

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

MyScript SAS,

Civil Action No. 2:25-cv-00532-JRG-RSP

Plaintiff,

v.

JURY TRIAL DEMANDED

Goodnotes Limited,

Defendant.

**DEFENDANT GOODNOTES LIMITED'S INVALIDITY CONTENTIONS AND
SUBJECT-MATTER ELIGIBILITY CONTENTIONS**

Pursuant to the Court's Docket Control Order (Dkt. No. 15) and Discovery Order (Dkt. No. 19) and Eastern District of Texas Local Patent Rules 3-3 and 3-4, Defendant Goodnotes Limited hereby discloses its Invalidity Contentions and Subject-Matter Eligibility Contentions. Goodnotes Limited contends that each of the claims asserted by Plaintiff MyScript SAS is invalid under at least 35 U.S.C. §§ 101, 102, 103, and/or 112, for at least the reasons set forth herein.

I. RESERVATION OF RIGHTS AND OBJECTIONS

A. Asserted Claims

Plaintiff MyScript SAS' Amended Disclosure of Asserted Claims and Infringement Contentions Under Patent Rules 3-1 and 3-2, dated October 15, 2025, identify the following Asserted Claims from the Asserted Patents listed below:

Asserted Patents (U.S. Patent No.)	Asserted Claims
U.S. Patent No. 9,965,175	1, 2, 7, 8, 13, 14
U.S. Patent No. 10,082,951	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17
U.S. Patent No. 11,402,991	1, 2, 7, 8, 13, 14, 19
U.S. Patent No. 10,410,316	1, 2, 4, 5, 7, 8
U.S. Patent No. 10,181,076	1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, 19, 20, 21, 22, 23, 24, 25
U.S. Patent No. 10,013,603	1, 7, 13
U.S. Patent No. 9,489,572	1, 2, 4, 5, 6, 7, 8, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29, 30, 31, 35, 36, 37

B. General Reservation of Rights

These Invalidity Contentions, along with the information and documents that Goodnotes Limited produces herewith, are provisional in nature and subject to further revision or supplementation. Consistent with the Patent Rules, Goodnotes Limited reserves the right to amend these contentions should MyScript SAS: (1) provide any information that it failed to properly provide in its preliminary infringement contentions; (2) amend its preliminary infringement contentions; (3) produce documents evidencing conception and reduction to practice that it failed to produce; or (4) attempt to rely upon any information during claim construction proceedings, at trial, in a hearing, or during a deposition that it failed to provide in its infringement contentions. Goodnotes Limited further reserves the right to amend these contentions in light of the Court's claim construction rulings or based on further discovery or Court rulings.

Discovery in this case has just begun; and Goodnotes Limited's investigations are ongoing. Goodnotes Limited expressly reserves the right to amend or supplement these disclosures based on additional information obtained through continued formal discovery or other means pursuant

G. The '316 Patent

Defendant contends that the prior art references identified in Exhibits D-1 through D-8 and/or described below anticipate and/or render obvious, alone or in combination, one or more of the Asserted Claims of the '316 Patent.

U.S. Patent No. 10,410,316	
Exhibit No.	Reference(s) Name
D-1	US005850477A (Takada)
D-2	US 2017/0091153A1 (Thimbleby)
D-3	US 2014/0300609A1 (Kang et al.)
D-4	US 6,600,834 B1 (Su)
D-5	US 2002/0064308A1 (Altman)
D-6	US 2010/0066691 A1 (Li)/ US 8,115,748 B2 (Clary)
D-7	US 2010/0066691 A1 (Li)/ US 8,115,748 B2 (Clary)
D-8	Apple Newton/3Com Palm III Organizer/aha! InkWriter handbook

The Asserted Claims of U.S. Patent No. 10,410,316 (“the '316 Patent”) are invalid under at least 35 U.S.C. §§ 102 and 103. Under 35 U.S.C. § 102, a patent claim is invalid as anticipated if each and every limitation is disclosed, either expressly or inherently, in a single prior art reference. For each Asserted Claim that is anticipated by a reference, the corresponding claim chart attached as an Exhibit provides citations for each limitation.

In the alternative, to the extent any limitation is deemed not to be expressly or inherently met by a single item of prior art, the claimed subject matter as a whole would have been obvious to a person of ordinary skill in the art under 35 U.S.C. § 103. With regard to obviousness, the

Supreme Court has directed the use of an expansive and flexible approach. *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1739, 550 U.S. 398, 415 (2007). An improvement is not patentable if it is merely “the predictable use of prior art elements according to their established functions.” *Id.* at 1740. The Court further noted that “common sense teaches...that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 1742. An explanation for why a claimed invention would have been obvious may be found, for example, in “the interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person of ordinary skill in the art.” *Id.* at 1740.

All of the Asserted Claims of the '316 Patent are rendered invalid as anticipated and/or obvious based on the grounds identified in the accompanying claim charts. The prior art references identified in the charts are exemplary and are not intended to be exhaustive. Defendant reserves the right to rely on any such reference or combination of references during this litigation.

Furthermore, the prior art relied upon by Defendant, alone or in combination, contains explicit and/or implicit teachings, suggestions, motivations, or inferences to combine them based on: (1) the knowledge generally available to a person of ordinary skill in the art; (2) the disclosures of the prior art as understood by such a person; (3) the nature of the problem to be solved; (4) the fact that each prior art reference addresses similar technical challenges; and (5) the common understanding among those skilled in the art regarding the design and operation of systems for capturing, processing, and enabling user interaction with digital handwriting. Defendant may also rely on expert testimony to establish that the Asserted Claims of the '316 Patent are invalid.

