Unified Patent Court
Einheitliches Patentgericht
Juridiction unifiée du brevet

The Hague - Local Division
UPC_CFI_43/2025
UPC_CFI_103/2025

Decision
of the Court of First Instance of the Unified Patent Court
delivered on 03/03/2026
regarding EP 2 437 696 B2

CLAIMANT/ DEFENDANT IN THE COUNTERCLAIM

Advanced Brain Monitoring, Inc.
-2237 Faraday Ave
A 92008 - Carlsbad – US
"**Claimant** "or "**ABM**"

Represented by Wim Maas, Faziel Abdul and Naomi Kannekens

DEFENDANTS/ CLAIMANTS IN THE COUNTERCLAIM

1) **Koninklijke Philips N.V.**
High Tech Campus 52 - 5656 AG - Eindhoven - NL

2) **Philips RS North America LLC**
1001 Murry Ridge Lane - PA 15668 - Murrysville - US

3) **Respironics Deutschland GmbH & Co. KG**
Gewerbstraße 17 - 82211 - Herrsching am Ammersee – DE

Representative (for defendants 1-3): Michael Ras, Hendrik Pastink, Arie Jan Willem Tol, Ceren Okat and Roeland Grijpink

Defendants are referred to collectively as "**Defendants"** or **"Philips"** and separately as "**Philips NV",** "**Respironics US**" and "**Respironics GE**"

PATENT AT ISSUE

Patent no.	*Proprietor/s*
EP2437696B2	ADVANCED BRAIN MONITORING INC

DECIDING JUDGES

This decision is issued by the panel, comprising:

Presiding judge	Edger Brinkman
Legally qualified judge	Stefan Johansson
Technically qualified judge	Stefanie Philipps
Judge-rapporteur	Margot Kokke

LANGUAGE OF PROCEEDINGS: English

I. SUMMARY OF FACTS AND PROCEDURE

The Claimant and the patent

1. ABM is a US company that focuses on innovative neuro-diagnostics devices. ABM's medical devices have been used on over 1.6 million patients world-wide. ABM has inter alia developed a specific medical device that relates to the field of treating sleep disorders and more specifically to systems and methods using position therapy to treat sleep disorders.

2. ABM is the sole proprietor of EP 2 437 696 B2 (the '**patent**' or "**EP696**"). The application of the patent was filed on 4 June 2010, claiming the priority of US20090184631P, dated 5 June 2009, and was granted to ABM on 3 April 2019 for "*Systems and methods for controlling position*". During opposition proceedings at the EPO, where Philips International B.V., a group member of Philips, was the opponent, the patent was confirmed in amended form by the Technical Board of Appeal on 25 December 2024.

3. The patent is validated, and currently in force, in the following UPC Member States: Germany, France, and The Netherlands. EP696 was opted out of the UPC, which opt-out was withdrawn on 20 January 2025.

4. During opposition, method claims 8-12 as originally granted (the B1 version) were deleted as well as device claim 7. Independent claim 1 and dependant claims 2-6 of the patent as maintained (the B2 version) are identical to claims 1-6 as originally granted and pertain to a wearable position therapy device. The wording of claim 1 in the language of the patent is:

1. A wearable position therapy device (100) for influencing the position of a user, the device (100) comprising:

a position detector (110) configured to generate positional signal data that can be used to determine a position of the user,
a haptic feedback device (140) configured to generate tactile feedback to the user of the wearable position therapy device (100), and
a microcontroller (130) in communication with the position detector (110) and the haptic feedback device (140),
wherein the microcontroller (130) is configured to:

receive and analyze the positional signal data from the position detector (110),
determine whether the user of the wearable position therapy device (100) is in a target sleeping position, and
generate a control signal to cause the haptic feedback device (140) to provide tactile feedback to the user to induce the user to change to a different, non-target sleeping position if the user of the wearable position therapy device (100) is in the target sleeping position,
wherein the feedback is initiated only after a predetermined time period has elapsed in order to allow the user to initially fall asleep in the target sleeping position,
wherein the user can reset the predetermined time period, and
wherein the feedback begins at a low-intensity level, and, if a change in position is not detected after termination of the previous feedback, the feedback is presented at a higher-intensity level.

5. The dependent claims 2 to 6 are:

2. The device of claim 1 wherein the wearable position therapy device (100) can be worn around the neck, back, or torso of the user.

3. The device of claim 1, wherein the wearable position therapy device (100) is configured to be worn around the neck of the user, wherein the wearable position therapy device includes an enclosure strap (510) for holding the wearable position therapy device around the neck of the user, and wherein the enclosure strap (510) includes a detachable magnetic clasp that is configured to automatically release if the wearable position therapy device (100) is snagged while the user is wearing the wearable position therapy device (100).

4. The device of any preceding claim wherein the microcontroller (130) is configured to provide adaptive feedback to the user based on the user's reaction to previously applied haptic feedback.

5. The device of any preceding claim wherein the positional therapy device includes a microphone (105) for capturing audio data while the user is sleeping and to provide the audio data to the microcontroller (130), wherein the microcontroller (130) is configured to analyze the audio data to detect snoring events.

6. The device of claim 5 wherein the microcontroller (130) is configured to correlate the snoring event data with the positional signal data received from the position detector (110) to determine whether to generate a control signal to cause the haptic feedback device (140) to provide tactile feedback to the user to induce the user to change to a different position.

6. The description of EP696 contains inter alia the following:

[0013] In an embodiment, a wearable position therapy device for influencing the position of a user is provided. The device includes a position detector configured to generate positional signal data that can be used to determine a position of the user, a haptic feedback device configured to generate tactile feedback to the user of the device, and a microcontroller. The microcontroller is configured to receive and analyze the signal data from the position detector, determine whether the user of the device is in a target position, and generate a control signal to cause the haptic feedback device to provide tactile feedback to the user to induce the user to change to a different, non-target position if the user of the device is in a target position. In an embodiment, the position therapy device can be configured to influence a sleeping position of a user and can be worn while the user sleeps. The target position can be a target sleep position, and the microcontroller can be configured to generate a control signal to cause the haptic feedback device to provide tactile feedback to the user to induce the user to change to a different, non-target sleep position if the user of the device is in a target sleep position.

