

**In the United States Court of Federal Claims**

No. 15-175C

(Filed: January 22, 2020)

(Re-Filed: February 10, 2020)<sup>1</sup>

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IRIS CORPORATION BERHAD,

*Plaintiff,*

Patents; claim construction;  
*Markman* hearing; plain and  
ordinary meaning; extrinsic  
evidence; sequence.

v.

THE UNITED STATES,

*Defendant.*

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*Stephen Norman Weiss*, New York, NY, for plaintiff.

*Philip Charles Sternhell*, United States Department of Justice, Civil Division, Commercial Litigation Branch, Washington, DC, with whom were *Joseph H. Hunt*, Assistant Attorney General, and *Gary L. Hausken*, Director, for defendant. *Conrad J. DeWitte, Jr.*, United States Department of Justice, of counsel.

CLAIM CONSTRUCTION ORDER AND OPINION

BRUGGINK, *Judge.*

This is a patent infringement case brought under 28 U.S.C. § 1498 (2018). Plaintiff IRIS Corporation Berhad (“IRIS”) alleges that the United States Department of State has infringed several claims of U.S. Patent No. 6,111,506 (“the ’506 Patent”) by its manufacture of electronic passports. Before the court are the parties’ briefs regarding construction of claim terms used in the ’506 Patent.

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<sup>1</sup> This opinion was originally issued under seal to permit the parties an opportunity to propose redactions on or before February 5, 2020. The parties did not propose redactions and, thus, we reissue this opinion unredacted.

## BACKGROUND

IRIS is suing the United States for the State Department's unauthorized use of IRIS's invention described in the '506 Patent. The '506 Patent concerns a method of making an improved security identification document including a contactless communication insert. The '506 Patent is comprised of one independent claim and six dependent claims.

Claim 1, the independent claim, describes:

1. A method of making an identification document comprising the steps of:

forming a contactless communication insert unit by electrically connecting an integrated circuit including a microprocessor, a controller, a memory unit, a radio frequency input/output device and an antenna, and disposing a metal ring to surround the integrated circuit;

disposing the contactless communication insert unit on a substrate and laminating it to form a laminated substrate;

supplying a first sheet of base material;

supplying a second sheet of base material;

disposing the second sheet of base material on top of the first sheet of base material and inserting the laminated substrate including the contactless communication insert unit between the first and second sheets of base material; and

joining a third sheet of base material to the first and second sheets of base material having the laminated substrate disposed therebetween, the third sheet of base material containing printed text data located so as to be readable by humans.

'506 Patent, col. 20, ll. 10–34.

Claims 2-7, the dependent claims, continue:

2. A method of making an identification document according to claim 1, further comprising the step of attaching a cover page to the third sheet of base material.

3. A method of making an identification document according to claim 2, wherein the third sheet of base material containing the printed text data is joined to the cover page and the second sheet of base material via tamper-proof stitching.

4. A method of making a security document according to claim 1, further comprising the step of supplying a cover comprising a relatively rigid material compared to the first, second and third sheets of base material and joining the cover to the first, second and third sheets of base material for supporting the integrated circuit.

5. A method of making a identification document according to claim 1, wherein the memory unit includes memory for storing biometrics data and memory for storing non-biometrics data, the memory for storing biometrics data including a plurality of memory locations which can only be written to once and prevent the stored data from ever being altered, the memory for storing non-biometrics data including memory locations which are capable of being altered.

6. A method of making an identification document according to claim 5, wherein the biometrics data includes at least one of a still photograph, moving video images, a palm print, fingerprints, a retina scan, a voice print, a two-dimensional facial image and a three-dimensional facial image.

7. A method of making a security document according to claim 6, wherein data stored in the memory unit is encrypted.

*Id.* at ll. 35–65.