The '316 Patent relates to systems and methods for improving the rendering and editing of handwritten input—commonly referred to as “digital ink”—on computing devices. Digital ink allows users to input handwritten strokes onto a touchscreen or similar interface using a finger, stylus, or similar tool. By the alleged priority date of the '316 Patent, it was well known in the art of digital handwriting recognition to manage the layout of user-input strokes on a display. This process was fundamental to the operation of pen-based computing systems such as tablet PCs, which had been commercially available for over a decade. The basic steps of this process were well established and understood by those of ordinary skill in the art.

Similarly, by that time, it was well known to provide systems for editing handwritten digital ink on computing devices. Such systems were fundamental to note-taking and document-editing applications that sought to combine the flexibility of handwriting with the editability of typed text. The basic operations of capturing handwritten strokes, displaying them as digital ink, and providing tools for their manipulation were well established and widely understood by those of ordinary skill in the art.

First, to enable editing of handwritten content, a user would provide input strokes using a stylus or finger. The system would capture this input and render it on the display as digital ink. This captured input inherently contained both the raw coordinate data of the strokes and the resulting visual representation of the handwritten characters or words. *See, e.g.*, Takada (D-1) at [Col. 2, Line 15] & [Figure 14B]; Thimbleby (D-2) at [Para. 00009-0010] & [Figures 5AI–5AJ]; Kang (D-3) at [Para. 0188] & [Figure 2].

After capturing the strokes, it was known for systems to process this data using a recognition and segmentation engine. A core function of this process was to group strokes into discrete elements—such as characters or words—and determine their physical extents on the

display. This segmentation process typically generated defined boundaries or regions for each element, allowing the system to treat handwritten ink not as a single image, but as a collection of editable objects. *See, e.g.*, Takada (D-1) at [Col. 10, Line 34]; Thimbleby (D-2) at [Para. 0188] & [Figures 5AI–5AJ].

A known and persistent problem in the art was that the natural variation and frequent overlap of handwritten characters made precise, character-level editing—such as placing a cursor between closely spaced, slanted, or touching letters—difficult and inefficient compared to editing typed text. *See, e.g.*, Takada (D-1) at [Col. 18, Line 28] & [Figures 21A–21E]; Thimbleby (D-2) at [Paras. 0142 & 0188]; Kang (D-3) at [Para. 0093-0096] & [Figure 7].

However, solutions to this problem were well known, obvious, and routinely practiced by those skilled in the art. To resolve issues of imprecise editing in overlapping ink, it was already known to use the segmented regions of characters to enable precise cursor placement and editing operations. Specifically, Takada (D-1) teaches a system where a user can specify a character to be edited and then touch a “boundary portion to be divided” on the display input screen of the specified stroke data. *See* Takada (D-1) at [Col. 14, Line 1] & [Col. 18, Line 28]; Thimbleby (D-2) at [Paras. 0142 & 0188]; Kang (D-3) at [Para. 0110-0116] & [Figure 10].

Moreover, Takada and Thimbleby each describe systems that necessarily manage cursor placement between potentially overlapping handwritten elements to enable advanced editing functions. *See* Takada (D-1) at [Col. 14, Line 1] & [Col. 18, Line 28]; Thimbleby (D-2) at [Paras. 0142 & 0188]; Kang (D-3) at [Para. 0051-0057, 0110-0116] & [Figure 10].

There are also various combinations of the cited references Exhibits D1 through D8 that can render claims 1-9 of the '316 Patent obvious. First, no showing of a specific motivation should be required to combine the references Exhibits D1 through D8 disclosed in the accompanying

claim charts, because each combination of art would have no unexpected results, at most would simply represent a readily known alternative to a person of ordinary skill in the art, and because the cited art relates to the same general objectives and subject area, including, without limitation, systems, methods, and devices improving the rendering and editing of handwritten input, or digital ink on computing devices. These references are within the field of the '316 Patent or are directed to the same or similar subject matter within the relevant fields of endeavor.

Additionally, the references, and any products, devices, or processes described in the references, already existed and/or were invented within the same time period, thus providing further motivation for combination.

Some sample combinations are presented here; however, the combination of prior art references in the charts are exemplary and are not intended to be exhaustive. Additional obviousness combinations of the references identified herein are possible, and Defendant reserves the right to use any such combination(s) in this litigation.

For example, Su (D-4) discloses all claimed elements except for claim 3, which claims geometrical features including height and width of the determined ranges. Su (D-4) explains this is because, in cursive Chinese handwriting, there is not enough space between characters. Sometimes, between the adjacent characters, the last stroke of the preceding character is connected with the first stroke of following character. In such cases, the result of the automatic character segmentation, as explained in '316 at [Cols 11-12, Figure 4], is not reliable. Instead, Su discloses manual correction; the character boundary can be defined by a user at the same time when s/he is writing. Su (D-4) [Col. 4, lines 39-50].

However, this deficiency can be cured easily by combining the segmentation techniques revealed in Clary (D-7) [Col. 17, lines 53-67] with Su. Clary discloses a computer device that

determines the spatial arrangement of the fields in which data was entered by the user. A POSITA would be motivated to combine Clary and Su because these two references are both directed to the field of editing digital ink; and a POSITA who wants to implement automatic segmentation with geometric features of height and width would be motivated to use the disclosed segmentation method in Clary with the teachings in Su.

