

Samsung Electronics Co. Ltd., Samsung Electronics America, Inc., and Apple Inc. v. Neonode Smartphone LLC

IPR2021-00144
U.S. Patent No. 8,095,879

Petitioners' Demonstrative Slides

Before Hon. Kara L. Szpondowski, Christopher L. Ogden, and Scott B. Howard

September 6, 2022

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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'879 Patent, Claim 1

1.pre	A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:
1.a	a touch sensitive area in which a representation of a function is provided,
1.b	wherein the representation consists of only one option for activating the function and
1.c	wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location,
1.d	wherein the representation of the function is not relocated or duplicated during the gliding.

'879 Patent, Dependent Claims 2-6, 12-17

2	The computer readable medium of claim 1, wherein the function, when activated, causes the user interface to display icons representing different services or settings for a currently active application.
3	The computer readable medium of claim 2, wherein the user interface is characterised in, that a selection of a preferred service or setting is done by tapping on a display icon corresponding to the preferred service or setting.
4	The computer readable medium of claim 1, wherein the function, when activated, causes the user interface to display a keyboard and a text field.
5	The computer readable medium of claim 4, wherein said text field is used for inputting and editing of text through said keyboard.
6	The computer readable medium of claim 1, wherein the function, when activated, causes the user interface to display a list with a library of available applications and files on the mobile handheld computer unit.
12	The computer readable medium of claim 1, wherein the user interface is characterised in, that an active application, function, service or setting is advanced one step by gliding the object along the touch sensitive area from left to right, and that the active application, function, service or setting is closed or backed one step by gliding the object along the touch sensitive area from right to left.
13	The computer readable medium of claim 1, wherein the user interface is characterised in, that said representation of said function is located at the bottom of said touch sensitive area.
14	The computer readable medium of claim 1, wherein the touch sensitive area is 2-3 inches in diagonal dimension.
15	The computer readable medium of claim 1, characterised in, that said computer program code is adapted to function as a shell upon an operating system.
16	The computer readable medium of claim 1, wherein the representation is finger-sized.
17	The computer readable medium of claim 1, wherein the location where the representation is provided does not provide touch functionality for a different function.

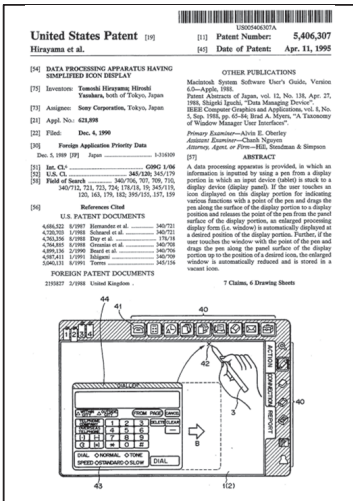
Petition, 1-2.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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'879 Patent Prior Art

Hirayama-307
U.S. 5,406,307



EX1006.

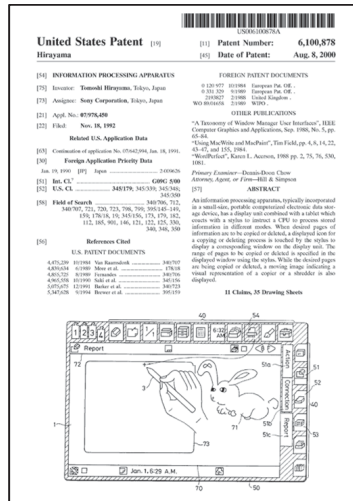
Ren

"Improving Selection on Pen-Based Systems," ACM Transactions on Computer-Human Interaction



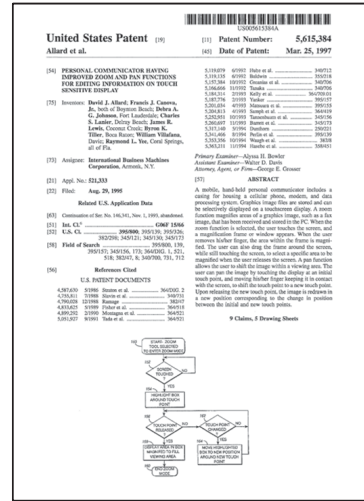
EX1004.

Hirayama-878
U.S. 6,100,878



EX1009.

Allard
U.S. 5,615,384



EX1010.

Grounds

Ground	Claims	Basis	Prior Art
2A	1, 2, 4, 5, 14-17	§103	Hirayama-307, Ren
2B	3	§103	Hirayama-307, Ren, Hirayama-878
2C	6, 13	§103	Hirayama-307, Ren, Allard
2D	12	§103	Hirayama-307, Henckel

The parties stipulated to withdrawal of Grounds 1 and 3.
Paper 50.

'879 Patent Overview

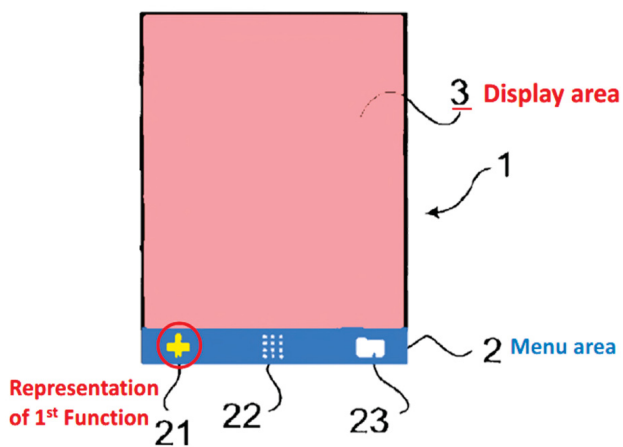
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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'879 Patent, Claim 1

1.pre	A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit , the user interface comprising:
1.a	a touch sensitive area in which a representation of a function is provided,
1.b	wherein the representation consists of only one option for activating the function and
1.c	wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location,
1.d	wherein the representation of the function is not relocated or duplicated during the gliding.

'879 Patent



EX1001, FIG. 1 (emphasis and annotations added).

FIG. 1 illustrates a user interface for a mobile handheld computer unit. The user interface according to the present invention is specifically adapted to computer units comprising a touch sensitive area 1, which is divided into a menu area 2 and a display area 3. It should be understood that there are several different kinds of known touch sensitive displays and that the present invention does not depend on what kind of touch sensitive display that is used in relation to the inventive user interface.

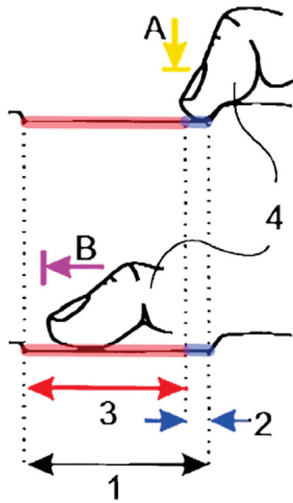
EX1001, 3:50-58.

According to the present invention the menu area 2 is adapted to present a representation of a first 21, a second 22 and a third 23 predefined function.

The first function 21 is a general application dependent function, the second function 22 is a keyboard function, and the third function 23 is a task and file manager.

EX1001, 4:1-6.

'879 Patent



EX1001, FIG. 2
(emphasis added).



EX1001, FIG. 1 (rotated
and labels removed,
emphasis added).

