

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

FLATFROG LABORATORIES AB,

Plaintiff,

vs.

PROMETHEAN LTD. AND
PROMETHEAN INC.,

Defendants.

C.A. No. 1:19-cv-02246-MN

DEFENDANTS' INITIAL INVALIDITY CONTENTIONS

Pursuant to the Scheduling Order dated December 15, 2020 (D.I. 69), Defendant Promethean Limited and Defendant Promethean Inc. (“Defendants”) respectfully submit the following Initial Invalidity Contentions.

I. PRELIMINARY STATEMENTS AND RESERVATIONS

Plaintiff FlatFrog Laboratories AB (“Plaintiff”) asserts that Defendants have infringed claims 1-12 and 14 of U.S. Patent No. 10,775,935 (“the ‘935 Patent”) under 35 U.S.C. §§ 271(a), (b), and/or (g) by using, selling, offering to sell, and/or importing the ActivPanel 7 Titanium and ActivPanel 7 Nickel products (“‘935 Accused Products”) and by “intentionally taking action that has actually induced and continues to induce direct infringement of the ‘935 Patent by Promethean Partners and/or distributors.” Initial Infringement Contentions, at p. 3. Plaintiff also asserts that Defendants have infringed claims 1-5 and 9¹ of U.S. Patent No. 10,739,916 (“the ‘916 Patent”)

¹ Plaintiff’s Initial Infringement Contentions, at page 5, indicate that Plaintiff asserts that Defendants have infringed Claim 8 of the ‘916 Patent. However, Plaintiff does not include any disclosure of a basis for that allegation within the body of the Initial Infringement Contentions or the exhibits thereto. Thus, Plaintiff’s Initial Infringement Contentions are insufficient with regard to Claim 8 of the ‘916 Patent, and Defendants therefore proceed herein only with regard to Claims 1-5 and 9 of the ‘916 Patent as being asserted by Plaintiff in this matter. Defendants reserve the right to fully defend any and all allegations that may be made in this matter regarding Claim 8 of the ‘916 Patent.

under 35 U.S.C. §§ 271(a) and/or (b) by using, selling, offering to sell, and/or importing the ActivPanel 7 Titanium product (“‘916 Accused Products”) and by “intentionally taking action that has actually induced and continues to induce direct infringement of the ‘935 Patent by Promethean Partners and/or distributors.” *Id.* at p. 5. Defendants will refer herein to claims 1-12 and 14 of the ‘935 Patent as the “‘935 Asserted Claims” and to claims 1-5 and 9 of the ‘916 Patent as the “‘916 Asserted Claims.” Defendants expressly limit these Invalidity Contentions to response to Plaintiff’s assertions of the ‘935 Asserted Claims and the ‘916 Asserted Claims in Plaintiff’s Initial Infringement Contentions dated March 12, 2021.

These Initial Invalidity Contentions are based on Defendants’ current knowledge, understanding, and belief as to the facts and information available at this time and are subject to supplementation and/or amendment as provided in the Federal Rules of Civil Procedure, and/or any Order of this Court. Defendants have not completed their investigation, collection of information, discovery, or analysis relating to non-infringement and/or invalidity, or otherwise with regard to this action, and they fully reserve the right to amend these Initial Invalidity Contentions in accordance with this Court’s Scheduling Order and Federal Rule of Civil Procedure 26(e).

Further, Defendants have not yet had the opportunity to take the depositions of the named inventors of either Asserted Patent and/or other persons having potentially relevant information. Defendants continue to investigate the prior art. It is likely that Defendants will subsequently discover additional prior art and/or information pertinent to the ‘935 and ‘916 Asserted Claims that may impact the analysis of the invalidity of one or more of the ‘935 Asserted Claims and/or the ‘916 Asserted Claims, and Defendants reserve their right to amend, supplement, and/or seek

to amend and/or supplement these Initial Invalidity Contentions after becoming aware of such additional prior art and/or information.

In accordance with the Court's Scheduling Order, Defendants also reserve the right to supplement and/or amend these contentions after the Court has construed disputed claim terms, because Defendants' contentions as to invalidity may change based upon the Court's constructions of the claims or upon positions that Plaintiff may take leading up to and after such construction. These Initial Invalidity Contentions, in some instances, necessarily rely upon Plaintiff's proposed (or implied) claim constructions, with which Defendants may disagree and which Defendants believe the Court may not sustain. Accordingly, while Defendants do not believe Plaintiff's positions reflect proper construction of the claims, Defendants assert certain prior art in these Initial Invalidity Contentions based on Plaintiff's adopted constructions. Nothing contained in these Initial Invalidity Contentions, therefore, should be understood or deemed to be an express or implied admission or contention with respect to the proper construction or scope of any term in the '935 and '916 Asserted Claims, nor should anything in these Initial Invalidity Contentions be understood to endorse Plaintiff's apparent claim construction(s) or Plaintiff's proposed scope of the '935 and '916 Asserted Claims, to the extent discernable.