Another example is Li (D-6), which discloses all features claimed in the '316 Patent except displaying cursor in the overlap region. Thimbleby (D-2) is a combination patent to Li for this element as it discloses placing cursor in an overlap region [Para 014]. Thimbleby discloses in some embodiments insertion cursor is optionally placed anywhere in the document region (*e.g.*, across a guideline) in accordance with the current location of a focus selector on the display (*e.g.*, in accordance with the contact location of a tap gesture on touch screen) and/or in accordance with movement of the focus selector (*e.g.*, in accordance with a drag gesture that grabs and drags insertion cursor from one location to another in the document region). A POSITA who wants to implement displaying cursor in the overlap region would be motivated to combine Li and Thimbleby because they are both directed to the field of the '316 Patent regarding systems and methods for improving the rendering and editing of handwritten input on computing devices. A simple substitution of one known element for another will render claims 1-9 of the '316 Patent obvious.

These and other reasons that the subject matter claimed in the '316 Patent is invalid as anticipated and/or obvious are further demonstrated in the claim charts attached hereto as Exhibits D-1 through D-8.

“providing an output based on the application of the at least one constraint to the at least one primitive” (Claims 1, 14, 27)

The specification fails to disclose sufficient structure for the function of providing output based on constraint application. The specification states that “After the constraint solving method 122 applies the proper constraints to the primitives, it rebuilds the primitives from their vector component levels to produce output 126 in the form of smooth geometric shapes” (Col. 10, lines 1-4).

However, the specification provides no algorithmic detail for the “rebuilding” process or how the output is generated from the constraint-applied vector components. The specification does not explain:

- The algorithm for reconstructing primitives from vector components
- How constraints are incorporated during reconstruction
- How smoothness is achieved in the output geometric shapes
- What processes generate the output from the rebuilt primitives

Without such structural detail, the claim limitation recites a function (providing output) without adequate corresponding structure, rendering it indefinite under § 112, ¶ 6.

G. The '316 Patent

Pursuant to P.R. 3-3(d) and based on Plaintiff’s Infringement Contentions, and subject to the Preliminary Statement and Reservation of Rights set out above, Defendant identifies grounds upon which it contends that the Asserted Claims are invalid for failure to meet the requirements of 35 U.S.C. § 112. Defendant continues to investigate grounds of invalidity based upon indefiniteness, lack of enablement, inadequate written description, and improper use of Section 112, ¶ 6.

Although the investigation continues, Defendant believes that all the Asserted Claims are invalid for failure to comply with 35 U.S.C. § 112 for at least the following reasons: (1) the specification of the '316 Patent lacks a written description of the alleged invention of the Asserted Claims in full, clear, concise, and exact terms as required by 35 U.S.C. § 112, ¶ 1; (2) the specification of the '316 Patent does not enable the Asserted Claims as required by 35 U.S.C. § 112, ¶ 1; (3) the Asserted Claims are invalid as indefinite under 35 U.S.C. § 112, ¶ 2, because they fail to particularly point out and distinctly claim the subject matter which the applicant regarded as its alleged invention; and/or (4) the Asserted Claims containing means-plus-function elements pursuant to 35 U.S.C. § 112, ¶ 6, are indefinite for failing to disclose in the specification the specific structures, materials, or acts that relate to a given means-plus-function term.

A more detailed basis for Defendant's written description, enablement, and/or indefiniteness defenses will be set forth in Defendant's respective expert reports on invalidity, to be served in accordance with the Court's Docket Control Order, and L.R. CV-26. Defendant has not yet taken any depositions related to these issues. Defendant specifically reserves the right to amend and/or supplement these Preliminary Invalidity Contentions based on a failure to comply with the requirements of 35 U.S.C. § 112, including, for example, based on supplementation or amendments to Plaintiff's Infringement Contentions.

Defendant's contentions that the Asserted Claims are invalid under 35 U.S.C. § 112 are made at least partly in the alternative, and should in no way be seen as admissions (1) as to the proper construction or scope of the claims of the '316 Patent or (2) that any such claims are not anticipated or rendered obvious by the prior art.

(a) Lack of Written Description and Enablement Under 35 U.S.C. § 112, ¶ 1

Written description and enablement are statutory requirements for validity. *See* 35 U.S.C. § 112, ¶ 1:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.

The written description, drawings, and claims in the patent must clearly allow a person of ordinary skill in the art to understand and recognize that the patentee invented what is claimed. *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479 (Fed. Cir. 1998). That is, the patent must demonstrate by disclosure in the specification to those skilled in the art that, as of the filing date, the named inventors were in possession of what is now asserted to be the claimed invention. *Id.* In this regard, the written description must actually or inherently disclose every claim element. It is not enough to say that undisclosed subject matter would have been obvious or within the normal skill set of a person of ordinary skill.

“[T]he test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. Based on that inquiry, the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). The disclosure of the claimed subject matter must be:

- expressly or necessarily present, *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1159 (Fed. Cir. 1998);
- complete, *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997) (“One shows that one is ‘in possession’ of the invention by describing the invention, with all its claimed limitations....”);

- unambiguous, *Hyatt v. Boone*, 146 F.3d 1348, 1354 (Fed. Cir. 1998);
- specific, *Purdue Pharma L.P. v. F.H. Faulding Inc.*, 230 F.3d 1320, 1322 (Fed. Cir. 2000); and
- as broad as the claim, *Gentry Gallery*, 134 F.3d at 1478-80.

