UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHENZHEN QIANFENYI INTELLIGENT TECHNOLOGY CO., LTD.,
(A.K.A. MAXEYE)
Petitioner,

v.

WACOM CO. LTD.,
Patent Owner.

Case IPR2025-01596
Patent 10,108,277

PATENT OWNER'S PRELIMINARY RESPONSE

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PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	Second Amended Complaint, *Wacom, Co., Ltd. v. Shenzhen Qianfenyi Intelligent Technology Co., Ltd.*, Civ. No. 2:24-cv-702 (E.D. Tex. Oct. 27, 2025)
2002	Defendant's Preliminary Invalidity Contentions, *Wacom, Co., Ltd. v. Shenzhen Qianfenyi Intelligent Technology Co., Ltd.*, Civ. No. 2:24-cv-702 (E.D. Tex. Mar. 4, 2025)
2003	Agreed Docket Control Order, *Wacom, Co., Ltd. v. Shenzhen Qianfenyi Intelligent Technology Co., Ltd.*, Civ. No. 2:24-cv-702 (E.D. Tex. Feb. 6, 2025)
2004	U.S. District Courts - Federal Court Management Statistics– Comparison Within Circuit (June 30, 2025) (available at https://www.uscourts.gov/sites/default/files/document/fcms_na_distcomparison0630.2025.pdf) (annotated)
2005	Memorandum Order, *Headwater Research LLC v. Samsung Electronics Co., Ltd.*, Civ. No. 2:23-CV-00103 (Dec. 11, 2024)

Pursuant to 37 C.F.R. § 42.107, Patent Owner Wacom Co. Ltd. ("Patent Owner" or "Wacom") files this preliminary response to the Petition, setting forth reasons why the Petition for *inter partes* review ("IPR") of claims 1-5, 7-12, 14-18, and 20-24 of U.S. Patent No. 10,108,277 (the "'277 patent"), as requested by Shenzhen Qianfenyi Intelligent Technology Co., Ltd. (a.k.a Maxeye) ("Petitioner" or "Maxeye"), should be denied on the merits.[1]

I. INTRODUCTION

The Petition challenges claims 1-5, 7-12, 14-18, and 20-24 of the '277 patent based on two grounds, each of which fails on the merits. The '277 patent discloses innovative technology that is capable of detecting not only the position of a stylus on a touch surface but also additional information such as the rotation and inclination of the stylus. In one exemplary disclosed technique, electrodes are positioned at different locations on the stylus tip and then the electrodes are supplied with distinguishable signals that generate detectable capacitive relationships with a sensor surface.

Petitioner's grounds are fundamentally flawed because they mischaracterize the cited references and improperly attempt to combine them through hindsight reconstruction. Petitioner's primary reference, Yoshida, teaches a system designed

[1] By submitting this Preliminary Response, no waiver of any argument is intended by Patent Owner. Patent Owner will have a right to file a complete response to the Petition, should the Board institute *inter partes* review. 37 C.F.R. § 42.120(a).

to eliminate variations in an electric field caused by stylus rolling, not to exploit those variations for angle detection. It does this using different electrode combinations and driving those electrodes with an AC signal generated in the stylus itself. In contrast, secondary references Ikeda and Iguchi teach systems where a tablet generates signals that are detected by the stylus. These systems teach conflicting approaches for communications between a stylus and a tablet, and Petitioner provides no proper motivation to combine these contradictory teachings or to fundamentally reverse the signal flow in Ikeda and Iguchi. Accordingly, both grounds should be rejected.

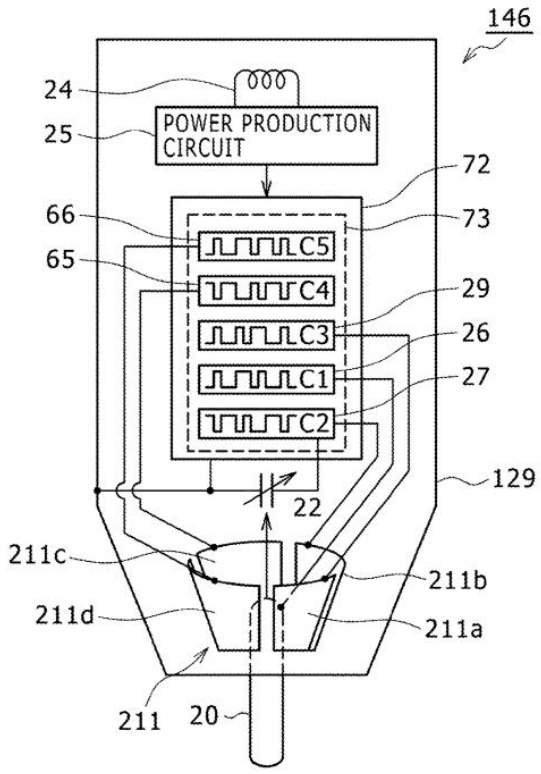
For the reasons explained below, the Petition should be rejected on the merits, and no *inter partes* review should be granted.