The parties presented their positions on terms for construction, which evolved through the course of briefing. They agree that “encrypted” should be construed as “information that has been transformed from plain text to coded text or ciphertext.” Joint Claim Construction Statement 1. The parties’ positions, as presented in the Joint Claim Construction Statement, on disputed terms are:

<b>Term</b>	<b>Plaintiff's Construction</b>	<b>Defendant's Construction</b>
<p>Order of steps in which the method must be performed</p> <p><i>Claim 1</i></p>	<p>The claim does not specify an order in which the steps are to be performed.</p>	<p>Plain and ordinary meaning, subject to the other constructions defendant proposes, with the understanding that the limitations be performed as ordered steps in the order recited in the claims.</p>
<p>integrated circuit</p> <p><i>Claim 1</i></p>	<p>“An integrated circuit means electronic component(s) designed to perform processing and/or memory functions”</p>	<p>“a microprocessor, a controller, a memory unit, a radio frequency input/output device and an antenna, and the connections thereto”</p>
<p>Plaintiff: “metal” and “ring” are two claim terms that should be construed separately.</p> <p>Defendant: the entire phrase “disposing a metal ring to surround the integrated circuit” should be construed as a whole.</p> <p><i>Claim 1</i></p>	<p>Metal: “Comprised of metal along with other material.”</p> <p>Ring: “A perimetric protective enclosure.”</p>	<p>Plain and ordinary meaning. Each word of the limitation must, however, be given effect. First, the metal ring must be “disposed” on and separate from any substrate or base material. Second, the metal ring must be metal as opposed to a non-metallic substance or comprised of metal along with another material. Third, the metal ring must be a ring that encircles or surrounds the integrated circuit (including the antenna) and the interconnections thereto and provides mechanical strength for protecting the integrated circuit.</p>
<p>Defendant: “laminating it to form a laminated substrate.”</p> <p><i>Claim 1</i></p>	<p>No construction is necessary since plain and ordinary meaning.</p>	<p>“uniting the contactless communication insert and the substrate with one or more layers of polyester or similar</p>

	“laminating” means coating; “laminated” means coated or covered with a coating; “substrate” is any material which provides the surface upon which something is deposited or inscribed	material”
base material  <i>Claims 1-4</i>	“A sheet of paper, plastic or similar material capable of having thin films of ink and/or other coatings applied thereto”	“material separate from the claimed ‘cover’”
tamper-proof stitching  <i>Claim 3</i>	“Stitching that is at least partially protected from unintended removal or unraveling”	“stitching that cannot be altered or tampered with”

*Id.* at 2-6. The claim construction hearing was held on January 16, 2020. We conclude that the following constructions are appropriate.

#### DISCUSSION

Claim construction is the first step in a patent infringement action, because the court must understand what the invention is before it determines whether the United States has used the invention without permission. The scope and meaning of the patent is a question of law. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996). “It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The court’s “analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to ‘particularly point[ ] out and distinctly claim[ ] the subject matter which the patentee regards as his invention.’” *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001) (quoting 35 U.S.C. § 112(b)).

The court construes the claim terms according to their “ordinary and customary meaning” as understood by “a person of ordinary skill in the art in question at the time of invention.” *Phillips*, 415 F.3d at 1313. Here, the parties agree that

[a] person of ordinary skill in the art of the '506 Patent at the time of the alleged invention would have had at least a Bachelor's degree in Electrical Engineering or Computer Science, or related field, as well as at least two years of work experience relating to working with integrated circuit cards and smart cards, including familiarity with identification cards as reflected ISO/IEC 7816 as it existed on October 14, 1997, which is an international standard related to electronic identification cards.

Pl.'s Opening Br. 4; Def.'s Opening Br. 17.<sup>2</sup> At times “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314.

“The meaning of a term ‘must be considered in the context of all the intrinsic evidence, including the claims, specification, and prosecution history.’” *Iridescent Networks, Inc. v. AT&T Mobility, LLC*, 933 F.3d 1345, 1350 (Fed. Cir. 2019) (quoting *Biogen Idec, Inc. v. GlaxoSmithKline LLC*, 713 F.3d 1090, 1094 (Fed. Cir. 2013) (citing *Phillips*, 415 F.3d at 1314)). The court may consult extrinsic evidence, such as dictionaries, treatises, and expert testimony, however, as necessary, without using it to vary the meaning of terms contrary to the claims, specification, and prosecution history. *Phillips*, 415 F.3d at 1319. We turn now to the disputed terms.