“The appearance of mere indistinct words in a specification or a claim, even an original claim, does not necessarily satisfy” the written description requirement. *Univ. of Rochester v. G.D. Searle & Co.*, 358 F.3d 916, 923 (Fed. Cir. 2004). It is not enough that a claim “reads on” the specification. *Lockwood*, 107 F.3d 1565. Even a claim filed with the original application may lack written description support: “[The claims’] principal function, therefore, is to provide notice of the boundaries of the right to exclude and to define limits; it is not to describe the invention, although their original language contributes to the description and in certain cases satisfies it. Claims define and circumscribe, the written description discloses and teaches.” *Ariad*, 598 F.3d at 1347.

The specification of the ’316 Patent fails to satisfy the written description requirement for the Asserted Claims because the alleged invention claimed therein is not sufficiently described in the specification of the ’316 Patent. Specifically, the ’316 Patent fails to satisfy the written description requirement for at least the terms identified below because, based on those terms, the specification of the ’316 Patent does not adequately convey to those skilled in the art that the inventors had possession of the claimed subject matter as of the filing date. These Preliminary Invalidity Contentions are based on Defendant’s understanding of Plaintiff’s interpretation of the Asserted Claims as asserted in the Initial Infringement Contentions. Because compliance with the written description requirement of 35 U.S.C. § 112, ¶ 1, depends on the construction of the Asserted Claims—and no claim construction positions have been exchanged, no claim construction order has issued, and no expert discovery has taken place—Defendant’s positions on written description are necessarily preliminary at this early stage of the case. Defendant reserves

its right to amend or further revise these Preliminary Invalidity Contentions based on further developments, including the Court's claim construction opinion, and discovery in the case. When a phrase is recited in multiple claims, the first instance of that phrase being recited is indicated below; invalidity under § 112, ¶ 1, for lack of written description applies to any, all, and each of the claims where the phrase is recited, however.

The Asserted Claims also are invalid for lack of enablement under 35 U.S.C. § 112, ¶ 1. The enablement requirement of 35 U.S.C. § 112 requires that the specification describe "the manner and process of making and using [the claimed invention], in such clear and concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use [the claimed invention]." *Id.*

It is well established that enablement requires the specification to teach those in the art to make and use the invention without undue experimentation. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). The determination of what constitutes undue experimentation requires the application of a standard of reasonableness, giving due regard for the nature of the invention and the state of the art. Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing several factual considerations. *Id.*

Factors to be considered in determining whether an Asserted Claim would require undue experimentation include:

- (1) the quantity of experimentation necessary,
- (2) the amount of direction or guidance presented in the specification,
- (3) the presence or absence of working examples,
- (4) the nature of the invention,
- (5) the state of the prior art,
- (6) the relative skill of those in the art,

- (7) the predictability or unpredictability of the art, and
- (8) the breadth of the claims.

Id.

The specification must enable the “full scope” of the claim. Thus, “[t]he enabling disclosure of the specification [must] be commensurate in scope with the claim under consideration.” *Chiron Corp. v. Genentech Inc.*, 363 F.3d 1247, 1253 (Fed. Cir. 2004) (quoting *In re Hyatt*, 705 F.2d 712, 714 (Fed. Cir. 1983)). Enablement is a question of law based on underlying facts. *Wands*, 858 F.2d at 735.

The '316 Patent also fails to satisfy the enablement requirement because the specification of the '316 Patent does not describe the manner and process of making and using the alleged invention in the Asserted Claims so as to enable a person of skill in the art to make and use the full scope of the alleged invention without undue experimentation. Specifically, the specification of the '316 Patent fails to meet the enablement requirement for at least the terms identified below because, based on those terms, the specification of the '316 Patent does not describe the manner and process of making and using the alleged invention in the Asserted Claims. These Invalidity Contentions are based on Defendant's understanding of Plaintiff's interpretation of the Asserted Claims as asserted in the Infringement Contentions. Because compliance with the enablement requirement of 35 U.S.C. § 112, ¶ 1, depends on the construction of the Asserted Claims—and no claim construction positions have been exchanged, no claim construction order has been issued and no expert discovery has taken place—Defendant's positions on enablement are necessarily preliminary at this early stage of the case. Defendant reserves its right to amend or further revise these Invalidity Contentions based on further developments, including the Court's claim construction opinion, and discovery in the case. When a phrase is recited in multiple claims, the

first instance of that phrase being recited is indicated below; invalidity under § 112, ¶ 1 for lack of enablement applies to any, all, and each of the claims where the phrase is recited, however.

For example, under at least Plaintiff's apparent overly broad interpretation of the Asserted Claims, certain Asserted Claims of the '316 Patent are invalid for lack of written description and are not enabled. For example, the following limitations lack written description support at least under Plaintiff's overly broad interpretation of the claims:

“ranges of elements of the digital ink” (Claims 1, 4, 7)

The specification does not adequately describe what constitutes “ranges of elements” in a manner sufficient to support the full scope of this claim language. The specification's disclosure is limited to a single, simplistic embodiment of a “range” —a rectangular character bounding box. While the specification states that segmentation information is used to “determine the ranges of each recognized element,” '316 Patent at col. 16:30-32, its only concrete examples illustrate these ranges as simple rectangles. *See, e.g.*, '316 Patent at FIGs. 12, 14, 16; col. 16:49-53 (“FIG. 12 shows the determined ranges, illustrated as character bounding boxes 511 to 520”).

This conclusory statement and singular example do not provide sufficient written description for the broad and encompassing term “ranges.” One of ordinary skill in the art would understand that a “range” of a graphical element could encompass numerous other forms, such as a convex hull, a non-rectangular polygon tightly wrapping the ink strokes, a collection of disjoint polygons (for characters like ‘i’ or ‘?’), or a pixel-based mask. The specification provides no guidance, algorithms, or implementation details for determining or using any form of range other than a simple bounding box.