II. THE '277 PATENT

The '277 patent is entitled, "Pointer, Position Detection Apparatus and Position Detection Method," and discloses embodiments of a pointer (also referred to a stylus, pen-shaped position indicator, etc.) and position detection apparatus (such as a tablet) that uses electrostatic coupling to detect not only position information representative of the position pointed to by a pointer, but also other information such as information regarding inclination of the pointer. '277 patent, 1:60-2:4.

FIG. 20 (reproduced below) shows an exemplary pointer disclosed in the '277 patent:

FIG.20



In FIG. 20, a transmission signal production section 73 of an integrated circuit 72 accommodated in the pointer 146 includes a first code production section 26, a second code production section 27, a third code production section 29, a fourth code production section 65, and a fifth code production section 66, which respectively produce and output a first code C1, a second code C2, a third code C3, a fourth code C4, and a fifth code C5. '277 patent, 22:58- 23:15.

A first electrode 20 is disposed axially in the pointer 146 and receives code signal C1, and a second electrode 211 is composed of a plurality of electrode

pieces (211a, 211b, 211c and 211d) that receive the code signals C2-C5. '277 patent, 23:16-26. The detection of the code signals at the surface of a tablet allows angular information to be ascertained. '277 patent, 23:37-24:41.

Consistent with this description, the '277 patent includes four independent claims (claims 1, 10, 14, and 22), and each of these independent claims is the subject of a challenge in the Petition:

Independent claim 1 recites in full:

1. **1[pre]**[2] A pen-shaped position indicator configured to capacitively couple with a sensor surface, the pen-shaped position indicator comprising:

[1a] a pen-shaped body having a pen-tip portion;

[1b] a first electrode arranged at a first position of the pen-tip portion;

[1c] a second electrode arranged at a second position of the pen-tip portion different from the first position, the second position being off an axis of the pen-shaped position indicator;

[1d] ***a signal production circuit configured to generate first and second signals*** that are distinguishable from each other; and

[1e] conductive lines extending between the signal production circuit and the first and second electrodes, respectively,

[2] The bolded designations added before the preamble and each claim element correspond to Petitioner's designations as set forth in the Petition.

[1f] wherein the first and second signals generated by the signal production circuit, in operation, are transmitted to the first and second electrodes via the conductive lines;

[1g] wherein the first and second electrodes are configured to form first and second capacitive relationships with the sensor surface, respectively, ***to generate detection signals in the sensor surface based on which angle information of the pen-shaped position indicator is obtainable***.

'277 patent, claim 1 (emphasis added to elements 1[d] and 1[g]).

Independent claim 10 recites in full:

10. **10[pre]**[3] A pen-shaped position indicator configured to capacitively couple with a sensor surface, the pen-shaped position indicator comprising:

[10a] a pen-shaped body having a pen-tip portion;

[10b] first and second electrodes arranged near the pen-tip portion to surround an axis of the pen-shaped position indicator; and

[10c] ***a signal production circuit configured to generate first and second signals*** that are distinguishable from each other; and

[10d] conductive lines extending between the signal production circuit and the first and second electrodes, respectively, wherein the first and second signals generated by the signal

[3] Once again, the bolded designations added before the preamble and each claim element correspond to Petitioner's designations as set forth in the Petition.

production circuit, in operation, are transmitted to the first and second electrodes via the conductive lines;

[10e] wherein the first and second electrodes are configured to form first and second capacitive relationships with the sensor surface, respectively, ***to generate detection signals in the sensor surface based on which angle information of the pen-shaped position indicator is obtainable***.

'277 patent, claim 10 (emphasis added to elements 10[c] and 10[e]).

Independent claim 14 recites in full:

14. **14[pre]**[4] A method of detecting angle information of a pen-shaped position indicator, the method comprising:

14[a] ***forming a first capacitive relationship*** between a sensor surface and ***first electrode***, which is arranged at a first position of a pen-tip portion of the pen-shaped position indicator and ***is supplied with a first signal generated by a signal production circuit and transmitted via a first conductive line in the pen-shaped position indicator***;

14[b] ***forming a second capacitive relationship*** between the sensor surface and a ***second electrode***, which is arranged at a second position of the pen-tip portion different from the first position and off an axis of the pen-shaped position indicator and ***is supplied with a second signal generated by the signal production circuit and transmitted via a second conductive***

[4] Again, the bolded designations added before the preamble and each claim element correspond to Petitioner's designations as set forth in the Petition.

line in the pen-shaped position indicator, wherein the second signal is distinguishable from the first signal; and

14[c] ***detecting angular information of the pen-shaped position indicator based on the first and second capacitive relationships***.

'277 patent, claim 14 (emphasis added to elements 14[a], 14[b], and 14[c]).