In the invalidity claim charts attached hereto, Defendants have identified structure in specific portions of certain prior art references that disclose certain limitations of the '935 Asserted Claims and the '916 Asserted Claims. Within any such prior art reference, however, Defendants do not necessarily specify every occurrence in the reference of a given cited structure. Accordingly, Defendants reserve the right to refer to or rely upon any reference cited herein to the fullest extent of that reference.

Defendants note that persons of ordinary skill in the art generally read a prior art reference as a whole, in the context of other publications and literature, and in light of their own scientific or engineering knowledge. Defendants, therefore, reserve the right to rely upon other publications and expert testimony as to the knowledge of a person of ordinary skill, for example, to provide such context and to aid understanding and interpretation of the identified prior art references. Where appropriate, Defendants also reserve the right to rely on other publications and the testimony of experts to establish that a person of ordinary skill in the art would have been motivated to modify or combine certain of the cited references so as to render the ‘935 Asserted Claims and/or the ‘916 Asserted Claims obvious.

II. INVALIDITY BASED ON PRIOR ART

A. The ‘935 Patent

1. Identification of Prior Art

Defendants identify below prior art that anticipates, renders obvious, and/or otherwise evidences the invalidity of each ‘935 Asserted Claim. Defendants may also rely on this identified prior art to illustrate the level of ordinary skill in the art and the background knowledge and common sense of those of ordinary skill in the art at or about the time of the alleged invention in the ‘935 Patent. In addition, Defendants may rely on the file histories and family members of all prior art patents and published patent applications, and all prior art cited or disclosed in the file histories of the ‘935 Patent. Defendants also may rely on the prior art identified in connection with the ‘916 Patent below.

a. Prior Art Patent Applications, Patents, and Utility Models

Defendants hereby identify the following prior art patent applications and patents, copies of which are being served herewith, that anticipate and/or render obvious the '935 Asserted Claims under 35 U.S.C. §102 (post-AIA) and/or 35 U.S.C. § 103 (post-AIA):

Reference No.	Named Inventor(s)
U.S. Patent No. 4,751,379	Sasaki et al.
U.S. Pre-Grant Pub. No. 2019/0235701	Han et al.
U.S. Pre-Grant Pub. No. 2015/0256658	Shin et al.
U.S. Patent No. 9,291,845	Shin et al.
U.S. Pre-Grant Pub. No. 2017/0123257	Zhao
Pub. Int'l App. No. WO 2014/130515	Allan et al.
U.S. Pre-Grant Pub. No. 2016/0202841	Christiansson et al.
International App. Pub. No. WO 2014/098742	Wassvik et al.
U.S. Pre-Grant Pub. No. 2011/0080361	Miller et al.
China Pub. App. No. 104808843	Kang
U.S. Pre-Grant Pub. No. 2019/0004668	Jeong et al.
U.S. Patent No. 9,366,802	Lee et al.
U.S. Patent No. 9,207,800	Eriksson et al.
U.S. Patent No. 8,581,884	Fahraeus et al.
International App. Pub. No. WO 2006/095320	Van De Wijdeven
International App. Pub. No. WO 2016/130074	Wassvik et al.
Taiwan Utility Model No. M517370U	Lee et al.
China Published App. No. 102117155A	Cheng et al.
U.S. Pre-Grant Pub. No. 2017/0308245	Goertz
Korea Pub. App. No. 10-2015-0125374	Lee
Korea Patent No. 10-1081586	Joung
U.S. Patent No. 8,319,729	Choi et al.
International App. Pub. No. WO 2017/099657	Christiansson et al.
U.S. Pre-Grant Pub. No. 2019/0025984	Weilbacher et al.
U.S. Patent No. 9,983,626	Cao et al.
Japanese Pub. App. No. 2015-158831	Yano et al.
U.S. Pre-Grant Pub. No. 2013/0222344	Lu et al.
U.S. Patent No. 9,983,626	Cao et al.

b. Prior Art Publications

Defendants hereby identify the following prior art publications, copies of which are being produced herewith, that anticipate or render obvious the '935 Asserted Claims under 35 U.S.C. §102 and/or 35 U.S.C. § 103:

1. European Standard EN 12150-1:2000, entitled “Glass in Building—Thermally Toughened Soda Lime Silicate Safety Glass,” published August 15, 2000; and
2. ASTM Standard C 1048 – 04, entitled “Standard Specification for Heat-Treated Flat Glass—Kind HS, Kind FT Coated and Uncoated Glass,” published March 2004.

c. Prior Art Uses/Sales/Offers for Sales Under § 102(a)

As set forth below, Defendants contend that public use, offers for sale, and sales of certain Promethean Inc. products constitute prior art to the ‘935 Patent under 35 U.S.C. § 102(a). Defendants dispute and do not concede that any ‘935 Accused Products meet all limitations of any ‘935 Asserted Claim. However, based on Plaintiff’s assertions in the Third Amended Complaint and in Plaintiff’s Initial Infringement Contentions (to which Defendants do not concede or acquiesce) that Promethean Inc.’s ActivPanel 7 Titanium and Nickel products infringe the ‘935 Asserted Claims, and therefore also upon Plaintiff’s apparent assertion of scope of the ‘935 Asserted Claims, Defendants assert that Promethean Inc.’s ActivPanel 4.5 (“AP4.5”) product is invalidating prior art to the ‘935 Asserted Claims. The AP4.5 product was in public use and/or on sale at least as early as June, 2016. Defendants are in possession of the AP4.5 product from which the information provided in Exhibit 1 was obtained, and Defendants will make this AP4.5 product available for inspection by Plaintiff.

2. Identification of Exemplary Anticipation and Obviousness

a. Anticipation – 35 U.S.C. § 102

Based on the scope of the claims as asserted by Plaintiff in its Initial Infringement Contentions, claims 1-2, 7-12, and 14 of the ‘935 Patent are anticipated under 35 U.S.C. § 102, for example, as set forth in the table below and in the claim chart provided in Exhibit 1.

Exemplary Anticipation – ‘935 Patent		
No.	Basis	Applicable ‘935 Asserted Claims
1	Public use and/or commercial sales and/or offers for sale of Promethean Inc.’s AP4.5 product.	1-2, 7-12, and 14

Exhibit 1, attached hereto, provides a representative claim chart that identifies respective elements of the AP4.5 product corresponding to each element of claims 1-2, 7-12, and 14 of the ‘935 Patent.

b. Obviousness – 35 U.S.C. § 103

In addition, all ‘935 Asserted Claims would have been obvious to one of ordinary skill in the art at the time of the alleged invention under 35 U.S.C. § 103. The prior art references disclosed above render the ‘935 Asserted Claims invalid as obvious, for example, in the combinations as set forth below and in the claim charts provided at Exhibits 1-7C. In particular, each prior art reference may be combined, in the context of information known to persons skilled in the art at the time of the alleged invention, with any of the other prior art references necessary to disclose various claim elements. To the extent that Plaintiff contends that any of the prior art cited herein fails to disclose one or more limitations of any of the ‘935 Asserted Claims, Defendants reserve the right to identify and/or rely upon other prior art references that, when combined with the cited prior art, would render the claims obvious despite the allegedly missing limitation.

Specific examples of prior art combinations are set forth below for each ‘935 Asserted Claim. These prior art combinations are not exhaustive. The combinations are exemplary alternatives to Defendants’ anticipation contentions and, thus, should not be interpreted as indicating that any of the individual references are not, alone, invalidating prior art under 35 U.S.C. §§ 102 and/or 103. Moreover, each reference having a corresponding disclosure for any limitation of a ‘935 Asserted Claim can be combined with any other reference having disclosure for the same or any other limitation of that ‘935 Asserted Claim to render that ‘935 Asserted Claim obvious. In

addition, in the event that any listed reference is found not to adequately disclose any element of a '935 Asserted Claim, any other references listing such elements may be relied upon to establish that element.

The references identified in the table below, in various combinations or sub-combinations for each ground based on one or multiple references, make the claims cited therein obvious and, therefore, invalid. In addition, any combination of the references listed below otherwise resulting in the disclosure of all limitations of any of the '935 Asserted Claims is also asserted. In addition, Defendants expressly reserve the right to assert the invalidity of any additional claims that Plaintiff may assert in this matter.