(...)

[0021] The position detector 110 is configured to generate signal data that can be analyzed by the PTD 100 to determine the sleeping position of the user. For example, the position detector 110 can be used to determine whether the user is in a supine position. According to an embodiment, the position detector 110 can comprise an accelerometer. According to an alternative embodiment, a pressure switch or sensor can be used instead of an accelerometer. When the PTD 100 is worn on the user's the neck or against the user's back, the pressure switch or sensor can be used to detect when the user is sleeping or laying in a supine position.

(...)

[0025] The PTD 100 can include a memory 170 for data storage. In an embodiment, the memory 170 can comprise a removable Multimedia Memory card (MMC) or Secure Digital card (SD) car or other types of removable persistent memory. In another embodiment, the memory 170 can comprise a fixed flash chip. According to an embodiment, a data transfer interface 175 is provided. According to an embodiment, the data transfer interface 175 can comprise a micro-USB or similar type of connector that can be used facilitate downloading data from the PTD to an external computer system or web portal, for uploading firmware executable by microcontroller 130 to memory 170, or both. In an embodiment, the data transfer interface 175 can also include a mechanical interface for providing power to the recharging component 160 to recharge the battery 155.

(...)

[0026] According to an embodiment, most commercially available microcontrollers or microprocessor 130 would be appropriate for the PTD 100. However, in a preferred embodiment, the microcontroller 130 is an inexpensive, small, low-powered chip. The PTD 100 can include firmware executable by the microcontroller 130. The firmware can be stored in data storage 170 or in a flash memory of microcontroller 130. According to some embodiments, the firmware can be updated by downloading new firmware from an external computer system via data transfer interface 175.

(...)

[0053] According to an embodiment, a user can reset the time period on the PTD 100 if the user has trouble falling asleep. For example, a user might be awakened during the night by the need to use the bathroom, and upon returning from the nocturnal use of the bathroom, the user can turn the PTD 100 off and then back on in order to reset the feedback delay. According to an em-

(...)

The Defendants and the contested product

7. Philips NV is part of the Philips group which specialises in electronics, including health products for respiratory care, under the name (Philips) Respironics. Respironics US and Respironics DE are subsidiaries of Philips.

8. Philips' product that is alleged to infringe, is the NightBalance, a position therapy device.

Prior art

9. The Japanese patent application publication JP H03-49748 A ("**JP748**"), published on 4 March 1991 relates to, inter alia, in undisputed English translation:

1. Title of the Invention
ANTI-SNORING DEVICE

2. Claims

1. An anti-snoring device comprising:
an angle sensor; and
a warning device activated by a signal from the angle sensor.

2. The anti-snoring device according to claim 1, wherein the warning device is activated with a delay by a timer, from the signal from the angle sensor.

3. The anti-snoring device according to claim 1 or 2, wherein the warning device is caused emit a warning that gradually increases to a stronger warning.

On page 5, lines 2-17 and 27-33:

Therefore, in the present invention, an angle sensor for detecting that a sleeper lies on his or her back, is attached to the body of the sleeper, and a warning device is activated by a signal of the angle sensor.

In a state where the sleeper temporarily lies on his or her back while just rolling over, the warning device is prevented from being activated for a while by a timer, even when a signal of the angle sensor is received.

The warning device is caused to initially emit a weak warning and gradually emit a stronger warming, in order to eliminate a sudden shock to the user, so that if the user rolls over when he or she faintly notices the warning, the warning device is turned off at that point.

(…)

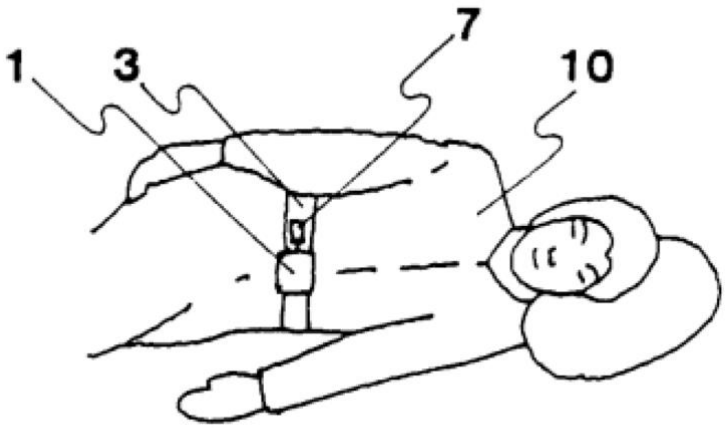
When the angle sensor of the anti-snoring device configured as described above, or the entire anti-snoring device, is attached to a part of the body of a sleeper, nothing happens when the sleeper lies on his or her side, but when the sleeper lies on his or her back, the angle sensor outputs a signal and the warning device is activated. As a

On page 8 l. 9 to page 9, l.1:

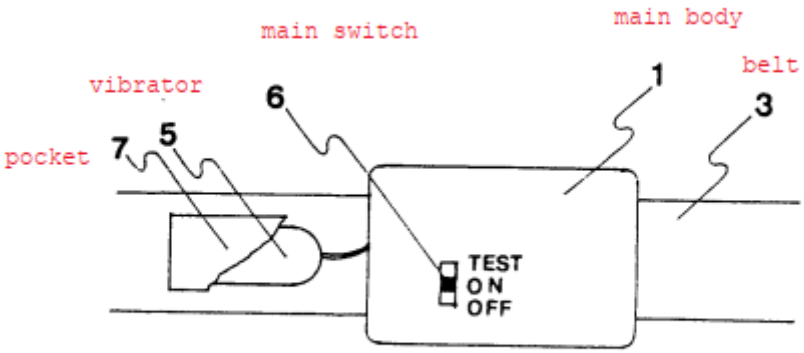
A mercury switch 9, which is an angle sensor, is set inside the main body so as to turn off when the main body 1 is tilted by greater than or equal to 30 degrees with respect to the horizontal direction. When the sleeper 10 is lying on his or her side, the main body 1 is tilted by greater than or equal to 30 degrees with respect to the horizontal direction. Therefore, the mercury switch 9 is turned off, and the electric current in the entire device does not flow, and the device does is not activated.

