

Application No.:

04 748 654.3

Patent No.:

EP-B-1 634 140

Direct Decision:

☐ yes ☒ no

Revocation of the European Patent (Art. 101(3)(b) EPC)

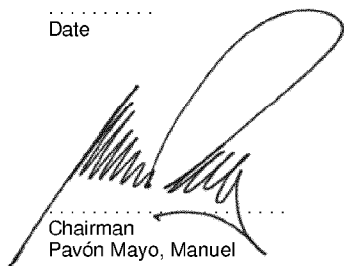
The Opposition Division - at the oral proceedings dated 23.06.2021 - has decided:

European Patent No. EP-B- 1 634 140 is revoked.

The Grounds for the decision (Form 2916) are enclosed.

14.09.2021

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Date


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Application No. / Patent No. 04 748 654.3 - 1010 / 1 634 140 /	Ref. 330.002 EPw	Date 24.09.2021
Proprietor Ward Participations B.V.		

Decision revoking the European Patent (Art. 101(3)(b) EPC)

The Opposition Division - at the oral proceedings dated 23.06.2021 - has decided:

European Patent No. EP-B- 1 634 140 is revoked.

The reasons for the decision are enclosed.

Possibility of appeal

This decision is open to appeal. Attention is drawn to the attached text of Articles 106 to 108 and Rules 97 to 98 EPC.

Opposition Division:

Chairman: Pavón Mayo, Manuel
2nd Examiner: Kleiber, Michael
1st Examiner: Hijazi, Ali



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Enclosure(s): 21 page(s) reasons for the decision (Form 2916)
Wording of Articles 106 - 108 and Rules 97-98 EPC (Form 2019)
Minutes of oral proceedings

to EPO postal service: 21.09.21



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Datum
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Sheet 1
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Anmelde-Nr:
Application No: 04 748 654.3
Demande n°:

Summary of Facts and Submissions

- I. European patent N°1 634 140 B1 entitled "*METHOD AND SYSTEM FOR PERFORMING A TRANSACTION AND FOR PERFORMING A VERIFICATION OF LEGITIMATE ACCESS TO, OR USE OF DIGITAL DATA*" is based on European patent application N°04 748 654.3 (international application number PCT/NL2004/000 422). The patent Proprietor is Ward Participations B.V.
De Schaepstal 1, 1251 MZ Laren, NL.
The mention of the grant of the patent was published in European Patent Bulletin 2019/03 on 16-01-2019. The patent claims the following priority: PCT/NL03/00436 filed on 13-06-2003
- II. A notice of opposition against the patent has been filed on 16-10-2019 by:
Samsung Electronics Benelux B.V.
Evert van de Beekstraat 310
1118 CX Schiphol, NL
- III. The Opponent submitted that the subject-matter of the patent was not patentable according to Article 100(a) EPC (Article 52(1) EPC; Articles 54 and 56 EPC) and Article 100(c) EPC. He requested to revoke the patent in its entirety and auxilliarily to arrange an oral proceedings according to Article 116 EPC.
- IV. The following documents were cited by the Opponent in support of his requests:
- E1 WO 2004/015579 A1 (TREK 2000 INT LTD [SG]; OOI CHIN SHYAN RAYMOND [SG] ET AL.) 19 February 2004 (2004-02-19)

- E2 "Client Security Software Version 5.0 Installation Guide",
IBM Client Security Solutions, September 2002 ;
- E2a "IBM Improves PC Security System",
IBM News room, 4 October 2002 (2002-10-04), pages 1-2, URL:https://
www-03.ibm.com/press/us/en/pressrelease/485.wss ;
- E2b "Embedded Security Chip and Software - a white paper",
IBM Client Security Solutions, 1999, pages 1-6 ;
- E2c "Client Security Software Version 1.0 Administrator's Guide",
IBM Client Security Solutions, December 1999
- E3 US 5 892 900 A (GINTER KARL L [US] ET AL) 6 April 1999 (1999-04-06)
- E4 US 2002/007456 A1 (PEINADO MARCUS [US] ET AL) 17 January 2002
(2002-01-17)
- E5 US 2002/023215 A1 (WANG YNJIUN P [US] ET AL) 21 February 2002
(2002-02-21)
- E6 EP 1 076 279 A1 (HEWLETT PACKARD CO [US]) 14 February 2001
(2001-02-14)
- E7 WO 01/17296 A1 (ERICSSON TELEFON AB L M [SE]) 8 March 2001
(2001-03-08)
- E8 WO 02/076127 A1 (QUALCOMM INC [US]) 26 September 2002
(2002-09-26)
- E9 GB 2 338 381 A (BARCLAYS BANK PLC [GB]) 15 December 1999
(1999-12-15)
- E10 EP 1 237 324 A (SANYO ELECTRIC CO [JP]; PFU LTD [JP]; FUJITSU
LTD [JP]; HITACHI LTD [J]) 4 September 2002 (2002-09-04)
- E11 WO 01/84319 A (XTEC INC [US]) 8 November 2001 (2001-11-08)
- E12 WO 02/47081 A (SANDISK CORP [US]) 13 June 2002 (2002-06-13)
- E13 US 5 802 590 A (DRAVES RICHARD P [US]) 1 September 1998
(1998-09-01)