Exemplary Invalidity Combinations – '935 Patent		
No.	Basis	Applicable '935 Asserted Claims
1	35 U.S.C. § 103 over AP4.5 in view of any of: - Shin '658; - Shin '845; or - Zhao.	3-6
2	35 U.S.C. § 103 over Han in view of any of: - Shin '658; - Shin '845; - Zhao; - AP4.5 product; or - '935 Patent Admitted Prior Art.	1-6
3	35 U.S.C. § 103 over Han in view of any of - Sasaki '379; - Jeong; - Cao '626; or - AP4.5 product; Further in view of any of: - Shin '658; - Shin '845; - Zhao; - AP4.5 product; or - '935 Patent Admitted Prior Art.	1-6
4	35 U.S.C. § 103 over Han in view of any of	7, 9-11, 14

Exemplary Invalidity Combinations – ‘935 Patent		
No.	Basis	Applicable ‘935 Asserted Claims
	- Sasaki ‘379; - Jeong; - Cao ‘626; or - AP4.5 product; Further in view of any of: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art; Further in view of any of the following: - Allan; - EN 12150-1:2000; - ASTM 1048 C – 04; - AP4.5 Product; or - ‘935 Admitted Prior Art.	
5	35 U.S.C. § 103 over Han in view of any of - Sasaki ‘379; - Jeong; - Cao ‘626; - AP4.5 product; Further in view of any of: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art; Further in view of any of the following: - Allan; - EN 12150-1:2000; - ASTM 1048 C – 04; - AP4.5 Product; or - ‘935 Admitted Prior Art; Further in view of Christiansson ‘841.	8
6	35 U.S.C. § 103 over Han in view of any of - Sasaki ‘379; - Jeong; - Cao ‘626; or - AP4.5 product Further in view of any of: - Shin ‘658; - Shin ‘845;	12

Exemplary Invalidity Combinations – ‘935 Patent		
No.	Basis	Applicable ‘935 Asserted Claims
	- Zhao; - AP4.5 product; or - ‘935 Admitted Prior Art; Further in view of any of the following: - Allan; - EN 12150-1:2000; - ASTM 1048 C – 04; - AP4.5 Product; or - ‘935 Admitted Prior Art; Further in view of Wassvik ‘742.	
7	35 U.S.C. § 103 over: - Sasaki ‘379; - Jeong; or - Cao ‘626; In view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art.	1-6
8	35 U.S.C. § 103 over: - Sasaki ‘379; - Jeong; or - Cao ‘626; In view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art; Further in view of any of the following: - Allan; - EN 12150-1:2000; - ASTM 1048 C – 04; or - AP4.5 Product.	7, 9-11, 14
9	35 U.S.C. § 103 over: - Sasaki ‘379; - Jeong; or	8

Exemplary Invalidity Combinations – ‘935 Patent		
No.	Basis	Applicable ‘935 Asserted Claims
	- Cao ‘626; In view of either of the following: - Han; or - Kang Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art; Further in view of any of the following: - Allan; - EN 12150-1:2000; - ASTM 1048 C – 04; or - AP4.5 Product; Further in view of Christiansson ‘841.	
10	35 U.S.C. § 103 over: - Sasaki ‘379; - Jeong; or - Cao ‘626 In view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 Product; or - ‘935 Patent Admitted Prior Art; Further in view of any of the following: - Allan; - EN 12150-1:2000; - ASTM 1048 C – 04; or - AP4.5 Product; Further in view of Wassvik ‘742.	12
11	35 U.S.C. § 103 over: - Sasaki ‘379; - Jeong; or - Cao ‘626 in view of Miller, Further in view of either of the following: - Han; or - Kang Further in view of any of the following:	1-6

Exemplary Invalidity Combinations – ‘935 Patent		
No.	Basis	Applicable ‘935 Asserted Claims
	- Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art.	
12	35 U.S.C. § 103 over: - Sasaki ‘379; - Jeong; or - Cao ‘626 in view of Miller, Further in view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art; Further in view of any of the following: - Allan; - EN 12150-1:2000; - ASTM 1048 C – 04; or - AP4.5 Product.	7, 9-11, 14
13	35 U.S.C. § 103 over: - Sasaki ‘379; - Jeong; or - Cao ‘626 in view of Miller, Further in view either of the following: - Han; or - Kang Further in view of any of the following: - Shin ‘658; - Shin ‘845; or - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art; Further in view of any of the following: - Allan; - EN 12150-1:2000; - ASTM 1048 C – 04; or - AP4.5 Product; Further in view of Christiansson ‘841.	8

