14. (Withdrawn) A system as recited in claim 13, wherein the sensor is electrically connected to the electronic circuitry, and wherein the electronic circuitry contained within the head-worn structure of the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor.

15. (Withdrawn-Currently Amended) A system as recited in claim 14, wherein head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

16. (Withdrawn) A system as recited in claim 14, wherein head-worn personal electronic apparatus is configured to support a low power operational mode, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in the low power operational mode.

17. (Withdrawn-Currently Amended) A system as recited in claim 1, wherein the system ~~head-worn personal electronic apparatus~~ comprises:

a Hall effect detector ~~at least partially contained within the head-worn structure and~~ configured to capture data associated with a magnetic characteristic~~, the Hall effect detector being operatively connected to the electronic circuitry~~.

18. (Withdrawn) A system as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn structure and configured to operate in accordance with acoustic characteristics, the bone conducting element being operatively connected to the electronic circuitry.

19. (Currently Amended) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a ~~at least one~~ speaker at least partially contained within ~~internal to~~ the head-worn structure, the ~~at least one~~ speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

a sensor at least partially contained within the head-worn structure and configured to capture data;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least one or more of the first microphone, the second microphone, the rechargeable battery and the sensor, the electronic circuitry being configured to at least process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, the electronic circuitry being configured to process at least the data captured by the sensor, and the electronic circuitry being configured to determine whether the head-worn structure is being worn by a user based on at least the processed sensor data;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

20. (Currently Amended) A system as recited in claim 19, wherein the first microphone is positioned to be directed forward towards the user's front when the head-worn structure is being worn by the user, and the second microphone is positioned to be directed outward away from the user's head when the head-worn structure is being worn by the user ~~the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone~~.

21. (Original) A system as recited in claim 20, wherein the head-worn personal electronic apparatus comprises:

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus.

22. (Currently Amended) A system as recited in claim 21, wherein head-worn electronic personal audio apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn electronic personal audio apparatus being altered concerns control of the audio output being provided to the user.

23. (Currently Amended) A system as recited in claim 21, wherein the system ~~head-worn electronic personal audio apparatus~~ comprises:

a Hall effect detector ~~at least partially contained within the head-worn structure and~~ configured to capture data associated with a magnetic characteristic.

24. (Currently Amended) A system as recited in claim 19, wherein the sensor is positioned to be directed towards the user's head when the head-worn structure is being worn ~~the head-worn personal electronic apparatus comprises:~~

~~a sensor at least partially contained within the head-worn structure and configured to capture data,~~

~~wherein the electronic circuitry provided within the head-worn structure and electrically connected to the sensor, the electronic circuitry configured to process at least the data captured by the sensor~~.

25. (Currently Amended) A system as recited in claim 24, wherein the data captured by the sensor is dependent on thermal characteristics of the user's head when the head-worn structure is being worn ~~electronic circuitry is configured to determine whether the head-worn structure is being worn by a user based on at least the processed sensor data~~.

26. (Currently Amended) A system as recited in claim 19, wherein the head-worn personal electronic apparatus comprises:

wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

27. (Canceled).

28. (Canceled).

29. (Currently Amended) A system as recited in claim 19 [[28]], wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-

worn personal electronic apparatus based at least in part on the sensed data from the sensor.

30. (Currently Amended) A system as recited in claim 29, wherein head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

31. (Original) A system as recited in claim 19, wherein the head-worn personal electronic apparatus comprises:

a user input device supported by the head-worn structure, the user input device being configured to receive a user input, the user input device is based on at least capacitive effect, wherein the user input being received induces at least a capacitive change to produce at least an electrical response.

32. (Original) A system as recited in claim 31, wherein the user input device is configured to distinguish at least a direction of the user input with respect to the user input device.

33. (Original) A system as recited in claim 31, wherein the electronic circuitry is electrically connected to the user input device to receive user input data from the user input device, and wherein the head-worn personal electronic apparatus is configured to detect at least a sliding of a finger action with respect to the user input device using at least the electronic circuitry and the user input data.

34. (Original) A system as recited in claim 31, wherein the electronic circuitry is electrically connected to the user input device to receive user input data from the user input device, and wherein the head-worn personal electronic apparatus is configured to distinguish at least whether the user input pertains to a forward sliding action or a

backward sliding action with respect to the user input device using at least the electronic circuitry and the user input data.

35. (Canceled).

36. (Canceled).

37. (Canceled).

38. (Currently Amended) A system as recited in claim 19, wherein the system ~~head-worn electronic personal audio apparatus~~ comprises:

a Hall effect detector ~~at least partially in the head-worn structure and configured to capture data associated with a magnetic characteristic~~.

39. (Original) A system as recited in claim 19, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn structure and configured to operate based on signals associated with sound, the bone conducting element being operatively connected to the electronic circuitry.

40. (Currently Amended) A system, comprising: ~~as recited in claim 19, wherein the head-worn personal electronic apparatus comprises:~~

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

a "being worn" sensor at least partially contained within the head-worn structure and configured to detect data indicative of whether the head-worn structure of the head-worn personal electronic apparatus is being worn;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least one or more of the first microphone, the second microphone, the rechargeable battery and the "being worn" sensor, the electronic circuitry being configured to at least process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, the electronic circuitry being configured to process at least the detected data captured by the "being worn" sensor;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus

~~radiation detector configured to capture radiation data,~~

~~wherein the electronic circuitry is electrically connected to the radiation detector, the electronic circuitry configured to process at least the radiation data captured by the radiation detector, and~~

~~wherein the electronic circuitry is configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data~~.

41. (Currently Amended) A system as recited in claim 40, wherein the detected data by the "being worn" sensor is dependent on a physical characteristic of the user ~~the radiation detector comprises a photodetector~~.

42. (Original) A system as recited in claim 19, wherein the conductive element is a conductive pad.

43. (Withdrawn-Currently Amended) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a ~~at least one~~ speaker at least partially contained within ~~internal to~~ the head-worn structure, the ~~at least one~~ speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus;

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus.

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

44. (Withdrawn-Currently Amended) A system as recited in claim 43, wherein the head-worn personal electronic apparatus comprises:

wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and

wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine or receive a determination of a requested

operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

45. (Withdrawn-Currently Amended) A system as recited in claim 44, wherein the head-worn personal electronic apparatus comprises:

at least one magnetic element at least partially contained within ~~internal to~~ the head-worn structure and configured to support a magnetic force that facilitates an electrical connection.

46. (Withdrawn) A system as recited in claim 44, wherein the head-worn personal electronic apparatus comprises:

a sensor at least partially contained within the head-worn structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user,

wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor.

47. (Withdrawn-Currently Amended) A system as recited in claim 46, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

48. (Withdrawn-Currently Amended) A system as recited in claim 46, wherein the head-worn personal electronic apparatus is configured to support a low power operational mode, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in the low power operational mode.

49. (Withdrawn-Currently Amended) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a ~~at least one~~ speaker at least partially contained within ~~internal to~~ the head-worn structure, the ~~at least one~~ speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure~~, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus~~;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery;

a radiation emitter at least partially contained within the head-worn structure and configured to at least direct radiation towards the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn;

a radiation detector at least partially contained within the head-worn structure and configured to detect at least a portion of the radiation from the radiation emitter that is reflected back from the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

50. (Withdrawn-Currently Amended) A system as recited in claim 49,

wherein the radiation detector is operatively connected to the electronic circuitry, and

wherein electronic circuitry within the head-worn structure is configured to facilitate determining whether the head-worn structure of the head-worn personal electronic apparatus is being worn by the user ~~based on at least the detected radiation, and~~

~~wherein the detected radiation is at least infrared radiation~~.

51. (Withdrawn-Currently Amended) A system as recited in claim 50, wherein the head-worn personal electronic apparatus comprises:

at least one magnetic element at least partially contained within ~~internal to~~ the head-worn structure and configured to support a magnetic force that facilitates an electrical connection.

52. (Withdrawn-Currently Amended) A system as recited in claim 50 [[51]], ~~wherein the head-worn personal electronic apparatus comprises:~~

wherein the second microphone is positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and

wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

53. (Withdrawn-Currently Amended) A system as recited in claim 50 [[51]], wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the determination of whether the head-worn structure of the head-worn personal electronic apparatus is being worn by the user based on at least the motion data ~~detected radiation~~.

54. (Withdrawn-Currently Amended) A system as recited in claim 53, wherein head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

55. (Withdrawn) A system as recited in claim 53, wherein head-worn personal electronic apparatus is configured to support a low power operational mode, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in the low power operational mode.

56. (New) A system as recited in claim 50, wherein the radiation detector is an infrared radiation detector, and wherein the radiation being detected by the radiation detector includes infrared radiation.

57. (New) A system as recited in claim 56, wherein the first microphone is positioned to be directed forward towards the user's front when the head-worn structure is being

worn by the user, and the second microphone is positioned to be directed outward away from the user's head when the head-worn structure is being worn by the user.

58. (New) A system as recited in claim 57, wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the determination of whether the head-worn structure of the head-worn personal electronic apparatus is being worn by the user.

59. (New) A system as recited in claim 58,

wherein the second microphone is positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and

wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

60. (New) A system as recited in claim 59,

wherein the motion detector comprises an accelerometer, and

wherein the system comprises a Hall effect detector.

61. (New) A system as recited in claim 49, wherein the head-worn personal electronic apparatus comprises:

a force sensor at least partially contained within the head-worn structure and configured to sense a force input associated with the user, wherein the sensed force input operating to at least alter operation of the head-worn electronic personal audio apparatus.

62. (New) A system as recited in claim 61, wherein head-worn electronic personal audio apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn electronic personal audio apparatus being altered concerns control of the audio output being provided to the user.

63. (New) A system as recited in claim 61, wherein head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

64. (New) A system as recited in claim 49, wherein the first microphone is positioned to be directed forward towards the user's front when the head-worn structure is being worn by the user, and the second microphone is positioned to be directed outward away from the user's head when the head-worn structure is being worn by the user.

65. (New) A system as recited in claim 40, wherein the head-worn structure comprises:

an accelerometer, operatively connected to the rechargeable battery, at least partially contained within the head-worn structure and configured to sense movement data.

AMENDMENTS TO THE DRAWINGS:

Please **AMEND** the application to **ADD** New Figures 14-19C to the application. These New Figures 14-19C are submitted as attached hereto.

Apple Inc. Exhibit 1002 Page 715

REMARKS

In the Office Action, the Examiner restricted certain claims, objected to the drawings, rejected claims 19-42 under the first paragraph of 35 USC § 112, rejected claims 19-42 under the second paragraph of 35 USC § 112, and rejected claims 19, 20, 24-30 and 38-42 under 35 USC § 103(a). These objections and rejections are fully traversed below.

Claims 1, 4, 8, 10, 11, 15, 17, 19, 20, 22-26, 29, 30, 38, 40, 41, 43-45 and 47-54 have been amended to further clarify the subject matter regarded as the invention. Claims 9, 27, 28 and 35-37 have been canceled from the application without prejudice or disclaimer. New claims 56-65 have been added to the application. Claims 1-8, 10-26, 29-34 and 38-65 are pending.

A Substitute Specification is submitted herewith including additional content from incorporated by reference content from earlier patent application. New FIGs. 14-19C are also added to the application.

Reconsideration of the application is respectfully requested based on the following remarks.

RESTRICTION REQUIREMENTS

On pages 2-3 of the Office Action, the Examiner notes that claim 21 (of Species II) was not then allowable given a rejection under 35 USC § 112. However, since the rejections under 35 USC § 112 have been traversed below, and claim 21 is in condition for allowance and serves as a linking claim to Species I and III). As such, Applicant respectfully requests that the Restriction Requirement be reconsidered and withdrawn so that all pending claims are examined.

OBJECTION TO THE DRAWINGS

In the Office Action, the Examiner objected to the drawings for not showing features associated with claims 19, 21, 31 and 35. Applicant respectfully disagrees and submits that the drawings are sufficiently compliant with 37 CFR 1.83(a). However, to

expedite examination, Applicant has added New Figures 14-19C to the application. These added New Figures 14-19C are directly from drawings provided in prior applications that are incorporated by reference into the present application, see, e.g., U.S. Patent Application No. 11/183,276, FIG. 7; and U.S. Patent Application No. 11/283,283, FIGs. 3-7C. With respect to the Examiner's specific concerns, Applicant notes, for example, that regarding claims 21 and 31, Figures 16, 17 and/or 19C denote a touch sensitive surface as well as electrical/capacitive effect. For claim 35, Applicant notes, for example, that Figure 14 illustrates uses of various different sensors, one of which being a sensor that can utilize an infrared emitter and an infrared detector. Further, as to claim 19, Applicant notes, for example, that Figure 11A notes electrical components 1116 (which can pertain to microphones) and also paragraphs [00199] and [00200] are of note, for example. Accordingly, it is respectfully requested that the Examiner reconsider and withdraw the objection to the drawings.

REJECTION OF CLAIMS 19-24 UNDER 35 USC 112, FIRST PARAGRAPH

In the Office Action, the Examiner rejected claims 19-24 under the first paragraph of 35 USC 112 as failing to comply with the written description requirement. Applicant respectfully disagrees.

Specifically, on pages 4-6 of the Office Action, the Examiner alleges that claims 19, 21, 31 and 35 are not adequately described in the specification. Applicant respectfully disagrees and submits that these claims are adequately disclosed in the written description provided in the present specification and drawings. In this regard, as examples, Applicant notes that: (i) for claim 19, paragraphs [00199] and [00200] provide written support for "a second microphone" for use in noise cancelation in noisy environments; (ii) for claims 21 and/or 31, paragraphs [00237], [00238], [00246] and [00254] provide written support for "a touch sensitive surface" and/or "capacitive effect"; and (iii) for claim 35, paragraph [00218].

Accordingly, it is respectfully requested that the Examiner reconsider and withdraw the rejection of claims 19-24 under the first paragraph of 35 USC 112.

REJECTION OF CLAIMS 19-24 UNDER 35 USC 112, SECOND PARAGRAPH

In the Office Action, the Examiner rejected claims 19-24 under the second paragraph of 35 USC 112 as being indefinite. Applicant respectfully disagrees. This rejection is premised on the same basis as the above rejection under 35 USC 112, first paragraph, and is respectfully traversed for at least the one or more reasons noted above. Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claims 19-24 under the second paragraph of 35 USC 112.

REJECTION OF CLAIMS 19-20, 24-30 AND 38-42 UNDER 35 USC 103

In the Office Action, the Examiner rejected claims 19-20, 24-30 and 38-42 under 35 USC 103 as being unpatentable over Spitzer (US Patent No. 6,349,001) in view of Kallman et al. (US Patent No. 5,835,185). Applicant respectfully disagrees.

Claim 19 pertains to a system having a head-worn personal electronic apparatus as well as a charging apparatus. The Office Action principally relies on Spitzer to reject claim 19. However, on pages 11-12 of the Office Action, the Examiner notes various deficiencies of Spitzer, such as at least a charging apparatus and at least one conductive element for a head-worn structure of the head-worn personal electronic apparatus.

Besides the admitted deficiencies, Spitzer has other deficiencies. Among other things, claim 19 recites that the head-worn structure includes:

> a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;
>
> a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus….

As to Spitzer's use of microphone, on page 10 of the Office Action, the Examiner makes reference to column 8, lines 1-5 and Figure 1, #106 of Spitzer. Column 8, lines 6-8 of Spitzer makes general mention of using a plurality of microphones for implementing noise reduction techniques. However, to the contrary, claim 19 not only includes the first microphone but also a second microphone "positioned to pick up at least environmental

audio input associated with an environment around the head-worn personal electronic apparatus…." Spitzer simply notes that a plurality of microphones may be used to implement noise reduction techniques and that "it may be desirable to sense ambient sound". As such, Spitzer does not disclose first and second microphones differently positioned as denoted in claim 19. Kallman et al. also does not disclose first and second microphones recited in claim 19.

Claim 19 also recites limitations previously recited in claim 20, which further distinguish claim 19 from Spitzer in combination with Kallman. For instance, claim 19 specifies that "the electronic circuitry being configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone." Spitzer and Kallman fail to teach or suggest any sort of electronic circuitry that is configured to process audio input and environmental audio input as recited in claim 19.

Moreover, claim 19 also recites that there is a rechargeable battery contained within the head-worn structure of the head-worn personal electronic apparatus, that "at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery", and that the rechargeable battery is able to be charged when placed in a charging apparatus. More particularly, claim 19, recites "wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus."

Spitzer discloses that its eyeglasses 100 include internal batteries 112. Spitzer, col. 4, lines 20-21. FIG. 1 of Spitzer also show the internal batteries 112 within the rear portion of temples of eyeglasses. Likewise, Spitzer also states concerning FIGs. 17A-C that "a battery 925 may also be installed in the eyeglasses which powers the interface circuits and all other devices in the eyewear. The battery may be located within the temple

behind the ear or remote from the eyeglass frame and in communication with the eyeglasses by wire." Spitzer, col. 9, lines 26-31. There is nothing in Spitzer that teaches or suggests that these internal batteries 112 could be recharged via an exposed conductor for electrically coupling to a charging system. Furthermore, even if Spitzer were to be combined with Kallman, there is nothing to teach or suggest that the battery 112 internal the eyeglass frame of Spitzer, such as shown in FIG. 1, would be capable of being recharged if placed within an eyewear case 110, a charging case, described in Kallman et al. Indeed, Spitzer places its microphone 106 at the bridge area of the eyeglass frame; it is not clear how it is that a conductive element could be or would be placed in the same area in order to operate with the charging case 110 of Kallman et al. which also requires its electrical connection to be at the bridge area.

Further still, claim 19 also recites "a sensor at least partially contained within the head-worn structure and configured to capture data" and "electronic circuitry contained within the head-worn structure ... the electronic circuitry being configured to process at least the data captured by the sensor, and the electronic circuitry being configured to determine whether the head-worn structure is being worn by a user based on at least the processed sensor data ...." Neither Spitzer nor Kallman teach or suggest such features. On page 15 of the Office Action, the Examiner commented on then pending claim 25 and referenced col. 11, lines 35-42 of Spitzer. There, however, Spitzer simply discloses use of magnetic sensors to determine head position, which can be used for head position tracking. Claim 19, to the contrary, is concerned with determining whether a head-worn structure is being worn, not tracking head position. Second, col. 11, lines 35-42 of Spitzer concern magnetic sensors in its module 1001 which is not only separate from Spitzer's eyeglass frame but also worn on the shoulders of the user. It is thus clear that nothing in Spitzer teaches or suggests any ability or desire to determine "whether the head-worn structure is being worn by a user based on at least the processed sensor data," as recited in claim 19.

Further still, there is no motivation to combine Spitzer and Kallman et al. The alleged justification to combine these references are non-specific and/or without justification, improperly driven by hindsight, and fail to offer a reasonable rationale as to why one skilled in the art would attempt such a combination.

Accordingly, it is submitted that claim 19 is patentably distinct from Spitzer in view of Kallman et al., even if these references were able to be combined. It is also submitted that claim 40 is patentably distinct from Spitzer in view of Kallman et al. for one or more similar reasons as claim 19.

Based on the foregoing, it is submitted that claims 19 and 40 are patentably distinct from Spitzer in view of Kallman et al. Additional limitations recited in the independent claims or the dependent claims need not be further discussed because the limitations discussed above are sufficient to distinguish the claimed invention from the cited art.

Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claims under 35 U.S.C. § 103.

SUMMARY

It is submitted that both the rejections under 35 USC 112 have been traversed. In addition, it is submitted that the rejection under 35 USC 103 has been traversed. It is also submitted that the objections to the drawings have been likewise traversed. Therefore, it is submitted that all claims are in condition for allowance.

Reconsideration of the application and an early Notice of Allowance are earnestly solicited. If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned representative at the telephone number listed below.

Respectfully submitted,

/C. Douglass Thomas/

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Reg. No. 32,947

(650) 903-9200, x103

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/375,893	Howell et al.
	Examiner	Art Unit
	JIE LEI	2872

CPC - Searched*		
Symbol	**Date**	**Examiner**
G02C 1/00, 11/10, 11/06, 5/001, 5/02, 5/14, 5/22, 5/143, 5/146, 2200/08	12/12/2023	JL
G02B 27/01, 27/017, 27/0176; G02J 7/0045	12/12/2023	JL
update search	02/19/2024	JL

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
351	158, 41, 111, 121, 123, 124	12/12/2023	JL
359	13, 629-633	12/12/2023	JL
381	381, 327, 328, 370, 380	12/12/2023	JL
	update search	02/19/2024	JL

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/JIE LEI/ Primary Examiner, Art Unit 2872	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/375,893	Howell et al.
	Examiner	Art Unit
	JIE LEI	2872

Search Notes		
Search Notes	**Date**	**Examiner**
G02C 1/00, 11/10, 11/06, 5/001, 5/02, 5/14, 5/22, 5/143, 5/146, 2200/08 class and text search	12/12/2023	JL
G02B 27/01, 27/017, 27/0176; G02J 7/0045 class and text search	12/12/2023	JL
351/158, 41, 111, 121, 123, 124 class and text search	12/12/2023	JL
359/13, 629-633 class and text search	12/12/2023	JL
381/381, 327, 328, 370, 380 class and text search	12/12/2023	JL
Inventor name search	12/12/2023	JL
NPL and foreign search (google scholar, google patent, globaldossier and Dialog search)	12/12/2023	JL
PE2E text search	12/12/2023	JL
Similarity search	12/12/2023	JL
update search	02/19/2024	JL

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
	USPGPUB, USPAT	12/12/2023	JL
	update search	02/19/2024	JL

/JIE LEI/ Primary Examiner, Art Unit 2872	

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/375,893	Howell et al.
	Examiner	**Art Unit**
	JIE LEI	2872

CPC						
Symbol					**Type**	**Version**
G02C	/	11	/	10	F	2013-01-01
G02C	/	5	/	143	I	2013-01-01
G02C	/	5	/	146	I	2013-01-01
H02J	/	7	/	0045	I	2013-01-01
G02C	/	11	/	06	I	2013-01-01
G02C	/	2200	/	08	A	2013-01-01

CPC Combination Sets							
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	/		/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	59	
/JIE LEI/ Primary Examiner, Art Unit 2872	19 February 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office — Part of Paper No.: 20240219

Apple Inc. Exhibit 1002 Page 724

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/375,893	Howell et al.
	Examiner	**Art Unit**
	JIE LEI	2872

INTERNATIONAL CLASSIFICATION				
CLAIMED				
G02C	/	11	/	00
G02C	/	5	/	14
H02J	/	7	/	00
G02C	/	11	/	06

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
351	158

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 59	
/JIE LEI/ Primary Examiner, Art Unit 2872 (Primary Examiner)	19 February 2024 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office — Part of Paper No.: 20240219

Apple Inc. Exhibit 1002 Page 725

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/375,893	Howell et al.
	Examiner	**Art Unit**
	JIE LEI	2872

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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3	3	11	12	20	21	27	30	33	39	43	48	52	57		
4	4	12	13	21	22	28	31	35	40	44	49	53	58		
5	5	13	14	22	23	29	32	36	41	45	50	54	59		
6	6	14	15	23	24	30	33	34	42	46	51	55	60		
7	7	15	16	24	25	31	34	38	43	50	52	56	61		
8	8	16	17	25	26	-	35	39	44	47	53	57	62		
-	9	17	18	-	27	-	36	40	45	48	54	58	63		

NONE (Assistant Examiner) (Date)	**Total Claims Allowed:** 59	
/JIE LEI/ Primary Examiner, Art Unit 2872 (Primary Examiner) (Date) 19 February 2024	O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office Part of Paper No.: 20240219

Apple Inc. Exhibit 1002 Page 726

Bibliographic Data

Application No: 18/375,893

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /JIE LEI/ (Examiner's Signature) | (Initials)

Title: SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/02/2023	351	2872	IPVCP003X1C4X1C1
RULE			

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CONTINUING DATA

This application is a CON of 16182969 11/07/2018

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11580222 has PRO of 60725896 10/11/2005

11580222 has PRO of 60725999 10/11/2005

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

10/17/2023

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FILING FEE RECEIVED

$4,620

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	4	"18375893"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:12 PM
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L16	45	(Artificial Intelligence) Similar to: 16/182,969 with 2 CPC Selections and 3 Text Selections Text: (US-9690121-B2 OR US-10330956-B2 OR US-20170131575-A1 OR US-11086147-B2 OR US-11204512-B2 OR US-20220260859-A1 OR US-7581833-B2 OR US-8905542-B2 OR US-20070046887-A1 OR US-9033493-B2 OR US-20220011604-A1 OR US-20100309426-A1 OR JP-6475289-B2 OR US-20210364827-A9 OR US-20190187492-A1 OR US-20210364828-A1 OR WO-0003287-A1 OR CA-2275057-C OR GB-2336692-A OR US-20190033623-A1 OR FR-2906900-A1 OR US-6176576-B1 OR JP-2017194712-A OR JP-2017194711-A OR CA-2275057-A1 OR GB-2343263-A OR US-20090296044-A1 OR US-4251302-A OR US-8465151-B2 OR CA-2045119-A1 OR US-10168551-B2 OR US-20130201440-A1 OR US-20200041813-A1 OR US-11199724-B2 OR JP-6571136-B2 OR US-20170075141-A1 OR US-20220099996-A1 OR US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2023/12/11 03:33 PM

Apple Inc. Exhibit 1002 Page 735

		20120133885-A1 OR US-20150253590-A1 OR US-10222633-B2 OR WO-2021262097-A1 OR US-20170031181-A1 OR CN-114174900-A OR FR-2957157-A1 OR WO-2017106385-A3 OR US-5042933-A OR US-20170146829-A1 OR GB-2079972-A OR JP-S56501775-A OR US-20180074341-A1).did.					
L17	46	(Artificial Intelligence) Similar to: 16/182,969 with 2 CPC Selections and 3 Text Selections Text: (US-11204512-B2 OR US-9690121-B2 OR US-8905542-B2 OR US-10330956-B2 OR US-20170131575-A1 OR US-11086147-B2 OR US-11536988-B2 OR US-8500271-B2 OR US-20200012127-A1 OR US-9547184-B2 OR US-10061144-B2 OR AU-2016201503-B2 OR US-10114235-B2 OR US-9033493-B2 OR US-7922321-B2 OR US-20180231804-A1 OR US-10156739-B2 OR CN-106940484-B OR US-20210364827-A9 OR US-20190187492-A1 OR US-20210364828-A1 OR US-20100309426-A1 OR BR-112014016460-A8 OR BR-112014016460-A2 OR AU-2013207265-B2 OR US-11243416-B2 OR US-20190033623-A1 OR US-11487138-B2 OR US-20200218093-A1 OR US-20150378180-A1 OR US-10598960-B2 OR US-20090296044-A1 OR AU-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2023/12/11 03:33 PM

		2013207265-A1 OR WO-2013103985-A2 OR EP-2800993-A2 OR US-20130215374-A1 OR KR-102276220-B1 OR WO-2013103985-A3 OR US-8465151-B2 OR US-20130201440-A1 OR KR-20220003143-A OR US-20150253590-A1 OR US-20120133885-A1 OR KR-102347056-B1 OR US-20170146829-A1 OR US-8109629-B2 OR US-20170090219-A1 OR US-20180335650-A1 OR WO-2014163794-A2 OR US-20140270316-A1).did.					
L18	47	(Artificial Intelligence) Similar to: 16/182,969 with 2 CPC Selections and 3 Text Selections Text: (US-9690121-B2 OR US-10330956-B2 OR US-11086147-B2 OR US-20170131575-A1 OR US-11204512-B2 OR US-20190187492-A1 OR US-20210364827-A9 OR US-20210364828-A1 OR US-9033493-B2 OR US-20190033623-A1 OR US-20090296044-A1 OR US-20120133885-A1 OR US-20150253590-A1 OR US-8905542-B2 OR US-8109629-B2 OR US-20100309426-A1 OR KR-20210110726-A OR US-20220260859-A1 OR US-20170255029-A1 OR EP-3914960-A1 OR WO-2020154047-A1 OR US-20200233238-A1 OR US-20130201440-A1 OR US-8465151-B2 OR US-20170146829-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2023/12/11 03:33 PM

		OR US-11536988-B2 OR EP-3686654-A1 OR US-20210389605-A1 OR US-20080151179-A1 OR CN-111033361-A OR US-8500271-B2 OR US-20200012127-A1 OR JP-6475289-B2 OR US-7438410-B1 OR JP-WO2019059220-A1 OR JP-2017194711-A OR US-10423011-B2 OR EP-1707028-A1 OR WO-2005067343-A1 OR JP-6896086-B2 OR JP-2017194712-A OR CN-113330355-A OR US-10168551-B2 OR WO-2019059220-A1 OR US-20090060231-A1 OR CN-113078715-A OR KR-20210080253-A OR US-7621634-B2 OR JP-6571136-B2 OR US-10345625-B2).did.					
L19	20223	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2023/12/11 03:33 PM
L20	42965	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L21	300	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND frame AND (arm	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2023/12/11 03:33 PM

		OR temple) AND sensor AND battery	MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L22	296	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND frame AND (arm OR temple) AND sensor AND batter$4 AND control$4 AND connect$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L23	195	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND frame AND (arm OR temple) AND sensor AND batter$4 AND control$4 AND connect$4 AND charg$4 AND electric$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L24	176	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND frame AND (arm OR temple) AND sensor AND batter$4 AND control$4 AND connect$4 AND charg$4 AND electric$4 AND wireless AND communicat$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM

L25	50912	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND batter$4 AND control$4 AND connect$4 AND charg$4 AND electric$4 AND wireless AND communicat$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L26	33912	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND wireless AND communicat$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L27	31655	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L28	24323	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO,	OR	ON	ON	2023/12/11 03:33 PM

		(wireless WITH communicat$4) AND position AND open$4 AND clos$4	MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L29	20131	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L30	6749	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L31	2943	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L32	2424	(eyewear OR spectale	(US-PGPUB; USPAT;	OR	ON	ON	2023/12/11

		OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4	USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				03:33 PM
L33	2310	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L34	1453	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L35	1439	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2023/12/11 03:33 PM

		AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4	IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L36	1174	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L37	999	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L38	23	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2023/12/11 03:33 PM

		AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND endpiece	IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L39	999	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L40	836	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L41	544	(eyewear OR spectale	(US-PGPUB; USPAT;	OR	ON	ON	2023/12/11

		OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone AND diode AND output	USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				03:33 PM
L42	520	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone AND diode AND output AND front AND section	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L43	464	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2023/12/11 03:33 PM

		position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone AND diode AND output AND front AND section AND information AND place AND expos$4	RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L44	319	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone AND diode AND output AND front AND section AND information AND place AND expos$4 AND pin	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L45	317	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM

		AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone AND diode AND output AND front AND section AND information AND place AND expos$4 AND pin AND pad					
L46	0	(eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone AND diode AND output AND front AND section AND information AND place AND expos$4 AND pin AND pad AND endpiece	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L47	32	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND (eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM

		communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone AND diode AND output AND front AND section AND information AND place AND expos$4					
L48	3433	L1 AND ((G02B2027/0178 OR G02B27/017 OR G02B27/0172 OR G02B2027/014 OR G02B2027/0138 OR G02B27/0093 OR G02B2027/0187 OR G02B27/0176 OR G02B2027/0118 OR G02B27/0101 OR G02B2027/0134 OR G02B27/01 OR G02B2027/0174 OR G02B27/0179 OR G02B2027/012 OR G02B6/005 OR G02B2027/0141 OR G02B6/00 OR G02B6/0076 OR G02B27/0081 OR G02B2027/0132 OR G02B2027/0123 OR G02B6/0016 OR G02B2027/011 OR G02B2027/0156 OR G02B6/0023 OR G02B27/30 OR G02B2027/0125 OR G02B27/144 OR G02B6/0036 OR G02B6/34 OR G02B6/0038 OR G02B2027/0127 OR G02B7/285 OR G02B27/283 OR G02B3/0081 OR G02B27/1086 OR G02B5/3025 OR G02B7/28 OR G02B5/1857 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM

		G02B6/0088 OR G02B5/1866 OR G02B6/0068 OR G02B27/0018 OR G02B6/0035 OR G02B7/008 OR G02B5/1871 OR G02B2027/0112 OR G02B2027/0114 OR G02B2027/0147 OR G02B2027/0159 OR G02B5/1823 OR G02B6/003 OR G02B6/29325 OR G02B2027/0154 OR G02B27/0149 OR G02B3/14 OR G02B6/0001 OR G02B6/006 OR G02B6/0028 OR G02B6/0018 OR G02B2027/015 OR G02B2027/0181 OR G02B27/022 OR G02B6/0065 OR G02B2027/0169 OR G02B27/028 OR G02B5/208 OR G02B6/002 OR G02B19/0061 OR G02B2027/013 OR G02B7/09 OR G02B27/02 OR G02B2027/0161 OR G02B26/10 OR G02B6/0031 OR G02B6/0053 OR G02B27/4272 OR G02B19/0042 OR G02B26/0833 OR G02B19/0052 OR G02B6/009 OR G02B2027/0152 OR G02B27/0103 OR G02B27/20 OR G02B13/001 OR G02B13/06 OR G02B2027/0163 OR G02B5/005 OR G02B26/001 OR G02B27/64 OR G02B5/30 OR G02B7/02 OR G02B7/021 OR G02B7/102 OR G02B27/646 OR G02B5/32 OR G02B6/001 OR					

		G02B6/0055 OR G02B13/0045 OR G02B27/0006 OR G02B6/0006 OR G02B13/14 OR G02B5/3016 OR G02B5/18 OR G02B5/20 OR G02B6/0011 OR G02B7/08 OR G02B2027/0107 OR G02B27/0972 OR G02B27/4205 OR G02B3/0056 OR G02B30/24 OR G02B6/0078 OR G02B6/0085 OR G02B2027/0116 OR G02B2027/0158 OR G02B2027/0185 OR G02B2027/0198 OR G02B27/0944 OR G02B27/0955 OR G02B7/12 OR G02B2027/0143 OR G02B2027/0167 OR G02B26/00 OR G02B27/0977 OR G02B30/00 OR G02B30/34 OR G02B5/201 OR G02B7/04 OR G02B9/62 OR G02B5/0263 OR G02B6/0051 OR G02B6/0075 OR G02B6/42 OR G02B13/00 OR G02B3/0006 OR G02B6/0045 OR G02B6/02085 OR G02B9/60 OR G02B13/004 OR G02B27/0189 OR G02B27/0905 OR G02B3/08 OR G02B30/27 OR G02B30/30 OR G02B13/0015 OR G02B15/14 OR G02B2027/0136 OR G02B25/004 OR G02B26/101 OR G02B6/2848 OR G02B9/34 OR G02B13/009 OR G02B15/142 OR G02B23/125 OR					

Apple Inc. Exhibit 1002 Page 750

		G02B26/0875 OR G02B27/00 OR G02B27/0075 OR G02B27/14 OR G02B27/425 OR G02B3/0075 OR G02B30/36 OR G02B6/0008 OR G02B6/0015 OR G02B6/0025 OR G02B7/003 OR G02B7/182 OR G02B7/38 OR G02B19/0028 OR G02B2027/0196 OR G02B26/02 OR G02B26/105 OR G02B27/48 OR G02B5/205 OR G02B6/0033 OR G02B7/006 OR G02B7/025 OR G02B9/16 OR G02B13/18 OR G02B23/2484 OR G02B27/0961 OR G02B27/106 OR G02B27/146 OR G02B27/40 OR G02B27/4233 OR G02B27/4288 OR G02B3/0043 OR G02B3/10 OR G02B30/26 OR G02B30/33 OR G02B5/003 OR G02B5/0294 OR G02B5/23 OR G02B6/0083 OR G02B6/0086 OR G02B6/32 OR G02B9/10).cpc.)					
L49	1197	L1 AND ((G02C11/10 OR G02C7/101 OR G02C7/083 OR G02C11/06 OR G02C7/04 OR G02C7/06 OR G02C7/08 OR G02C7/02 OR G02C2202/20 OR G02C5/146 OR G02C2202/16 OR G02C2202/18 OR G02C2202/22 OR G02C5/14 OR G02C11/00 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2023/12/11 03:33 PM