- E14 US 2001/051996 A1 (COOPER ROBIN ROSS [US] ET AL) 13 December 2001 (2001-12-13)
- E15 US 2002/112162 A1 (COCOTIS THOMAS ANDREW [US] ET AL) 15 August 2002 (2002-08-15)
- E16 US 2002/112171 A1 (GINTER KARL L [US] ET AL) 15 August 2002 (2002-08-15)
- E17 US 2003/039362 A1 (CALIFANO ANDREA [US] ET AL) 27 February 2003 (2003-02-27)
- E18 BENNET YEE: "Using Secure Coprocessors",
THESIS SUBMITTED TO THE SCHOOL OF COMPUTER SCIENCE FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY, May 1994
- E19 WO 00/67143 A2 (UNICATE BV [NL]; SIPMAN WILHELMUS HENDRIKUS
MAR [NL] ET AL.) 9 November 2000 (2000-11-09)
- E20 US 5 354 097 A (TEL TEUNIS [NL]) 11 October 1994 (1994-10-11)
- E21 GERALD J POPEK ET AL: "Encryption and Secure Computer Networks",
ACM COMPUTING SURVEYS, ACM, NEW YORK, NY, US, US,
vol. 11, no. 4, December 1979, pages 331-356, ISSN: 0360-0300, DOI:
10.1145/356789.356794

- V. With a letter, received on 03-03-2020, the Patentee filed observations concerning the opposition and requested to reject the opposition. Furthermore, he auxiliarily requested oral proceedings according to Article 116 EPC to take place.
- VI. On 25-05-2020 the Opposition Division issued a summons to attend oral proceedings pursuant to Rule 115(1) EPC. The matters to be discussed as well as a provisional, non-binding, opinion of the Opposition Division were set out in a communication accompanying the summons.

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- VII. With letters dated 26-08-2020 and 21-09-2020, the Patentee indicated that it did not agree with the oral proceedings being held by videoconference. The Opposition Division decided therefore to postpone the oral proceedings and issued a new summons on 13-10-2020.
- VIII. With a letter, received on 23-04-2021, the Opponent made some further submissions in response to the summons and cited the following documents.
- E22 HPL-2002-185, entitled "A trusted biometric system", by Liqun Chen, Siani Pearson, and Athanasios Vamvakas published in July 2002
- E22a, Exhibits to prove the publication date of E22
- E22b
- E23 US 6 327 652 B1 (ENGLAND PAUL [US] ET AL) 4 December 2001 (2001-12-04)
- IX. With a letter, received on 23-04-2021, the Patentee made some further submissions in response to the summons and filed 9 auxiliary requests.
- X. With a letter, received on 28-05-2021, the Opponent made some further submissions and with a letter, received on 07-06-2021, the Patentee also made some further submissions.
- XI. On 23-06-2021, oral proceedings were held. As to the course of the oral proceedings, it is referred to the minutes.
- XII. As to the sets of claims forming the basis of the decision, reference is made to the file. The main request is the maintenance of the patent as granted, the auxiliary requests 1 to 9 being as received on 23.04.2021.

Reasons for the Decision

Admissibility of the opposition

- 1 The opposition fulfils the requirements of Article 99(1) EPC, Rule 3(1) EPC and of Rule 76 EPC and is therefore admissible.

Procedural aspects

- 2 The oral proceedings took place in a distributed manner by videoconference with the use of Zoom and could be held without technical problems. Therefore, the Opposition Division considers that the parties' rights under Articles 113 and 116 EPC have been fulfilled.
- 3 The present patent is based on an application filed before 13.12.2007, i.e. before the EPC 2000 is entered into force, and therefore in accordance with the transitional provisions as decided by the Administrative Council some of the provisions of the EPC 2000 are to be applied while other provisions of the EPC 1973 still apply. As the Euro-PCT at the basis of the patent in suit was still pending on 13.12.2007, Article 54(4) EPC 1973 and therefore Rule 23a EPC 1973 apply in the present case. For the rest, in the present case, no substantial difference could be detected between both provisions to be applied concretely and therefore for simplicity reasons it is referred merely to the EPC 2000, i.e. EPC unless otherwise mentioned.
- 4 The application as filed has been published under the number WO 2004/111752 A2 and is in the following called D2.