Exemplary Invalidity Combinations – ‘935 Patent		
No.	Basis	Applicable ‘935 Asserted Claims
14	35 U.S.C. § 103 over: - Sasaki ‘379; - Jeong; or - Cao ‘626 in view of Miller, Further in view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art; Further in view of any of the following: - Allan; - EN 12150-1:2000; - ASTM 1048 C – 04; or - AP4.5 Product; Further in view of Wassvik ‘742.	12
15	35 U.S.C. § 103 over Weilbacher in view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art.	1-6
	35 U.S.C. § 103 over Weilbacher in view of Miller, Further in view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art.	1-6
16	35 U.S.C. § 103 over Weilbacher in view of any of the following: - Sasaki ‘379;	1-6

Exemplary Invalidity Combinations – ‘935 Patent		
No.	Basis	Applicable ‘935 Asserted Claims
	- Jeong; - Cao ‘626; or - AP4.5 product in view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art.	
17	35 U.S.C. § 103 over Weilbacher in view of any of the following: - Sasaki ‘379; - Jeong; - Cao ‘626; or - AP4.5 product; Further in view of Miller, Further in view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art.	1-6
18	35 U.S.C. § 103 over Eriksson in view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art.	1-6
19	35 U.S.C. § 103 over Eriksson in view of Miller, Further in view of either of the following: - Han; or - Kang; Further in view of any of the following:	1-6

Exemplary Invalidity Combinations – ‘935 Patent		
No.	Basis	Applicable ‘935 Asserted Claims
	- Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art.	
20	35 U.S.C. § 103 over Eriksson in view of any of the following: - Sasaki ‘379; - Jeong; - Cao ‘626; or - AP4.5 Product in view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art.	1-6
21	35 U.S.C. § 103 over Eriksson in view of any of the following: - Sasaki ‘379; - Jeong; - Cao ‘626; or - AP4.5 product; Further in view of Miller, Further in view of either of the following: - Han; or - Kang; Further in view of any of the following: - Shin ‘658; - Shin ‘845; - Zhao; - AP4.5 product; or - ‘935 Patent Admitted Prior Art.	1-6

Exhibits 1, 2, 3A-3C, 4A-4C, 5A-5C, 6A-6C, and 7A-7C, attached hereto, provide representative claim charts that identify disclosure in the prior art identified above corresponding to each element of each ‘935 Asserted Claim.

B. The '916 Patent

1. Identification of Prior Art

Defendants identify below prior art that anticipates and/or otherwise evidences the invalidity of each '916 Asserted Claim. Defendants may also rely on this identified prior art to illustrate the level of ordinary skill in the art and the background knowledge and common sense of those of ordinary skill in the art at or about the time of the alleged invention in the '916 Patent. In addition, Defendants may rely on the file histories and family members of all prior art patents and published patent applications, and all prior art cited or disclosed in the file histories of the '916 Patent. Defendants also may rely on the prior identified in connection with the '935 Patent above.

a. Prior Art Patent Applications, Patents, and Utility Models

Defendants hereby identify the following prior art patent applications, patents, and utility models, copies of which are being served herewith, that anticipate and/or render obvious the '916 Asserted Claims under 35 U.S.C. §102 (post-AIA) and/or 35 U.S.C. § 103 (post-AIA):

Reference No.	Named Inventor(s)
Chinese Utility Model No. CN 203786707 U	Chen et al.
International Pub. App. No. WO 2014/131221	Chen et al.
Chinese Pub. App. No. 104391611 A	Hu et al.
Chinese Utility Model 203786708 U	Cao
Chinese Utility Model 204288179 U	Mo et al.
International App. Pub. No. WO 2017/099657	Christiansson et al.
U.S. Patent No. 5,729,250	Bishop et al.
U.S. Patent No. 4,751,379	Sasaki et al.
U.S. Pub. App. No. 2019/0004668	Jeong et al.
Chinese Utility Model 203720812 U	Chen et al.
Japanese Pub. App. No. 2015-158831A	Yano et al.
U.S. Pub. App. No. 2014/0210793	Eriksson et al.
U.S. Pub. App. No. 2015/0131010	Sugiyama et al.
U.S. patent No. 9,983,626	Cao et al.
Japanese Pub. App. No. 62-159213	Sasaki et al.
German Pub. App. No. 102009003990	Kulik et al.
German Pub. App. No. 10025175	John
Chinese Utility Model No. 202887145 U	Quan

Reference No.	Named Inventor(s)
Chinese Utility Model No. 203825586 U	Chen et al.

b. Prior Art Uses/Sales/Offers for Sales Under § 102(a)