Independent claim 22 recites in full:

22. **22[pre]**[5] A method of detecting angle information of a pen-shaped position indicator, the method comprising:

22[a] forming first and second capacitive relationships between a sensor surface and ***first and second electrodes***, respectively,

22[b] wherein the first and second electrodes are arranged near a pen-tip portion of the pen-shaped position indicator to surround an axis of the pen-shaped indicator, and

22[c] wherein the ***first and second electrodes are supplied with first and second signals generated by a signal production circuit via first and second lines, respectively,*** wherein the first and second signals are distinguishable from each other; and

22[d] ***detecting angular information of the pen-shaped position indicator based on the first and second capacitive relationships***.

'277 patent, claim 22 (emphasis added to elements 22[a], 22[c], and 22[d]).

[5] Again, the bolded designations added before the preamble and each claim element correspond to Petitioner's designations as set forth in the Petition.

III. CLAIM CONSTRUCTION

Petitioner provides no "formal" claim construction for any claim terms and violates 37 C.F.R. § 42.104(b)(3) with an allegation that it is not "waiving any arguments concerning claim scope or grounds that can only be raised in district court." Pet., 6.

Further, as will be addressed below, Petitioner provides an inadequate and conclusory analysis and fails to address a variety of claim terms, particularly the recitations noted above concerning the first and second signals and their relationship to the pen-shaped position indicator. Without waiving its right to address claim construction more fully in a Patent Owner Response, Patent Owner shows in Section IV that Petitioner's failure to provide its interpretation of the language in these recitations magnifies fundamental flaws in Petitioner's analysis, resulting in Petitioner's failure to establish the disclosure of every claimed element in each independent claim.

IV. PETITIONER'S CHALLENGES FAIL ON THE MERITS

The Petition presents two redundant challenges against independent claims 1, 10, 14, and 22 of the '277 patent founded primarily on Yoshida[6]. Ground 1

[6] Ex. 1005, U.S. Patent No. 5,798,756 ("Yoshida").

challenges claims 1-5, 7-12, 14-18, and 20-24 based on Yoshida in view of Ikeda[7]. Ground 2 challenges claims 1-5, 8-12, 14-18, and 21-24[8] based on Yoshida in view of Iguchi[9].

As addressed below, each Ground fails to establish that any independent claim is unpatentable. Therefore, Petitioner's challenges against each independent claim, and each challenged dependent claim, fail.

A. The Petition Improperly Attempts to Incorporate External Materials By Reference to its Petition

As an initial matter, throughout the 109-page Petition, Petitioner cites to and improperly relies upon its voluminous expert declaration, Ex. 1008. That Declaration and its Appendices (Ex. 1008) span 293 pages, over 236 of which are single-spaced in landscape format, and is conservatively estimated to exceed 50,000 words. Thus, the incorporation of such a declaration is improper for a variety of reasons, including that it fails to provide notice of Petitioner's theories, it completely upends the type-volume limitations on a Petition, and it is an improper

[7] Ex. 1006, Japanese Patent Application Publication No. H10-11206 – Certified English Translation ("Ikeda").

[8] Unlike Ground 2, Ground 1 challenges dependent claims 7 and 20. Those dependent claims are omitted from Ground 2's challenges.

[9] Ex. 1007, U.S. Patent No. 5,736,980 ("Iguchi").

incorporation by reference. *See* 37 C.F.R. § 42.6(a)(3) ("Arguments must not be incorporated by reference from one document into another document.").

To that end, Patent Owner will address the theories presented in the Petition, but will also point out selected instances in the Declaration that highlight the deficiencies of Petitioner's challenges.

B. Grounds 1 and 2 Fail to Establish the Unpatentability of Claims 1, 10, 14, and 22 Because Petitioner Fundamentally Misinterprets Each of the References

Petitioner provides its "Summary of Prior Art" on pages 12-20 of the Petition. Each summary fails to address critical disclosures in each reference that show Petitioner has misunderstood each reference. Once the references are correctly understood, it is clear that Petitioner's theories are untenable.

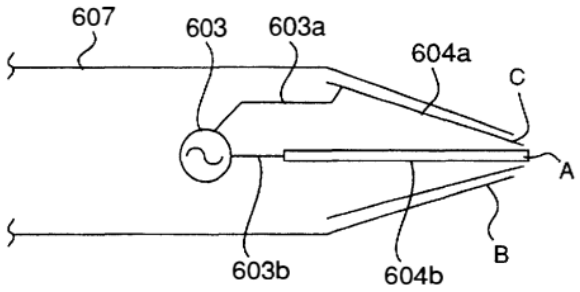
1. Yoshida's Goal is to Eliminate Any Impact of a Stylus's Roll or Tilt Such that These Orientation Changes are Undetectable

Initially, Yoshida does not provide a system to detect rotation or tilt of a stylus. While Yoshida recognizes that a rotation or tilt of a stylus may result in variations of the electrostatic capacitive coupling, Yoshida seeks to eliminate those variations, rather than exploit them. Accordingly, the Petition's assertion that "variations in capacitive signals correspond to stylus tilt and rotation relative to the sensor surface" (Pet., 13 (citing Yoshida, 28:3-25; 26:36-48)) fails to understand Yoshida and fails to acknowledge Yoshida's goal of eliminating those variations.