		G02C7/061 OR G02C7/102 OR G02C7/022 OR G02C5/16 OR G02C2202/12 OR G02C7/049 OR G02C7/066 OR G02C3/003 OR G02C2200/08 OR G02C5/143 OR G02C11/04 OR G02C7/16 OR G02C5/02 OR G02C7/086 OR G02C5/001 OR G02C9/00 OR G02C7/10 OR G02C7/088 OR G02C5/22 OR G02C7/041 OR G02C5/12 OR G02C2202/24 OR G02C9/02 OR G02C5/008 OR G02C5/10 OR G02C2202/10 OR G02C5/2209 OR G02C2200/02 OR G02C7/081 OR G02C7/104 OR G02C7/085 OR G02C1/00 OR G02C7/12 OR G02C9/04 OR G02C7/14 OR G02C1/10 OR G02C2200/26 OR G02C3/006 OR G02C5/006 OR G02C7/107).cpc.)	IBM_TDB)				
L50	1691	L4 AND ((G02B2027/0178 OR G02B27/017 OR G02B2027/014 OR G02B27/0172 OR G02B2027/0138 OR G02B27/0176 OR G02B27/0093 OR G02B2027/0187 OR G02B2027/0118 OR G02B27/0101 OR G02B2027/012 OR G02B6/0076 OR G02B6/005 OR G02B2027/0174 OR G02B6/00 OR G02B27/30 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM

		G02B6/0016 OR G02B6/0036 OR G02B2027/0156 OR G02B2027/0125 OR G02B27/01 OR G02B6/0023 OR G02B6/0038 OR G02B27/283 OR G02B2027/011 OR G02B2027/0132 OR G02B2027/0134 OR G02B27/0081 OR G02B7/008 OR G02B27/0179 OR G02B27/1086 OR G02B5/1857 OR G02B5/1866 OR G02B2027/0114 OR G02B27/0018 OR G02B5/1823 OR G02B5/1871 OR G02B5/3025 OR G02B6/0035 OR G02B6/0088 OR G02B6/29325 OR G02B6/34 OR G02B6/0068 OR G02B6/003 OR G02B6/0001 OR G02B6/006 OR G02B6/0028 OR G02B6/0018 OR G02B27/022 OR G02B2027/0169 OR G02B2027/0141 OR G02B3/14 OR G02B6/002 OR G02B2027/0159 OR G02B27/028 OR G02B2027/0123 OR G02B2027/0154 OR G02B6/0053 OR G02B6/0065 OR G02B19/0061 OR G02B19/0042 OR G02B19/0052 OR G02B2027/0127 OR G02B27/144 OR G02B6/0031 OR G02B6/009 OR G02B27/0149 OR G02B5/208 OR G02B7/09 OR G02B27/02 OR G02B27/64 OR G02B2027/0147 OR G02B6/001 OR G02B26/001 OR					

		G02B26/10 OR G02B2027/013 OR G02B2027/0161 OR G02B6/0078 OR G02B6/0085 OR G02B2027/0167 OR G02B27/0006 OR G02B27/646 OR G02B6/0011 OR G02B7/021 OR G02B2027/0112 OR G02B2027/015 OR G02B5/005 OR G02B5/201 OR G02B6/0075 OR G02B2027/0158 OR G02B2027/0163 OR G02B5/0263 OR G02B5/30 OR G02B6/0045 OR G02B6/0051 OR G02B6/0055 OR G02B2027/0152 OR G02B27/20 OR G02B6/0006 OR G02B6/42 OR G02B7/102 OR G02B26/00 OR G02B7/02 OR G02B13/009 OR G02B26/0833 OR G02B27/14 OR G02B3/0075 OR G02B5/20 OR G02B6/0025 OR G02B7/08 OR G02B7/38 OR G02B2027/0136 OR G02B27/48 OR G02B5/205 OR G02B7/003 OR G02B7/025 OR G02B13/001 OR G02B15/142 OR G02B2027/0143 OR G02B27/00 OR G02B27/0103 OR G02B27/106 OR G02B27/146 OR G02B27/4272 OR G02B3/10 OR G02B30/34 OR G02B5/0294 OR G02B6/0015 OR G02B6/0083 OR G02B6/0086 OR G02B6/32 OR G02B7/12 OR					

		G02B13/0045 OR G02B26/0875 OR G02B3/08 OR G02B6/0021 OR G02B7/006 OR G02B7/182 OR G02B15/00 OR G02B17/08 OR G02B2003/0093 OR G02B2027/0116 OR G02B25/02 OR G02B26/06 OR G02B26/0841 OR G02B27/08 OR G02B27/0972 OR G02B3/0006 OR G02B30/36 OR G02B5/18 OR G02B7/023 OR G02B7/026 OR G02B7/028 OR G02B9/62 OR G02B13/06 OR G02B13/14 OR G02B2027/0107 OR G02B2027/0181 OR G02B2027/0185 OR G02B2027/0196 OR G02B21/0012 OR G02B26/02 OR G02B27/0012 OR G02B27/0075 OR G02B27/04 OR G02B27/0955 OR G02B3/005 OR G02B3/0087 OR G02B30/27 OR G02B30/30 OR G02B5/122 OR G02B5/3016 OR G02B7/1827).cpc.)					
L51	658	L4 AND ((G02C11/10 OR G02C11/06 OR G02C7/101 OR G02C5/16 OR G02C7/083 OR G02C3/003 OR G02C7/04 OR G02C5/146 OR G02C5/14 OR G02C5/143 OR G02C11/00 OR G02C7/06 OR G02C2200/08 OR G02C7/16 OR G02C5/001 OR G02C5/02 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM

		G02C7/02 OR G02C5/12 OR G02C5/22 OR G02C9/00 OR G02C2200/02 OR G02C7/10 OR G02C7/086 OR G02C7/08 OR G02C1/00 OR G02C11/04 OR G02C5/008 OR G02C9/04 OR G02C5/10 OR G02C2202/10 OR G02C5/2209 OR G02C2200/26 OR G02C9/02 OR G02C1/10 OR G02C3/006 OR G02C5/2263 OR G02C7/104 OR G02C2200/28 OR G02C5/006 OR G02C5/2227 OR G02C7/041 OR G02C7/081).cpc.)					
L52	472	L6 AND ((G02B2027/0178 OR G02B27/017 OR G02B27/0172 OR G02B2027/014 OR G02B27/0176 OR G02B27/0093 OR G02B2027/0138 OR G02B6/0076 OR G02B2027/0118 OR G02B6/005 OR G02B27/0101 OR G02B6/0036 OR G02B6/0016 OR G02B2027/0174 OR G02B6/0038 OR G02B7/008 OR G02B2027/012 OR G02B27/0081 OR G02B2027/0114 OR G02B2027/0125 OR G02B27/0018 OR G02B27/1086 OR G02B27/283 OR G02B27/30 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B5/3025 OR G02B6/0023 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM

		G02B6/0035 OR G02B6/29325 OR G02B6/34 OR G02B2027/0156 OR G02B2027/0132 OR G02B2027/0187 OR G02B6/0068 OR G02B6/0018 OR G02B6/0028 OR G02B6/006 OR G02B6/003 OR G02B6/0088 OR G02B2027/011 OR G02B2027/0169 OR G02B27/0179 OR G02B27/022 OR G02B27/028 OR G02B6/002 OR G02B6/0065 OR G02B27/0149 OR G02B6/0053 OR G02B6/0078 OR G02B6/0085 OR G02B6/0031 OR G02B6/009 OR G02B2027/0159 OR G02B6/0011 OR G02B6/0075 OR G02B2027/0134 OR G02B5/30 OR G02B5/0263 OR G02B3/14 OR G02B2027/0112 OR G02B2027/0158 OR G02B26/00 OR G02B3/08 OR G02B2027/0161 OR G02B2027/0123 OR G02B2027/013 OR G02B2027/0143 OR G02B2027/0147 OR G02B2027/0116 OR G02B2027/0127 OR G02B2027/0167 OR G02B27/0103 OR G02B27/04 OR G02B27/40 OR G02B3/0006 OR G02B3/005 OR G02B5/18 OR G02B6/0051 OR G02B6/0055 OR G02B6/0083 OR G02B6/12009 OR G02B2027/0152 OR G02B2027/0154 OR G02B2027/0163 OR G02B2207/113 OR					

		G02B2207/115 OR G02B26/004 OR G02B27/0075 OR G02B27/01 OR G02B27/18 OR G02B27/281 OR G02B27/4272 OR G02B5/23 OR G02B5/3058 OR G02B6/0045 OR G02B6/0056 OR G02B6/12019 OR G02B6/42 OR G02B2003/0093 OR G02B2027/0141 OR G02B2027/015 OR G02B26/10 OR G02B27/02 OR G02B27/64 OR G02B3/0081 OR G02B3/10 OR G02B30/00 OR G02B30/34 OR G02B5/04 OR G02B5/1842 OR G02B5/28 OR G02B6/00 OR G02B6/001 OR G02B7/38).cpc.)					
L53	389	L6 AND ((G02C11/10 OR G02C11/06 OR G02C5/16 OR G02C3/003 OR G02C7/101 OR G02C5/143 OR G02C5/146 OR G02C7/083 OR G02C5/14 OR G02C2200/08 OR G02C7/16 OR G02C11/00 OR G02C5/001 OR G02C7/06 OR G02C5/22 OR G02C5/02 OR G02C7/02 OR G02C1/00 OR G02C5/12 OR G02C2200/02 OR G02C9/00 OR G02C5/2209 OR G02C5/008 OR G02C7/086 OR G02C11/04 OR G02C5/10 OR G02C7/10 OR G02C9/04 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM

		G02C2200/26 OR G02C7/08 OR G02C2200/28 OR G02C5/006 OR G02C5/2227 OR G02C9/02 OR G02C7/104 OR G02C1/08 OR G02C1/10 OR G02C11/08 OR G02C2200/22 OR G02C5/2236 OR G02C5/2263 OR G02C5/2272 OR G02C7/081 OR G02C11/02 OR G02C5/2218).cpc.)					
L54	368	L13 AND ((G02B2027/0178 OR G02B27/017 OR G02B27/0172 OR G02B2027/014 OR G02B27/0176 OR G02B27/0093 OR G02B2027/0138 OR G02B2027/0118 OR G02B6/0076 OR G02B6/005 OR G02B6/0016 OR G02B6/0036 OR G02B6/0038 OR G02B7/008 OR G02B2027/012 OR G02B2027/0174 OR G02B27/0081 OR G02B2027/0114 OR G02B2027/0125 OR G02B27/0018 OR G02B27/1086 OR G02B27/283 OR G02B27/30 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B5/3025 OR G02B6/0023 OR G02B6/0035 OR G02B6/29325 OR G02B6/34 OR G02B2027/0156 OR G02B2027/0132 OR G02B27/0101 OR G02B2027/0187 OR G02B2027/0169 OR G02B27/022 OR G02B27/028 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM

		G02B2027/011 OR G02B27/0179 OR G02B6/0018 OR G02B6/0028 OR G02B6/003 OR G02B6/006 OR G02B6/0068 OR G02B6/0088 OR G02B6/0053 OR G02B6/0011 OR G02B6/002 OR G02B6/0065 OR G02B6/0031 OR G02B6/0075 OR G02B6/0078 OR G02B6/0085 OR G02B6/009 OR G02B5/30 OR G02B2027/0134 OR G02B5/0263 OR G02B3/14 OR G02B27/0149 OR G02B2027/0112 OR G02B26/00 OR G02B2027/0123 OR G02B2027/013 OR G02B2027/0143 OR G02B2027/0147 OR G02B2027/0159 OR G02B2027/0116 OR G02B2027/0127 OR G02B2027/0161 OR G02B27/0103 OR G02B27/40 OR G02B3/0006 OR G02B3/005 OR G02B5/18 OR G02B6/12009 OR G02B2027/0154 OR G02B2027/0163 OR G02B2207/113 OR G02B2207/115 OR G02B26/004 OR G02B27/0075 OR G02B27/4272 OR G02B5/23 OR G02B5/3058 OR G02B6/0045 OR G02B6/0056 OR G02B6/12019 OR G02B2003/0093 OR G02B2027/0141 OR G02B2027/015 OR G02B2027/0152 OR G02B2027/0167 OR G02B26/10 OR G02B27/01 OR G02B27/02 OR					

		G02B27/04 OR G02B3/0081 OR G02B3/10 OR G02B30/34 OR G02B5/04 OR G02B5/1842 OR G02B5/28 OR G02B6/00 OR G02B6/001).cpc.)					
L55	301	L13 AND ((G02C11/10 OR G02C11/06 OR G02C5/16 OR G02C5/143 OR G02C3/003 OR G02C5/14 OR G02C7/101 OR G02C5/146 OR G02C7/083 OR G02C2200/08 OR G02C5/001 OR G02C5/22 OR G02C7/02 OR G02C1/00 OR G02C5/02 OR G02C5/12 OR G02C9/00 OR G02C7/06 OR G02C7/16 OR G02C11/00 OR G02C5/008 OR G02C5/2209 OR G02C2200/02 OR G02C5/10 OR G02C7/10 OR G02C7/08 OR G02C7/086 OR G02C2200/26 OR G02C5/006 OR G02C9/02 OR G02C9/04 OR G02C1/10 OR G02C11/08 OR G02C5/2236 OR G02C5/2263 OR G02C5/2272 OR G02C7/081 OR G02C11/02 OR G02C2200/28 OR G02C5/2218 OR G02C5/2227).cpc.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L56	308	L17 AND ((G02B2027/0178 OR G02B27/017 OR G02B27/0172 OR G02B2027/014 OR G02B27/0093 OR G02B27/0176 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2023/12/11 03:33 PM

		G02B2027/0118 OR G02B2027/0138 OR G02B6/0076 OR G02B6/0016 OR G02B6/0036 OR G02B6/005 OR G02B6/0038 OR G02B7/008 OR G02B2027/012 OR G02B2027/0174 OR G02B2027/0114 OR G02B2027/0125 OR G02B27/0018 OR G02B27/0081 OR G02B27/1086 OR G02B27/283 OR G02B27/30 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B5/3025 OR G02B6/0023 OR G02B6/0035 OR G02B6/29325 OR G02B6/34 OR G02B2027/0132 OR G02B2027/0156 OR G02B27/0101 OR G02B2027/0169 OR G02B27/022 OR G02B27/028 OR G02B2027/0187 OR G02B2027/011 OR G02B27/0179 OR G02B6/0018 OR G02B6/0028 OR G02B6/003 OR G02B6/006 OR G02B6/0068 OR G02B6/0088 OR G02B6/0011 OR G02B6/0031 OR G02B6/0075 OR G02B6/0078 OR G02B6/0085 OR G02B6/009 OR G02B5/30 OR G02B6/0053 OR G02B2027/0134 OR G02B27/0149 OR G02B3/14 OR G02B6/002 OR G02B6/0065 OR G02B2027/0112 OR G02B26/00 OR G02B2027/013 OR G02B2027/0147 OR	IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				

		G02B2027/0123 OR G02B2027/0127 OR G02B2027/0161 OR G02B27/0103 OR G02B27/40 OR G02B3/0006 OR G02B5/18 OR G02B6/12009 OR G02B2027/0154 OR G02B2207/113 OR G02B2207/115 OR G02B27/0075 OR G02B5/23 OR G02B5/3058 OR G02B6/0045 OR G02B6/0056 OR G02B6/12019 OR G02B2027/0141 OR G02B2027/015 OR G02B2027/0152 OR G02B2027/0167 OR G02B26/10 OR G02B27/04 OR G02B30/34 OR G02B5/04 OR G02B5/1842 OR G02B5/28 OR G02B6/00).cpc.)					
L57	247	L17 AND ((G02C11/10 OR G02C11/06 OR G02C5/16 OR G02C3/003 OR G02C5/143 OR G02C5/146 OR G02C5/14 OR G02C2200/08 OR G02C7/101 OR G02C7/083 OR G02C5/001 OR G02C1/00 OR G02C7/06 OR G02C7/16 OR G02C11/00 OR G02C7/08 OR G02C7/086 OR G02C5/2209 OR G02C9/00 OR G02C1/10 OR G02C5/2236 OR G02C7/081 OR G02C11/02 OR G02C5/2218).cpc.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L58	124	L21 AND ((G02B27/017 OR G02B2027/0178 OR G02B27/0093 OR G02B2027/014 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2023/12/11 03:33 PM

		G02B27/0172 OR G02B2027/0187 OR G02B2027/0118 OR G02B6/0018 OR G02B6/0028 OR G02B6/003 OR G02B6/006 OR G02B6/0068 OR G02B6/0076 OR G02B6/0088 OR G02B2027/0138 OR G02B6/0011 OR G02B6/0016 OR G02B6/0031 OR G02B6/0036 OR G02B6/0075 OR G02B6/0078 OR G02B6/0085 OR G02B6/009 OR G02B27/0176 OR G02B5/30 OR G02B6/0053 OR G02B27/0101 OR G02B6/002 OR G02B6/005 OR G02B6/0065 OR G02B2027/0112 OR G02B2027/0147 OR G02B2027/0127 OR G02B2027/0132 OR G02B27/0149 OR G02B5/18 OR G02B6/12009 OR G02B2027/011 OR G02B2027/0123 OR G02B2027/0134 OR G02B2207/113 OR G02B2207/115 OR G02B27/0075 OR G02B5/23 OR G02B5/3058 OR G02B6/0038 OR G02B6/0045 OR G02B6/0056 OR G02B6/12019 OR G02B7/008 OR G02B2027/012 OR G02B2027/0141 OR G02B2027/0167 OR G02B5/04 OR G02B5/1842 OR G02B5/28 OR G02B6/00).cpc.)	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L59	47	L21 AND ((G02C11/10 OR G02C5/143 OR G02C5/001 OR G02C5/14 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2023/12/11 03:33 PM

Apple Inc. Exhibit 1002 Page 764

		G02C11/06 OR G02C7/086 OR G02C7/08 OR G02C9/00 OR G02C11/00 OR G02C2200/08 OR G02C5/146).cpc.)	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L60	175	L1 AND ((351/158 OR 351/41 OR 351/159.39 OR 351/159.03 OR 351/121 OR 351/159.01 OR 351/159.42 OR 351/246 OR 351/124 OR 351/210 OR 351/216 OR 351/111 OR 351/113 OR 351/159.41 OR 351/159.46 OR 351/116 OR 351/159.4 OR 351/159.44 OR 351/159.75 OR 351/222 OR 351/228 OR 351/114 OR 351/119 OR 351/131 OR 351/159.08 OR 351/159.6 OR 351/159.78 OR 351/204 OR 351/205 OR 351/233 OR 351/47 OR 351/110 OR 351/118 OR 351/125 OR 351/132 OR 351/133 OR 351/135 OR 351/136 OR 351/153 OR 351/156 OR 351/157 OR 351/159.02 OR 351/159.1 OR 351/159.31 OR 351/159.56 OR 351/159.62 OR 351/159.68 OR 351/159.71 OR 351/159.73 OR 351/159.74 OR 351/206 OR 351/209 OR 351/211 OR 351/219 OR 351/239 OR 351/51 OR 351/57 OR 351/74).ccls.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L61	56	L1 AND ((359/630 OR 359/13 OR 359/633 OR 359/838 OR 359/265	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2023/12/11 03:33 PM

		OR 359/267 OR 359/275 OR 359/631 OR 359/269 OR 359/273 OR 359/567 OR 359/632 OR 359/14 OR 359/197.1 OR 359/214.1 OR 359/223.1 OR 359/244 OR 359/245 OR 359/247 OR 359/256 OR 359/266 OR 359/291 OR 359/296 OR 359/358 OR 359/466 OR 359/554 OR 359/627 OR 359/844 OR 359/846 OR 359/851 OR 359/866 OR 359/871 OR 359/872 OR 359/886).ccls.)	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L62	88	L4 AND ((351/158 OR 351/41 OR 351/111 OR 351/121 OR 351/124 OR 351/113 OR 351/114 OR 351/159.39 OR 351/159.78 OR 351/116 OR 351/119 OR 351/125 OR 351/132 OR 351/133 OR 351/156 OR 351/157 OR 351/159.01 OR 351/159.56 OR 351/159.75 OR 351/204 OR 351/205 OR 351/206 OR 351/210 OR 351/219 OR 351/246 OR 351/47 OR 351/51 OR 351/74).ccls.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L63	30	L4 AND ((359/630 OR 359/13 OR 359/838 OR 359/267 OR 359/633 OR 359/197.1 OR 359/223.1 OR 359/245 OR 359/247 OR 359/265 OR 359/273 OR 359/275 OR 359/291 OR 359/358 OR 359/554 OR 359/567 OR 359/627 OR 359/631 OR 359/632 OR 359/844 OR 359/846 OR 359/871 OR 359/872 OR 359/886).ccls.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L64	71	L6 AND ((351/158 OR 351/41 OR 351/111 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2023/12/11 03:33 PM

		351/121 OR 351/113 OR 351/114 OR 351/124 OR 351/159.39 OR 351/116 OR 351/119 OR 351/125 OR 351/132 OR 351/133 OR 351/156 OR 351/157 OR 351/159.75 OR 351/159.78 OR 351/47 OR 351/74).ccls.)	AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L65	11	L6 AND ((359/630 OR 359/13 OR 359/358 OR 359/554 OR 359/567 OR 359/632 OR 359/886).ccls.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L66	4719	351/158,41,111.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L67	1918	351/121,123,124.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2023/12/11 03:33 PM

			RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L68	994	359/13.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L69	7622	359/629-633.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L70	3402	381/381,327,328.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L71	3460	381/370,380.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2023/12/11 03:33 PM

Apple Inc. Exhibit 1002 Page 768

			CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L72	789	g02c1/00.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L73	16424	g02c11/10.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L74	2896	g02c11/06.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK,	OR	ON	ON	2023/12/11 03:33 PM

			TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L75	3099	g02c5/001.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L76	3949	g02c5/02.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L77	4712	g02c5/14.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L78	5034	g02c5/22.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2023/12/11 03:33 PM

			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L79	4635	g02c5/143.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L80	4888	g02c5/146.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L81	5935	g02c2200/08.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2023/12/11 03:33 PM

			VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L82	34429	g02b27/01.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L83	68456	g02b27/017.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L84	26298	g02b27/0176.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:33 PM
L85	33028	h02j7/0045.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2023/12/11 03:33 PM

			EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L93	45	(Artificial Intelligence) Similar to: 16/182,969 with 0 CPC Selections and 0 Text Selections Text: (US-11086147-B2 OR US-10330956-B2 OR US-20210364828-A1 OR US-9033493-B2 OR US-20190033623-A1 OR US-20090296044-A1 OR US-9690121-B2 OR US-8109629-B2 OR US-20220260859-A1 OR US-20170131575-A1 OR US-20190187492-A1 OR US-20210364827-A9 OR US-20120133885-A1 OR US-20150253590-A1 OR US-20100309426-A1 OR US-8465151-B2 OR US-20130201440-A1 OR US-20170146829-A1 OR US-11204512-B2 OR CN-113330355-A OR KR-20210110726-A OR EP-3914960-A1 OR WO-2020154047-A1 OR US-20200233238-A1 OR US-20190113774-A1 OR US-11156855-B2 OR EP-3455670-A1 OR WO-2017196294-A1 OR US-11668958-B2 OR US-20220113562-A1 OR US-7581833-B2 OR US-8905542-B2 OR US-20070046887-A1 OR CN-113454521-A OR KR-20210127221-A OR EP-3928149-A1 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2023/12/11 03:33 PM

		WO-2020172138-A1 OR US-20200271961-A1 OR CA-3103299-A1 OR US-20210191159-A1 OR US-20230204985-A1 OR DE-102020102281-A1 OR KR-102077483-B1 OR CH-718397-A2 OR TW-M583054-U OR FR-3126050-A3 OR CH-718869-A2 OR AT-525342-B1 OR AU-2022201400-A1 OR CA-3149165-A1).did.					
L94	45	(Artificial Intelligence) Similar to: 16/182,969 with 0 CPC Selections and 6 Text Selections Text: (US-11204512-B2 OR US-11086147-B2 OR US-9690121-B2 OR US-8905542-B2 OR MX-PA99011222-A OR US-10330956-B2 OR US-20220260859-A1 OR US-10777048-B2 OR US-11536988-B2 OR US-20170131575-A1 OR US-10310296-B2 OR US-11721183-B2 OR US-20130329183-A1 OR EP-3377934-B1 OR US-8500271-B2 OR US-20170168316-A1 OR US-10031345-B2 OR AU-2016373687-A1 OR CA-3008656-A1 OR AU-2016373687-B2 OR WO-2017105647-A1 OR US-20080151179-A1 OR US-10345625-B2 OR KR-20150040032-A OR CN-218547168-U OR US-20230026477-A1 OR US-9547184-B2 OR US-20230054967-A1 OR US-11330165-B2 OR US-20190318589-A1 OR US-9033493-B2 OR KR-102240087-B1 OR US-10444544-B2 OR US-20180252946-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2023/12/11 03:33 PM

		A1 OR US-20220011604-A1 OR US-20200012127-A1 OR US-7192136-B2 OR US-7621634-B2 OR US-7438410-B1 OR EP-3519892-B1 OR EP-3519892-A1 OR WO-2018064195-A1 OR US-20180091729-A1 OR US-11470936-B2 OR US-20210298440-A1 OR US-20050078274-A1 OR US-7922321-B2 OR US-10708488-B2 OR EP-3341785-B1 OR US-20220417418-A1).did.					
L95	44	(Artificial Intelligence) Similar to: 16/182,969 with 2 CPC Selections and 6 Text Selections Text: (US-11086147-B2 OR US-10330956-B2 OR US-9690121-B2 OR US-11204512-B2 OR US-20220260859-A1 OR US-8905542-B2 OR US-9033493-B2 OR US-20210364828-A1 OR US-20090296044-A1 OR US-20170131575-A1 OR US-20190033623-A1 OR US-20210364827-A9 OR US-20190187492-A1 OR US-8109629-B2 OR MX-PA99011222-A OR US-20120133885-A1 OR US-20150253590-A1 OR CN-111538173-B OR CN-111538173-A OR US-10777048-B2 OR US-20100309426-A1 OR WO-2022231768-A1 OR US-11536988-B2 OR US-8465151-B2 OR US-20170255029-A1 OR WO-2018058130-A1 OR EP-3515232-A1 OR US-20180090958-A1 OR KR-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2023/12/11 03:33 PM

		20190054144-A OR EP-3539285-A1 OR US-20170146829-A1 OR CN-114545635-A OR KR-20210110726-A OR US-20130201440-A1 OR EP-3914960-A1 OR WO-2020154047-A1 OR US-20200233238-A1 OR KR-20210080253-A OR KR-20230003284-A OR WO-2021227975-A1 OR CA-3103299-A1 OR US-20210191159-A1 OR CN-113009715-A OR EP-4152079-A1 OR US-20230054967-A1 OR JP-2023524838-A OR CN-113467103-A OR JP-2022517538-A OR DE-102020102281-A1 OR US-20230060657-A1).did.					
L96	45	(Artificial Intelligence) Similar to: 16/182,969 with 5 CPC Selections and 6 Text Selections Text: (US-11086147-B2 OR US-9690121-B2 OR US-10330956-B2 OR US-20220260859-A1 OR US-20170131575-A1 OR US-9033493-B2 OR US-11204512-B2 OR US-20210364828-A1 OR US-20100309426-A1 OR US-20090296044-A1 OR US-8465151-B2 OR US-20190033623-A1 OR US-20210364827-A9 OR US-20190187492-A1 OR US-8109629-B2 OR US-20170146829-A1 OR US-20130201440-A1 OR US-20120133885-A1 OR US-20150253590-A1 OR US-20190113774-A1 OR US-11156855-B2 OR EP-3455670-A1 OR WO-2017196294-A1 OR US-11668958-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2023/12/11 03:33 PM

		B2 OR US-20220113562-A1 OR CN-113454521-A OR KR-20210127221-A OR EP-3928149-A1 OR WO-2020172138-A1 OR US-20200271961-A1 OR US-8905542-B2 OR CN-113330355-A OR US-7581833-B2 OR US-20070046887-A1 OR KR-20210110726-A OR EP-3914960-A1 OR WO-2020154047-A1 OR US-20200233238-A1 OR KR-102077483-B1 OR TW-M583054-U OR CH-718397-A2 OR KR-102006414-B1 OR US-9720260-B2 OR KR-20200063030-A OR US-9081212-B1 OR US-20220390766-A1 OR WO-2014201213-A1 OR CH-718397-B1 OR US-20180011344-A1 OR US-20150286074-A1).did.					
L97	45	(Artificial Intelligence) Similar to: 16/182,969 with 7 CPC Selections and 6 Text Selections Text: (US-11086147-B2 OR US-10330956-B2 OR US-9690121-B2 OR US-9033493-B2 OR US-20210364828-A1 OR US-20220260859-A1 OR US-20090296044-A1 OR US-20170131575-A1 OR US-20190033623-A1 OR US-20190187492-A1 OR US-20210364827-A9 OR US-8109629-B2 OR US-20120133885-A1 OR US-20150253590-A1 OR US-20100309426-A1 OR US-8465151-B2 OR US-20170146829-A1 OR US-20130201440-A1 OR CN-113330355-A OR KR-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2023/12/11 03:33 PM

		20210110726-A OR WO-2020154047-A1 OR EP-3914960-A1 OR US-20200233238-A1 OR US-11204512-B2 OR US-20190113774-A1 OR US-11156855-B2 OR EP-3455670-A1 OR WO-2017196294-A1 OR US-11668958-B2 OR US-20220113562-A1 OR CN-113454521-A OR CA-3103299-A1 OR US-20210191159-A1 OR KR-20210127221-A OR EP-3928149-A1 OR WO-2020172138-A1 OR US-20200271961-A1 OR DE-102020102281-A1 OR US-20230204985-A1 OR US-7581833-B2 OR US-20070046887-A1 OR US-8905542-B2 OR KR-102077483-B1 OR TW-M583054-U OR CH-718869-A2 OR AT-525342-B1 OR FR-3126050-A3 OR CH-718397-A2 OR AU-2022201400-A1 OR CA-3149165-A1).did.					
L794	336	(US-10042186-$ | US-10139966-$ | US-10152141-$ | US-10191279-$ | US-10215568-$ | US-10254856-$ | US-10310296-$ | US-10338400-$ | US-10341787-$ | US-10345625-$ | US-10359459-$ | US-10448867-$ | US-10466491-$ | US-10469916-$ | US-10481417-$ | US-10515623-$ | US-10534203-$ | US-10539459-$ | US-10613355-$ | US-10617342-$ | US-10624790-$ | US-10649220-$ | US-10663740-$ | US-10684478-$ | US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 03:58 PM

		10684687-$ | US- 10722128-$ | US- 10739253-$ | US- 10761566-$ | US- 10777048-$ | US- 10802582-$ | US- 10824253-$ | US- 10853589-$ | US- 10908421-$ | US- 10964190-$ | US- 10993515-$ | US- 10997943-$ | US- 11003246-$ | US- 11042045-$ | US- 11061252-$ | US- 11064282-$ | US- 11069358-$ | US- 11086147-$ | US- 11103122-$ | US- 11204512-$ | US- 11243416-$ | US- 11300857-$ | US- 11340466-$ | US- 11487110-$ | US- 11495207-$ | US- 11513371-$ | US- 11558538-$ | US- 11604367-$ | US- 11630331-$ | US- 11644693-$ | US- 11669163-$ | US- 11709376-$ | US- 11733549-$ | US- 11737666-$ | US- 11762224-$ | US- 11796833-$ | US- 11829518-$ | US- 1255265-$ | US- 1917745-$ | US- 20020021407-$ | US- 20020081982-$ | US- 20020090103-$ | US- 20020098877-$ | US- 20020140899-$ | US- 20030022690-$ | US- 20030032449-$ | US- 20030226978-$ | US- 20040096078-$ | US- 20040114770-$ | US- 20050230596-$ | US- 20050248719-$ | US- 20050278446-$ | US- 20060034478-$ | US- 20070186330-$ | US- 20070248238-$ | US- 20070270663-$ | US- 20070271116-$ | US- 20080129953-$ | US-					

		20080144854-$ | US- 20090156128-$ | US- 20100045928-$ | US- 20100149073-$ | US- 20120105740-$ | US- 20120113235-$ | US- 20120176580-$ | US- 20130072828-$ | US- 20130143519-$ | US- 20140064536-$ | US- 20140176902-$ | US- 20140198293-$ | US- 20140259271-$ | US- 20150205135-$ | US- 20150206173-$ | US- 20150241964-$ | US- 20150293379-$ | US- 20150338677-$ | US- 20160019715-$ | US- 20160187651-$ | US- 20160239985-$ | US- 20170131575-$ | US- 20170255029-$ | US- 20200029140-$ | US- 20200124468-$ | US- 20210000347-$ | US- 20210259621-$ | US- 20210263319-$ | US- 20210379425-$ | US- 20220008763-$ | US- 20220034542-$ | US- 20220054092-$ | US- 20230033660-$ | US- 20230057654-$ | US- 2249572-$ | US- 2638532-$ | US- 2794085-$ | US- 2818511-$ | US- 2830132-$ | US- 2874230-$ | US- 2904670-$ | US- 3060308-$ | US- 3104290-$ | US- 3119903-$ | US- 3597054-$ | US- 3710115-$ | US- 3858001-$ | US- 3883701-$ | US- 4165487-$ | US- 4254451-$ | US- 4283127-$ | US- 4322585-$ | US- 4348664-$ | US- 4389217-$ | US- 4526473-$ | US- 4535244-$ | US- 4608492-$ | US- 46259103-$ | US-					

		4683587-$ | US- 4751691-$ | US- 4757714-$ | US- 4806011-$ | US- 4822160-$ | US- 4822161-$ | US- 4851686-$ | US- 4856086-$ | US- 4859047-$ | US- 4882769-$ | US- 4962469-$ | US- 4967268-$ | US- 4985632-$ | US- 5008548-$ | US- 5015086-$ | US- 5020150-$ | US- 5026151-$ | US- 5064410-$ | US- 5093576-$ | US- 50963103-$ | US- 5144344-$ | US- 5151600-$ | US- 5161250-$ | US- 5172256-$ | US- 5264877-$ | US- 52756503-$ | US- 5306917-$ | US- 5353378-$ | US- 5359444-$ | US- 5367345-$ | US- 5379464-$ | US- 5382986-$ | US- 5394005-$ | US- 5452026-$ | US- 5452480-$ | US- 5455637-$ | US- 5455640-$).DID.					
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		5900720-$ | US- 5903395-$ | US- 59204504-$ | US- 5923398-$ | US- 5941837-$ | US- 5946071-$ | US- 5949516-$ | US- 5963294-$ | US- 5966746-$ | US- 5988812-$ | US- 5991085-$ | US- 5992996-$ | US- 6010216-$ | US- 6013919-$ | US- 6023372-$ | US- 6028627-$ | US- 6046455-$ | US- 60519104-$ | US- 6060321-$ | US- 6061580-$ | US- 6091832-$ | US- 6115177-$ | US- 6132681-$ | US- 6132881-$ | US- 6154552-$ | US- 6176576-$ | US- 61810704-$ | US- 6199550-$ | US- 62023804-$ | US- 6225897-$ | US- 6231181-$ | US- 6236969-$ | US- 6259367-$ | US- 6270466-$ | US- 6292213-$ | US- 6292685-$ | US- 6301050-$ | US- 6301367-$ | US- 6311155-$ | US- 6343858-$ | US- 6409335-$ | US- 6409338-$ | US- 6431705-$ | US- 6474816-$ | US- 64782605-$ | US- 64783605-$ | US- 6511175-$ | US- 6513532-$ | US- 6517203-$ | US- 6539336-$ | US- 6542081-$ | US- 6546101-$ | US- 6554444-$ | US- 6582075-$ | US- 6612695-$ | US- 6619799-$ | US- 6629076-$ | US- 6686843-$ | US-					

