleeuw (BE).

(74) **Agent**: **WEED, Stephen, J.**; RatnerPrestia, PO Box 980, Valley Forge, PA 19482 (US).

(81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

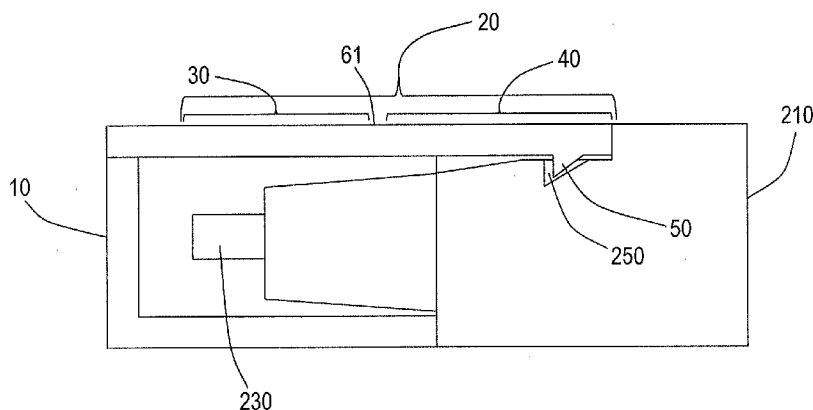
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

**Published:**

- with international search report (Art. 21(3))

[Continued on next page]

## (54) Title: USB DEVICE WITH A CAP

**FIG. 3A**

(57) **Abstract**: An electronic device, which may be a USB device, includes a body part that is removably connected to a cap. The body part includes a connector for plugging the device into a host computing device. The cap includes a lever part and a main part. The lever part of the cap is attached to the main part and pivots at least partially around a pivot axis. The lever part includes an anchor part on one side of the pivot axis and an unlock part on the other side of the pivot axis. The anchor part includes a hook that engages a cavity in the body part when the cap is connected to the body part. Depressing the unlock part of the cap causes the lever to pivot around the pivot axis thereby disengaging the hook from the first cavity, and thereby releasing the cap from the body part.



---

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

**(88) Date of publication of the international search report:**  
26 September 2013

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2012/071939

## A. CLASSIFICATION OF SUBJECT MATTER

INV. H05K5/02 H01R13/453 G06K19/077 H01R13/44  
ADD.

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)

H05K H01R G06K

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 practicable, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                                  | Relevant to claim No. |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| A         | US 2007/111583 A1 (CUELLAR EDWIN J [US] ET AL) 17 May 2007 (2007-05-17)<br>paragraphs [0011] - [0018]; figures 1A-4<br>-----        | 1-15                  |
| A         | US 7 503 780 B1 (HUANG JOSEPH [TW])<br>17 March 2009 (2009-03-17)<br>column 2, line 23 - column 3, line 24;<br>figures 1-5<br>----- | 1-15                  |
| A         | US 2008/192444 A1 (CHEN CHIH-SHENG [TW])<br>14 August 2008 (2008-08-14)<br>paragraphs [0021], [0024]; figures 10,11<br>-----        | 1-15                  |
| A         | US 2009/258516 A1 (HIEW SIEW S [US] ET AL)<br>15 October 2009 (2009-10-15)<br>paragraph [0030]; figures 1A,1B<br>-----              | 1-15                  |



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 application or patent 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 July 2013

Date of mailing of the international search report

22/07/2013

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

Schneider, Florian

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2012/071939

## 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.: 1-14(partially)  
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:  
see FURTHER INFORMATION sheet PCT/ISA/210
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:

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**

Continuation of Box II.2

Claims Nos.: 1-14(partially)

Present claims 1-14 are directed towards an "electronic device having a connector" and thus relate to an extremely large number of possible products or apparatus. Support and disclosure in the sense of Article 6 and 5 PCT is to be found however only for a USB device, whose USB connector is to be protected by a cap (see e.g. paragraph 2 of the description).

The non-compliance with the substantive provisions is to such an extent, that the search was performed taking into consideration the non-compliance in determining the extent of the search of claims 1-14 (PCT Guidelines 9.19 and 9.23).

The search of claims 1-14 was restricted to USB devices. In other words, the searched subject-matter corresponds to claims 1-14 as originally filed wherein the expressions "electronic device" and "connector" defined in claims 1-14 have been replaced by the expressions "USB device" and "USB connector" respectively.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guidelines C-IV, 7.2), should the problems which led to the Article 17(2) declaration be overcome.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/071939

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date         |
|-------------------------------------------|---------------------|----------------------------|-----------------------------|
| US 2007111583                             | A1                  | 17-05-2007                 | NONE                        |
| US 7503780                                | B1                  | 17-03-2009                 | NONE                        |
| US 2008192444                             | A1                  | 14-08-2008                 | NONE                        |
| US 2009258516                             | A1                  | 15-10-2009                 | US 2009258516 A1 15-10-2009 |
|                                           |                     |                            | US 2010248512 A1 30-09-2010 |