Indeed, in the same disclosure cited in the Petition and elsewhere, Yoshida states that "the electrostatic capacity between the electrodes of the pen and the electrodes of the panel" does not change as the "pen…rolls" (Yoshida, 26:44-46) and that, "not depending on the direction and angle of the pen-shaped object," "the electrical change to be applied can be made constant" (Yoshida, 25:51-57). Yoshida also states that "it is ***indispensable*** to make the pen have a structure in which the electrostatic capacitive coupling ***does not change regardless of the rolling of the pen***." Yoshida, 25:45-50 (emphasis supplied). Thus, Yoshida does not want to generate dynamic, variable signals to determine angle information of a pen or stylus, and instead Yoshida's design seeks to keep electrostatic signals constant as a pen or stylus rolls.

To maintain the constant electrostatic capacity in Yoshida, as depicted in Fig. 6A (reproduced below), Yoshida discloses an electric field generator 607:

Fig.6A

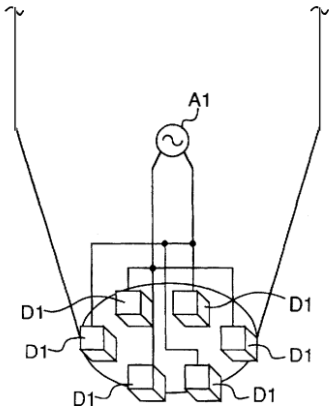


The electric field generator 607 includes an AC power source 603 with output terminals 603a and 603b connected to electrodes 604a and 604b respectively. Yoshida, 24:66-25:4. "An AC frequency generated by the AC power source 603 is 100 kHz, and an AC voltage outputted across the electrode 604a and the electrode 604b is 100 Vp-p." Yoshida, 25:5-8.

Again, turning to Yoshida's focus on providing a stable electrostatic capacity even as the pen "rolls," Yoshida explains the purpose of the AC power generation source within the stylus relative to the panel and the "reason why" it provides its particular arrangement of electrodes in that environment. Initially, Yoshida treats the rolling of a stylus to be a problem to be solved rather than a characteristic to be exploited. Yoshida discloses that the "electric field generator having such a cylindrical pen-shaped exterior configuration tends to roll," and "***it is indispensable*** to make the pen have a structure in which the electrostatic capacitive coupling ***does not change regardless of the rolling of the pen***." Yoshida, 25:26-57 (emphasis added). By providing a specific "coaxial electrode configuration," Yoshida's "electric field generator is consistently coupled with the electrodes of the LCD panel through an electrostatic capacitive coupling, and the ***electrical change to be applied can be made constant***" regardless of "***the direction and angle of the pen-shaped object in which the electric field generator is incorporated***." *Id*. (emphasis added).

Fig. 28 (reproduced below) of Yoshida further depicts an arrangement of electrodes D1 in Yoshida that maintain the same goal of seeking to provide a constant coupling regardless of the roll of the pen-shaped position indicator:

Fig.28



As Yoshida explains, "a plurality of electrodes D1 are mounted on a circumference of the tip end portion of the pen, and the electrodes D1 are connected to an AC power source A1 so that a rotational electric field is generated on the circumference." Yoshida, 26:36-43. Thus, the electrodes are divided into two sets and each set is connected to a respective side of the AC source. As Yoshida then again explains, "there is produced an effect that, ***even though the pen*** … ***rolls***, the electrostatic capacity between the electrodes of the pen and the electrodes of the panel ***do not change*** similarly to the electric field generator shown in FIG. 26 [which is consistent with the configuration of FIG. 6A (*see* Yoshida, 26:12-19)]."

Yoshida, 26:43-48 (emphasis and explanation of relationship between FIG. 26 and FIG. 6A added).

Considered in full, Yoshida teaches that variations due to rotation/tilt of a stylus are to be avoided and compensated for, rather than sensed and exploited to generate angle information of a stylus.

Accordingly, because Yoshida's driving circuitry and electrode arrangements seek to provide a constant electric field, Yoshida does not "generate detection signals in the sensor surface based on which angle information of the pen-shaped position indicator is obtainable," as recited in claim 1 of the '277 patent. More fully explained, Yoshida alone fails to disclose or suggest a pen-shaped position indicator with "a signal production circuit configured to generate first and second signals that are distinguishable from each other" where "the first and second signals generated by the signal production circuit, in operation, are transmitted to the first and second electrodes via the conductive lines" and where "the first and second electrodes are configured to form first and second capacitive relationships with the sensor surface, respectively, to ***generate detection signals in the sensor surface based on which angle information of the pen-shaped position indicator is obtainable***," as recited in claim 1 of the '277 patent (emphasis added). Claim 10 contains similar limitations, as does the method of claims 14 and 22 where electrodes of a pen-shaped position indicator are supplied with generated