As set forth below, Defendants contend that public use, offers for sale, and sales of certain Promethean Inc. products constitute prior art to the ‘916 Patent under 35 U.S.C. § 102(a). Defendants dispute and do not concede that any ‘916 Accused Products meet all limitations of any ‘916 Asserted Claim. However, based on Plaintiff’s assertions in the Third Amended Complaint and in Plaintiff’s Initial Infringement Contentions (to which Defendants do not concede or acquiesce) that Promethean Inc.’s ActivPanel 7 Titanium products infringe the ‘916 Asserted Claims, and therefore also on Plaintiff’s apparent assertion of scope of the ‘916 Asserted Claims, Defendants assert that Promethean Inc.’s ActivPanel 4.5 product (“AP4.5”) product is invalidating prior art to the ‘916 Asserted Claims. The AP4.5 product was in public use and/or on sale at least as early as June, 2016. Defendants are in possession of the AP4.5 product from which the information provided in Exhibit 8 was obtained, and Defendants will make this AP4.5 product available for inspection by Plaintiff.

2. Identification of Exemplary Anticipation

a. Anticipation – 35 U.S.C. § 102

Based on the scope of the claims as asserted by Plaintiff in its Initial Infringement Contentions, all ‘916 Asserted Claims are anticipated under 35 U.S.C. § 102, for example, as set forth in the table below and in the claim charts provided in Exhibits 8-13.

Exemplary Anticipation – ‘916 Patent		
No.	Basis	Applicable ‘916 Asserted Claims
1	Public use and/or commercial sales and/or offers for sale of Promethean Inc.’s AP4.5 product.	1-5, 9
2	Chen ‘707	1-5, 9
3	Chen ‘221	1-5, 9

4	Hu	1-5, 9
5	Cao '708	1-5, 9
6	Mo	1-5, 9

Exhibits 8-13, attached hereto, provide representative claim charts that identify respective elements in the aforementioned prior art references corresponding to each element of each applicable '916 Asserted Claim.

III. INVALIDITY BASED ON 35 U.S.C. § 112

A. The '935 Patent

Defendants contend that the '935 Asserted Claims are invalid for failure to comply with the enablement and written description requirements of 35 U.S.C. § 112(a) and/or the definiteness requirements of 35 U.S.C. § 112(b).

1. Enablement and Written Description Requirements – 35 U.S.C. § 112(a)

One or more of the Asserted Claims of the '935 Patent is invalid under § 112(a) for failing to teach those of ordinary skill in the art how to make and use the full scope of the claimed invention without undue experimentation and/or to show that the inventors were in possession of the claimed invention at the time they filed their application. The failures of the '935 Asserted Claims to comply with § 112(a) are addressed below.

a. Claims 1-6 of the '935 Patent

If the phrase “wherein configuring the frame assembly to support the plate includes inducing a parabolic curvature in the touch surface” is construed beyond the disclosure of the '935 Patent, e.g. to encompass the insertion of a pre-curved touch plate into a frame assembly or into a lesser-curved frame assembly that thereby reduces the touch plate's curvature, then Claims 1-6 of the '935 Patent do not comply with the written description requirement of 35 U.S.C. § 112(a) because the disclosure of the '935 Patent does not allow the ordinarily skilled person to recognize

that the purported inventors of the ‘935 Patent were in possession of such subject matter as of the priority date to which the ‘935 Patent is entitled.

If the phrase “parabolic curvature in the touch surface” is construed beyond the disclosure of the ‘935 Patent, e.g. to encompass a convex parabolic curvature in the touch surface, then Claims 1-6 of the ‘935 Patent do not comply with the written description requirement of 35 U.S.C. § 112(a) because the disclosure of the ‘935 Patent does not allow the ordinarily skilled person to recognize that the purported inventors of the ‘935 Patent were in possession of such subject matter as of the priority date to which the ‘935 Patent is entitled.

Claims 1-6 do not meet the enablement requirement of 35 U.S.C. § 112(a) because the specification of the ‘935 Patent does not enable the full scope of the phrase “wherein configuring the frame assembly to support the plate includes inducing a parabolic curvature in the touch surface.”

b. Claims 7-12 and 14 of the ‘935 Patent

If the phrase “wherein the plate has a first curvature in the touch surface when not installed in the frame assembly, and wherein the plate has a second curvature along the width and along the length in the touch surface when the plate is installed in the frame assembly” is construed beyond the disclosure of the ‘935 Patent, e.g. to encompass the insertion of a pre-curved touch plate into a frame assembly or into a lesser-curved frame assembly that thereby reduces the touch plate’s curvature, then Claims 7-12 and 14 of the ‘935 Patent do not comply with the written description requirement of 35 U.S.C. § 112(a) because the disclosure of the ‘935 Patent does not allow the ordinarily skilled person to recognize that the purported inventors of the ‘935 Patent were in possession of such subject matter as of the priority date to which the ‘935 Patent is entitled.