		6717737-$ | US- 6729726-$ | US- 6736759-$ | US- 6764194-$ | US- 6769767-$ | US- 6771423-$ | US- 6788309-$ | US- 6792401-$ | US- 6798391-$ | US- 6824265-$ | US- 6840908-$ | US- 6853303-$ | US- 6857741-$ | US- 6876947-$ | US- 6879930-$ | US- 6899585-$ | US- 6912386-$ | US- 6932090-$ | US- 6944474-$ | US- 6947219-$ | US- 6974226-$ | US- 7013009-$ | US- 7023594-$ | US- 7030902-$ | US- 7033025-$ | US- 7044615-$ | US- 7048370-$ | US- 7059717-$ | US- 7079876-$ | US- 7095455-$ | US- 7150526-$ | US- 7192136-$ | US- 7255437-$ | US- 72589605-$ | US- 72599905-$ | US- 7265358-$ | US- 7274292-$ | US- 7278734-$ | US- 7289767-$ | US- 7312699-$ | US- 7313246-$ | US- 7319780-$ | US- 7376238-$ | US- 7380936-$ | US- 7388962-$ | US- 7392880-$ | US- 7405801-$ | US- 7431450-$ | US- 7438409-$ | US- 7438410-$ | US- 7449622-$ | US- 7452067-$ | US- 7500746-$ | US- 7500747-$ | US- 7521623-$ | US- 7543934-$ | US- 7543938-$ | US- 7547101-$ | US-					

		7564981-$ | US- 7581833-$ | US- 7604348-$ | US- 7643895-$ | US- 7648236-$ | US- 7677723-$ | US- 7760898-$ | US- 7792552-$ | US- 7798638-$ | US- 7806525-$ | US- 78785006-$ | US- 7922321-$ | US- 8044879-$ | US- 8073984-$ | US- 8109629-$ | US- 8142015-$ | US- 8182084-$ | US- 8184067-$ | US- 8243973-$ | US- 8337013-$ | US- 8421851-$ | US- 84615006-$ | US- 8465151-$ | US- 8482488-$ | US- 8485661-$ | US- 8508851-$ | US- 8558759-$ | US- 8593795-$ | US- 8668334-$ | US- 8678581-$ | US- 8684900-$ | US- 8766747-$ | US- 8767306-$ | US- 8778022-$ | US- 8818466-$ | US- 8823740-$ | US- 8838708-$ | US- 8884845-$ | US- 8893010-$ | US- 8907867-$ | US- 8915588-$ | US- 8918197-$ | US- 8941560-$ | US- 8952869-$ | US- 8957835-$ | US- 9024843-$ | US- 9116545-$ | US- 9128522-$ | US- 9137309-$ | US- 9141194-$ | US- 9201512-$ | US- 9207515-$ | US- 9210991-$ | US- 9229233-$ | US- 9230501-$ | US- 9256071-$ | US- 9256253-$ | US- 9264803-$ | US-					

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		5949516-$ | US- 5963294-$ | US- 5966746-$ | US- 5980037-$ | US- 5988812-$ | US- 5991085-$ | US- 5992996-$ | US- 5995592-$ | US- 6010216-$ | US- 6013919-$ | US- 6028627-$ | US- 6046455-$ | US- 60519104-$ | US- 6060321-$ | US- 6061580-$ | US- 6091546-$ | US- 6091832-$ | US- 6115177-$ | US- 6132681-$ | US- 6132881-$ | US- 6154552-$ | US- 6176576-$ | US- 61810704-$ | US- 62023804-$ | US- 6225897-$ | US- 6231181-$ | US- 6236969-$ | US- 6243578-$ | US- 6259367-$ | US- 6270466-$ | US- 6292213-$ | US- 6292685-$ | US- 6301367-$ | US- 6307526-$ | US- 6343858-$ | US- 6409335-$ | US- 6409338-$ | US- 6426719-$ | US- 6431705-$ | US- 6474816-$ | US- 64782605-$ | US- 64783605-$ | US- 6478736-$ | US- 6506142-$ | US- 6511175-$ | US- 6513532-$ | US- 6517203-$ | US- 6539336-$ | US- 6542081-$ | US- 6546101-$ | US- 6554763-$ | US- 6582075-$ | US- 6619799-$ | US- 6629076-$ | US- 6736759-$ | US- 6764194-$ | US- 6788309-$ | US- 6792401-$ | US-					

		6824265-$ | US- 6857741-$ | US- 6879930-$ | US- 6912386-$ | US- 6932090-$ | US- 6947219-$ | US- 7013009-$ | US- 7023594-$ | US- 7030902-$ | US- 7031667-$ | US- 7033025-$ | US- 7059717-$ | US- 7079876-$ | US- 7192136-$ | US- 7255437-$ | US- 72589605-$ | US- 72599905-$ | US- 7274292-$ | US- 7278734-$ | US- 7289767-$ | US- 7312699-$ | US- 7319780-$ | US- 7376238-$ | US- 7405801-$ | US- 7429965-$ | US- 7431450-$ | US- 7438409-$ | US- 7438410-$ | US- 7452067-$ | US- 7500746-$ | US- 7527374-$ | US- 7543938-$ | US- 7547101-$ | US- 7581833-$ | US- 7604348-$ | US- 7648236-$ | US- 7740353-$ | US- 7792552-$ | US- 7798638-$ | US- 7806525-$ | US- 78785006-$ | US- 8109629-$ | US- 8142015-$ | US- 8243973-$ | US- 8384617-$ | US- 8421851-$ | US- 84615006-$ | US- 8485661-$ | US- 8508851-$ | US- 8558759-$ | US- 8593795-$ | US- 8668334-$ | US- 8678581-$ | US- 8766747-$ | US- 8767306-$ | US- 8770742-$ | US- 8823740-$ | US- 8838708-$ | US-					

		8884845-$ | US- 8892232-$ | US- 8907867-$ | US- 8915588-$ | US- 8934015-$ | US- 8941560-$ | US- 8952869-$ | US- 8957835-$ | US- 9024843-$ | US- 9033493-$ | US- 9116545-$ | US- 9122083-$ | US- 9124796-$ | US- 9128522-$ | US- 9137309-$ | US- 9141194-$ | US- 9201512-$ | US- 9207515-$ | US- 9210991-$ | US- 9229233-$ | US- 9230501-$ | US- 9256071-$ | US- 9264803-$ | US- 9274395-$ | US- 9298007-$ | US- 9299194-$ | US- 9360889-$ | US- 9400390-$ | US- 9401540-$ | US- 9405135-$).DID.					
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		10722128-$ | US- 10739253-$ | US- 10777048-$ | US- 10824253-$ | US- 10853589-$ | US- 10863060-$ | US- 10876886-$ | US- 10908421-$ | US- 10993515-$ | US- 10997943-$ | US- 11003246-$ | US- 11061252-$ | US- 11064282-$ | US- 11086147-$ | US- 11103122-$ | US- 11243416-$ | US- 11300857-$ | US- 11487110-$ | US- 11495207-$ | US- 11513371-$ | US- 11558538-$ | US- 11604367-$ | US- 11630331-$ | US- 1255265-$ | US- 1917745-$ | US- 20010005230-$ | US- 20020017997-$ | US- 20020021407-$ | US- 20020081982-$ | US- 20020084990-$ | US- 20020089639-$ | US- 20020090103-$ | US- 20020098877-$ | US- 20020109600-$ | US- 20020140899-$ | US- 20030018274-$ | US- 20030022690-$ | US- 20030032449-$ | US- 20030062046-$ | US- 20030067585-$ | US- 20030068057-$ | US- 20030083591-$ | US- 20030226978-$ | US- 20040000733-$ | US- 20040063378-$ | US- 20040096078-$ | US- 20040100384-$ | US- 20040128737-$ | US- 20040150986-$ | US- 20040160573-$ | US- 20050067580-$ | US- 20050213026-$ | US- 20050230596-$ | US- 20050248717-$ | US- 20050248719-$ | US- 20050264752-$ | US- 20060001827-$ | US- 20060003803-$ | US-					

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		4165487-$ | US-4254451-$ | US-4283127-$ | US-4322585-$ | US-4348664-$ | US-4389217-$ | US-4526473-$ | US-4535244-$ | US-4608492-$ | US-4683587-$ | US-4751691-$ | US-4757714-$ | US-4773095-$ | US-4806011-$ | US-4822160-$ | US-4822161-$ | US-4851686-$ | US-4856086-$ | US-4859047-$ | US-4882769-$ | US-4942629-$ | US-4962469-$ | US-4967268-$ | US-4985632-$ | US-5008548-$ | US-5015086-$ | US-5020150-$ | US-5026151-$).DID.					
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		2012058530-$ | JP-2012159681-$ | JP-2012249097-$ | JP-2013255012-$ | JP-2014049934-$ | JP-2015132821-$ | JP-2017183857-$ | JP-2021189379-$ | JP-3000621-$ | JP-3111430-$ | JP-3151770-$ | JP-3245478-$ | JP-3310325-$ | JP-3632271-$ | JP-4073533-$ | JP-4367663-$ | JP-4506795-$ | JP-4727188-$ | JP-4961914-$ | JP-4961984-$ | JP-5023663-$ | JP-5092357-$ | JP-5119636-$ | JP-5228305-$ | JP-5295714-$ | JP-5360115-$ | JP-5363555-$ | JP-5748939-$ | JP-5812666-$ | JP-5891705-$ | JP-6021582-$ | JP-6499154-$ | KR-100584344-$ | KR-100609421-$ | KR-100707294-$ | KR-101231026-$ | KR-101253348-$ | KR-101290994-$ | KR-101871660-$ | KR-102422782-$ | KR-20020067443-$ | KR-20150084603-$ | KR-20170112898-$ | KR-20180009932-$ | KR-20180037909-$ | KR-20190100105-$ | KR-20220140289-$ | RU-2404531-$ | RU-2593391-$ | RU-2607640-$ | SE-524821-$ | SG-193669-$ | WO-1997034182-$ | WO-2000079327-$ | WO-2000079329-$ | WO-2003083875-$ | WO-2003100503-$ | WO-2006001254-$ | WO-2006045843-$ |					

		WO-2006085308-$ | WO-2006085310-$ | WO-2006102368-$ | WO-2006128648-$ | WO-2007079633-$ | WO-2007110551-$ | WO-2008017051-$ | WO-2008096719-$ | WO-2008149172-$ | WO-2009012470-$ | WO-2009094646-$ | WO-2011100284-$ | WO-2011159205-$ | WO-2013013158-$ | WO-2013019893-$ | WO-2013052274-$ | WO-2013098376-$ | WO-2013101313-$ | WO-2014035622-$ | WO-2014160500-$ | WO-2015072633-$ | WO-2015110859-$ | WO-2015143018-$ | WO-2016090066-$ | WO-2017051079-$ | WO-2017058733-$ | WO-2017144934-$ | WO-2017145382-$ | WO-2017171157-$ | WO-2017222497-$).DID.					
L800	1656	794 795 796 797 798 799	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:00 PM
L801	91	800 AND 27	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	OR	ON	ON	2023/12/11 04:01 PM

			NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L802	75	800 AND 29	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:01 PM
L804	43	800 AND 40	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:01 PM
L806	12	800 AND 38	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:01 PM
L807	20536	66 67 68 69 70 71	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2023/12/11 04:17 PM

			AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L808	127	807 AND 27	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:17 PM
L809	79	807 AND 30	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:17 PM
L811	51	807 AND 40	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2023/12/11 04:18 PM

			RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L812	21	807 AND 44	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:18 PM
L813	12	807 AND 38	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:18 PM
L814	185512	72 73 74 75 76 77 78 79 80 81 82 83 84 85	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:42 PM
L815	2416	814 AND 27	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY,	OR	ON	ON	2023/12/11 04:42 PM

			CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L816	755	814 AND 30	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:43 PM
L817	382	814 AND 40	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:43 PM
L819	127	814 AND 44	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH,	OR	ON	ON	2023/12/11 04:43 PM

			TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L820	22	814 AND 38	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 04:43 PM
L825	45	(Artificial Intelligence) Similar to: 18/375,893 with 0 CPC Selections and 2 Text Selections Text: (US-11204512-B2 OR US-9761068-B2 OR US-20040086141-A1 OR US-11326941-B2 OR WO-2020060596-A1 OR US-20200088999-A1 OR CN-210136443-U OR US-20160349520-A1 OR KR-102400383-B1 OR US-11644361-B2 OR US-20220394371-A1 OR US-7677723-B2 OR WO-2021086537-A1 OR EP-4052478-A1 OR WO-2021086538-A1 OR US-10191289-B2 OR EP-3358861-A1 OR US-20180227679-A1 OR EP-3358812-A1 OR US-20180227684-A1 OR US-10674290-B2 OR EP-3358812-B1 OR US-20160100237-A1 OR BR-202014016356-U2 OR US-11762224-B2 OR CN-111936953-A OR US-10575579-B2 OR US-20220353624-A1 OR EP-3358861-B1 OR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2023/12/11 04:54 PM

		CN-111936953-B OR US-6473630-B1 OR US-20100315329-A1 OR CN-115735179-A OR US-11630331-B2 OR WO-2021262318-A1 OR EP-4074067-A1 OR EP-3776144-B1 OR US-10359311-B2 OR US-20170090219-A1 OR US-20180335650-A1 OR NL-1027023-C2 OR WO-2023049877-A1 OR JP-2019537144-A OR US-9075249-B2 OR WO-2013109874-A1 OR US-20130188080-A1 OR AU-2013209578-A1 OR EP-2805201-A1 OR EP-2805201-B1 OR US-11668958-B2).did.					
L826	44	(Artificial Intelligence) Similar to: 18/375,893 with 3 CPC Selections and 2 Text Selections Text: (CN-113454521-A OR CN-113330355-A OR EP-3928149-A1 OR WO-2020172138-A1 OR KR-20210127221-A OR US-11762224-B2 OR WO-2020154047-A1 OR EP-3914960-A1 OR US-20200233238-A1 OR KR-20210110726-A OR US-9033493-B2 OR US-20210364828-A1 OR US-8109629-B2 OR US-20170131575-A1 OR US-20210364827-A9 OR US-20190187492-A1 OR US-10330956-B2 OR US-9690121-B2 OR US-20130201440-A1 OR US-20150253590-A1 OR US-20120133885-A1 OR US-11086147-B2 OR US-20090296044-A1 OR US-20170146829-A1 OR US-11733549-B2 OR US-8465151-B2	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2023/12/11 04:54 PM

		OR US-20150286074-A1 OR KR-20200135137-A OR CN-205691887-U OR US-11668958-B2 OR US-20220113562-A1 OR TW-M583054-U OR US-20230204985-A1 OR US-11156855-B2 OR US-9989771-B2 OR US-10288908-B2 OR US-20180011344-A1 OR KR-102006414-B1 OR WO-2017215953-A1 OR EP-3469418-A1 OR EP-3258308-A1 OR US-9720260-B2 OR US-11500227-B2 OR WO-2014201213-A1 OR WO-2023192316-A1 OR EP-4057051-A1 OR EP-3455670-A1 OR WO-2017196294-A1 OR CH-718397-A2 OR US-20220244576-A1).did.					
L827	44	(Artificial Intelligence) Similar to: 18/375,893 with 6 CPC Selections and 2 Text Selections Text: (US-11762224-B2 OR US-9033493-B2 OR US-20210364828-A1 OR US-10330956-B2 OR US-8109629-B2 OR US-20190187492-A1 OR US-20210364827-A9 OR US-20170131575-A1 OR US-11733549-B2 OR US-11086147-B2 OR US-9690121-B2 OR US-20130201440-A1 OR US-20120133885-A1 OR US-20150253590-A1 OR US-20090296044-A1 OR US-20170146829-A1 OR US-20100309426-A1 OR US-8465151-B2 OR CN-113330355-A OR US-20220260859-A1 OR US-11156855-B2 OR CN-113454521-A	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2023/12/11 04:54 PM

		OR EP-3914960-A1 OR WO-2020154047-A1 OR US-20200233238-A1 OR KR-20210110726-A OR US-11668958-B2 OR US-20220113562-A1 OR EP-3455670-A1 OR WO-2017196294-A1 OR US-20190113774-A1 OR WO-2023192316-A1 OR KR-102077483-B1 OR KR-20210127221-A OR EP-3928149-A1 OR WO-2020172138-A1 OR US-20200271961-A1 OR US-20230204985-A1 OR TW-M583054-U OR US-7581833-B2 OR KR-102006414-B1 OR FR-3126050-A3 OR AU-2022201400-A1 OR CA-3149165-A1 OR GB-2609686-A OR NL-2031025-A OR KR-20230000350-U OR CH-718869-A2 OR AT-525342-B1 OR AT-525342-A1).did.					
L828	44	(Artificial Intelligence) Similar to: 18/375,893 with 6 CPC Selections and 4 Text Selections Text: (US-11762224-B2 OR US-9033493-B2 OR US-20210364828-A1 OR US-10330956-B2 OR US-8109629-B2 OR US-20190187492-A1 OR US-20210364827-A9 OR US-20170131575-A1 OR US-11086147-B2 OR US-11733549-B2 OR US-9690121-B2 OR US-20090296044-A1 OR US-20130201440-A1 OR US-20120133885-A1 OR US-20150253590-A1 OR US-20170146829-A1 OR US-8465151-B2 OR CN-113330355-A	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2023/12/11 04:59 PM

		OR US-20220260859-A1 OR US-11156855-B2 OR CN-113454521-A OR EP-3914960-A1 OR WO-2020154047-A1 OR US-20200233238-A1 OR KR-20210110726-A OR US-11668958-B2 OR US-20220113562-A1 OR WO-2017196294-A1 OR EP-3455670-A1 OR US-20190113774-A1 OR WO-2023192316-A1 OR KR-20210127221-A OR KR-102077483-B1 OR EP-3928149-A1 OR WO-2020172138-A1 OR US-20230204985-A1 OR TW-M583054-U OR US-7581833-B2 OR KR-102006414-B1 OR FR-3126050-A3 OR AU-2022201400-A1 OR CA-3149165-A1 OR GB-2609686-A OR NL-2031025-A OR KR-20230000350-U OR CH-718869-A2 OR AT-525342-B1 OR CH-718397-A2 OR US-20210318558-A1 OR EP-4057051-A1).did.					
L829	579	"6349001"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:13 PM
L830	117	"5835185"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2023/12/11 05:13 PM

			IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L831	116	"6301050"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:13 PM
L832	84	"6678381"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:13 PM
L833	147	"5777715"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:13 PM

L834	74	"5819183"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:13 PM
L864	18	(16/182969 | 16/424018 | 16/429181 | 16/821810 | 17/395509 | 17/484080 | 17/737866 | 17/873104 | 17/942347 | 17/949029 | 17/964853).APP.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:25 PM
L865	12	(AT-20220034542-$ | EP-1027626-$ | EP-2290433-$ | KR-20020044416-$ | WO-200124576-$).DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:25 PM
L866	75	(US-9299194-$ | US-9360889-$ | US-9400390-$ | US-9401540-$ | US-9405135-$ | US-9423870-$ | US-9460732-$ | US-9482880-$ | US-9482882-$ | US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO,	OR	ON	ON	2023/12/11 05:40 PM

		9482883-$ | US- 9494800-$ | US- 9501880-$ | US- 9508269-$ | US- 9538915-$ | US- 9575321-$ | US- 9594246-$ | US- 9632059-$ | US- 9635222-$ | US- 9651784-$ | US- 9651787-$ | US- 9684172-$ | US- 9684374-$ | US- 9726904-$ | US- 9746676-$ | US- 9746686-$ | US- 9753288-$ | US- 9766463-$ | US- 9766479-$ | US- 9798458-$ | US- 9800990-$ | US- 9810906-$ | US- 9829707-$ | US- 9836122-$ | US- 9841599-$ | US- 9851567-$ | US- 9874936-$ | US- 9880052-$ | US- 9910298-$ | US- 9922236-$ | US- 9939934-$ | US- 9952664-$ | US- 9965681-$).DID.	MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L867	74	(US-9423870-$ | US- 9451068-$ | US- 9482880-$ | US- 9482882-$ | US- 9482883-$ | US- 9494800-$ | US- 9494807-$ | US- 9532714-$ | US- 9575321-$ | US- 9594246-$ | US- 9619201-$ | US- 9628707-$ | US- 9632059-$ | US- 9635222-$ | US- 9649052-$ | US- 9651784-$ | US- 9651787-$ | US- 9684172-$ | US- 9684374-$ | US- 9720258-$ | US- 9720260-$ | US- 9726904-$ | US- 9740280-$ | US- 9746676-$ | US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:40 PM

		9746686-$ | US-9753288-$ | US-9766463-$ | US-9766479-$ | US-9798458-$ | US-9800990-$ | US-9810906-$ | US-9811152-$ | US-9823494-$ | US-9829707-$ | US-9836122-$ | US-9841599-$ | US-9880052-$ | US-9910298-$ | US-9939934-$ | US-9952664-$ | US-9965681-$).DID.					
L868	127	(US-10042186-$ | US-10222617-$ | US-10345625-$ | US-10613355-$ | US-10624790-$ | US-10777048-$ | US-11061252-$ | US-11513371-$ | US-11536988-$ | US-20040160572-$ | US-20090097688-$ | US-20090296044-$ | US-20100177277-$ | US-20100265456-$ | US-20110080556-$ | US-20110102734-$ | US-20110109873-$ | US-20120002159-$ | US-20130010256-$ | US-20160109729-$ | US-20170068117-$ | US-20190126060-$ | US-3042548-$ | US-3683168-$ | US-3923384-$ | US-4447504-$ | US-4449799-$ | US-4618226-$ | US-4675259-$ | US-4756605-$ | US-4770954-$ | US-4883728-$ | US-4977899-$ | US-5007726-$ | US-5142406-$ | US-5455637-$ | US-5455638-$ | US-5835185-$ | US-5900720-$ | US-6099117-$ | US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:40 PM

		6325507-$ | US-6476311-$ | US-64764696-$ | US-6552511-$ | US-7150526-$ | US-7339353-$ | US-7370963-$ | US-7461936-$ | US-8337013-$ | US-8465151-$ | US-8500271-$ | US-8770742-$ | US-8787970-$ | US-8801174-$ | US-8876285-$ | US-8905541-$ | US-8944590-$ | US-9192772-$ | US-9207515-$ | US-9274395-$ | US-9405135-$ | US-9470909-$ | US-9482880-$ | US-9619201-$ | US-9632059-$ | US-9720258-$ | US-9720260-$).DID.					
L869	69	(CA-2388872-$ | CN-1110465-$ | CN-212276134-$ | CN-217718312-$ | DE-69800345-$ | EP-2082281-$ | EP-3306380-$ | EP-3608705-$ | JP-2000162341-$ | JP-2000268883-$ | JP-2001183620-$ | JP-2002218669-$ | JP-2003017020-$ | JP-2020027271-$ | JP-6742059-$ | KR-100720019-$ | KR-101529551-$ | KR-20010078034-$ | KR-200250874-$ | KR-200262295-$ | WO-2001035159-$ | WO-2002054135-$ | WO-2009062381-$ | WO-2010010204-$ | WO-2019011925-$).DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:40 PM
L870	46	(US-9759932-$ | US-9763071-$ | US-9767160-$ | US-9782604-$ | US-9786171-$ | US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2023/12/11 05:40 PM

		9804400-$ | US-9811752-$ | US-9814425-$ | US-9843743-$ | US-9864211-$ | US-9897811-$ | US-9897886-$ | US-9898039-$ | US-9901406-$ | US-9915545-$ | US-9915823-$ | US-9922236-$ | US-9946074-$ | US-9949700-$ | US-9958275-$ | US-9972216-$ | US-9976901-$ | US-9980054-$).DID.	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L871	18	(US-0017635-$ | US-0063763-$ | US-0415338-$ | US-11721183-$ | US-11733549-$ | US-2725462-$ | US-20030063763-$ | US-20220415338-$ | US-20230017635-$).DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:40 PM
L872	11	(WO-2019013821-$ | WO-2019154509-$ | WO-2020244358-$ | WO-2022145647-$).DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:40 PM
L873	378	864 865 866 867 868 869 870 871 872	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2023/12/11 05:41 PM

			IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L874	41	873 AND 27	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:41 PM
L876	27	873 AND 40	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:42 PM
L877	15	873 AND 44	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:42 PM

L878	8	873 AND 38	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:42 PM
L879	27	873 AND 40	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:45 PM
L880	27	873 AND 40	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:46 PM
L881	27	873 AND 40	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO,	OR	ON	ON	2023/12/11 05:46 PM

			MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L882	15	873 AND 44	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:46 PM
L883	8	873 AND 38	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:46 PM
L884	27	873 AND 40	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/11 05:47 PM
L885	69	"2011106798"	(US-PGPUB; USPAT;	OR	ON	ON	2023/12/12

			USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				07:48 AM
L886	117	"20120075168"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/12 07:48 AM
L887	56	"20120194420"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/12 07:48 AM
L888	45	"20120194419"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	OR	ON	ON	2023/12/12 07:48 AM

			NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L889	30	"20120206322"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/12 07:48 AM
L890	22	"20040000733"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/12 08:06 AM
L891	24	"20050201585"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/12 08:06 AM
L892	90	"20060023158"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2023/12/12 08:06 AM

			AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L893	31	"20070030442"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/12 08:06 AM
L900	10	"20160085076"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/12 08:51 AM
L901	13	"20140268013"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2023/12/12 08:51 AM

			RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L902	17	"20140268008"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/12 08:51 AM
L903	202	"20130278631"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/12 08:51 AM
L904	19	"20110221657"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/12 08:51 AM
L913	1	"20240036361"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/02/19 03:25 PM

			CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L914	1	"89665263".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/02/19 03:26 PM
L916	63009	(G02C11/10 OR G02C5/143 OR G02C5/146 OR G02C11/06 OR H02J7/0045 OR G02C2200/08).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 03:32 PM
L923	887	916 AND 27	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2024/02/19 03:33 PM

			JPO; DERWENT; IBM_TDB)				
L924	636	916 AND 29	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 03:34 PM
L925	442	916 AND 30	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 03:34 PM
L926	242	916 AND 40	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 03:34 PM
L927	85	916 AND 42	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2024/02/19 03:34 PM

			HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L928	24	916 AND 38	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 03:34 PM
L929	32	(Artificial Intelligence) More like doc: US-20240036361-A1 Text: (US-9690121-B2 OR US-9033493-B2 OR US-20170146829-A1 OR US-20170131575-A1 OR US-20100309426-A1 OR US-20190187492-A1 OR US-20210364827-A9 OR US-8465151-B2 OR US-11762224-B2 OR US-20090296044-A1 OR US-20210364828-A1 OR US-8109629-B2 OR US-20230408850-A1 OR US-20130201440-A1 OR US-11733549-B2 OR US-20070046887-A1 OR US-10330956-B2 OR US-20120133885-A1 OR US-20150253590-A1 OR US-7581833-B2).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 03:47 PM
L930	32	(Artificial Intelligence) More like doc: US-20190187492-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/02/19 03:47 PM

		Text: (US-20090296044-A1 OR US-20120133885-A1 OR US-20210364827-A9 OR US-20100309426-A1 OR US-20210364828-A1 OR US-20170146829-A1 OR US-20170131575-A1 OR US-20150253590-A1 OR US-20130201440-A1 OR US-20190033623-A1 OR US-20220260859-A1 OR US-20070046887-A1 OR US-8109629-B2 OR US-8465151-B2 OR US-7581833-B2 OR US-11733549-B2 OR US-9033493-B2 OR US-9690121-B2 OR US-11086147-B2 OR US-10330956-B2).did.	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L931	37	(Artificial Intelligence) More like doc: US-20200218094-A1 Text: (US-20220357599-A1 OR US-20230017635-A1 OR US-20220011603-A1 OR US-20230273464-A1 OR US-20200012127-A1 OR US-20050264752-A1 OR US-7500747-B2 OR US-7922321-B2 OR US-20230033660-A1 OR US-20230057654-A1 OR US-20110187990-A1 OR US-20230236444-A1 OR US-8500271-B2 OR US-8905542-B2 OR US-10310296-B2 OR US-11536988-B2 OR US-20130308089-A1 OR US-20180335650-A1 OR US-20170090219-A1 OR US-20150085245-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 03:47 PM
L932	35	(Artificial Intelligence) More like doc: US-20220357599-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/02/19 03:47 PM

		Text: (US-20230017635-A1 OR US-20230273464-A1 OR US-20200218094-A1 OR US-20220011603-A1 OR US-7500747-B2 OR US-20230033660-A1 OR US-11644693-B2 OR US-20230057654-A1 OR US-20230236444-A1 OR US-11536988-B2 OR US-20190285913-A1 OR US-20120050668-A1 OR US-20190278110-A1 OR US-20220260859-A1 OR US-20140268008-A1 OR US-20160246075-A9 OR US-11513371-B2 OR US-11204512-B2 OR US-11733549-B2 OR US-8430507-B2).did.	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L933	44	(Artificial Intelligence) Similar to: 18/375,893 with 0 CPC Selections and 0 Text Selections Text: (US-20210364828-A1 OR US-10330956-B2 OR US-20210364827-A9 OR US-20190187492-A1 OR US-11733549-B2 OR US-20170131575-A1 OR US-11086147-B2 OR US-9690121-B2 OR US-20090296044-A1 OR US-20130201440-A1 OR US-20120133885-A1 OR US-20150253590-A1 OR US-20100309426-A1 OR US-8465151-B2 OR CN-113330355-A OR US-20220260859-A1 OR CN-113454521-A OR US-11668958-B2 OR US-20220113562-A1 OR EP-3914960-A1 OR KR-20210110726-A OR WO-2017196294-A1 OR EP-3455670-A1 OR WO-2023192316-	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/02/19 04:12 PM

		A1 OR KR-20210127221-A OR EP-3928149-A1 OR WO-2020172138-A1 OR US-20200271961-A1 OR KR-102077483-B1 OR US-20230204985-A1 OR TW-M583054-U OR US-7581833-B2 OR KR-102006414-B1 OR CA-3149165-A1 OR GB-2609686-A OR NL-2031025-A OR KR-20230000350-U OR CH-718869-A2 OR AT-525342-B1 OR US-20210318558-A1 OR US-11604367-B2 OR CA-3103299-A1 OR US-20210191159-A1 OR DE-102020102281-A1 OR KR-20200135137-A OR JP-3237752-U OR CH-718397-B1 OR US-20180011344-A1 OR US-10288908-B2 OR US-20230040338-A1).did.					
L934	44	(Artificial Intelligence) Similar to: 18/375,893 with 0 CPC Selections and 5 Text Selections Text: (US-11204512-B2 OR US-9761068-B2 OR US-20040086141-A1 OR US-11326941-B2 OR WO-2020060596-A1 OR US-20200088999-A1 OR CN-210136443-U OR KR-102400383-B1 OR US-20160349520-A1 OR US-7677723-B2 OR US-20220394371-A1 OR US-11644361-B2 OR WO-2021086537-A1 OR US-10191289-B2 OR EP-4052478-A1 OR WO-2021086538-A1 OR US-20180227679-A1 OR US-20180227684-A1 OR EP-3358812-A1 OR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/02/19 04:12 PM

		US-10674290-B2 OR US-10986451-B2 OR EP-3358812-B1 OR EP-3577911-A1 OR US-20160100237-A1 OR CN-111936953-A OR US-11762224-B2 OR US-10575579-B2 OR CN-111936953-B OR US-20220353624-A1 OR US-20140292636-A1 OR US-6473630-B1 OR US-11630331-B2 OR KR-20080031206-A OR CN-115735179-A OR EP-4074067-A1 OR WO-2021262318-A1 OR KR-20190027934-A OR EP-3776144-B1 OR US-20180335650-A1 OR US-20170090219-A1 OR US-10345625-B2 OR NL-1027023-C2 OR EP-3065027-B1 OR US-10359311-B2 OR WO-2023049877-A1 OR US-9075249-B2 OR EP-2805201-B1 OR WO-2013109874-A1 OR EP-2805201-A1 OR US-20130188080-A1).did.					
L935	44	(Artificial Intelligence) Similar to: 18/375,893 with 3 CPC Selections and 5 Text Selections Text: (CN-113454521-A OR CN-113330355-A OR US-20200271961-A1 OR EP-3928149-A1 OR WO-2020172138-A1 OR KR-20210127221-A OR EP-3914960-A1 OR WO-2020154047-A1 OR US-20200233238-A1 OR KR-20210110726-A OR US-11762224-B2 OR US-9033493-B2 OR US-20210364828-A1 OR US-8109629-B2 OR US-20170131575-A1 OR US-10330956-B2 OR US-20190187492-	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/02/19 04:12 PM

		A1 OR US-20210364827-A9 OR US-9690121-B2 OR US-20130201440-A1 OR US-11086147-B2 OR US-20090296044-A1 OR US-20150253590-A1 OR US-20120133885-A1 OR US-20170146829-A1 OR US-11733549-B2 OR US-20100309426-A1 OR US-8465151-B2 OR US-20150286074-A1 OR KR-20200135137-A OR CN-205691887-U OR TW-M583054-U OR US-20230204985-A1 OR US-9989771-B2 OR US-11668958-B2 OR US-20220113562-A1 OR US-10288908-B2 OR KR-102006414-B1 OR US-20180011344-A1 OR US-11156855-B2 OR EP-3469418-A1 OR WO-2017215953-A1 OR EP-3258308-A1 OR JP-2017147520-A OR US-11500227-B2 OR WO-2023192316-A1 OR EP-4057051-A1 OR EP-3455670-A1 OR WO-2017196294-A1 OR US-20220244576-A1).did.					
L936	44	(Artificial Intelligence) Similar to: 18/375,893 with 6 CPC Selections and 5 Text Selections Text: (US-11762224-B2 OR US-9033493-B2 OR US-20210364828-A1 OR US-10330956-B2 OR US-8109629-B2 OR US-20190187492-A1 OR US-20210364827-A9 OR US-20170131575-A1 OR US-11086147-B2 OR US-11733549-B2 OR US-9690121-B2 OR US-20090296044-A1 OR US-20130201440-	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/02/19 04:12 PM

		A1 OR US-20120133885-A1 OR US-20150253590-A1 OR US-20170146829-A1 OR US-20100309426-A1 OR US-8465151-B2 OR CN-113330355-A OR US-20220260859-A1 OR US-11156855-B2 OR CN-113454521-A OR WO-2020154047-A1 OR EP-3914960-A1 OR US-20200233238-A1 OR KR-20210110726-A OR US-11668958-B2 OR US-20220113562-A1 OR WO-2017196294-A1 OR EP-3455670-A1 OR US-20190113774-A1 OR WO-2023192316-A1 OR KR-20210127221-A OR KR-102077483-B1 OR EP-3928149-A1 OR WO-2020172138-A1 OR US-20200271961-A1 OR US-20230204985-A1 OR TW-M583054-U OR US-7581833-B2 OR KR-102006414-B1 OR FR-3126050-A3 OR AU-2022201400-A1 OR CA-3149165-A1 OR GB-2609686-A OR NL-2031025-A OR KR-20230000350-U OR CH-718869-A2 OR AT-525342-B1 OR AT-525342-A1).did.					
L937	303	"7792552"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2024/02/19 04:15 PM