A. Claim 1: The Claimed Method Steps Must be Performed in the Sequence Claimed.

In the Joint Claim Construction Statement, the parties disputed whether one must perform the steps of Claim 1 in the sequence claimed. Although this dispute appeared near the end of their joint statement and briefing, understanding whether the claimed method must be performed in the sequence claimed is a helpful starting point before parsing the individual words and phrases.

Defendant argues that “a logical reading of the claim language plainly

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<sup>2</sup> Although the parties agreed on the definition of a person of ordinary skill in the art, the parties did not further discuss a particular field of art. Because the construction of these terms turned on intrinsic evidence using terms understandable even to laymen, a definition of the field of art was not needed.

requires ordered or sequential performance.” Def.’s Opening Br. 36. The government asks the court to hold that the steps in Claim 1 must be performed in the following sequence:

- Before the metal ring is disposed “to surround the integrated circuit,” one must first have formed the integrated circuit;
- Before the contactless communication insert unit is laminated “to form a laminated substrate,” one must have formed that contactless communication insert unit and disposed it on a substrate;
- Before the laminated substrate is inserted “between the first and second sheets of base material,” one must have supplied the laminated substrate and a first and second sheet of base material;
- Before one joins “a third sheet of base material to the first and second sheets of base material having the laminated substrate disposed therebetween,” one must already have the laminated substrate disposed between the first and second sheets of material.

*Id.* at 37.

After initially disputing this construction, IRIS agreed in its responsive brief to the exact sequence that the government proposed. Plaintiff wrote, “There is no dispute that the steps must be performed as per the above Government bullet points.” Pl.’s Resp. Br. 10-11, 12-13. Plaintiff restated its agreement during the claim construction hearing.

The parties thus agree that, at least as to the steps quoted above, the steps articulated in Claim 1 must be performed in the sequence that they appear in the claim. For clarity, we further hold that, to the extent that there is any remaining disagreement regarding the sequence of the steps, Claim 1’s language both logically and grammatically dictates that the claimed method steps must be performed in the sequence claimed. *See Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003) (citing *Interactive Gift Express, Inc.*, 256 F.3d at 1342-43).

#### B. Claim 1: Integrated Circuit

Plaintiff contends that “[a]n integrated circuit means electronic component(s) designed to perform processing and/or memory functions.”

Joint Statement 2. Specifically, plaintiff argues that Claim 1’s integrated circuit is a microprocessor, a controller, a memory unit, and a radio frequency input/output device. Plaintiff argues that the antenna is not a part of the integrated circuit but is connected to the integrated circuit.

IRIS argues that the language of Claim 1 reads that one must “connect[] an integrated circuit . . . and an antenna.” ’506 Patent, col. 20, ll. 14-16. Plaintiff suggests that “and” in that phrase is interchangeable with words such as “to” or “with.” IRIS points to “the ISO/IEC7816[, which] is an international standard related to electronic identification cards,” defining an integrated circuit as electronic components that perform processing or memory functions. Pl’s Opening Br. 6. Plaintiff next relies on a statement made in the government’s petition for *inter partes* review (“IPR”) before the Patent Trial and Appeal Board in which the government wrote that “the broadest reasonable interpretation of the claim language ‘integrated circuit’ means electronic circuitry or components including microprocessors.” *Id.* at 6, Ex. B.<sup>3</sup>

Defendant responds that an “integrated circuit,” whatever it might be in the abstract, within the meaning of the ’506 Patent, is “a microprocessor, a controller, a memory unit, a radio frequency input/output device and an antenna, and the connections thereto.” Joint Statement 2. Defendant points to the express language of Claim 1 that the integrated circuit “includ[es]”