One of ordinary skill in the art would not be able to determine from the specification the full scope of what the inventors possessed with respect to “ranges of elements.” The specification

fails to describe critical implementation details for the broader concept, such as: the data structures for representing non-rectangular ranges, the algorithms for calculating such ranges from stroke data, or how operations like determining an “overlap” would function with these more complex range types. Therefore, the specification lacks adequate written description for this limitation across its full scope as claimed.

“cause said display of the input cursor within a region of overlap of ranges of elements of the digital ink” (Claims 1)

The specification fails to provide sufficient written description to support the broad functional language of causing the display of a cursor anywhere “within a region of overlap.” This limitation claims a result—placing the cursor—without adequately describing how to achieve the full scope of that result. The specification discloses only two high-level, exemplary strategies for cursor placement within an overlap region but provides no enabling details or support for the myriad other possibilities covered by the claim.

The first strategy is to position the cursor “in the center of the overlapping area.” ’316 Patent at col. 17:49-51; FIG. 18A. The second is to position it at the border of the character having the “smallest or the highest value” of a geometric feature like height, width, or area. ’316 Patent at col. 17:55-63; FIG. 18B. These two specific rules are insufficient to describe the entire functional scope of placing a cursor anywhere “within” the overlap.

One of ordinary skill in the art would not be able to determine from the specification the full scope of what the inventors possessed regarding this functional limitation. The specification fails to describe critical implementation details, such as: the specific algorithms for calculating the “center” of a potentially complex, non-rectangular overlap region; the rules for handling ties or ambiguities in the “smallest or highest” feature comparison; or any other alternative placement rules covered by the claim, such as placement based on the temporal order of strokes, the density

of ink pixels within the overlap, or the trajectory of the pen. The specification's sporadic mention of two simple rules does not amount to a complete written description of the broad function of placing the cursor anywhere within the overlap region. Therefore, the specification lacks adequate written description for this limitation across its full scope as claimed.

“determine, from segmentation information of the handwriting input determined through the recognition of the handwriting input” (Claims 1, 4, 7)

Plaintiff has asserted Infringement Contentions against Defendant premised on an overly broad interpretation of the claim term “segmentation information.” Specifically, Plaintiff's theory appears to be that this term can encompass any and all data derived from a handwriting recognition process that relates to the division of digital ink. The specification of the '316 Patent, however, provides no written description to support such a broad scope, nor does it enable one of ordinary skill in the art to practice the full breadth of this claim without undue experimentation. The disclosure does not demonstrate that the inventors possessed the subject matter of the Asserted Claims consistent with what is apparently asserted against Defendant in this litigation.

The specification of the '316 Patent exclusively describes a process that uses one specific type of “segmentation information”: the final, definitive output of a recognition engine that has already segmented the ink into discrete characters. The patent describes the process as first completing the recognition of the ink into distinct characters (*e.g.*, “h,” “e,” “l,” “l,” “o”) and only then determining ranges based on this completed and unambiguous segmentation. *See, e.g.*, '316 Patent at Col. 16:25-36. The specification provides no disclosure, teaching, or suggestion of how to determine ranges from any other type of segmentation information, such as probabilistic data, a lattice of potential segmentation points, or confidence scores for various break-points. The inventors described only a single embodiment of what constitutes the source segmentation data, and a person of ordinary skill in the art reviewing the patent would not understand the inventors to

have possessed a broader invention covering any and all possible forms of segmentation information.

Furthermore, the specification of the '316 fails to describe or enable the full scope of determining ranges from any type of "segmentation information." The patent provides a simple recipe for a single scenario but offers no guidance, principles, or algorithms for handling the complex data produced by other types of recognition systems. For a skilled artisan to practice the full scope of the claim as interpreted by Plaintiff, it would have to independently invent methods for processing probabilistic or ambiguous segmentation data. For example, it would have to experiment with thresholding algorithms to convert probabilities into definite boundaries or develop rules for resolving conflicting segmentation hypotheses to derive a stable range.

This inventive effort constitutes undue experimentation. There is no description suggesting the inventors possessed the much broader concept of using any form of segmentation data, as the claim language, under Plaintiff's broad interpretation, would allow. The disclosure is limited to a single, simplistic species, and one of ordinary skill would not recognize a description of the full genus of using any and all data from a recognition process. As such, the specification does not demonstrate that the inventors were in possession of the full scope of the claimed invention.

(b) Indefiniteness Under 35 U.S.C. § 112, ¶ 2

The Asserted Claims are invalid as indefinite because they fail to inform those skilled in the art about the scope of the alleged invention with reasonable certainty. These Invalidity Contentions are based on Defendant's understanding of Plaintiff's interpretation of the Asserted Claims as asserted in the Infringement Contentions. Because the determination of whether the claims are indefinite under 35 U.S.C. § 112, ¶ 2, depends on the construction of the Asserted Claims—and no claim construction positions have been exchanged, no claim construction order

has been issued and no expert discovery has taken place—Defendant’s positions on indefiniteness are necessarily preliminary at this early stage of the case. Defendant reserves its right to amend or further revise these Invalidity Contentions based on further developments, including the Court’s claim construction opinion, and discovery in the case. When a phrase is recited in multiple claims, the first instance of that phrase being recited is indicated below; invalidity under § 112, ¶ 2 for indefiniteness applies to any, all, and each of the claims where the phrase is recited, however.