			IBM_TDB)				
L938	2	"35514697".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/02/19 04:16 PM
L941	12	"46332221".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/02/19 04:17 PM
L943	194	"8593795"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 04:18 PM
L944	1	"49596677".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2024/02/19 04:18 PM

			RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)				
L946	29	"11630331"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 04:52 PM
L947	26	"11513371"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 04:53 PM
L948	57	"10345625"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 04:53 PM
L949	41	"10802582"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2024/02/19 04:53 PM

			EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L950	60	"10515623"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 04:53 PM
L951	10	"11762224"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/02/19 04:53 PM
L952	37	(Artificial Intelligence) More like doc: US-6349001-B1 Text: (CA-2307877-C OR EP-1027627-A1 OR EP-1027627-A4 OR WO-9923524-A1 OR US-6091546-A OR JP-2001522063-A OR EP-1027627-B1 OR AU-2007205168-A1 OR CA-2636159-A1 OR AU-2007205168-B2 OR CA-2174510-A1 OR CA-2636159-C OR BR-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 04:55 PM

		PI0706349-A2 OR KR-20180037887-A OR US-20040108981-A1 OR CN-1529831-A OR CN-100365470-C OR TW-200409945-A OR CN-103033952-A OR CA-2377742-A1).did.					
L953	38	(Artificial Intelligence) More like doc: US-5835185-A Text: (US-5455638-A OR US-5455637-A OR US-5900720-A OR US-20080100792-A1 OR WO-2008057199-A2 OR CA-2667671-A1 OR US-20090201460-A1 OR WO-2008057200-A2 OR EP-2082281-A2 OR US-20080106694-A1 OR WO-2008057198-A2 OR WO-2008054654-A2 OR US-20080129953-A1 OR US-20210149216-A1 OR WO-2019011925-A1 OR EP-3652584-A1 OR EP-3608705-A1 OR TW-200837421-A OR CN-110892314-A OR WO-2008057200-A3).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 04:55 PM
L954	34	(Artificial Intelligence) More like doc: US-7792552-B2 Text: (US-20060003803-A1 OR US-9690121-B2 OR US-20080151179-A1 OR US-11204512-B2 OR US-11630331-B2 OR US-7621634-B2 OR US-20050078274-A1 OR US-20240036361-A1 OR US-7192136-B2 OR US-11644693-B2 OR US-7438410-B1 OR US-7631968-B1 OR US-20230017635-A1 OR US-20220357599-A1 OR US-10777048-B2 OR US-20070046887-A1 OR US-20200012127-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 04:55 PM

		OR US-11721183-B2 OR US-20190318589-A1 OR US-20230273464-A1).did.					
L955	33	(Artificial Intelligence) More like doc: US-8109629-B2 Text: (US-20090296044-A1 OR US-9033493-B2 OR US-11086147-B2 OR US-20210364828-A1 OR US-20230408850-A1 OR US-20220260859-A1 OR US-10330956-B2 OR US-20070046887-A1 OR US-11762224-B2 OR US-11733549-B2 OR US-20190033623-A1 OR US-20100309426-A1 OR US-20120133885-A1 OR US-7581833-B2 OR US-8465151-B2 OR US-20150253590-A1 OR US-20170146829-A1 OR US-20130201440-A1 OR US-20170131575-A1 OR US-20210364827-A9).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 04:55 PM
L956	29	(Artificial Intelligence) More like doc: US-8593795-B1 Text: (US-8971023-B2 OR US-20130250503-A1 OR EP-2831661-B1 OR TW-201346333-A OR US-9291823-B2 OR US-20160147086-A1 OR US-9766482-B2 OR KR-102308595-B1 OR WO-2013148980-A1 OR EP-2831661-A1 OR US-20130258270-A1 OR JP-2015521395-A OR US-9091852-B2 OR EP-2828704-B1 OR US-20130249776-A1 OR US-20140028968-A1 OR KR-20140053341-A OR US-10139625-B2 OR US-20160320618-A1 OR US-11135446-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 04:55 PM

		B2).did.					
L957	212	(US-0000347-$ | US-0004325-$ | US-0005069-$ | US-0008763-$ | US-0011603-$ | US-0017634-$ | US-0026146-$ | US-0033622-$ | US-0033660-$ | US-0036103-$ | US-0044416-$ | US-0045928-$ | US-0054092-$ | US-0057654-$ | US-0064746-$ | US-0089545-$ | US-0091200-$ | US-0098874-$ | US-0101411-$ | US-0104864-$ | US-0105445-$ | US-0114770-$ | US-0122208-$ | US-0136414-$ | US-0172691-$ | US-0178743-$ | US-0189548-$ | US-0211574-$ | US-0226838-$ | US-02511706-$ | US-0277123-$ | US-0283894-$ | US-0291667-$ | US-0292333-$ | US-0335792-$ | US-0338677-$ | US-0357599-$ | US-0369402-$ | US-0378493-$ | US-0379425-$ | US-0415388-$ | US-10515623-$ | US-10571715-$ | US-10802582-$ | US-10964190-$ | US-11069358-$ | US-11204512-$ | US-11243416-$ | US-11326941-$ | US-11513371-$ | US-11536988-$ | US-11630331-$ | US-11644361-$ | US-11644693-$ | US-20020136414-$ | US-20030064746-$ | US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:23 PM

		20030091200-$ | US- 20040005069-$ | US- 20040104864-$ | US- 20040114770-$ | US- 20050036103-$ | US- 20060291667-$ | US- 20070189548-$ | US- 20070211574-$ | US- 20080089545-$ | US- 20100045928-$ | US- 20100105445-$ | US- 20110292333-$ | US- 20120101411-$ | US- 20120283894-$ | US- 20130172691-$ | US- 20140226838-$ | US- 20150277123-$ | US- 20150338677-$ | US- 20160098874-$ | US- 20180122208-$ | US- 20190004325-$ | US- 20190033622-$ | US- 20190369402-$ | US- 20190378493-$ | US- 20210000347-$ | US- 20210026146-$ | US- 20210379425-$ | US- 20220008763-$ | US- 20220011603-$ | US- 20220054092-$ | US- 20220178743-$ | US- 20220335792-$ | US- 20220357599-$ | US- 20220415388-$ | US- 20230017634-$ | US- 20230033660-$ | US- 20230057654-$ | US- 3104290-$ | US- 3119903-$ | US- 5144344-$ | US- 5475798-$ | US- 5519781-$ | US- 5777715-$ | US- 5819183-$ | US- 6301050-$ | US- 6311155-$ | US- 6346929-$ | US- 6678381-$ | US- 6717737-$ | US- 6771423-$ | US- 7801570-$ | US- 8582789-$ | US- 8849185-$).DID.					
L958	209	(IP-0920081021-$ | RF-1220040325-$ | DA-1419941122-$ | DA-1419970304-$ | IP-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/02/19 05:23 PM

		1520090310-$ | QR- 1820030624-$ | QR- 2320010515-$ | DA- 2420050929-$ | AT- 383428-$ | CA- 2059597-$ | CA- 2603077-$ | CA- 2667671-$ | CH- 037719-$ | CN- 101815962-$ | CN- 2054169-$ | CN- 2066151-$ | CN- 216145034-$ | CN- 88203065-$ | DE- 10103922-$ | DE- 10123226-$ | DE- 10222375-$ | EP- 1134491-$ | EP- 1196807-$ | EP- 1830221-$ | EP- 1908304-$ | EP- 2439580-$ | EP- 3258308-$ | EP- 3264162-$ | EP- 3299870-$ | EP- 3893043-$ | ES- 2530421-$ | FR- 2530039-$ | FR- 3028980-$ | GB- 1467982-$ | GB- 2291551-$ | GB- 2476064-$ | GB- 2495697-$ | GB- 2561854-$ | IT- 1298975-$ | IT- 1397295-$ | JP- 2000039595-$ | JP- 2002341059-$ | JP- 2005151292-$ | JP- 2010231119-$ | JP- 2012078588-$ | JP- 2014049934-$ | JP- 2017183827-$ | JP- 2019522391-$ | JP- 3000621-$ | JP- 3532537-$ | JP- 3794986-$ | JP- 3988632-$ | JP- 4470301-$ | JP- 4496354-$ | JP- 4887907-$ | JP- 5436678-$ | JP- 5458080-$ | JP- 6032940-$ | JP- 6332880-$ | JP- 7037818-$ | KR- 100420024-$ | KR- 101044199-$ | KR-	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				

		101124852-$ | KR-101940638-$ | TW-484711-$ | TW-572286-$ | WO-1997012205-$ | WO-2002006881-$ | WO-2003069394-$ | WO-2003100368-$ | WO-2004012477-$ | WO-2004025554-$ | WO-2007070508-$ | WO-2010062479-$ | WO-2011137034-$ | WO-2016044612-$ | WO-2019178557-$ | WO-2020006275-$).DID.					
L959	341	(US-20080090679-$ | US-20080119207-$ | US-20080147488-$ | US-20080151179-$ | US-20080218684-$ | US-20080273165-$ | US-20080291277-$ | US-20090059159-$ | US-20090059381-$ | US-20090086159-$ | US-20090091838-$ | US-20090109395-$ | US-20090122161-$ | US-20090122414-$ | US-20090154293-$ | US-20090202096-$ | US-20090213323-$ | US-20090226022-$ | US-20090237355-$ | US-20090251660-$ | US-20090251661-$ | US-20090268032-$ | US-20100026970-$ | US-20100103249-$ | US-20100103516-$ | US-20100110368-$ | US-20100149073-$ | US-20100165287-$ | US-20100277563-$ | US-20100309426-$ | US-20110055027-$ | US-20110077548-$ | US-20110080289-$ | US-20110084900-$ | US-20110139163-$ | US-20110169932-$ | US-20110170723-$ | US-20110193963-$ | US-20110194029-$ | US-20110213664-$ | US-20110214082-$ |	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:23 PM

		US-20110221658-$ | US-20110248905-$ | US-20120188501-$ | US-20120194549-$ | US-20120194550-$ | US-20120224070-$ | US-20120262557-$ | US-20120281961-$ | US-20130131985-$ | US-20130141313-$ | US-20130150004-$ | US-20130169513-$ | US-20130201285-$ | US-20130249776-$ | US-20130342806-$ | US-20140063054-$ | US-20140152530-$ | US-20140164282-$ | US-20140184724-$ | US-20140253867-$ | US-20140270316-$ | US-20140291396-$ | US-20140347736-$ | US-20150177521-$ | US-20150187357-$ | US-20150219899-$ | US-20150234192-$ | US-20150261995-$ | US-20150323990-$ | US-20160004306-$ | US-20160103322-$ | US-20160210834-$ | US-20160248994-$ | US-20160259996-$ | US-20170053576-$ | US-20170099479-$ | US-20180130371-$ | US-20180131847-$ | US-20180336382-$ | US-20220163806-$ | US-20220299792-$ | US-2339173-$ | US-3192826-$ | US-3216308-$ | US-3229580-$ | US-3524710-$ | US-3610825-$ | US-3787109-$ | US-3885095-$ | US-3915548-$ | US-3923370-$ | US-3936605-$ | US-3940204-$ | US-4052073-$ | US-4082432-$ | US-4195915-$ | US-4218111-$ | US-4447128-$ | US-					

		4516157-$ | US- 4550984-$ | US- 4621283-$ | US- 4649434-$ | US- 4664475-$ | US- 4665385-$ | US- 4722601-$ | US- 4751691-$ | US- 4753514-$ | US- 4799765-$ | US- 4806001-$ | US- 4806011-$ | US- 4818048-$ | US- 4826287-$ | US- 4852988-$ | US- 4853306-$ | US- 4867551-$ | US- 4869575-$ | US- 4884137-$ | US- 4961626-$ | US- 4968117-$ | US- 4973132-$ | US- 4973139-$ | US- 4988183-$ | US- 5003300-$ | US- 5013134-$ | US- 5028119-$ | US- 5044709-$ | US- 5050962-$ | US- 5053755-$ | US- 5129716-$ | US- 5138470-$ | US- 5162828-$ | US- 5212471-$ | US- 5214425-$ | US- 5231379-$ | US- 5281957-$ | US- 5281960-$ | US- 5309169-$ | US- 5320538-$ | US- 5325386-$ | US- 5334991-$ | US- 5348477-$ | US- 5359669-$ | US- 5367345-$ | US- 5369415-$ | US- 5381267-$ | US- 5384654-$ | US- 5392158-$ | US- 5416876-$ | US- 5446507-$ | US- 5455591-$ | US- 5459612-$ | US- 5469185-$ | US- 5491510-$ | US- 5495576-$ | US- 5506728-$ | US- 5519410-$ | US-					

		5537253-$ | US-5539578-$ | US-5576887-$ | US-5579148-$ | US-5583590-$ | US-5585871-$ | US-5589846-$ | US-5596451-$ | US-5606743-$ | US-5610765-$ | US-5626410-$ | US-5629790-$ | US-5648789-$ | US-5653751-$ | US-5654827-$ | US-5654828-$ | US-5671037-$).DID.					
L960	340	(US-10042186-$ | US-10139966-$ | US-10152141-$ | US-10191279-$ | US-10215568-$ | US-10254856-$ | US-10310296-$ | US-10345625-$ | US-10359459-$ | US-10448867-$ | US-10466491-$ | US-10469916-$ | US-10481417-$ | US-10527491-$ | US-10613355-$ | US-10617342-$ | US-10624790-$ | US-10649220-$ | US-10663740-$ | US-10684478-$ | US-10684687-$ | US-10722128-$ | US-10739253-$ | US-10761566-$ | US-10777048-$ | US-10824253-$ | US-10853589-$ | US-10863060-$ | US-10908421-$ | US-10997943-$ | US-11003246-$ | US-11061252-$ | US-11064282-$ | US-11086147-$ | US-11103122-$ | US-11163156-$ | US-11219287-$ | US-11243416-$ | US-11300857-$ | US-11326941-$ | US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:23 PM

Apple Inc. Exhibit 1002 Page 839

		11487110-$ | US- 11495207-$ | US- 11513371-$ | US- 11536988-$ | US- 1255265-$ | US- 1917745-$ | US- 20020021407-$ | US- 20020057440-$ | US- 20020081982-$ | US- 20020090103-$ | US- 20020098877-$ | US- 20030022690-$ | US- 20030032449-$ | US- 20030226978-$ | US- 20040096078-$ | US- 20050230596-$ | US- 20050248719-$ | US- 20060034478-$ | US- 20070186330-$ | US- 20070270663-$ | US- 20070271116-$ | US- 20080144854-$ | US- 20090156128-$ | US- 20100296045-$ | US- 20120105740-$ | US- 20120113235-$ | US- 20120176580-$ | US- 20130072828-$ | US- 20130143519-$ | US- 20140064536-$ | US- 20140176902-$ | US- 20140198293-$ | US- 20140259271-$ | US- 20150205135-$ | US- 20150206173-$ | US- 20150293379-$ | US- 20160019715-$ | US- 20160187651-$ | US- 20160239985-$ | US- 20170131575-$ | US- 20170255029-$ | US- 20190278110-$ | US- 20200029140-$ | US- 20210263319-$ | US- 20210263343-$ | US- 20220260859-$ | US- 2249572-$ | US- 2638532-$ | US- 2794085-$ | US- 2818511-$ | US- 2830132-$ | US- 2874230-$ | US- 2904670-$ | US- 3060308-$ | US- 3597054-$ | US- 3710115-$ | US- 3858001-$ | US- 3883701-$ | US-					

		4165487-$ | US- 4254451-$ | US- 4283127-$ | US- 4322585-$ | US- 4348664-$ | US- 4389217-$ | US- 4526473-$ | US- 4535244-$ | US- 4608492-$ | US- 46259103-$ | US- 4683587-$ | US- 4751691-$ | US- 4757714-$ | US- 4806011-$ | US- 4822160-$ | US- 4822161-$ | US- 4851686-$ | US- 4856086-$ | US- 4859047-$ | US- 4882769-$ | US- 4962469-$ | US- 4967268-$ | US- 4985632-$ | US- 5008548-$ | US- 5015086-$ | US- 5020150-$ | US- 5026151-$ | US- 5064410-$ | US- 5093576-$ | US- 50963103-$ | US- 5151600-$ | US- 5161250-$ | US- 5172256-$ | US- 5264877-$ | US- 52756503-$ | US- 5306917-$ | US- 5353378-$ | US- 5359444-$ | US- 5367345-$ | US- 5379464-$ | US- 5382986-$ | US- 5394005-$ | US- 5452026-$ | US- 5452480-$ | US- 5455637-$ | US- 5455640-$ | US- 5457751-$ | US- 5463428-$ | US- 5500532-$ | US- 5510961-$ | US- 5513384-$ | US- 5533130-$ | US- 5581090-$ | US- 5585871-$ | US- 56279804-$ | US- 5634201-$ | US- 5671035-$ | US- 5686727-$ | US-					

		5694475-$ | US-5715323-$ | US-58316904-$ | US-5835185-$ | US-5900720-$ | US-5903395-$ | US-59204504-$ | US-5923398-$ | US-5946071-$ | US-5949516-$ | US-5963294-$ | US-5966746-$ | US-5988812-$ | US-5991085-$ | US-5992996-$ | US-6010216-$ | US-6013919-$ | US-6028627-$ | US-6046455-$ | US-60519104-$ | US-6060321-$ | US-6061580-$ | US-6091832-$ | US-6115177-$ | US-6132681-$ | US-6132881-$).DID.					
L961	329	(US-6154552-$ | US-6176576-$ | US-61810704-$ | US-6199550-$ | US-62023804-$ | US-6225897-$ | US-6231181-$ | US-6236969-$ | US-6259367-$ | US-6270466-$ | US-6292213-$ | US-6292685-$ | US-6301367-$ | US-6343858-$ | US-6409335-$ | US-6409338-$ | US-6431705-$ | US-6474816-$ | US-64782605-$ | US-64783605-$ | US-6511175-$ | US-6513532-$ | US-6517203-$ | US-6539336-$ | US-6542081-$ | US-6546101-$ | US-6554444-$ | US-6582075-$ | US-6619799-$ | US-6629076-$ | US-6686843-$ | US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:24 PM

Apple Inc. Exhibit 1002 Page 842

		6729726-$ | US- 6736759-$ | US- 6764194-$ | US- 6769767-$ | US- 6788309-$ | US- 6792401-$ | US- 6798391-$ | US- 6824265-$ | US- 6840908-$ | US- 6853303-$ | US- 6857741-$ | US- 6871951-$ | US- 6876947-$ | US- 6879930-$ | US- 6899585-$ | US- 6912386-$ | US- 6932090-$ | US- 6947219-$ | US- 6974226-$ | US- 7013009-$ | US- 7023594-$ | US- 7030902-$ | US- 7033025-$ | US- 7044615-$ | US- 7048370-$ | US- 7059717-$ | US- 7079876-$ | US- 7150526-$ | US- 7187960-$ | US- 7192136-$ | US- 7255437-$ | US- 72589605-$ | US- 72599905-$ | US- 7265358-$ | US- 7274292-$ | US- 7278734-$ | US- 7289767-$ | US- 7312699-$ | US- 7313246-$ | US- 7319780-$ | US- 7376238-$ | US- 7380936-$ | US- 7405801-$ | US- 7431450-$ | US- 7438409-$ | US- 7438410-$ | US- 7449622-$ | US- 7452067-$ | US- 7500746-$ | US- 7500747-$ | US- 7521623-$ | US- 7543934-$ | US- 7543938-$ | US- 7547101-$ | US- 7581833-$ | US- 7604348-$ | US- 7643895-$ | US- 7648236-$ | US-					

		7677723-$ | US- 7740353-$ | US- 7760898-$ | US- 7792552-$ | US- 7798638-$ | US- 7806525-$ | US- 78785006-$ | US- 7922321-$ | US- 8073984-$ | US- 8109629-$ | US- 8142015-$ | US- 8184067-$ | US- 8243973-$ | US- 8337013-$ | US- 8421851-$ | US- 84615006-$ | US- 8465151-$ | US- 8482488-$ | US- 8485661-$ | US- 8508851-$ | US- 8558759-$ | US- 8593795-$ | US- 8668334-$ | US- 8678581-$ | US- 8766747-$ | US- 8767306-$ | US- 8778022-$ | US- 8823740-$ | US- 8838708-$ | US- 8884845-$ | US- 8893010-$ | US- 8907867-$ | US- 8918197-$ | US- 8931896-$ | US- 8941560-$ | US- 8952869-$ | US- 8957835-$ | US- 9024843-$ | US- 9116545-$ | US- 9128522-$ | US- 9137309-$ | US- 9141194-$ | US- 9201512-$ | US- 9207515-$ | US- 9210991-$ | US- 9229233-$ | US- 9230501-$ | US- 9256071-$ | US- 9256253-$ | US- 9264803-$ | US- 9298007-$ | US- 9299194-$ | US- 9360889-$ | US- 9400390-$ | US- 9401540-$ | US- 9405135-$ | US- 9423870-$ | US- 9482880-$ | US-					

		9482882-$ | US-9482883-$ | US-9494800-$ | US-9529199-$ | US-9532714-$ | US-9575321-$ | US-9594246-$ | US-9632059-$ | US-9635222-$ | US-9651784-$ | US-9651787-$ | US-9684172-$ | US-9684374-$ | US-9726904-$ | US-9746686-$ | US-9753288-$ | US-9766463-$ | US-9766479-$ | US-9798458-$ | US-9800990-$ | US-9810906-$ | US-9811153-$ | US-9829707-$ | US-9836122-$ | US-9841599-$ | US-9851567-$ | US-9874936-$ | US-9880052-$ | US-9910298-$ | US-9939934-$ | US-9952664-$ | US-9965681-$).DID.					
L962	293	(IP-0920081021-$ | IP-0920100720-$ | RF-1220040317-$ | DA-1419941122-$ | DA-1419960502-$ | IP-1520090310-$ | QR-1820030624-$ | QR-2320010515-$ | QR-3020040803-$ | AT-383428-$ | AU-2001269883-$ | AU-2002243370-$ | CA-2059597-$ | CA-2307877-$ | CA-2310114-$ | CA-2667671-$ | CA-2852711-$ | CA-3018763-$ | CH-037719-$ | CN-102972037-$ | CN-104793338-$ | CN-106687858-$ | CN-107077173-$ | CN-2054169-$ | CN-205691887-$ | CN-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:24 PM

		2066151-$ | CN- 216145034-$ | CN- 88203065-$ | DE- 10103922-$ | DE- 10123226-$ | DE- 10205579-$ | DE- 10222375-$ | DE- 3818389-$ | DE- 4338811-$ | DE- 69810855-$ | DE- 8529458-$ | EP- 1196807-$ | EP- 1265524-$ | EP- 1547434-$ | EP- 1830221-$ | EP- 1908304-$ | EP- 2439580-$ | EP- 3258308-$ | EP- 3264162-$ | EP- 3299870-$ | EP- 3308216-$ | EP- 3867610-$ | ES- 2530421-$ | FR- 2530039-$ | FR- 2697921-$ | FR- 2706103-$ | FR- 3028980-$ | GB- 1467982-$ | GB- 2291551-$ | GB- 2369754-$ | GB- 2393076-$ | GB- 2495697-$ | GB- 2561854-$ | IT- 1298975-$ | IT- 1397295-$ | JP- 2000039595-$ | JP- 2001183735-$ | JP- 2002341059-$ | JP- 2003033328-$ | JP- 2005151292-$ | JP- 2010231119-$ | JP- 2012078588-$ | JP- 2014049934-$ | JP- 2017183827-$ | JP- 2799002-$ | JP- 3000621-$ | JP- 3048964-$ | JP- 3532537-$ | JP- 3794986-$ | JP- 3988632-$ | JP- 4096376-$ | JP- 4239317-$ | JP- 4470301-$ | JP- 4496354-$ | JP- 4510993-$ | JP- 4887907-$ | JP- 5458080-$ | JP- 6032940-$ | JP-					

		6332880-$ | JP-7037818-$ | KR-100420024-$ | KR-101940638-$ | NL-1021485-$ | PL-181650-$ | TW-200819817-$ | TW-484711-$ | TW-572286-$ | WO-1996013136-$ | WO-1997011574-$ | WO-1997022295-$ | WO-2005043224-$ | WO-2006118555-$ | WO-2007070508-$ | WO-2010062479-$ | WO-2013084240-$ | WO-2014149631-$ | WO-2017075405-$ | WO-2020006271-$).DID.					
L963	384	(US-5673139-$ | US-5682173-$ | US-5699194-$ | US-5717479-$ | US-5719588-$ | US-5744788-$ | US-5751493-$ | US-5808589-$ | US-5815197-$ | US-5815326-$ | US-5886822-$ | US-5943171-$ | US-5973845-$ | US-5991103-$ | US-6005720-$ | US-6023372-$ | US-6081304-$ | US-6091546-$ | US-6169789-$ | US-6204974-$ | US-6301050-$ | US-6349001-$ | US-6417969-$ | US-6442018-$ | US-6443097-$ | US-6523006-$ | US-6523753-$ | US-6582075-$ | US-6619799-$ | US-6629076-$ | US-6639706-$ | US-6724354-$ | US-6729726-$ | US-6736759-$ | US-6769767-$ | US-6784833-$ | US-6966647-$ | US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:24 PM

		6975991-$ | US- 7008074-$ | US- 7013009-$ | US- 7079876-$ | US- 7095573-$ | US- 7126558-$ | US- 7158296-$ | US- 7199951-$ | US- 7248232-$ | US- 7255437-$ | US- 7321785-$ | US- 7380936-$ | US- 7410254-$ | US- 7488294-$ | US- 7500747-$ | US- 7505793-$ | US- 7536150-$ | US- 7581833-$ | US- 7631968-$ | US- 7648236-$ | US- 7760898-$ | US- 7773767-$ | US- 7791593-$ | US- 7810750-$ | US- 7824052-$ | US- 7855743-$ | US- 7873243-$ | US- 7885419-$ | US- 7922321-$ | US- 7987070-$ | US- 8109629-$ | US- 8128422-$ | US- 8160287-$ | US- 8188880-$ | US- 8189263-$ | US- 8203502-$ | US- 8223088-$ | US- 8294994-$ | US- 8316319-$ | US- 8340476-$ | US- 8376548-$ | US- 8386261-$ | US- 8405489-$ | US- 8411214-$ | US- 8417185-$ | US- 8438659-$ | US- 8467133-$ | US- 8471967-$ | US- 8472119-$ | US- 8472120-$ | US- 8477425-$ | US- 8482859-$ | US- 8488246-$ | US- 8503087-$ | US- 8508851-$ | US- 8531355-$ | US- 8554307-$ | US- 8576143-$ | US-					

		8582209-$ | US- 8588448-$ | US- 8593795-$ | US- 8605009-$ | US- 8640959-$ | US- 8641621-$ | US- 8659397-$ | US- 8666212-$ | US- 8690776-$ | US- 8699842-$ | US- 8743464-$ | US- 8744113-$ | US- 8749886-$ | US- 8760762-$ | US- 8760765-$ | US- 8767305-$ | US- 8767306-$ | US- 8773599-$ | US- 8778022-$ | US- 8786686-$ | US- 8798292-$ | US- 8817379-$ | US- 8823603-$ | US- 8823636-$ | US- 8823740-$ | US- 8830329-$ | US- 8848289-$ | US- 8867131-$ | US- 8867139-$ | US- 8873148-$ | US- 8878750-$ | US- 8885877-$ | US- 8890946-$ | US- 8911087-$ | US- 8929589-$ | US- 8941560-$ | US- 8956396-$ | US- 8964298-$ | US- 8966656-$ | US- 8976085-$ | US- 8988519-$ | US- 9001030-$ | US- 9013793-$ | US- 9069115-$ | US- 9087471-$ | US- 9091851-$ | US- 9097890-$ | US- 9097891-$ | US- 9116337-$ | US- 9116545-$ | US- 9128281-$ | US- 9129295-$ | US- 9129429-$ | US- 9134534-$ | US- 9151953-$ | US- 9153074-$ | US- 9182596-$ | US- 9194995-$ | US-					

		9217868-$ | US- 9223134-$ | US- 9229227-$ | US- 9239415-$ | US- 9256071-$ | US- 9277334-$ | US- 9285589-$ | US- 9285591-$ | US- 9285592-$ | US- 9286726-$ | US- 9329388-$ | US- 9341843-$ | US- 9366862-$ | US- 9366869-$ | US- 9377627-$ | US- 9389422-$ | US- 9395544-$ | US- 9405135-$ | US- 9429759-$ | US- 9436009-$ | US- 9438984-$ | US- 9459455-$ | US- 9470907-$ | US- 9482882-$ | US- 9482883-$ | US- 9488833-$ | US- 9519092-$ | US- 9544675-$ | US- 9578307-$ | US- 9586318-$ | US- 9592404-$ | US- 9606612-$ | US- 9606992-$ | US- 9629774-$ | US- 9635222-$ | US- 9665901-$ | US- 9675319-$ | US- 9677901-$ | US- 9720258-$ | US- 9720260-$ | US- 9726904-$ | US- 9729767-$ | US- 9759917-$).DID.					
L964	340	(US-10012505-$ | US- 10013138-$ | US- 10013889-$ | US- 10015577-$ | US- 10018530-$ | US- 10024667-$ | US- 10024678-$ | US- 10024679-$ | US- 10024680-$ | US- 10037708-$ | US- 10039445-$ | US- 10042186-$ | US- 10061352-$ | US- 10063958-$ | US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2024/02/19 05:24 PM

		10067341-$ | US- 10073264-$ | US- 10089684-$ | US- 10095034-$ | US- 10095036-$ | US- 10095833-$ | US- 10129395-$ | US- 10133070-$ | US- 10133074-$ | US- 10146054-$ | US- 10162180-$ | US- 10172760-$ | US- 10178378-$ | US- 10180572-$ | US- 10188467-$ | US- 10192133-$ | US- 10192361-$ | US- 10219944-$ | US- 10222617-$ | US- 10248856-$ | US- 10261321-$ | US- 10275642-$ | US- 10278778-$ | US- 10288881-$ | US- 10302835-$ | US- 10306389-$ | US- 10310296-$ | US- 10314559-$ | US- 10338390-$ | US- 10338400-$ | US- 10339952-$ | US- 10341787-$ | US- 10345625-$ | US- 10348965-$ | US- 10360907-$ | US- 10423760-$ | US- 10424405-$ | US- 10432851-$ | US- 10437031-$ | US- 10453264-$ | US- 10466487-$ | US- 10481319-$ | US- 10481417-$ | US- 10490102-$ | US- 10506220-$ | US- 10507346-$ | US- 10520731-$ | US- 10520732-$ | US- 10521669-$ | US- 10539787-$ | US- 10545347-$ | US- 10547814-$ | US- 10551544-$ | US- 10561519-$ | US- 10624790-$ | US- 10634912-$ | US- 10634921-$ | US- 10646283-$ | US-	JPO; DERWENT; IBM_TDB)				

		10650594-$ | US- 10742965-$ | US- 10747301-$ | US- 10764571-$ | US- 10777048-$ | US- 10782527-$ | US- 10809528-$ | US- 10859834-$ | US- 10860100-$ | US- 10884246-$ | US- 10895679-$ | US- 10965931-$ | US- 10976575-$ | US- 11009711-$ | US- 11054648-$ | US- 11119353-$ | US- 11137609-$ | US- 11153472-$ | US- 11153555-$ | US- 11163161-$ | US- 11181974-$ | US- 11207150-$ | US- 11219287-$ | US- 11243434-$ | US- 11259879-$ | US- 11262587-$ | US- 11294427-$ | US- 11300857-$ | US- 11378802-$ | US- 11382699-$ | US- 11382700-$ | US- 11402668-$ | US- 11415802-$ | US- 11415812-$ | US- 11448816-$ | US- 11464578-$ | US- 11464581-$ | US- 11484365-$ | US- 11500143-$ | US- 11510750-$ | US- 11513371-$ | US- 11523092-$ | US- 11526003-$ | US- 11533961-$ | US- 11536988-$ | US- 20020049566-$ | US- 20020049775-$ | US- 20020058531-$ | US- 20030020950-$ | US- 20030068057-$ | US- 20030090439-$ | US- 20030090787-$ | US- 20030227542-$ | US- 20040096078-$ | US- 20040108981-$ | US- 20040156012-$ | US- 20040156114-$ | US- 20040160573-$ | US-					

		20040171432-$ | US-20040178970-$ | US-20040201695-$ | US-20040205256-$ | US-20040212776-$ | US-20040238732-$ | US-20050012683-$ | US-20050046953-$ | US-20050078274-$ | US-20050110943-$ | US-20050184866-$ | US-20050201585-$ | US-20050230596-$ | US-20050248719-$ | US-20050254135-$ | US-20060003803-$ | US-20060052146-$ | US-20060055786-$ | US-20060093178-$ | US-20060109350-$ | US-20060115130-$ | US-20060140422-$ | US-20060152618-$ | US-20060192306-$ | US-20060212430-$ | US-20060236120-$ | US-20060236121-$ | US-20060238550-$ | US-20060238877-$ | US-20070030442-$ | US-20070049351-$ | US-20070064097-$ | US-20070064888-$ | US-20070064894-$ | US-20070067885-$ | US-20070081646-$ | US-20070109491-$ | US-20070204014-$ | US-20080024391-$ | US-20080064326-$ | US-20080068559-$ | US-20080082363-$ | US-20080084362-$).DID.				
L965	2139	957 958 959 960 961 962 963 964	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2024/02/19 05:24 PM

			JPO; DERWENT; IBM_TDB)				
L966	129	965 AND 27	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:25 PM
L967	92	965 AND 30	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:25 PM
L968	72	965 AND 40	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:25 PM
L969	41	965 AND 44	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2024/02/19 05:26 PM

			HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L970	7	965 AND 38	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:26 PM
L971	45	"8849185"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:50 PM
L972	30	"8582789"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2024/02/19 05:50 PM

			IBM_TDB)				
L973	188	"8109629"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:50 PM
L976	560	"8964298"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:52 PM
L977	422	"8467133"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/19 05:52 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	13385	((("HOWELL") near3 ("Thomas")) OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11 03:33 PM

		(("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV.					
N2	210	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND frame AND (arm OR temple) AND sensor AND battery	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11 03:33 PM
N3	210	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND frame AND (arm OR temple) AND sensor AND batter$4 AND control$4 AND connect$4	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11 03:33 PM
N4	143	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND frame AND (arm OR temple) AND sensor AND batter$4 AND control$4 AND connect$4 AND charg$4 AND electric$4	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11 03:33 PM
N5	129	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND frame AND (arm OR temple) AND sensor AND batter$4 AND control$4 AND connect$4 AND charg$4 AND electric$4 AND wireless AND communicat$4	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11 03:33 PM
N6	32	((("HOWELL") near3	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11

		("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND (eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone AND diode AND output AND front AND section AND information AND place AND expos$4					03:33 PM
N146	5484	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11 03:44 PM
N147	687	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11 03:44 PM
N148	140	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11 03:44 PM
N149	51	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11 04:19 PM

N150	28	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND connect$4 AND electric$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2023/12/11 04:19 PM
N164	21	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 03:24 PM
N165	11	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND wireless).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 03:24 PM
N166	10	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND wireless AND communicat$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 03:24 PM
N167	2	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 03:45 PM
N168	2	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple)	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 03:45 PM

		AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4).clm.					
N169	2	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 03:46 PM
N170	0	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 04:50 PM
N171	0	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 04:51 PM

		hing$4 AND conduct$4 AND coupl$4).clm.					
N172	0	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 04:51 PM
N173	0	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 05:27 PM
N174	0	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 05:27 PM

		WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone AND diode AND output AND front AND section).clm.					
N177	0	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND microphone AND diode AND output AND front AND section AND information AND place AND expos$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 05:50 PM
N178	0	((eyewear OR spectale OR eyeglass$4 OR glass$4) AND frame AND (arm OR temple) AND sensor AND (batter$4 WITH charg$4) AND control$4 AND connect$4 AND electric$4 AND (wireless WITH communicat$4) AND position AND open$4 AND clos$4 AND circuit$4 AND (within WITH frame) AND hing$4 AND conduct$4 AND coupl$4 AND lens$4 AND indicat$4 AND embed$4 AND antenna AND side AND view AND audio AND	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/19 05:50 PM

		microphone AND diode AND output AND front AND section AND information AND place AND expos$4 AND pin AND pad).clm.					

