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

CLO VIRTUAL FASHION INC., Plaintiff, v. ZHEJIANG LINGDI DIGITAL TECHNOLOGY CO., LTD. (D/B/A LINCTEX), Defendant.	Civil Action No. _____ **DEMAND FOR JURY TRIAL**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff CLO Virtual Fashion Inc. ("CLO") brings this action against Zhejiang Lingdi Digital Technology Co., Ltd., (f/k/a Shanghai Lingdi Digital Technology Co., Ltd.), who does business under the name "Linctex" in the United States ("Linctex" or "Defendant") for an injunction, damages, and other appropriate relief to stop Linctex from violating CLO's patent rights. CLO states and alleges as follows:

THE PARTIES

1. CLO is a leading fashion technology provider, organized under the laws of South Korea, with a principal place of business at 42nd Floor, Gangnam Finance Center, 152 Teheran-ro, Gangnam-gu, Seoul, Republic of Korea (06236).

2. Upon information and belief, Defendant Linctex is a company organized under the laws of the People's Republic of China with a principal place of business at Room 1958, 639 Qianjiang Rd., Shangcheng, Hangzhou, Zhejiang, China.

LINGDI 1017

NATURE OF THE ACTION

3. This is a civil action for infringement of United States Patent Nos. 10,733,773 (the '773 patent), 11,410,355 (the '355 patent), and 11,222,448 (the '448 patent) (collectively, the "patents-in-suit") under the patent laws of the United States, including, without limitation, 35 U.S.C. § 1 *et seq.*

JURISDICTION AND VENUE

4. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

5. The Court has personal jurisdiction over Defendant because Defendant has, directly or through agents and/or intermediaries, committed actions within Texas, including within the District, giving rise to this action and/or has established minimum contacts with Texas and this District such that the exercise of jurisdiction would not offend traditional notions of fair play and justice.

6. On information and belief, Linctex regularly conducts business in Texas, including this District, and purposefully avails itself of the privileges of conducting business in Texas. In particular, on information and belief, Linctex, directly and/or through its agents and/or intermediaries, makes, uses, imports, offers for sale, sells, and/or advertises its products and affiliated services in Texas, including this District. In addition, Linctex has placed, and continues to place, infringing products into the stream of commerce, via an established distribution channel, with the knowledge and/or understanding that such products are sold in the United States including in Texas and specifically including this District.

7. For example, Defendant sells and offers to sell its infringing products directly through its website to the public throughout the United States, including in Texas and this District.

8. Defendant also sells and offers to sell its infringing products, or otherwise makes its infringing products available, online and through other distribution channels, including in Texas and this District.

9. Defendant also purposefully directs its infringing activities toward Texas and the United States via its websites, linctex.com and style3d.com, from which it does business over the internet and makes its Style3D Studio product available for download.[1, 2]

10. Defendant's website is interactive. Defendant's website details its activities as they are directed to the United States. In the "About Us" page of Defendant's website, Defendant states, "Style3D® stitches an ecosystem of software and services that enables fashion designers and enterprises to work with real time 3D simulation, surpassing their productivity, sustainability and creativity."[3] Defendant's website contains links and for prospective U.S. businesses, including brands, designers ("ODMs"), fabric suppliers, and colleges to provide information and potentially partner with or become a client of Linctex.[4] The website further contains multiple links for individual users or corporate users to "Try it free," which prompts the user to submit personal information to sign up for a free trial of Linctex's products. It also offers users the ability to subscribe to a newsletter.[5] The website provides a "Resources" link, which contains videos with customer stories,[6] a "3D Design School" with videos teaching users how to

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[1] https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1199
[2] https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1200
[3] https://www.linctex.com/company/index#section-aboutus
[4] https://www.linctex.com/solutions/index
[5] *Id.*
[6] https://blog.linctex.com/customer-stories/

use Style3D,[7] and links to virtual seminars hosted by Style3D or industry groups.[8] It also solicits entries for design competitions for customers,[9] and allows users to submit comments on blog posts.[10]

11. Alternatively, and/or in addition, this Court has jurisdiction over Linctex under Federal Rule of Civil Procedure 4(k)(2). This action arises from actions of Linctex directed toward the United States, including (1) committing at least a portion of the infringing acts alleged herein and (2) regularly transacting business, soliciting business, and deriving revenue from the sale of goods and services, including infringing goods and services, to individuals in the United States. Therefore, Linctex has purposefully availed itself of the benefits of the United States, including the Eastern District of Texas, and the exercise of jurisdiction over Linctex would not offend traditional notions of fair play and substantial justice.

12. Venue in proper in this District under 28 U.S.C. § 1391(c) because Linctex is not a resident of the United States.

CLO'S VIRTUAL GARMENT TECHNOLOGY

13. CLO is a global virtual fashion software company that specializes in software and computer graphics technology for 3D garment design and cloth simulation.

14. CLO, whose name evolved from the word "clothing," was founded in 2009 with a simple vision: to innovate and transform the way people communicate and engage with fashion.

15. From the beginning, CLO has focused on research and development in garment simulation, and has ever since led the market in all aspects of digital garment design through its state of the art 3D Cloth Simulation Algorithm. CLO's market-leading product offerings include

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[7] https://blog.linctex.com/3d-design-school/
[8] https://blog.linctex.com/events/
[9] https://blog.linctex.com/christmas-fantasy/
[10] https://blog.linctex.com/style3d-nvidia-omniverse-are-creating-a-3d-world-together/

cutting-edge 3D garment design software, asset management tools, a design and development platform, and consumer facing products such as virtual fitting on e-commerce garments.

16. In 2009, CLO launched its first product, Marvelous Designer, a 3D garment design program targeted to independent virtual artists.

17. The product became an immediate hit among virtual artists. One problem, however, began to emerge, as "cracked versions" of the software – meaning unlicensed or "pirated" versions of CLO's software – began to spread among independent artists. Such unlicensed use, while a major concern, had a silver lining. Independent artists began discussing Marvelous Designer in online forums and spreading the word about CLO's technology. It wasn't long before, industry leaders caught word and took notice of the popularity of Marvelous Designer and reached out to CLO to become clients.

18. CLO's first enterprise client was Weta Digital, who used CLO's Marvelous Designer program in the production of the computer-animated movie *The Adventures of Tintin*, directed by Steven Spielberg.

19. In 2011, CLO launched a 3D design program and digital garment ecosystem, also named CLO, that allows apparel designers and brands to construct creative digital garment designs easily and accurately and also collaborate and share designs.

20. Fashion industry leaders again took notice of CLO's innovative technology. Leading fashion brands and gaming and film companies such as Hugo Boss, Adidas, Mango, and Ubisoft have each used CLO, making CLO the unrivaled leader of the virtual garment industry.

LINCTEX'S SYSTEMIC MISAPPROPRIATION OF CLO'S TECHNOLOGY

21. But industry leaders were not the only ones to take notice of CLO's innovations. Companies looking to take shortcuts to compete with CLO again began using "cracked" or pirated versions of CLO's software to learn from and copy CLO's technology.

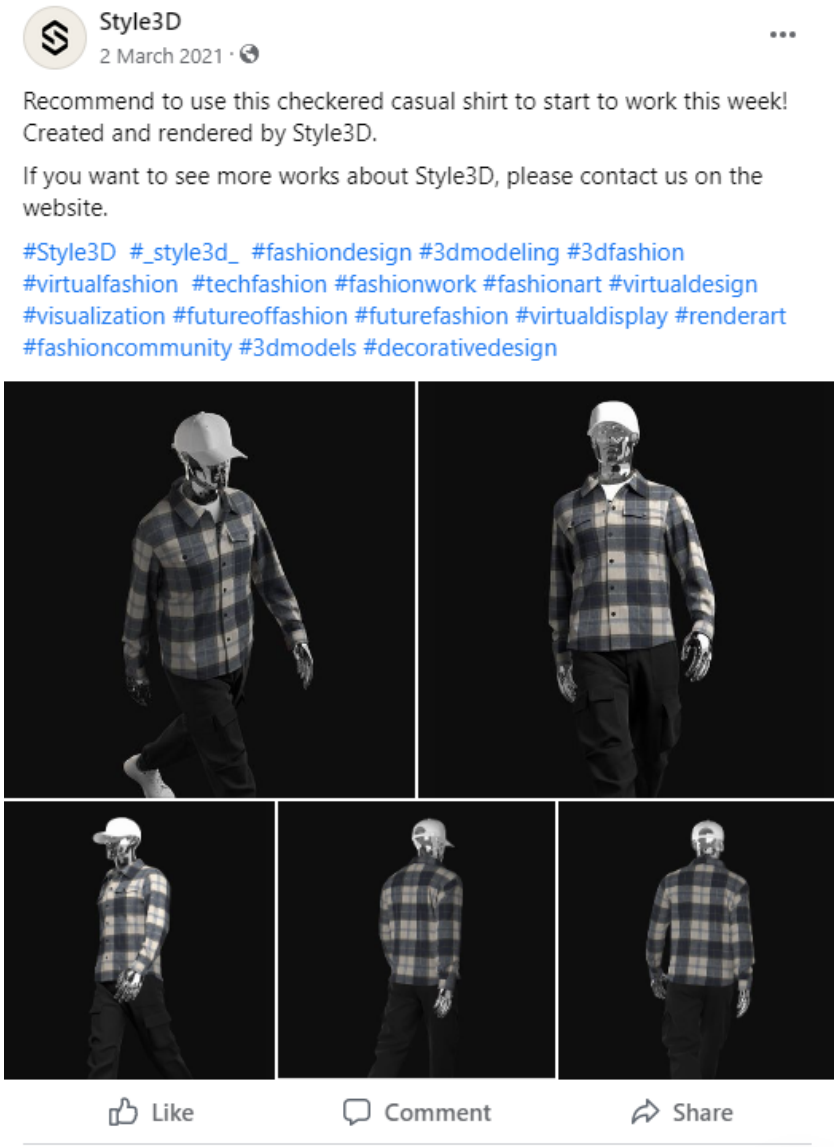
22. On information and belief, Linctex is one of the companies that used "cracked" or pirated versions of CLO's software.

23. Indeed, on information and belief, Linctex has used more than 50 unlicensed "cracked" versions of CLO's software including in Linctex's software research and development department. To stop Linctex from further unauthorized use of CLO's technology, CLO has initiated legal proceedings in China. CLO has successfully convinced a judge in China that sufficient grounds exist to authorize a court raid on Linctex's offices to collect documents and evidence regarding Linctex's unauthorized use of CLO technology. The court raid took place on May 10, 2023, and review of the evidence is ongoing.

24. But unlike the early independent designers who used CLO's products and spread the word to CLO's customers, on information and belief, Linctex has instead used these "cracked" versions of CLO's products to develop its own competing software called Style3D and misappropriate CLO's innovative design features.