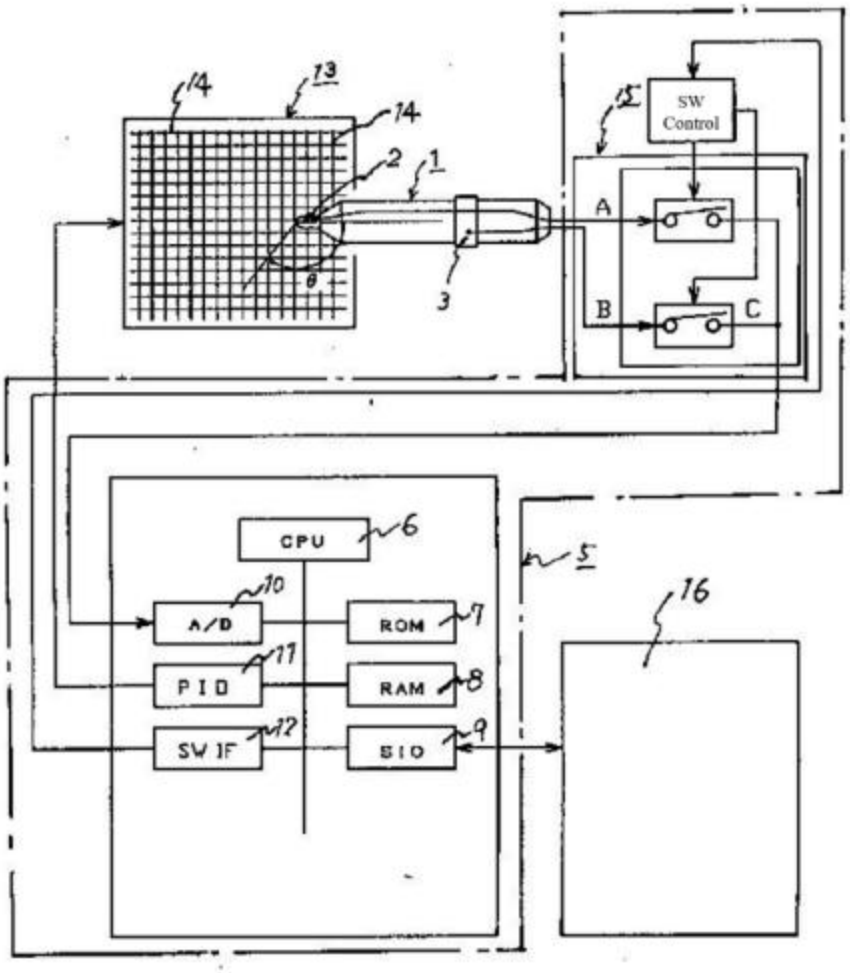
signals via lines and the method detects angular information of the pen-shaped position indicator.

2. Ikeda and Iguchi Focus Their Signal Generation at the Touch Surface, Not a Stylus

The Petition presents two secondary references, Ikeda and Iguchi, and relies on these secondary references for the claimed angle detection. But these secondary references both fail for the same basic reason—they are fundamentally different and incompatible with Yoshida. In particular, Ikeda and Iguchi each originate capacitive signals on a touch surface to be detected by a stylus, rather than originating capacitive signals in a stylus to be detected at a touch surface such as disclosed by Yoshida. Accordingly, even when considered with Yoshida, Petitioner presents no reference or combination of references that discloses or suggests detecting angle information using capacitive signals originating from a pen-shaped position indicator and detected at a touch surface.

In the system of Ikeda, a pen-shaped position indicator has two "detection units" illustrated, as elements 2 and 3 in FIG. 3 of Ikeda (reproduced below) that detect signals from a tablet 13:

[Fig. 3]



As Ikeda explains, "analog signals ***detected by*** each detection unit 2 and 3" are used to generate coordinate data. Ikeda, [0010]; *see also* Ikeda [0011] ("the detected analog signal is converted into a digital signal"); Ikeda [0012].

The Petition and Petitioner's expert err in suggesting that there are signals generated within the pen-shaped position indicator of Ikeda for creating the capacitive signals in Ikeda. In particular, the Petition misleadingly cites Ikeda as follows: "Ex. 1006, ¶ [0008] ('coordinate detection is performed using the two

detection units 2 and 3, and the coordinate data detected via electrostatic capacitance coupling with the tablet's electrodes. . .is applied to the main body 5 of the coordinate input device . . . .')". Pet., 31. What Ikeda says in [0008] is (with the portions the Petition omits from its quotation highlighted):

> The coordinate detection is performed using the two detection units 2 and 3, and the coordinate data detected via electrostatic capacitance coupling with the tablet's electrodes***, as described later,*** is applied to the main body 5 of the coordinate input device ***through a cable 4 connected to the coordinate detection pen 1***.