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<sup>3</sup> Plaintiff argues that defendant’s statements in a petition to PTAB seeking an IPR constitute intrinsic evidence, but it overstates the holdings of the cases it cites. Plaintiff cites a single Federal Circuit decision in which the court wrote, “[W]e hold that *statements made by a patent owner* during an IPR proceeding, whether before or after an institution decision, can be considered for claim construction and relied upon to support a finding of prosecution disclaimer.” *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1362 (Fed. Cir. 2017) (emphasis added). Plaintiff also cites *Evolutionary Intelligence, LLC v. Sprint Nextel Corp.*, 2014 WL 4802426 \*4 (N.D. Cal. Sept. 26, 2014), but the court in that case noted that the *patentee’s* statements during an IPR could disclaim scope. Plaintiff finally cites *Corel Software, LLC v. Microsoft Corp.*, 2016 WL 4444747 \*2 (D. Utah Aug. 23, 2016), where the court granted a motion for a stay while PTAB determined whether to institute an IPR, reasoning that an IPR may add to the intrinsic record. The court has not found legal support for plaintiff’s position that statements by the government when seeking an IPR constitute part of the intrinsic record. The government’s statement in its petition to PTAB is extrinsic evidence that is unpersuasive on the meaning of “integrated circuit.”



each of the components listed in defendant's construction. '506 Patent, col. 20, ll. 10–20. Defendant argues that five components form the integrated circuit and that “connecting” instructs the maker to connect those five components to one another to form the integrated circuit. Defendant notes that the “and” precedes “an antenna,” not “a radio frequency input/output device,” grammatically placing “an antenna” within the list of components of the integrated circuit.

The government also points to the specification where Figure 1 shows an antenna within the metal ring, which, the government argues, supports the antenna being part of the integrated circuit surrounded by the metal ring. Defendant cites definitions that use “interconnection” to mean the connection between the components. Finally, defendant notes a page from the prosecution history in which handwritten notes, by someone other than the patentee, group the antenna into the integrated circuit.

The dispute between the parties boils down to whether the antenna is a part of the integrated circuit or merely connected to it. We need look no further than the plain language in Claim 1, expressly defining the components of an integrated circuit. Claim 1 begins, “[F]orming a contactless communication insert unit by electrically connecting an integrated circuit including a microprocessor, a controller, a memory unit, a radio frequency input/output device and an antenna, and disposing a metal ring to surround the integrated circuit[.]” '506 Patent, col. 20, ll. 10-20. First, a list of five components follows the word “including,” which unambiguously shows that the integrated circuit in this patent includes an antenna. Whatever an integrated circuit could mean in a different context, here it must include the five parts specifically listed as components in Claim 1 of the patent.

Furthermore, the last part on the list is “an antenna.” Grammatically, if the list were meant to end with the input/output device, the conjunction “and” would appear before that phrase rather than before “an antenna.” Plaintiff's construction makes the step ambiguous because the list is missing a conjunction. Nor is the conjunction “and” interchangeable with prepositions such as “to” or “with.” While it is possible that “and” could indicate a pair of items that will connect, in this case the foregoing use of “including” indicates that “and” is a conjunction concluding a list. This construction does not leave “connecting” floating freely without an object; rather, the term “by electrically connecting” is an instruction to connect the parts of an integrated circuit. We thus construe the term “integrated circuit” to mean a microprocessor, a controller, a memory unit, a radio frequency

input/output device, an antenna, and the connections thereto.

### C. Claim 1: Disposing a Metal Ring to Surround the Integrated Circuit

The parties disagree on the meaning of the terms “metal” and “ring.” Plaintiff argues that “metal” means “comprised of metal along with other material.” Joint Statement 2. Plaintiff cites the specification to support its construction; the preferred embodiment found in the specification is “preferably made of SUS 304 stainless steel.” ’506 Patent, col. 12, ll. 45–50. Plaintiff requests that the court take judicial notice, under Federal Rules of Evidence 201(b)(2) and (c)(2), that SUS 304 stainless steel contains carbon, which is not a metal. From this, plaintiff extrapolates that, when Claim 1 expressly, and only, uses the word “metal,” it means metal plus something else.