If the phrase “wherein the plate has a first curvature in the touch surface when not installed in the frame assembly, and wherein the plate has a second curvature along the width and along the length in the touch surface when the plate is installed in the frame assembly” is construed beyond the disclosure of the ‘935 Patent, e.g. to encompass causation of a difference between the claimed “first curvature” and the claimed “second curvature” other than through the claimed “frame assembly,” then Claims 7-12 and 14 of the ‘935 Patent do not comply with the written description requirement of 35 U.S.C. § 112(a) because the disclosure of the ‘935 Patent does not allow the ordinarily skilled person to recognize that the purported inventors of the ‘935 Patent were in possession of such subject matter as of the priority date to which the ‘935 Patent is entitled.

If the phrase “a second curvature along the width and along the length in the touch surface when the plate is installed in the frame assembly, said second curvature is parabolic” is construed beyond the disclosure of the ‘935 Patent to encompass a convex parabolic curvature in the touch surface, then Claims 7-12 and 14 of the ‘935 Patent do not comply with the written description requirement of 35 U.S.C. § 112(a) because the disclosure of the ‘935 Patent does not allow the ordinarily skilled person to recognize that the purported inventors of the ‘935 Patent were in possession of such subject matter as of the priority date to which the ‘935 Patent is entitled.

Claims 7-12 and 14 do not meet the enablement requirement of 35 U.S.C. § 112(a) because the specification of the ‘935 Patent does not enable the full scope of the phrase “wherein the plate has a first curvature in the touch surface when not installed in the frame assembly, and wherein the plate has a second curvature along the width and along the length in the touch surface when the plate is installed in the frame assembly.”

Claims 7-12 and 14 of the ‘935 Patent do not comply with the written description requirement or enablement requirement of 35 U.S.C. § 112(a) because the disclosure of the ‘935

Patent did not provide support for the limitation “wherein the first curvature is concave” as of the priority date to which the ‘935 Patent is entitled.

2. Indefiniteness - 35 U.S.C. § 112(b)

The ‘935 Asserted Claims are invalid under § 112(b) for failing to particularly point out and distinctly claim the subject matter that the patentee regards as its alleged invention, such that one of ordinary skill in the relevant art would be reasonably apprised of the bounds of the ‘935 Asserted Claims when read in light of the specification. *See Nautilus, Inc. v. Biosig Inst., Inc.*, 134 S. Ct. 2120 (2014). The indefiniteness of the ‘935 Asserted Claims is addressed below.

a. Claims 1-6 of the ‘935 Patent

Claims 1-6 are invalid as indefinite under 35 U.S.C. § 112(b) because neither the claims nor the specification of the ‘935 Patent suggest using one method in particular for measuring the claimed “parabolic curvature,” so that the claims fail to inform the skilled person of the scope of the claims with reasonable certainty.

Claims 3-6 are invalid as indefinite under 35 U.S.C. § 112(b) because neither the claims nor the specification of the ‘935 Patent suggest using one method in particular for measuring the claimed “first curvature” or the claimed “second curvature,” so that the claims fail to inform the skilled person of the scope of the claims with reasonable certainty.

Claims 1-6 are invalid as indefinite under 35 U.S.C. § 112(b) because neither the claims nor the specification of the ‘935 Patent provide a workable objective standard for the meaning of “parabolic curvature,” so that the claims fail to inform the skilled person of the scope of the claims with reasonable certainty.

b. Claims 7-12 and 14 of the '935 Patent

Claims 7-12 and 14 are invalid as indefinite under 35 U.S.C. § 112(b) because neither the claims nor the specification of the '935 Patent suggest using one method in particular for measuring the claimed "first curvature" or the claimed "parabolic" "second curvature," so that the claims fail to inform the skilled person of the scope of the claims with reasonable certainty.

Claims 7-12 and 14 are invalid as indefinite under 35 U.S.C. § 112(b) because neither the claims nor the specification of the '935 Patent provide a workable objective standard for the meaning of "parabolic" "second curvature," so that the claims fail to inform the skilled person of the scope of the claims with reasonable certainty.