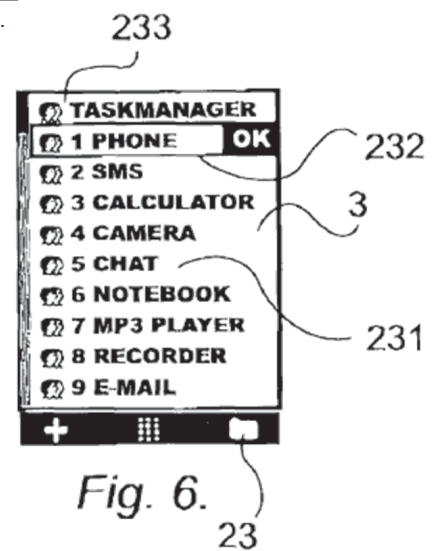
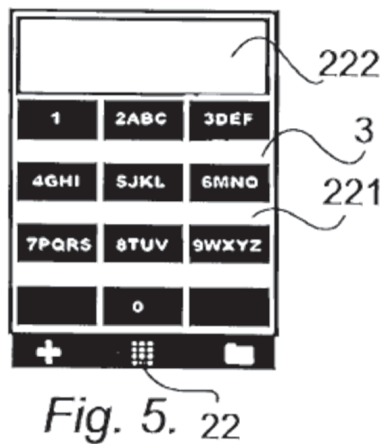
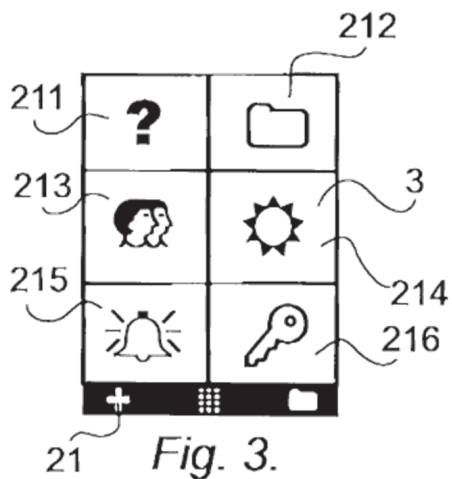
FIG. 2 shows that any one of these three functions 21, 22, 23 can be activated when the touch sensitive area 1 detects a movement of an object 4 with its starting point A within the representation of a function on the menu area 2 and with a direction B from the menu area 2 to the display area 3.

EX1001, 4:7-11.

'879 Patent

The first function 21 is a general application dependent function, the second function 22 is a keyboard function, and the third function 23 is a task and file manager.

EX1001, 4:4-6.



EX1001, FIGS. 3, 5, 6.

Claim Construction

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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'879 Patent, Claim 1

1.pre	A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:
1.a	a touch sensitive area in which a representation of a function is provided,
1.b	wherein the representation consists of only one option for activating the function and
1.c	wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location,
1.d	wherein the representation of the function is not relocated or duplicated during the gliding.

Patent Owner's Proposed Construction

Claim Term	Patent Owner's Proposed Construction
"gliding ... away from the touched location" (claim 1)	<i>Does not include "drag and drop"</i>

PO's Response, 19-25.

Claim Term	Patent Owner's Proposed Construction
"gliding" (claim 1)	?

PO's Sur-reply, 7-9, 12-14.

Reply, 1-9.

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Patent Owner's Proposed "Construction"

Claim Term	Patent Owner's Proposed "Construction"
"gliding ... away from the touched location" (claim 1)	Does not include "drag and drop"

PO's Response, 19-25.

67. Similarly, even though both the claimed "gliding ... away" gesture and a drag-and-drop operation may include movement of the stylus/finger on the screen, which may even happen to start and end at similar positions on the screen, they are fundamentally different with pronounced differences for the user. In a drag-and-drop operation, the user generally perceives some form of an object/function as behaving as if it is being dragged by the movement of the stylus/pen. Sometimes an operating system provides visual feedback by actually showing the object moving on the screen together with the stylus/pen.

Rosenberg Decl. (EX2001), ¶ 67;
Rosenberg Dep. Trans. (EX1053), 25:5-26:23.

Reply, 2, 4.

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Claim's Plain and Ordinary Meaning

the **object** gliding **along the touch sensitive area** away from the touched location, wherein the representation of the function is not relocated or duplicated during the gliding.

'879 Patent (EX1001), Claim 1.

opinion. EX1053, Rosenberg Tr., 82:1-85:19. In other words, the claims describe the “multi-step operation” in terms of how and where the object (*i.e.*, pen/finger) touches the touch sensitive area of the user interface, not in terms of how the user interface reacts to that interaction. The reaction of the user interface is captured in a separate “wherein” clause, which independently requires that “the representation of the function is not relocated or duplicated during the gliding.” To adopt Dr.

Bederson S. Decl. (EX1051), ¶ 23.

Proper Claim Construction Standard

The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed.Cir.2005) (en banc).

There are only two exceptions to this general rule:

- 1) when a patentee sets out a definition and acts as his own lexicographer, or
- 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.

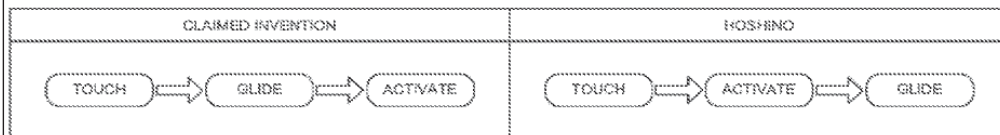
Thorner v. Sony Computer Entertainment America LLC, 669 F. 3d 1362, 1365-67 (Fed. Cir. 2012).

- Neonode does not allege the ordinary meaning of “gliding ... away from the touched location” excludes any definition of “drag-and-drop”
- Neonode does not allege that the patentee acted as his own lexicographer
 - Neither “gliding” nor “gliding away” is in the specification
- *Neonode alleges the patentee disavowed the full scope of “gliding ... away” during prosecution*
 - The alleged disavowal is not clear and unmistakable
 - The alleged disavowal does not disclaim Hirayama-307’s disclosure

Neonode Misrepresents Prosecution History

away from the location. Applicant respectfully submits that, unlike the claimed invention, Hoshino activates the function solely in response to a push-in operation; i.e., a hard touch, and not in response to a drag operation. Indeed, at par. 92 Hoshino recites

In distinction, the claimed invention activates a function in response to a multi-step touch-and-glide operation. Thus in particular, referring to the illustration below, the claimed invention responds to a (hard) touch followed by a glide differently than Hoshino. Specifically, the claimed invention activates a function after the glide, whereas Hoshino activates the function after the (hard) touch.



Function activation operation of claimed invention vs. that of Hoshino

EX1003, 169-170.

Neonode Misrepresents Prosecution History

Some distinctions between claimed invention and Hoshino		
	Claimed invention	Hoshino
Objective	Novel touch-and-glide user interface operation	Discriminate between two conventional operations; namely, (1) touch, and (2) drag-and-drop
Hardware	Touch screen	Touch screen with pressure sensor
<u>Function Activation</u>	In response to both steps of a multi-step operation; namely, (1) touch, followed by (2) a glide	In response to hard touch

Hard touch = press > P2

Reply, 7 (citing EX1003, 170)

Neonode Misrepresents Prosecution History

In Paragraph 3 of the Office Action, the Examiner has indicated that it would have been obvious to combine the teaching of Hoshino with the medium of Nakajima. Applicant respectfully disagrees. Hoshino does not teach gliding a finger away from an icon. Instead, Hoshino teaches a drag-and-drop operation for moving an icon. In Nakajima the icons are either carve-outs in a frame surrounding a touch pad, or icons on an overlay of the touch pad. It is not possible to move the icons of Nakajima. As such, even the combination of Hoshino and Nakajima does not suggest the touch-and-glide operation of the claimed invention.

EX1003, 171.

PO's New "Gliding" Argument

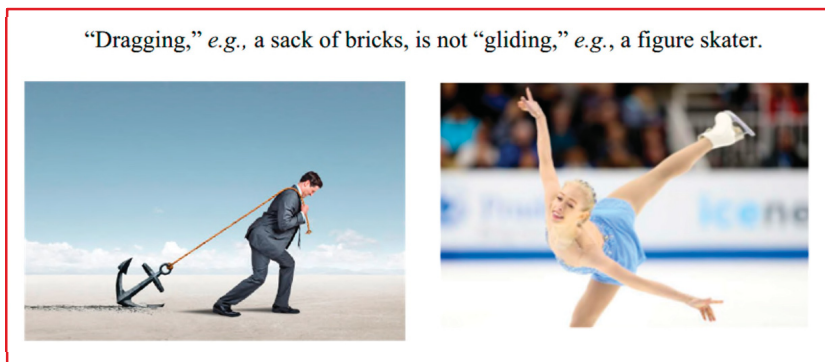
Claim Term	Patent Owner's Proposed Construction
"gliding"	?