When the sleeper 10 lies on his or her back, the mercury switch 9 is brought into a conductive state. The IC-NE 555 is a timer, and + and - are alternately output to (pin 3) in a cycle of 10 seconds. The IC-CMOS 4017 is a 10 digit counter, and when the output of the NE-555 (pin 3) is input to (pin 14), the potential of + is output to 10 pins in successive 10 seconds increments, and if the pins 1 to 3 are cut, nothing happens for 30 seconds, and if the pins 4 to 10 are attached with resistances starting from a large resistance to a gradually small resistance, and the output is input to a transistor S for driving the vibrator, the vibrator vibrates while increasing its strength every 10 seconds.

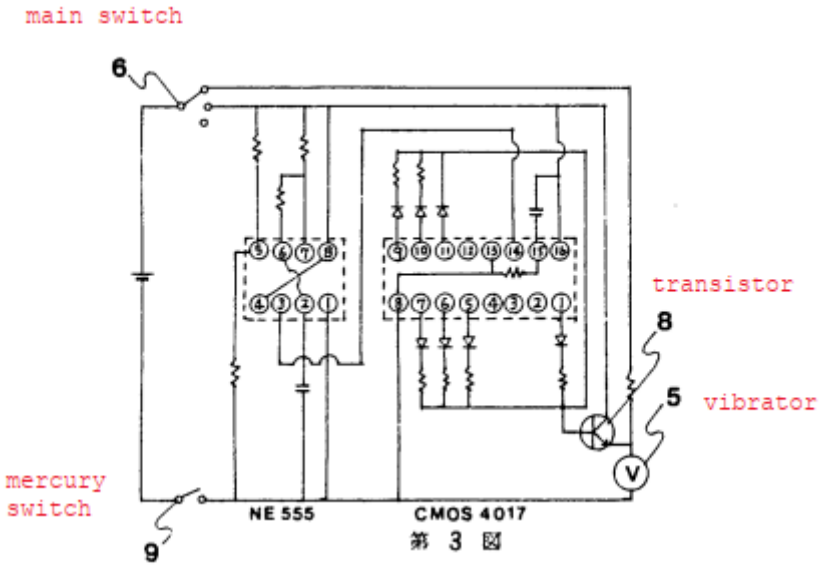
10. The following figures 1, 2 and 3 are disclosed in JP748 (with the meaning of some reference numbers added in red).



第 1 図



第 2 図



第 3 図

II. REMEDIES SOUGHT AND SUBMISSIONS

11. Asserting that the Defendants infringe device claims 1, 2 and 4 of the patent with its NightBalance device, the Claimant requests that the Court, in summary, declare, where possible with immediate effect, that Defendants infringe the patent, prohibit Defendants from infringing the patent in the contracting member states where the patent is in effect,

together with additional remedies (deliver up and/or destruction of infringing products, recall, providing information, publication of a declaration of infringement, damages and legal costs).

12. Defendants request that the Court dismiss the infringement action and order the Claimant to pay the legal costs and other expenses of the proceedings. Thereto they submit that none of the Defendants infringe the patent with the NightBalance, inter alia because the NightBalance does not exhibit all features of the claim, because Philips does not sell the contested device and because the patent is not valid.

13. In the counterclaim action, Defendants request that the Court revoke the patent entirely because the claimed subject matter is neither novel nor inventive over the prior art and/or because the patent contains unpermitted added matter and suffers from insufficiency of disclosure. It also requests the Court to order the Claimant to bear costs and other expenses of the counterclaim proceedings.

14. ABM requests the court to dismiss the counterclaim action, ordering Philips to reimburse ABM's legal costs and, in case the costs are to be determined in separate proceedings, to order Philips to pay an in interim cost award to EUR 100,000 within fourteen days after service.

Procedure

15. On 21 January 2025, Claimant filed a statement of claim ("SoC") to start this infringement action. On 29 April 2025 Defendants filed a statement of defence ("SoD"), and a counterclaim for revocation. Further written submissions were exchanged as foreseen by the rules of procedure ("RoP").

16. The file features several applications to amend, each disputed.

    In response to the SoD, ABM filed a R.263 Application to change the claim to reflect the revised B2 version of the patent (the original SoC was based on the B1 version). Claimant was permitted to submit a new version of the SoC as well as a track-changes version.

    In Philips' Rejoinder/Reply to the CC, Defendants featured a request for leave to amend the counterclaim to include a new inventive step attack on claim 1 starting from JP 748 (which prior art document, discussed below, had already been relied on for novelty) in combination with common general knowledge, in response to ABM's Defence to the CC. Leave was granted by order of the panel of 30 September 2025.

    In response, on the day of submission of its rejoinder in the counterclaim action, Claimant submitted a conditional application to amend the patent, filing one auxiliary request ("**AR**"). In the circumstances of the case, this application was also admitted into the proceedings (by order of 31 October 2025). For further details and interim applications, reference is made to the CMS.

17. With the conditional AR (only) the following underlined amendment is introduced in (feature 1.2 of) claim 1:

A wearable position therapy device (100) for influencing the position of a user, the device (100) comprising:
a position detector (110) comprising an accelerometer configured to generate positional signal data that can be used to determine a position of the user, (….)