Main request

- 5 In order to ease the discussion, the features breakdown is as follows:

Claim 1:

- M1: Method for performing an electronic transaction between a first transaction party and a second transaction party using an electronic device operated by the first transaction party,
- M2: the electronic device having an operating system (48) creating a run-time environment for user applications
- M3: and authentication software (54) running in a separate operating environment, independent from and inaccessible to said operating system, (48)
- M4: the electronic device having a memory comprising
- M4.1: storage locations, part of the memory being accessible to the operating system, (48)
- M4.2: part of the memory being a secure area (62) storage locations of which are not reported to the operating system, (48)
- the method comprising:
- M5: providing authentication data (63A) in the secure area (62) of said electronic device
- M5.1: which authentication data (63A) are inaccessible to a user of said electronic device,
- M5.2: wherein said secure area (62) is inaccessible to said operating system (48) of said electronic device, thereby rendering the authentication data (63A) inaccessible to said user;
- M6: providing authentication software (54) in said electronic device,
- M6.1: the authentication data (63A) being accessible to said authentication software, (54) wherein the authentication software (54) is stored in the secure area (62) inaccessible to said operating system;(*) (48)
- M6.2: activating the authentication software (54) to generate a digital signature from the authentication data, (63A)
- M6.3: wherein the authentication software (54) is run in a secure processing environment inaccessible to said operating system;(*) (48)
- M7: providing the digital signature to the second transaction party.

(*) Note: the Druckexemplar mentions a ";" which is not present on the B1 publication of the patent.

Claim 23:

- S1: System for performing an electronic transaction between a first transaction party and a second transaction party using an electronic device operated by the first transaction party,
- S2: the electronic device having an operating system creating a run-time environment for user applications
- S3: and authentication software running in a separate operating environment, independent from and inaccessible to said operating system,
- S4: the electronic device having a memory comprising
- S4.1: storage locations, part of the memory being accessible to the operating system,
- S4.2: part of the memory being a secure area storage locations of which are not reported to the operating system,
- the system comprising:
- S5: means for providing authentication data in the secure area of said electronic device
- S5.1: which authentication data are inaccessible to a user of the electronic device,
- S5.2: wherein said secure area is inaccessible to said operating system of said electronic device, thereby rendering the authentication data inaccessible to said user;
- S6: means for providing authentication software in said electronic device,
- S6.1: the authentication data being accessible to said authentication software, wherein the authentication software is stored in the secure area inaccessible to said operating system;
- S6.2: means for activating the authentication software to generate a digital signature from the authentication data,
- S6.3: wherein the authentication software is run in a secure processing environment inaccessible to said operating system;
- S7: means for providing the digital signature to the second transaction party.

Claim 24:

- E1: Electronic device for performing an electronic transaction between a first transaction party and a second transaction party, wherein the electronic device is operated by the first transaction party,
- E2: the electronic device having an operating system creating a run-time environment for user applications
- E3: and authentication software running in a separate operating environment, independent from and inaccessible to said operating system,
- E4: the electronic device having a memory comprising
- E4.1: storage locations, part of the memory being accessible to the operating system,
- E4.2: part of the memory being a secure area storage locations of which are not reported to the operating system,
- E5: the secure area storing authentication data
- E5.1: which are inaccessible to a user of the electronic device,
- E5.2: wherein said secure area is inaccessible to said operating system of said electronic device, thereby rendering the authentication data inaccessible to said user;
- the electronic device comprising:
- E6: a memory storing authentication software,
- E6.1: the authentication data being accessible to said authentication software, wherein the authentication software is stored in the secure area inaccessible to said operating system;
- E6.2: means for activating the authentication software to generate a digital signature from the authentication data,
- E6.3: wherein the authentication software is run in a secure processing environment inaccessible to said operating system; and
- E7: means for providing the digital signature to the second transaction party.

6 The Opposition Division comes to the conclusion that the the subject-matter of the European patent extends beyond the content of the application as filed so that the ground of opposition of **Article 100(c) EPC** prejudices the maintenance of the patent as granted, i.e. the main request is not allowable.