PO argues: Hirayama's "dragging" does not disclose "gliding"

PO Sur-reply, 7-9, 12-15.

- The Board should reject PO's claim construction argument as untimely and unsupported by evidence
- Petitioners need not show Hirayama uses the same language as the claim
- PO fails to articulate a plain meaning for an "object gliding along [a] touch sensitive area"
- The relevant context is the movement of an object (pen/finger) along the surface of a touch sensitive area

'879 Patent (EX1001), 6:56-57, 4:9-11;
Reply, 1-2, 19-20.



PO Sur-reply, 8.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

PO's New "Gliding" Argument

PO argues: Hirayama's "dragging" does not disclose "gliding"

PO Sur-reply, 7-9, 12-15.

- PO's expert admitted that a glide and a drag "may have overlapping movements"
Rosenberg 2nd Dec. (EX2007), ¶ 65; Rosenberg Dep. Trans. (EX1053), 25:5-26:23.
- PO argues: The applicant allegedly "emphasized that the claimed 'gliding ... away' is not just any movement but a 'gliding' or swiping' gesture"
PO Sur-reply, 14 (citing '879 File History (EX1003), 357, 269).
- PO argues: Petitioner did not substantiate its position that dragging discloses gliding because "Dr. Bederson, did not perform any 'analysis of any potential distinction between the term gliding a pen and moving a pen'"
PO Sur-reply, 14.

Ground 2
**Claims 1-6, 12-17 are At Least Obvious
in view of Hirayama-307 (Ex. 1006) and Ren (Ex. 1004)**

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Hirayama-307 – PO argues Two Differences from Claim 1

- 1) Whether Hirayama-307 discloses or renders obvious a touched icon is “not relocated or duplicated during the gliding”
- 2) Whether Hirayama-307 discloses or renders obvious “gliding ... away from the touched location”

- Hirayama discloses, or at least renders obvious, the dialer icon 41 is not relocated, duplicated, or otherwise dragged during the gliding of the pen
- Hirayama discloses, or at least renders obvious, “gliding ... away from the touched location”

➤ The Board correctly rejected PO’s “not relocated or duplicated” argument: “we find that Petitioner shows sufficiently at this stage of the proceeding that Hirayama-307 alone discloses the limitation at issue.”

Paper 26, 7 n. 10.

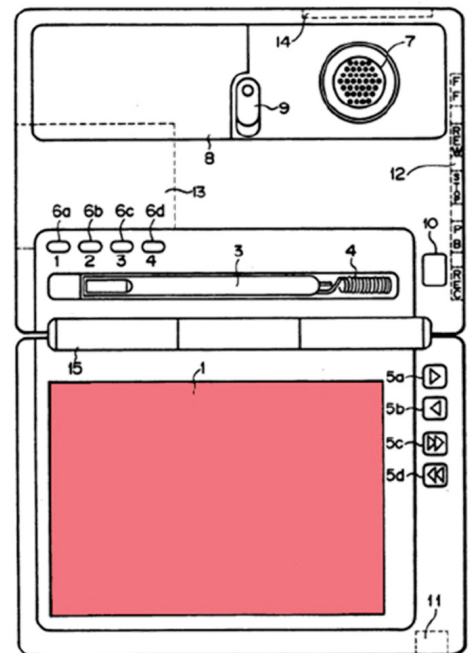
Hirayama-307 (Exhibit 1006)

According to the present invention. In this case, the data processing apparatus of the present invention is applied to, for example, a so-called portable computer of a very small type.

Referring to FIG. 1, there is shown a display apparatus formed of a liquid crystal display device (LCD) or the like, that is, a display portion 1. The display portion 1 is adapted to display thereon video image data from the CPU, which will be described later. An input apparatus, i.e. an input tablet 2 formed of a so-called transparent touch sensor or the like, is mounted on the surface of the display portion 1.

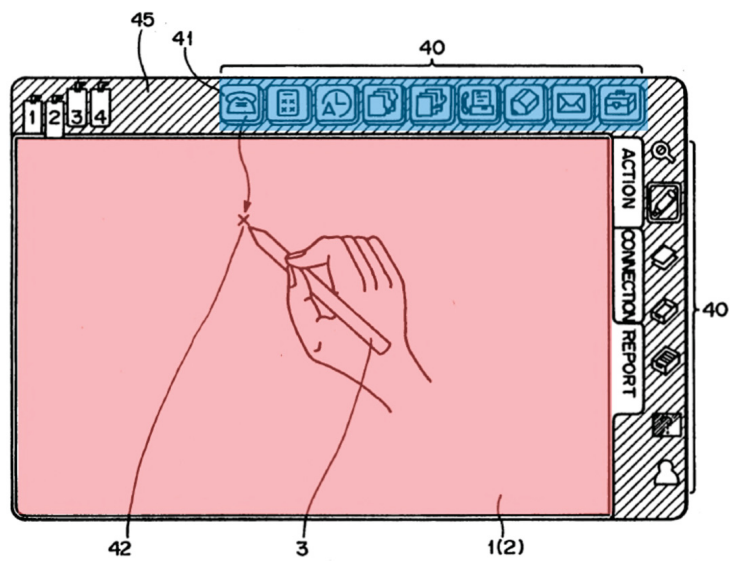
A pen 3 is adapted to input desired data or the like in cooperation with the input tablet 2. The pen 3 incorpo-

Hirayama-307 (EX1006), 2:67-3:8.



Hirayama-307 (EX1006), FIG. 1.

Hirayama – Figure 3A



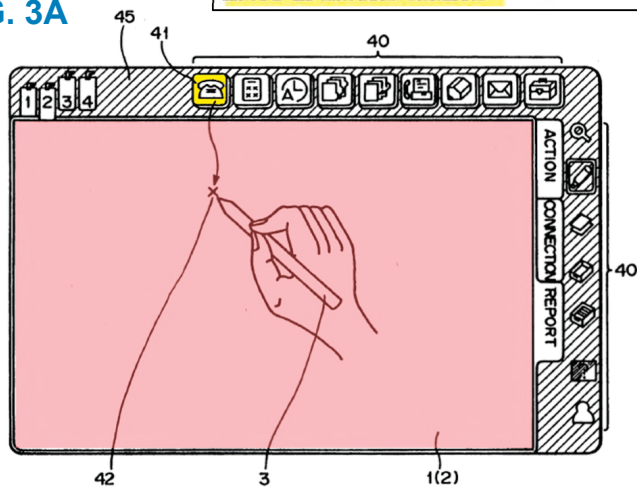
Hirayama-307 (EX1006), FIG. 3A
(emphasized).

Hirayama – Activating and Deactivating a Function

More specifically, it is an object of the present invention to provide a data processing apparatus in which the user can activate or deactivate a designated function by the user when the user drags a pen.

It is another object of the present invention to provide a data processing apparatus in which a starting or ending position of a dragging operation can be designated in natural fashion.