18. An interim conference was held on 21 November 2025. Following the interim conference, the outcome/decisions taken at the IC were confirmed in a R.105.5 RoP order, copied below:

    1. *The value of the action/proceedings of the infringement action is set at **EUR 500,000.***
    2. *The value of the counterclaim-action/proceedings is set at **EUR 500,000.***
    3. *Additional submissions (within three weeks):*
        a. *The Claimant will submit an overview of all its exhibits*
        b. *The Defendants will submit new editable and renamed versions of its submissions (and of any important annexes that are not searchable).*
    4. *Defendants' requests are amended as follows:*
        a. *request I. (concerning R.360/361) is withdrawn*
        b. *request III should be understood to encompass AR1 (Claimant does not object).*
    5. *Defendants no longer rely on invalidity attacks involving US148; the challenge to the priority date is therefore without purpose/irrelevant in the context of these proceedings.*
    6. *Defendants will inform the court within one week if there are any other invalidity attacks they no longer rely on.*
    7. *Parties agree on the definition of the skilled person (as set out in Claimant's defense to the CC).*
    8. *At the oral hearing, each party is allotted a maximum of 60 minutes pleading time in the first round (Claimant to start; combined pleading on infringement and validity) and 15 minutes for rebuttal. Pleading notes can be used as an aid/transcript of the recordings of the hearing, but they do not have a legal status in the proceedings.*
    9. *Parties are urged to reach an agreement on the costs to be formalized in the final decision, taking into account the ceiling of EUR 112,000. In case no agreement is reached, parties are requested to submit a substantiated overview of the costs that they will seek to recover two days before the oral hearing.*
    10. *Parties are both willing to discuss a settlement. They will inform the court within three weeks from today about the results thereof.*

19. The parties informed the Court that no settlement was reached. Parties submitted the requested documents and Philips agreed to limit its invalidity attacks as follows:

"(…) *Response to point 6 of the Order*
With an eye to efficiency, Philips is willing to reduce the amount of inventive step attacks it relies on, by leaving out (i) inventive steps attacks including document US 2010/0057148 (US'148); (ii)

inventive steps attacks including document US 5,381,801 (US'801); and (iii) inventive steps attacks based on document US 5,081,447 (US'447) as starting document.
Consequently, Philips suggests to focus on the following validity attacks:

a) Main request:

a. Novelty attacks based on JP H03-49748 (JP748) (SoD section 5.4, and Rej section 3.1.1);

b. Inventive step attacks based on JP748 + common general knowledge (Rej section 3.2.2.3); and

c. Inventive step attacks based on JP748 + US'867 (Rej section 3.2.2.4).

b) Auxiliary request:

a. Inventive step attacks based on JP748 + common general knowledge (section2.4 of the R. 30.2 Response dated Nov 17, 2025);

b. Inventive step attacks based on JP748 + US 2008/0264426 (US'426) (section2.5 of said R. 30.2 Response);

c. Inventive step attacks based on US'426 + JP748 (section 3.2 of said R. 30.2Response); and

d. Inventive step attacks based on US'426 + US'867 + US'447 and on US'426 + US 5,540,733 (US'733) + US 2006/173257 (US'257) (section 3.3 of said R. 30.2 Response)."

III. GROUNDS FOR THE DECISION

III.A – JURISDICTION, COMPETENCE AND SUMMARY

International jurisdiction and competence

20. The Defendant did not file a preliminary objection within the timeframe of R.19.1 RoP. Pursuant to R.19.7, the Defendant is therefore considered to submit to the jurisdiction of the UPC and to the competence of the LD The Hague. Ex officio, the court also has no doubts that international jurisdiction can be based on art. 4 BR for Philips and on art.8 BR for the other two defendants.

Summary

21. It is not in dispute that the Claimant is the owner of the patent and has standing to sue. In the counterclaim action, the court concludes that the patent is not valid. This means that the counterclaim action is successful and the infringement action will be dismissed. The reasons for this are explained below, whereby the teaching of the patent and claim construction will be addressed first (in III.B). The validity is subsequently dealt with in III.C, III.D deals with infringement and in III.E the outcome of the proceedings is discussed.

III.B –TEACHING OF THE PATENT, SKILLED PERSON AND CLAIM CONSTRUCTION

The teaching of the patent; objective problem

22. The patent relates to the field of treating sleep disorders, in particular apnoea and snoring, and more specifically to systems using position therapy (PTD, position therapy device) to treat such sleep disorders, as described in para. [0001] of the patent.

23. Sleep disordered breathing, which results in the diagnosis of Obstructive Sleep Apnea ("OSA"), occurs as a result of a partial or complete collapse of the upper airway during

sleep (para. [0002]). Snoring is the first indication of an airway susceptible to collapse and can lead to inspiratory flow limitation.

24. When a patient with OSA is in the supine position (i.e. is lying on his back), gravity increases the susceptibility of the airway to partial or full collapse during sleep (see para. [0003]). Studies have shown that position therapy can contribute to a significant drop in blood pressure in patients with OSA because supine sleep increases the severity of OSA (see the patent, para. [0004]).

25. Early devices developed to encourage a person not to sleep on the back were mechanical: a plethora of shirts, vests, pillows and other inventions designed to essentially make it uncomfortable for a user to sleep supine. The greatest limitation of these approaches is that the therapy is initiated prior to the patient falling asleep. As shown with CPAP-therapy (nasal continuous positive airway pressure), patients are much more tolerant of therapy if it is initiated after the patients have fallen asleep (para. [0005]).

26. The next generation of devices invented to limit supine sleep were electronic and substantially less in number at the priority date (para. [0006]). In the description of the patent specification, several prior art devices are described (in para's [0006], and [0008] – [0010]. Many of these use an audio alarm to trigger the sleeper to change position.

27. In para. [0007], it is pointed out that the potential benefit of positional therapy is clear, but conventional systems and methods to affect or influence sleep position have been largely ineffective.