Defendant responds that “metal” must mean “metal, as opposed to a non-metallic substance or comprised of metal along with another material.” Joint Statement 2. Defendant acknowledges that the patent states that “SUS 304 stainless steel” is the preferred material for the “metal” ring. Defendant objects to the court taking judicial notice that SUS 304 stainless steel is metal plus other substances, because scientific dictionaries and standards name SUS 304 stainless steel as simply metal, a “specific type of steel having defined amounts of chromium and nickel added to an iron-carbon alloy to improve corrosion resistance.” Def.’s Opening Br. 25. Defendant also points out that carbon is a specific non-metal substance alloyed into the single final product of stainless steel. It is not an extra material added to the metal, such as the substrate material. The government contends that the presence of carbon in stainless steel is insufficient evidence to construe “metal” in the ’506 Patent to mean metal plus any other substance in any amount.

Plaintiff next argues that “ring” means “a perimetric protective enclosure.” Joint Statement 2. Plaintiff points to the patent drawings and the preferred embodiment as showing a rectangular enclosure that surrounds the integrated circuit. The parties agree that the ring must surround the integrated circuit. Plaintiff contended at the claim construction hearing that the claim language does not require the ring to be protective or to supply mechanical strength, despite its own proposed construction including the term “protective.” *Id.*

Defendant proposes that “the metal ring must be a ring that encircles or surrounds the integrated circuit (including the antenna) and the

interconnections thereto and provides mechanical strength for protecting the integrated circuit.” *Id.* Although defendant notes that the parties appear to agree that the purpose of a ring is to provide the necessary strength to protect the integrated circuit, defendant objects to a “perimetric protective enclosure” as too vague, because it would allow plaintiff to argue that a cavity in the substrate is a perimetric protective enclosure. Defendant argues that the prosecution history shows that the “ring” must surround the entire integrated circuit and protect the circuit.

Finally, defendant proposes that the court should construe the entire phrase “disposing a metal ring to surround the integrated circuit” as a whole. *Id.* Defendant argues that “the metal ring must be ‘disposed’ on and separate from any substrate or base material.” *Id.* at 3. The government highlights that the claim language makes the metal ring distinct from the integrated circuit and from the substrate. Defendant particularly notes that the metal ring is *disposed on* the substrate, in the words of Claim 1, or *located on* the substrate, in the words of the specification, which indicates that the metal ring and the substrate are separate components. At the claim construction hearing, plaintiff agreed that “disposing” means “to place,” in other words, that one places the metal ring around the integrated circuit.

We begin with “metal.” Metal modifies ring, and we find that “metal” means metal, not metal plus something else. Plaintiff’s argument that “metal” means “metal plus something else” relies on the fact that the specification names stainless steel as the preferred substance to make the metal ring. Plaintiff’s reliance is misplaced. The specification refers to stainless steel as a metal. The parties agree that SUS 304 stainless steel is a metal, albeit one whose makeup includes a non-metallic substance. The court concludes that stainless steel is, in fact, a metal. Plaintiff may not use the presence of carbon in stainless steel to transform its claim into a ring that may be partially metal and may be combined with any other substance in no particular ratio. This improperly removes a limitation from a patent that specifically claimed a “metal” ring. Thus, metal means metal, as commonly understood, not metal along with other materials.

We turn next to “ring.” The language of Claim 1 is unambiguous: a ring “surround[s]” or encloses. ’506 Patent, col. 20, l. 17. The parties agree that the ring exists to protect the integrated circuit. The specification likewise endorses the construction that the ring exists “to provide mechanical strength.” *Id.* at col. 12, ll. 45-51. We therefore construe the term “ring” to mean a structure that surrounds the integrated circuit, and a metal ring is a metal structure that surrounds the integrated circuit.

