

OPINION UNDER SECTION 74A

Patent	GB 2594820 B
Proprietor(s)	Prevayl Innovations Limited
Exclusive Licensee	
Requester	Prevayl Innovations Limited
Observer(s)	
Date Opinion issued	14 August 2022

The request

1. The Comptroller has been requested by Prevayl Innovations Limited ("the requester") to issue an opinion as to whether claims 1 - 4, 7 - 10, 12 and 14 - 16 of GB 2594820 B ("the patent") are infringed by the Whoop (RTM) 4.0 ("the Whoop") distributed by Whoop Inc.

2. The request includes the following evidence describing the Whoop:

A1 - screenshot of <https://join.whoop.com/en-uk/>

A2 - screenshot of <https://shop.whoop.com/products/sports-bra-1/?variant=41033232646327>

A3 - screenshot of <https://shop.whoop.com/products/battery-pack/?variant=40646938951863>

A4 - external photos obtained from <https://fcc.report/FCC-ID/2AJ2X-WS40/5495208>

A5 - external photos obtained from <https://fcc.report/FCC-ID/2AJ2X-WS40/5495217>

A6 - screenshot of https://support.whoop.com/STRAP_CHARGING/Charging_Battery/4.0_Battery_Pack_Overview

A7 - screenshot of <https://twitter.com/joevennare/status/1438535308040101898?lang=en-GB>

A8 - screenshot of <https://www.nucurrent.com/nfc-charging-popular-product-categories/>

A9 - screenshot of https://support.whoop.com/STRAP_CHARGING/Commonly_Asked_Questions/Can_I_Turn_My_WHOOP_Off%3F#:~:text=For%20all%20versions%20of%20WHOOOP,as%20it%20is%20still%20charged

Observations and observations in reply

3. No observations were received in response to the request.

The patent

4. The patent, titled "Electronics module for a wearable article", is divided from application number GB2006830.0, which has a filing date of 7 May 2020. The patent was published on 10 November 2021 and granted on 13 April 2022. The patent remains in force.
5. The patent relates to wearable articles, for example garments, designed to interface with a user to determine information such as their heart rate, rate of respiration, activity level and body positioning. The patent relates more specifically to an electronics module for processing and communicating signals received from sensing components of the wearable article to a user's mobile device, such as their mobile phone. Figure 1 shows a garment having a pocket 201 for holding the electronics module 100 to enable the module to integrate with sensor components of the garment.

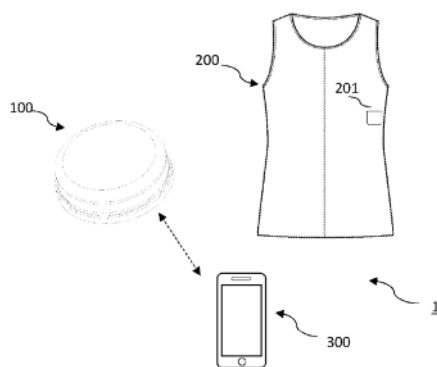


FIG. 1

6. The electronics module and mobile device communicate via a protocol such as Bluetooth (RTM), Bluetooth (RTM) Low Energy or near-field communication (NFC). If NFC is used, the electronics module may comprise an NFC coil antenna. Figure 3 represents components of an electronics module communicating with a user's mobile phone. As can be seen in the figure, the electronics module also comprises a controller 103. It is noted on page 11 of the description that the input unit 111 may comprise the first antenna 107.