28. From the description of the patent specification of EP696, the object of the invention, can be derived. The objective problem of the patent, assessed from the perspective of the skilled person, with their common general knowledge, as at the priority date of the patent, is assumed to be to improve PTDs for treating sleep disorders known in the prior art. This is in line with the parties' position. Philips abandoned its initial position that the objective is merely to find an alternative PTD. The object is, according to EP696, achieved by a wearable PTD having the features of claim 1.

29. The patent as maintained contains 6 claims, product claim 1 relating to a wearable position therapy device, and the dependent claims 2-6 directly or indirectly referring to claim 1. Claim 1 is divided into features as follows:

Claim 1	
1.1	A wearable position therapy device (100) for influencing the position of a user, the device (100) compromising:
1.2	**a position detector** (110) configured to generate positional signal data that can be used to determine a position of the user
1.3	a **haptic feedback device (**140) configured to generate tactile feedback to the user of the wearable position therapy device (100)

1.4	a **microcontroller** (130) in communication with the position detector (110) and the haptic feedback device (140), wherein the microcontroller (130) is configured to:
1.4.1	receive and analyse the positional signal data from the position detector (110),
1.4.2	determine whether the user of the wearable position therapy device (100) is in a target sleeping position, and
1.4.3	generate a control signal to cause the haptic feedback device (140) to provide tactile feedback to the user to induce the user to change to a different, non-target sleeping position if the user of the wearable position therapy device (100) is in the target sleeping position,
1.5	**wherein** the feedback is initiated only after a predetermined time period has elapsed in order to allow the user to initially fall asleep in the target sleeping position
1.6	**wherein** the user can reset the predetermined time period, and
1.7	**wherein** the feedback begins at a low-intensity level, and, if a change in position is not detected after termination of the previous feedback, the feedback is presented at a higher-intensity level.

Claim construction

30. The Court of Appeal of the UPC ("CoA") has set out the following principles regarding interpretation of a patent claim according to Art. 69 EPC.[1] The patent claim is not only the starting point, but the decisive basis for determining the protective scope of a European patent. The interpretation of a patent claim does not depend solely on the strict, literal meaning of the wording used (…). Rather, the description and the drawings must always be used as explanatory aids for the interpretation of the patent claim and not only to resolve any ambiguities in the patent claim. However, this does not mean that the patent claim merely serves as a guideline and that its subject-matter also extends to what, after examination of the description and drawings, appears to be the subject-matter for which the patent proprietor seeks protection. The CoA also clarified (i) that the principles for interpreting a patent claim apply equally to the assessment of the infringement and to the validity of a European patent and (ii) that a patent must be interpreted from the point of view of the person skilled in the art (the "skilled person").

31. In this case, the skilled person is understood to be an electrical engineer with general experience in designing therapeutic devices, including some familiarity with non-invasive technologies. He has a basic understanding of sleep-related breathing disorders such as snoring and obstructive sleep apnoea, and a working awareness of common therapeutic principles like positional therapy. He is acquainted with standard components used in

[1] Order CoA UPC, NanoString Technologies -v- 10x Genomics, UPC_CoA_335/2023, App_576355/2023 of 26 February 2024, as rectified by the order of 11 March 2024. See also G1/24, Enlarged Board of Appeal EPO.

simple wearable or bed-based devices, such as basic sensors, control mechanisms, and conventional communication technologies. This is agreed between the parties, and the Court has no reason to hold otherwise.

32. The parties disagree on the interpretation of certain features of claim 1 of the patent. These are, where relevant for the decision, discussed here, applying the principles set out above.

33. The patent claims a wearable PTD (feature 1.1) comprising three components, a position detector (feature 1.2), a haptic feedback device (feature 1.3) and a microcontroller (feature 1.4). The PTD furthermore has three specific characteristics: it only starts to give haptic feedback (vibration) after a predetermined period, to allow the user to fall asleep (feature 1.5), it allows the user to reset this time period (feature 1.6) and the feedback it gives is adaptable, starting gently and increasing in intensity if there is no response (feature 1.7).

    - Interpretation of feature 1.2
      a position detector (110) configured to generate positional signal data that can be used to determine a position of the user

34. The skilled person understands from the wording of feature 1.2 that the position detector must be able to ("*configured to*") generate positional data which can be used to determine a position of the user. In para. [0021] of the description (cited in 5. above), where the position detector 110 is described, the sleeping position is, as an example, specified to be a supine position. In the context of the invention the skilled person will understand that this will be the position that is targeted and hence needs determination (and is to be prevented). Para. [0021] then discloses as examples of position detectors an accelerometer or, alternatively, a pressure switch or sensor. This teaches the skilled person that any detector which can be used to determine the position of the user and can generate a signal to that effect, falls within the scope of the claim.

35. Parties mainly agree on the interpretation of this feature.[2] Only in the context of validity, ABM asserts that a particular meaning should be given to the phrase 'positional signal data' and to the word 'determine'. The skilled person will understand that any detector which is able to, in case the supine target position is assumed by the user, detect this and as a result trigger the activation of the haptic feedback device of feature 1.3, must be considered to generate the required "data" or information. This can be achieved by a simple on/off switch, driven by the position detection. Furthermore, the claim also does not require that the position detector is able to detect each single position of the user, or several positions. The language of the (feature of the) claim, read in the context of the description and the teaching of the patent only requires the detection of one (target) position, namely the supine position.