A patent is invalid for indefiniteness if its claims fail to inform, with reasonable certainty, those skilled in the art about the scope of the claimed invention. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2015). The mere ability to articulate a definition supported by the specification does not make a claim definite. “Even if a claim term’s definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into a meaningfully precise claim scope.” *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008). In addition, lack of proper “antecedent basis” results in a “zone of uncertainty” as to construction, and renders the claim insolubly ambiguous. *See Adv. Tech. Incubator, Inc. v. Sharp Corp.*, No. 2:07-CV-468, 2009 U.S. Dist. LEXIS 109173 at *72-73 (E.D. Tex. Jun. 26, 2009); *Gardner v. Toyota Motor Corp.*, No. C 08-632 RAJ, 2009 U.S. Dist. LEXIS 108755 at *7 (W.D. Wash. Nov. 19, 2009); *Parker-Hannifin Corp. v. Baldwin Filters, Inc.*, No. 1:07-CV-1709, 2008 U.S. Dist. LEXIS 108152 at *18-19 (N.D. Ohio July 3, 2008). Indefiniteness is a question of law. *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1378 (Fed. Cir. 1999).

The ’316 Patent fails to particularly point out and distinctly claim the subject matter of the Asserted Claims in compliance with 35 U.S.C. § 112, ¶ 2. The Asserted Claims of the ’316 Patent are invalid as indefinite based on at least the following terms:

“in relation to the determined digital ink element ranges” (Claims 1, 2, 4, 5, 7, 8)

One of ordinary skill in the art cannot reasonably ascertain the scope of this phrase. The term “in relation to” is a term of degree that is not defined in the '316 Patent, nor does the specification provide any objective standard for measuring this relationship. The specification describes specific embodiments where a cursor is positioned “between first and second characters” or “on a border of the determined range” (Col. 3, ll. 26-29; Col. 18, ll. 30-33). However, the claim language “in relation to” is substantially broader than these specific examples and provides no guidance as to how close or in what manner the cursor must be placed relative to the “ranges” to fall within the claim. A person of ordinary skill is thus left to guess at the metes and bounds of this limitation.

“ranges of elements of the digital ink” (Claims 1, 4, 7)

A person of ordinary skill in the art would not be able to determine, with reasonable certainty, the scope of the term “ranges.” The specification discloses an embodiment where the ranges are illustrated as rectangular “character bounding boxes.” See '316 Patent at Col. 16, ll. 31-36; Figs. 12, 14, 16. However, the claims are not limited to “bounding boxes” and use the much broader and undefined term “ranges.” The patent fails to provide a definition for “ranges” or objective criteria for determining the boundaries of a “range.” It is unclear whether a “range” is limited to a rectangular shape, or could encompass the specific pixels of the digital ink element, a convex hull surrounding the element, or some other arbitrary shape. Without a clear and objective standard for defining the boundaries of a “range,” one skilled in the art cannot determine when the subsequent claim limitations, such as the existence of a “region of overlap,” are met.

**“cause said display of the input cursor within a region of overlap of ranges”
(Claims 1, 4, 7)**

This phrase renders the claims indefinite for two reasons. First, as discussed above, the term “ranges” is indefinite, and therefore the scope of a “region of overlap of ranges” cannot be determined with reasonable certainty. Second, the claim requires displaying the cursor “within” this indeterminate region but fails to provide any rule or standard for selecting a position. The specification describes multiple, mutually exclusive strategies for placing the cursor within an overlap region. For example, the cursor may be placed “at the center of the area of overlap” (Col. 18, ll. 45-47; Fig. 18A) or, alternatively, at the border of the character with the “smallest” or “highest value” of certain geometrical features (Col. 18, ll. 52-64; Fig. 18B). The claim provides no guidance as to which of these distinct methods, or any other method, should be used. By failing to specify how to determine the cursor’s position “within” the region, the claim fails to inform those skilled in the art about the scope of the invention with reasonable certainty.

“determine, from segmentation information of the handwriting input determined through the recognition of the handwriting input” (Claims 1, 4, 7)

This phrase renders the claims indefinite because the key term “segmentation information” is ambiguous and fails to provide an objective boundary for its scope. The term is not defined in the patent, nor does it have a plain and ordinary meaning that would inform a person of ordinary skill in the art with reasonable certainty what types of data fall within its bounds. Handwriting recognition systems can produce a wide variety of outputs that could plausibly be considered “segmentation information,” such as a “segmentation graph” with “element hypotheses” (Col. 9, ll. 38-41), probabilistic data, or simply the final, discrete character breaks. The specification, however, only provides a single, concrete example of using this information: retrieving the final output of the recognition process—the recognized characters themselves—to determine the

“ranges,” which are illustrated as “character bounding boxes” (Col. 16, ll. 30-36; Fig. 12). The claim provides no guidance as to which of these distinct forms of data qualifies as “segmentation information.” By failing to specify the nature and scope of this critical input term, the claim fails to inform those skilled in the art about the scope of the invention with reasonable certainty.

(c) Indefiniteness for Lack of Structure Under 35 U.S.C. § 112, ¶¶ 2, 6

The Asserted Claims are indefinite because the specification of the ’316 Patent fails to disclose a specific structure for performing the functions recited in the Asserted Claims. These Invalidity Contentions are based on Defendant’s understanding of Plaintiff’s interpretation of the Asserted Claims as set forth in its Infringement Contentions. Because the determination of whether claims are indefinite under 35 U.S.C. § 112, ¶ 6 and ¶ 2, depends on the construction of the Asserted Claims—and no claim construction positions have been exchanged, no claim construction order has issued, and no expert discovery has taken place—Defendant’s positions on indefiniteness are necessarily preliminary at this early stage of the case. Defendant reserves its right to amend or further revise these Preliminary Invalidity Contentions based on further developments, including the Court’s claim construction opinion, and discovery in this case. When a phrase is recited in multiple claims, the first instance of that phrase being recited is indicated below; invalidity under § 112, ¶¶ 2 and 6, for indefiniteness applies to any, all, and each of claims where the phrase is recited, however.