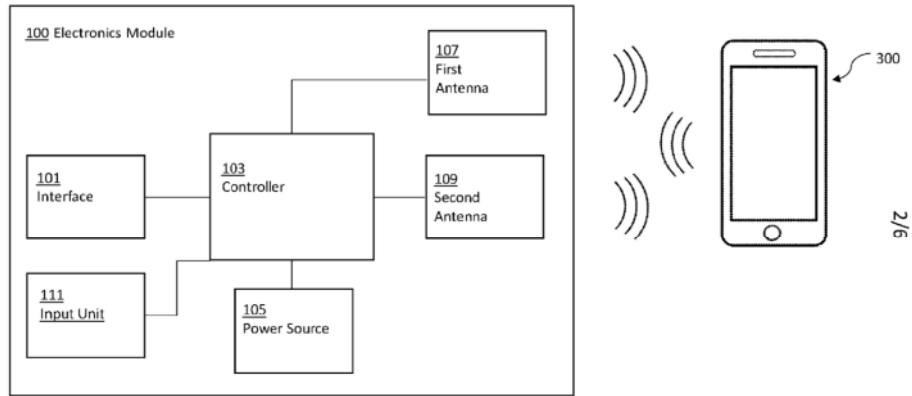


FIG. 3

7. The patent describes how the electronics module can operate in a first (lower) power mode in which the majority of its components do not operate to save power and a second (higher) power mode in which the components are operational to enable the user to obtain the full functionality of the electronics module.
8. The controller transitions from the first to the second power mode following detection by the input unit of an input event caused by an object being brought into proximity with the electronics module. Following transition from the first to the second power mode, the controller determines whether the wearable article is being worn by receiving and processing data from the sensing components of the wearable article. The controller transitions back to the first power mode if it concludes that the article is not being worn.
9. Figure 4 shows a process flow diagram for a method performed by the controller of the electronics module.

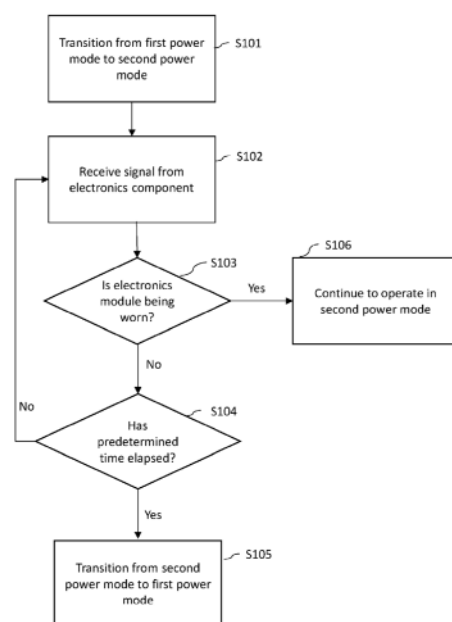


FIG. 4

10. The patent has 16 claims including a single independent claim. Claim 1, adopting the references used by the requester, reads:

- 1A *An electronics module for a wearable article, the electronics module comprising:*
- 1B *an input unit comprising one or both of an antenna and a motion sensor,*
- 1C *the one or both of the antenna and the motion sensor being arranged to detect an input event caused by an object being brought into proximity with the electronics module; and*
- 1D *a controller arranged to operate in a first power mode and a second power mode, wherein the first power mode consumes less power than the second power mode, and*
- 1E *wherein the controller is arranged to transition from the first power mode to the second power mode in response to the input unit detecting the input event,*
- 1F *wherein in the second power mode, the controller is arranged to determine whether the wearable article is being worn, and, in response to determining that the wearable article is not being worn, the controller is arranged to transition from the second power mode to the first power mode.*

Claim construction

11. Before considering whether the patent is infringed, I need to construe the claims of the patent – that is to say, I must interpret them in the light of the description and drawings as instructed by Section 125(1):

125(1) For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.

12. In doing so I must interpret the claims in context through the eyes of the person skilled in the art. Ultimately the question is what the person skilled in the art would have understood the patentee to be using the language of the claims to mean. This approach has been confirmed in the recent decisions of the High Court in *Mylan v Yeda*¹ and the Court of Appeal in *Actavis v ICOS*².

¹ *Generics UK Ltd (t/a Mylan) v Yeda Research and Development Co. Ltd & Anor* [2017] EWHC 2629 (Pat)

² *Actavis Group & Ors v ICOS Corp & Eli Lilly & Co.* [2017] EWCA Civ 1671

13. I consider the person skilled in the art to be a designer and manufacturer of electronics modules for wearable articles.
14. The reference to "an object being brought into proximity with the electronics module", can be interpreted by referring to pages 3 and 4 of the description as filed, where it is stated:

'The input unit may detect an object being brought into proximity with the electronics module as a result of a current being induced in the antenna. The current may be induced in the antenna as a result of a mobile device being brought into proximity with the electronics module. The mobile device may comprise an active antenna to induce the current in the antenna.'

'The sensing unit may comprise a motion sensor. The motion sensor may be arranged to detect the object being brought into proximity with the electronics module. That is, the sensing unit may be able to detect a "tap" input caused by the object being tapped against the electronics module or a pocket or other holder in which the electronics module is located.'