Finally, the term metal ring is one of two components of “a contactless communication insert” described in the first step of Claim 1. The court agrees with defendant that the patent sets out “disposing a metal ring to surround the integrated circuit” and “disposing the contactless communication insert unit on a substrate” as distinct steps. At the claim construction hearing, plaintiff agreed that the steps are distinct. Moreover, plaintiff has not pointed to any evidence within or beyond the patent to suggest that the metal ring and the substrate are interchangeable. The metal ring must surround the entire integrated circuit, as construed above, which is followed by—and distinct from—placing the contactless communication insert unit (made up of the integrated circuit surrounded by the metal ring) on a substrate. The metal ring and the substrate are, thus, separate components of the invention.

#### D. Claim 1: Laminating it to Form a Laminated Substrate

Plaintiff argues that the court can read “laminating” according to its plain and ordinary meaning, i.e., that “laminating” means coating and “laminated” means coated or covered with a coating. Joint Statement 3. Plaintiff contends that “‘substrate’ is any material which provides the surface upon which something is deposited or inscribed.” *Id.* Defendant responds that the term in Claim 1 “laminating it to form a laminated substrate” means “uniting the contactless communication insert and the substrate with one or more layers of polyester or similar material.” *Id.*

The difference between these two positions is subtle. Defendant objects to plaintiff’s definition of “laminating” as “coating,” because coating could include simply applying an adhesive to the contactless communication insert to attach it to two sheets of base material. Defendant argues that this understanding of lamination reads out the step of forming a laminated substrate and then inserting that laminated substrate between the sheets of base material. Plaintiff argues, however, that the language in Claim 1 does not specify the nature of the laminate or limit it to a particular material and that the example given in the specification cannot be used to create a limitation not present in the claim.

We agree that the step of laminating the contactless communication insert unit on a substrate to form a laminated substrate is distinct from the later step of inserting the laminated substrate between the sheets of base material. Lamination of the unit to the substrate precedes the introduction of base material. As to what “laminating” means, the parties agree that laminating in this patent requires covering the unit and substrate with a

material that bonds them together. The court therefore finds that “laminating” means bonding the contactless communication insert unit to the substrate with one or more layers of a coating material.

#### E. Claims 1 – 4: Base Material

The parties disagreed in briefing on the construction of “base material” in Claims 1-4. Plaintiff contended that “base material” means “[a] sheet of paper, plastic or similar material capable of having thin films of ink and/or other coatings applied thereto.” Joint Statement 4. Plaintiff pointed out that Claim 1 states that the third sheet of base material has “printed text data located so as to be readable by humans,” which shows that the third sheet must be capable of having text data applied to it. ’506 Patent, col. 20, ll. 30–35. (We note, however, that the first two references to “base material” do not contemplate printed text data.) Plaintiff also pointed to the preferred embodiment which states that the first two sheets of base material “may preferably [be] comprise[d] of a sheet of paper, plastic or other suitable base material for document,” supporting plaintiff’s construction that base material may be paper, plastic, or similar material. *Id.* at col. 13, ll. 65-67.

Defendant argues that the principles of claim differentiation require that “base material” mean a “material separate from the claimed ‘cover’.” Def.’s Opening Br. 33. Defendant points out that Claim 1 recites the supply of a first, second, and third sheet of base material in sequence and that dependent Claim 3 later adds the step of “attaching a cover page to the third sheet of base material.” ’506 Patent, col. 20, ll. 35-50. Claim 4 then adds that one must “supply[] a cover comprising a relatively rigid material compared to the first, second and third sheets of base material and joining the cover to the first, second and third sheets of base material for supporting the integrated circuit.” *Id.* Defendant further cites the specification, noting that each reference to “cover” in the specification is distinct from the base material. *Id.* at col. 6, ll. 30-40. Based on the claim language, defendant concludes that the base material and the cover must be separate materials.

