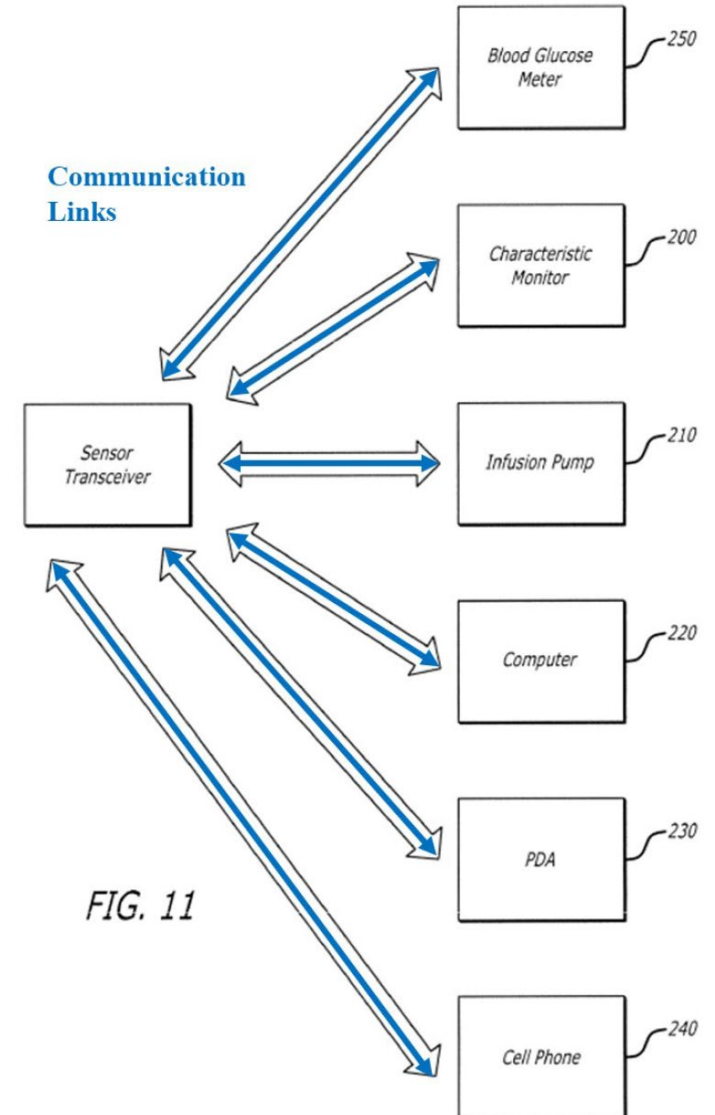


Dexcom, Inc.
v.
Abbott Diabetes Care Inc.

IPR2023-01251
Patent 11,298,056

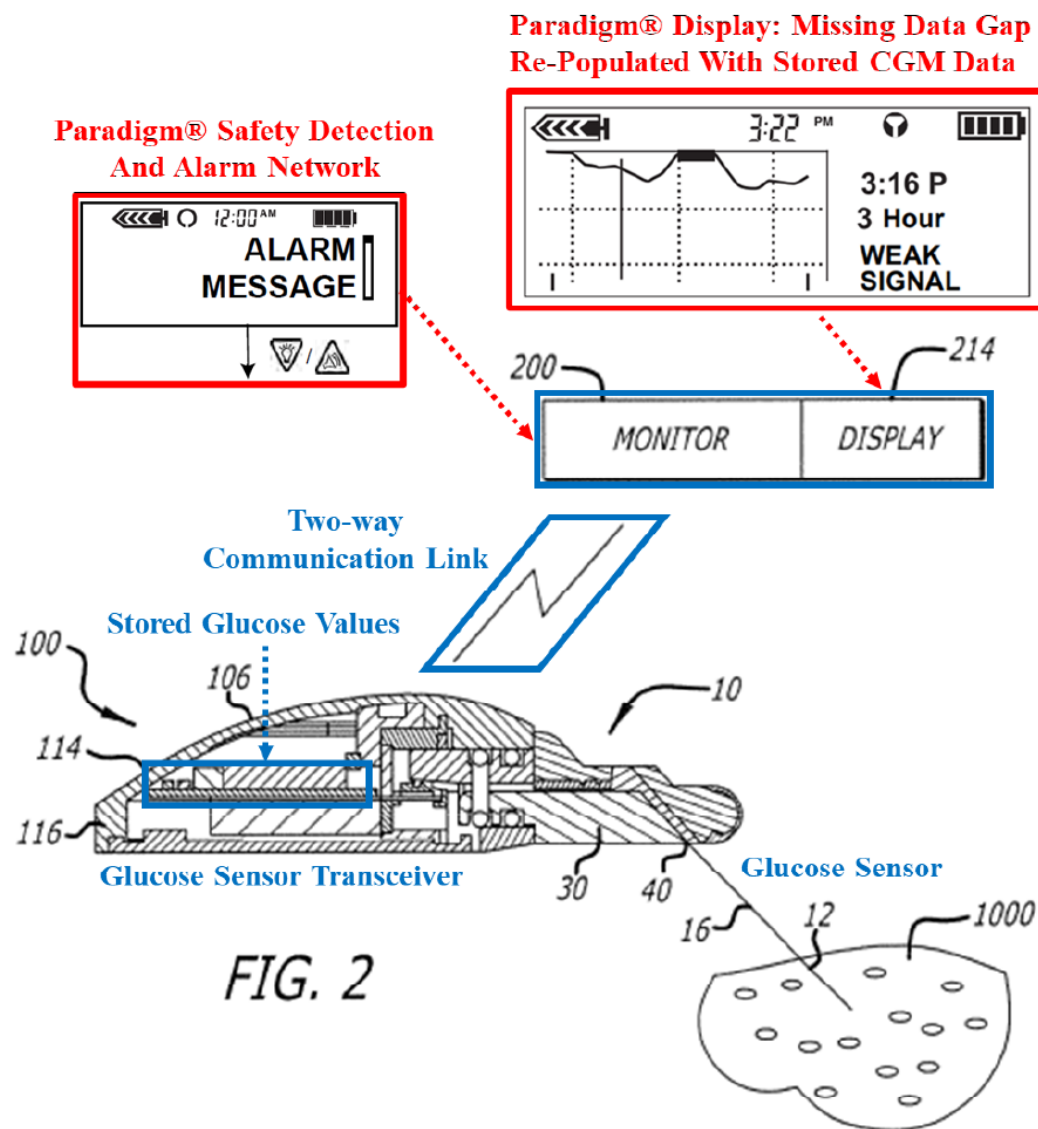
Petitioner Dexcom's Demonstratives
November 4, 2024

[0086] Another advantage is that glucose history information is stored on the transceiver 100. Thus, because the transceiver 100 can be networked to a plurality of devices, the information is available to any receiver or network node on demand. Furthermore, the transceiver 100 can continuously calculate glucose values even when a remote device is not in proximity to the user. Thus, when communication between the transceiver 100 and the remote device fails, the calibration algorithm can continue to calculate glucose data points. Preferably, when communication is re-established, the remote device can synchronize data with the transceiver 100 and receive glucose values calculated while the remote device was not communicating with the transceiver 100.



(EX 1012 (Patel-2009), [0086], Fig. 11 (as annotated in Petition (Paper 3) at 24))
(cited by Petition (Paper 3) at 3, 24-26, 28-29, 36, 39, 44-45, 58)

Ground 1 Combination: Patel-2009 and Paradigm Real-Time



(Petition (Paper 3) at 27)

Patent Owner Response (Paper 20) on Grounds 1 and 2

Did Not Contest:

- Any claim 1 element other than **1.K** (displaying backfilled data) and **1.L** (in a second line graph) (see Pet'r Reply (Paper 25) at 1)
- **Motivation** to apply Paradigm's teachings to Patel-2009 (see Pet'r Reply at 2)
- **Reasonable expectation of success** in displaying repopulated data in trend graphs (see Pet'r Reply at 2)

Did Not Assert:

- **Secondary considerations** (see Pet'r Reply at 14 n.3)

Paradigm teaches or suggests re-populating gaps in displayed data

For example, Paradigm REAL-Time states:

As long as the transmitter is within 6 feet (approximately 2 meters) of the insulin pump, continuous glucose monitoring (CGM) data will be displayed *on the insulin pump's screen*. If the MiniLink REAL-Time Transmitter and insulin pump are out-of-range for longer than 40 minutes, *only the last 40 minutes will be re-populated*.

Id. (emphasis added). We agree with Petitioner that this disclosure appears in a section of Paradigm REAL-Time relating to the MiniLink REAL-Time Transmitter, which “focuses on the interactions between the MiniLink and Paradigm devices, without any mention of the separate CareLink product.” Pet. Prelim. Reply 6 (citing Ex. 1011 (Paradigm REAL-Time), 7–8). Thus, on this record, we agree with Petitioner that this disclosure (as well as other cited disclosures in Paradigm REAL-Time) appears to teach or suggest that “a data gap up to 40 minutes is re-populated to the screen of the user device (in this case, a pump).” *Id.* at 2.

(D.I. (Paper 11) at 31 (highlighting added))
(cited by POR (Paper 20) at 31; Pet’r Reply (Paper 25) at 4, 6-9)

Missing data would likely appear as a data gap on the screen

Striegel: “A POSA reading EX1011 would understand that, if data were not received for a period of time, for example, due to a wireless out-of-range condition, the display buffer and long-term memory would have empty cells for that point in time. When the display buffer is accessed to print to the screen, an absence of data would likely appear as a data gap on the screen.”

(EX 2015 (Striegel Decl.) ¶ 49 (highlighting added))
(cited by POR (Paper 20) at 5, 23; Pet’r Reply (Paper 25) at 9, 21)

Previously missing data was stored in long-term memory

Striegel: “... it is my opinion that a POSA reading EX1011 would further understand that, when the insulin pump receives missing data that was not received when it was previously expected, for example, due to the wireless out-of-range condition, the data would be stored in the long-term memory”

(EX 2015 (Striegel Decl.) ¶ 50 (highlighting added))

(cited by POR (Paper 20) at 5, 23; Pet'r Reply (Paper 25) at 9-10; EX 1057 (Gross Reply Decl.) ¶ 15)

Discrete historical data values were retrieved from long-term memory

Striegel: “... it is my opinion that a POSA reading EX1011 would understand that data for displaying trend graphs of 3-hour and 24-hour periods on a screen would likely be kept in volatile memory (e.g., a static random access memory (SRAM)) for quick retrieval (‘display buffer’), whereas longer term, historical data that could be downloaded to a personal computer or accessed for retrieving discrete data values would likely be kept in non-volatile memory (e.g., flash memory) (‘long-term memory’)”

(EX 2015 (Striegel Decl.) ¶ 42 (highlighting added))
(cited by POR (Paper 20) at 5, 23; Pet’r Reply (Paper 25) at 9; EX 1057 (Gross Reply Decl.) ¶ 14)

User could scroll through glucose data points received in past 24 hours

Striegel: “A POSA reading EX1011 would have recognized that devices with a display, like the insulin pump, would likely feed the display with data from the display buffer, which, again, a POSA would understand to likely be low latency random access memory (SRAM). Such low latency SRAM memory would, as described in EX1011, ‘allow[] scrolling through your sensor glucose data points and any alarms that you may have received’ in the most recent 3-hour or 24-hour window. EX1011 at p. 64.”

(EX 2015 (Striegel Decl.) ¶ 43 (highlighting added))
(cited by POR (Paper 20) at 5, 23; Pet’r Reply (Paper 25) at 9)

Gross: Data gaps in trend graphs would be backfilled from long-term memory

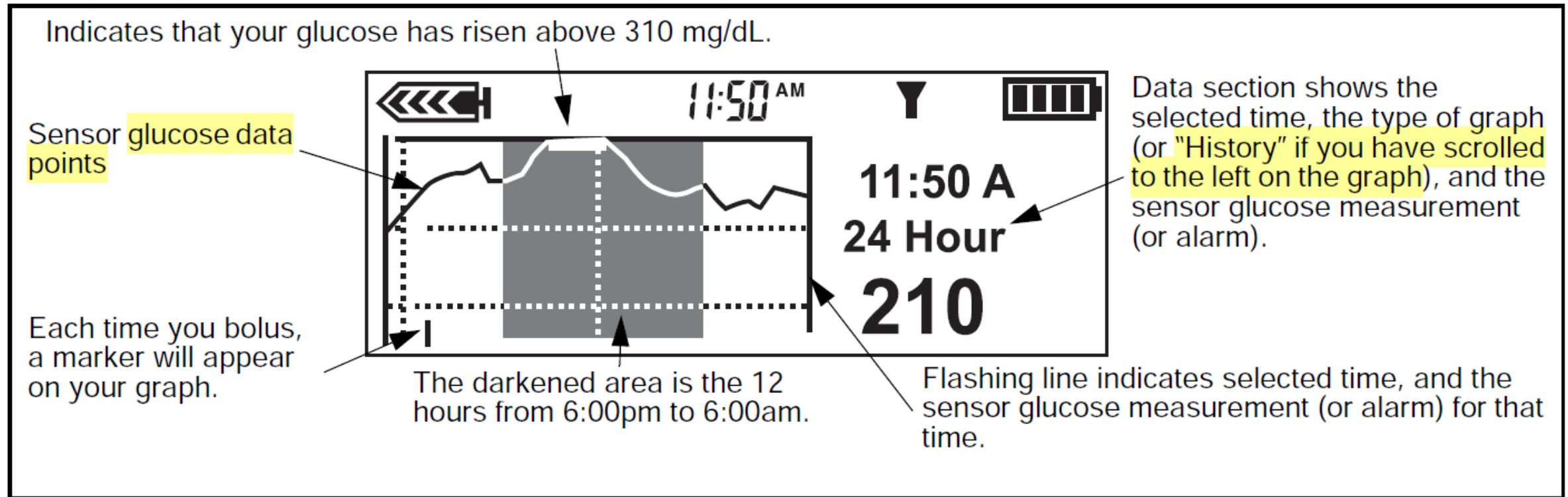
Gross: “... This is consistent with how a POSITA would implement such a system: as the user switches among different types of display, access any needed data from long-term memory and load the corresponding display information into the display buffer. See also EX1054, 71:25-72:11, 79:14-80:6, 81:15-20, 81:22-82:3. Since missing data that is later received would be stored in this long-term storage according to Dr. Striegel (see EX2015, ¶ 50), any data gaps previously shown in the trend graphs would be backfilled once the previously missing (and now re-populated) data was loaded from long-term memory into the display buffer. In short, when a user chooses to view trend graphs after the glucose data has already come in, the display buffer is filled with information from long-term memory and thus includes any data that has been re-populated.”

(EX 1057 (Gross Reply Decl.) ¶ 15 (highlighting added))
(cited by Pet'r Reply (Paper 25) at 9, 10)

Displays graph of the most recent 24 hours of glucose data points

24 hour graph

To view the current glucose and a graph of the most recent 24 hours of data, press **ESC** twice from the HOME screen:



(EX 1011 (Paradigm) at 64 (with highlighting added in Pet'r Reply (Paper 25) at 3))

(cited by Pet'r Reply (Paper 25) at 3; EX 1055 (Ahmann Decl.) ¶ 33; EX 1057 (Gross Reply Decl.) ¶ 42)

(p. 64 cited by Petition (Paper 3) at 25, 30-31, 41-42, 47-48; POR (Paper 20) at 34; Pet'r Reply (Paper 25) at 2, 5-6, 8, 17; EX 2015 (Striegel Decl.) ¶¶ 41, 43)

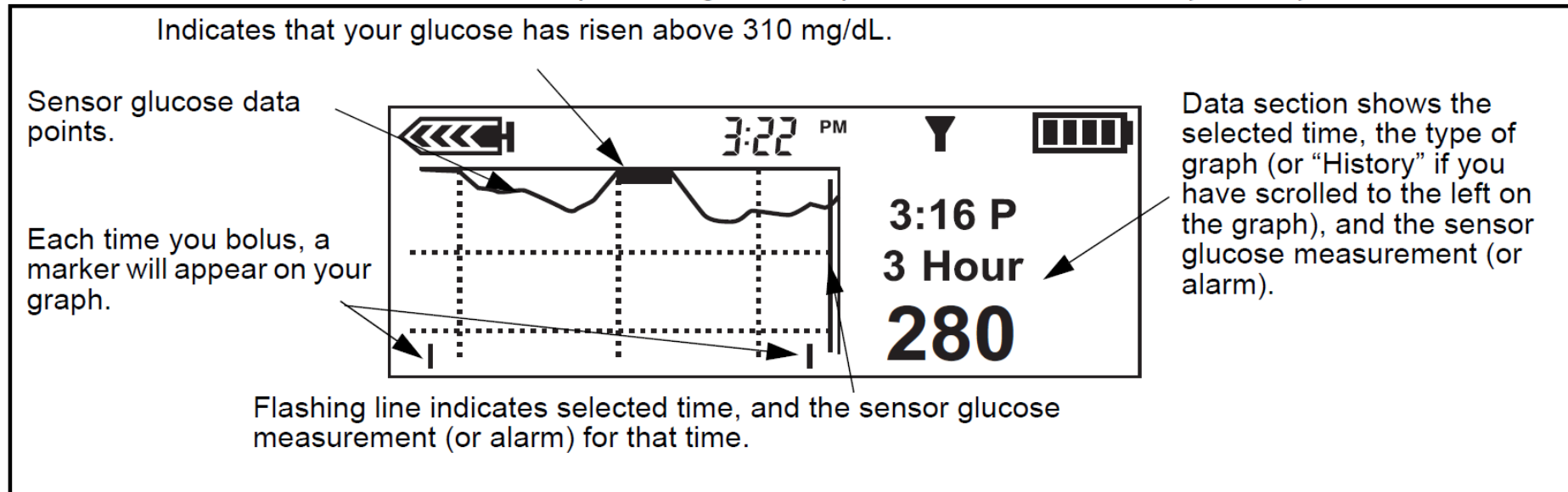
Displays graph of the most recent 3 hours of glucose data points

Reading your graphs

Once the sensor is calibrated you can view your sensor glucose values in real time. To view your current sensor glucose and the most recent three hours of data, press **ESC** once from the HOME screen. To view the most recent 24 hours of data, press **ESC** twice from the HOME screen.

3 hour graph

To scroll through your sensor glucose data points and any alarms that you may have received, press the down button. Below is an example along with explanations of a screen you may see.



(EX 1011 (Paradigm) at 64)

(cited by Petition (Paper 3) at 41-42, 47-48; D.I. (Paper 11) at 28; POR (Paper 20) at 34-35; Pet'r Reply (Paper 25) at 5; EX 2015 (Striegel Decl.) ¶¶ 41, 43)

“First” FAQ: Re-populates last 40 minutes of data

How much data does the MiniLink REAL-Time Transmitter store? If I move outside of the six foot (two meters) transmission range – will I lose my data?

When the MiniLink REAL-Time Transmitter is separated from the insulin pump for more than six feet (approximately 2 meters), the transmission is considered "out of range." The transmitter holds 40 minutes worth of memory, so even though your system is "out of range," continuous glucose monitoring (CGM) data can be re-populated in the insulin pump.

If your system is out-of-range for longer than 40 minutes, when reviewing historical reports you would notice "data gap" where information is missing during this period of time.

(EX 1011 (Paradigm) at 8 (excerpted) (“first FAQ”))

(cited by D.I. (Paper 11) at 26, 29; Petition (Paper 3) at 2, 31, 44-45; POR (Paper 20) at 13, 17-18, 20; Pet’r Reply (Paper 25) at 4, 7)

“Second” FAQ: Displays data. Re-populates last 40 minutes of data

As long as the transmitter is within 6 feet (approximately 2 meters) of the insulin pump, continuous glucose monitoring (CGM) data will be displayed on the insulin pump's screen. If the MiniLink REAL-Time Transmitter and insulin pump are out-of-range for longer than 40 minutes, only the last 40 minutes will be re-populated. When reviewing historical reports, you would notice a "data gap" where information is missing during this period of time.

(EX 1011 (Paradigm) at 8 (excerpted) (“second FAQ”))

(cited by Petition (Paper 3) at 25, 45; Pet’r Reply to POPR (Paper 9) at 2; D.I. (Paper 11) at 31; POR (Paper 20) at 20, 32; Pet’r Reply (Paper 25) at 4-5, 7)

POSITAs knew it is important to provide PWDs as much accurate glucose data as possible

3	Q. In 2009, did a POSITA know that it	09:49
4	was important to provide as much accurate	09:50
5	glucose data as possible to PWDs?	09:50
6	MR. CARROZZA: Objection to form.	09:50
7	THE WITNESS: From a CGM?	09:50
8	BY MR. MASON:	09:50
9	Q. Correct.	09:50
10	A. Yes. Yes.	09:50

(EX 1053 (Wright Depo.) 41:3-10)

(cited by Pet'r Reply (Paper 25) at 12; EX 1055 (Ahmann Decl.) ¶ 28; EX 1057 (Gross Reply Decl.) ¶ 34)

Paradigm describes benefits of its real-time glucose trend graphs

REAL-Time features give you insights you need to take action

Feature	Specification	Benefit
REAL-Time Trend Graphs	Your insulin pump displays glucose trend graphs for 3-hour and 24-hour periods.	Shows you the effects of meals, exercise, insulin, and medication on your glucose control.

(EX 1011 (Paradigm) at 24)

(cited by D.I. (Paper 11) at 18, 28; EX 2015 (Striegel Decl.) ¶ 41; EX 1055 (Ahmann Decl.) ¶ 26; EX 1057 (Gross Reply Decl.) ¶ 32)
(p. 24 cited by Petition (Paper 3) at 25, 29, 30, 41-42; POR (Paper 20) at 22; Pet'r Reply (Paper 25) at 13)

Paradigm describes benefits of its real-time glucose trend graphs

An important benefit of using a CGM system is REAL-Time readings and trend graphs. They allow you to be proactive in your diabetes treatment so you can avoid severe highs and lows. You can see if your glucose is trending up or trending down and take action much earlier. With this information, you will be able to confidently make changes to your daily glucose management to improve your health.

...

The advantages of REAL-Time CGM are the trend graphs. The trend graphs allow you to see when glucose is trending up or trending down and how fast it is moving. All of these things help you manage your diabetes more effectively so you can live a healthier life.

(EX 1011 (Paradigm) at 9 (highlighting added))

(cited by Pet'r Reply POPR (Paper 9) at 3; EX 1055 (Ahmann Decl.) ¶¶ 37, 51, 55, 67, 68; Pet'r Reply (Paper 25) at 2-3, 5-6, 13)

(p. 9 cited by Petition (Paper 3) at 25)

Patent Owner Expert: No emphasis in 2009 on continuous graph without gaps

Wright: “From what I recall in the 2009 timeframe, there was not a huge emphasis on making sure the PWD had a continuous graph with no gaps partly because the screens at that time were small (especially compared to today’s standards).”

(EX 2013 (Wright Decl.) ¶ 192)
(cited by POR (Paper 20) at 25)

Patent Owner Expert: Backfilling data gaps might not always be the best idea

Wright: “I agree that these would be reasons why backfilling data gaps might not always be the best idea.”

(EX 2013 (Wright Decl.) ¶ 160)

(cited by POR (Paper 20) at 25, 29; EX 1055 (Ahmann Decl.) ¶ 62 {¶ 62 cited by Pet’r Reply (Paper 25) at 6, 13, 15})

Patent Owner: Historical data not viewable on trend graph beyond 24 hours

Patent Owner: “Although the insulin pump stored historical data (for downloading to a computer), there is nothing in the cited art that suggests the data was viewable as a trend graph on the pump beyond a rolling 24 hours. (Ex. 2015 ¶¶41, 47.)”

(**POR** (Paper 20) at 21)
(cited by Pet'r Reply (Paper 25) at 2, 8)

Grounds 1 and 2: Dependent claims

Not Addressed in Patent Owner Response:

- 2-3, 8-12, 14-20, 22-28, 30

Addressed in Patent Owner Response:

- 4 (signal error associated with glucose sensor)
- 5 (signal error—transmitter)
- 6 (signal error—receiver)
- 7 (malfunction associated with transmitter or receiver)
- 21 (transmitter + sensor portion within integrated housing)

(See **POR** (Paper 20) at 57-68)