15. I consider therefore that "an object being brought into proximity with the electronics module" means either that an impact is detected, for example by a motion sensor, or that an object is detected close to but not in contact with the module, for example by a current being induced in an antenna.
16. The claim describes how the controller is arranged to operate in first and second power modes. Further information describing the first power mode can be found, for example on page 10 of the description, where it is stated that:

'In the first power mode, the controller 103 may not activate components of the electronics module 100 such as the first antenna 107 and the second antenna 109 to communicate with the mobile device 300. Moreover, the electronics component may not be activated to sense signals. Other features may be disabled/enabled in the first power mode/second power mode. The input unit 111 is operational during the first power mode but may operate in a restricted mode.'

17. It would seem to me therefore that the controller operating in the first (lower) power mode disables some components of the electronics module to save power.
18. I consider the remainder of the claim to be clear.

Infringement - the law

19. Section 60 Patents Act 1977 governs what constitutes infringement of a patent:

(1) Subject to the provision of this section, a person infringes a patent for an invention if, but only if, while the patent is in force, he does any of the following things in the United Kingdom in relation to the invention without the consent of the proprietor of the patent, that is to say -

(a) where the invention is a product, he makes, disposes of, offers to dispose of, uses or imports the product or keeps it whether for disposal or otherwise;

(b) where the invention is a process, he uses the process or he offers it for use in the United Kingdom when he knows, or it is obvious to a reasonable person in the circumstances, that its use there without the consent of the proprietor would be an infringement of the patent;

(c) where the invention is a process, he disposes of, offers to dispose of, uses or imports any product obtained directly by means of that process or keeps any such product whether for disposal or otherwise.

20. In the Supreme Court in *Actavis v Eli Lilly*³, Lord Neuberger stated that the problem of infringement is best approached by addressing two issues, each of which is to be considered through the eyes of the notional addressee of the patent in suit, i.e. the person skilled in the relevant art. Those issues are:

(i) does the variant infringe any of the claims as a matter of normal interpretation; and, if not,

(ii) does the variant nonetheless infringe because it varies from the invention in a way or ways which is or are immaterial?

21. If the answer to either issue is "yes", there is infringement; otherwise there is not.

22. The second issue to be addressed is whether the variant provided by the product varies in a way that is immaterial. The court in *Actavis* provided a reformulation of the three questions in *Improver*⁴ to provide guidelines or helpful assistance in connection with this second issue. These reformulated questions are:

(i) Notwithstanding that it is not within the literal meaning of the relevant claim(s) of the patent, does the variant achieve substantially the same result in substantially the same way as the invention, i.e. the inventive concept revealed by the patent?

(ii) Would it be obvious to the person skilled in the art, reading the patent at the priority date, but knowing that the variant achieves substantially the same result as the invention, that it does so in substantially the same way as the invention?

(iii) Would such a reader of the patent have concluded that the patentee nonetheless intended that strict compliance with the literal meaning of the relevant claims(s) of the patent was an essential requirement of the invention?

23. To establish infringement in a case where there is not literal infringement, a patentee would have to establish that the answer to the first two questions was "yes" and that the answer to the third question was "no".

³ *Actavis UK Limited and Others v Eli Lilly and Company* [2017] UKSC 48

⁴ *Improver* [1990] FSR 181

24. The first step in determining if there is any infringement under section 60(1) is to consider whether the Whoop falls within the scope of the claims of the patent.

The Whoop

25. The Whoop is an activity tracking device that measures metrics such as a user's heart rate, blood oxygen level and skin temperature to provide health and fitness related statistics. The device comprises measurement sensors and electronic components, and pairs with the user's mobile phone to send data to an application installed on the phone. The image below, taken from A1, shows how the Whoop may be supported by a wrist strap to hold the device, and therefore the sensors, against a user's wrist.



26. The Whoop accessory range includes garments having an internal pod for housing the Whoop to allow a user to position the Whoop in alternative positions also in contact with their body. The image below, taken from A2, shows how the Whoop fits into the internal pod of a sports bra from the accessory range.



27. It is described in A9 how the Whoop remains powered for the entire time that it retains a charge but enters a low power mode when motionless and removed from a user's wrist. (It will presumably also remain powered when held in the internal pod of a garment).

28. The Whoop battery pack is designed to charge the Whoop whilst it is held in position on a user's wrist. An image of the battery pack from A3 is reproduced below.



29. The battery pack is charged using a USB-C connection and then slides into position over the Whoop. Charge is transferred using near-field communication (NFC) charging technology. As detailed in A8, this technology is based on transmitting small amounts of wireless power from a single coil. A7 includes what appears to be an internal image of the battery pack (reproduced below) showing the coil. In their letter, the requester also provides images that apparently show the corresponding coil of the Whoop for receiving the wireless power.