The claims of the ’316 Patent invoke 35 U.S.C. § 112, ¶ 6, by reciting generic placeholders performing functions without the specification describing sufficient structure corresponding to the function, as identified below:

“at least one non-transitory computer readable medium...configured to: ... determine, from segmentation information of the handwriting input determined through the recognition of the handwriting input, ranges of elements of the digital ink” (Claim 1) / “processor...under control of the processor” performing method steps (Claims 4, 7)

The '316 Patent specification fails to disclose and adequately link specific structure for performing the recited function of determining ranges from segmentation information. The specification describes a general computer system with generic components (processor 106, memory 108), '316 Patent at Fig. 1; col. 7-8, but fails to provide or identify an algorithm or a detailed process by which this function is carried out.

The specification provides high-level, conclusory descriptions of this process, *see, e.g., id.* at col. 16:25-30 (“This segmentation information is retrieved by the application 112 to determine the ranges of each recognized element within the handwritten input...”), but does not disclose sufficient algorithmic detail to provide corresponding structure for the claimed function. Specifically, the specification fails to disclose:

The algorithm by which “segmentation information” is retrieved and processed to serve as an input for range determination.

The algorithm for calculating the boundaries of a “range” (disclosed as a bounding box) from the ink strokes of a recognized character.

Here, the invocation by the alleged named inventors of a general “non-transitory computer readable medium” or “processor” to perform the specific function of determining ranges, without further description of an algorithm or procedure to accomplish this function, renders the claim indefinite. *See Aristocrat Techs. Austl. Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008) (holding that for computer-implemented functions, corresponding structure requires disclosure of an algorithm).

The specification's general statements that the HWR system performs segmentation and that the application "retrieves" this information to "determine the ranges" do not constitute sufficient algorithmic disclosure. These conclusory functional statements do not provide the level of detail necessary to constitute corresponding structure for the claimed function.

"cause said display of the input cursor within a region of overlap of ranges of elements of the digital ink" (Claims 1, 4, 7)

The '316 Patent specification fails to disclose and adequately link a specific structure for performing the recited function of displaying the cursor "within a region of overlap." While the specification discusses this function, it describes multiple, distinct, and mutually exclusive algorithms without providing a rule for selecting between them, and without sufficiently describing the algorithms themselves.

The specification states that to solve user confusion from overlapping ranges, the cursor can be placed either "at the center of the area of overlap" (*id.* at col. 18:45-48; Fig. 18A) or, alternatively, on the border of a character based on "consideration of the other geometrical features of the ranges of the overlapped characters, such as the height, the width, or the area" (*id.* at col. 18:52-57; Fig. 18B). This functional description does not disclose a single, specific algorithm corresponding to the claim language.

Without disclosure of the algorithm or process by which the system: (1) determines which of the multiple placement strategies to apply, and (2) executes the vaguely described "geometrical features" comparison (*e.g.*, the rules for prioritizing height vs. width, or handling ties), the specification fails to provide adequate corresponding structure for this function. A structure that performs a function must be an algorithm, not a menu of algorithms from which to choose. This failure renders the claim indefinite.

32), and that constraints include standard geometric relationships like “length equality, angle equality, parallelism, symmetry, alignment, tangency, connection, and perpendicularity” (Col. 7, lines 55-58). These are conventional geometric concepts applied using conventional computing methods.

The specification’s admission that “this hierarchy is only one example, and the present system and method is able to prioritize constraints in any manner one skilled in the art would necessitate” (Col. 10, lines 2-4) further demonstrates that the claims cover conventional techniques known in the art rather than any specific inventive implementation.

Accordingly, the claims of the ’572 Patent are invalid under 35 U.S.C. § 101 as attempting to claim patent-ineligible subject matter.

G. The ’316 Patent

Pursuant to Standing Order Regarding Subject Matter Eligibility Contentions, and subject to the Preliminary Statement and Reservation of Rights set out above, Defendant identifies grounds upon which it contends that the Asserted Claims are invalid for failure to meet the requirements of 35 U.S.C. § 101. Exhibit N sets forth a chart identifying the specific exception to eligibility to which each Asserted Claim is directed and the factual and legal basis therefore.

As identified below, the Asserted Claims are invalid because they are directed to the abstract idea of collecting data, analyzing it according to a predetermined rule, and displaying the result of that analysis. Specifically, the claims recite collecting handwriting data, analyzing the geometric properties of its recognized components, and applying a simple organizational rule to place a cursor. This abstract idea is implemented using only generic computer components performing their conventional functions, without any inventive concept sufficient to transform it into patent-eligible subject matter.

In order to determine whether claimed subject matter is patent-eligible, *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208 (2014), established a two-part test. First, the court must determine whether the claims are “directed to” a patent-ineligible concept, such as an abstract idea. *Id.* at 217. Second, if they are, the court must consider the claim elements—individually and as an ordered combination—to determine whether they contain an “inventive concept” sufficient to “transform the nature of the claim” into a patent-eligible application. *Id.*

(a) Under *Alice* Step 1, the Asserted Claims are Directed to an Unpatentable Abstract Idea.