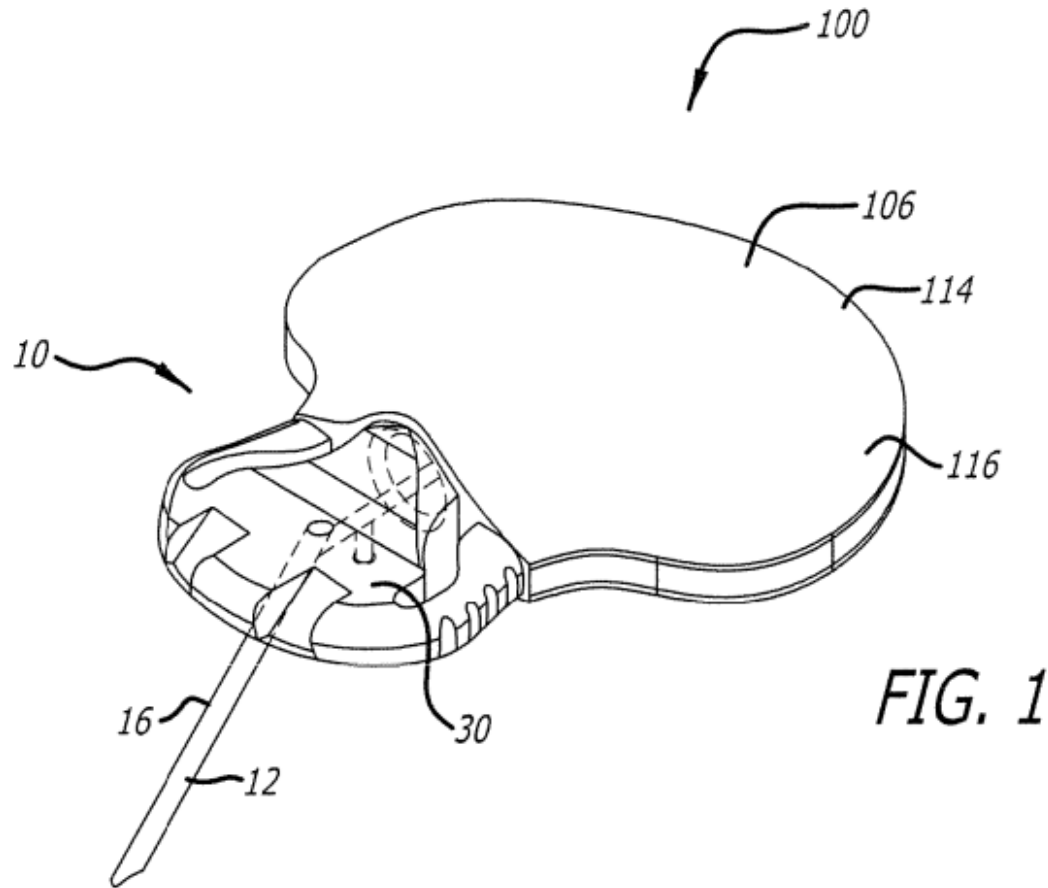


FIG. 1

(EX 1012 (Patel-2009), Fig. 1)
(reproduced by Petition (Paper 3) at 57; POR (Paper 20) at 65, 67;
Pet'r Reply (Paper 25) at 26; PO Sur-Reply (Paper 35) at 12)

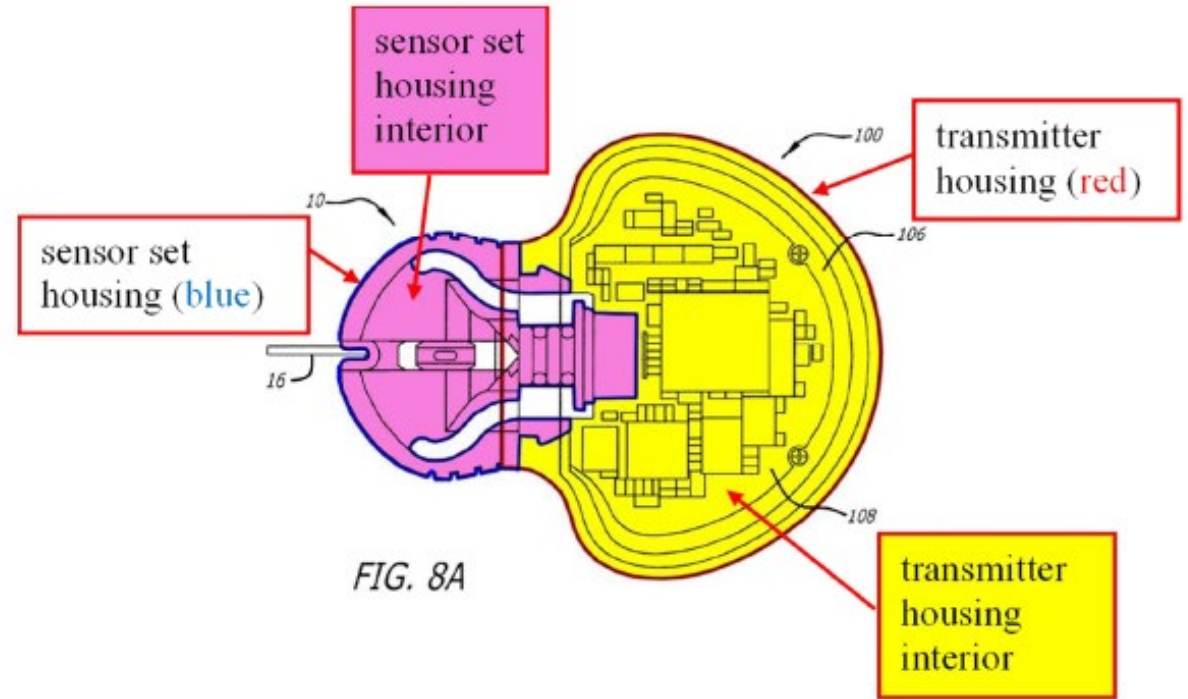


FIG. 8A

(PO Sur-Reply (Paper 35) at 13)
(reproducing and annotating EX 1012 (Patel-2009), Fig. 8A)
(Fig. 8A cited by Petition (Paper 3) at 35)

CERTIFICATE OF SERVICE
IN COMPLIANCE WITH 37 C.F.R. § 42.6(E)(4)

The undersigned certifies that on October 30, 2024, a complete copy of
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