30. The requester also provides in their letter a series of still images from a video available from: <https://youtu.be/gqpi4laDyRQ>, which they assert shows the Whoop transitioning between power modes. The video clearly shows the battery pack being brought into proximity with the Whoop by sliding into position. As shown in the first still image below, as the battery pack slides into place the Whoop is not held in contact with a user by a wrist strap or garment.



31. The second image provided by the requester and reproduced below shows the Whoop with the battery pack in place. The requester states that the battery pack begins to transfer power to the Whoop over the near-field protocol.



32. In the next image, a light source of an optical sensor located on the base of the Whoop is illuminated. According to the requester, this occurs in response to the Whoop detecting induced current in the NFC antenna, with the induced current causing the Whoop to 'transition to the normal power mode and activate the green LEDs'.



33. After a period of time, the light source switches off. The requester believes that the Whoop has now re-entered the low power mode, as the controller of the Whoop 'determines whether the WHOOP 4.0 is on/off body and transitions to the first power mode (low power mode) in response to determining that the WHOOP 4.0 is not being worn'.
34. I accept that one interpretation of the sequence of events depicted in the video may include the light source of the sensor and the sensor itself switching on in response to the Whoop detecting induced current in the NFC antenna, and subsequently switching off when the sensor detects that the Whoop is not in position for data collection from a user. However, in my view, an equally possible interpretation is that the sensor switches on and off periodically in a pattern unrelated to the charging status of the Whoop.

35. Furthermore, even if the video does show the light source of the sensor illuminating in response to detecting an induced current in the antenna, in my view it does not necessarily follow that the controller of the Whoop transitions from the low to the normal power mode in response. Also, when the light source switches off, the controller does not necessarily transition from the normal to the low power mode. In addition, it is clear to me that the antenna of the Whoop is not switched off if charging is taking place and so it seems likely that the controller remains in the normal power mode. In summary, I do not believe that the video provides a clear disclosure of the controller transitioning between power modes.

Does the Whoop infringe the patent as a matter of normal interpretation?

36. I do not believe there to be any doubt that the Whoop is an electronics module for a wearable article. I accept that the Whoop comprises a coil antenna that may be considered to form part of an input unit. The antenna of the Whoop interacts with the antenna of the battery pack when they are brought into proximity (for charging purposes), and so it might be considered that an input event occurs.

37. It seems clear to me that the Whoop, and hence its controller, can operate in a normal power mode, in which the sensors are active and collecting data. I accept the evidence presented suggesting that, when not being worn, the Whoop transitions to a lower power mode, which consumes less power than the normal power mode. I consider that this lower power mode extends to the controller.

38. However, in my view, the evidence provided does not demonstrate convincingly that the controller is arranged to transition from the lower to the higher power mode in response to the input unit detecting an induced current in the antenna of the Whoop when the battery pack is brought into proximity, as alleged by the requester. Therefore, I cannot conclude that the controller transitions to the higher power mode in response to an input event comprising current being induced in the antenna by the battery pack being brought into proximity.

39. Although not suggested in the arguments put forward by the requester, for completeness I note that the Whoop (and presumably the controller) transitions to a lower power mode when motionless and removed from a user's wrist (as evidenced in A9). In my view, it follows that the Whoop enters the higher power mode when motion is detected, probably by a motion sensor. Therefore, motion of the Whoop appears to form an input event. However, this input event is not in response to an object being brought into proximity with the electronics module.

40. In my opinion, on the basis of the evidence provided, the answer to the first *Actavis* question is 'no'. The Whoop does not infringe claim 1 of the patent as a matter of normal interpretation.

Is the Whoop an immaterial variation?

41. Having answered 'no' to the first *Actavis* question, I must now consider the

second question. I will make use of the reformulated *Improver* questions.

42. In order to answer the first reformulated *Improver* question, I must decide whether the variant achieves substantially the same result in substantially the same way as the invention. Although the Whoop does have the function of transitioning between power modes in response to an input event, the nature of the input event differs, and so I cannot conclude that the result is achieved in substantially the same way. It seems clear to me that the answer to the first *Improver* question is 'no'. I do not need to consider the other two *Improver* questions.

Opinion

43. It is my opinion, based on the evidence provided, that the Whoop does not infringe claim 1 of GB 2594820 B under section 60(1) of the Act. It follows that the Whoop does not infringe any of dependent claims 2 - 4, 7 - 10, 12 and 14 - 16.

Application for review

44. Under section 74B and rule 98, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion.

Karen Payne
Examiner

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.