The dispute between the parties ultimately was whether the sheets of base material are distinct from the claimed “cover,” rather than what is the necessary composition of base material. At the claim construction hearing, however, plaintiff stated that it was content with the construction that base material is separate from the claimed cover.

Absent plaintiff’s concession, the court would still conclude that the base material is separate from the claimed cover. The basic definition of a

dependent claim is one that “contain[s] a reference to a claim previously set forth and then specif[ies] a further limitation of the subject matter claimed.” 35 U.S.C. § 112(d) (2018). Under the principles of claim differentiation, “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Phillips*, 415 F.3d at 1315. The dependent claims make clear that the “cover” is *in addition to*, or different from, the sheets of base material. Independent Claim 1 introduces three sheets of base material that one joins with the laminated substrate in between the first two sheets. Dependent Claim 2 then adds that one attaches “a cover page” to the third sheet of base material. ’506 Patent, col. 20, ll. 35–40. The specification likewise refers to the base material sheets and the cover in different steps. Thus, the term “base material” is material separate from the claimed cover.

#### F. Claim 3: Tamper-Proof Stitching

The final dispute is the meaning of “tamper-proof stitching.” Plaintiff argues that “tamper-proof stitching” is “[s]titching that is at least partially protected from unintended removal or unraveling.” Joint Statement 6. Plaintiff relied on the PTAB’s decision instituting an IPR that accepted this construction from the government. Defendant takes the narrower view that “tamper-proof stitching” means “stitching that cannot be altered or tampered with.” *Id.* Defendant argues that the plain and ordinary meaning of “tamper-proof” is that an object cannot be tampered with. Defendant cites the specification, which states, “To ensure maximum security of the documents, the third page with printed text is stitched onto the third base sheet and the cover page using tamper-proof stitching.” ’506 Patent, col. 6, ll. 35-40. Defendant also cites the discussion of preferred embodiments, which says that “the data stored in the document 10 can only be accessed by an approved and authorized interface device and therefore, cannot be altered or tampered with.” *Id.* at col. 14, ll. 35-55. The government concludes that “tamper-proof” means “that the claimed stitching must prevent intentional alteration, i.e., tampering.” Def.’s Opening Br. 39 (emphasis omitted).

The parties stake out extreme positions in their proposed constructions. The definition accepted by PTAB is unpersuasive, because the patent does not suggest that the stitching is partial or that the only tampering the stitching protects against is unintentional tampering or unraveling. Defendant’s construction goes too far, however, because the specification supports the notion that this invention “improved security” of the identification document but did not make it impervious to any imaginable tampering. ’506 Patent, col. 1, ll. 10–35. We note that discovery in this case

involved destructive examination of passports. When asked at the claim construction hearing, the parties agreed that a proper construction of “tamper-proof” is that the stitching cannot readily be tampered with. The court therefore holds that “tamper-proof stitching” means stitching that cannot readily be altered or tampered with.

### CONCLUSION

The following table states the court’s holding as to each term:

<b>Term</b>	<b>The Court’s Construction</b>
encrypted	information that has been transformed from plain text to coded text or ciphertext
Order of steps in which the method must be performed	The limitations in Claim 1 must be performed in the sequence claimed.
integrated circuit	a microprocessor, a controller, a memory unit, a radio frequency input/output device, an antenna, and the connections thereto
ring  metal  disposing a metal ring to surround the integrated circuit	a structure that surrounds the integrated circuit  metal  The metal ring must surround the integrated circuit. The metal ring and the substrate are separate components.
laminating it to form a laminated substrate	bonding the contactless communication insert unit and the substrate with one or more layers of a coating material
base material	material separate from the claimed cover
tamper-proof stitching	stitching that cannot readily be altered or tampered with

The parties shall file a joint status report on or before February 5, 2020, proposing a schedule for next steps in this matter.

s/Eric G. Bruggink  
ERIC G. BRUGGINK  
Senior Judge