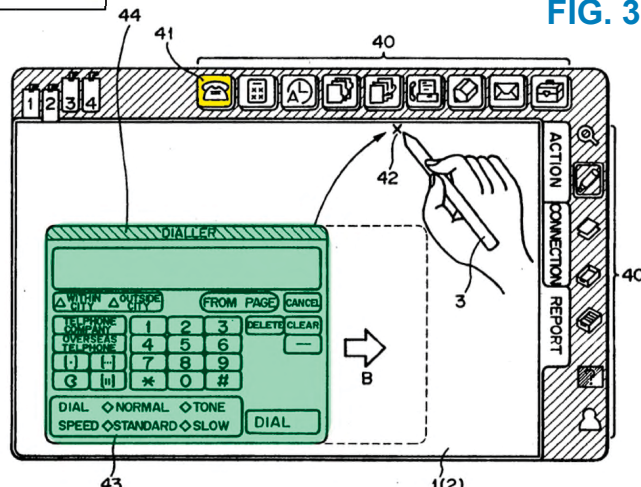
Activate:
FIG. 3A



Hirayama-307 (EX1006), FIG. 3A (emphasized).

Hirayama-307
(EX1006), 1:52-59.

Deactivate:
FIG. 3B



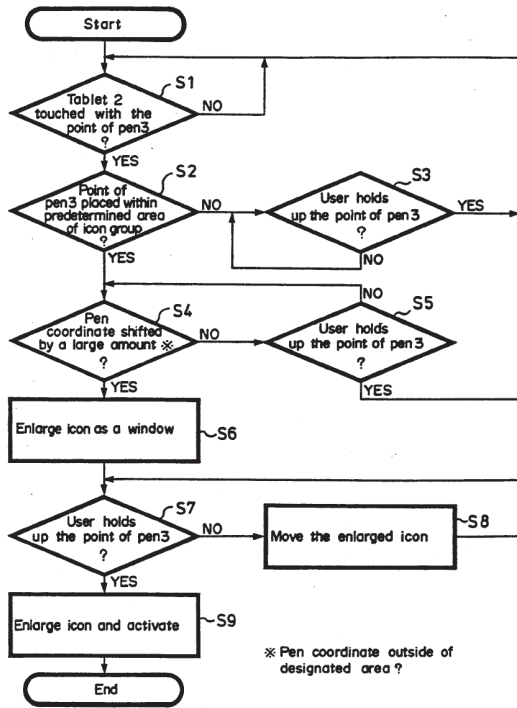
Hirayama-307 (EX1006), FIG. 3B (emphasized).

Petition, 51-54, 60-61.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

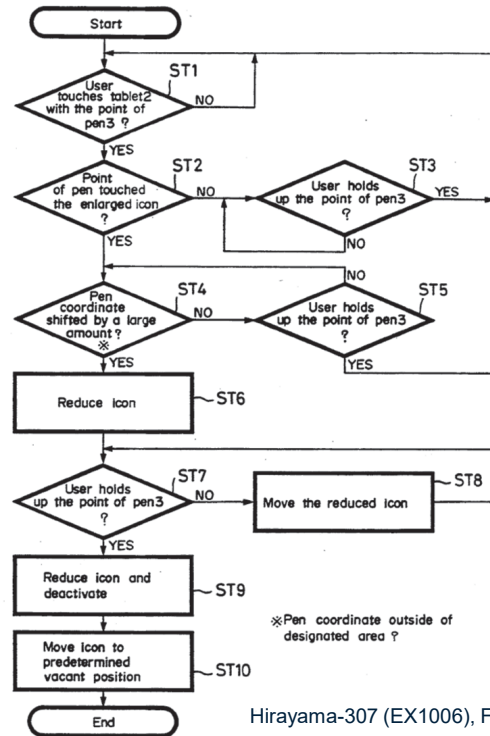
Hirayama – Activating and Deactivating a Function

Activate:
FIG. 4A



Hirayama-307 (EX1006), FIG. 4A.

Deactivate:
FIG. 4B



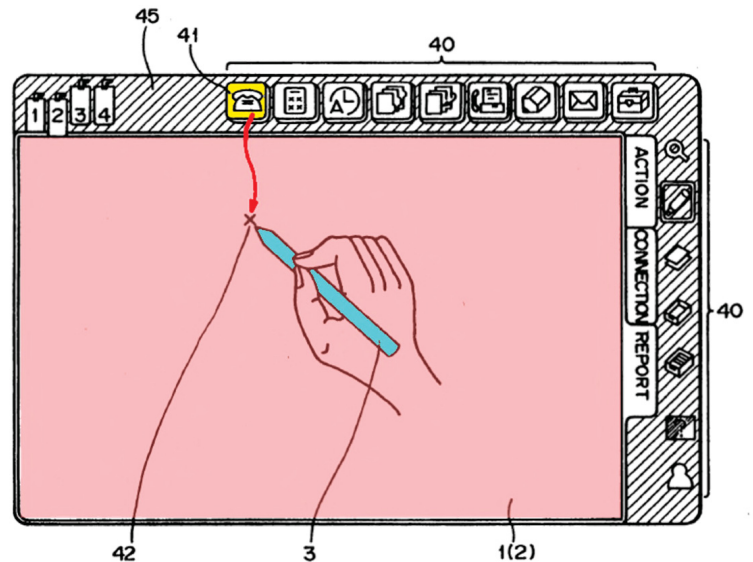
Hirayama-307 (EX1006), FIG. 4B.

Hirayama: Activating a Function

tion 1 as shown in FIG. 3A. When a desired processing, for example, a dialler processing, from a plurality of these icon groups 40 is executed, the user touches an icon 41 on which a picture of a telephone is drawn in various icon groups 40 with the point of the pen 3. Since as the point of the pen 3 approaches the panel surface of the display portion 1 serving as the input tablet 2 a cross-shaped position designating cursor 42 is displayed on the picture screen of the display portion 1, the user can visually confirm the exact position of the point of pen 3 on the input tablet 2 very clearly. Then, if the user moves (i.e. drags) the point of the pen 3 to the display position on the surface of the input tablet 2 without being separated therefrom after having touched the desired icon 41 with the point of the pen 3, and takes the point of the pen 3 off from the surface of the input tablet 2, an icon (hereinafter be referred to as a window) enlarged in the form of the processing display mode of the desired icon 41 is automatically displayed on the display portion 1 as shown in FIG. 3B.

Hirayama-307 (EX1006) at 4:57-5:12.

icon 41 = "representation of a function"

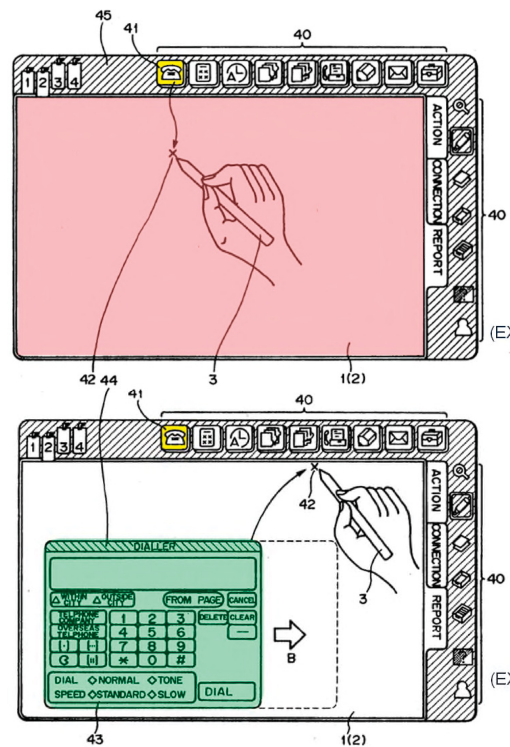


Hirayama-307 (EX1006), FIG. 3A (emphasized) (arrow in original).

Hirayama: “Enlarged Icon” ≠ “Desired Icon 41”

tion 1 as shown in FIG. 3A. When a desired processing, for example, a dialler processing, from a plurality of these icon groups 40 is executed, the user touches an icon 41 on which a picture of a telephone is drawn in various icon groups 40 with the point of the pen 3. Since as the point of the pen 3 approaches the panel surface of the display portion 1 serving as the input tablet 2 a cross-shaped position designating cursor 42 is displayed on the picture screen of the display portion 1, the user can visually confirm the exact position of the point of pen 3 on the input tablet 2 very clearly. Then, if the user moves (i.e. drags) the point of the pen 3 to the display position on the surface of the input tablet 2 without being separated therefrom after having touched the desired icon 41 with the point of the pen 3, and takes the point of the pen 3 off from the surface of the input tablet 2, an icon (hereinafter be referred to as a window) enlarged in the form of the processing display mode of the desired icon 41 is automatically displayed on the display portion 1 as shown in FIG. 3B.