Claim 4 of the '316 Patent is representative. Under *Alice* step one, the Asserted Claims are directed to the abstract idea of organizing information based on predetermined rules. The claims recite functional, result-oriented limitations that amount to: (1) receive digital ink, (2) determine the boundaries (“ranges”) of its constituent parts using a conventional recognition process, and (3) apply a rule to place a cursor based on the geometry of those boundaries. These are generalized steps for information processing and presentation, not a specific means or method for improving the underlying technology itself. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (finding that claims reciting collecting information, analyzing it, and displaying certain results are abstract).

The patent’s specification identifies a problem with editing digital ink due to the irregular and overlapping nature of handwritten characters. '316 Patent at col. 2:1-24. However, the claimed “solution” is not a technological one; it is the application of a basic organizational principle. The idea of resolving a spatial ambiguity between two adjacent items by analyzing their properties (*e.g.*, size, shape) and applying a placement rule is a long-standing concept, akin to a mental process that a person could perform. Limiting this abstract organizational process to the

technological environment of digital ink editing does not make the idea any less abstract. *Ericsson Inc. v. TCL Commc’n Tech. Holdings, Ltd.*, 955 F.3d 1317, 1327 (Fed. Cir. 2020).

The claims focus on what to accomplish (placing a cursor within an overlap region) rather than a specific technical means for how to accomplish it. The functional language—”determining...ranges,” “causing display...within a region of overlap”—describes desired outcomes without reciting any non-conventional algorithm or process. This result-oriented claiming is a hallmark of an abstract idea.

Furthermore, the claims do not recite an improvement to computer functionality. They do not make the computer operate faster, more efficiently, or more accurately. The underlying handwriting recognition process itself is not improved; the claims merely use the output of this conventional process. The purported benefit of a more “intuitive” cursor placement is a benefit to the user’s cognitive experience, not a technical improvement to the computer’s operation. Such benefits, without a corresponding technological improvement, do not save claims from abstraction. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (user experience benefits without technological improvement insufficient for patent eligibility).

The dependent claims do not alter this analysis. They merely add further details to the abstract rule (*e.g.*, applying the rule between “first and second characters” or using basic geometric features like “height and width”), which remains squarely within the abstract realm of information organization.

(b) Under *Alice* Step 2, the Asserted Claims Lack an Inventive Concept.

The Asserted Claims fail *Alice* step two because they do not contain an inventive concept that transforms the abstract idea into a patentable application. The claims merely instruct the use

of “well-understood, routine, conventional components” to implement the abstract rule. *Yanbin Yu v. Apple Inc.*, 1 F.4th 1040, 1045 (Fed. Cir. 2021).

The only hardware recited are generic computer components: a processor, memory, and display. The specification confirms their conventional nature. ’316 Patent at col. 7-8. These off-the-shelf components are insufficient to supply an inventive concept. *Elec. Power Grp.*, 830 F.3d at 1355.

The claimed functions are likewise conventional. Displaying digital ink and cursors are fundamental operations of any graphical user interface (GUI). The core step of “determin[ing]...ranges of elements of the digital ink” relies entirely on the output of a conventional handwriting recognition (HWR) system. The patent explicitly admits this reliance, stating that its “HWR system 114” uses well-known “segmentation expert[s]” and classifiers like “Neural Networks.” ’316 Patent at col. 9:25-30, 13:48-54. The process of generating bounding boxes (“ranges”) for recognized characters is a routine function of such systems. *See Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (recognizing data extraction and recognition as conventional computer functions).

Since the input data for the abstract rule (the “ranges”) is generated by conventional means, the only remaining element is the application of the rule itself: placing the cursor “within a region of overlap.” This is nothing more than a simple conditional logic operation (*e.g.*, IF overlap exists, THEN place cursor based on a comparison of geometric properties). Applying such basic logical rules is precisely what a general-purpose computer is designed to do and is not inventive. The dependent claims’ recitation of using “height and width” underscores the simplicity and conventionality of this rule, as these are the most fundamental properties of a 2D bounding box.

The ordered combination of these elements provides no inventive concept. The claims recite a predictable sequence: (1) display ink (standard GUI operation), (2) determine character ranges using a conventional HWR process, and (3) apply a simple logical rule to place a cursor (standard GUI operation). This is a textbook example of a conventional data processing flow where each element performs its well-understood function without any synergistic or unexpected result.

In short, the claims take the conventional output of a conventional HWR system and apply a simple, abstract rule using conventional computer components and GUI functions. This is a classic case of using a computer as a mere tool to implement an abstract idea. Such a recitation cannot supply the requisite inventive concept to overcome an *Alice* challenge. *Chamberlain Grp., Inc. v. Techtronic Indus. Co.*, 935 F.3d 1341, 1349 (Fed. Cir. 2019).

Accordingly, the claims of the Patents-in-Suit are invalid under 35 U.S.C. § 101 as attempting to claim patent-ineligible subject matter.

Pursuant to the Standing Order Regarding Subject Matter Eligibility Contentions, Exhibits H through N contains the following charts:

- 1) First, Exhibits H-N contain charts that identifies each exception to eligibility (*e.g.*, abstract idea, law of nature, and natural phenomenon) to which each Asserted Claim is directed and the factual and legal basis therefor, as well as identifying representative claims.
- 2) Second, Exhibits H-N contain charts chart that includes a description of the industry at the time of the purported invention, in which the Asserted Claims are well understood and a description of how each element of the Asserted Claims (through a representative claim) was well understood, routine, and conventional, both individually and in combination with the other elements of that claim.