25. On information and belief, Linctex has even gone so far as to advertise its own product's capabilities using CLO's custom and proprietary avatars. Avatars are used in 3D digital design much like mannequins in the real world. Designers create clothing designs on CLO and display them on avatars. Those avatars then move around to model how the clothes could be worn and how the clothes would function and look in motion. CLO has made a custom avatar available on its CLO product. This avatar is shown in the image below with a see-through metallic finish applied:

26. On information and belief, Linctex downloaded this avatar from CLO and used it to advertise its Style3D product on Facebook and other websites on the internet while applying a similar see-through metallic finish. For example, Linctex put the following advertisement on Facebook via its Style3D account:



27. Below is a side-by-side comparison of CLO's proprietary avatar (on the left of each image) and the images in the advertisement Linctex placed on Facebook using the same avatar (shown on the right):

CLO

Style3D

CLO

Style3D

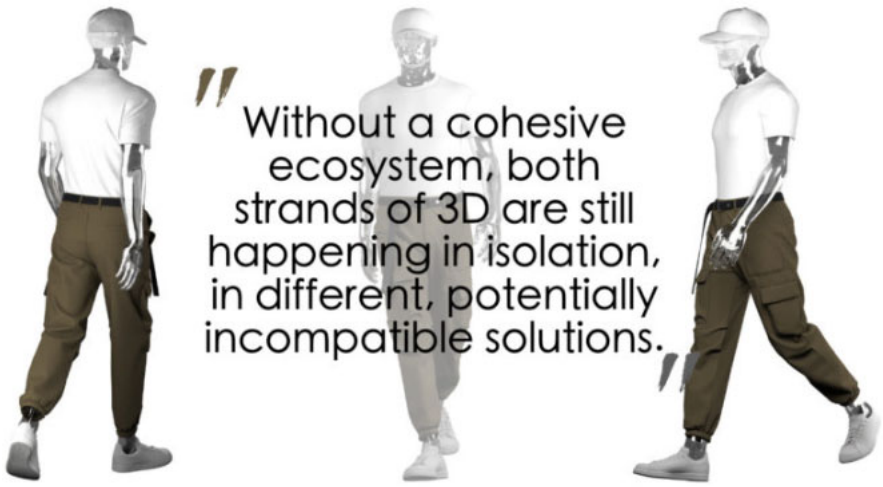
CLO

Style3D

CLO

Style3D

28. On information and belief, Linctex has used CLO's custom and proprietary avatar in other product advertisements as well, such as at the website, https://www.theinterline.com/2021/04/06/3d-bridging-the-brand-supplier-divide/, shown below:



29. But Linctex's use and infringement of CLO's intellectual property runs much deeper than use CLO's avatars in its advertisements.

30. From the beginning, CLO has known that its success and growth have stemmed from its "user-focused" mindset and emphasis on research and development to create innovative technology that provides the best user experience to virtual artists. CLO's research and development aims to accommodate user needs and deliver a seamless and intuitive user experience by blending its knowledge of user interface design, software development, and fashion industry practices. This has resulted in innovative sewing simulation and design features that empower designers to design virtual garments in a seamless, intuitive environment.

31. CLO also has learned, however, that its innovative technology would be the target of competitors seeking to "knock-off" its products by using "cracked" versions of CLO's products and creating inferior competing products.

32. Thus, as part of developing and creating its pioneering technology, CLO protects its investments in innovation through patent protection. The asserted patents are part of CLO's effort to protect its investments in creating the most advanced, user-focused design technology.

33. Much like Linctex's use of CLO's avatars to enhance the marketing of its own products, Linctex is also using CLO's patented technology in its Style3D product by implementing infringing virtual design features, as detailed below.

THE '773 AND '355 PATENTS

34. CLO currently holds patents covering a number of solutions in the 3D virtual fashion design throughout the world, including in the United States.

35. CLO is the owner by assignment of all right, title, and interest in and to the United States Patent No. 10,733,773 (the "'773 patent") entitled "Method and apparatus for creating digital clothing," which duly and legally issued on August 4, 2020. The '773 patent is attached to this Complaint as **Exhibit A**.

36. CLO is the owner by assignment of all right, title, and interest in and to the United States Patent No. 11,410,355 (the "' 355 patent") entitled "Method and apparatus for creating digital clothing," which duly and legally issued on August 9, 2022. The '355 patent is attached to this Complaint as **Exhibit B**.

37. CLO is the owner by assignment of all right, title, and interest in and to the United States Patent No. 11,222,448 (the "'448 patent") entitled "Method and apparatus for measuring measurement of two-dimensional pattern corresponding to three-dimensional virtual clothing," which duly and legally issued on January 11, 2022. The '448 patent is attached to this Complaint as **Exhibit C**.

38. The '773 and '355 patents share a common specification.

39. The '773 and '355 patents describe and claim innovative methods and systems for improving "free sewing" in clothing simulation technology. Ex. A, '773 patent, 1:20.

40. Clothing simulation technology is frequently used in the fashion industry as well as in the gaming, animation, and motion picture visual effects fields to model textiles on an avatar and simulate movements of the textiles according to movements of the avatar. *Id.*, 1:20-26.

41. Sewing simulation is a type of clothing simulation technology that allows a user to create digital clothing using patterns or segments of virtual fabric. *Id.* at 1:27-29. Such sewing simulation may, for example, occur in a computer-aided design program that utilizes a spring model where the virtual garment is comprised of polygon "mesh" segments, each consisting of "springs that connect grid points to each other" that permits the program to simulate and display the internal and external force applied to each pattern segment according to the properties of the pattern segment. *Id.* at 4:1-5:13.

42. Sewing simulation is typically done either by "segment sewing" or "free sewing. *Id.* at 1:30-32. "Segment sewing" is where the user creates a virtual garment by selecting and

connecting two different fabric segments of predetermined size and connecting them (i.e., sewing them together) according to predetermined dots on each segment. *Id.* at 1:33-34. "Free sewing" is where users may freely adjust the length of the fabric segments being sewn together to create the virtual garment and sew the segments together however they would like. *Id.* at 1:34-37.

43. Although free sewing provides more autonomy to the user, it also can place a greater burden on the user. For instance, if a user is sewing together two matching fabric segments, and the user has adjusted the length of one segment, the user must then manually adjust the length of the other segment to be the same as the first. *Id.* at 1:38-42. If the user does not accurately adjust the length of both fabric segments, and the fabric does not stretch well, then the resulting virtual garment may be compromised. *Id.* at 1:43-49. And even if users want the two segments to be different length during free sewing, they are still required to recognize how long or short the segment should be and manually adjust the length of the segments as needed. *Id.* at 1:38-42, 1:50-54.

44. Thus, the inventors of the '773 and '355 patents recognized that a solution was required to improve both the usability and efficiency of free sewing programs.

45. To provide such solutions, the '773 and '355 patents propose innovative systems and methods that will "allow the user, during free sewing, to easily adjust the length of one digital pattern's line segments to match that of another's," "to display the difference between each length of a selected segment on the pattern and another segment to be sewn thereto," and to provide a "warning sign" to the user "when the difference between each length of the selected segment on the pattern and another segment to be sewn thereto is too large for the two segments to be sewn together." *Id.* at 1:63-2:8.

46. To achieve this solution, the common specification of the '773 and '355 patents describes a method of creating digital clothing via storing patterns and draped digital clothing,

comprising the steps of: (1) setting a first selected segment by inputting the first selected segment to be sewn on a first segment on a pattern, (2) setting a second selected segment, and (3) draping the digital clothing by processing (i.e., sewing) the first and second selected segments according to sewing instructions so as to create 3D digital clothing. *Id.* at 2:9-17.

47. The common specification further discloses that the setting of the second segment may further include: (1) inputting a starting point of a second selected segment onto at least one second segment within the user interface, which is to be sewn to the first selected segment to create the virtual garment, (2) inputting an ending point, which, upon starting a point-clicking process at the starting point located on a second segment, is the closest in distance to a point, where the point-clicking process occurs, on the second segment that includes the input starting point, and (3) setting, as the second selected segment, a section of the second segment between the input starting point and the input ending point. *Id.* at 2:19-28.

48. The solution may further include setting of the second selected segment in response to a difference between the current cursor position and the determined candidate for the ending point being lower than a reference value, moving the cursor position to a position of the determined candidate for the ending point and displaying the cursor position. *Id.* at 2:44-49.

49. The common specification further discloses that the setting of the second selected segment may further include calculating and displaying at least one of: the length of the first selected segment and a length of a line, which is acquired by connecting the starting point, input along the second segment, to a point that is on the second segment and that is the closest in distance to the current cursor position. *Id.* at 2:50-55.

50. The common specification further discloses that the setting of the second selected segment may further include displaying a difference value between the length of the first selected segment and a length of a line, which is acquired by connecting the starting point, input along the

second segment, to the point that is on the second segment and that is the closest in distance to the current cursor position. *Id.* at 2:56-62.

51. The common specification further discloses that the setting of the second selected segment may further include, in response to the difference value being greater than a reference value, displaying a warning sign, which may include changing colors of the calculated length and the difference value. *Id.* at 2:63-65.

52. The claims of the ’773 and ’355 patents cannot be performed without a computer.

53. The claims of the ’773 and ’355 patents are directed to technological solutions to technological problems within the field of virtual clothing design.

54. The claims of the ’773 and ’355 patents employ unconventional technology to provide for an improved user interface and to increase accuracy and efficiency in segment sewing technology by decreasing user error in segment sewing. *Id.* at 1:35-56.

55. Adjusting the length of one digital pattern’s line segments to match that of another line segment, calculating and displaying the difference between each length of a selected segment on the pattern and another segment to be sewn so as to perform accurate sewing, and providing a warning sign to a user when the difference between each length of the selected segment on the pattern and another segment is too large for the two segments to be sewn together, as described and recited in the claims of the ’773 and ’355 patents, were not, individually or as an ordered combination, well-understood, routine, or conventional in the art of creating digital clothing.

56. The disclosed improvements over prior art and conventional systems and methods represent meaningful limitations and/or inventive concepts. In light of these specific improvements, the inventions of the asserted claims of the ’773 and ’355 patents, when such

claims are viewed as a whole and as an ordered combination, are not well-understood, routine, conventional, previously known, or typical.

THE ’448 PATENT

57. The ’448 patent, likewise, describes and claims innovative methods and systems for improving measurements of two-dimensional patterns as used in three-dimensional virtual clothing. Ex. C, ’448 patent, 1:20-25.

58. The inventors of the ’448 patents recognized that clothing and garments appear in three dimensions, but individual pieces of fabric that are used to create any garment are two-dimensional patterns. The difference can be problematic when taking measurements of the fabric in clothing because the dimensions of a piece of fabric may vary when worn according to the body shape and movement of the person wearing the clothing as well as the type of fabric. *Id.* at 1:29-32. For example, clothes may stretch, fold, or wrinkle depending on condition, use, and how the garment is worn. *Id.* at 1:35-37. Thus, measuring the distance between two points on three-dimensional clothing may not accurately represent the length on the two dimensional fabric due to stretching, draping, folding, wrinkles, and the like. *Id.* at 1:38-47.