7 The set of claims is generally directed to the first and second embodiments corresponding to Figs. 1 to 3 while the third embodiment corresponding to Figs. 4, 5A and 5B are not covered by the set of claims. This can already be seen as the independent claims mention a secure area storage location which are not reported to the operating system (features M4.2, S4.2 and E4.2) while the description of the third embodiment starts by defining that the memory "is accessible to an operating system" (p. 15, l. 13 of D2). Figs. 6 to 9 and the corresponding parts of the description are directed to several methods which may use all of the above mentioned embodiments. As to the embodiment of Fig. 10, the Patentee argued during the oral proceedings that it would also apply to all above mentioned embodiments. The Opposition Division has doubts that this can be followed as the embodiment of Fig. 10 relates to a removable and portable memory which, in a standard manner, is accessible to the operating system. Furthermore, the description of this embodiment clearly refers to Fig. 4, i.e. to an embodiment not covered by the set of claims (see e.g. p. 25, l. 28-33). As a conclusion and in general, the basis for the set of claims cannot be taken from the embodiment of Figs. 4, 5A, 5B and 10, unless some specific reasons would allow to do so.

8 Claim 1.

8.1 Generally, the subject-matter of claim 1 is mainly based on claims 1, 12, 26 and 27 of D2. In addition, the operating system, the memory and the authentication software have been further specified based on the description. In summary features M2, M3, M4, M4.1 and M4.2 have been introduced while the rest of the claim has been adapted to the wording used in these features (see also the letter of the Patentee of 23-04-2021, section 4.1.1). The Opposition Division notes the following concerning the basis of claim 1 in D2:

8.1.1 Feature M1.

This feature was already present in claim 1 of D2.

8.1.2 Feature M2.

The Opponent has challenged the lack of basis of feature M2 in the originally filed application mainly on the ground that the only passage explicitly disclosing this definition (page 13, lines 23-24) is to be read in the context of the embodiment of Fig. 3 which discloses other components.

The Opposition Division is of the opinion that this feature, although only explicitly present at one place in D2, is nothing more than providing the definition of what an operating system is and generally applies to the whole disclosure (see also point 4 of the decision T 0248/17).

8.1.3 Feature M3 and M4 to M4.2.

8.1.3.1 Feature M3.

Claim 27 of D2 provides a partial basis for feature M3 in that it is stated that "the authentication software is run in a secure processing environment inaccessible to an operating system". It is however not mentioned there that the operating (processing) environment is separate and independent from said operating system.

Page 7, lines 31-34 discloses that the authentication software is independent from and inaccessible to the operating system on the device. However, it is also specified there that the separate operating environment is in the BIOS or in a console (or behind the console, see page 14, lines 12-13). The Opposition Division is therefore of the opinion that this feature does not have a basis in its present generality in D2. The fact that the BIOS is a quite general feature, as argued in the letter of 23-04-2021, page 9, does not change this view, as still D2 consistently mentions the BIOS as one of the actors which is present when carrying the method of the 1st or 2nd embodiments.

8.1.3.2 Features M4 to M4.2.

The Opponent has argued that no part of D2 discloses a memory which comprises a combination of parts that are accessible and non-accessible to the operating system.

The Opposition Division notes the following:

Feature M4. The claim mentions a memory in general (and not for instance a memory module), while this aspect was already present in claim 1 of D2 (the authentication data is provided in a memory of said electronic device). It is not specified whether this memory is formed of one or several physical memory parts and where this memory is located. Generally speaking a memory must be present in an electronic device as claimed, independently of the embodiment considered, and a memory, as a matter of definition, comprises a storage location. Feature M4 appears therefore to have a basis in D2.

Claim 12 of D2 merely mentions that "said memory is inaccessible to an operating system of said electronic device" i.e. does not specify several parts of the memory, one being accessible to the operating system and one not. It is therefore necessary to refer to the description in order to find a basis for features M4.1 and M4.2.

Feature M4.1. Page 10, lines 25-26 mentions a separate part of a hard drive of a computer which may not be accessible to the operating system. This implies therefore that the other part of the hard drive is accessible to the operating system. Feature M4.1 appears therefore to have a basis in D2.

Feature M4.2. Page 10, lines 22-28 (1st embodiment) mentions a secure part of the BIOS or a separate part of a hard drive of a computer not being accessible to the operating system. Page 11, lines 6-9 mentions that the necessary software and authentication table should be installed in a secure memory location of the device (2nd embodiment). Page 11, lines 9-12 discloses that a secure memory location has to be provided as a part of a secure memory or it may be an encrypted part of a non-secure memory (the second part of this sentence, however, appears to relate to the third embodiment because of the memory being non-secure, such as user accessible - see also page 15, lines 13-14). It can also be seen on Fig. 3 that the operating system 48 is shown as being linked to the BIOS 44 but not to the console 52 or the secure area 62 itself linked to the console. At page 14, lines 12-13, it is stated that in or behind the console 52, there is a secure area 62 only accessible to the BIOS. At page 7, lines 28-29, it is stated that the secure part of the device is accessible only to the BIOS. It is further stated (page 14, lines 13+) that the secure area 62 comprises applications and storage locations, which are not reported to the operating system 48. Later (page 14, lines 35+), it is stated that the secure area may further comprises other ... memory locations. Such a secure area appears therefore to also encompass some part of a memory.