Hirayama-307 (EX1006) at 4:57-5:12.



Hirayama-307 (EX1006), FIG. 3A (emphasized).

Hirayama-307 (EX1006), FIG. 3B (emphasized).

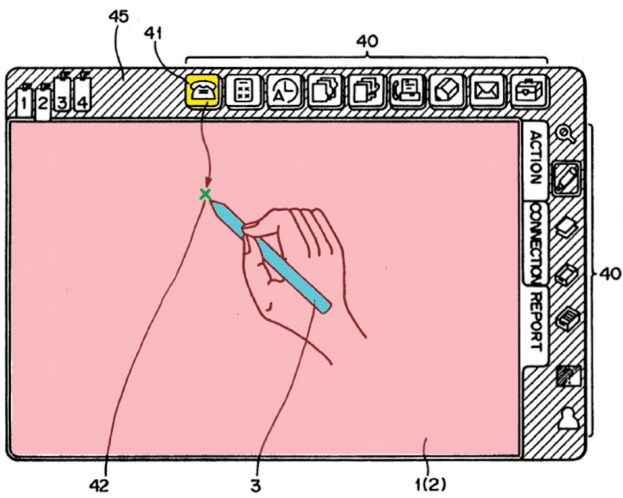
Hirayama's "Enlarged Icon," "Processing Display Mode," is Window 43

"In step S6, the processing display form of the icon 41 designated is enlarged as a window 43 shown in FIG. 3B." Hirayama-307 (EX1006), 5:64-66; Paper 26, 7.

"In step S8, when the user wants to move the window 43 shown, for example, in FIG. 3B to the central position of the display portion 1 as shown by an arrow B in FIG. 3B, the user moves the point of the pen 3 in the arrow B direction and drags the pen 3 to the position shown by the broken line, then the large display icon, i.e. the window 43 is moved to the position shown by the broken line in FIG. 3B." Hirayama-307 (EX1006), 6:7-14; Paper 26, 7.

"It is determined in decision step ST2 whether or not the point of the pen 3 touches the large icon, i.e. the upper edge portion 44 of, for example, the window 43 shown in FIG. 3B"
Hirayama-307 (EX1006), 6:44-47.

Hirayama: Activating a Function



Hirayama-307 (EX1006), Fig. 3A (emphasized).

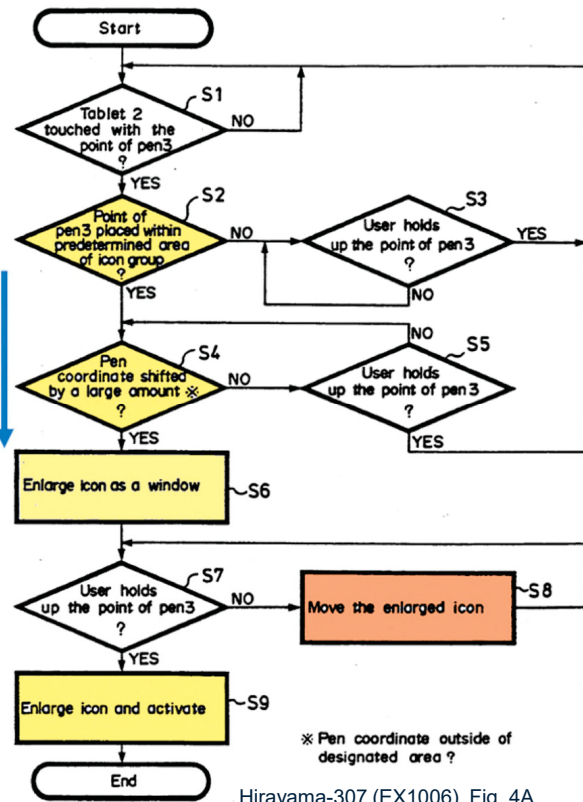
(i) Pen (object) touches touch sensitive area at location of dialler icon 41

No discussion of movement of icon 41

(ii) User glides pen (object) along the touch sensitive area away from the location touched in S2

Window 43 associated with dialler icon 41 displayed

Dialler window 43 activated

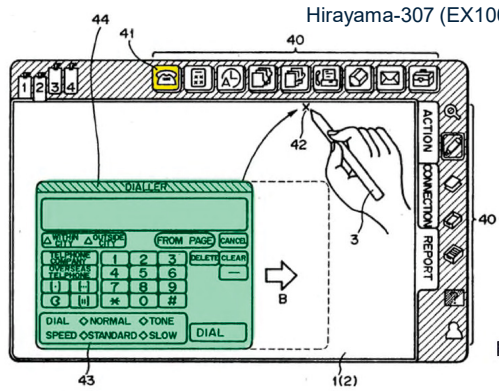


Hirayama-307 (EX1006), Fig. 4A (emphasized, annotated).

* Pen coordinate outside of designated area?

Hirayama: Activating a Function

the routine proceeds to step S8. In step S8, when the user wants to **move the window 43** shown, for example, in FIG. 3B to the central position of the display portion 1 as shown by an arrow B in FIG. 3B, the user moves the point of the pen 3 in the arrow B direction and drags the pen 3 to the position shown by the broken line, then the large display icon, i.e. the window 43 is moved to the position shown by the broken line in FIG. 3B. At the completion of step S8, the routine, of course, returns to step S7. If it is determined that the user holds up the



Hirayama-307 (EX1006) at 6:7-16.

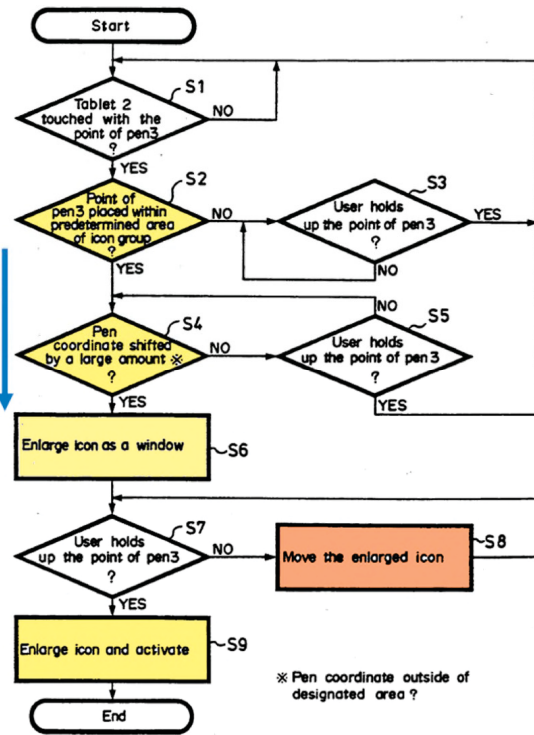
Hirayama-307 (EX1006),
Fig's. 3A, 3B (emphasized).

Petition, 53-56; Reply, 10-13.

(i) Pen (object) touches touch sensitive area at location of dialler icon 41
 No discussion of movement of icon 41
 (ii) User glides pen (object) along the touch sensitive area away from the location touched in S2

Window 43 associated with dialler icon 41 displayed

Dialler window 43 activated



* Pen coordinate outside of designated area?

Hirayama-307 (EX1006), Fig. 4A
(emphasized, annotated).