59. The ’448 patent describes and claims innovative methods and systems for resolving this issue. For instance, the ’448 patent describes and claims a method and apparatus that measure a length of two desired points by measuring a length on a two-dimensional (2D) pattern corresponding to three-dimensional (3D) virtual clothing or in a space in which the 2D pattern is displayed, instead of measuring a length between two points in the 3D virtual clothing. *Id.* at 1:55-60. Additionally, the ’448 patent describes and claims a method and apparatus that accounts for the measurement challenges described above by changing a length of a line segment between two points on a 2D pattern based on a strain rate of the 2D pattern. *Id.* at 1:61-67. Further, the ’448 patent describes and claims a method and apparatus that measure the length of

a line segment inside a 2D pattern and the length of a different line segment outside of the 2D pattern, and the length of a line segment stretched to the 2D pattern from a remaining area in the space from which the 2D pattern is excluded. *Id.* at 2:1-7.

60. Further still, the ’448 patent describes and claims a method of measuring a two-dimensional measurement by receiving an input of a plurality of points in a space in which a 2D pattern of clothing is displayed, determining an attribute of an area in which the points are included in the space (for example, based on a data structure corresponding to each of the point), measuring the length of a line segment using the points based on the determined attribute of the area, and outputting the length of the line segment. *Id.* at 2:8-15.

61. The 2D pattern may, for example, be modeled with a mesh comprising a plurality of polygons that simulate the 3D virtual clothing in a “mass-spring model.” *Id.* at 6:15-21. For example, the vertices of each polygon constituting the mesh may be point masses having a mass, and the sides of the polygon may be represented as springs having elasticity which connects the point masses. *Id.* The springs may have respective resistance values against, for example, stretch, shear, and bending, depending on a material property of fabric used, and each vertex may move according to the action of an external force such as gravity, and the action of an internal force such as stretch, shear, and bending. *Id.* at 6:21-26.

62. The claims of the ’448 patent cannot be performed without a computer and are directed to technological solutions to technological problems within the field of virtual clothing design.

63. Resolving measurement problems by receiving a plurality of points in a space in which a 2D pattern of clothing is displayed, determining attributes of areas in which the points are displayed (for example, based upon a data structure corresponding to each of the points), and determining a length of a line segment using the points based on the determined attributes of the

areas while accounting for separation between the pattern pieces, and outputting the length were not, individually or as an ordered combination, well-understood, routine, or conventional in the field of digital clothing design or elsewhere.

64. Further, providing these improvements over the prior art wherein the 2D pattern is modeled with a mesh including or comprising a plurality of polygons was not, individually or as an ordered combination, well-understood, routine, or conventional in the field of digital clothing design or elsewhere.

65. By providing for these improvements over the prior art, the claims of the ’448 patent employ unconventional technology to increase accuracy in virtual clothing measurements and solve a technological problem in the field of virtual clothing design.

66. These improvements over prior art and conventional systems and methods represent meaningful limitations and/or inventive concepts. In light of these specific improvements and technological solutions, the inventions of the asserted claims of the ’448 patent, when such claims are viewed as a whole and as an ordered combination, are not well-understood, routine, conventional, previously known, or typical.

GENERAL ALLEGATIONS

67. Defendant Linctex makes, uses, sells, offers for sale, and/or imports into the United States digital clothing design systems, software, or methods for controlling digital clothing design systems, including its virtual design program Style3D Studio (“Style3D”).

68. Style3D has registered users in the United States and Texas.

69. Linctex infringes one or more claims of each of the patents-in-suit.

70. On June 7, 2023, CLO sent Linctex a letter informing Linctex of its infringement of the patents-in-suit.

71. On information and belief, Linctex has been aware of the patents-in-suit since at least June 7, 2023, and its continued infringement of the patents-in-suit is willful.

COUNT I – INFRINGEMENT OF THE ’773 PATENT

72. CLO realleges and incorporates by reference each and every allegation contained in the paragraphs above as if fully set forth herein.

73. CLO is the assignee of the ’773 patent.

74. The ’773 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

75. The ’773 patent issued from U.S. Patent Application No. 14/921,269.

76. Linctex directly infringes at least exemplary claim 1 of the ’773 patent by, without authority, making, using, importing, selling, or offering to sell Style3D in the United States, in violation of 35 U.S.C. § 271(a).

77. Claim 1 of the ’773 patent recites:

> [preamble] 1. A method of creating digital clothing executable by a computing device storing patterns and draped digital clothing, the method comprising:
>
> [a] setting a first selected segment by inputting the first selected segment to be sewn on a first segment on a pattern; and
>
> [b] setting a second selected segment, comprising
>
> > [b.1] inputting a starting point of the second selected segment on a second segment, wherein the second selected segment is sewn to the first selected segment,
>
> [c] detecting a current cursor position,
>
> [d] displaying a point on the second segment as a candidate ending point of the second selected segment to make a length of the second selected segment substantially equal to a length of the first selected segment,
>
> [e] connecting the starting point to a present point on the second selected segment closest in distance to the current cursor position to form a line

> based on a difference between the current cursor position and the present point being less than a first reference value,
>
> [f] moving the present point to the candidate ending point, in response to the difference between the present point and the candidate ending point being less than a second reference value,
>
> [g] displaying a difference value between the length of the first selected segment and a length of the line,
>
> [h] selecting the present point as an ending point of the second selected segment, in response to a user input, and
>
> [i] setting, as the second selected segment, a section of the second segment between the starting point and the ending point.

78. To the extent the preamble is found to be limiting, Style3D satisfies the preamble of claim 1. Style3D is computer software for creating digital clothing using patterns and draped digital clothing stored on a computer and is used by individuals who have downloaded and installed the Style3D software from the Style3D website. *See, e.g.*, https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1200; https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1199; https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1202.

79. Style3D satisfies limitation 1[a]. Style3D, in "Free Sewing" mode, sets a first selected segment to be sewn on the first segment of a pattern. For example, in the image below, which is taken from the video demonstrating Style3D's "Free Sewing" mode available at https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1285, Style3D sets a first selected segment when the user selects the segment to be sewn. In the example below, the first selected segment is on the rectangle-shaped fabric on the right side of the 2D image:

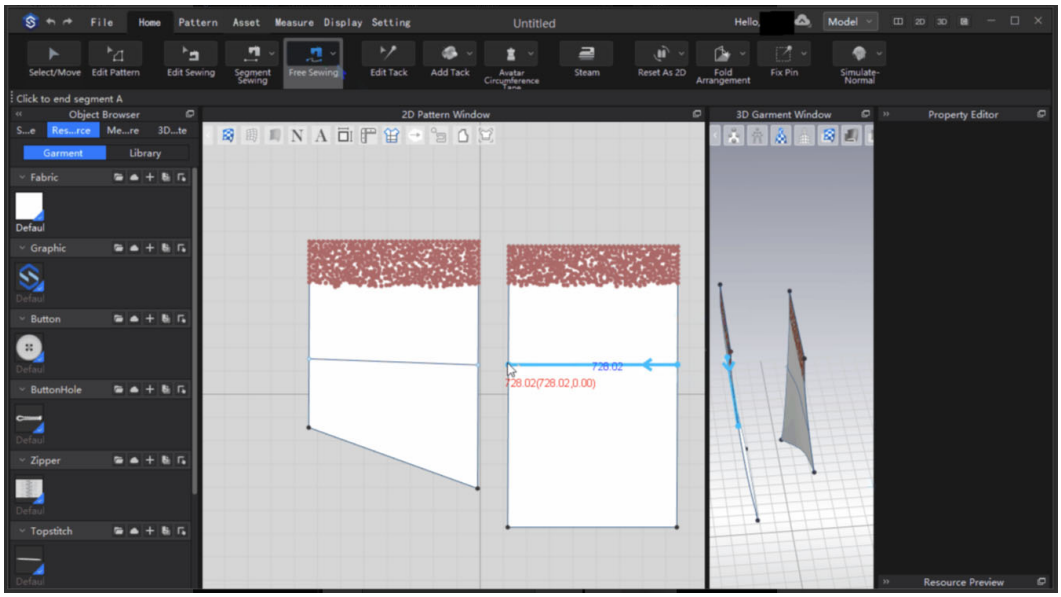


Figure 1: Illustrating "Free Sewing" Mode and a "first selected segment"

80. Style3D satisfies limitation 1[b] because Style3D may set a second selected segment. The second segment is on the trapezoid-shaped segment on the left side of the 2D image below:

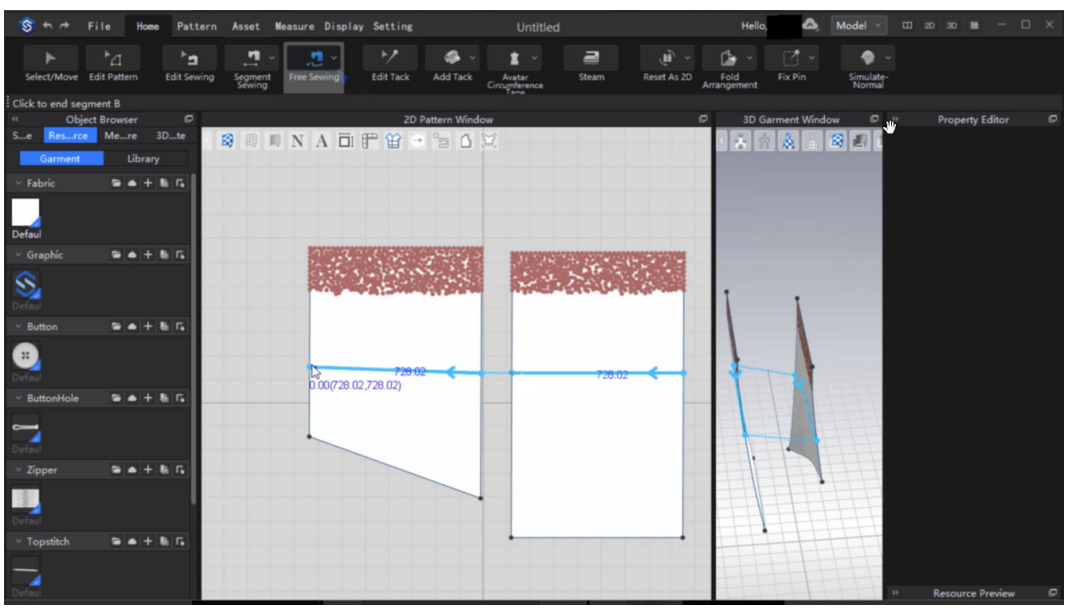


Figure 2: Illustrating "Free Sewing" Mode and a "second selected segment"