It is however noted that all these quoted passages relate to specific embodiments involving to some extent the BIOS or the console.

Therefore, the question which still arises is which link, if any, is to be made between features M3, M4.1 and M4.2 and the BIOS (and possibly the console).

In the paragraph bridging pages 5 and 6 it is mentioned that in the context of the installation method a new device contains a BIOS and an existing device also contains such BIOS. It is also specified that the BIOS is used to access a memory location in a memory. This part appears to relate to all relevant embodiments to the present set of claims, see with that regard page 5, line 19 and the reference to Figs. 1, 2, 4 and 6-9.

Therefore, in the light of these passages, the Opposition Division cannot see that the BIOS can be omitted from the combination of features M3-M4.2 without extending the content of the application as filed.

The fact that independent claim 1 of D2 does not mention the BIOS does not provide any technical teaching providing such a justification as the aspects related to the secure area have been taken from the description. The same applies in relation with page 2 of D2 quoted by the Patentee which appears to be directed to a mere repetition of the claims of D2. The reasoning in the decision of the BoA mentioned above does not appear to provide a justification for the present generality either, as the claim pending at the time did have a reference to the BIOS.

In the letter of 23-04-2021 (pages 9 to 14), the Patentee is providing its view why the BIOS as such is not important but only some of its functionality, i.e. mainly the memory management aspect ("system for accessing a memory location"). As mentioned above under point 8.1.3.1, D2 describes in the 1st and 2nd embodiments two methods which require the BIOS to some extent. In the 1st embodiment (Fig. 1) the BIOS manufacturer is an actor, so that clearly the BIOS is an essential part which cannot be generalised to any memory management component. In the 2nd embodiment and as it concerns a device which is already existing (page 10, line 37 - page 11, line 9) some further steps are necessary. Nevertheless, Fig. 2 and the corresponding part of the description still describes the involvement of the BIOS (see page 12). This is further explained in connection with Fig. 3 where the inaccessible memory linked to the BIOS is defined as being a secure area in or behind the console and only accessible to the BIOS (page 14, lines 12-13). Although in principle it

cannot be excluded that other alternative solutions not necessitating the BIOS could also be possibly implemented, such technical teachings are not disclosed in D2.

8.1.3.3 The Opposition Division comes to the conclusion that present claim 1 is directed to intermediate generalisation between the combination of claims forming its basis and the passages of the description taken to further limit its subject-matter, especially the secure area as claimed.

8.1.3.4 During the oral proceedings it was also discussed whether the description of D2 provides room for generalisation which would render the claim allowable.

The Patentee argued that the passage at page 6, lines 5-8 of D2 would provide a basis for such a generalisation, implying that the BIOS would not be mandatory, i.e. inextricably linked to the other features of the related embodiment(s) in the sense of the GL, H-V, 3.2.1, so that a secure area in general as yet claimed would be allowable (see also letter of 23-04-2021, section 4.1.3).

This passage reads: "The Basic In Out System is only referred to as a system for accessing a memory location in a memory that is directly or indirectly connected to the electronic device".

The Patentee sees in this passage a justification that the BIOS is not mandatory but that merely a system for accessing a memory location (i.e. a memory controller) in a memory would be sufficient.

The Opposition Division understands this sentence in the context it is used as meaning that some memory management of the BIOS is used but still this management is related to the BIOS. In that respect it is referred to page 5, lines 35-37 and page 6, lines 8-11 which mention this relation with the storage and the BIOS in a general manner.

The Patentee also quoted during oral proceedings several parts of the passage starting from page 13, line 10 to page 15, line 10 as also providing some basis for omitting to mention the BIOS in the claim.

The Opposition Division does not see either that this passage provides for such a basis as, here also, this whole part is making reference to some specific functions of the BIOS, but nevertheless it is referred to the BIOS (see e.g. especially the accessibility control mentioned at page 13, lines 32-36 which is done by the BIOS 44).

The Patentee also argued that the BIOS is immutable and therefore this would show that the BIOS cannot be a mandatory part of the claimed method which should have been introduced when amending the claims set which led to the granted patent (see also the Preamble and section 4.1.4 of the letter of 23-04-2021).