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Hirayama's FIG. 4A Flowchart Would Practice Claim 1

Dr. Bederson:

65. A POSA would have recognized that implementation of Hirayama-307's processing flowchart of FIG. 4A and its corresponding description would have practiced the user interface of challenged claim 1. Neither the flowchart of FIG. 4A nor the corresponding description tell a POSA the icon 41 should be relocated, duplicated, or otherwise dragged during the movement of the pen. Notably, a POSA would have recognized that Hirayama-307 expressly teaches when to move/drag the window 43, which is not a relocation or duplication of the icon 41, with the movement of the pen in step S8 (indicated in orange in the above annotated FIG. 4A). EX1006, FIG. 4A, 6:7-14; EX1053, Rosenberg Tr. 94:10-95:12 (agreeing window 43 is not a duplication of icon 41). In other words,

Hirayama-307's FIG. 4A expressly illustrates and describes movements of interface elements when it intends for the system to provide for such movement, leaving a POSA to assume that where no such movement is described, none should be implemented. A POSA would have therefore recognized that Hirayama-307's flowchart at FIG. 4A and corresponding description teaches a POSA to not move the dialler icon 41 with movement of the pen in step S4 and instead teaches that dialler icon 41 should remain stationary. Had Hirayama-307 intended otherwise, a POSA would have expected to see a rectangular box between steps S2 and S4 labeled "Move the icon," like shown in step S8.

Bederson S. Dec. (EX1051), ¶ 65.

Hirayama Discloses Claim 1

1.c	<p>wherein the function is activated by a multi-step operation comprising</p> <p>(i) an object touching the touch sensitive area at a location where the representation is provided and then</p> <p>(ii) the object gliding along the touch sensitive area away from the touched location,</p>
1.d	<p>wherein the representation of the function is not relocated or duplicated during the gliding.</p>

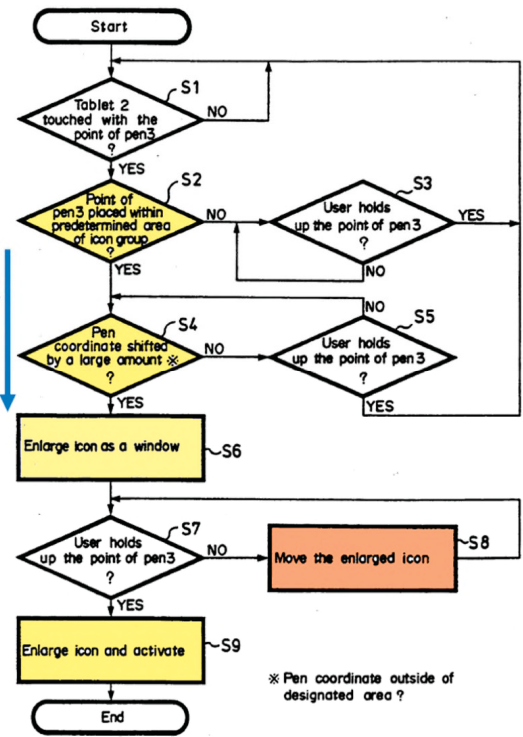
(i) Pen (object) touches touch sensitive area at location of dialler icon 41

No discussion of movement of icon 41

(ii) User glides pen (object) along the touch sensitive area away from the location touched in S2

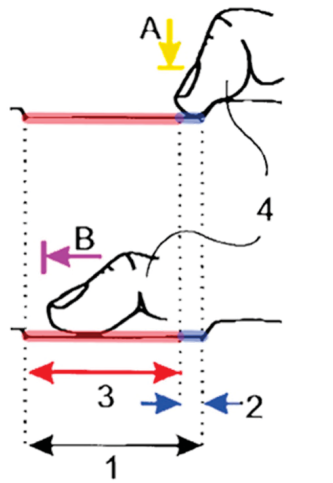
Window 43 associated with dialler icon 41 displayed

Dialler window 43 activated



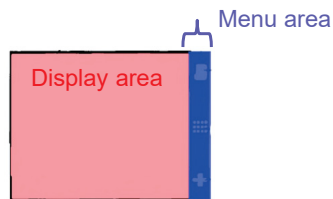
Hirayama-307 (EX1006), Fig. 4A (emphasized, annotated).

'879 Patent

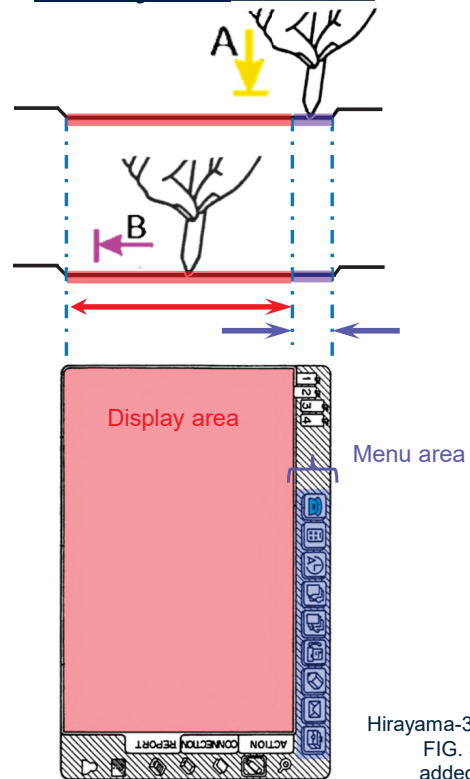


'879 Patent (EX1001),
FIG. 2 (emphasis added).

'879 Patent (EX1001),
FIG. 1 (emphasis added)(annotated).



Hirayama-307

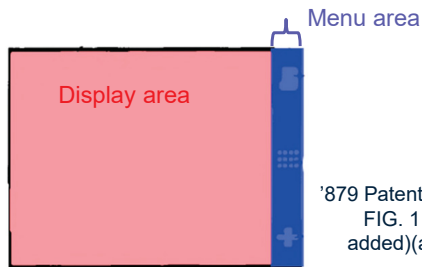


Hirayama-307 (EX1006),
FIG. 3A (emphasis added)(annotated).

'879 Patent

FIG. 2 shows that any one of these three functions 21, 22, 23 can be activated when the touch sensitive area 1 detects a movement of an object 4 with its starting point A within the representation of a function on the menu area 2 and with a direction B from the menu area 2 to the display area 3.

'879 Patent (EX1001), 4:7-11.



'879 Patent (EX1001), FIG. 1 (emphasis added)(annotated).

Petition, 4-5, 52; Reply 19-21.

Hirayama-307

pen 3 on the input tablet 2 very clearly. Then, if the user moves (i.e. drags) the point of the pen 3 to the display position on the surface of the input tablet 2 without being separated therefrom after having touched the desired icon 41 with the point of the pen 3, and takes the point of the pen 3 off from the surface of the input tablet 2, an icon (hereinafter be referred to as a window) enlarged in the form of the processing display mode of the desired icon 41 is automatically displayed on the display portion 1 as shown in FIG. 3B.

Hirayama-307 (EX1006) at 5:3-12.



Hirayama-307 (EX1006), FIG. 3A (emphasis added)(annotated).

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Hirayama's Disclosure as a Whole Renders Claim 1 Obvious

PO Argues:

Petitioner is wrong. As Dr. Rosenberg explains below, Hirayama-307 *expressly* states that “*the icon* [e.g., icon 41] display coordinate position *is moved in accordance with* the movement of the position coordinate of the point of *the pen*” *before* icon 41 is enlarged into the window 43. Ex. 1006 [Hirayama-307] 2:5-13.

PO Resp., 36-40.