[2] See e.g. para. 14 of Philips Rejoinder/Reply/ in the counterclaim

- Interpretation of feature 1.4

*1.4 a **microcontroller** (130) in communication with the position detector (110) and the haptic feedback device (140), wherein the microcontroller (130) is configured to:*

1.4.1 receive and analyse the positional signal data from the position detector (110),

1.4.2 determine whether the user of the wearable position therapy device (100) is in a target sleeping position, and

1.4.3 generate a control signal to cause the haptic feedback device (140) to provide tactile feedback to the user to induce the user to change to a different, non-target sleeping position if the user of the wearable position therapy device (100) is in the target sleeping position,

36. In the patent specification no specific definition of a microprocessor is provided. According to para. [0026] of the patent, most commercially available microcontrollers or microprocessors would be appropriate for the claimed position detection device, and, in a preferred embodiment, the microcontroller is an inexpensive, small, low-powered chip. The PTD can include a memory (para. [0025]). The PTD can also include firmware executable by the microcontroller, whereby the firmware can be stored in data storage or in a flash memory of microcontroller.

37. Parties furthermore seem to agree that the term 'microprocessor' of feature 1.4, is rather defined by its functionality than by its form.

38. Based on the above, the skilled person, using common general knowledge, would understand the microcontroller according to feature 1.4 to be at least a chip, which is an integrated circuit performing logical operation and which is configured in such a way, that data from the position detector can be received and analysed and a control signal can be generated, so that a haptic feedback device can be caused to provide a tactile feedback.

39. This is also in line with ABM's initial interpretation of a microcontroller in the statement of claim (para. 83 with reference to Wikipedia): "A *microcontroller is a single microchip designed for specific applications, commonly used to enable automation in products and devices, such as medical devices, by facilitating data collecting, sensing and interaction with the physical world*". The claimant's subsequent position in its reply/defence to the counterclaim that the microcontroller is more sophisticated and in particular comprises a memory to store firmware and other data, is dismissed. The reference in [0026] to firmware and the storage thereof on a flash memory of the microcontroller, is only mentioned as a possibility, an exemplary embodiment. This is not claimed. The same is true for the memory as such, since para. [0025] specifies that it *can* have a memory, but apparently not necessarily so.

40. Also, ABM's assertion that the word 'analyse' in feature 1.4 should be interpreted to require a memory to perform such task, is dismissed. This term does not demand that a complex algorithm must be performed; it suffices that receipt of input from the position detector that the user is in the (unwanted) target position, triggers a feedback signal.

- Interpretation of feature 1.6

***wherein** the user can reset the predetermined time period, and*

41. According to feature 1.6, the user can reset the predetermined time period of feature 1.5 (which period is meant to allow the user to initially fall asleep in the target sleeping position). It follows from para. [0053], that the reset option is meant for a situation that the user has trouble falling asleep, or when a user might be awakened during the night by the need to use the bathroom. The claim does not specify how the "reset" must be effected. According to an embodiment described in para. [0053], the u*ser can turn the PTD off and then back on* in order to reset the feedback delay.

42. From the above the skilled person understands that merely turning off and on of the PTD, qualifies as a 'reset' according to feature 1.6.

III.C – VALIDITY

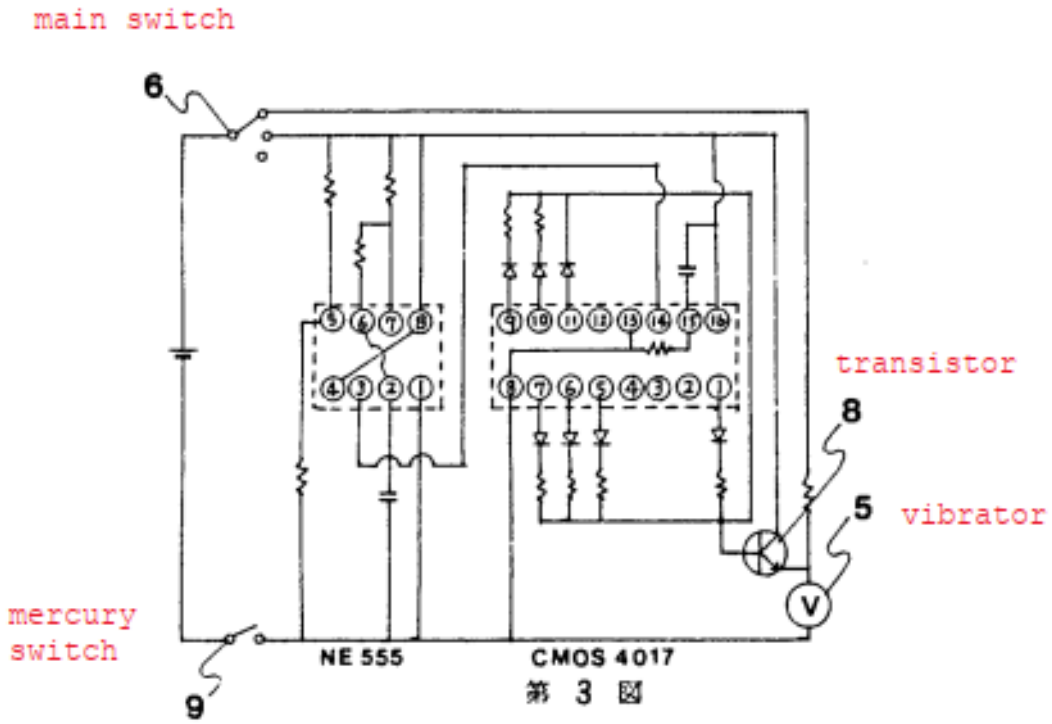
Novelty of claim 1 of the patent – JP748

43. The Defendants assert inter alia that the position therapy device according to claim 1 is not new over the Japanese patent application publication JP748, which prior art was not considered by the EPO (Philips explained that it only came across this prior art recently). This attack succeeds.

44. JP748 discloses an anti-snoring device, comprising an angle sensor which functions as a position detector of the patent. The angle sensor produces a signal that activates a 'warning device', which can be a vibrator (a haptic feedback device). The angle sensor detects if a sleeper lies on the back, and a warning device is activated by a signal of the angle sensor. The embodiment relied on is illustrated in figures 1-3 of JP748, depicted in 10. above.