81. Style3D satisfies limitation 1[b.1]. In "Free Sewing" mode, Style3D inputs a starting point of the second selected segment on the second segment on the left side pattern (the

trapezoid), which is to be sewn to the first selected segment on the right side pattern (the rectangle):

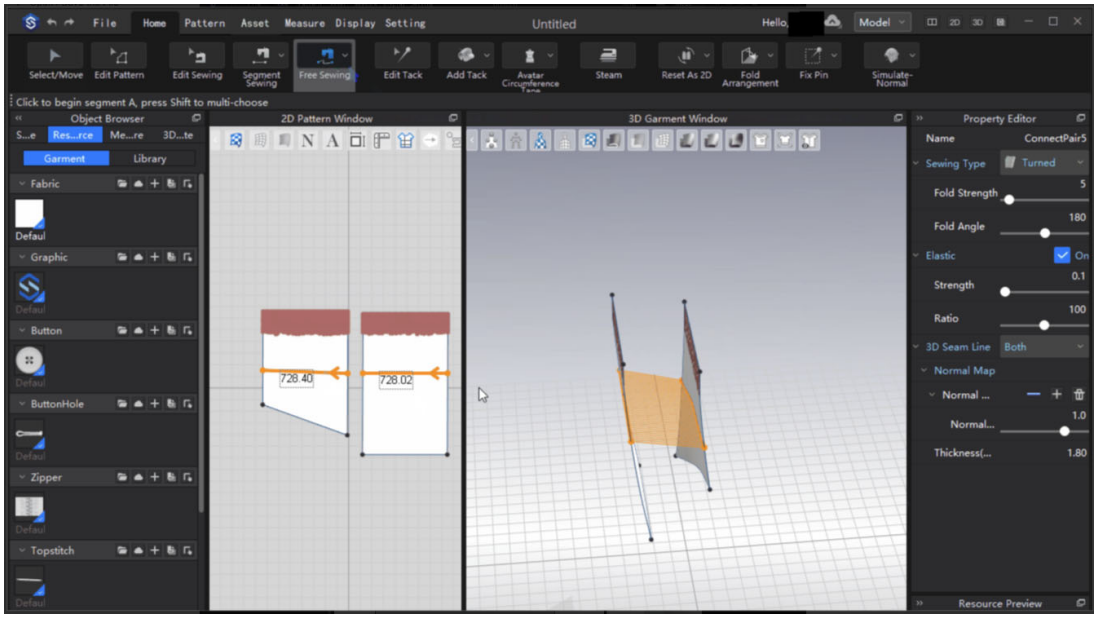


Figure 3: Illustrating "Free Sewing" Mode and the first and second selected segments

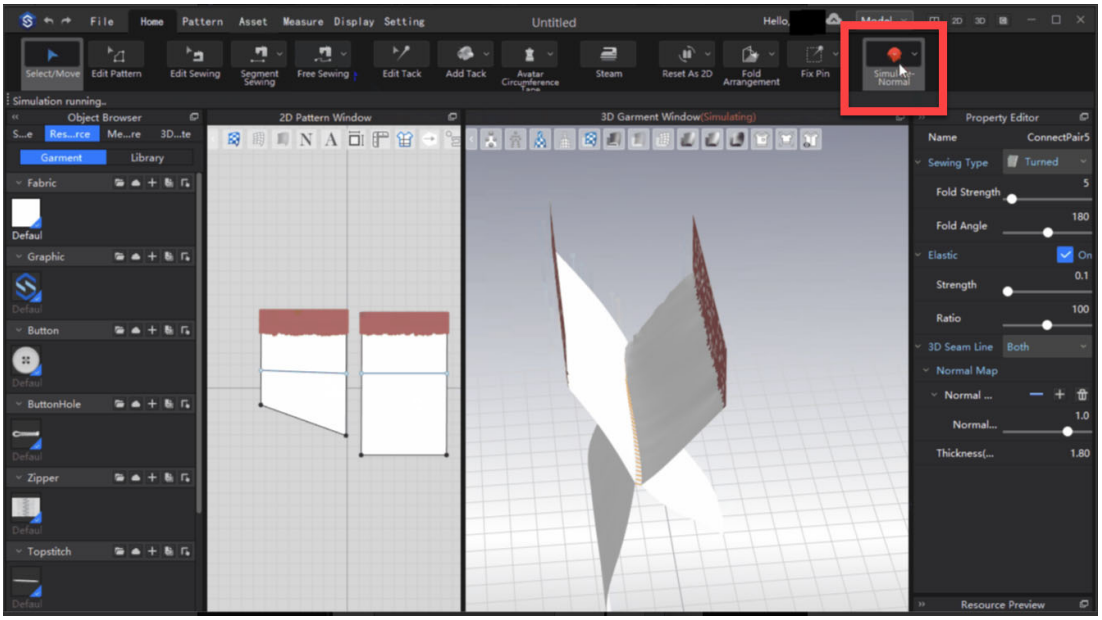


Figure 4: Illustrating sewing together the first and second selected segments

82. Style3D satisfies limitation 1[c]. In "Free Sewing" mode, Style3D detects a current cursor position. For example, as shown in the image below, Style3D detects the current

cursor position and tracks that current cursor position with a blue dot, line, or outline of the figure the cursor is hovering over.

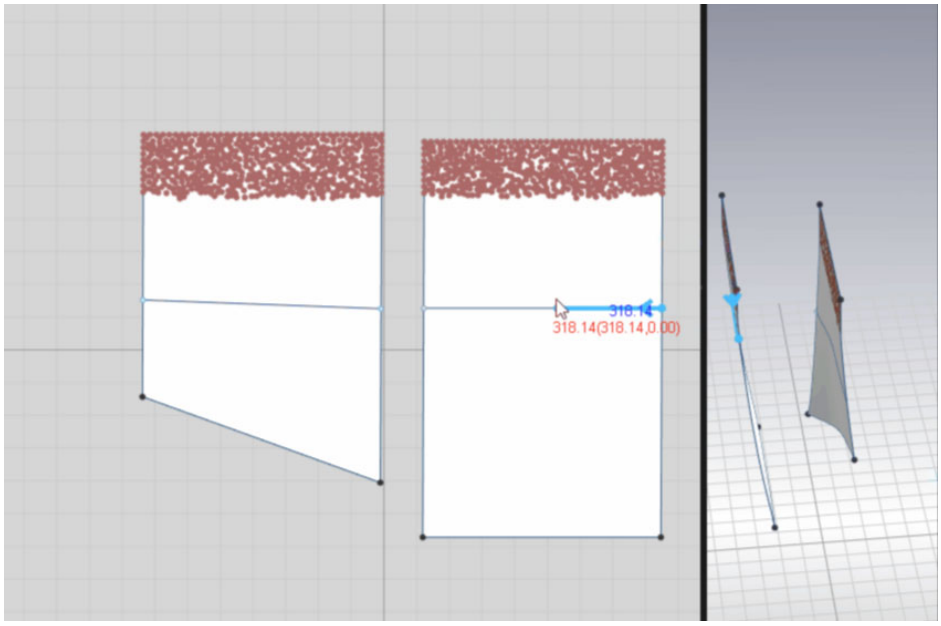


Figure 5: Illustrating tracing the cursor position with a blue line

83. Style3D satisfies limitation 1[d]. In "Free Sewing" mode, Style3D displays a point on the second segment as a candidate ending point of the second selected segment to make a length of the second selected segment substantially equal to a length of the first selected segment. For example, Style3D displays a candidate ending point (identified with a blue dot) to make the length of the second selected segment substantially equal to a length of the first selected segment, which is shown by the difference between the lengths of the first and second selected segments displayed as "0.00" at that candidate ending point:

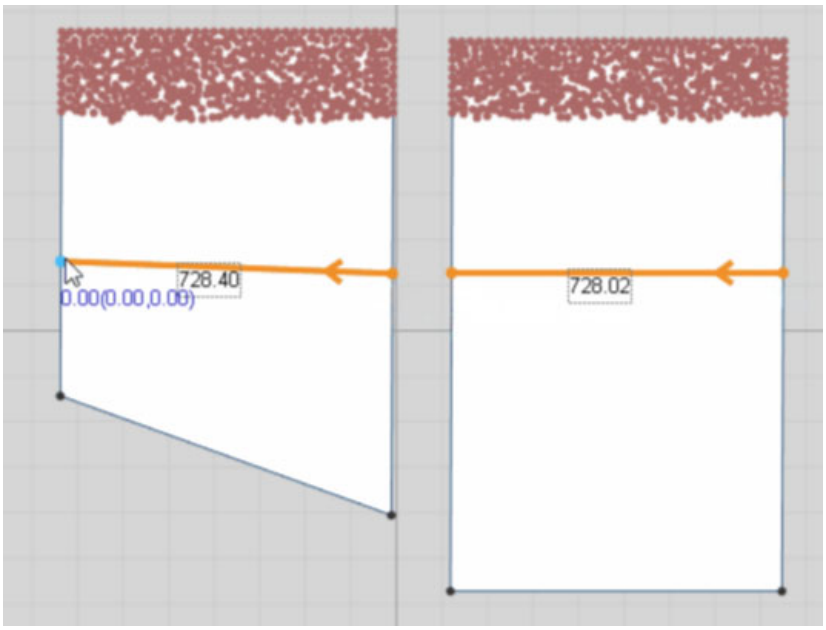


Figure 6: Illustrating identifying a candidate end point on the second segment

84. Style3D satisfies limitation 1[e]. In "Free Sewing" mode, Style3D connects the starting point to a present point on the second selected segment closest in distance to the current cursor position to form a line based on a difference between the current cursor position and the present point being less than a first reference value. For example, on information and belief and as shown above in Figure 6, in Style3D causes the second line segment to snap to the candidate end point based upon a calculation performed by Style3D and action by the user.

85. Style3D satisfies limitation 1[f]. In "Free Sewing" mode, Style3D moves the present point to the candidate ending point, in response to the difference between the present point and the candidate ending point being less than a second reference value. For example, on information and belief and as shown above in Figure 6, the blue dot snaps to the candidate end point based upon the difference between the present point and the candidate ending point being less than a second reference value.

86. Style3D meets limitation 1[g]. In "Free Sewing" mode, as shown above in Figure 5, Style3D displays a difference value between the length of the first selected segment and a

length of the line. Style3D displays the difference value between the length of the first selected segment and a length of the line, in the format N.NN (XX.XX, YY.YY), where XX.XX is the length of the first selected segment, YY.YY is the length of the second selected segment, and N.NN is XX.XX – YY.YY.

87. Style3D meets limitation 1[h]. In "Free Sewing" mode, Style3D selects the present point as an ending point of the second selected segment, in response to a user input. For example, when the user makes a mouse click, Style3D selects that present point of the cursor as the ending point of the second selected segment, and shows that selection by displaying the line in orange.