- “Icon display coordinate position” is never mentioned again in Hirayama. Reply, 18.
- It would have at least been obvious to implement the flowchart of FIG. 4A as written, which would not drag the touched icon. Bederson Supp. Dec. (EX1051), ¶¶ 65, 80-82; Reply, 12-13, 18.
- Implementation of Hirayama's FIGs. 3A-3B that consistently show the dialer icon 41 in its original location in the hatched menu area (1) during gliding of the pen, (2) when the window 43 is displayed, and (3) when the user moves the pen from the window to the menu area to deactivate the dialer function, would not drag the icon 41. Petition, 61-62; EX1051, ¶ 63; Reply, 10, 12.
- Hirayama's claims do not mention the “icon display coordinate position” or moving the icon – breadth of the claims reflects the breadth of the disclosure Bederson Supp. Dec. (EX1051), ¶ 81; Hirayama-307 (EX1006), 7:44-56; Reply, 18.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Hirayama's Cursor Provides Feedback, Not the Icon

PO Argues:

Furthermore, a POSITA would understand that Hirayama-307's cursor is insufficient to provide feedback to the user during the drag-and-drop

PO Resp., 49.

- PO relies on the unsupported speculation of its expert, which should be rejected
PO Resp., 49-50 (quoting Rosenberg Dec. (EX2007), ¶¶ 86-88.
- Petitioners' expert (Dr. Bederson) explained that the cursor feedback during the gliding would be sufficient.
Petition, 60-62; Bederson Dec. (EX1002), ¶¶ 157-159; Reply 16-17, 21.
- Dr. Bederson's opinion, unlike Dr. Rosenberg's, is supported by additional evidence:
 - Sears (EX1012) corroborates the use of a cursor as feedback during touch-interface gliding gestures, teaches additional feedback that does not drag the icon
Bederson Supp. Dec. (EX1051), ¶ 100-104, (quoting Sears (EX1012), 19); Reply, 22-23.
 - *Neonode has no response to the Sears evidence*
- PO's argument that Hirayama's cursor is allegedly insufficient also relies on its faulty "drag-and-drop" argument – Hirayama does not move or "drop" the icon
Sur-reply, 25-26; Reply, 18-21.

Dragging the Icon Was Not Standard or Necessary

PO Argues:

Thus, there simply is no reason for a POSITA to implement Hirayama-307's drag-and-drop process, but avoid the industry-standard method of providing user feedback by "relocating or duplicating" the icon during the drag-and-drop operation.

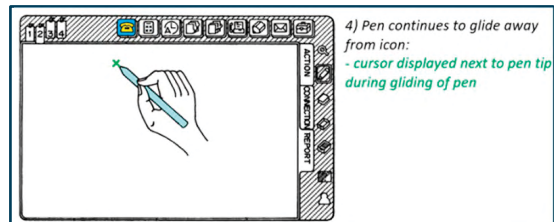
PO Resp., 47-50
(quoting Rosenberg
Dec. (EX2007), ¶ 85).

- PO's expert relies solely on a non-contemporaneous desktop example (MacOS 2021) EX2007, ¶¶ 84-85, 87.
- Petitioners' expert (Dr. Bederson), relying on contemporaneous evidence, explained why PO's expert is wrong:

➤ Visually dragging the icon on a tablet would have been computationally expensive, resulting in flickering and a poor user experience EX1051, ¶ 107 (discussing supporting disclosures from EX1009, EX1005, EX1060, EX1063); Reply, 25.

➤ Visually dragging the icon was unnecessary because the cursor provides feedback

EX1051, ¶ 96, 106; EX1006, 4:66-5:3; Reply, 21, 23-25.

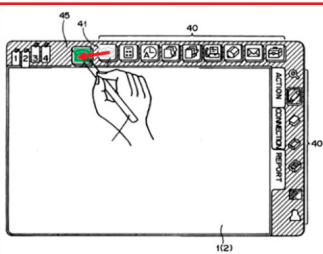


Bederson Supp. Dec.
(EX1051), ¶ 105;
Reply, 23-24.

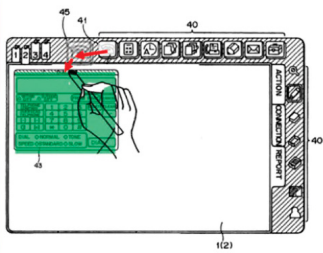
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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PO's Alleged "Schematics" of Hirayama are Wrong



While the stylus moves within hatched area 45, icon 41 moves with it. Ex. 1003 [Hirayama-307] 2:5-8; 5:39-53.



When the stylus moves outside of hatched area 45, icon 41 is "enlarged as a window 43." Ex. 1003 [Hirayama-307] 2:8-13; 5:59-66.

PO Resp., 38-39.

- PO relies on the embodiment where window 43 is displayed when the pen leaves the hatched region
- *PO's expert agreed that window 43 is not a duplication of icon 41* Rosenberg Dep. Tr. (EX1053), 94:10-95:12.
- *No reason to drag the icon in the hatched region—would be confusing and undesirable for icons in the middle to be dragged left or right over other icons*
- *Along vertical path from icon 41, no reason to drag the icon down the few millimeters between where pen touches and pen leaves hatched area*
- *Ignores the cursor—cursor 42 already provides feedback, no need to drag icon*
- *Nothing in column 5 supports dragging icon 41*

Hirayama Discloses Dragging Back To Still-Displayed Icon 41

PO argues: Hirayama's reference to a "vacant icon position" means the icon must have been relocated or moved with the pen

PO Resp., 41-42, 46, 63; PO Sur-reply, 24.

- Is contrary to Hirayama's express disclosure about dragging back to the icon 41:

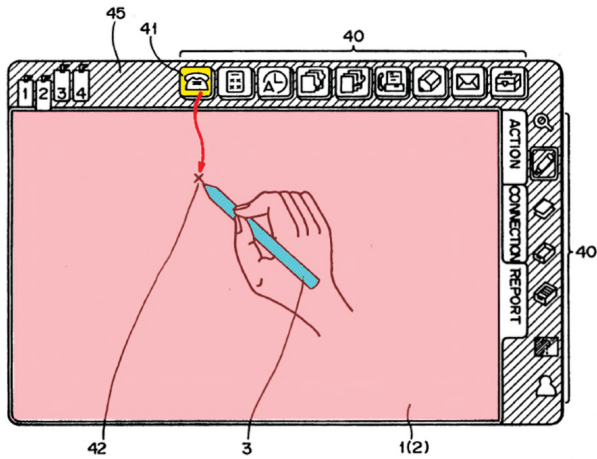
➤ **This means the icon 41 was not relocated or moved with the pen**

When the user wants to bring the large icon, i.e. the window 43 displayed on the display portion 1 as shown in FIG. 3B back to the original position, if the user touches the portion other than the function operation portion, for example, a hatched upper edge portion 44 within the window 43 with the point of the pen 3 and drags the point of the pen 3 back to the telephone icon 41 of the original icon group 40 without being apart from the tablet, then the icon of-large size can be returned to and stored in that position. In this operation, the pen 3 need not be always returned to the telephone icon 41, but if the pen 3 is returned to a predetermined icon in the icon group 40, then the window can automatically be stored in the vacant icon position. The

Hirayama-307 (EX1006), 6:22-35.

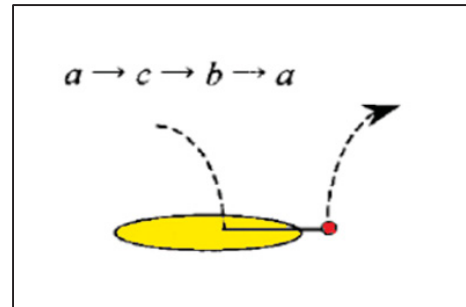
A POSA Given Hirayama's Disclosure Would Have Looked to Ren

Hirayama-307



Hirayama-307 (Exhibit 1006), Fig. 3A (emphasis added).

Ren's "Slide Off"



Ren (Exhibit 1004), Fig. 3 (emphasis added).

Claim 15 is Obvious in View of Hirayama

PO Argues:

While not discussed in the Petition (at 67), Petitioner's expert declaration appears to suggest that Hirayama-307's dialer application window in and of itself discloses the limitation of claim 15 by virtue of being a window. Ex. 1002

PO Resp., 66.