Claims 7-12 and 14 are invalid as indefinite under 35 U.S.C. § 112(b) because the claims do not define a reference from which to measure the claimed "first curvature" or the claimed "second curvature," so that the claims fail to inform the skilled person of the scope of the claims with reasonable certainty.

Claims 7-12 and 14 are invalid as indefinite under 35 U.S.C. § 112(b) because the claims fail to recite sufficient relationships between essential elements, e.g., the claimed "frame assembly," the claimed "first curvature," and the claimed "second curvature," so that the claims fail to inform the skilled person of the scope of the claims with reasonable certainty.

Claims 7-12 and 14 are invalid as indefinite under 35 U.S.C. § 112(b) because a present determination of infringement, with regard to the limitation "wherein the plate has a first curvature in the touch surface when not installed in the frame assembly, and wherein the plate has a second curvature along the width and along the length in the touch surface when the plate is installed in the frame assembly," may depend on the occurrence of events that may, or may not, occur in the

future. As such, the claims fail to inform the skilled person of the scope of the claims with reasonable certainty.

Claim 8 is invalid as indefinite under 35 U.S.C. § 112(b) because the phrase “processing element” is properly construed under 35 U.S.C. § 112(f), but the specification of the ‘935 Patent does not disclose sufficient corresponding structure.

B. The ‘916 Patent

Defendants contend that the ‘916 Asserted Claims are invalid for failure to comply with the enablement and written description requirements of 35 U.S.C. § 112(a) and/or the definiteness requirements of 35 U.S.C. § 112(b).

1. Enablement and Written Description Requirements – 35 U.S.C. § 112(a)

One or more of the ‘916 Asserted Claims is invalid under § 112(a) for failing to teach those of ordinary skill in the art how to make and use the full scope of the claimed invention without undue experimentation and/or to show that the inventors were in possession of the claimed invention at the time they filed their application.

The ‘916 Asserted Claims do not comply with the written description requirement or enablement requirement of 35 U.S.C. § 112(a) because the disclosure of the ‘916 Patent did not provide support for the limitation “said first portion including a first projection extending downwards from said first portion and a second projection extending downwards from said first portion, wherein a gap between the first projection and the second projection forms a receptacle having a first cross-sectional shape” as of the priority date to which the ‘916 Patent is entitled.

2. Indefiniteness - 35 U.S.C. § 112(b)

The ‘916 Asserted Claims are invalid under § 112(b) for failing to particularly point out and distinctly claim the subject matter that the patentee regards as its alleged invention, such that

one of ordinary skill in the relevant art would be reasonably apprised of the bounds of the ‘935 Asserted Claims when read in light of the specification. *See Nautilus*, 134 S. Ct. 2120. The indefiniteness of the ‘916 Asserted Claims is addressed below.

Claims 1-5 and 9 are invalid as indefinite under 35 U.S.C. § 112(b) because the inconsistent use of the term “optical element” between the claims and the specification of the ‘916 Patent, such that neither the claims nor the specification of the ‘916 Patent provides a workable objective standard for the meaning of “optical element” and that the claims thereby fail to inform the skilled person of the scope of the claims with reasonable certainty.

Claims 1-5 and 9 are invalid as indefinite under 35 U.S.C. § 112(b) because the phrase “support structure” is properly construed under 35 U.S.C. § 112(f), but the claims do not disclose what is being supported. As a result, one of ordinary skill in the art cannot understand what, if any, corresponding structure in the specification would perform the recited function.

IV. INVALIDITY BASED ON 35 U.S.C. § 101

Defendants contend that the ‘935 Asserted Claims are invalid under 35 U.S.C. § 101 because they are directed to unpatentable subject matter.

Claims 1-12 and 14 of the ‘935 Patent are directed to an abstract idea, without reciting significantly more than the abstract idea within the context of Section 101. The ‘935 Patent presents an initial problem to be solved, e.g. how to assemble the touch plate of an above surface optical touch panel with the frame assembly to thereby limit uncontrolled warp in the touch plate and allow a low touch height. Each of claims 1-12 and 14 is directed to the abstract idea of solving that problem but does not recite meaningful limitations directed to an improvement in technology to do so.

V. COPIES OF KNOWN RELATED INVALIDATING REFERENCES

Pursuant to the Scheduling Order, Defendants are producing herewith a copy of each item of documentary prior art identified in these Initial Invalidity Contentions. Defendants' production includes documents bates labeled DEF_00004252 through DEF_00005180.

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CERTIFICATE OF SERVICE

I hereby certify that on April 23, 2021, true and correct copies of the foregoing document were served, in the following manner, on the following:

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