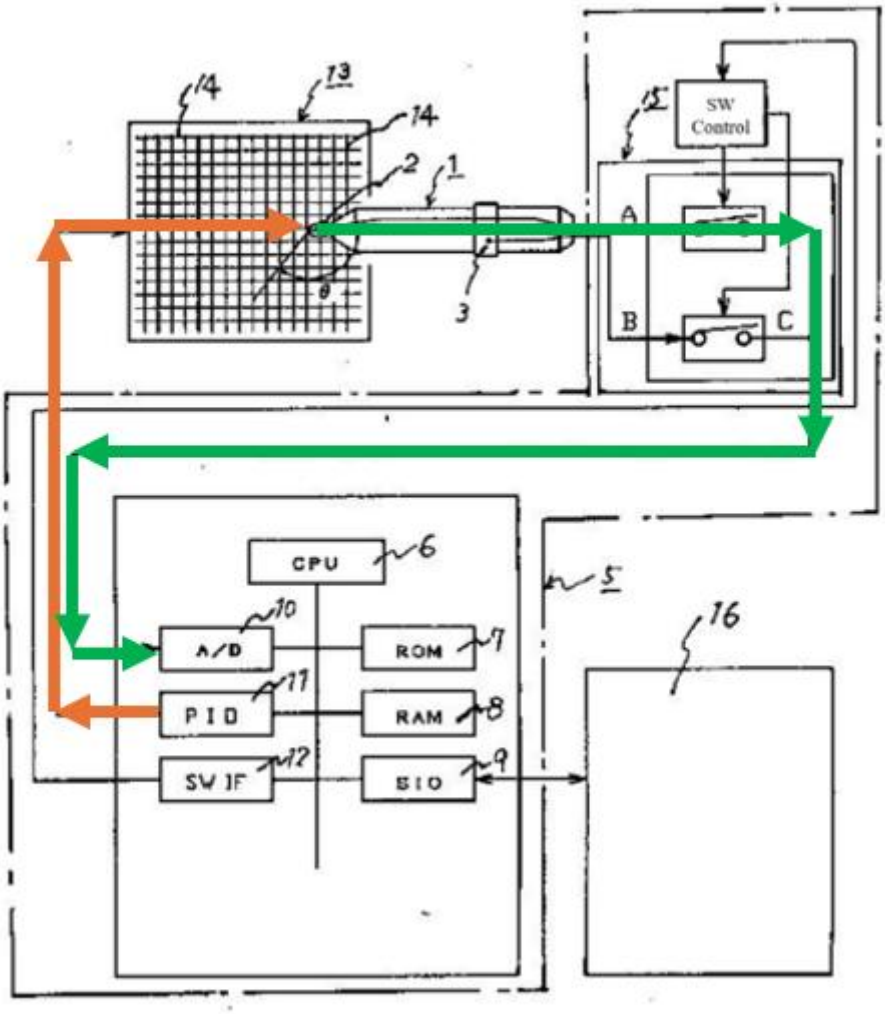
When Ikeda's [0008] is considered in full, it is clear that the signals from the tablet are detected using the "detection units 2 and 3," as described later in Ikeda [0011] for example, and then passed to a "main body," that is the portion including a "CPU 6" (Ikeda, [0009]), through cable 4.

Petitioner's expert repeatedly provides the same mistaken citation to [0008] of Ikeda (*see, e.g.*, Ex. 1008 at 82 (Appendix at 25)) and then, confirming the mistaken view of Ikeda that permeates the Petition, advances the following mischaracterization of Ikeda (Ex. 1008 at 189 (Appendix at 132)):

> The ***pen-tip detection unit is driven by signals from the signal production circuitry in the main body*** (CPU 6, ROM 7, RAM 8), and these signals are used to establish capacitive coupling with electrodes on the tablet to detect position and orientation. The signal applied to the pen-tip portion thereby forms the required capacitive relationship with the sensor surface. IKEDA, Fig. 3, ¶[0011].

This is wrong, and not what Ikeda discloses. Ikeda in paragraph [0011] states the opposite, because it is not the "pen-tip detection unit" that is driven. Rather, as depicted in orange in an annotated version of Ikeda's FIG. 3 below, Ikeda instead discloses that the lines of "tablet 13 are driven" to create an electrostatic coupling.

[Fig. 3]



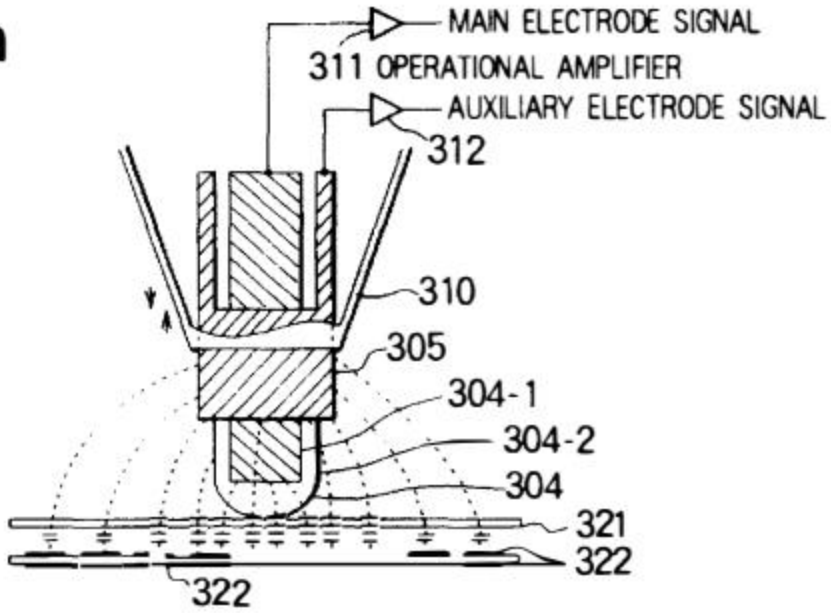
As depicted in the green in the annotated FIG. 3 of Ikeda above, the "pen-tip detection unit 2" then detects a signal associated with the coupling and passes it (through a cable) to an A/D converter (within the main body 5 of Ikeda):

> The electrode lines 14, 14, 14, ... in the X and Y axis directions of the tablet 13 are driven by applying PIO 11 pulses, and the coordinate signal is sent to the connected A/D converter 10 through electrostatic capacitance coupling between each electrode line 14, 14, 14, ... and the detection unit 2 for coordinate detection. The detected analog signal is converted into a digital signal using the control program in ROM 7 and stored as coordinate data in the RAM 8 of the coordinate input device.

Ikeda, [0011]. Thus, the Petitioner either misunderstands or misrepresents the disclosures of Ikeda, and therefore fails to realize and reconcile the technical incompatibilities between Yoshida and Ikeda.

Further, the Petition makes similar mistakes concerning Iguchi. In Iguchi, a pen-shaped position indicator has a main electrode and an auxiliary electrode. As shown in FIG. 27a of Iguchi, reproduced below, the signals from the main and auxiliary electrodes are received, output signals resulting from signals driven on a sensor surface:

FIG. 27a



See Iguchi, 30:48-57 ("***An output*** of the main electrode 304 is transmitted to the central processing section 303 through an operational amplifier 311. … ***An output*** of the auxiliary electrode 305 is transmitted to the central processing section 303 through an operational amplifier 312.") (emphasis added).

Nevertheless, the Petition seems to point to FIG. 29a and FIG. 29b of Iguchi to argue that "Iguchi teaches signal modulation (timing, phase, or waveform) across electrodes so their capacitive couplings can be independently resolved at the tablet side, enabling both positional and angular detection." Pet., 18 (citing Iguchi, Figs. 29a, 29b; 18:14-36). These portions of Iguchi teach no such thing. As far as Patent Owner can determine, either this argument or its citations have been completely hallucinated by Petitioner.

FIG. 29a and FIG. 29b are plainly described in Iguchi as depicting "output" signals. Iguchi, 31:26-31 ("FIG. 29a shows waveforms of output signals provided by the main and auxiliary electrodes when the input pen is vertically located with respect to the tablet 302. FIG. 29b shows waveforms of output signals provided by the main and auxiliary electrodes when the input pen is inclined 45° with respect to the tablet 302."). Confirming that the direction of travel of these signals is away from a tablet's surface and not towards it, Iguchi explains that signals travel from the electrode through the operational amplifiers to a central processing unit. Iguchi, 30:48-50 ("An output of the main electrode 304 is transmitted to the central processing section 303 through an operational amplifier 311."); Iguchi, 30:55-57 ("An output of the auxiliary electrode 305 is transmitted to the central processing section 303 through an operational amplifier 312.").

Moreover, the portion of Iguchi cited by Petitioner, 18:14-36, is nonsensical and irrelevant to Petitioner's argument that Iguchi "teaches signal modulation (timing, phase, or waveform) across electrodes." This portion of Iguchi, 18:14-36, is reproduced below to show just how off-topic this citation is for the disclosures allegedly attributed to it:

FIG. **35** is a view showing a cordless system detecting pen in accordance with another embodiment of the present invention;

FIG. **36** is a detailed view of an ID code generating circuit of the detecting pen shown in FIG. **35**;

FIG. **37** is a view for explaining the construction of a coordinate inputting apparatus in accordance with another embodiment of the present invention;

FIG. **38** is a first view showing operating timings of signals in the coordinate inputting apparatus shown in FIG. **37**; and

FIG. **39** is a second view showing operating timings of signals in the coordinate inputting apparatus shown in FIG. **37**.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The preferred embodiments of a coordinate inputting apparatus and a signal transmitting system thereof in the present invention will next be described in detail with reference to the accompanying drawings.

A coordinate inputting apparatus in accordance with a first embodiment of the present invention will first be described with reference to FIG. **14**. This coordinate inputting apparatus approximately has the same entire schematic construction as the general coordinate inputting apparatus shown in FIG. **1**. Accordingly, only constructional portions different from the general coordinate inputting apparatus will next be explained. The same constructional portions as FIG. **1** are designated by the same reference numerals and an explanation thereof is omitted in the following description.