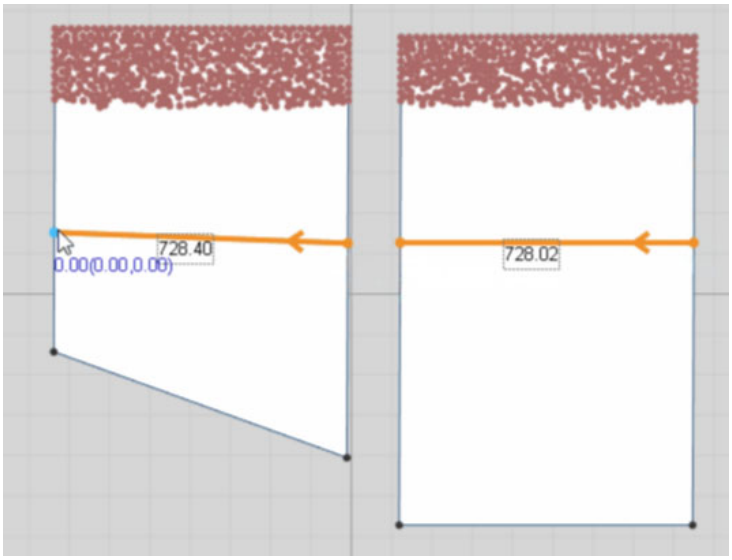


Figure 7: Illustrating selecting the ending point of the second selected segment

88. Style3D meets limitation 1[i]. In "Free Sewing" mode, Style3D sets as the second selected segment a section of the second segment between the starting point and the ending point. As shown above, when the user selects the end point of the trapezoid, Style3D sets as the second selected segment the line between the starting point and the end point, and shows that second segment in orange.

89. Defendant Linctex indirectly infringes one or more claims of the ’773 patent within the United States by inducement under 35 U.S.C. § 271(b). For example, since learning of its infringement of the ’773 patent and failing to cease offering Style3D, Linctex has knowingly and intentionally induced Style3D users to directly infringe at least claim 1 of the ’773 patent by, *inter alia,* (1) providing instructions or information, for example on public available websites (https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1285), to explain how to use Style3D in an infringing manner, including the use of Style3D in the manner described in the foregoing paragraphs, and (2) promoting these infringing uses of Style3D in advertisements including, but not limited to, those on their website.

90. Defendant Linctex indirectly infringes the ’773 patent by contributing to the direct infringement of users under 35 U.S.C. § 271(c). For example, since learning of its infringement of the ’773 patent, Linctex has continued to contribute to the direct infringement of users by providing Style3D program, which, as evidenced by Linctex’s websites and advertisements (https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1285), is especially made for use in a manner infringing one or more claims of the ’773 patent as described herein and has no substantial non-infringing uses.

91. CLO has been and continues to be injured by Defendant Linctex’s infringement of the ’773 patent. CLO is entitled to recover damages adequate to compensate it for Defendant Linctex’s infringing activities in an amount to be determined at trial but in no event less than a reasonable royalty.

92. Unless enjoined by this Court, Defendant Linctex’s acts of infringement will continue to damage CLO irreparably.

93. On information and belief, defendant Linctex has been aware of the ’773 patent and CLO’s infringement allegations since June 7, 2023, when CLO sent Linctex’s CEO and

U.S.-based attorney a letter via email specifically identifying the ’773 patent. CLO sent the same letter via FedEx to Linctex’s headquarters in Hangzhou, China. On June 13, 2023 Linctex refused to accept delivery of the shipment, but on June 14, 2023 Linctex accepted delivery of the letter. CLO also sent a letter to Linctex’s chief science officer, which was delivered June 13, 2023. On information and belief, Defendant Linctex’s infringement of the ’773 patent has been willful and deliberate since June 7, 2023 and no later than June 13, 2023.

94. Linctex is therefore entitled to increased damages under 35 U.S.C. § 284 and attorneys’ fees and costs under 35 U.S.C. § 285.

COUNT II – INFRINGEMENT OF THE ’355 PATENT

95. CLO realleges and incorporates by reference each and every allegation contained in the paragraphs above as if fully set forth herein.

96. CLO is the assignee of the ’355 patent.

97. The ’355 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

98. The ’355 patent issued from U.S. Patent Application No. 16/925,878.

99. Linctex directly infringes at least exemplary claim 1 of the ’355 patent by, without authority, making, using, importing, selling, or offering to sell Style3D in the United States, in violation of 35 U.S.C. § 271(a). For example, claim 1 of the ’355 patent recites:

> [preamble] 1. A method of creating digital clothing executable by a computing device storing digital clothing patterns for draping simulation, the method comprising:
>
> [a] setting a first selected segment to be sewn on a first segment on a pattern; and
>
> [b] setting a second selected segment comprising:

[b.1] setting a starting point of the second selected segment on a second segment wherein the second selected segment is sewn to the first selected segment,

[b.2] determining a present point on the second segment based on a current cursor position,

[b.3] moving the present point to a candidate ending point on the second segment, in response to the difference between the present point and the candidate ending point being less than a reference value, wherein the candidate ending point is determined to make a second length of the second selected segment substantially equal to a first length of the first selected segment,

[b.4] selecting the present point as an ending point of the second selected segment, in response to a user input, and

[b.5] setting as the second selected segment, a section of the second segment between the starting point and the ending point,

[b.6] wherein, when the second length is substantially equal to the first length, at least one of the first length, the second length and a difference value between the first length and the second length is displayed in a first color, and

[b.7] wherein, when the second length is substantially different from the first length, at least one of the first length, the second length and the difference value is displayed in a second color, the second color being different from the first color.

100. To the extent the preamble is found to be limiting, Style3D satisfies the preamble of claim 1. Style3D is computer software for creating digital clothing using patterns and draped digital clothing stored on a computer and is used by individuals who have downloaded and installed the Style3D software from the Style3D website. *See, e.g.*, https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1200; https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1199; https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1202.

101. Style3D satisfies limitation 1[a]. Style3D sets a first selected segment to be sewn on the first segment on a pattern. For example, in the image below, which is taken from the

video demonstrating Style3D's "Free Sewing" mode available at https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1285, Style3D sets a first selected segment when the user selects the segment to be sewn on the rectangle-shaped fabric segment on the right side of the 2D image:

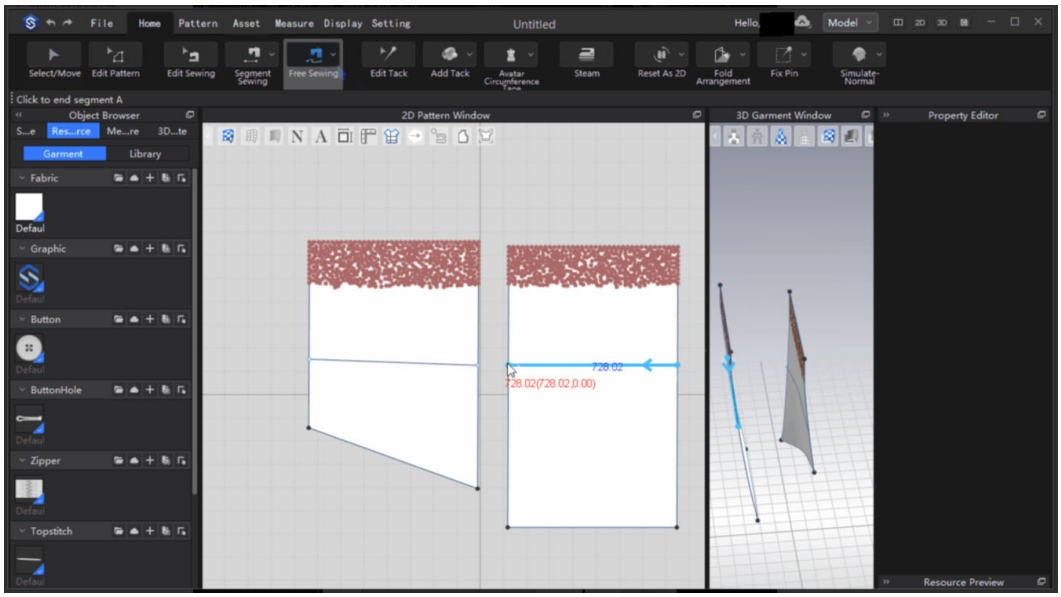


Figure 8: Illustrating "Free Sewing" Mode and a "first selected segment"

102. Style3D satisfies limitation 1[b]. Style3D sets a second selected segment. The second segment is the segment on the trapezoid-shaped fabric segment displayed on the left side of the 2D image below:

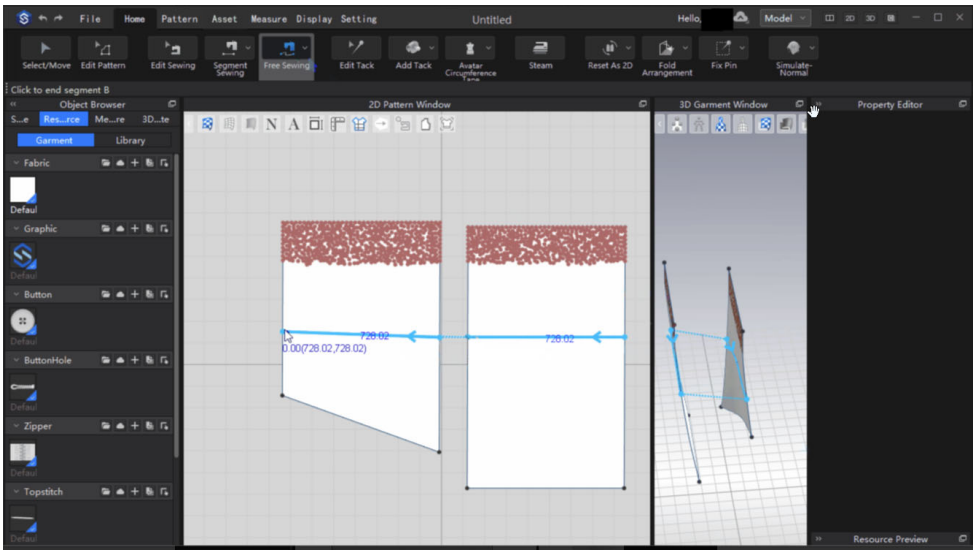


Figure 9: Illustrating "Free Sewing" Mode and a "second selected segment"

103. Style3D satisfies limitation 1[b.1]. In "Free Sewing" mode, Style3D inputs a starting point of the second selected segment on the second segment on the second pattern (the trapezoid), which is to be sewn to the first selected segment on the first pattern (the rectangle):