PE2E SEARCH - Search History (Similarity Search)

Ref #	Sort and Retrieval Information	Text Selections	CPC Selections
L825	Sort results by: Similarity to Application # 18/375,893 Retrieve results by: Application # 18/375,893	(Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) 19. (Original) A system, comprising: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;	No selections

		a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic	

		apparatus is placed in the charging apparatus. a charging apparatus having a charging connector,	
L826	Sort results by: Similarity to Application # 18/375,893 Retrieve results by: Application # 18/375,893	(Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) 19. (Original) A system, comprising: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure, the second microphone being	(G02C11/10) Electronic devices other than hearing aids (G02C5/146) Side-members having special front end (G02C2200/08) Modular frames, easily exchangeable frame parts and lenses

		positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector,	

L827	Sort results by: Similarity to Application # 18/375,893 Retrieve results by: Application # 18/375,893	(Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) 19. (Original) A system, comprising: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus;	(G02C11/10) Electronic devices other than hearing aids (G02C5/146) Side-members having special front end (G02C2200/08) Modular frames, easily exchangeable frame parts and lenses (G02C5/143) Side-members having special ear pieces (G02C11/06) Hearing aids (H02J7/0045) Circuit arrangements for charging or depolarising batteries or for supplying loads from batteries characterised by the mechanical construction concerning the insertion or the connection of the batteries

		a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector,	
L828	Sort results by: Similarity to Application # 18/375,893 Retrieve results by: Application # 18/375,893	(Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed.	(G02C11/10) Electronic devices other than hearing aids (G02C5/146) Side-members having special front end

		The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) 19. (Original) A system, comprising: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure;	(G02C2200/08) Modular frames, easily exchangeable frame parts and lenses (G02C5/143) Side-members having special ear pieces (G02C11/06) Hearing aids (H02J7/0045) Circuit arrangements for charging or depolarising batteries or for supplying loads from batteries characterised by the mechanical construction concerning the insertion or the connection of the batteries

		electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector, (Claims) 31. (Original) A system as recited in claim 19, wherein the head-worn personal electronic apparatus comprises: a userinput device supported by the head-worn structure, the user input device being configured to receive a user	

		input, the user input device is based on at least capacitive effect, wherein the user input being received induces at least a capacitive change to produce at least an electrical response. (Claims) a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user;	
L933	Sort results by: Similarity to Application # 18/375,893 Retrieve results by: Application # 18/375,893	No selections	No selections
L934	Sort results by: Similarity to Application # 18/375,893 Retrieve results by: Application # 18/375,893	(Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured	No selections

Apple Inc. Exhibit 1002 Page 871

		to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery, and the electronic circuitry being electrically connected to the touch sensitive surface; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having a charging connector, wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the	

		rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. 1. (Original) A system, comprising: (Claims) 19. (Original) A system, comprising: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially	

		contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector, (Claims) 43. (Original) A system, comprising: wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection	

		therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector, wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operatio (Claims) 49. (New) A system, comprising: at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;	

		a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; a radiation emitter at least partially contained within the head-worn structure and configured to at least direct radiation towards the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn; a radiation detector at least partially contained within the	

		head-worn structure and configured to detect radiation reflected back from the user when at least the head- worn structure of the head-worn personal electronic apparatus is being worn; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector,	
L935	Sort results by: Similarity to Application # 18/375,893 Retrieve results by: Application # 18/375,893	(Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate	(G02C2200/08) Modular frames, easily exchangeable frame parts and lenses (G02C11/10) Electronic devices other than hearing aids (G02C5/146) Side-members having special front end

		independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery, and the electronic circuitry being electrically connected to the touch sensitive surface; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at	

		least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having a charging connector, wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. 1. (Original) A system, comprising: (Claims) 19. (Original) A system, comprising: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least	

		environmental audio input associated with an environment around the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector,	

		(Claims) 43. (Original) A system, comprising: wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector, wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone,	

		determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operatio (Claims) 49. (New) A system, comprising: at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication	

		circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; a radiation emitter at least partially contained within the head-worn structure and configured to at least direct radiation towards the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn; a radiation detector at least partially contained within the head-worn structure and configured to detect radiation reflected back from the user when at least the head- worn structure of the head-worn personal electronic apparatus is being worn; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector,	

L936	Sort results by: Similarity to Application # 18/375,893 Retrieve results by: Application # 18/375,893	(Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery, and the	(G02C2200/08) Modular frames, easily exchangeable frame parts and lenses (G02C11/10) Electronic devices other than hearing aids (G02C5/146) Side-members having special front end (G02C5/143) Side-members having special ear pieces (G02C11/06) Hearing aids (H02J7/0045) Circuit arrangements for charging or depolarising batteries or for supplying loads from batteries characterised by the mechanical construction concerning the insertion or the connection of the batteries

		electronic circuitry being electrically connected to the touch sensitive surface; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having a charging connector, wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. 1. (Original) A system, comprising: (Claims) 19. (Original) A system, comprising: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least	

		one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the	

		head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector, (Claims) 43. (Original) A system, comprising: wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.	

		a charging apparatus having a charging connector, wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operatio (Claims) 49. (New) A system, comprising: at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least	

		environmental audio input associated with an environment around the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; a radiation emitter at least partially contained within the head-worn structure and configured to at least direct radiation towards the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn; a radiation detector at least partially contained within the head-worn structure and configured to detect radiation reflected back from the user when at least the head- worn structure of the head-worn personal electronic apparatus is being worn; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and	

		wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. a charging apparatus having a charging connector,	

Web Search History

date, time	web site	search string
2/19/2024 10:01:08 AM	Google Scholar	(electrode) (electrochromic) (group) (general formula) (layer)
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2/19/2024 10:01:16 AM	Google Scholar	layer metal electrochromic composite layer group

date, time	web site	search string
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date, time	web site	search string
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date, time	web site	search string
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date, time	web site	search string
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date, time	web site	search string
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Apple Inc. Exhibit 1002 Page 901

date, time	web site	search string
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Apple Inc. Exhibit 1002 Page 902

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date, time	web site	search string
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2/19/2024 3:44:08 PM	Google Scholar	(user) (temple) (head) (worn) (recited)
2/19/2024 3:44:08 PM	Google Patents	Search Term 1 (user) (temple) (head) (worn) (recited) Before Priority Date: priority:20040728
2/19/2024 3:44:10 PM	Google Scholar	user temple head worn recited
2/19/2024 3:44:10 PM	Google Patents	Search Term 1 user Search Term 2 temple Search Term 3 head Search Term 4 worn Search Term 5 recited Before Priority Date: priority:20040728
2/19/2024 3:44:17 PM	Google Scholar	(temple) (endpiece) (connector) (another) (front section)
2/19/2024 3:44:17 PM	Google Patents	Search Term 1 (temple) (endpiece) (connector) (another) (front section) Before Priority Date: priority:20051011
2/19/2024 3:44:18 PM	Google Scholar	temple endpiece connector another front section

date, time	web site	search string
2/19/2024 3:44:18 PM	Google Patents	Search Term 1 temple Search Term 2 endpiece Search Term 3 connector Search Term 4 another Search Term 5 front section Before Priority Date: priority:20051011
2/19/2024 3:44:26 PM	Google Scholar	(glasses) (head) (electronic apparatus) (wireless electronic) (user)
2/19/2024 3:44:26 PM	Google Patents	Search Term 1 (glasses) (head) (electronic apparatus) (wireless electronic) (user) Before Priority Date: priority:20040728
2/19/2024 3:44:28 PM	Google Scholar	glasses head electronic apparatus wireless electronic user
2/19/2024 3:44:28 PM	Google Patents	Search Term 1 glasses Search Term 2 head Search Term 3 electronic apparatus Search Term 4 wireless electronic Search Term 5 user Before Priority Date: priority:20040728
2/19/2024 3:44:37 PM	Google Scholar	(user) (temple) (eyewear device) (sensor) (eyewear)
2/19/2024 3:44:37 PM	Google Patents	Search Term 1 (user) (temple) (eyewear device) (sensor) (eyewear) Before Priority Date: priority:20181212
2/19/2024 3:44:39 PM	Google Scholar	user temple eyewear device sensor eyewear

date, time	web site	search string
2/19/2024 3:44:39 PM	Google Patents	Search Term 1 user Search Term 2 temple Search Term 3 eyewear device Search Term 4 sensor Search Term 5 eyewear Before Priority Date: priority:20181212
2/19/2024 4:08:39 PM	Google Scholar	(eyewear) (temple) (front section) (recited) (extended)
2/19/2024 4:08:40 PM	Google Scholar	eyewear temple front section recited extended
2/19/2024 4:08:40 PM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 front section Search Term 4 recited Search Term 5 extended Before Priority Date: priority:20031009
2/19/2024 4:08:49 PM	Google Scholar	(temple) (electrical components) (connector) (eyewear) (eyeglasses)
2/19/2024 4:08:49 PM	Google Patents	Search Term 1 (temple) (electrical components) (connector) (eyewear) (eyeglasses) Before Priority Date: priority:20030415
2/19/2024 4:08:51 PM	Google Scholar	temple electrical components connector eyewear eyeglasses

date, time	web site	search string
2/19/2024 4:08:51 PM	Google Patents	Search Term 1 temple Search Term 2 electrical components Search Term 3 connector Search Term 4 eyewear Search Term 5 eyeglasses Before Priority Date: priority:20030415
2/19/2024 4:09:00 PM	Google Scholar	(eyewear) (recited) (temple) (embedded) (electrically connected)
2/19/2024 4:09:00 PM	Google Patents	Search Term 1 (eyewear) (recited) (temple) (embedded) (electrically connected) Before Priority Date: priority:20031009
2/19/2024 4:09:01 PM	Google Scholar	eyewear recited temple embedded electrically connected
2/19/2024 4:09:01 PM	Google Patents	Search Term 1 eyewear Search Term 2 recited Search Term 3 temple Search Term 4 embedded Search Term 5 electrically connected Before Priority Date: priority:20031009
2/19/2024 4:09:08 PM	Google Scholar	(temple) (glasses) (pair) (connector) (electrical components)
2/19/2024 4:09:08 PM	Google Patents	Search Term 1 (temple) (glasses) (pair) (connector) (electrical components) Before Priority Date: priority:20031009

date, time	web site	search string
2/19/2024 4:09:09 PM	Google Scholar	temple glasses pair connector electrical components
2/19/2024 4:09:09 PM	Google Patents	Search Term 1 temple Search Term 2 glasses Search Term 3 pair Search Term 4 connector Search Term 5 electrical components Before Priority Date: priority:20031009
2/19/2024 4:09:22 PM	Google Scholar	(user) (eyewear system) (electrical) (electrical components) (cord)
2/19/2024 4:09:23 PM	Google Scholar	user eyewear system electrical electrical components cord
2/19/2024 4:09:23 PM	Google Patents	Search Term 1 user Search Term 2 eyewear system Search Term 3 electrical Search Term 4 electrical components Search Term 5 cord Before Priority Date: priority:20031009
2/19/2024 4:09:32 PM	Google Scholar	(cord) (electrical) (eyeglass) (tethered) (eyeglasses)
2/19/2024 4:09:32 PM	Google Patents	Search Term 1 (cord) (electrical) (eyeglass) (tethered) (eyeglasses) Before Priority Date: priority:20030415
2/19/2024 4:09:34 PM	Google Scholar	cord electrical eyeglass tethered eyeglasses

date, time	web site	search string
2/19/2024 4:09:34 PM	Google Patents	Search Term 1 cord Search Term 2 electrical Search Term 3 eyeglass Search Term 4 tethered Search Term 5 eyeglasses Before Priority Date: priority:20030415
2/19/2024 4:09:40 PM	Google Scholar	(temple) (electrical components) (eyewear) (glasses) (rearward)
2/19/2024 4:09:40 PM	Google Patents	Search Term 1 (temple) (electrical components) (eyewear) (glasses) (rearward) Before Priority Date: priority:20051011
2/19/2024 4:09:42 PM	Google Scholar	temple electrical components eyewear glasses rearward
2/19/2024 4:09:42 PM	Google Patents	Search Term 1 temple Search Term 2 electrical components Search Term 3 eyewear Search Term 4 glasses Search Term 5 rearward Before Priority Date: priority:20051011
2/19/2024 4:09:49 PM	Google Scholar	(eyeglasses) (sensor) (wireless communication) (recited) (communication circuitry)
2/19/2024 4:09:49 PM	Google Patents	Search Term 1 (eyeglasses) (sensor) (wireless communication) (recited) (communication circuitry) Before Priority Date: priority:20030415

date, time	web site	search string
2/19/2024 4:09:51 PM	Google Scholar	eyeglasses sensor wireless communication recited communication circuitry
2/19/2024 4:09:51 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 sensor Search Term 3 wireless communication Search Term 4 recited Search Term 5 communication circuitry Before Priority Date: priority:20030415
2/19/2024 4:19:59 PM	Google Images	Electronic smart glasses reviews
2/19/2024 4:19:59 PM	Google	Electronic smart glasses reviews
2/19/2024 4:20:13 PM	Google Images	Best electronic smart glasses
2/19/2024 4:20:13 PM	Google	Best electronic smart glasses
2/19/2024 4:20:23 PM	Google Images	Electronic smart glasses app
2/19/2024 4:20:23 PM	Google	Electronic smart glasses app
2/19/2024 4:48:10 PM	Google Scholar	(eyeglass frame) (eyeglasses) (hole) (coupling) (nose)
2/19/2024 4:48:10 PM	Google Patents	Search Term 1 (eyeglass frame) (eyeglasses) (hole) (coupling) (nose) Before Priority Date: priority:20060302
2/19/2024 4:48:11 PM	Google Scholar	eyeglass frame eyeglasses hole coupling nose

date, time	web site	search string
2/19/2024 4:48:11 PM	Google Patents	Search Term 1 eyeglass frame Search Term 2 eyeglasses Search Term 3 hole Search Term 4 coupling Search Term 5 nose Before Priority Date: priority:20060302
2/19/2024 4:48:17 PM	Google Scholar	(eyeglass frame) (eyeglasses) (coupling) (eyeglass) (nose)
2/19/2024 4:48:17 PM	Google Patents	Search Term 1 (eyeglass frame) (eyeglasses) (coupling) (eyeglass) (nose) Before Priority Date: priority:20060221
2/19/2024 4:48:19 PM	Google Scholar	eyeglass frame eyeglasses coupling eyeglass nose
2/19/2024 4:48:19 PM	Google Patents	Search Term 1 eyeglass frame Search Term 2 eyeglasses Search Term 3 coupling Search Term 4 eyeglass Search Term 5 nose Before Priority Date: priority:20060221
2/19/2024 4:48:25 PM	Google Scholar	(head) (worn) (temple) (user) (personal electronic)
2/19/2024 4:48:25 PM	Google Patents	Search Term 1 (head) (worn) (temple) (user) (personal electronic) Before Priority Date: priority:20051011
2/19/2024 4:48:27 PM	Google Scholar	head worn temple user personal electronic

date, time	web site	search string
2/19/2024 4:48:27 PM	Google Patents	Search Term 1 head Search Term 2 worn Search Term 3 temple Search Term 4 user Search Term 5 personal electronic Before Priority Date: priority:20051011
2/19/2024 4:48:33 PM	Google Scholar	(video recording) (frame) (video) (recording device) (spectacles)
2/19/2024 4:48:33 PM	Google Patents	Search Term 1 (video recording) (frame) (video) (recording device) (spectacles) Before Priority Date: priority:20091209
2/19/2024 4:48:35 PM	Google Scholar	video recording frame video recording device spectacles
2/19/2024 4:48:35 PM	Google Patents	Search Term 1 video recording Search Term 2 frame Search Term 3 video Search Term 4 recording device Search Term 5 spectacles Before Priority Date: priority:20091209
2/19/2024 4:49:26 PM	Google Scholar	(battery) (eyewear) (lens) (frame) (batteries)
2/19/2024 4:49:26 PM	Google Patents	Search Term 1 (battery) (eyewear) (lens) (frame) (batteries) Before Priority Date: priority:19930910
2/19/2024 4:49:27 PM	Google Scholar	battery eyewear lens frame batteries

date, time	web site	search string
2/19/2024 4:49:27 PM	Google Patents	Search Term 1 battery Search Term 2 eyewear Search Term 3 lens Search Term 4 frame Search Term 5 batteries Before Priority Date: priority:19930910
2/19/2024 4:49:35 PM	Google Scholar	(light) (eye) (pupil) (optical fibers) (array)
2/19/2024 4:49:35 PM	Google Patents	Search Term 1 (light) (eye) (pupil) (optical fibers) (array) Before Priority Date: priority:19950615
2/19/2024 4:49:37 PM	Google Scholar	light eye pupil optical fibers array
2/19/2024 4:49:37 PM	Google Patents	Search Term 1 light Search Term 2 eye Search Term 3 pupil Search Term 4 optical fibers Search Term 5 array Before Priority Date: priority:19950615
2/19/2024 4:49:44 PM	Google Scholar	(electro) (lens) (active) (optical lens) (controller)
2/19/2024 4:49:44 PM	Google Patents	Search Term 1 (electro) (lens) (active) (optical lens) (controller) Before Priority Date: priority:20000623
2/19/2024 4:49:45 PM	Google Scholar	electro lens active optical lens controller

date, time	web site	search string
2/19/2024 4:49:45 PM	Google Patents	Search Term 1 electro Search Term 2 lens Search Term 3 active Search Term 4 optical lens Search Term 5 controller Before Priority Date: priority:20000623
2/19/2024 4:49:52 PM	Google Scholar	(eyeglass) (bracket) (spectacles) (spectacle) (combined)
2/19/2024 4:49:52 PM	Google Patents	Search Term 1 (eyeglass) (bracket) (spectacles) (spectacle) (combined) Before Priority Date: priority:18850623
2/19/2024 4:49:53 PM	Google Scholar	eyeglass bracket spectacles spectacle combined
2/19/2024 4:49:53 PM	Google Patents	Search Term 1 eyeglass Search Term 2 bracket Search Term 3 spectacles Search Term 4 spectacle Search Term 5 combined Before Priority Date: priority:18850623
2/19/2024 4:50:19 PM	Google Scholar	(transistor) (light emitting) (display device) (electrode) (signal line)
2/19/2024 4:50:19 PM	Google Patents	Search Term 1 (transistor) (light emitting) (display device) (electrode) (signal line) Before Priority Date: priority:20031028
2/19/2024 4:50:20 PM	Google Scholar	transistor light emitting display device electrode signal line

date, time	web site	search string
2/19/2024 4:50:20 PM	Google Patents	Search Term 1 transistor Search Term 2 light emitting Search Term 3 display device Search Term 4 electrode Search Term 5 signal line Before Priority Date: priority:20031028
2/19/2024 5:21:37 PM	Google Scholar	(sunglasses) (frames) (band) (lenses) (user)
2/19/2024 5:21:37 PM	Google Patents	Search Term 1 (sunglasses) (frames) (band) (lenses) (user) Before Priority Date: priority:20031028
2/19/2024 5:21:39 PM	Google Scholar	sunglasses frames band lenses user
2/19/2024 5:21:39 PM	Google Patents	Search Term 1 sunglasses Search Term 2 frames Search Term 3 band Search Term 4 lenses Search Term 5 user Before Priority Date: priority:20031028
2/19/2024 5:21:45 PM	Google Scholar	(liquid) (crystal) (computerized) (implement) (control system)
2/19/2024 5:21:45 PM	Google Patents	Search Term 1 (liquid) (crystal) (computerized) (implement) (control system) Before Priority Date: priority:20031103
2/19/2024 5:21:46 PM	Google Scholar	liquid crystal computerized implement control system

date, time	web site	search string
2/19/2024 5:21:46 PM	Google Patents	Search Term 1 liquid Search Term 2 crystal Search Term 3 computerized Search Term 4 implement Search Term 5 control system Before Priority Date: priority:20031103
2/19/2024 5:21:55 PM	Google Scholar	(conduction speaker) (bone conduction) (bone) (head) (glasses)
2/19/2024 5:21:55 PM	Google Patents	Search Term 1 (conduction speaker) (bone conduction) (bone) (head) (glasses) Before Priority Date: priority:20031118
2/19/2024 5:21:57 PM	Google Scholar	conduction speaker bone conduction bone head glasses
2/19/2024 5:21:57 PM	Google Patents	Search Term 1 conduction speaker Search Term 2 bone conduction Search Term 3 bone Search Term 4 head Search Term 5 glasses Before Priority Date: priority:20031118
2/19/2024 5:22:04 PM	Google Scholar	(sound) (speaker) (display device) (observer) (video display)
2/19/2024 5:22:04 PM	Google Patents	Search Term 1 (sound) (speaker) (display device) (observer) (video display) Before Priority Date: priority:20031205

date, time	web site	search string
2/19/2024 5:22:05 PM	Google Scholar	sound speaker display device observer video display
2/19/2024 5:22:05 PM	Google Patents	Search Term 1 sound Search Term 2 speaker Search Term 3 display device Search Term 4 observer Search Term 5 video display Before Priority Date: priority:20031205
2/19/2024 5:22:12 PM	Google Scholar	(signal) (carrier wave) (frequency) (sound) (audible sound)
2/19/2024 5:22:12 PM	Google Patents	Search Term 1 (signal) (carrier wave) (frequency) (sound) (audible sound) Before Priority Date: priority:20031218
2/19/2024 5:22:13 PM	Google Scholar	signal carrier wave frequency sound audible sound
2/19/2024 5:22:13 PM	Google Patents	Search Term 1 signal Search Term 2 carrier wave Search Term 3 frequency Search Term 4 sound Search Term 5 audible sound Before Priority Date: priority:20031218
2/19/2024 5:22:21 PM	Google Scholar	(microphone) (eyeglass) (telephone) (arm) (speaker)
2/19/2024 5:22:21 PM	Google Patents	Search Term 1 (microphone) (eyeglass) (telephone) (arm) (speaker) Before Priority Date: priority:20031223

date, time	web site	search string
2/19/2024 5:22:22 PM	Google Scholar	microphone eyeglass telephone arm speaker
2/19/2024 5:22:22 PM	Google Patents	Search Term 1 microphone Search Term 2 eyeglass Search Term 3 telephone Search Term 4 arm Search Term 5 speaker Before Priority Date: priority:20031223
2/19/2024 5:22:29 PM	Google Scholar	(temple) (wireless communication) (glasses) (lens frame) (adjustable handle)
2/19/2024 5:22:29 PM	Google Patents	Search Term 1 (temple) (wireless communication) (glasses) (lens frame) (adjustable handle) Before Priority Date: priority:20040116
2/19/2024 5:22:30 PM	Google Scholar	temple wireless communication glasses lens frame adjustable handle
2/19/2024 5:22:30 PM	Google Patents	Search Term 1 temple Search Term 2 wireless communication Search Term 3 glasses Search Term 4 lens frame Search Term 5 adjustable handle Before Priority Date: priority:20040116
2/19/2024 5:22:37 PM	Google Scholar	(subscriber) (computer) (expert) (technical) (home)
2/19/2024 5:22:37 PM	Google Patents	Search Term 1 (subscriber) (computer) (expert) (technical) (home) Before Priority Date: priority:20040527

date, time	web site	search string
2/19/2024 5:22:38 PM	Google Scholar	subscriber computer expert technical home
2/19/2024 5:22:38 PM	Google Patents	Search Term 1 subscriber Search Term 2 computer Search Term 3 expert Search Term 4 technical Search Term 5 home Before Priority Date: priority:20040527
2/19/2024 5:29:02 PM	Google Scholar	(head mounted) (focus) (mounted display) (image) (unit)
2/19/2024 5:29:03 PM	Google Scholar	head mounted focus mounted display image unit
2/19/2024 5:29:03 PM	Google Patents	Search Term 1 head mounted Search Term 2 focus Search Term 3 mounted display Search Term 4 image Search Term 5 unit Before Priority Date: priority:20040602
2/19/2024 5:29:09 PM	Google Scholar	(camera) (calibration) (image) (index) (instrument)
2/19/2024 5:29:09 PM	Google Patents	Search Term 1 (camera) (calibration) (image) (index) (instrument) Before Priority Date: priority:20040618
2/19/2024 5:29:11 PM	Google Scholar	camera calibration image index instrument

date, time	web site	search string
2/19/2024 5:29:11 PM	Google Patents	Search Term 1 camera Search Term 2 calibration Search Term 3 image Search Term 4 index Search Term 5 instrument Before Priority Date: priority:20040618
2/19/2024 5:29:17 PM	Google Scholar	(items) (proximity threshold) (master controller) (tagged) (item)
2/19/2024 5:29:17 PM	Google Patents	Search Term 1 (items) (proximity threshold) (master controller) (tagged) (item) Before Priority Date: priority:20040625
2/19/2024 5:29:19 PM	Google Scholar	items proximity threshold master controller tagged item
2/19/2024 5:29:19 PM	Google Patents	Search Term 1 items Search Term 2 proximity threshold Search Term 3 master controller Search Term 4 tagged Search Term 5 item Before Priority Date: priority:20040625
2/19/2024 5:29:27 PM	Google Scholar	(eyewear) (temple) (recited) (glasses) (rfid tag)
2/19/2024 5:29:27 PM	Google Patents	Search Term 1 (eyewear) (temple) (recited) (glasses) (rfid tag) Before Priority Date: priority:20040728
2/19/2024 5:29:28 PM	Google Scholar	eyewear temple recited glasses rfid tag

date, time	web site	search string
2/19/2024 5:29:28 PM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 recited Search Term 4 glasses Search Term 5 rfid tag Before Priority Date: priority:20040728
2/19/2024 5:29:35 PM	Google Scholar	(audio) (eyeglasses) (recited) (frame assembly) (mass storage)
2/19/2024 5:29:37 PM	Google Scholar	audio eyeglasses recited frame assembly mass storage
2/19/2024 5:29:37 PM	Google Patents	Search Term 1 audio Search Term 2 eyeglasses Search Term 3 recited Search Term 4 frame assembly Search Term 5 mass storage Before Priority Date: priority:20040811
2/19/2024 5:29:50 PM	Google Scholar	(glasses) (user) (wearable device) (connector) (microphone)
2/19/2024 5:29:50 PM	Google Patents	Search Term 1 (glasses) (user) (wearable device) (connector) (microphone) Before Priority Date: priority:20041012
2/19/2024 5:29:51 PM	Google Scholar	glasses user wearable device connector microphone

date, time	web site	search string
2/19/2024 5:29:51 PM	Google Patents	Search Term 1 glasses Search Term 2 user Search Term 3 wearable device Search Term 4 connector Search Term 5 microphone Before Priority Date: priority:20041012
2/19/2024 5:29:58 PM	Google Scholar	(biometric) (equipment) (scanner) (operator) (authorization signal)
2/19/2024 5:29:58 PM	Google Patents	Search Term 1 (biometric) (equipment) (scanner) (operator) (authorization signal) Before Priority Date: priority:20050331
2/19/2024 5:30:00 PM	Google Scholar	biometric equipment scanner operator authorization signal
2/19/2024 5:30:00 PM	Google Patents	Search Term 1 biometric Search Term 2 equipment Search Term 3 scanner Search Term 4 operator Search Term 5 authorization signal Before Priority Date: priority:20050331
2/19/2024 5:30:07 PM	Google Scholar	(liquid crystal) (crystal panel) (pixel) (polarized light) (polarizer)
2/19/2024 5:30:07 PM	Google Patents	Search Term 1 (liquid crystal) (crystal panel) (pixel) (polarized light) (polarizer) Before Priority Date: priority:20050711

date, time	web site	search string
2/19/2024 5:30:08 PM	Google Scholar	liquid crystal crystal panel pixel polarized light polarizer
2/19/2024 5:30:08 PM	Google Patents	Search Term 1 liquid crystal Search Term 2 crystal panel Search Term 3 pixel Search Term 4 polarized light Search Term 5 polarizer Before Priority Date: priority:20050711
2/19/2024 5:47:30 PM	Google Scholar	(light) (illumination system) (adjustment device) (eyewear) (intensity)
2/19/2024 5:47:30 PM	Google Patents	Search Term 1 (light) (illumination system) (adjustment device) (eyewear) (intensity) Before Priority Date: priority:20050715
2/19/2024 5:47:32 PM	Google Scholar	light illumination system adjustment device eyewear intensity
2/19/2024 5:47:32 PM	Google Patents	Search Term 1 light Search Term 2 illumination system Search Term 3 adjustment device Search Term 4 eyewear Search Term 5 intensity Before Priority Date: priority:20050715
2/19/2024 5:47:38 PM	Google Scholar	(battery) (light source) (node) (electrical communication) (low)

date, time	web site	search string
2/19/2024 5:47:38 PM	Google Patents	Search Term 1 (battery) (light source) (node) (electrical communication) (low) Before Priority Date: priority:20051011
2/19/2024 5:47:39 PM	Google Scholar	battery light source node electrical communication low
2/19/2024 5:47:39 PM	Google Patents	Search Term 1 battery Search Term 2 light source Search Term 3 node Search Term 4 electrical communication Search Term 5 low Before Priority Date: priority:20051011
2/19/2024 5:47:45 PM	Google Scholar	(eyeglasses) (wire) (dep) (electronic) (temple)
2/19/2024 5:47:45 PM	Google Patents	Search Term 1 (eyeglasses) (wire) (dep) (electronic) (temple) Before Priority Date: priority:20051213
2/19/2024 5:47:47 PM	Google Scholar	eyeglasses wire dep electronic temple
2/19/2024 5:47:47 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 wire Search Term 3 dep Search Term 4 electronic Search Term 5 temple Before Priority Date: priority:20051213

date, time	web site	search string
2/19/2024 5:47:55 PM	Google Patents	Search Term 1 (eyeglasses) (wire) (dep) (electronic) (temple) Before Priority Date: priority:20061213
2/19/2024 5:47:56 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 wire Search Term 3 dep Search Term 4 electronic Search Term 5 temple Before Priority Date: priority:20061213
2/19/2024 5:48:03 PM	Google Scholar	(recited) (user) (binocular viewer) (binocular) (viewer)
2/19/2024 5:48:03 PM	Google Patents	Search Term 1 (recited) (user) (binocular viewer) (binocular) (viewer) Before Priority Date: priority:20060227
2/19/2024 5:48:05 PM	Google Scholar	recited user binocular viewer binocular viewer
2/19/2024 5:48:05 PM	Google Patents	Search Term 1 recited Search Term 2 user Search Term 3 binocular viewer Search Term 4 binocular Search Term 5 viewer Before Priority Date: priority:20060227
2/19/2024 5:48:16 PM	Google Scholar	(patient) (processor) (sensor) (data) (coupled)

date, time	web site	search string
2/19/2024 5:48:16 PM	Google Patents	Search Term 1 (patient) (processor) (sensor) (data) (coupled) Before Priority Date: priority:20060516
2/19/2024 5:48:18 PM	Google Scholar	patient processor sensor data coupled
2/19/2024 5:48:18 PM	Google Patents	Search Term 1 patient Search Term 2 processor Search Term 3 sensor Search Term 4 data Search Term 5 coupled Before Priority Date: priority:20060516
2/19/2024 5:48:25 PM	Google Scholar	(user) (activity) (calibration) (type) (data)
2/19/2024 5:48:25 PM	Google Patents	Search Term 1 (user) (activity) (calibration) (type) (data) Before Priority Date: priority:20060522
2/19/2024 5:48:27 PM	Google Scholar	user activity calibration type data
2/19/2024 5:48:27 PM	Google Patents	Search Term 1 user Search Term 2 activity Search Term 3 calibration Search Term 4 type Search Term 5 data Before Priority Date: priority:20060522
2/19/2024 5:48:34 PM	Google Scholar	(workout) (data) (user) (screen) (recited)

date, time	web site	search string
2/19/2024 5:48:34 PM	Google Patents	Search Term 1 (workout) (data) (user) (screen) (recited) Before Priority Date: priority:20060522
2/19/2024 5:48:36 PM	Google Scholar	workout data user screen recited
2/19/2024 5:48:36 PM	Google Patents	Search Term 1 workout Search Term 2 data Search Term 3 user Search Term 4 screen Search Term 5 recited Before Priority Date: priority:20060522
2/19/2024 5:48:43 PM	Google Scholar	(media player) (computer) (portable media) (physiologic data) (user)
2/19/2024 5:48:43 PM	Google Patents	Search Term 1 (media player) (computer) (portable media) (physiologic data) (user) Before Priority Date: priority:20060522
2/19/2024 5:48:44 PM	Google Scholar	media player computer portable media physiologic data user
2/19/2024 5:48:44 PM	Google Patents	Search Term 1 media player Search Term 2 computer Search Term 3 portable media Search Term 4 physiologic data Search Term 5 user Before Priority Date: priority:20060522
2/19/2024 5:53:17 PM	Google Patents	Search Term 1 (~patent/US8073984B2)

date, time	web site	search string
2/19/2024 5:53:18 PM	Google Patents	Search Term 1 ~patent/US8073984B2
2/19/2024 5:53:23 PM	Google Scholar	(accessory device) (accessory) (portable electronic) (capabilities) (electronic device)
2/19/2024 5:53:23 PM	Google Patents	Search Term 1 (accessory device) (accessory) (portable electronic) (capabilities) (electronic device) Before Priority Date: priority:20060522
2/19/2024 5:53:25 PM	Google Scholar	accessory device accessory portable electronic capabilities electronic device
2/19/2024 5:53:25 PM	Google Patents	Search Term 1 accessory device Search Term 2 accessory Search Term 3 portable electronic Search Term 4 capabilities Search Term 5 electronic device Before Priority Date: priority:20060522
2/19/2024 5:53:34 PM	Google Scholar	(physiologic data) (host computer) (media player) (user) (portable device)
2/19/2024 5:53:34 PM	Google Patents	Search Term 1 (physiologic data) (host computer) (media player) (user) (portable device) Before Priority Date: priority:20060522
2/19/2024 5:53:36 PM	Google Scholar	physiologic data host computer media player user portable device

date, time	web site	search string
2/19/2024 5:53:36 PM	Google Patents	Search Term 1 physiologic data Search Term 2 host computer Search Term 3 media player Search Term 4 user Search Term 5 portable device Before Priority Date: priority:20060522
2/19/2024 5:53:44 PM	Google Scholar	(speaker) (ear) (display device) (temple) (video display)
2/19/2024 5:53:44 PM	Google Patents	Search Term 1 (speaker) (ear) (display device) (temple) (video display) Before Priority Date: priority:20060526
2/19/2024 5:53:46 PM	Google Scholar	speaker ear display device temple video display
2/19/2024 5:53:46 PM	Google Patents	Search Term 1 speaker Search Term 2 ear Search Term 3 display device Search Term 4 temple Search Term 5 video display Before Priority Date: priority:20060526
2/19/2024 5:53:51 PM	Google Scholar	(frame) (pair) (electronic device) (slot) (lens)
2/19/2024 5:53:51 PM	Google Patents	Search Term 1 (frame) (pair) (electronic device) (slot) (lens) Before Priority Date: priority:20060712
2/19/2024 5:53:53 PM	Google Scholar	frame pair electronic device slot lens

date, time	web site	search string
2/19/2024 5:53:53 PM	Google Patents	Search Term 1 frame Search Term 2 pair Search Term 3 electronic device Search Term 4 slot Search Term 5 lens Before Priority Date: priority:20060712
2/19/2024 5:54:02 PM	Google Scholar	(flicker) (rate) (display) (display area) (vision training)
2/19/2024 5:54:04 PM	Google Scholar	flicker rate display display area vision training
2/19/2024 5:54:04 PM	Google Patents	Search Term 1 flicker Search Term 2 rate Search Term 3 display Search Term 4 display area Search Term 5 vision training Before Priority Date: priority:20060831
2/19/2024 5:54:12 PM	Google Scholar	(optical device) (tab) (electrode) (lens) (insulator layer)
2/19/2024 5:54:12 PM	Google Patents	Search Term 1 (optical device) (tab) (electrode) (lens) (insulator layer) Before Priority Date: priority:20060911
2/19/2024 5:54:13 PM	Google Scholar	optical device tab electrode lens insulator layer

date, time	web site	search string
2/19/2024 5:54:13 PM	Google Patents	Search Term 1 optical device Search Term 2 tab Search Term 3 electrode Search Term 4 lens Search Term 5 insulator layer Before Priority Date: priority:20060911
2/19/2024 5:54:20 PM	Google Scholar	(hands) (user) (frame) (free commands) (image)
2/19/2024 5:54:20 PM	Google Patents	Search Term 1 (hands) (user) (frame) (free commands) (image) Before Priority Date: priority:20060918
2/19/2024 5:54:21 PM	Google Scholar	hands user frame free commands image
2/19/2024 5:54:21 PM	Google Patents	Search Term 1 hands Search Term 2 user Search Term 3 frame Search Term 4 free commands Search Term 5 image Before Priority Date: priority:20060918
2/19/2024 5:55:18 PM	Google Scholar	(pedometer) (glasses) (pair) (activity) (recited)
2/19/2024 5:55:18 PM	Google Patents	Search Term 1 (pedometer) (glasses) (pair) (activity) (recited) Before Priority Date: priority:20060920
2/19/2024 5:55:20 PM	Google Scholar	pedometer glasses pair activity recited

date, time	web site	search string
2/19/2024 5:55:20 PM	Google Patents	Search Term 1 pedometer Search Term 2 glasses Search Term 3 pair Search Term 4 activity Search Term 5 recited Before Priority Date: priority:20060920
2/19/2024 5:55:27 PM	Google Scholar	(imaging) (information) (unit) (image) (control)
2/19/2024 5:55:27 PM	Google Patents	Search Term 1 (imaging) (information) (unit) (image) (control) Before Priority Date: priority:20060927
2/19/2024 5:55:31 PM	Google Patents	Search Term 1 (imaging) Search Term 2 (information) Search Term 3 (unit) Search Term 4 (image) Search Term 5 (control) Before Priority Date: priority:20060927
2/19/2024 5:55:32 PM	Google Scholar	imaging information unit image control

date, time	web site	search string
2/19/2024 5:55:32 PM	Google Patents	Search Term 1 imaging Search Term 2 information Search Term 3 unit Search Term 4 image Search Term 5 control Before Priority Date: priority:20060927
2/19/2024 5:55:43 PM	Google Scholar	(temple) (frame) (lens) (utep) (electrical)
2/19/2024 5:55:43 PM	Google Patents	Search Term 1 (temple) (frame) (lens) (utep) (electrical) Before Priority Date: priority:20061027
2/19/2024 5:55:44 PM	Google Scholar	temple frame lens utep electrical
2/19/2024 5:55:44 PM	Google Patents	Search Term 1 temple Search Term 2 frame Search Term 3 lens Search Term 4 utep Search Term 5 electrical Before Priority Date: priority:20061027

Web Search History

date, time	web site	search string
12/12/2023 7:45:20 AM	Google Scholar	(eyeglass) (interface system) (camera) (audio) (integrated circuits)
12/12/2023 7:45:20 AM	Google Patents	**Search Term 1** (eyeglass) (interface system) (camera) (audio) (integrated circuits) **Before** Priority Date: priority:19971030
12/12/2023 7:45:22 AM	Google Scholar	eyeglass interface system camera audio integrated circuits
12/12/2023 7:45:22 AM	Google Patents	**Search Term 1** eyeglass **Search Term 2** interface system **Search Term 3** camera **Search Term 4** audio **Search Term 5** integrated circuits **Before** Priority Date: priority:19971030
12/12/2023 7:45:51 AM	Google Scholar	(prism) (telescopes) (relating) (block) (systems suitable)
12/12/2023 7:45:51 AM	Google Patents	**Search Term 1** (prism) (telescopes) (relating) (block) (systems suitable) **Before** Priority Date: priority:19280124
12/12/2023 7:45:53 AM	Google Scholar	prism telescopes relating block systems suitable

Apple Inc. Exhibit 1002 Page 935

date, time	web site	search string
12/12/2023 7:45:53 AM	Google Patents	**Search Term 1** prism **Search Term 2** telescopes **Search Term 3** relating **Search Term 4** block **Search Term 5** systems suitable **Before** Priority Date: priority:19280124
12/12/2023 7:46:01 AM	Google Scholar	(viewfinder) (mirror) (block means) (intermediate block) (light rays)
12/12/2023 7:46:01 AM	Google Patents	**Search Term 1** (viewfinder) (mirror) (block means) (intermediate block) (light rays) **Before** Priority Date: priority:19601102
12/12/2023 7:46:02 AM	Google Scholar	viewfinder mirror block means intermediate block light rays
12/12/2023 7:46:02 AM	Google Patents	**Search Term 1** viewfinder **Search Term 2** mirror **Search Term 3** block means **Search Term 4** intermediate block **Search Term 5** light rays **Before** Priority Date: priority:19601102
12/12/2023 7:46:11 AM	Google Scholar	(aircraft) (landing) (mirror) (spherical) (pilot)
12/12/2023 7:46:11 AM	Google Patents	**Search Term 1** (aircraft) (landing) (mirror) (spherical) (pilot) **Before** Priority Date: priority:19611005
12/12/2023 7:46:12 AM	Google Scholar	aircraft landing mirror spherical pilot

date, time	web site	search string
12/12/2023 7:46:12 AM	Google Patents	**Search Term 1** aircraft **Search Term 2** landing **Search Term 3** mirror **Search Term 4** spherical **Search Term 5** pilot **Before** Priority Date: priority:19611005
12/12/2023 7:46:18 AM	Google Scholar	(viewer) (vehicle) (windshield) (housing) (vehicles)
12/12/2023 7:46:18 AM	Google Patents	**Search Term 1** (viewer) (vehicle) (windshield) (housing) (vehicles) **Before** Priority Date: priority:19640210
12/12/2023 7:46:19 AM	Google Scholar	viewer vehicle windshield housing vehicles
12/12/2023 7:46:19 AM	Google Patents	**Search Term 1** viewer **Search Term 2** vehicle **Search Term 3** windshield **Search Term 4** housing **Search Term 5** vehicles **Before** Priority Date: priority:19640210
12/12/2023 7:46:29 AM	Google Scholar	(reticle) (target) (sight) (mirror) (semi)
12/12/2023 7:46:29 AM	Google Patents	**Search Term 1** (reticle) (target) (sight) (mirror) (semi) **Before** Priority Date: priority:19650412
12/12/2023 7:46:30 AM	Google Scholar	reticle target sight mirror semi

date, time	web site	search string
12/12/2023 7:46:30 AM	Google Patents	**Search Term 1** reticle **Search Term 2** target **Search Term 3** sight **Search Term 4** mirror **Search Term 5** semi **Before** Priority Date: priority:19650412
12/12/2023 7:46:36 AM	Google Scholar	(housing) (camera head) (mirror) (elevation) (turret)
12/12/2023 7:46:36 AM	Google Patents	**Search Term 1** (housing) (camera head) (mirror) (elevation) (turret) **Before** Priority Date: priority:19690604
12/12/2023 7:46:38 AM	Google Scholar	housing camera head mirror elevation turret
12/12/2023 7:46:38 AM	Google Patents	**Search Term 1** housing **Search Term 2** camera head **Search Term 3** mirror **Search Term 4** elevation **Search Term 5** turret **Before** Priority Date: priority:19690604
12/12/2023 8:03:59 AM	Google Patents	**Search Term 1** (~patent/DE2205325A1)
12/12/2023 8:04:01 AM	Google Patents	**Search Term 1** ~patent/DE2205325A1
12/12/2023 8:04:12 AM	Google Scholar	(visor) (focal point) (light emitting) (emitting means) (helmet)

date, time	web site	search string
12/12/2023 8:04:12 AM	Google Patents	**Search Term 1** (visor) (focal point) (light emitting) (emitting means) (helmet) **Before** Priority Date: priority:19720628
12/12/2023 8:04:13 AM	Google Scholar	visor focal point light emitting emitting means helmet
12/12/2023 8:04:13 AM	Google Patents	**Search Term 1** visor **Search Term 2** focal point **Search Term 3** light emitting **Search Term 4** emitting means **Search Term 5** helmet **Before** Priority Date: priority:19720628
12/12/2023 8:04:20 AM	Google Scholar	(light) (image) (lens) (source) (focal plane)
12/12/2023 8:04:20 AM	Google Patents	**Search Term 1** (light) (image) (lens) (source) (focal plane) **Before** Priority Date: priority:19730430
12/12/2023 8:04:21 AM	Google Scholar	light image lens source focal plane
12/12/2023 8:04:21 AM	Google Patents	**Search Term 1** light **Search Term 2** image **Search Term 3** lens **Search Term 4** source **Search Term 5** focal plane **Before** Priority Date: priority:19730430
12/12/2023 8:04:28 AM	Google Scholar	(holographic lens) (lens) (holographic) (axial) (tilted)

date, time	web site	search string
12/12/2023 8:04:28 AM	Google Patents	**Search Term 1** (holographic lens) (lens) (holographic) (axial) (tilted) **Before** Priority Date: priority:19750123
12/12/2023 8:04:30 AM	Google Scholar	holographic lens lens holographic axial tilted
12/12/2023 8:04:30 AM	Google Patents	**Search Term 1** holographic lens **Search Term 2** lens **Search Term 3** holographic **Search Term 4** axial **Search Term 5** tilted **Before** Priority Date: priority:19750123
12/12/2023 8:04:47 AM	Google Scholar	(documentation) (information) (documentation data) (data) (real information)
12/12/2023 8:04:48 AM	Google Scholar	documentation information documentation data data real information
12/12/2023 8:04:48 AM	Google Patents	**Search Term 1** documentation **Search Term 2** information **Search Term 3** documentation data **Search Term 4** data **Search Term 5** real information **Before** Priority Date: priority:19990325
12/12/2023 8:04:57 AM	Google Scholar	(data) (operating) (acquisition means) (designed) (observation)
12/12/2023 8:04:57 AM	Google Patents	**Search Term 1** (data) (operating) (acquisition means) (designed) (observation) **Before** Priority Date: priority:19990302

date, time	web site	search string
12/12/2023 8:04:58 AM	Google Scholar	data operating acquisition means designed observation
12/12/2023 8:04:58 AM	Google Patents	**Search Term 1** data **Search Term 2** operating **Search Term 3** acquisition means **Search Term 4** designed **Search Term 5** observation **Before** Priority Date: priority:19990302
12/12/2023 8:05:07 AM	Google Scholar	(arm) (phone) (user) (image) (phone body)
12/12/2023 8:05:07 AM	Google Patents	**Search Term 1** (arm) (phone) (user) (image) (phone body) **Before** Priority Date: priority:20001110
12/12/2023 8:05:09 AM	Google Scholar	arm phone user image phone body
12/12/2023 8:05:09 AM	Google Patents	**Search Term 1** arm **Search Term 2** phone **Search Term 3** user **Search Term 4** image **Search Term 5** phone body **Before** Priority Date: priority:20001110
12/12/2023 8:05:16 AM	Google Scholar	(language) (learning) (virtual world) (studying) (education)
12/12/2023 8:05:16 AM	Google Patents	**Search Term 1** (language) (learning) (virtual world) (studying) (education) **Before** Priority Date: priority:20020511

Apple Inc. Exhibit 1002 Page 941

date, time	web site	search string
12/12/2023 8:05:17 AM	Google Scholar	language learning virtual world studying education
12/12/2023 8:05:17 AM	Google Patents	**Search Term 1** language **Search Term 2** learning **Search Term 3** virtual world **Search Term 4** studying **Search Term 5** education **Before** Priority Date: priority:20020511
12/12/2023 8:13:39 AM	Google Scholar	(image capture) (remote device) (image data) (images) (user)
12/12/2023 8:13:41 AM	Google Scholar	image capture remote device image data images user
12/12/2023 8:13:41 AM	Google Patents	**Search Term 1** image capture **Search Term 2** remote device **Search Term 3** image data **Search Term 4** images **Search Term 5** user **Before** Priority Date: priority:20010727
12/12/2023 8:13:51 AM	Google Scholar	(multidimensional) (video) (receptors) (video data) (audio)
12/12/2023 8:13:51 AM	Google Patents	**Search Term 1** (multidimensional) (video) (receptors) (video data) (audio) **Before** Priority Date: priority:19980127
12/12/2023 8:13:53 AM	Google Scholar	multidimensional video receptors video data audio

Apple Inc. Exhibit 1002 Page 942

date, time	web site	search string
12/12/2023 8:13:53 AM	Google Patents	**Search Term 1** multidimensional **Search Term 2** video **Search Term 3** receptors **Search Term 4** video data **Search Term 5** audio **Before** Priority Date: priority:19980127
12/12/2023 8:13:59 AM	Google Scholar	(reader) (keyboard) (indicia) (monitor) (light)
12/12/2023 8:13:59 AM	Google Patents	**Search Term 1** (reader) (keyboard) (indicia) (monitor) (light) **Before** Priority Date: priority:19981110
12/12/2023 8:14:01 AM	Google Scholar	reader keyboard indicia monitor light
12/12/2023 8:14:01 AM	Google Patents	**Search Term 1** reader **Search Term 2** keyboard **Search Term 3** indicia **Search Term 4** monitor **Search Term 5** light **Before** Priority Date: priority:19981110
12/12/2023 8:14:08 AM	Google Scholar	(wearer) (eyewear) (speaker) (microphone) (unit)
12/12/2023 8:14:08 AM	Google Patents	**Search Term 1** (wearer) (eyewear) (speaker) (microphone) (unit) **Before** Priority Date: priority:20011006
12/12/2023 8:14:09 AM	Google Scholar	wearer eyewear speaker microphone unit

date, time	web site	search string
12/12/2023 8:14:09 AM	Google Patents	**Search Term 1** wearer **Search Term 2** eyewear **Search Term 3** speaker **Search Term 4** microphone **Search Term 5** unit **Before** Priority Date: priority:20011006
12/12/2023 8:14:16 AM	Google Scholar	(support) (display) (support member) (user) (ear)
12/12/2023 8:14:16 AM	Google Patents	**Search Term 1** (support) (display) (support member) (user) (ear) **Before** Priority Date: priority:20010907
12/12/2023 8:14:17 AM	Google Scholar	support display support member user ear
12/12/2023 8:14:17 AM	Google Patents	**Search Term 1** support **Search Term 2** display **Search Term 3** support member **Search Term 4** user **Search Term 5** ear **Before** Priority Date: priority:20010907
12/12/2023 8:14:33 AM	Google Scholar	(values) (speaker) (listener) (location) (speech)
12/12/2023 8:14:33 AM	Google Patents	**Search Term 1** (values) (speaker) (listener) (location) (speech) **Before** Priority Date: priority:20001127
12/12/2023 8:14:34 AM	Google Scholar	values speaker listener location speech

date, time	web site	search string
12/12/2023 8:14:34 AM	Google Patents	**Search Term 1** values **Search Term 2** speaker **Search Term 3** listener **Search Term 4** location **Search Term 5** speech **Before** Priority Date: priority:20001127
12/12/2023 8:49:24 AM	Google Scholar	(audio) (video) (wearer) (pick) (mounting means)
12/12/2023 8:49:25 AM	Google Scholar	audio video wearer pick mounting means
12/12/2023 8:49:25 AM	Google Patents	**Search Term 1** audio **Search Term 2** video **Search Term 3** wearer **Search Term 4** pick **Search Term 5** mounting means **Before** Priority Date: priority:20020403
12/12/2023 8:49:31 AM	Google Scholar	(eyewear according) (eyewear) (front frame) (sidepiece) (display)
12/12/2023 8:49:31 AM	Google Patents	**Search Term 1** (eyewear according) (eyewear) (front frame) (sidepiece) (display) **Before** Priority Date: priority:20020524
12/12/2023 8:49:32 AM	Google Scholar	eyewear according eyewear front frame sidepiece display

date, time	web site	search string
12/12/2023 8:49:32 AM	Google Patents	**Search Term 1** eyewear according **Search Term 2** eyewear **Search Term 3** front frame **Search Term 4** sidepiece **Search Term 5** display **Before** Priority Date: priority:20020524
12/12/2023 8:49:38 AM	Google Scholar	(tracking) (augmented reality) (frame acquisition) (video) (computer)
12/12/2023 8:49:38 AM	Google Patents	**Search Term 1** (tracking) (augmented reality) (frame acquisition) (video) (computer) **Before** Priority Date: priority:20011220
12/12/2023 8:49:39 AM	Google Scholar	tracking augmented reality frame acquisition video computer
12/12/2023 8:49:39 AM	Google Patents	**Search Term 1** tracking **Search Term 2** augmented reality **Search Term 3** frame acquisition **Search Term 4** video **Search Term 5** computer **Before** Priority Date: priority:20011220
12/12/2023 8:49:46 AM	Google Scholar	(speaker) (eyewear) (wearer) (earstem)
12/12/2023 8:49:46 AM	Google Patents	**Search Term 1** (speaker) (eyewear) (wearer) (earstem) **Assignee(s)** [microphone] **Before** Priority Date: priority:20011006

date, time	web site	search string
12/12/2023 8:49:54 AM	Google Scholar	(speaker) (eyewear) (microphone) (wearer) (earstem)
12/12/2023 8:49:54 AM	Google Patents	**Search Term 1** (speaker) **Search Term 2** (eyewear) **Search Term 3** (microphone) **Search Term 4** (wearer) **Search Term 5** (earstem) **Before** Priority Date: priority:20011006
12/12/2023 8:49:55 AM	Google Scholar	speaker eyewear microphone wearer earstem
12/12/2023 8:49:55 AM	Google Patents	**Search Term 1** speaker **Search Term 2** eyewear **Search Term 3** microphone **Search Term 4** wearer **Search Term 5** earstem **Before** Priority Date: priority:20011006
12/12/2023 8:50:10 AM	Google Scholar	(information) (user) (telescope) (electronic) (visual)
12/12/2023 8:50:10 AM	Google Patents	**Search Term 1** (information) (user) (telescope) (electronic) (visual) **Before** Priority Date: priority:20021210
12/12/2023 8:50:11 AM	Google Scholar	information user telescope electronic visual

date, time	web site	search string
12/12/2023 8:50:11 AM	Google Patents	**Search Term 1** information **Search Term 2** user **Search Term 3** telescope **Search Term 4** electronic **Search Term 5** visual **Before** Priority Date: priority:20021210
12/12/2023 8:50:19 AM	Google Scholar	(audio interface) (wearer) (signal) (audio) (support)
12/12/2023 8:50:19 AM	Google Patents	**Search Term 1** (audio interface) (wearer) (signal) (audio) (support) **Before** Priority Date: priority:20020726
12/12/2023 8:50:21 AM	Google Scholar	audio interface wearer signal audio support
12/12/2023 8:50:21 AM	Google Patents	**Search Term 1** audio interface **Search Term 2** wearer **Search Term 3** signal **Search Term 4** audio **Search Term 5** support **Before** Priority Date: priority:20020726
12/12/2023 8:50:27 AM	Google Scholar	(mounting) (user) (chassis) (virtual) (images)
12/12/2023 8:50:27 AM	Google Patents	**Search Term 1** (mounting) (user) (chassis) (virtual) (images) **Before** Priority Date: priority:20030103
12/12/2023 8:50:29 AM	Google Scholar	mounting user chassis virtual images

date, time	web site	search string
12/12/2023 8:50:29 AM	Google Patents	**Search Term 1** mounting **Search Term 2** user **Search Term 3** chassis **Search Term 4** virtual **Search Term 5** images **Before** Priority Date: priority:20030103
12/12/2023 9:29:11 AM	Google Scholar	(support) (wearer) (eyeglass) (frame) (audio)
12/12/2023 9:29:11 AM	Google Patents	**Search Term 1** (support) (wearer) (eyeglass) (frame) (audio) **Before** Priority Date: priority:20000602
12/12/2023 9:29:13 AM	Google Scholar	support wearer eyeglass frame audio
12/12/2023 9:29:13 AM	Google Patents	**Search Term 1** support **Search Term 2** wearer **Search Term 3** eyeglass **Search Term 4** frame **Search Term 5** audio **Before** Priority Date: priority:20000602
12/12/2023 9:29:21 AM	Google Scholar	(golfer) (image) (training aid) (golf training) (light)
12/12/2023 9:29:21 AM	Google Patents	**Search Term 1** (golfer) (image) (training aid) (golf training) (light) **Before** Priority Date: priority:20010327
12/12/2023 9:29:22 AM	Google Scholar	golfer image training aid golf training light

date, time	web site	search string
12/12/2023 9:29:22 AM	Google Patents	**Search Term 1** golfer **Search Term 2** image **Search Term 3** training aid **Search Term 4** golf training **Search Term 5** light **Before** Priority Date: priority:20010327
12/12/2023 9:29:28 AM	Google Scholar	(user) (virtual image) (spectacles) (display) (mounting)
12/12/2023 9:29:28 AM	Google Patents	**Search Term 1** (user) (virtual image) (spectacles) (display) (mounting) **Before** Priority Date: priority:20021210
12/12/2023 9:29:30 AM	Google Scholar	user virtual image spectacles display mounting
12/12/2023 9:29:30 AM	Google Patents	**Search Term 1** user **Search Term 2** virtual image **Search Term 3** spectacles **Search Term 4** display **Search Term 5** mounting **Before** Priority Date: priority:20021210
12/12/2023 9:29:37 AM	Google Scholar	(location) (audiovisual) (processor) (communication) (user)
12/12/2023 9:29:37 AM	Google Patents	**Search Term 1** (location) (audiovisual) (processor) (communication) (user) **Before** Priority Date: priority:20021127
12/12/2023 9:29:38 AM	Google Scholar	location audiovisual processor communication user

date, time	web site	search string
12/12/2023 9:29:38 AM	Google Patents	**Search Term 1** location **Search Term 2** audiovisual **Search Term 3** processor **Search Term 4** communication **Search Term 5** user **Before** Priority Date: priority:20021127
12/12/2023 9:29:50 AM	Google Scholar	(viewing system) (binocular viewing) (optical) (assembly) (optical pipe)
12/12/2023 9:29:50 AM	Google Patents	**Search Term 1** (viewing system) (binocular viewing) (optical) (assembly) (optical pipe) **Before** Priority Date: priority:20030425
12/12/2023 9:29:51 AM	Google Scholar	viewing system binocular viewing optical assembly optical pipe
12/12/2023 9:29:51 AM	Google Patents	**Search Term 1** viewing system **Search Term 2** binocular viewing **Search Term 3** optical **Search Term 4** assembly **Search Term 5** optical pipe **Before** Priority Date: priority:20030425
12/12/2023 9:29:58 AM	Google Scholar	(user) (arrangement according) (vehicle) (head) (information)
12/12/2023 9:29:58 AM	Google Patents	**Search Term 1** (user) (arrangement according) (vehicle) (head) (information) **Before** Priority Date: priority:20030829

Apple Inc. Exhibit 1002 Page 951

date, time	web site	search string
12/12/2023 9:29:59 AM	Google Scholar	user arrangement according vehicle head information
12/12/2023 9:29:59 AM	Google Patents	**Search Term 1** user **Search Term 2** arrangement according **Search Term 3** vehicle **Search Term 4** head **Search Term 5** information **Before** Priority Date: priority:20030829
12/12/2023 9:30:29 AM	Google Scholar	(cord) (eyeglass) (tethered) (electrical) (recited)
12/12/2023 9:30:29 AM	Google Patents	**Search Term 1** (cord) (eyeglass) (tethered) (electrical) (recited) **Before** Priority Date: priority:20030415
12/12/2023 9:30:31 AM	Google Scholar	cord eyeglass tethered electrical recited
12/12/2023 9:30:31 AM	Google Patents	**Search Term 1** cord **Search Term 2** eyeglass **Search Term 3** tethered **Search Term 4** electrical **Search Term 5** recited **Before** Priority Date: priority:20030415
12/12/2023 9:30:39 AM	Google Scholar	(video) (audio) (stream) (camera) (participant)
12/12/2023 9:30:39 AM	Google Patents	**Search Term 1** (video) (audio) (stream) (camera) (participant) **Before** Priority Date: priority:20030724

date, time	web site	search string
12/12/2023 9:30:40 AM	Google Scholar	video audio stream camera participant
12/12/2023 9:30:40 AM	Google Patents	**Search Term 1** video **Search Term 2** audio **Search Term 3** stream **Search Term 4** camera **Search Term 5** participant **Before** Priority Date: priority:20030724
12/12/2023 9:45:23 AM	Google Scholar	(eyeglasses) (wireless) (arms) (wireless communication) (frame)
12/12/2023 9:45:23 AM	Google Patents	**Search Term 1** (eyeglasses) (wireless) (arms) (wireless communication) (frame) **Before** Priority Date: priority:20030415
12/12/2023 9:45:25 AM	Google Scholar	eyeglasses wireless arms wireless communication frame
12/12/2023 9:45:25 AM	Google Patents	**Search Term 1** eyeglasses **Search Term 2** wireless **Search Term 3** arms **Search Term 4** wireless communication **Search Term 5** frame **Before** Priority Date: priority:20030415
12/12/2023 9:45:31 AM	Google Scholar	(head mounted) (mounted display) (signals) (unit) (display device)

date, time	web site	search string
12/12/2023 9:45:31 AM	Google Patents	**Search Term 1** (head mounted) (mounted display) (signals) (unit) (display device) **Before** Priority Date: priority:20040909
12/12/2023 9:45:33 AM	Google Scholar	head mounted mounted display signals unit display device
12/12/2023 9:45:33 AM	Google Patents	**Search Term 1** head mounted **Search Term 2** mounted display **Search Term 3** signals **Search Term 4** unit **Search Term 5** display device **Before** Priority Date: priority:20040909
12/12/2023 9:45:40 AM	Google Scholar	(coupled) (microphone) (speaker) (eyeglasses) (frame)
12/12/2023 9:45:40 AM	Google Patents	**Search Term 1** (coupled) (microphone) (speaker) (eyeglasses) (frame) **Before** Priority Date: priority:20010621
12/12/2023 9:45:41 AM	Google Scholar	coupled microphone speaker eyeglasses frame
12/12/2023 9:45:41 AM	Google Patents	**Search Term 1** coupled **Search Term 2** microphone **Search Term 3** speaker **Search Term 4** eyeglasses **Search Term 5** frame **Before** Priority Date: priority:20010621
12/12/2023 9:45:47 AM	Google Scholar	(camera) (cable) (wiring harness) (communication system) (power)

date, time	web site	search string
12/12/2023 9:45:47 AM	Google Patents	**Search Term 1** (camera) (cable) (wiring harness) (communication system) (power) **Before** Priority Date: priority:20040309
12/12/2023 9:45:49 AM	Google Scholar	camera cable wiring harness communication system power
12/12/2023 9:45:49 AM	Google Patents	**Search Term 1** camera **Search Term 2** cable **Search Term 3** wiring harness **Search Term 4** communication system **Search Term 5** power **Before** Priority Date: priority:20040309
12/12/2023 9:45:57 AM	Google Scholar	(display) (information) (user) (gaze) (control)
12/12/2023 9:45:57 AM	Google Patents	**Search Term 1** (display) (information) (user) (gaze) (control) **Before** Priority Date: priority:20041001
12/12/2023 9:45:59 AM	Google Scholar	display information user gaze control
12/12/2023 9:45:59 AM	Google Patents	**Search Term 1** display **Search Term 2** information **Search Term 3** user **Search Term 4** gaze **Search Term 5** control **Before** Priority Date: priority:20041001
12/12/2023 9:46:07 AM	Google Scholar	(eye) (audio circuitry) (ear) (arm) (compartment)

date, time	web site	search string
12/12/2023 9:46:07 AM	Google Patents	**Search Term 1** (eye) (audio circuitry) (ear) (arm) (compartment) **Before** Priority Date: priority:20041013
12/12/2023 9:46:09 AM	Google Scholar	eye audio circuitry ear arm compartment
12/12/2023 9:46:09 AM	Google Patents	**Search Term 1** eye **Search Term 2** audio circuitry **Search Term 3** ear **Search Term 4** arm **Search Term 5** compartment **Before** Priority Date: priority:20041013
12/12/2023 9:46:15 AM	Google Scholar	(module) (user) (visualisation) (eye) (images)
12/12/2023 9:46:15 AM	Google Patents	**Search Term 1** (module) (user) (visualisation) (eye) (images) **Before** Priority Date: priority:20041029
12/12/2023 9:46:17 AM	Google Scholar	module user visualisation eye images
12/12/2023 9:46:17 AM	Google Patents	**Search Term 1** module **Search Term 2** user **Search Term 3** visualisation **Search Term 4** eye **Search Term 5** images **Before** Priority Date: priority:20041029
12/12/2023 9:46:23 AM	Google Scholar	(user) (data) (biometric authentication) (eyewear) (biometric)

date, time	web site	search string
12/12/2023 9:46:23 AM	Google Patents	**Search Term 1** (user) (data) (biometric authentication) (eyewear) (biometric) **Before** Priority Date: priority:20041129
12/12/2023 9:46:24 AM	Google Scholar	user data biometric authentication eyewear biometric
12/12/2023 9:46:24 AM	Google Patents	**Search Term 1** user **Search Term 2** data **Search Term 3** biometric authentication **Search Term 4** eyewear **Search Term 5** biometric **Before** Priority Date: priority:20041129
12/12/2023 9:46:30 AM	Google Scholar	(user) (signals) (accelerometer) (nose) (input)
12/12/2023 9:46:30 AM	Google Patents	**Search Term 1** (user) (signals) (accelerometer) (nose) (input) **Before** Priority Date: priority:20041229
12/12/2023 9:46:31 AM	Google Scholar	user signals accelerometer nose input
12/12/2023 9:46:31 AM	Google Patents	**Search Term 1** user **Search Term 2** signals **Search Term 3** accelerometer **Search Term 4** nose **Search Term 5** input **Before** Priority Date: priority:20041229
12/12/2023 9:46:38 AM	Google Scholar	(image) (distance) (optical element) (display) (subject)

date, time	web site	search string
12/12/2023 9:46:38 AM	Google Patents	**Search Term 1** (image) (distance) (optical element) (display) (subject) **Before** Priority Date: priority:20040206
12/12/2023 9:46:40 AM	Google Scholar	image distance optical element display subject
12/12/2023 9:46:40 AM	Google Patents	**Search Term 1** image **Search Term 2** distance **Search Term 3** optical element **Search Term 4** display **Search Term 5** subject **Before** Priority Date: priority:20040206
12/12/2023 9:46:48 AM	Google Scholar	(optical device) (substrate) (light waves) (reflecting surfaces) (optical)
12/12/2023 9:46:48 AM	Google Patents	**Search Term 1** (optical device) (substrate) (light waves) (reflecting surfaces) (optical) **Before** Priority Date: priority:20050210
12/12/2023 9:46:49 AM	Google Scholar	optical device substrate light waves reflecting surfaces optical
12/12/2023 9:46:49 AM	Google Patents	**Search Term 1** optical device **Search Term 2** substrate **Search Term 3** light waves **Search Term 4** reflecting surfaces **Search Term 5** optical **Before** Priority Date: priority:20050210

Apple Inc. Exhibit 1002 Page 958

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US	11078857			03/11/2005	US 60647826 US 60583169 US 60562798 US 60620238 US 60618107 US 60605191 US 11078857 US 60592045 US 60647836	US 20050230596 A1	10/20/2005
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US	11183263			07/15/2005	US 60647826 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 11183263 US 60592045 US 60647836	US 20060001827 A1 US 7380938 B2	01/05/2006 06/03/2008
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US	11183283			07/15/2005	US 60647826 US 60527565 US 60583169 US 60509631 US 11183283 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20050248719 A1	11/10/2005

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US	11580222			10/11/2006	US 60583169 US 60725896 US 11183256 US 60787850 US 60846150 US 10964011 US 60725999 US 60527565 US 60509631 US 60562798 US 60620238 US 11580222 US 60818107 US 60805191 US 60592045 US 60647836	US 20070046887 A1 US 7581833 B2	03/01/2007 09/01/2009
US	11546685			10/11/2006	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 60725999 US 11183256 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 60818107 US 60805191 US 60592045 US 60647836	US 20070030442 A1 US 7806525 B2	02/08/2007 10/05/2010
US	11650626			01/06/2007	US 11650626 US 60583169 US 60787850 US 60846150 US 10964011 US 11183256 US 60647826 US 60527565 US 60509631 US 60763854 US 60562798 US 60620238 US 60818107 US 60805191 US 60592045 US 60647836	US 20070109491 A1 US 7677723 B2	05/17/2007 03/16/2010
US	11700550			01/30/2007	US 60583169 US 11700550 US 11078865 US 60787850 US 60846150 US 60647826 US 60763854 US 60562798 US 60620238 US 60818107 US 60805191 US 60592045 US 60647836	US 20070186330 A1	08/16/2007

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US	11903512			09/20/2007	US 60846150 US 11903512	US 20080068559 A1 US 7543934 B2	03/20/2008 06/09/2009
US	12074302			03/03/2008	US 11521256 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 12074302 US 60605191 US 60592045	US 20080151179 A1 US 7621634 B2	06/26/2008 11/24/2009
US	12074961			03/07/2008	US 11497651 US 12074961 US 11006343 US 60527565	US 7890128 B1	02/15/2011
US	12152480			05/13/2008	US 60647826 US 60620238 US 60618107 US 60605191 US 11183263 US 12152480 US 60592045 US 60647836	US 20080218684 A1 US 8337013 B2	09/11/2008 12/25/2012
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US	12317043			12/18/2008	US 60583169 US 11183276 US 10964011 US 11891411 US 12317043 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 12214435 US 60605191 US 60592045 US 60647836	US 20090141233 A1 US 7771046 B2	06/04/2009 08/10/2010
US	12322377			02/02/2009	US 60647826 US 60583169 US 12322377 US 11078855 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20090147215 A1 US 8770742 B2	06/11/2009 07/08/2014
US	12462286			07/31/2009	US 60583169 US 60725896 US 11183269 US 60757850 US 60846150 US 10964011 US 60725999 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60605191 US 12462286 US 60592045 US 60647836	US 20090296044 A1 US 8109629 B2	12/03/2009 02/07/2012
US	12798995			04/14/2010	US 11452115 US 60689586 US 11006343 US 60527565 US 12798995	US 20100205272 A1 US 8744407 B2	08/12/2010 06/03/2014

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US	12803732			07/01/2010	US 60583169 US 60725896 US 11546855 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 11183256 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20110102734 A1 US 8434863 B2	05/05/2011 05/07/2013
US	12806312			08/10/2010	US 60583169 US 60725896 US 60787850 US 10522218 US 11891411 US 60647826 US 60527565 US 12214435 US 60605191 US 12462286 US 60592045 US 60647836 US 11183269 US 11183276 US 60846150 US 10964011 US 12806312 US 60725999 US 12317043 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60462591	US 20100309426 A1 US 8465151 B2	12/09/2010 06/18/2013
US	12987018			01/07/2011	US 12987018 US 11497651 US 12074961 US 11006343 US 60527565	US 8112104 B1	02/07/2012
US	13085402			04/12/2011	US 60583169 US 11183269 US 10964011 US 13085402 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20110187990 A1 US 8500271 B2	08/04/2011 08/06/2013

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US	13291020			11/07/2011	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 11183256 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 13291020 US 60605191 US 60592045 US 60647836	US 20120050668 A1 US 8430507 B2	03/01/2012 04/30/2013
US	13363360			01/31/2012	US 12987018 US 11497651 US 12074961 US 11006343 US 60527565 US 13363360	US 8280419 B1	10/02/2012
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US	13831445			03/14/2013	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 60647826 US 60527565 US 60605191 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 12803732 US 60725993 US 11183256 US 11006343 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 60618107 US 13831445 US 11078857 US 11183263	US 20140268013 A1 US 20170068117 A9 US 10310296 B2	09/18/2014 03/09/2017 06/04/2019
US	13831512			03/14/2013	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 11891411 US 60647826 US 60527565 US 12214435 US 60605191 US 13831512 US 12462286 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 12806312 US 60725999 US 11183256 US 12317043 US 11006343 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 11580222 US 60618107 US 60462591 US 11078857 US 11183263	US 20130201440 A1 US 9690121 B2	08/08/2013 06/27/2017
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US	13955336			07/31/2013	US 60583169 US 11078855 US 11183269 US 11183276 US 10964011 US 13955336 US 10822218 US 13086402 US 11183256 US 60647826 US 11006343 US 60527565 US 60509831 US 11183283 US 60562798 US 11183262 US 60620238 US 60618107 US 60605191 US 11078857 US 11183263 US 60592045 US 60647836	US 20130308089 A1 US 8905542 B2	11/21/2013 12/09/2014
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US	14286976			05/23/2014	US 12987018 US 11497851 US 13580483 US 11006343 US 60527565 US 13363360 US 14286976 US 12074961	US 20140256293 A1 US 11019199 B2	09/11/2014 05/25/2021
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US	14557409			12/01/2014	US 60583169 US 11078855 US 11183269 US 11183276 US 10964011 US 13955336 US 10822218 US 13085402 US 11183256 US 14557409 US 60647826 US 11006343 US 60527565 US 60509531 US 11183283 US 60562798 US 11183262 US 60620238 US 60618107 US 60606191 US 11078857 US 11183263 US 60592045 US 60647836	US 20150085245 A1 US 9547184 B2	03/26/2015 01/17/2017
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US	16127957			09/11/2018	US 14715501 US 60583169 US 60725596 US 11183269 US 60787850 US 60846150 US 10964011 US 13367346 US 60725999 US 16127957 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60605191 US 12462286 US 60592045 US 60647836	US 20190033623 A1 US 11086147 B2	01/31/2019 08/10/2021

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	16182969	1)Howell, Thomas A. 2)Chao, David ,3)Thomas, C. Douglass,4)Tong, Peter P.	EYEWEAR HOUSING FOR CHARGING EMBEDDED BATTERY IN EYEWEAR FRAME	11/07/2018	US 14715501 US 60583169 US 60725896 US 60787850 US 13367346 US 10822218 US 13085402 US 11891411 US 60647826 US 15409723 US 60527565 US 15375423 US 12214436 US 60805191 US 13831512 US 12462286 US 60592045 US 60647836 US 16182969 US 11183269 US 11183276 US 60846150 US 10964011 US 13958336 US 12806312 US 16049120 US 60725999 US 16127967 US 12317043 US 14557409 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60462591	US 20190187492 A1 US 20210364827 A9	06/20/2019 11/25/2021
US	16424018			05/28/2019	US 60583169 US 60725896 US 11546695 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 11183256 US 60647826 US 60527565 US 16424018 US 60509631 US 60562798 US 60620238 US 60618107 US 13291020 US 60805191 US 13831419 US 60592045 US 60647836	US 20190278110 A1 US 11630331 B2	09/12/2019 04/18/2023

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	16426351			05/30/2019	US 14313989 US 60583169 US 12322377 US 11078855 US 16102859 US 16426351 US 60647826 US 15343472 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20190310132 A1 US 10539459 B2	10/10/2019 01/21/2020
US	16429181			06/03/2019	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 13831455 US 12503732 US 60725999 US 11183256 US 60647826 US 60527565 US 60509631 US 16429181 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20190285913 A1 US 11513371 B2	09/19/2019 11/29/2022
US	16445452			06/19/2019	US 12987018 US 11497651 US 13593483 US 11006343 US 60527565 US 13363360 US 14286976 US 12074961 US 16445452	US 20190306304 A1 US 11792316 B2	10/03/2019 10/17/2023
US	16446710			06/20/2019	US 12987018 US 11497651 US 13593483 US 11006343 US 60527565 US 13363360 US 14286976 US 12074961 US 16446710	US 20190306305 A1 US 11711459 B2	10/03/2019 07/25/2023
US	16556205			08/29/2019	US 14922344 US 11006343 US 60527565 US 14272632 US 15469440 US 11452115 US 60889686 US 15704181 US 12798995 US 16556205	US 20190387371 A1 US 10708727 B2	12/19/2019 07/07/2020

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	16574254			09/18/2019	US 60583169 US 11183269 US 10964011 US 13956336 US 13086402 US 16049120 US 14557409 US 60647826 US 60527565 US 60509631 US 15375423 US 60562798 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20200012127 A1 US 11204512 B2	01/09/2020 12/21/2021
US	16703805			12/04/2019	US 14313989 US 60583169 US 12322377 US 11078855 US 16102859 US 16426351 US 16703805 US 60647826 US 15343472 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20200109986 A1 US 11326941 B2	04/09/2020 05/10/2022
US	16794458			02/19/2020	US 14922344 US 11006343 US 60527565 US 14272632 US 16794458 US 15469440 US 11452115 US 60589686 US 15704181 US 12798995 US 16556205	US 20200186975 A1 US 11800329 B2	06/11/2020 10/24/2023
US	16821810			03/17/2020	US 60583169 US 16821810 US 11183269 US 10964011 US 13956336 US 13086402 US 16049120 US 14557409 US 60647826 US 60527565 US 60509631 US 15375423 US 60562798 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20200218094 A1 US 11536988 B2	07/09/2020 12/27/2022

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	17395509			08/06/2021	US 14715501 US 60583169 US 60725896 US 11183269 US 60787850 US 60846150 US 10964011 US 13367346 US 17395509 US 60725999 US 16127957 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60605191 US 12462286 US 60592045 US 60647836	US 20210364828 A1 US 11762224 B2	11/25/2021 09/19/2023
US	17484080			09/24/2021	US 17484080 US 60583169 US 11183269 US 10964011 US 13955336 US 13085402 US 16049120 US 14557409 US 60647826 US 60527565 US 60509631 US 15375423 US 60562798 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20220011603 A1	01/13/2022
US	17681593			02/25/2022	US 14313989 US 60583169 US 12322377 US 11078855 US 16102859 US 16426351 US 16703805 US 17681593 US 60647826 US 15343472 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20220178743 A1 US 11644361 B2	06/09/2022 05/09/2023

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	17737866			05/05/2022	US 14715501 US 60725896 US 17737866 US 60787850 US 60846150 US 13367346 US 11580222 US 17395509 US 12462286 US 60725999 US 16127957	US 20220260859 A1 US 11733549 B2	08/18/2022 08/22/2023
US	17873104			07/25/2022	US 17484080 US 11183269 US 13956336 US 13086402 US 16049120 US 14557409 US 60647826 US 15376423 US 17873104 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20220357599 A1 US 11644693 B2	11/10/2022 05/09/2023
US	17942347			09/12/2022	US 60725896 US 11546685 US 60787850 US 60846150 US 17942347 US 12503732 US 60725999 US 11183256 US 60647826 US 16429181 US 60620238 US 60618107 US 13831445 US 60647836	US 20230057654 A1	02/23/2023
US	17949029			09/20/2022	US 17949029 US 17484080 US 11183269 US 13956336 US 13086402 US 16049120 US 14557409 US 60647826 US 15376423 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20230017635 A1	01/19/2023

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	17964853			10/12/2022	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 17964853 US 11183256 US 60647826 US 60527565 US 60509631 US 16429181 US 60562798 US 60620238 US 60618107 US 13831445 US 60606191 US 60592045 US 60647836	US 20230033660 A1	02/02/2023
US	18129660			03/31/2023	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 11183256 US 60647826 US 18129660 US 60527565 US 16424018 US 60509631 US 60562798 US 60620238 US 60618107 US 13291020 US 60606191 US 13831419 US 60592045 US 60647836	US 20230236444 A1 US 11803089 B2	07/27/2023 10/31/2023
US	18144557			05/08/2023	US 17484080 US 18144557 US 11183269 US 13955336 US 13085402 US 16049120 US 14557409 US 60647826 US 15375423 US 17873104 US 60620238 US 60618107 US 16574254 US 60606191 US 60592045 US 60647836	US 20230273464 A1	08/31/2023

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	18224793			07/21/2023	US 60725896 US 11546685 US 60757850 US 60846150 US 12803732 US 60725999 US 18224793 US 11183256 US 60647826 US 18129660 US 16424018 US 60620238 US 60618107 US 13291020 US 60605191 US 13831419 US 60592045 US 60647836	US 20230359266 A1 US 11829518 B1	11/09/2023 11/28/2023

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

34071 7590 02/22/2024

IPVENTURE, INC.
4010 Moorpark Avenue
Suite 211
San Jose, CA 95117

EXAMINER	
LEI, JIE	
ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 02/22/2024

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/375,893	10/02/2023	Thomas A. Howell	IPVCP003X1C4X1C1	4776

TITLE OF INVENTION: SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	05/22/2024

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PTOL-85 (Rev. 11/23)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

34071 7590 02/22/2024
IPVENTURE, INC.
4010 Moorpark Avenue
Suite 211
San Jose, CA 95117

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/375,893	10/02/2023	Thomas A. Howell	IPVCP003X1C4X1C1	4776

TITLE OF INVENTION: SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	05/22/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEI, JIE	2872	351-158000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑Issue Fee ❑Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via the USPTO patent electronic filing system ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/375,893	10/02/2023	Thomas A. Howell	IPVCP003X1C4X1C1	4776

34071 7590 02/22/2024

IPVENTURE, INC.
4010 Moorpark Avenue
Suite 211
San Jose, CA 95117

EXAMINER	
LEI, JIE	

ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 02/22/2024

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 11/23)

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/ owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).
https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf

Routine uses of the information in this record may include disclosure to:

1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
2) a federal, state, local, or international agency, in response to its request;
3) a contractor of the USPTO having need for the information in order to perform a contract;
4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
9) the Office of Personnel Management (OPM) for personnel research purposes; and
10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Notice of Allowability	Application No. 18/375,893	Applicant(s) Howell et al.	
	Examiner JIE LEI	Art Unit 2872	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to filing of 2/13/2024.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are See Continuation Sheet . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/JIE LEI/
Primary Examiner, Art Unit 2872

Continuation of 3. The allowed claim(s) is/are: 1-8,10-26,29-34 and 38-65

REASONS FOR ALLOWANCE

1. The present application is being examined under the pre-AIA first to invent provisions. This office action is in response to the filing of 2/13/2024.

Election/Restrictions

2. Claims 1, 19, 40, 43 and 49 are allowable. The restriction requirement between the Inventions, as set forth in the Office action mailed on 11/14/2023, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Specifically, the restriction requirement of 11/14/2023 is withdrawn. Withdrawn claims directed to other Inventions are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See In re Ziegler, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Allowable Subject Matter

3. Claims 1-8, 10-26,29-34 and 38-65 are allowed.

4. The following is an examiner's statement of reasons for allowance: the prior art taken singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper.

In regard to independent claims 1, 19, 40, 43 and 49, the closest prior art are US 6349001 of Spitzer and US 5835185 of Kallman et al.

Regarding Claims 1, 19, 40, 43 and 49, Spitzer teaches a system, comprising: a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a user; at least one speaker at least partially internal to the head-worn structure, the at least one speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus; a battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least

the battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the battery .

Kallman teaches an eyewear system, wherein, a rechargeable battery contained within the head-worn structure; at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having a charging connector, wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head- worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

But none of them teaches that wherein a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user; wherein a sensor at least partially contained within the head-worn structure and configured to capture data; the electronic circuitry being configured to process at least the data captured by the sensor, and the electronic circuitry being configured to determine whether the head-worn structure is being worn by a user based on at least the processed sensor data.

The prior art taken either singly or in combination fails to anticipate or fairly suggest a system further comprising:

wherein a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user; wherein a sensor at least partially contained within the head-worn structure and configured to capture data; the electronic circuitry being configured to process at least the data captured by the sensor, and the electronic circuitry being configured to determine whether the head-worn structure is being worn by a user based on at least the processed sensor data,

as claimed; recited together in combination with the totality of particular features/limitations recited therein.

Claims 2-8 and 10-18 are also allowed due to their dependence on claim 1.

Claims 20-26, 29-34, 38-39 and 42 are also allowed due to their dependence on claim 19.

Claims 41 and 65 are also allowed due to their dependence on claim 40.

Claims 44-48 are also allowed due to their dependence on claim 43.

Claims 50-64 are also allowed due to their dependence on claim 49.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Jie Lei whose telephone number is (571) 272 7231. The examiner can normally be reached on Mon.-Thurs. 8:00 am to 5:30 pm.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, Thomas Pham can be reached on (571) 272 3689.The Fax number for the organization where this application is assigned is (571) 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Services Representative or access to the automated information system, call 800-786-9199(In USA or Canada) or 571-272-1000.

/JIE LEI/
Primary Examiner, Art Unit 2872

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ISSUE FEE TRANSMITTAL FORM

APPLICATION #	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET #
18375893	10/02/2023	Thomas Howell	IPVCP003X1C4X1C1

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

APPLICATION TYPE	Nonprovisional Application under 35 USC 111(a)	DATE DUE	05/22/2024
CONFIRMATION #	4776	ISSUE FEE DUE	$ 1200
EXAMINER	JIE LEI	PUBLICATION DUE	$ 0
GROUP ART UNIT	2872	TOTAL FEES DUE	$1200
CLASS - SUBCLASS	351/158000	PREV. PAID FEE	$ 0
ENTITY STATUS	Regular Undiscounted		

1. CHANGE OF CORRESPONDENCE ADDRESS AND/OR INDICATION OF FEE ADDRESS (37 CFR 1.33 & 1.363)

Correspondence Address

CURRENT ADDRESS

Maintenance Fee Address

CURRENT ADDRESS

☐ Change of correspondence address requested,system generated AIA/122-PC form attached

☐ Fee address indication requested, system generatedSB/47-PC form attached

2. ENTITY STATUS

Change in Entity Status

NEW STATUS

3. THE FOLLOWING FEES ARE SUBMITTED

☑ Issue Fee

☑ Publication Fee

4. FEE AUTHORIZATION

☐ I authorize USPTO to apply my previously paid issue fee to the current fees due

☐ The Director is herby authorized to apply my previously paid issue fee to the current fee due and to charge deficient fees to Deposit Account Number:

☑ If in addition to the payment of the issue fee amount submitted with this form, there are any discrepencies in any amount(s) due, the Director is authorized to charge any deficiency, or credit any overpayment, to Deposit Account Number: 503874

5. FIRM AND/OR ATTORNEY NAMES TO BE PRINTED

NOTE: If no name is listed, no name will be printed
For printing on the patent front page, list to be displayed as entered

6. ASSIGNEE NAME(S) AND RESIDENCE DATA TO BE PRINTED

NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been

Apple Inc. Exhibit 1002 Page 993

filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a susbstitute for filing an assignment.

IngenioSpec, LLC	San Jose, CA UNITED STATES	Corporation

Signature

I certify, in accordance with 37 CFR 1.4(d)(4) that I am an attorney or agent registered to practice before the Patent and Trademark Office who has filed and has been granted power of attorney in this application. I also certify that this Fee(s) Transmittal form is being transmitted to the USPTO via Patent Center on the date indicated below.

Signature	Name	Registration #	Date
/Peter Tong/	Peter Tong	35757	02/23/2024

Apple Inc. Exhibit 1002 Page 994

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/375,893	**02/23/2024 06:34:40 PM Z ET**	**IPVCP003X1C4X1C1**

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4776	FILED BY	Peter Tong
PATENT CENTER #	64427080	FILING DATE	10/02/2023
CUSTOMER #	34071	FIRST NAMED INVENTOR	Thomas A. Howell
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
web85b.pdf	3	Issue Fee Payment (PTO-85B)	58 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
web85b.pdf	6995C0DB5655D74AC1074D9225575C013A2D37BABD7E598E3 2EA224D2A2178F007CED66D6551F50C39874EBD0669FBE1E3 409BBE5D45BD4BC9B3C3726C468917

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/375,893	**02/23/2024 06:34:40 PM Z ET**	**IPVCP003X1C4X1C1**

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4776	FILED BY	Peter Tong
PATENT CENTER #	64427080	AUTHORIZED BY	-
CUSTOMER #	34071	FILING DATE	10/02/2023
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Thomas A. Howell

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 9649	**E20242MI36526145**	**Peter Tong**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1501	UTILITY ISSUE FEE	1200.00	1	1200.00
			TOTAL AMOUNT:	**$1,200.00**

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New Applications Under 35 U.S.C. 111

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National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage

submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/375,893	**02/23/2024 09:50:32 PM Z ET**	**IPVCP003X1C4X1C1**

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4776	FILED BY	Angela Nijim
PATENT CENTER #	64435232	FILING DATE	10/02/2023
CUSTOMER #	34071	FIRST NAMED INVENTOR	Thomas A. Howell
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Peter Tong

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
IPVCP003X1C4X1C1_Amd_312_AsFiled_2-24-APP.TEXT.docx	19	Application body structured text document	34 KB
IPVCP003X1C4X1C1_Amd_312_AsFiled_2-24.pdf	19	Auxiliary PDF of Application	87 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
IPVCP003X1C4X1C1_Amd_312_AsFiled_2-24-APP.TEXT.docx	427204DC9212DFE597E81549D1B176DF10900D46AF431E2032651EF1C209CE11AD81924F1824E55017B2BF2A1A988D72E5ADB8E62B6DB6184388E512DFD3B020

IPVCP003X1C4X1C1_Amd_312_AsFiled_2-24.pdf

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery, and the electronic circuitry being electrically connected to the touch sensitive surface;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

2. (Previously Presented) A system as recited in claim 1, wherein the sensed touch input by the touch sensitive surface operates to at least alter operation of the head-worn personal electronic apparatus.

3. (Previously Presented) A system as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

4. (Currently Amended) A system as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

5. (Previously Presented) A system as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to distinguish at least a direction of the user input with respect to the touch sensitive surface.

6. (Previously Presented) A system as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to detect at least a sliding of a finger action with respect to the touch sensitive surface.

7. (Previously Presented) A system as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to facilitate determination at least whether the user input pertains to a forward sliding action or a backward sliding action with respect to the touch sensitive surface.

8. (Previously Presented) A system as recited in claim 1, wherein the head-worn structure comprises:

a physical condition sensor at least partially contained within the head-worn structure and configured to acquire data pertaining to a physical condition of the user, the

physical condition sensor being provided at least partially contained within the head-worn structure.

9. (Canceled).

10. (Previously Presented) A system as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

at least one magnetic element at least partially contained within the head-worn structure and configured to support a magnetic force that facilitates an electrical connection.

11. (Currently Amended) A system as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a microphone at least partially contained within the head-worn structure,

wherein the head-worn personal electronic apparatus ~~device~~ is configured to receive a voice input via the microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personable electronic apparatus ~~device~~ based on the requested operation.

12. (Previously Presented) A system as recited in claim 1, wherein the head-worn structure comprises:

a radiation sensor, operatively connected to the rechargeable battery, at least partially contained within the head-worn structure and configured to sense radiation.

13. (Previously Presented) A system as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a sensor at least partially contained within the head-worn structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user.

14. (Previously Presented) A system as recited in claim 13, wherein the sensor is electrically connected to the electronic circuitry, and wherein the electronic circuitry contained within the head-worn structure of the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor.

15. (Currently Amended) A system as recited in claim 14, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

16. (Currently Amended) A system as recited in claim 14, wherein the head-worn personal electronic apparatus is configured to support a low power operational mode, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in the low power operational mode.

17. (Previously Presented) A system as recited in claim 1, wherein the system comprises:

a Hall effect detector configured to capture data associated with a magnetic characteristic.

18. (Previously Presented) A system as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn structure and configured to operate in accordance with acoustic characteristics, the bone conducting element being operatively connected to the electronic circuitry.

19. (Previously Presented) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

a sensor at least partially contained within the head-worn structure and configured to capture data;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least one or more of the first microphone, the second microphone, the rechargeable battery and the sensor, the electronic circuitry being configured to at least process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, the electronic circuitry being configured to process at least the data captured by the sensor, and the electronic circuitry being configured to determine whether the head-worn structure is being worn by a user based on at least the processed sensor data;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

20. (Previously Presented) A system as recited in claim 19, wherein the first microphone is positioned to be directed forward towards the user's front when the head-worn structure is being worn by the user, and the second microphone is positioned to be directed outward away from the user's head when the head-worn structure is being worn by the user.

21. (Original) A system as recited in claim 20, wherein the head-worn personal electronic apparatus comprises:

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus.

22. (Currently Amended) A system as recited in claim 21, wherein the head-worn electronic personal audio apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn electronic personal audio apparatus being altered concerns control of the audio output being provided to the user.

23. (Previously Presented) A system as recited in claim 21, wherein the system comprises:

a Hall effect detector configured to capture data associated with a magnetic characteristic.

24. (Previously Presented) A system as recited in claim 19, wherein the sensor is positioned to be directed towards the user's head when the head-worn structure is being worn.

25. (Previously Presented) A system as recited in claim 24, wherein the data captured by the sensor is dependent on thermal characteristics of the user's head when the head-worn structure is being worn.

26. (Currently Amended) A system as recited in claim 19, wherein the head-worn personal electronic apparatus ~~comprises: wherein the head-worn personal electronic device~~ is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic apparatus ~~device~~ based on the requested operation.

27. (Canceled).

28. (Canceled).

29. (Previously Presented) A system as recited in claim 19, wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor.

30. (Currently Amended) A system as recited in claim 29, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

31. (Original) A system as recited in claim 19, wherein the head-worn personal electronic apparatus comprises:

a user input device supported by the head-worn structure, the user input device being configured to receive a user input, the user input device is based on at least capacitive effect, wherein the user input being received induces at least a capacitive change to produce at least an electrical response.

32. (Original) A system as recited in claim 31, wherein the user input device is configured to distinguish at least a direction of the user input with respect to the user input device.

33. (Original) A system as recited in claim 31, wherein the electronic circuitry is electrically connected to the user input device to receive user input data from the user input device, and wherein the head-worn personal electronic apparatus is configured to detect at least a sliding of a finger action with respect to the user input device using at least the electronic circuitry and the user input data.

34. (Original) A system as recited in claim 31, wherein the electronic circuitry is electrically connected to the user input device to receive user input data from the user input device, and wherein the head-worn personal electronic apparatus is configured to distinguish at least whether the user input pertains to a forward sliding action or a backward sliding action with respect to the user input device using at least the electronic circuitry and the user input data.

35. (Canceled).

36. (Canceled).

37. (Canceled).

38. (Previously Presented) A system as recited in claim 19, wherein the system comprises:

a Hall effect detector.

39. (Original) A system as recited in claim 19, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn structure and configured to operate based on signals associated with sound, the bone conducting element being operatively connected to the electronic circuitry.

40. (Previously Presented) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

a "being worn" sensor at least partially contained within the head-worn structure and configured to detect data indicative of whether the head-worn structure of the head-worn personal electronic apparatus is being worn;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least one or more of the first microphone, the second microphone, the rechargeable battery and the "being worn" sensor, the electronic circuitry being configured to at least process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, the electronic circuitry being configured to process at least the detected data captured by the "being worn" sensor;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

41. (Previously Presented) A system as recited in claim 40, wherein the detected data by the "being worn" sensor is dependent on a physical characteristic of the user.

42. (Original) A system as recited in claim 19, wherein the conductive element is a conductive pad.

43. (Currently Amended) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus;

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus; [[.]]

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

44. (Currently Amended) A system as recited in claim 43, wherein the head-worn personal electronic apparatus comprises:

wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and

wherein the head-worn personal electronic apparatus ~~device~~ is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic apparatus ~~device~~ based on the requested operation.

45. (Previously Presented) A system as recited in claim 44, wherein the head-worn personal electronic apparatus comprises:

at least one magnetic element at least partially contained within the head-worn structure and configured to support a magnetic force that facilitates an electrical connection.

46. (Previously Presented) A system as recited in claim 44, wherein the head-worn personal electronic apparatus comprises:

a sensor at least partially contained within the head-worn structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user,

wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor.

47. (Previously Presented) A system as recited in claim 46, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

48. (Previously Presented) A system as recited in claim 46, wherein the head-worn personal electronic apparatus is configured to support a low power operational mode, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in the low power operational mode.

49. (Previously Presented) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery;

a radiation emitter at least partially contained within the head-worn structure and configured to at least direct radiation towards the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn;

a radiation detector at least partially contained within the head-worn structure and configured to detect at least a portion of the radiation from the radiation emitter that

is reflected back from the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

50. (Previously Presented) A system as recited in claim 49,

wherein the radiation detector is operatively connected to the electronic circuitry, and

wherein electronic circuitry within the head-worn structure is configured to facilitate determining whether the head-worn structure of the head-worn personal electronic apparatus is being worn by the user.

51. (Previously Presented) A system as recited in claim 50, wherein the head-worn personal electronic apparatus comprises:

at least one magnetic element at least partially contained within the head-worn structure and configured to support a magnetic force that facilitates an electrical connection.

52. (Currently Amended) A system as recited in claim 50,

wherein the second microphone is positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and

wherein the head-worn personal electronic apparatus ~~device~~ is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic apparatus ~~device~~ based on the requested operation.

53. (Previously Presented) A system as recited in claim 50, wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the determination of whether the head-worn structure of the head-worn personal electronic apparatus is being worn by the user based on at least the motion data.

54. (Currently Amended) A system as recited in claim 53, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

55. (Currently Amended) A system as recited in claim 53, wherein the head-worn personal electronic apparatus is configured to support a low power operational mode, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in the low power operational mode.

56. (Previously Presented) A system as recited in claim 50, wherein the radiation detector is an infrared radiation detector, and wherein the radiation being detected by the radiation detector includes infrared radiation.

57. (Previously Presented) A system as recited in claim 56, wherein the first microphone is positioned to be directed forward towards the user's front when the head-

worn structure is being worn by the user, and the second microphone is positioned to be directed outward away from the user's head when the head-worn structure is being worn by the user.

58. (Previously Presented) A system as recited in claim 57, wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the determination of whether the head-worn structure of the head-worn personal electronic apparatus is being worn by the user.

59. (Currently Amended) A system as recited in claim 58,

wherein the second microphone is positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and

wherein the head-worn personal electronic apparatus ~~device~~ is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic apparatus ~~device~~ based on the requested operation.

60. (Previously Presented) A system as recited in claim 59,

wherein the motion detector comprises an accelerometer, and

wherein the system comprises a Hall effect detector.

61. (Previously Presented) A system as recited in claim 49, wherein the head-worn personal electronic apparatus comprises:

a force sensor at least partially contained within the head-worn structure and configured to sense a force input associated with the user, wherein the sensed force input operating to at least alter operation of the head-worn electronic personal audio apparatus.

62. (Currently Amended) A system as recited in claim 61, wherein the head-worn electronic personal audio apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn electronic personal audio apparatus being altered concerns control of the audio output being provided to the user.

63. (Currently Amended) A system as recited in claim 61, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

64. (Previously Presented) A system as recited in claim 49, wherein the first microphone is positioned to be directed forward towards the user's front when the head-worn structure is being worn by the user, and the second microphone is positioned to be directed outward away from the user's head when the head-worn structure is being worn by the user.

65. (Previously Presented) A system as recited in claim 40, wherein the head-worn structure comprises:

an accelerometer, operatively connected to the rechargeable battery, at least partially contained within the head-worn structure and configured to sense movement data.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al.	Attorney Docket No.: IPVCP003X1C4X1C1
Application No.: 18/375,893	Examiner: LEI, JIE
Filed: October 2, 2023	Group: 2872
Title: SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC DEVICES	

AMENDMENT UNDER 37 CFR 1.312

Mail Stop _____
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Further to the Notice of Allowance mailed February 22, 2024, please amend the above-identified as follows:

Amendments to the Claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks/Arguments begin on page 19 of this paper.

REMARKS

Further to the Notice of Allowance, claims 3, 4, 11, 15, 16, 22, 26, 30, 43, 44, 52, 54, 55, 59, 62 and 63 have been amended to correct minor informalities. Claims 1-8, 10-26, 29-34 and 38-65 remain pending. Entry of this Amendment is respectfully requested.

Respectfully submitted,

/C. Douglass Thomas/

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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AMENDMENT UNDER 37 CFR 1.312 [Revised]

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Alexandria, VA 22313-1450

Dear Sir:

Further to the Notice of Allowance mailed February 22, 2024, please amend the above-identified as follows:

Amendments to the Claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks/Arguments begin on page 19 of this paper.

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery, and the electronic circuitry being electrically connected to the touch sensitive surface;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

2. (Previously Presented) A system as recited in claim 1, wherein the sensed touch input by the touch sensitive surface operates to at least alter operation of the head-worn personal electronic apparatus.

3. (Previously Presented) A system as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

4. (Currently Amended) A system as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

5. (Previously Presented) A system as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to distinguish at least a direction of the user input with respect to the touch sensitive surface.

6. (Previously Presented) A system as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to detect at least a sliding of a finger action with respect to the touch sensitive surface.

7. (Previously Presented) A system as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to facilitate determination at least whether the user input pertains to a forward sliding action or a backward sliding action with respect to the touch sensitive surface.

8. (Previously Presented) A system as recited in claim 1, wherein the head-worn structure comprises:

a physical condition sensor at least partially contained within the head-worn structure and configured to acquire data pertaining to a physical condition of the user, the

physical condition sensor being provided at least partially contained within the head-worn structure.

9. (Canceled).

10. (Previously Presented) A system as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

at least one magnetic element at least partially contained within the head-worn structure and configured to support a magnetic force that facilitates an electrical connection.

11. (Currently Amended) A system as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a microphone at least partially contained within the head-worn structure,

wherein the head-worn personal electronic apparatus ~~device~~ is configured to receive a voice input via the microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personable electronic apparatus ~~device~~ based on the requested operation.

12. (Previously Presented) A system as recited in claim 1, wherein the head-worn structure comprises:

a radiation sensor, operatively connected to the rechargeable battery, at least partially contained within the head-worn structure and configured to sense radiation.

13. (Previously Presented) A system as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a sensor at least partially contained within the head-worn structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user.

14. (Previously Presented) A system as recited in claim 13, wherein the sensor is electrically connected to the electronic circuitry, and wherein the electronic circuitry contained within the head-worn structure of the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor.

15. (Currently Amended) A system as recited in claim 14, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

16. (Currently Amended) A system as recited in claim 14, wherein the head-worn personal electronic apparatus is configured to support a low power operational mode, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in the low power operational mode.

17. (Previously Presented) A system as recited in claim 1, wherein the system comprises:

a Hall effect detector configured to capture data associated with a magnetic characteristic.

18. (Previously Presented) A system as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn structure and configured to operate in accordance with acoustic characteristics, the bone conducting element being operatively connected to the electronic circuitry.

19. (Currently Amended) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be at or adjacent ~~worn proximate~~ to an ear of the user when the head-worn structure is being worn by the user;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

a sensor at least partially contained within the head-worn structure and configured to capture data;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least one or more of the first microphone, the second microphone, the rechargeable battery and the sensor, the electronic circuitry being configured to at least process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, the electronic circuitry being configured to process at least the data captured by the sensor, and the electronic circuitry being configured to determine whether the head-worn structure is being worn by a user based on at least the processed sensor data;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

20. (Previously Presented) A system as recited in claim 19, wherein the first microphone is positioned to be directed forward towards the user's front when the head-worn structure is being worn by the user, and the second microphone is positioned to be directed outward away from the user's head when the head-worn structure is being worn by the user.

21. (Original) A system as recited in claim 20, wherein the head-worn personal electronic apparatus comprises:

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus.

22. (Currently Amended) A system as recited in claim 21, wherein the head-worn electronic personal audio apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn electronic personal audio apparatus being altered concerns control of the audio output being provided to the user.

23. (Previously Presented) A system as recited in claim 21, wherein the system comprises:

a Hall effect detector configured to capture data associated with a magnetic characteristic.

24. (Previously Presented) A system as recited in claim 19, wherein the sensor is positioned to be directed towards the user's head when the head-worn structure is being worn.

25. (Previously Presented) A system as recited in claim 24, wherein the data captured by the sensor is dependent on thermal characteristics of the user's head when the head-worn structure is being worn.

26. (Currently Amended) A system as recited in claim 19, wherein the head-worn personal electronic apparatus ~~comprises: wherein the head-worn personal electronic device~~ is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic apparatus ~~device~~ based on the requested operation.

27. (Canceled).

28. (Canceled).

29. (Previously Presented) A system as recited in claim 19, wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor.

30. (Currently Amended) A system as recited in claim 29, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

31. (Original) A system as recited in claim 19, wherein the head-worn personal electronic apparatus comprises:

a user input device supported by the head-worn structure, the user input device being configured to receive a user input, the user input device is based on at least capacitive effect, wherein the user input being received induces at least a capacitive change to produce at least an electrical response.

32. (Original) A system as recited in claim 31, wherein the user input device is configured to distinguish at least a direction of the user input with respect to the user input device.

33. (Original) A system as recited in claim 31, wherein the electronic circuitry is electrically connected to the user input device to receive user input data from the user input device, and wherein the head-worn personal electronic apparatus is configured to detect at least a sliding of a finger action with respect to the user input device using at least the electronic circuitry and the user input data.

34. (Original) A system as recited in claim 31, wherein the electronic circuitry is electrically connected to the user input device to receive user input data from the user input device, and wherein the head-worn personal electronic apparatus is configured to distinguish at least whether the user input pertains to a forward sliding action or a backward sliding action with respect to the user input device using at least the electronic circuitry and the user input data.

35. (Canceled).

36. (Canceled).

37. (Canceled).

38. (Previously Presented) A system as recited in claim 19, wherein the system comprises:

a Hall effect detector.

39. (Original) A system as recited in claim 19, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn structure and configured to operate based on signals associated with sound, the bone conducting element being operatively connected to the electronic circuitry.

40. (Previously Presented) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

a "being worn" sensor at least partially contained within the head-worn structure and configured to detect data indicative of whether the head-worn structure of the head-worn personal electronic apparatus is being worn;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least one or more of the first microphone, the second microphone, the rechargeable battery and the "being worn" sensor, the electronic circuitry being configured to at least process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, the electronic circuitry being configured to process at least the detected data captured by the "being worn" sensor;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

41. (Previously Presented) A system as recited in claim 40, wherein the detected data by the "being worn" sensor is dependent on a physical characteristic of the user.

42. (Original) A system as recited in claim 19, wherein the conductive element is a conductive pad.

43. (Currently Amended) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be at or adjacent ~~worn proximate~~ to an ear of the user when the head-worn structure is being worn by the user;

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus;

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus; [[.]]

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

44. (Currently Amended) A system as recited in claim 43, wherein the head-worn personal electronic apparatus comprises:

wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and

wherein the head-worn personal electronic apparatus ~~device~~ is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic apparatus ~~device~~ based on the requested operation.

45. (Previously Presented) A system as recited in claim 44, wherein the head-worn personal electronic apparatus comprises:

at least one magnetic element at least partially contained within the head-worn structure and configured to support a magnetic force that facilitates an electrical connection.

46. (Previously Presented) A system as recited in claim 44, wherein the head-worn personal electronic apparatus comprises:

a sensor at least partially contained within the head-worn structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user,

wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor.

47. (Previously Presented) A system as recited in claim 46, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

48. (Previously Presented) A system as recited in claim 46, wherein the head-worn personal electronic apparatus is configured to support a low power operational mode, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in the low power operational mode.

49. (Currently Amended) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be at or adjacent ~~worn proximate~~ to an ear of the user when the head-worn structure is being worn by the user;

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery;

a radiation emitter at least partially contained within the head-worn structure and configured to at least direct radiation towards the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn;

a radiation detector at least partially contained within the head-worn structure and configured to detect at least a portion of the radiation from the radiation emitter that

is reflected back from the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

50. (Previously Presented) A system as recited in claim 49,

wherein the radiation detector is operatively connected to the electronic circuitry, and

wherein electronic circuitry within the head-worn structure is configured to facilitate determining whether the head-worn structure of the head-worn personal electronic apparatus is being worn by the user.

51. (Previously Presented) A system as recited in claim 50, wherein the head-worn personal electronic apparatus comprises:

at least one magnetic element at least partially contained within the head-worn structure and configured to support a magnetic force that facilitates an electrical connection.

52. (Currently Amended) A system as recited in claim 50,

wherein the second microphone is positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and

wherein the head-worn personal electronic apparatus ~~device~~ is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic apparatus ~~device~~ based on the requested operation.

53. (Previously Presented) A system as recited in claim 50, wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the determination of whether the head-worn structure of the head-worn personal electronic apparatus is being worn by the user based on at least the motion data.

54. (Currently Amended) A system as recited in claim 53, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

55. (Currently Amended) A system as recited in claim 53, wherein the head-worn personal electronic apparatus is configured to support a low power operational mode, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in the low power operational mode.

56. (Previously Presented) A system as recited in claim 50, wherein the radiation detector is an infrared radiation detector, and wherein the radiation being detected by the radiation detector includes infrared radiation.

57. (Previously Presented) A system as recited in claim 56, wherein the first microphone is positioned to be directed forward towards the user's front when the head-

worn structure is being worn by the user, and the second microphone is positioned to be directed outward away from the user's head when the head-worn structure is being worn by the user.

58. (Previously Presented) A system as recited in claim 57, wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the determination of whether the head-worn structure of the head-worn personal electronic apparatus is being worn by the user.

59. (Currently Amended) A system as recited in claim 58,

wherein the second microphone is positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the electronic circuitry is configured to process the audio input from at least the user via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked up via the second microphone, and

wherein the head-worn personal electronic apparatus ~~device~~ is configured to receive a voice input via the first microphone, determine or receive a determination of a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic apparatus ~~device~~ based on the requested operation.

60. (Previously Presented) A system as recited in claim 59,

wherein the motion detector comprises an accelerometer, and

wherein the system comprises a Hall effect detector.

61. (Previously Presented) A system as recited in claim 49, wherein the head-worn personal electronic apparatus comprises:

a force sensor at least partially contained within the head-worn structure and configured to sense a force input associated with the user, wherein the sensed force input operating to at least alter operation of the head-worn electronic personal audio apparatus.

62. (Currently Amended) A system as recited in claim 61, wherein the head-worn electronic personal audio apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn electronic personal audio apparatus being altered concerns control of the audio output being provided to the user.

63. (Currently Amended) A system as recited in claim 61, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

64. (Previously Presented) A system as recited in claim 49, wherein the first microphone is positioned to be directed forward towards the user's front when the head-worn structure is being worn by the user, and the second microphone is positioned to be directed outward away from the user's head when the head-worn structure is being worn by the user.

65. (Previously Presented) A system as recited in claim 40, wherein the head-worn structure comprises:

an accelerometer, operatively connected to the rechargeable battery, at least partially contained within the head-worn structure and configured to sense movement data.

REMARKS

Further to the Notice of Allowance, claims 3, 4, 11, 15, 16, 19, 22, 26, 30, 43, 44, 49, 52, 54, 55, 59, 62 and 63 have been amended to correct minor informalities. Claims 1-8, 10-26, 29-34 and 38-65 remain pending. Entry of this Amendment is respectfully requested.

Respectfully submitted,

/C. Douglass Thomas/

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/375,893	**02/27/2024 09:52:35 PM Z ET**	**IPVCP003X1C4X1C1**

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4776	FILED BY	Angela Nijim
PATENT CENTER #	64472390	FILING DATE	10/02/2023
CUSTOMER #	34071	FIRST NAMED INVENTOR	Thomas A. Howell
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Peter Tong

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
IPVCP003X1C4X1C1_Amd_312_Revised_AsFiled_2-27-24-APP.TEXT.docx	19	Application body structured text document	34 KB
Warning: The automatic document description has been replaced.			
IPVCP003X1C4X1C1_Amd_312_Revised_AsFiled_2-27-24.pdf	19	Auxiliary PDF of Application	88 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)

IPVCP003X1C4X1C1_Amd_312_Revised_AsFiled_2-27-24-APP.TEXT.docx	4663E7F183C89AD7F958800F001301D6ECE738842B49A94D39268D149450E4B545B91EF934C87F8F929323FD9333E11DBEF4F71C805D18E2BDF705CFC0435E96
IPVCP003X1C4X1C1_Amd_312_Revised_AsFiled_2-27-24.pdf	13F25B5BBF634DE0D9300D418798AEA1D8692B30B99158BF17E6938285D063C10D9AAEBF6BC9FFAD09596510C30028A1EF3AD2318028823D949B4963EEA4AC41

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/375,893	**03/29/2024 04:10:03 PM Z ET**	**IPVCP003X1C4X1C1**

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4776	FILED BY	Peter Tong
PATENT CENTER #	64898672	AUTHORIZED BY	-
CUSTOMER #	34071	FILING DATE	10/02/2023
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Thomas A. Howell

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
DA / 503874	**E20243SG14105404**	**Peter Tong**

PRE-AUTHORIZED ACCOUNT	PRE-AUTHORIZED CATEGORY
503874	**37 CFR 1.21 (Miscellaneous fees and charges)**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1464	PETITIONS REQUIRING THE PETITION FEE SET FORTH IN 37 CFR 1.17(H) (GROUP III)	140.00	1	140.00
1801	REQUEST FOR CONTINUED EXAMINATION (RCE) - 1ST REQUEST (SEE 37 CFR 1.114)	1360.00	1	1360.00
			TOTAL AMOUNT:	**$1,500.00**

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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PETITION TO WITHDRAW AN APPLICATION FROM ISSUE AFTER PAYMENT OF THE ISSUE FEE UNDER 37 CFR 1.313(c)(2)

APPLICATION #	ATTORNEY DOCKET #	FILING DATE
18375893	IPVCP003X1C4X1C1	10/02/2023

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

CONFIRMATION #	**4776**	FILING DATE	**10/02/2023**
ART UNIT	**2872**	FIRST NAMED INVENTOR	**Thomas Howell**
EXAMINER	**JIE LEI**		

An application may be withdrawn from issue for further action upon petition by the applicant. To request that the Office withdraw an application from issue, applicant must file a petition under this section including the fee set forth in § 1.17(h) and a showing of good and sufficient reasons why withdrawal of the application from issue is necessary.

APPLICANT HEREBY PETITIONS TO WITHDRAW THIS APPLICATION FROM ISSUE UNDER 37 CFR 1.313(c).

A grantable petition requires the following items:

(1) Petition fee; and
(2) One of the following reasons: A grantable petition requires the following items: (a) Unpatentability of one or more claims, which must be accompanied by an unequivocal statement that one or more claims are unpatentable, an amendment to such claim or claims, and an explanation as to how the amendment causes such claim or claims to be patentable;
(b) Consideration of a request for continued examination in compliance with § 1.114 (for a utility or plant application only); or
(c) Express abandonment of the application. Such express abandonment may be in favor of a continuing application, but not a CPA under 37 CFR 1.53(d).

Reason for withdrawal

Consideration of a request for continued examination (Quick Path Information Disclosure Statement) - RCE request, submission, and fee are attached

Applicant claims the following entity status

Regular Undiscounted

Signature

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:
An attorney or agent registered to practice before the Patent and Trademark Office who has been given power of attorney in this application

Signature	Name	Registration #
/Peter Tong/	Peter Tong	35757

Doc Code: QPIDS.REQ
Document Description: QuickPath Information Disclosure Statement

PTO/SB/09 (11-23)

CERTIFICATION AND REQUEST FOR CONSIDERATION OF AN INFORMATION DISCLOSURE STATEMENT FILED AFTER PAYMENT OF THE ISSUE FEE UNDER THE QPIDS PROGRAM

Non-Provisional Application Number: 18375893	Filing Date: October 2, 2023
First Named Inventor: Thomas A. Howell	Title of Invention: SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELEC

THE UNDERSIGNED HEREBY CERTIFIES AND REQUESTS THE FOLLOWING FOR THE ABOVE-IDENTIFIED APPLICATION.

1. Consideration is requested of the information disclosure statement (IDS) submitted herewith, which is being filed after payment of the issue fee.
2. Check the box next to the appropriate selection:

   ☐ Each item of information contained in the IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(1).

   OR

   ☑ No item of information contained in the IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(2).

   OR

   ☐ See attached certification statement in compliance with 37 CFR 1.97(e).
3. Please charge the IDS fee set forth in 37 CFR 1.17(p) to Deposit Account No. 503874.
4. A Petition to Withdraw from Issue After Payment of the Issue Fee (37 CFR 1.313(c)(2)), including the petition fee set forth in 37 CFR 1.17(h), is submitted herewith as a **Web-based ePetition**.
   WARNING: Do not submit the petition as a follow-on paper via the USPTO patent electronic filing system. Submit the petition as a Web-based ePetition by signing on to the USPTO patent electronic filing system as a registered user, selecting "Petitions" in the top menu or by using the display cards, and then selecting the appropriate Petition to Withdraw from Issue after Payment of the Issue Fee (for automatic processing and immediate grant, if all petitions requirements are met). Failure to use a Web-based ePetition will result in automatic entry of the RCE.
5. A request for continued examination (RCE) under 37 CFR 1.114 and the RCE fee under 37 CFR 1.17(e) are submitted herewith.
6. The RCE will be treated as a "conditional" RCE. In the event the examiner determines that any item of information contained in the IDS necessitates the reopening of prosecution in the application, the undersigned understands that (i) the RCE will be processed and treated as an RCE under 37 CFR 1.114 and therefore (ii) the IDS fee under 37 CFR 1.17(p) will be returned in accordance with 37 CFR 1.97(b)(4). In the event that no item of information in the IDS necessitates reopening prosecution, the undersigned understands that the RCE will not be processed and the RCE fee under 37 CFR 1.17(e) will be returned.
7. This certification and request is being filed as a **Web-based ePetition** and is not accompanied by an amendment to the application. Inclusion of an amendment will result in automatic entry of the RCE.

Signature /C. Douglass Thomas/	Date March 29, 2024
Name (Print/Typed) C. Douglass Thomas	Practitioner Registration Number (If applicable) 32947

Note: *Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 11.18. Please see 37 CFR 1.4(d) for the form of the signature. If necessary, submit multiple forms for more than one signature, see below.**

☑ *Total of 1 forms are submitted.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

Routine uses of the information in this record may include disclosure to:

1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;

2) a federal, state, local, or international agency, in response to its request;

3) a contractor of the USPTO having need for the information in order to perform a contract;

4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;

5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;

6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;

7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;

8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));

9) the Office of Personnel Management (OPM) for personnel research purposes; and

10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/375,893	**03/29/2024 04:10:03 PM Z ET**	**IPVCP003X1C4X1C1**

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4776	FILED BY	Peter Tong
PATENT CENTER #	64898672	FILING DATE	10/02/2023
CUSTOMER #	34071	FIRST NAMED INVENTOR	Thomas A. Howell
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 5

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
petition-request.pdf	2	ePetition Request Form	29 KB
IPVCP003X1C4X1C1_QPIDS_3-24.pdf	2	Quick Path Information Disclosure Statement	201 KB
IPVCP003X1C4X1C1_RCE_AsFiled_3-24.pdf	3	Request for Continued Examination (RCE)	84 KB
Warning: This is not a USPTO supplied RCE fillable form. Data in the form cannot be automatically loaded to other USPTO systems.			
IPVCP003X1C4X1C1_IDSTransAfterIssueFee_3-24.pdf	2	Letter specifying the conditions for filing under 37 CFR 1.97	21 KB
IPVCP003X1C4X1C1_1449_3-24.pdf	3	Information Disclosure Statement (IDS) Form (SB08)	41 KB

Warning: This is not a USPTO supplied IDS fillable form. Data in the form cannot be automatically loaded to other USPTO systems.

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
petition-request.pdf	B2E07DE61F9DA00537365F1B0D75DC2C84785141EA4D733E8 CCECF94A1A92160D9E54F60C9609DC1D9BCB3DD294190FB3 93DCE98817B9301A22DB31C3544F3D1
IPVCP003X1C4X1C1_QPIDS_ 3-24.pdf	440F12592595AC0E3DD74A75BC8F0FADE09468A30A1978E67 C86C9D604764C3DEA9D75A0FB99FE4CC956689915FDEE38E 57D4804CC865CB3FD1E256567E08033
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc code : PET.DEC.AUTO
Description : ePetition Grant Letter

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GRANT LETTER

APPLICATION #	DECISION DATE	DECISION ON PETITION #	ATTORNEY DOCKET NUMBER
18/375,893	03/29/2024		IPVCP003X1C4X1C1

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

In re Application of Thomas Howell

This is an electronic decision on the petition under , filed March 29, 2024 to withdraw the above-identified application from issue after payment of the issue fee.

The request is **GRANTED.**

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

The application is being referred to Technology Center AU for

Telephone inquired concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

Office of Petitions

Form 1449 (Modified)	Atty. Docket No.	IPVCP003X1C4X1C1
	Application No.:	18/375,893
Information Disclosure Statement By Applicant	Applicant	HOWELL et al.
	Filing Date	October 2, 2023
	Group	2872
(Use Several Sheets if Necessary)		Page 1 of 3

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	2003/0030597 A1	Feb-03	Geist			
	2.	2005/0281440 A1	Dec-05	Pemer			
	3.	2006/0203183 A1	Sep-06	Jannard et al.			
	4.	2007/0182812 A1	Aug-07	Ritchey			
	5.	2008/0024594 A1	Jan-08	Ritchey			
	6.	2020/0363835 A1	Nov-20	Blum et al.			
	7.	4,852,988	Aug-89	Velez et al.			
	8.	4,882,598	Nov-89	Wulf			
	9.	4,975,584	Dec-90	Benjamin et al.			
	10.	5,184,156	Feb-93	Black et al.			
	11.	5,495,576	Feb-96	Ritchey			
	12.	5,583,795	Dec-96	Smyth			
	13.	5,841,507	Nov-98	Barnes			
	14.	5,966,680	Oct-99	Butnaru			
	15.	6,099,124	Aug-00	Hidaji			
	16.	6,163,281	Dec-00	Torch			
	17.	6,244,703 B1	Jun-01	Resnikoff et al.			
	18.	6,433,760 B1	Aug-02	Vaissie et al.			
	19.	6,491,391 B1	Dec-02	Blum et al.			
	20.	6,563,532 B1	May-03	Strub et al.			
	21.	6,771,294 B1	Aug-04	Pulli et al			
	22.	6,847,336 B1	Jan-05	Lemelson et al.			
	23.	6,943,754 B2	Sep-05	Aughey et al.			
	24.	6,977,776 B2	Dec-05	Volkenandt et al.			
	25.	7,148,489 B2	Dec-06	Yagi			
	26.	7,150,526 B2	Dec-06	Jannard et al.			
	27.	7,278,734 B2	Oct-07	Jannard et al			

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

	28.	7,347,551 B2	Mar-08	Fergason et al.				
	29.	7,488,294 B2	Feb-09	Torch				
	30.	7,651,220 B1	Jan-10	Pattikonda				
	31.	8,408,699 B2	Apr-13	Blum et al.				
	32.	8,931,896 B2	Jan-15	Blum et al.				

Foreign Documents

							Translation	
Init.		Document No.	Date	Country	Class	Subclass	Yes	No
		CA 2,233,047C	Mar-98	Canada				
		CA 2,316,473 A1	Jul-00	Canada				
		CA 2,362,895 A1	Dec-02	Canada				
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		CA 2,435,873C	Mar-04	Canada				
		EP 0441791B1	Aug-91	Europe				
		H02-102521 U	Aug-90	Japan			X	
		H02-159272 A	Jun-90	Japan			X	
		JP 6275987	Feb-18	Japan			X	
		JP 63-153218	Oct-88	Japan			X	
		WO 01/84095 A1	Nov-01	WIPO				
		WO 02/086599 A1	Oct-02	WIPO				
		WO 03/062906 A1	July-03	WIPO				
		WO 04/001373 A2	Dec-03	WIPO				
		WO 05/036110 A1	Apr-05	WIPO				

Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)

	A	US Provisional Appl. No. 60/460154 filed April 3, 2003, to Jannard.
	B	Respondent's Disclosure of Invalidity Contentions with Exhibits A1-A13, Exhibits B1-B5, and Exhibits C1-C6, International Trade Commission Investigation No. 337-TA-1383, filed February 29, 2024, pp. 1-1516.
	C	Höllerer, T. and Feiner, S., "Mobile augmented reality." *Telegeoinformatics: Location-based computing and services* 21 (2004), pp. 1-39.
	D	Mann, Steve and S. Mann. *Intelligent image processing.* IEEE, 2002, 121 pgs. [Part 1 of 3]
	E	Mann, Steve and S. Mann. *Intelligent image processing.* IEEE, 2002, 130 pgs. [Part 2 of 3]

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form 1449 (Modified) **Information Disclosure Statement By Applicant** (Use Several Sheets if Necessary)	Atty. Docket No.	IPVCP003X1C4X1C1
	Application No.:	18/375,893
	Applicant	HOWELL et al.
	Filing Date	October 2, 2023
	Group	2872
		Page 3 of 3

	F	Mann, Steve and S. Mann. *Intelligent image processing.* IEEE, 2002, 110 pgs. [Part 3 of 3]
	G	Mann, S., & Fung, J. "VideoOrbits on Eye Tap devices for deliberately diminished reality or altering the visual perception of rigid planar patches of a real world scene." *EYE*, 3, pp. 1-8.
	H	Milgram, Paul, and Fumio Kishino. "A taxonomy of mixed reality visual displays." *IEICE TRANSACTIONS on Information and Systems* 77.12 (1994), pp. 1-15.
	I	DeVaul et al. MIThril Project Overview. https://www.media.mit.edu/wearables/mithril/overview.html, downloaded March 2, 2022, pp. 1-5.
	J	Rolland, Jannick P., and Hong Hua. "Head-mounted display systems." *Encyclopedia of optical engineering* 2 (2005), pp. 1-14.
	K	Rolland, Jannick P., et al. "High-resolution inset head-mounted display." *Applied optics* 37.19 (1998), pp. 1-11.
	L	Yoshida, Akitoshi, Jannick P. Rolland, and John H. Reif. "Design and Applications of a High Resolution Insert Head Mounted Display." (1994), pp. 1-13.
	M	Nortel 922, Mobile Phone Museum… pp. 1-3.

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al.	Attorney Docket No.: IPVCP003X1C4X1C1
Application No.: 18/375,893	Examiner: LEI, JIE
Filed: October 2, 2023	Group: 2872
Title: SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC SERVICES	

INFORMATION DISCLOSURE STATEMENT AFTER ISSUE FEE PAYMENT UNDER 37 CFR §§1.56 AND 1.97

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The issue fee in the above-identified patent application was paid on February 23, 2024. The references listed in the attached PTO Form 1449 became known after payment of the issue fee. Although this Information Disclosure Statement is being filed after payment of the Issue Fee, it is in accordance with the QPIDS Program and a conditional Request for Continued Examination is being filed herewith, if needed.

Under their duty of disclosure, Applicants hereby submit copies of the cited references. Applicants respectfully request that the Examiner consider these references and make these references of official record in this application.

Applicants would also like to inform the Patent Office of a potentially related case, as follows:

> United States International Trade Commission Investigation No. 337-TA-1383, filed on December 20, 2023 pertaining to US Patent Nos.8,770,742; 10,310,296; 11,762,224; 11,803,069.

Additionally, for your reference, the following items (though not specifically listed on the enclosed Form 1449) were denoted within the document listed at item B on the enclosed Form 1449:

> Nu Vision 60 GX Wireless Glasses; ELSA Revelator; Sun UV, Personal UV Monitor; SafeSun, Personal UV Meter, Optix Tech, Inc.; UV Index Solarmeter, Solartech, Inc.; Saitek Sunwatch II; Oakley Thump products, including at least Thump, Thump 1.5, Thump 2.0. (Item B, on pages 7 and/or 21)

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

In accordance with the QPIDS program, Applicants authorize the Commissioner to charge the required fee under 37 CFR § 1.17(p) to Deposit Account 50-3874 (Order No. IPVCP003X1C4X1C1).

Respectfully submitted,

/Peter P. Tong/

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Apple Inc. Exhibit 1002 Page 1054

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/375,893	**03/29/2024 04:20:30 PM Z ET**	**IPVCP003X1C4X1C1**

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4776	FILED BY	Angela Nijim
PATENT CENTER #	64887012	FILING DATE	10/02/2023
CUSTOMER #	34071	FIRST NAMED INVENTOR	Thomas A. Howell
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Peter Tong

Documents

TOTAL DOCUMENTS: 28

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
CA2233047_Mann_CUTE.pdf	59	Foreign Reference	4220 KB
CA2316473_Mann_CUTE.pdf	63	Foreign Reference	3679 KB
CA2362895_Mann_CUTE.pdf	26	Foreign Reference	1569 KB
CA2388766_Mann_CUTE.pdf	36	Foreign Reference	3022 KB
CA2435873C_Aughey_CUTE.pdf	40	Foreign Reference	3167 KB
EP0441791B1_Chance_CUTE.pdf	12	Foreign Reference	1154 KB

JP_H02-102521_Okamoto_CUTE.pdf	24	Foreign Reference	1103 KB
JP_H02-159272A_Ishida.pdf	12	Foreign Reference	379 KB
JP_Patent_6275987_wTranslation_CUTE.pdf	23	Foreign Reference	663 KB
JP_Patent_63153218.pdf	73	Foreign Reference	1673 KB
WO200184095_Jain.pdf	28	Foreign Reference	1270 KB
WO2002086599A1_DaPra.pdf	12	Foreign Reference	418 KB
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US_Prov_60460154_Jannard.pdf	66	Other reference-Patent/Application/Search Documents	2669 KB
24-02-29_ITC_1383_RespondentsJointInvalidityContentions_wExhibits.pdf	1516	Non Patent Literature	11057 KB
Hollerer_MobileAugmentedReality_CUTE.pdf	39	Non Patent Literature	1106 KB
Mann_IntelligentImageProcessing_CUTE1.pdf	121	Non Patent Literature	18569 KB
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Mann_IntelligentImageProcessing_CUTE3.pdf	110	Non Patent Literature	17566 KB
Mann_VideoOrbits_CUTE.pdf	8	Non Patent Literature	625 KB
Milgram_TaxonomyOfMixedReality_CUTE.pdf	15	Non Patent Literature	290 KB
DeVaul_MIThrilProjectOverview.pdf	5	Non Patent Literature	139 KB
Rolland_HeadMountedDisplaySystems_CUTE.pdf	14	Non Patent Literature	588 KB

Rolland_HighResolutionInset HeadMountedDisplay_CUTE.pdf	11	Non Patent Literature	781 KB
Yoshida_DesignAndApplicationsOfHighResolutionInsertHeadMoutnedDisplay_CUTE.pdf	13	Non Patent Literature	325 KB
Nortel_922_CUTE.pdf	3	Non Patent Literature	1001 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



United States Patent and Trademark Office

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Document Code:WFEE

User :Terrance Lawrence

Sale Accounting Date:04/02/2024

Sale Item Reference Number	Effective Date
18375893	03/29/2024

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I202442D30447501	1806	SUBMISSION- INFORMATION DISCLOSURE STMT	$260.00	Deposit Account

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/375,893	10/02/2023	Thomas A. Howell	IPVCP003X1C4X1C1	4776

34071 7590 04/05/2024

IPVENTURE, INC.
4010 Moorpark Avenue
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San Jose, CA 95117

EXAMINER	
LEI, JIE	

ART UNIT	PAPER NUMBER
2872	

MAIL DATE	DELIVERY MODE
04/05/2024	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Corrected ***Notice of Allowability***	**Application No.** 18/375,893	**Applicant(s)** Howell et al.	
	Examiner JIE LEI	**Art Unit** 2872	**AIA (FITF) Status** No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to IDS of 3/29/2024.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are See Continuation Sheet . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 3/29/2024.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/JIE LEI/
Primary Examiner, Art Unit 2872

Continuation of 3. The allowed claim(s) is/are: 1-8,10-26,29-34 and 38-65

Form 1449 (Modified)	Atty. Docket No.	IPVCP003X1C4X1C1
	Application No.:	18/375,893
Information Disclosure Statement By Applicant	Applicant	HOWELL et al.
	Filing Date	October 2, 2023
	Group	2872
(Use Several Sheets if Necessary)		Page 1 of 3

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	2003/0030597 A1	Feb-03	Geist			
	2.	2005/0281440 A1	Dec-05	Pemer			
	3.	2006/0203183 A1	Sep-06	Jannard et al.			
	4.	2007/0182812 A1	Aug-07	Ritchey			
	5.	2008/0024594 A1	Jan-08	Ritchey			
	6.	2020/0363835 A1	Nov-20	Blum et al.			
	7.	4,852,988	Aug-89	Velez et al.			
	8.	4,882,598	Nov-89	Wulf			
	9.	4,975,584	Dec-90	Benjamin et al.			
	10.	5,184,156	Feb-93	Black et al.			
	11.	5,495,576	Feb-96	Ritchey			
	12.	5,583,795	Dec-96	Smyth			
	13.	5,841,507	Nov-98	Barnes			
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	17.	6,244,703 B1	Jun-01	Resnikoff et al.			
	18.	6,433,760 B1	Aug-02	Vaissie et al.			
	19.	6,491,391 B1	Dec-02	Blum et al.			
	20.	6,563,532 B1	May-03	Strub et al.			
	21.	6,771,294 B1	Aug-04	Pulli et al			
	22.	6,847,336 B1	Jan-05	Lemelson et al.			
	23.	6,943,754 B2	Sep-05	Aughey et al.			
	24.	6,977,776 B2	Dec-05	Volkenandt et al.			
	25.	7,148,489 B2	Dec-06	Yagi			
	26.	7,150,526 B2	Dec-06	Jannard et al.			
	27.	7,278,734 B2	Oct-07	Jannard et al			

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.L/

Form 1449 (Modified)	Atty. Docket No.	IPVCP003X1C4X1C1
	Application No.:	18/375,893
Information Disclosure Statement By Applicant	Applicant	HOWELL et al.
	Filing Date	October 2, 2023
	Group	2872
(Use Several Sheets if Necessary)		Page 2 of 3

	28.	7,347,551 B2	Mar-08	Fergason et al.				
	29.	7,488,294 B2	Feb-09	Torch				
	30.	7,651,220 B1	Jan-10	Pattikonda				
	31.	8,408,699 B2	Apr-13	Blum et al.				
	32.	8,931,896 B2	Jan-15	Blum et al.				

Foreign Documents

							Translation	
Init.		Document No.	Date	Country	Class	Subclass	Yes	No
		CA 2,233,047C	Mar-98	Canada				
		CA 2,316,473 A1	Jul-00	Canada				
		CA 2,362,895 A1	Dec-02	Canada				
		CA 2,388,766 A1	Dec-03	Canada				
		CA 2,435,873C	Mar-04	Canada				
		EP 0441791B1	Aug-91	Europe				
		H02-102521 U	Aug-90	Japan			X	
		H02-159272 A	Jun-90	Japan			X	
		JP 6275987	Feb-18	Japan			X	
		JP 63-153218	Oct-88	Japan			X	
		WO 01/84095 A1	Nov-01	WIPO				
		WO 02/086599 A1	Oct-02	WIPO				
		WO 03/062906 A1	July-03	WIPO				
		WO 04/001373 A2	Dec-03	WIPO				
		WO 05/036110 A1	Apr-05	WIPO				

Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)

	A	US Provisional Appl. No. 60/460154 filed April 3, 2003, to Jannard.
	B	Respondent's Disclosure of Invalidity Contentions with Exhibits A1-A13, Exhibits B1-B5, and Exhibits C1-C6, International Trade Commission Investigation No. 337-TA-1383, filed February 29, 2024, pp. 1-1516.
	C	Höllerer, T. and Feiner, S., "Mobile augmented reality." *Telegeoinformatics: Location-based computing and services* 21 (2004), pp. 1-39.
	D	Mann, Steve and S. Mann. *Intelligent image processing.* IEEE, 2002, 121 pgs. [Part 1 of 3]
	E	Mann, Steve and S. Mann. *Intelligent image processing.* IEEE, 2002, 130 pgs. [Part 2 of 3]

Examiner	Date Considered

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.L/

Form 1449 (Modified) Information Disclosure Statement By Applicant (Use Several Sheets if Necessary)	Atty. Docket No.	IPVCP003X1C4X1C1
	Application No.:	18/375,893
	Applicant	HOWELL et al.
	Filing Date	October 2, 2023
	Group	2872
		Page 3 of 3

	F	Mann, Steve and S. Mann. *Intelligent image processing.* IEEE, 2002, 110 pgs. [Part 3 of 3]
	G	Mann, S., & Fung, J. "VideoOrbits on Eye Tap devices for deliberately diminished reality or altering the visual perception of rigid planar patches of a real world scene." *EYE*, 3, pp. 1-8.
	H	Milgram, Paul, and Fumio Kishino. "A taxonomy of mixed reality visual displays." *IEICE TRANSACTIONS on Information and Systems* 77.12 (1994), pp. 1-15.
	I	DeVaul et al. MIThril Project Overview. https://www.media.mit.edu/wearables/mithril/overview.html, downloaded March 2, 2022, pp. 1-5.
	J	Rolland, Jannick P., and Hong Hua. "Head-mounted display systems." *Encyclopedia of optical engineering* 2 (2005), pp. 1-14.
	K	Rolland, Jannick P., et al. "High-resolution inset head-mounted display." *Applied optics* 37.19 (1998), pp. 1-11.
	L	Yoshida, Akitoshi, Jannick P. Rolland, and John H. Reif. "Design and Applications of a High Resolution Insert Head Mounted Display." (1994), pp. 1-13.
	M	Nortel 922, Mobile Phone Museum… pp. 1-3.

Examiner /JIE LEI/	Date Considered 04/03/2024

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.L/



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Document Code:WFEE

User :Sengpheth Sandara

Refund Accounting Date:04/10/2024

Effective Date	Sale Item Reference Number	Refund Total
04/10/2024	18375893	$1,360.00

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method	Account Number
I202440009107705	1801	RCE- 1ST REQUEST	$1,360.00	DA	503874



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Effective Date	Sale Accounting Date	Sale Item Reference Number
04/10/2024	04/10/2024	18375893

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I202440009107705	1801	RCE- 1ST REQUEST	$1,360.00	DA

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/375,893	10/02/2023	Thomas A. Howell	IPVCP003X1C4X1C1	4776

34071 7590 06/13/2024

IPVENTURE, INC.
4010 Moorpark Avenue
Suite 211
San Jose, CA 95117

EXAMINER	
LEI, JIE	

ART UNIT	PAPER NUMBER
2872	

MAIL DATE	DELIVERY MODE
06/13/2024	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Response to Rule 312 Communication	Application No.	Applicant(s)	
	18/375,893	Howell et al.	
	Examiner	Art Unit	AIA (FITF) Status
	JIE LEI	2872	No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☑ The amendment filed on 27 February 2024 under 37 CFR 1.312 has been considered, and has been:
   - a) ☑ entered.
   - b) ☐ entered as directed to matters of form not affecting the scope of the invention.
   - c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
     Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.
   - d) ☐ disapproved. See explanation below.
   - e) ☐ entered in part. See explanation below.
   - f) ☐ not entered because the supplemental or corrected Application Data sheet (ADS)
     - ☐ was not accompanied by a petition to accept an unintentionally delayed claim under 37 CFR 1.55 or 27 CFR 1.78;
     - ☐ did not identify the information being changed in accordance with 37 CFR 1.76(c)(2);
     - ☐ was not properly signed in accordance with 37 CFR 1.76(e) (or 37 CFR 1.33(b) for applications filed prior to September 16, 2012).

Amendment of 2/23/2024 is also OK to enter.

/JIE LEI/ Primary Examiner, Art Unit 2872	

OK TO ENTER: /J.L/ 06/11/2024

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al.	Attorney Docket No.: IPVCP003X1C4X1C1
Application No.: 18/375,893	Examiner: LEI, JIE
Filed: October 2, 2023	Group: 2872
Title: SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC DEVICES	

AMENDMENT UNDER 37 CFR 1.312

Mail Stop _____
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Further to the Notice of Allowance mailed February 22, 2024, please amend the above-identified as follows:

Amendments to the Claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks/Arguments begin on page 19 of this paper.

OK TO ENTER: /J.L/ 06/11/2024

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al.	Attorney Docket No.: IPVCP003X1C4X1C1
Application No.: 18/375,893	Examiner: LEI, JIE
Filed: October 2, 2023	Group: 2872
Title: SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC DEVICES	

AMENDMENT UNDER 37 CFR 1.312 [Revised]

Mail Stop _____
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Further to the Notice of Allowance mailed February 22, 2024, please amend the above-identified as follows:

Amendments to the Claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks/Arguments begin on page 19 of this paper.

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/375,893	07/23/2024	12044901	IPVCP003X1C4X1C1	4776

34071 7590 07/03/2024

IPVENTURE, INC.
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ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at https://patentcenter.uspto.gov/. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at https://certifiedcopycenter.uspto.gov/index.html. The Certified Copy Center may be reached at (800)972-6382.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (https://patentcenter.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional inventors):

Thomas A. Howell, San Jose, CA;
David Chao, Saratoga, CA;
C. Douglass Thomas, Saratoga, CA;
Peter P. Tong, Mountain View, CA;

APPLICANT(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional applicants):

IngenioSpec, LLC, San Jose, CA;

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/375,893	10/02/2023	Thomas A. Howell	IPVCP003X1C4X1C1	4776

34071 7590 07/23/2024

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EXAMINER	
LEI, JIE	

ART UNIT	PAPER NUMBER
2872	

MAIL DATE	DELIVERY MODE
07/23/2024	PAPER

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The time period for reply, if any, is set in the attached communication.

APPLICATION NO.	ISSUE DATE	PATENT NO.
18/375,893	23-Jul-2024	12044901

IPVENTURE, INC.
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San Jose, CA 95117

EGRANT NOTIFICATION

Your electronic patent grant (eGrant) is now available, which can be accessed via Patent Center at https://patentcenter.uspto.gov

The electronic patent grant is the official patent grant under 35 U.S.C. 153. For more information, please visit https://www.uspto.gov/electronicgrants