The coordinate inputting apparatus in this embodiment has a separating circuit **1** for separating signals from each other, a cable **2** as a cable means and a position indicating pen **3** as a position indicating means. The cable **2** connects

Petitioner's expert reiterates the same citation and does not provide any additional support for Petitioner's apparently-hallucinated citation to Iguchi's 18:14-36. *See* Ex. 1008, ¶74. Indeed, Petitioner's expert goes further in paragraph 74 of his declaration and imagines the non-existent disclosure suggests "modulating" and "applying" signals to the electrodes rather than, as Iguchi actually discloses, detecting signals using the electrodes. Ex. 1008, ¶74.

What is also remarkable is that Petitioner provides this same citation to 18:14-36 of Iguchi three times in the Petition along with another questionable citation to column 17 of Iguchi. Pet., 18 (also citing 17:24-45, which is a description of Iguchi's figures), 20 (same), 70 (same). Similarly, Petitioner's expert repeats the error of citing to a meaningless passage six times for what appears to be hallucinated disclosures that cannot be found in Iguchi. Ex. 1008, ¶¶ 74, 75, 112, 114, 116, 118.

With the correct understanding of Ikeda and Iguchi in mind relative to the independent claims, it is also apparent that, like Yoshida, neither Ikeda nor Iguchi discloses or suggests a pen-shaped position indicator with the full "detection signals" features required by claim 1, namely the "signal production circuit configured to generate first and second signals that are distinguishable from each other" where "the first and second signals generated by the signal production circuit, in operation, are transmitted to the first and second electrodes via the conductive lines" and where "the first and second electrodes are configured to form first and second capacitive relationships with the sensor surface, respectively, to ***generate detection signals in the sensor surface based on which angle information of the pen-shaped position indicator is obtainable***," as recited in claim 1 of the '277 patent (emphasis added). Claim 10 contains similar limitations, as does the method of claims 14 and 22 where electrodes of a pen-shaped position

indicator are supplied with generated signals via lines and the method detects angular information of the pen-shaped position indicator.

3. The Proposed Combinations of Yoshida with Ikeda or Iguchi are Unsupported by Credible and Proper Motivation to Combine

The Petition proposes combining Yoshida with either Ikeda or Iguchi, but it ignores key differences between the references, and how each reference achieves its design objectives.

As noted above, Yoshida teaches a pen-shaped position indicator that drives electrodes in the pen to create a constant electric field on a tablet surface despite the "rolling" of a pen. Ikeda and Iguchi disclose angle detection mechanisms that drive a tablet surface to induce an electric field that is detected at a pen. Petitioner's stated motivation would seemingly combine Yoshida's electrode structures with Ikeda's or Iguchi's angle detection. Pet., 20 ("A POSITA would have been motivated to combine Yoshida's disclosure of stylus electrode structures and capacitive relationships with Ikeda's disclosure of capacitive detection circuits for stylus tilt and angular detection."); Pet., 70-71 ("A POSITA would have been motivated to combine Yoshida's disclosure of stylus electrode structures and capacitive relationships with Iguchi's disclosure of capacitive detection circuits for tilt and angular detection to achieve more robust stylus tracking.").

But due to the Petition's misunderstanding of Ikeda and Iguchi or simply due to impermissible hindsight, there would be no motivation to change Ikeda's or Iguchi's angle detection mechanisms so that the pen would be responsible for generating signals to drive electrodes in the pen as opposed to operating as detecting electrodes as Ikeda and Iguchi teach. This is especially true since a POSITA would understand Yoshida to teach the imperative elimination of any effects of rolling or tilting a pen through driving of electrodes, thus rendering any such roll or tilt indistinguishable.

Accordingly, the Petition presents no reasonable combination, supported with a proper motivation to combine, that discloses or suggests a pen-shaped position indicator with every claimed feature related to the "detection signals," namely "a signal production circuit configured to generate first and second signals that are distinguishable from each other" where "the first and second signals generated by the signal production circuit, in operation, are transmitted to the first and second electrodes via the conductive lines" and where "the first and second electrodes are configured to form first and second capacitive relationships with the sensor surface, respectively, to ***generate detection signals in the sensor surface based on which angle information of the pen-shaped position indicator is obtainable***," as recited in claim 1 of the '277 patent (emphasis added). Claim 10 contains similar limitations, as does the method of claims 14 and 22 where

electrodes of a pen-shaped position indicator are supplied with generated signals via lines and the method detects angular information of the pen-shaped position indicator.

V. CONCLUSION

For the reasons presented above, the Petition should be denied, and no *inter partes* review should be instituted.

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CERTIFICATE OF WORD COUNT

The undersigned certifies that the foregoing PATENT OWNER'S PRELIMINARY RESPONSE complies with the type-volume limitation in 37 C.F.R. § 42.24(b)(1). According to the word-processing system's word count, the brief contains 4,650 words, excluding the parts of the brief exempted by 37 C.F.R. § 42.24(a).

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I hereby certify that on this date, a true and correct copy of the foregoing document was served via email, by consent, to Petitioner by serving the correspondence email address of record as follows:

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