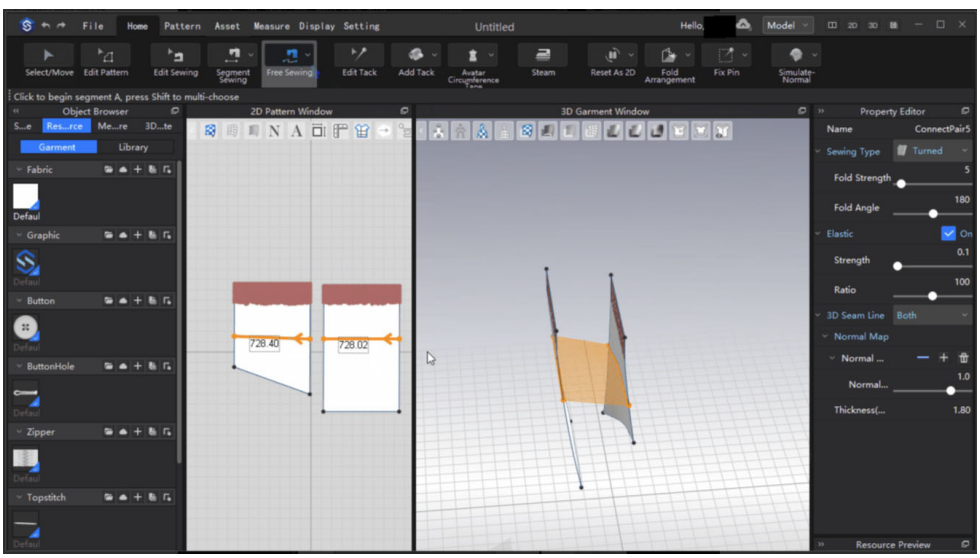


Figure 10: Illustrating "Free Sewing" Mode and the first and second selected segments

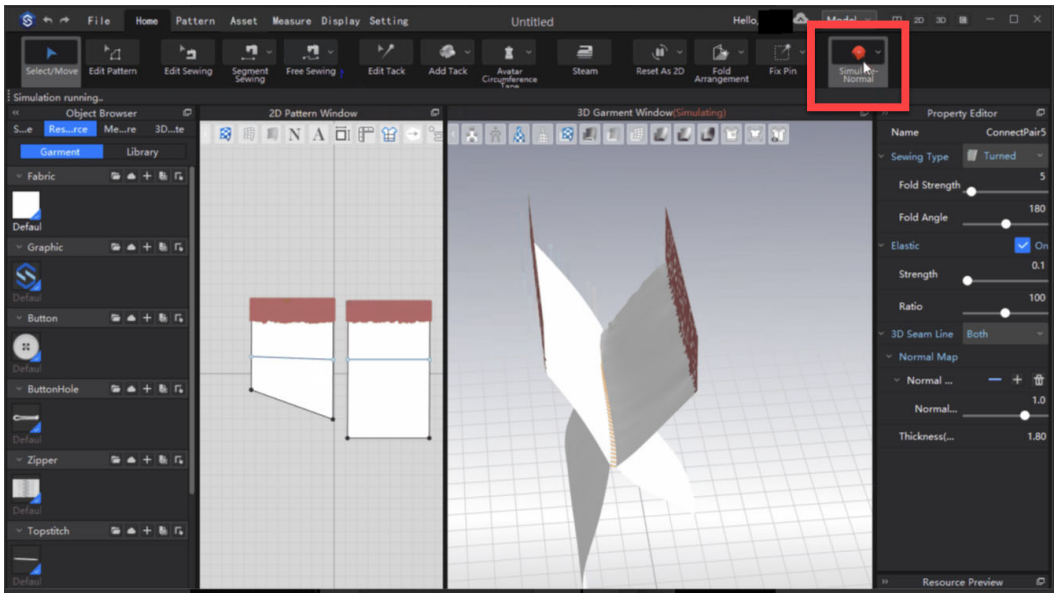


Figure 11: Illustrating sewing together the first and second selected segments

104. Style3D satisfies limitation 1[b.2]. In "Free Sewing" mode, Style3D determines a present point on the second segment based on the current cursor position. For example, as shown in the image below, Style3D detects the current cursor position, which is demonstrated by tracking that current cursor position with a blue dot on the second segment on the trapezoid-shaped pattern:

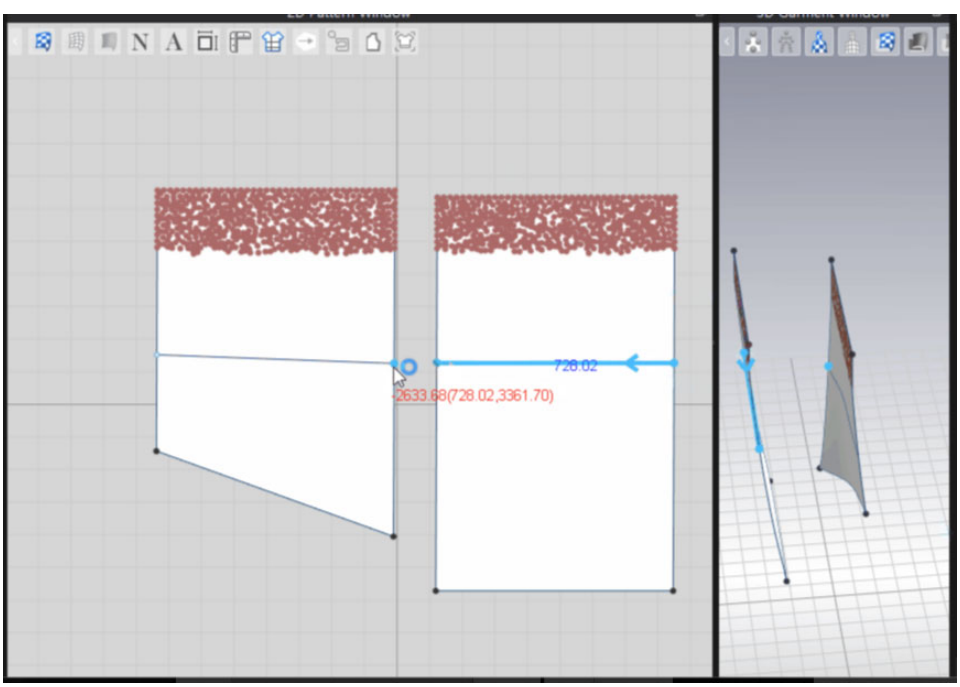


Figure 12: Illustrating showing the cursor position with a blue dot

105. Style3D satisfies limitation 1[b.3]. In "Free Sewing" mode, Style3D moves the present point to a candidate ending point on the second segment, in response to the difference between the present point and the candidate ending point being less than a reference value, wherein the candidate ending point is determined to make a second length of the second selected segment substantially equal to a first length of the first selected segment. For example, Style3D displays a candidate ending point (identified by a blue dot) to make the length of the second selected segment substantially equal to a length of the first selected segment, which is shown by the difference between the lengths of the first and second selected segments displayed as "0.00" at that candidate ending point:

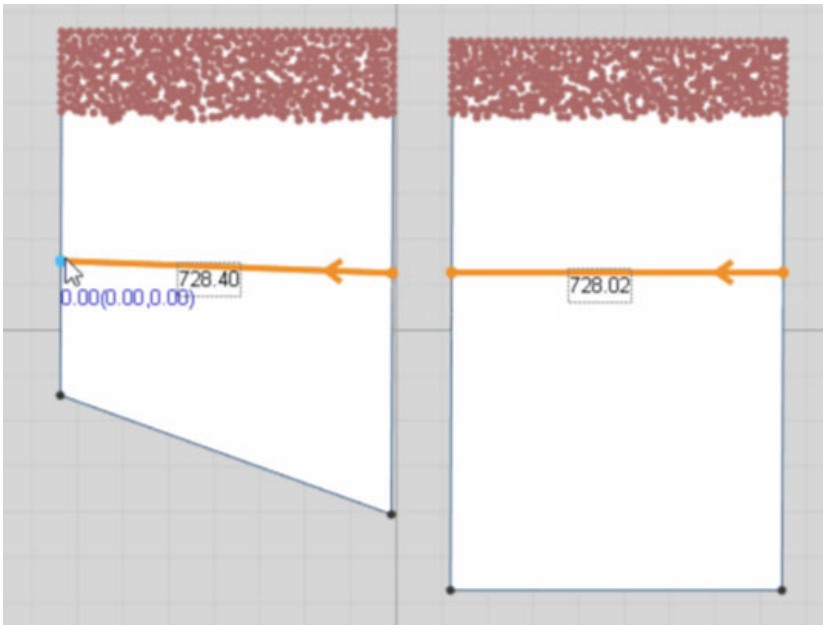


Figure 13: Illustrating identifying a candidate end point on the second segment

See also https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1285 ("When you click on the end point of the second segment, an equidistant cue point will appear for the absorption that starts on a click.")

106. Style3D satisfies limitation 1[b.4]. In "Free Sewing" mode, Style3D selects the present point as the ending point of the second selected segment, in response to a user input. For example, when the user makes a mouse click, Style3D selects that present point of the cursor as the ending point of the second selected segment, and shows that selection by displaying the line in orange.

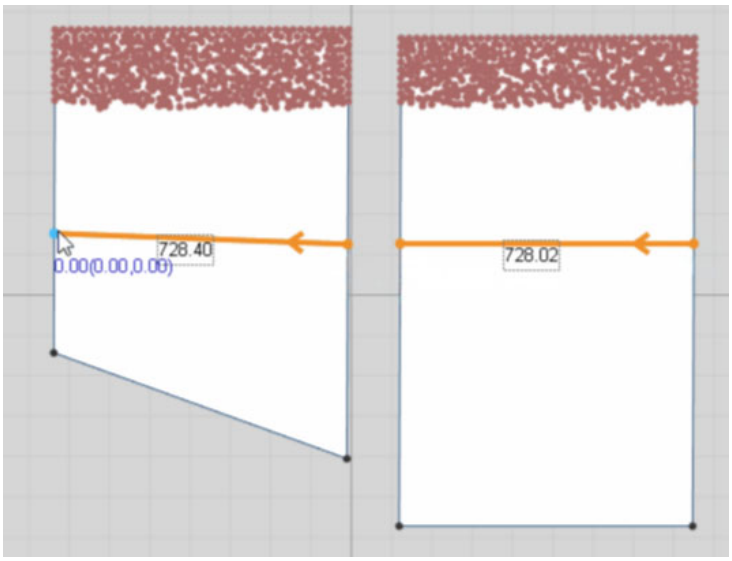


Figure 14: Illustrating selecting the ending point of the second selected segment

107. Style3D satisfies limitation 1[b.5]. In "Free Sewing" mode, Style3D sets, as the second selected segment, a section of the second segment between the starting point and the ending point. As shown above in Figure 13, when the user selects the end point of the trapezoid, Style3D sets as the second selected segment the line between the starting point and the end point, and shows that second segment in orange.

108. Style3D satisfies limitation 1[b.6]. In "Free Sewing" mode, Style3D displays a difference value between the length of the first selected segment and a length of the line. Style3D displays the difference value between the length of the first selected segment and a length of the line, in the format N.NN (XX.XX, YY.YY), where XX.XX is the length of the first selected segment, YY.YY is the length of the second selected segment, and N.NN is XX.XX –

YY.YY. Moreover, Style3D displays the difference value between the length of the first selected segment and a length of the line, in the format N.NN (XX.XX, YY.YY) in red ("the warning sign") when the difference is greater than a reference, and changes that color to blue when the when the difference is less than the reference. Style3D also changes the difference value itself as the difference changes.

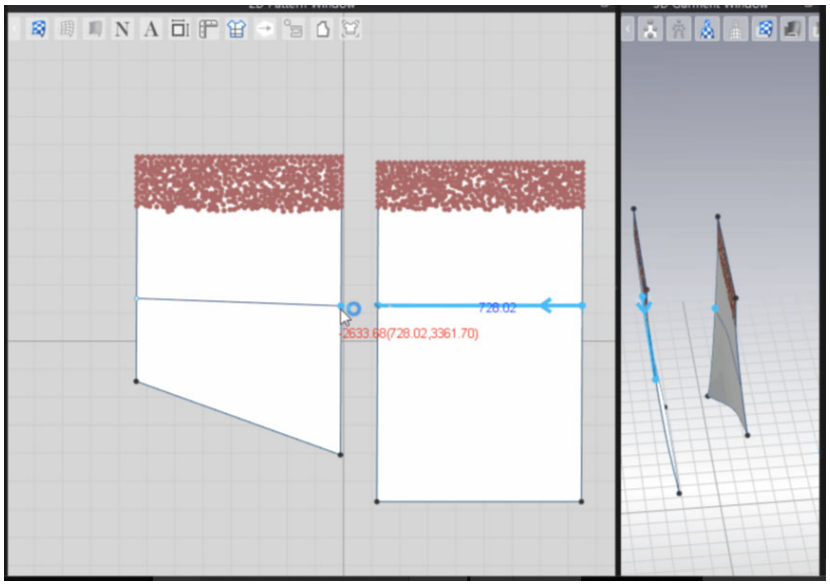


Figure 15: Illustrating how Style3D displays a difference value in red when the length of the line is less than the first selected segment

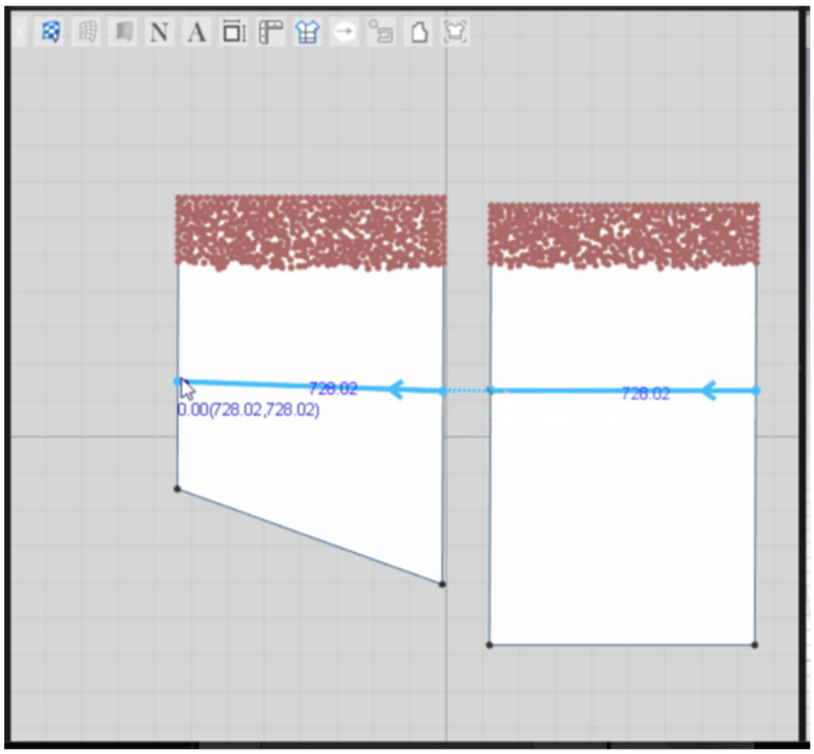


Figure 16: Illustrating how Style3D displays a difference value in blue when the length of the line is equal to the first selected segment

109. Style3D satisfies limitation 1[b.7]. As show above in Figures 14 and 15, Style3D displays a difference value between the length of the first selected segment and a length of the line. Style3D displays the difference value between the length of the first selected segment and a length of the line, in the format N.NN (XX.XX, YY.YY), where XX.XX is the length of the first selected segment, YY.YY is the length of the second selected segment, and N.NN is XX.XX – YY.YY. Moreover, Style3D displays the difference value between the length of the first selected segment and a length of the line, in the format N.NN (XX.XX, YY.YY) in red ("the warning sign") when the difference is greater than a reference, and changes that color to blue when the when the difference is less than the reference. Style3D also changes the difference value itself as the difference changes.

110. Defendant Linctex indirectly infringes one or more claims of the ’355 patent within the United States by inducement under 35 U.S.C. § 271(b). For example, since learning of the ’355 patent and failing to cease offering Style3D, Linctex has knowingly and intentionally induced Style3D users to directly infringe at least claim 1 of the ’355 patent by, *inter alia,* (1) providing instructions or information, for example on public available websites (https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1285), to explain how to use Style3D in an infringing manner, including the use of Style3D in the manner described in the foregoing paragraphs, and (2) promoting these infringing uses of Style3D in advertisements including, but not limited to, those on their website.

111. Defendant Linctex indirectly infringes the’355 patent by contributing to the direct infringement of users under 35 U.S.C. § 271(c) by providing Style3D program, which, as evidenced by Linctex’s websites and advertisements (https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1285), is especially made for use in a manner infringing one or more claims of the ’355 patent as described herein and has no substantial non-infringing uses.

112. CLO has been and continues to be injured by Defendant Linctex’s infringement of the ’355 patent. CLO is entitled to recover damages adequate to compensate it for Defendant Linctex’s infringing activities in an amount to be determined at trial but in no event less than a reasonable royalty.

113. Unless enjoined by this Court, Defendant Linctex’s acts of infringement will continue to damage CLO irreparably.

114. On information and belief, defendant Linctex has been aware of the ’355 patent and CLO’s infringement allegations since at least June 7, 2023, when CLO sent Linctex’s CEO and U.S.-based attorney a letter via email specifically identifying the ’355 patent. CLO sent the

same letter via FedEx to Linctex's headquarters in Hangzhou, China. On June 13, 2023 Linctex refused to accept delivery of the shipment, but on June 14, 2023 Linctex accepted delivery of the letter. CLO also sent a letter to Linctex's chief science officer, which was delivered June 13, 2023. On information and belief, Defendant Linctex's infringement of the '355 patent has been willful and deliberate since June 7, 2023 and no later than June 13, 2023.

115. Linctex is therefore entitled to increased damages under 35 U.S.C. § 284 and attorneys' fees and costs under 35 U.S.C. § 285.

COUNT III – INFRINGEMENT OF THE '448 PATENT

116. CLO realleges and incorporates by reference each and every allegation contained in the paragraphs above as if fully set forth herein.

117. CLO is the assignee of the '448 patent.

118. The '448 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

119. The '448 patent issued from U.S. Patent Application No. 17/027,426.

120. Linctex directly infringes at least exemplary claim 1 of the '448 patent by, without authority, making, using, importing, selling, or offering to sell Style3D in the United States, in violation of 35 U.S.C. § 271(a). For example, claim 1 of the '44 patent recites:

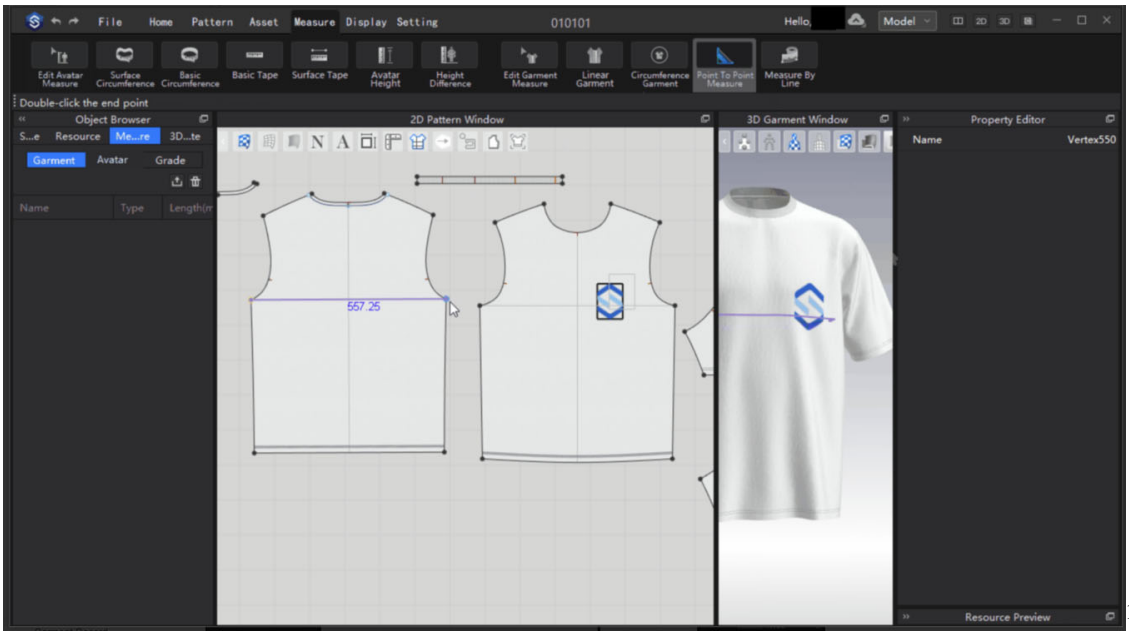
> [preamble] 1. A method of taking a measurement of a two-dimensional (2D) pattern, comprising:
>
> [a] receiving a plurality of points in a space in which a 2D pattern of clothing is displayed;
>
> [b] determining attributes of areas in which the points are located, wherein the attributes indicate at least whether the points are located in a same pattern piece of the clothing or different pattern pieces of the clothing;
>
> [c] determining a length of a line segment using the points based on the determined attributes of the areas, the determined length of the line segment changed to account for separation between the pattern pieces

responsive to determining that the points are located in different pattern pieces; and

[d] outputting the length of the line segment.

121. To the extent the preamble is found to be limiting, Style3D satisfies the preamble of claim 1. Style3D is computer software for creating and designing digital clothing. Its Point-to-Point measure function takes measurements of 2D patterns. *See, e.g.*, https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1306 ("This function can be used for both 2D and 3D scenes to select points; click in turn to determine the start and end points of multiple segments, and then double-click to end."); https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1304.