45. ABM disputes that JP748 discloses features 1.2, 1.4 and 1.5. That JP748 anticipates the other features is thus assumed.

46. Claimant argues that the "angle sensor" cannot be the position detector of feature 1.2, because it merely acts as a trigger; it is merely an on/off switch. However, the claim does not require more than that, as discussed above at claim construction. The mercury switch 9 shown in the circuit diagram of figure 3 (shown again below for easy reference) is an angle sensor. This is a position detector according to feature 1.2 and is configured to generate positional signal data to the vibrator as haptic feedback device.



第 3 図

47. When the user's body is tilted by greater than or equal to 30 degrees with respect to the horizontal direction, the mercury switch is turned off (i.e. the switch is open/unconnected). Therefore, when the sleeper 10 is lying on the side, the mercury switch is turned off, and the electric current in the entire device does not flow, and the device is not activated (see p. 8 l. 9-19). When the sleeper lies on the back, the mercury switch (angle sensor) is brought into a conductive state, which is the function of a position detector (see also page 8 lines 20-22). Therewith the requirement of feature 1.2 to "generate positional signal data" is met. The configuration of a "position detector" is not limited to the embodiments given in the patent. If the mercury switch is brought into the conductive state, it generates the "positional signal data" or information, that the position is below 30 degrees, followed by the activation of the haptic feedback device (see page 5, line 32-33, cited in 9. above: "*the angle sensor outputs a signal*"). Feature 1.2 is thus anticipated by JP748.

48. ABM also contests the disclosure of feature 1.4. A microcontroller, according to ABM, is a well-established term in the art which includes, at minimum, a processor (CPU) and a memory for storing and executing software. The entire purpose of a microcontroller is to execute software. Without the capability to run software, the device would not be considered a microcontroller. As discussed above at claim construction, the claim does not require a sophisticated microcontroller with memory able to perform analytical functions.

49. In JP748 an embodiment 1 is described with a circuit configuration between an "IC-CMOS 4017" and an "IC-NE 555" (wherein IC stands for Integrated Circuit), illustrated in the circuit diagram of figure 3 (shown above). Philips undisputedly explained that this works as follows. "*The diagram shown in Figure 3 shows a circuit with a power supply that provides power to a vibrator 5 if the on-off switch 6 is closed. The vibrator 5 is coupled to a transistor 8. Transistor 8 only conducts current and hence the vibrator 5 only vibrates if the transistor 8 is driven which is the case if a signal is put on its drive electrode. The pins 1 and 5-7 and 9-11 of the CMOS 4017 microcontroller are connected to the drive electrode*

of the transistor 8. The pins labeled 2-4 in figure 3, in the description confusingly identified as pins 1-34, are not connected to the transistor 8. Accordingly, the vibrator 5 vibrates when CMOS 4017 outputs a signal on any of the pins 1, 5-7 and 9-11 and does not on pins 2-4. The CMOS 4017 is a digital counter which outputs a signal on the pins 1-7 and 9-11 in alternate order. For example, when pin 5 is on, the other pins are off and, on the next count, another pin will be on and the other pins, including pin 5, are off. The timing of the counting is under control of the timer IC NE 555 which provides a 10-second cycle. When any one of pins 2-4 are on, the signal does not reach the transistor 8 and thus the vibrator 5 will not vibrate for 30 (3 times 10) seconds. Each of the pins is coupled to the transistor 8 via a resistor. The resistance of this [resistor] decreases, in the order of the counting. The lower the resistance, the stronger the signal on the drive electrode of the transistor 8, the more conductive the transistor 8 and the higher the intensity of the vibration. Thus, as the count increases, the vibration gets stronger. The NE 555/CMOS 4017 is only operative if the switch 9 is closed. As explained above, when the user is on his back the switch is closed and when the user turns from his back to his side the switch opens and the vibration stops."[3]

50. This also follows from the description of JP748 (page 8 line 9 to page 9 line 1, cited in 9. above). With NE 555 and IC-CMOS 4017, JP748 discloses two electronical chips which are in communication with the mercury switch 9 (position detector) and the vibrator 5 (haptic feedback device). As discussed above at claim construction, the microcontroller is understood to be at least a chip. The skilled person thus understands that the NE 555/CMOS 4017 qualifies as a microcontroller. The circuit diagram of figure 3 thus discloses the microcontroller of feature 1.4.

51. ABM also disputed, for the first time in its rejoinder to the counterclaim, that feature 1.5 is disclosed in JP748. It asserts that Philips only relies on page 14 lines 10-14 for this feature, however that disclosure only pertains to the fourth embodiment, whereas Philips relies exclusively on embodiment 1 for its novelty attack. Even if this late-filed defence is considered, it cannot help claimant. This feature is also disclosed in the general part of the description (p. 6, l. 19-25) of JP748, which is also relevant to embodiment 1:

> The user sets the timer such that the entire device is activated when the time necessar for the user to fall asleep has passed, so that t user can fall asleep in a free posture, and after that, according to operation of the activated device, the user is caused to lie on his or her "side, so that the user is prevented from snoring.

52. As claim 1 of EP696 is thus fully anticipated by embodiment 1 of JP748, the patent lacks novelty.

53. During the oral hearing, in response to the Court's question, ABM indicated that, in case the Court should find claim 1 invalid, the Court should assess whether the patent can be maintained in the form of one of the dependent claims, before proceeding to the AR. The Court notes that there was not debate on this in the submissions, apart from on claim 2

[3] Statement of defense/counterclaim for revocation paragraph 85

and 4. Claim 2 is also disclosed in JP748 and therefore cannot save the patent. The adaptive feedback added by subclaim 4 is not disclosed in JP748 as this requires a more advanced microcontroller with memory. At the priority date in 2009, the adaptation of the microcontroller of JP748 dating from 1990 to a more contemporary microprocessor with memory, would be obvious to the skilled person (see also the reasoning regarding the validity of the AR below). As the validity of all independent claims asserted by Philips and not contested by ABM, it cannot be established that one or more of the dependent claims can render the patent valid.

54. Validity of the Auxiliary Request

55. The limitation of the scope of the patent to a PTD with a position detector comprising an accelerometer in feature 1.2 in the AR, renders the patent in this form valid over JP748, as the disclosure thereof relied on concerns a mercury switch as angle sensor. Philips asserts that, starting from JP748, the patent according to the AR is obvious. The Court agrees.

56. ABM's belated (at the oral hearing) challenge that JP748 is a realistic starting point, is dismissed. JP748 relates to the same technical field and solves the perceived problems (of mechanical devices and PTDs with audio-prompting) in the same way. It is considered a realistic starting point.

57. For the reasons set out above at novelty of claim 1, all features of claim 1 of the patent according to the AR are disclosed in JP748 except for the accelerometer of amended feature 1.2. There are almost twenty years between the publication of JP748 and the priority date of the patent, during which time the common general knowledge of the skilled person expanded considerably. The skilled person in 2009, wishing to provide an improved position therapy device starting from embodiment 1 of JP748 dating from 1991, would arrive at the subject matter of claim 1 of the AR without any inventive steps.

58. JP748 discloses a mercury switch as tilting switch in the function of an angle sensor, a position detector. The skilled person is aware, that the mercury used in this switch is a hazardous substance that is prohibited to be used in the EU from 1 July 2006. At the priority date, the skilled person was therefore forced to provide an alternative implementation of the mercury switch as angle sensor in the device according to JP748.

59. Furthermore, the person skilled in the art, based on undisputed common general knowledge (evidenced by the textbook for sleep medicine submitted by Philips as exhibit P28, page 1459, abstract, lines 3-7), knew accelerometers are standard components of devices used in this field. For example, in wrist actigraphy a subject's sleep behaviour is monitored using a wrist-worn wearable device which typically has a miniaturized accelerometer and corresponding microcontroller. Such accelerometer/sensor has amongst other things, the advantages of being cost efficient. The use of accelerometers for inclination angle calculation and dynamic movement measurements thus belonged to the common general knowledge of the skilled person. This is also evidenced by another handbook submitted by Philips as exhibit P25, Handbook of Modern Sensors, published in 2003). In this way, the skilled person could and would choose such an accelerometer and associated microcontroller as angle sensor as modern off-the-shelf components to replace the hazardous mercury switch in JP748, simultaneously providing the advantage

of detecting different extends of movement detection instead of only detection of an angle of 30 degree.

60. The above leads to the conclusion that claim 1 of the AR is obvious, starting from JP748. The dependent claims, which are unamended, cannot change this for the same reasons set out above. The patent will therefore be revoked.

III.D – INFRINGEMENT

61. As the patent is considered invalid in its entirety, the infringement action fails. It is not necessary to address any arguments of the parties relating to (non)infringement nor to (non-)infringing acts. All ABM's requests in the infringement action shall be dismissed.

III.E – CONCLUSION AND COSTS

62. As the patent is invalid, it will be revoked in its entirety, granting the request in the counterclaim action. It is not possible to declare this decision enforceable with immediate effect, as requested. It shall take effect when the decision becomes final (i.e. upon on completion of the appeal proceedings or, when no appeal is filed, within the time limit for appeal). The infringement action is dismissed.

63. By email of 12.1.2026 parties informed the court that they reached the following agreement on the costs:
On behalf of both parties, I hereby inform you that the parties have agreed that the recoverable costs of representation on both sides amount to €56,000, to be added to the court fees for the respective actions (€11,000 per action). The parties furthermore agree that said amount of €56,000 should be split between the infringement and invalidity action on a 50/50 basis (i.e. €28,000 per action).

A final order on the costs shall be given in this decision accordingly.

IV. DECISION

For all these reasons and after having heard the parties, the Court

in the infringement action:

A. Dismisses all requests;

B. Orders ABM to pay to Philips the agreed reasonable and proportionate legal costs and other expenses of these proceedings in the amount of EUR 39,000;

C. Declares the cost order immediately enforceable;

In the counterclaim for revocation:

I. Revokes patent EP 2 437 696 B2 in its entirety;

II. Orders ABM to pay to Philips the agreed reasonable and proportionate legal costs and other expenses of these proceedings in the amount of EUR 39,000;

III. Declares the cost order immediately enforceable.

Information about appeal

An appeal against the present decision may be lodged at the Court of Appeal, by any party which has been unsuccessful, in whole or in part, in its submissions, within two months of the date of its notification (Art. 73(1) UPCA, R. 220.1(a), 224.1(a) RoP).

Information about enforcement

(Art. 82 UPCA, Art. Art. 37(2) UPCS, R. 118.8, 158.2, 354, 355.4 RoP)

An authentic copy of the enforcement of the decision will be issued by the Deputy-Registrar upon request of the enforcing party, R. 69 RegR (Rules governing the Registry of the UPC).

Brinkman Presiding judge	Edger Frank BRINKMAN Digitally signed by Edger Frank BRINKMAN Date: 2026.03.02 12:45:23 -03'00'
Johansson Legally qualified judge	Stefan Erik Johansson Digitally signed by Stefan Erik Johansson Date: 2026.03.02 14:05:46 +01'00'
Philipps Technically qualified judge	STEFANIE PHILIPPS Digital signiert von STEFANIE PHILIPPS DN: cn=STEFANIE PHILIPPS, c=DE Datum: 2026.03.02 11:54:36 +01'00'
Kokke Judge rapporteur	Margot Elsa Kokke Digitally signed by Margot Elsa Kokke Date: 2026.03.02 17:53:01 +01'00'
On behalf of the registrar	Anja Mittermeier Digital unterschrieben von Anja Mittermeier Datum: 2026.03.03 09:25:32 +01'00'