Indeed, D2 mentions at page 13, line 11 that the BIOS is stored in a ROM. Although the BIOS may be stored in an EEPROM so that it could be upgraded, i.e. modified, the Opposition Division agrees that this does probably not correspond to the second embodiment where the BIOS manufacturer is not an actor. However, in the case of the 2nd embodiment, the secure area is created in a very specific manner, by using the console environment, see page 14, lines 12-13, the secure area is in or behind the console 52 and only accessible to the BIOS. This is confirmed in the description of the 2nd embodiment at page 12, line 26, where it is stated that the authentication table is stored in a secure part of the BIOS.

8.1.3.5 As a conclusion, the Opposition Division considers that in the two disclosed embodiments, which may serve as a basis for the amendment concerning the secure area, the BIOS is mentioned in both cases as an "actor" and cannot be left apart. In both embodiments the secure area is only accessible to the BIOS either directly when the BIOS manufacturer is an actor (because the BIOS can be modified so as to exclude some memory part from being accessed by the operating system, e.g. page 10, lines 21-30) or indirectly when not (via the console, e.g. page 14, lines 12-13). In a similar manner, the separate operating environment independent from and inaccessible to said operating system for running the authentication software is either the BIOS itself or the console (e.g. page 7, lines 31-34).

8.1.4 Features M5 to M5.2.

The Opponent also argued that there is neither explicit nor implicit basis for features M5.1 and M5.2.

The Opposition Division notes the following:

Features M5 and M5.1. These features were already present in claim 12 of D2 apart that secure area instead of memory is now used in the claim. Concerning the expression "authentication data", the Opposition Division notes that this feature was present in the claim 1 of D2 which is supposed to cover all embodiments of D2. It is true that the specific embodiments of Figs. 1 and 2

appear to only refer to an authentication "table" instead of "data" (see e.g. the random table supplier, page 6, line 17 and the random table lines 21-23). The authentication data is not any data in general but is, according to feature M6.2, suitable to be used by an authentication software to generate a digital signature, an example of it being an authentication table (page 15, line 12 of D2). Although this statement is done in relation with the 3rd embodiment, the Opposition Division comes to the conclusion that this generalisation is applicable to all embodiments (as claimed). This level of generality is not linked to the fact that it is stored or not in a memory accessible to the OS, and therefore, the skilled person would derive from this that any authentication data can be used as long as it is related to the generation of a signature. The Opponent further argued (item b, pages 27 of the notice of opposition) that D2 teaches a different treatment of authentication data and authentication table. The Opposition Division does not share this view: the only reason there is a difference of treatment appears to be due to the storage location (inaccessible or accessible). In fact the exemplary (non claimed) embodiment of Fig. 4, page 15 does not suggest any difference of treatment: on the contrary, it is specified that an example of the data can be an authentication table and nowhere it appears to be made any distinction depending on these two types of data. All in all, the Opposition Division is of the opinion that "authentication data" is having a basis in D2, i.e. features M5 and M5.1 have such a basis as the secure area of feature M4.2 to which it refers is having a basis.

Feature M5.2. This feature is repeating feature M4.2 with a slightly different wording. The same consideration as made above for feature M4.2 apply.

Therefore, the Opposition Division comes to the conclusion that the features M5 to M5.2 have a basis in D2, as far as features M4 to M4.2 have such a basis.

8.1.5 Features M6 to M6.3.

These features were not challenged by the Opponent.

Feature M6 and the first part of feature M6.1 have a basis in claim 1 of D2.

Second part of feature M6.1 (starting at wherein) has a basis in claim 26 of D2 as far as the secure area of feature M4.2 to which it refers is allowable.

Feature M6.2 has a basis in claim 1 of D2. Fig. 3 appears to show that the authentication software is stored in the secure area 62 (see also page 14, lines 31-34).

Feature M6.3 has a basis in claim 27 of D2.

A basis in D2 for these features appears therefore to be present.

8.1.6 Feature M7.

This feature was not challenged by the Opponent and was present in claim 1 of D2.

8.2 For all these reasons, the subject-matter of claim 1 introduces subject-matter which extends beyond the content of the originally filed application D2.

9 Independent claim 23.

Claim 23 is directed to a system for performing an electronic transaction, is based on claim 29 of D2 and corresponds for the rest to claim 1 in terms of means for. For similar reasons, the Opposition Division considers that its subject-matter also extends beyond the content of the originally filed application D2.

10 Independent claim 24.

Claim 24 is directed to an electronic device for performing an electronic transaction and mostly takes back the features of claim 1. Therefore, for similar reasons, the Opposition Division considers that its subject-matter also extends beyond the content of the originally filed application D2.

11 The Opposition Division comes therefore to the conclusion that the subject-matter of the patent extends beyond the content of the application as filed for the reasons mentioned above.

12 Additional aspects of the main request not forming part of the decision as they were not discussed with the parties during the oral proceedings.

The following is noted by the Opposition Division concerning the dependent claims:

12.1 Claims 2 to 4 have a basis in original claims 5 to 7 of D2.

- 12.2 Claim 5. The additional features of claim 5 are based on page 8, lines 28-29 of D2.
- 12.3 Claims 6 and 7 have a basis in original claims 10 and 11.
- 12.4 Claim 8. The additional features of claim 8 originate from page 14, lines 31-34 of D2.
- 12.5 Claim 9. The additional features of claim 9 originate from page 15, lines 8-10 of D2.
- 12.6 Claim 10 have a basis in claim 14.
- 12.7 Claim 11 appears to have some basis in page 19, lines 14-17. However, this part relates to the third embodiment not covered by the present independent claims, so that a new unallowable combination is present.
- 12.8 Claim 12 appears to have a basis in original claim 15 while introducing a new dependency structure. Furthermore, it also relates to the embodiment where the memory is accessible to the user/OS, see e.g. page 17, lines 20-21, and therefore, this claim introduces added subject-matter.
- 12.9 Claims 13, 14. These claims appear to have some basis at page 17, line 32 to page 18, line 4. However, these parts refer to a second encryption layer not necessarily presently claimed as this aspect is only present starting at claim 12. Furthermore, it is not immediately apparent what is the basis for the new dependency structure.
- 12.10 Claim 15 appears to have a basis in original claim 16.
- 12.11 Claim 16 appears to have a basis in original claim 17, however, here also, it is not immediately apparent what the basis is for the new dependency structure.
- 12.12 Claims 17, 18 appear to have some basis page 19, lines 5-8. However, this part relates to the 3rd embodiment not covered by the independent claims. The reference to Fig. 3 shows that some aspect(s) of the first embodiment might be incorporated in the embodiment of Fig. 5A. The contrary does not appear, however, to be mentioned.
- 12.13 Claim 19 appears to have some basis on page 26, lines 32-35 which, however, also relates to the 3rd embodiment (where the memory is accessible to the user/OS) not covered by the present independent claims.

- 12.14 Claim 20. The additional features of claim 20 are based on original claim 18 of D2. However, the dependencies of this claim as yet specified (claims 14 to 19) do not appear to have a basis in D2. Claim 18 of D2 was only depending on claims 14 to 17 of D2 which are not corresponding to claims 14 to 19 of the patent.
- 12.15 Concerning claims 14-20, the Patentee has furthermore quoted in its letter of 23-04-2021 the passages of D2 which may also provide some basis for them. All these passages relate to Fig. 4 and the 3rd embodiment. As claim 1 encompasses some amendments which are taken from the description and the 1st and 2nd embodiments (the secure area), the Opposition Division has doubts that these claims are allowable as they introduce new combinations between the 3rd embodiment and embodiments 1 and 2.
- 12.16 Claim 21. The parties appear to agree that the relevant part for seeking a basis for this claim is the passage starting at page 19, line 24 to page 20, line 8. The Opponent objects to claim 21 and argues that the specific sequence ("before...") is not explicitly disclosed in D2 and that these features have been extracted and isolated from the embodiment of Fig. 6. The Patentee argues that the above quoted passage is providing a basis for claim 21. The Opposition Division has doubts that this is the case, already because this embodiment appears to refer to the BIOS which is not present in claim 1 on which claim 21 depends but also because these features appear to have been extracted from the embodiment of Fig. 6. The Patentee has argued in its letter of 23-04-2021 that the aspects between page 19, lines 26-33 and page 19, lines 33-36 are independents. The second aspect appears to be an additional ("optionally") aspect. In any case, Fig. 6 and the corresponding description shows two actors, a BIOS and the authentication software. As the BIOS is not present in claim 1, it appears that added subject-matter is present.
- 13 Claim 22. The additional features of claim 22 appear to be partly disclosed at page 8, line 29. Concerning the "two" private encryption keys (one in claim 5 and one in claim 22), this appears to be more a clarity problem than a lack of basis in D2. The general context of D2 appears to relate to digital data in connection with the encryption key, see page 3, lines 7-9. It is however not immediately apparent whether the new multiple dependencies have a basis in D2.
- 13.1 Claim 25. The only part which appears to provide some basis for this claim is page 12, lines 31-36. However, that this device should contain a BIOS appears mandatory in this passage. A clear basis for this claim is therefore not immediately apparent. The Patentee quoted in its letter of 23-04-2021 page 5,

line 34 to page 6, line 8 as providing a basis. This passage clearly refers to the BIOS and the last sentence was already discussed in relation with claim 1 and not found by the Opposition Division to provide a basis for removing the link to the BIOS.

Auxiliary request 1 to 9

14 Admissibility was not challenged by the Opponent. The Opposition Division decided to admit these requests as they were submitted in answer to the summons and were meant to address the points discussed in its annex.

15 Auxiliary requests (AR) 1 to 4.

15.1 The Patentee has made the attempt to amend the independent claims in a manner that some characteristics of the BIOS as described in D2 are introduced

15.2 AR1.

Compared to claim 1 as granted, features M3 to M4.2 now reads:

authentication software (54) running in a separate operating environment, independent from and inaccessible to said operating system (48), the electronic device having a memory comprising storage locations and a system for accessing a memory location in the memory, part of the memory being accessible to the operating system (48), part of the memory being a secure area (62) storage locations of which are not reported to the operating system (48) by said system for accessing.

According to the Patentee, this amendment is based on page 6, lines 5-8.

15.3 AR2.

Compared to claim 1 as granted, features M3 to M4.2 now reads:

authentication software (54) running in a separate operating environment, independent from and inaccessible to said operating system (48), the electronic device having a memory comprising storage locations and a system for accessing a memory location in the memory and controlling the accessibility of data in the memory, part of the memory being accessible to

the operating system (48), part of the memory being a secure area (62) storage locations of which are not reported to the operating system (48) by said system for accessing and controlling,

According to the Patentee, this amendment is based on page 13, lines 23-34.

15.4 AR3.

Compared to claim 1 as granted, features M3 to M4.2 now reads:

authentication software (54) running in a separate operating environment, independent from and inaccessible to said operating system (48), the electronic device comprising a system for controlling instructions and data flowing between hardware components of the electronic device, the operating system requesting data from said hardware components via said system for controlling, the electronic device having a memory comprising storage locations, part of the memory being accessible to the operating system (48), part of the memory being a secure area (62) storage locations of which are not reported to the operating system (48) by said system for controlling,

According to the Patentee, this amendment is based on page 13, lines 14-19 and lines 28-29.

15.5 AR4.

Compared to claim 1 as granted, features M3 to M4.2 now reads:

authentication software (54) running in a separate operating environment, independent from and inaccessible to said operating system (48), the electronic device comprising a system for controlling instructions and data flowing between hardware components of the electronic device, the operating system (48) requesting data from said hardware components via said system for controlling, the electronic device having a memory comprising storage locations, said system for controlling being for accessing a memory location in the memory and controlling the accessibility of data in said memory, part of the memory being accessible to the operating system (48), part of the memory being a secure area (62) storage locations of which are accessible by said system for controlling but not reported to the operating system (48) by said system for controlling,

This amendment combines the amendments made to claim 1 of AR2 and AR3.

15.6 The Opposition Division is of the opinion that the amendments made to claim 1 of AR1 to AR4 do not solve the objections made under point 8.1.3 as the BIOS is not mentioned in new claim 1 of these requests but merely what the Patentee considers to be the relevant functionalities of the BIOS. However, as indicated above under point 8.1.3 and especially points 8.1.3.4 and 8.1.3.5, the Opposition Division does not see any basis in D2 for only claiming some of the functions of the BIOS without the BIOS itself. For these reasons, the subject-matter of claim 1 of AR1 to AR4 does not fulfil the requirements of Article 123(2) EPC. A similar objection applies to independent claims 23 and 24. These requests are therefore not allowable.

16 Auxiliary requests 5 to 9.

The auxiliary requests 5 to 9 correspond to the main request and auxiliary requests 1 to 4 while removing some dependent claims.

Claims 1, 8 and 9 of AR5 correspond to claims 1, 23 and 24 of the patent as granted.

Claims 1, 8 and 9 of AR6 correspond to claims 1, 23 and 24 of AR1.

Claims 1, 8 and 9 of AR7 correspond to claims 1, 23 and 24 of AR2.

Claims 1, 8 and 9 of AR8 correspond to claims 1, 23 and 24 of AR3.

Claims 1, 8 and 9 of AR9 correspond to claims 1, 23 and 24 of AR4.

The objections made above against the independent claims of the main request and the auxiliary requests 1 to 4 apply mutatis mutandis to the independent claims of auxiliary requests 5 to 9 which therefore do not fulfil the requirements of Article 123(2) EPC. The requests AR5 to AR9 are therefore also not allowable.

Decision

17 The opposition division therefore decides that, taking into consideration the amendments made with the main request by the patent proprietor during opposition proceedings, the patent and the invention to which it relates do not meet the requirements of the EPC.