122. Style3D satisfies limitation 1[a]. Style3D receives a plurality of points in a space in which a 2D pattern of clothing is displayed. For example, as shown below, the Point to Point Measure functionality of Style3D permits the selection of a start and end point on the 2D image of the shirt shown in the user interface:



[11]

Figure 17: Illustrating a line measurement using Point to Point Measure

123. Style3D satisfies limitation 1[b]. Style3D determines attributes of areas in which the points are located, wherein the attributes indicate at least whether the points are located in a same pattern piece of the clothing or different pattern pieces of the clothing. For example, as shown below, if the Point to Point Measure feature is being used with two digital pattern pieces of a garment within the user interface, Style3D permits the user to select points for measurement in each 2D pattern piece and then uses the combined measurement of those different 2D pattern pieces to determine the measurement of the 3D garment (shown on the right). Thus, Style3D determines and recognizes attributes of each digital 2D pattern piece at least comprising that each pattern piece is a 2D pattern piece and that each pattern piece is a separate piece used in the same 3D garment.

[11] https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1306

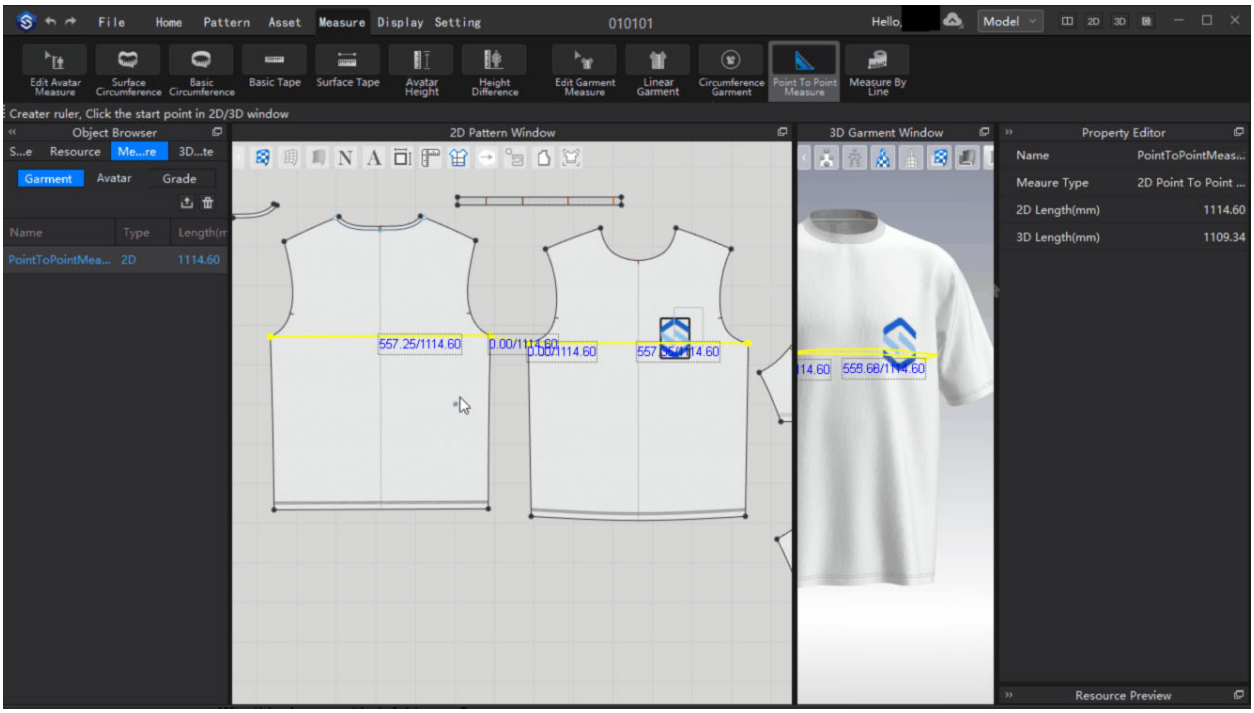
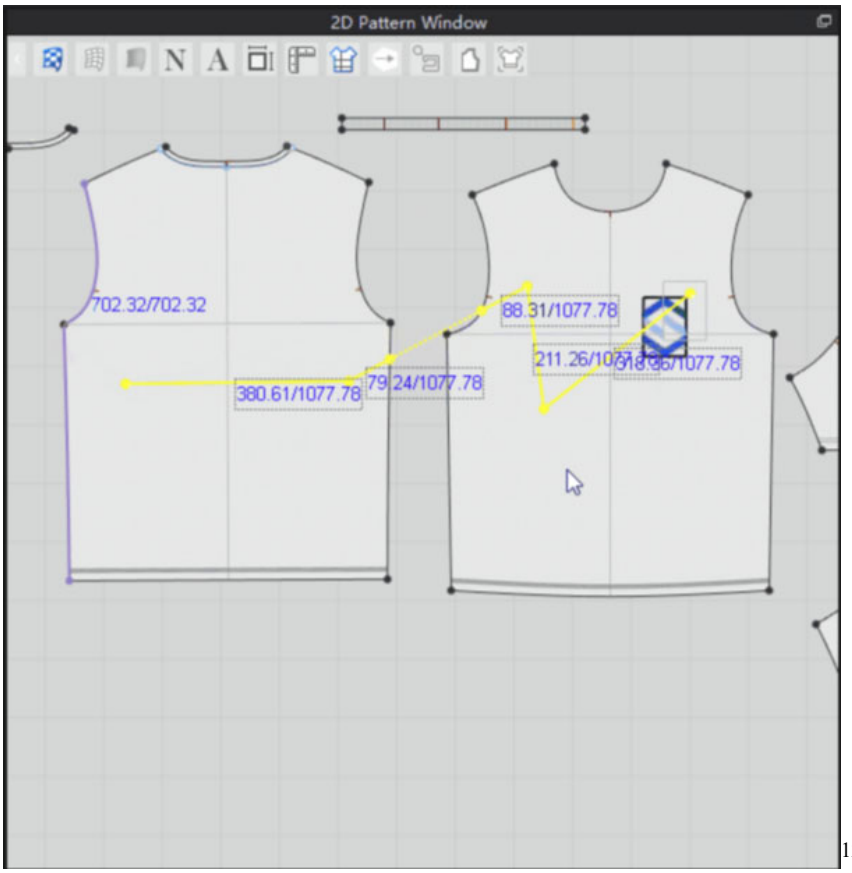


Figure 18: Illustrating measuring two 2D line segments in Point to Point Measure and their corresponding measurement in a 3D garment

124. Style3D satisfies limitation 1[c]. Style3D changes the measurement value of a segment from a longer length to a shorter length if the starting ending points are in different pattern pieces. As shown below, to account for the separation between the pattern pieces when the starting and ending points are located in different pattern pieces, the measurement of the line across the two pieces is limited to only the segments traversing the pattern pieces:



[12]

Figure 19: Illustrating measuring a line segment between two 2D pattern pieces taking into account the empty space between the two pieces

125. Style3D satisfies limitation 1[d]. As shown above in Figure 17, Style3D determines and outputs the length of the line segment across the two pattern pieces.

126. Defendant Linctex indirectly infringes one or more claims of the ’448 patent within the United States by inducement under 35 U.S.C. § 271(b). For example, since learning of the ’448 patent and failing to cease offering Style3D, Linctex has knowingly and intentionally induced Style3D users to directly infringe at least claim 1 of the ’448 patent by, *inter alia,* (1) providing instructions or information, for example on public available websites (https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1285), to explain how to use

[12] https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1304

Style3D in an infringing manner, including the use of Style3D in the manner described in the foregoing paragraphs, and (2) promoting these infringing uses of Style3D in advertisements including, but not limited to, those on their website.

127. Defendant Linctex indirectly infringes the ’448 patent by contributing to the direct infringement of users under 35 U.S.C. § 271(c) by providing Style3D program, which, as evidenced by Linctex’s websites and advertisements (https://www.style3d.com/public/helper/detail/grid/style3dsoftware/1285), is especially made for use in a manner infringing one or more claims of the ’448 patent as described herein and has no substantial non-infringing uses.

128. CLO has been and continues to be injured by Defendant Linctex’s infringement of the ’448 patent. CLO is entitled to recover damages adequate to compensate it for Defendant Linctex’s infringing activities in an amount to be determined at trial but in no event less than a reasonable royalty.

129. Unless enjoined by this Court, Defendant Linctex’s acts of infringement will continue to damage CLO irreparably.

130. On information and belief, defendant Linctex has been aware of the ’448 patent and CLO’s infringement allegations since at least June 7, 2023, when CLO sent Linctex’s CEO and U.S.-based attorney a letter via email specifically identifying the ’448 patent. CLO sent the same letter via FedEx to Linctex’s headquarters in Hangzhou, China. On June 13, 2023 Linctex refused to accept delivery of the shipment, but on June 14, 2023 Linctex accepted delivery of the letter. CLO also sent a letter to Linctex’s chief science officer, which was delivered June 13, 2023. On information and belief, Defendant Linctex’s infringement of the ’448 patent has been willful and deliberate since at least June 7, 2023 and no later than June 13, 2023.

131. Linctex is therefore entitled to increased damages under 35 U.S.C. § 284 and attorneys' fees and costs under 35 U.S.C. § 285.

PRAYER FOR RELIEF

WHEREFORE, CLO prays for the following relief:

1. A judgment that Linctex has infringed, and willfully infringed, the '773 patent, the '355 patent, and the '448 patent;

2. An order permanently enjoining and restraining Linctex, its officers, directors, agents, servants, employees, licensees, attorneys, successors, assigns, parents, subsidiaries, affiliated or related companies, and all other persons acting under or through them, directly or indirectly, from infringing the '773 patent, the '355 patent, and the '448 patent;

3. A judgment and order requiring that Linctex pay damages, enhanced damages, and costs to CLO under 35 U.S.C. § 284, with prejudgment and post-judgment interest;

4. A judgment and order finding this an exceptional case and directing Linctex to pay all costs and attorneys' fees as provided by 35 U.S.C. § 285, with prejudgment interest; and

5. Such other and further relief as the Court may deem just and equitable.

JURY TRIAL DEMANDED

CLO hereby demands a trial by jury of all issues so triable.

Dated: June 14, 2023

Respectfully submitted,

/s/ Michael J. Sacksteder

Michael J. Sacksteder (Admitted E.D. Texas)
FENWICK & WEST LLP
555 California Street, 12th Floor
San Francisco, California 94104
Telephone: 415.875.2300
Facsimile: 415.281.1350
Email: msacksteder@fenwick.com

Jae Won Song (Admitted E.D. Texas)
FENWICK & WEST LLP
801 California Street
Mountain View, California 94041
Telephone: 650.335.7164
Facsimile: 650.938.5200
Email: jsong@fenwick.com

Geoffrey R. Miller
(Texas State Bar No. 24094847)
FENWICK & WEST LLP
902 Broadway, Suite 14
New York, NY 10010
Telephone: 212.430.2600
Facsimile: 650.938.5200
Email: gmiller@fenwick.com

Attorneys for Plaintiff
CLO Virtual Fashion Inc.