Dr. Bederson:

4:61-65. Hirayama307 further discloses “if the user moves (i.e. drags) the point of the pen 3 to the display position [in red] on the surface of the input tablet 2” that “an icon (hereinafter be referred to as a window) enlarged in the form of the processing display mode of the desired icon 41 is automatically displayed on the display portion 1 as shown in FIG. 3B.” EX1006, 5:3-12; FIG. 3B. A POSA would have recognized the user interface with icons for opening windows for, for example, the dialler function, is implemented in computer program code adapted to function as a shell upon the operating system of the portable computer. If Patent

Bederson Dec. (EX1002), ¶ 171; Petition, 67.

Claim 15 is Obvious in View of Hirayama

PO Argues:

implementing it within the operating system where, for example, a shell would consume more memory, and more CPU power, and would require additional coding. A single conclusory sentence is insufficient to meet Petitioner's burden.

PO Resp., 66.

➤ *No support for PO's argument*

Petition:

shell upon the operating system of the portable computer. Moreover, this claim would have been obvious over Hirayama307 and POSA knowledge of well-known systems to implement similar user interfaces as a shell upon an operating system (e.g., Windows CE based and other handheld devices). EX1002, ¶¶170-71.

Petition, 67.

➤ *Neonode's N1 and N2 devices were likewise a "shell" on top of Windows CE*

N1 Review (EX2012), 4; N2 Review (EX2013), 6, 11.

➤ *Neonode did not respond to this*

Secondary Considerations

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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PO's Evidence Does Not Meet Nexus Requirements

Nexus Standard

In order to accord substantial weight to secondary considerations in an obviousness analysis, "the **evidence of secondary considerations must have a 'nexus' to the claims**, i.e., there must be 'a legally and factually sufficient connection' between the evidence and the patented invention." *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1332 (Fed. Cir. 2019) (quoting *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988)). "**The patentee bears the burden of showing that a nexus exists.**" *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999).

Fox Factory, Inc. v. SRAM, LLC, 944 F. 3d 1366, 1373 (Fed. Cir. 2019).

Nexus Presumption Standard

That is, **presuming nexus is appropriate "when the patentee shows that the asserted objective evidence is tied to a specific product and that product 'embodies the claimed features, and is coextensive with them.'**" *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018) (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000)). Conversely, "[w]hen the thing that is commercially successful is **not coextensive with the patented invention—for example, if the patented invention is only a component of a commercially successful machine or process,**" the patentee is not entitled to a presumption of nexus. *Demaco*, 851 F.2d at 1392.

Fox Factory, Inc. v. SRAM, LLC, 944 F. 3d 1366, 1373-74 (Fed. Cir. 2019).

Secondary Considerations

PO's alleged evidence of non-obviousness should be rejected:

- (1) No nexus
 - PO did not prove coextensiveness → *no presumption of nexus*
 - No direct showing of nexus to the allegedly non-obvious limitations of claim 1
- (2) No industry praise or expert skepticism for the non-obvious limitations of claim 1
 - No link to the allegedly non-obvious limitation “the representation of the function is not relocated or duplicated during the gliding”
 - PO conflates a “swipe interface” with the disputed limitation, fails to untangle from zForce and other “swipe” gestures enabled by zForce
- (3) No actual commercial success or “licensing” success attributed to non-obvious limitations
 - No market share evidence
 - No nexus between the allegedly novel features and technology agreement

Secondary Considerations – No Presumption of Nexus

A patent claim is **not coextensive** with a product that includes a **"critical" unclaimed feature** that is claimed by a different patent and that materially impacts the product's functionality by "lead[ing] to a chainering that will retain a chain in even the worst conditions."

Fox Factory, Inc. v. SRAM, LLC, 944 F. 3d 1366, 1375 (Fed. Cir. 2019).

Prior Panel: Products Not Coextensive

That Neonode has obtained a separate patent for its zForce technology, which is also a feature of the N1 and N2 devices, also leads us to conclude that zForce is a significant feature not claimed in the '993 patent. See *Fox Factory*, 944 F.3d at 1375 (citing *Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1289, 1299 (Fed. Cir. 2010) (“finding that the patentee was not entitled to a presumption of nexus because the product embodied at least two patented inventions, and the burden thus remained on the patentee to show that the product’s success was due to the invention claimed in the patent asserted in the case”)).

Thus, based on the evidence of record, we find that Neonode has not shown that its N1 and N2 products are coextensive or nearly coextensive with the claimed inventions. And consequently, a presumption of nexus is inappropriate in this case.

IPR2021-00145, Paper 71 (FWD), 45.

Secondary Considerations – PO Failed to Prove Nexus

“[T]here must be a nexus to some aspect of the claim not already in the prior art”

In re Kao, 639 F.3d 1057, 1069 (Fed. Cir. 2011); Reply, 30.

- No evidence of praise directed to “not relocated or duplicated during the gliding”
- Alleged praise was focused on unclaimed features, including zForce

The unique and different thing of the NeoNode phone is that it uses a touch screen unlike any you've used or seen. In contrast to most touchscreens that sense the pressure of a stylus or a finger, the NeoNode's "zForce" technology uses a grid of infrared beams to determine the location of your finger. The grid consists of eight horizontal and nine vertical "beams." You can't see them as they are integrated in the roughly 1/8-inch rise of the bezel that surrounds the display. So that is how the display senses the location of a finger. Quite obviously, a 9 x 8 array of sensors isn't anything like a digitizer. The NeoNode therefore doesn't do handwriting recognition and you can't write or draw on it with a pen. The infrared grid is exclusively used to determine the position of your finger and the direction in which you move a finger. The latter ability is used to give the NeoNode its totally unique personality and mode of operation.

Pen Computing Magazine (EX2012), 2.

Reply, 31-32.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Prior Panel: No Nexus to Industry Praise

We agree with Petitioner that the evidence does not show a nexus between the industry praise and the features of the claimed invention. Rather, the praise was focused on unclaimed features such as Neonode's separately patented zForce technology. Neonode has not produced any evidence, for example, of praise directed to the tap-absent state recited in limitation 1.c or the multi-step gesture recited in limitation 1.d. Therefore, we give Neonode's evidence of industry praise little weight in our obviousness analysis.

IPR2021-00145, Paper 71 (FWD), 48.

Inventor/Witness Admissions Contradict PO's Arguments

Mr. Goertz (named inventor):

Q. BY MR. GRAVES: At the time you created this document in or about May of 2001, were you thinking of other functions that a user might be able to execute, using the touch and glide operation depicted in the image?

...

THE WITNESS: I could say that we were almost inspired by the palm pilot that I used previously, and they had this type of sliding, but you did it through the stylus, for example, for making a reverse texting, so it was probably with inspiration from that.

Goertz Tr. (EX1057), 37:2-13.

Mr. Eriksson (co-developer):

Q. Did you provide demonstrations of the capabilities of the prototype phone at CeBIT in 2002?

A. Yes.

Q. And did you demonstrate any touch and glide functionality on the display of the device?

A. No.

Eriksson Tr. (EX1058) at 66:10-15.

Prior Panel: No Nexus to Alleged “Licensing Success”

We agree with Petitioner that Neonode has not produced evidence that Samsung’s interest in the license focused on the features claimed in the ’993 patent, as opposed to unclaimed features such as the zForce technology. In

IPR2021-00145, Paper 71 (FWD), 50.

Additional Slides

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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No Disavowal

~~each function of said first, second, and third functions simultaneously represented in said menu area plurality of functions being mapped to a corresponding location in the touch sensitive area at which the representation of the function is displayed, and being activated by the single step of a blunt an object touching the corresponding location and then gliding along the touch sensitive area away from the location moving in a direction from a starting point that is the representation of the corresponding one of said first, second, and third functions in said menu area to said display area being detected by said touch sensitive area, thereby allowing low precision navigation of the user interface using the blunt object, so that the user interface can be operated by one hand, where the blunt object is a finger.~~

EX1003, 326-327.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE