Substantially Identical Portions of Petition pages 26-31 and Ex. 1108 pages 90-94

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E. [10.4.1] "…instructions that, when executed by the processor, cause the processor to: generate a sequence of incremental hearing correction filters based at least in part on a magnitude of a difference between a hearing aid profile and a hearing loss level associated with a user of the hearing aid, the sequence of incremental hearing correction filters including at least a first hearing correction filter and a second hearing correction filter"	**E. [Claim 10.4.1] "…instructions that, when executed by the processor, cause the processor to: generate a sequence of incremental hearing correction filters based at least in part on a magnitude of a difference between a hearing aid profile and a hearing loss level associated with a user of the hearing aid, the sequence of incremental hearing correction filters including at least a first hearing correction filter and a second hearing correction filter"**
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Fichtl in view of Mangold discloses this limitation. As discussed above in Section VII.A. [element 10 – preamble], a POSA would have been motivated to implement Fichtl's remote control to include Fichtl's user controls 4 and 5, controller 6 to determine audio processing parameters (APPs), and memory 7 to store the APPs. Atlas Decl., Ex. 1108, ¶ 190.	190. Fichtl in view of Mangold discloses this limitation. As discussed above with respect to element 10 – preamble, a POSA would have been motivated to implement Fichtl's remote control to include Fichtl's user controls 4 and 5, controller 6 to determine audio processing parameters (APPs), and memory 7 to store the APPs.
Fichtl's controller is programmed to execute an acclimatization algorithm where the amount of compensation for the user's hearing loss increases over time. Fichtl, Ex. 1103 at Abstract ("The intensity of the hearing device is increased in the long term"), 3:32-34 ("controller 6 is adapted to execute an acclimatization algorithm . . ."), 4:25-26 ("acclimatization process is controlled by software being executed on the controller 6"). As represented by the curve marked "X" plotted on the graph depicted in Fig. 2, the acclimatization algorithm executed by controller 6 increases the value of an APP over time. *Id.* at Fig. 2, 3:35-36 ("FIG. 2 shows how an audio processing parameter APP is changed over time in a hearing device 1"), 3:42-4:15, 4:25-67. In particular, an intermediate value X is slowly increased while the hearing aid is on and held constant in memory while the hearing aid is off, such that each time the hearing aid is turned on the APP is set to the last value for X as stored in memory. *Id.* at Fig. 2, 3:55-57, 3:66-4:7, 4:31-36, 4:41-53. Atlas Decl., Ex. 1108, ¶ 191.	191. Fichtl's controller is programmed to execute an acclimatization algorithm where the amount of compensation for the user's hearing loss increases over time. Fichtl, Ex. 1103 at Abstract ("The intensity of the hearing device is increased in the long term"), 3:32-34 ("controller 6 is adapted to execute an acclimatization algorithm . . ."), 4:25-26 ("acclimatization process is controlled by software being executed on the controller 6"). As represented by the curve marked
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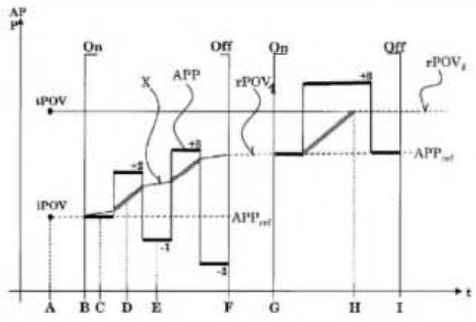
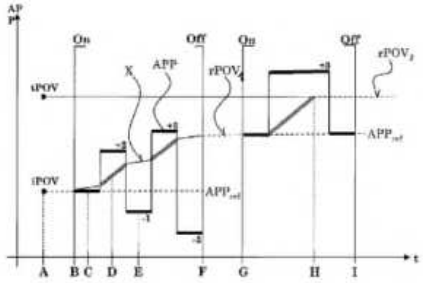
 Fig. 2 Fichtl, Ex. 1103, Fig. 2 As shown in Fig. 2, the APP starts at an initial power-on value (iPOV) selected to provide a smaller degree of compensation than the target power-on value (tPOV), which is the value for the APP corresponding to the selected hearing aid profile that compensates for the user's hearing impairment. *Id.* at Fig. 2, 3:42-48 ("At time 'A,' a fitter programs an initial power-on value iPOV for the audio processing parameter as well as a target power-on value tPOV…The target power-on value tPOV is, for example, 10 dB higher than the initial power-on value iPOV"), Abstract ("An initial power-on value (iPOV) and a target power-on value (tPOV), which is to be reached at the end (H) of the acclimatization phase, may be programmed by an audiologist."), 3:49-4:24, 4:25-67. The compensation increases over time to a replacement power-on-value (rPOV) each time the hearing aid is Petition – IPR of U.S. Patent No. 8,654,999 Page 28	U.S. Patent 8,654,999 Declaration of Les Atlas, Ph.D. "X" plotted on the graph depicted in Fig. 2, the acclimatization algorithm executed by controller 6 increases the value of an APP over time. *Id.* at Fig. 2, 3:35-36 ("FIG. 2 shows how an audio processing parameter APP is changed over time in a hearing device 1"), 3:42-4:15, 4:25-67. In particular, an intermediate value X is increased slowly while the hearing aid is on and held constant, stored in memory, while the hearing aid is off, such that each time the hearing aid is turned on the APP is set to the last value for X as stored in memory. *Id.* at Fig. 2, 3:55-57, 3:66-4:7, 4:31-36, 4:41-53.  Fig. 2 192. As shown in Fig. 2, the APP starts at an initial power-on value (iPOV) selected to provide a smaller degree of compensation as compared to the target power-on value (tPOV) for the APP, which is the value for the APP corresponding to the selected hearing aid profile that compensates for the user's hearing 91

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turned on until it reaches tPOV. *Id.* Processor 9 uses APP values provided by controller 6, including the reduced values iPOV and rPOV relative to tPOV generated by the acclimatization algorithm, to process sounds for the hearing device user. *Id.* at Fig. 2, 3:23-34. Thus, Fichtl's acclimatization algorithm corresponds to adjustments applied by controller 6 to the collection of APPs of processor 9 to reduce the level of correction provided to the hearing device user by application of the hearing aid profile. Atlas Decl., Ex. 1108, ¶ 192. In other words, Fichtl's acclimatization algorithm as executed by controller 6 generates a sequence of "hearing correction filters" including at least a first hearing correction filter and a second hearing correction filter. Atlas Decl., Ex. 1108, ¶ 192.	U.S. Patent 8,654,999 Declaration of Les Atlas, Ph.D. impairment, and the compensation increases over time to a replacement power-on-value (rPOV) each time the hearing aid is turned on until it reaches tPOV. Fichtl, Ex. 1103 at Fig. 2, 3:42-48 ("At time 'A,' a fitter programs an initial power-on value iPOV for the audio processing parameter as well as a target power-on value tPOV... The target power-on value tPOV is, for example, 10 dB higher than the initial power-on value iPOV), Abstract ("An initial power-on value (iPOV) and a target power-on value (tPOV), which is to be reached at the end (H) of the acclimatization phase, may be programmed by an audiologist."), 3:49-4:24, 4:25-67. Processor 9 uses APP values provided by controller 6, including the reduced values iPOV and rPOV relative to tPOV generated by the acclimatization algorithm, to process sounds for the hearing device user. *Id.* at Fig. 2, 3:23-34. Thus, Fichtl's acclimatization algorithm corresponds to adjustments applied by controller 6 to the collection of APPs of processor 9 to reduce the level of correction provided to the hearing device user by application of the hearing aid profile. In other words, Fichtl's acclimatization algorithm as executed by controller 6 generates a sequence of "hearing correction filters" including at least a first hearing correction filter and a second hearing correction filter.
The APP adjusted by the acclimatization algorithm may correspond to, for example, volume or treble. Fichtl, Ex. 1103 at 3:42-47. A volume APP corresponds to the loudness, or amplitude, of the output signal. *Id.* at 3:25-26 ("The magnitude of the amplification can be controlled by a volume control 4."), 3:44-48 ("The audio processing parameter APP is typically volume . . .. The target power-on value tPOV is, for example, 10 dB higher than the initial power-on value iPOV."), 6:42-48 ("The adjustments in the first adjustment direction are implemented by applying a faster learning speed . . .. If the audio processing parameter APP is volume, the first adjustment direction is louder . . ."). A treble APP corresponds to the loudness, or amplitude, specifically of the higher	193. The APP adjusted by the acclimatization algorithm may correspond to, for example, volume or treble. Fichtl, Ex. 1103 at 3:42-47. A volume APP corresponds to the loudness, or amplitude, of the output signal. *Id.* at 3:25-26
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frequencies. Atlas Decl., Ex. 1108, ¶ 193. By applying an intermediate value that is lower than a target value, tPOV, for the volume or treble APP, Fichtl provides a modulated output signal having a level that is within a range between an uncompensated output level and the desired output level. Thus, Fichtl's hearing correction filters are "incremental hearing correction filters" and are created as in the '999 Patent. Atlas Decl., Ex. 1108, ¶ 193; '999 Patent, Ex. 1101 at 3:32-41. As discussed above, Fichtl discloses an acclimatization program in which audio processing parameter (APP) settings are incrementally adjusted over time from an initial setting iPOV to a target setting tPOV, providing for at least first and second hearing correction filters. Fichtl, Ex. 1103 at 3:35-4:15, 4:25-67. Fichtl's hearing device "is initially fitted to a hearing loss of a hearing device user," including an initial power-on value iPOV and a target power-on value tPOV. *Id.* at 3:37-48. The iPOV is selected to provide a smaller degree of compensation than the tPOV, which corresponds to a hearing aid profile. Thus, the iPOV and all incremental adjustments between the iPOV and the tPOV are generated to provide values between the hearing loss level associated with the user (determined during the initial fitting) and the hearing aid profile (tPOV). This sequence of incremental hearing correction filters is, accordingly, based at least in part on a magnitude of a difference between a hearing aid profile and a hearing loss level associated with Petition – IPR of U.S. Patent No. 8,654,999 Page 30	U.S. Patent 8,654,999 Declaration of Les Atlas, Ph.D. ("The magnitude of the amplification can be controlled by a volume control 4."), 3:44-48 ("The audio processing parameter APP is typically volume . . . . The target power-on value tPOV is, for example, 10 dB higher than the initial power-on value iPOV."), 6:42-48 ("The adjustments in the first adjustment direction are implemented by applying a faster learning speed . . . . If the audio processing parameter APP is volume, the first adjustment direction is louder . . ."). A treble APP corresponds to the loudness, or amplitude, specifically of the higher frequencies. By applying an intermediate value that is lower than a target value, tPOV, for the volume or treble APP, Fichtl provides a modulated output signal having a level that is within a range between an uncompensated output level and the desired output level. Thus, Fichtl's hearing correction filters are "incremental hearing correction filters" and are created as in the '999 patent. '999 patent, Ex. 1101 at 3:32-41. 194. As discussed above, Fichtl discloses an acclimatization program in which audio processing parameter (APP) settings are incrementally adjusted over time from an initial setting iPOV to a target setting tPOV, providing for at least first and second hearing correction filters. Fichtl, Ex. 1103 at 3:35-4:15, 4:25-67. Fichtl's hearing device "is initially fitted to a hearing loss of a hearing device user," including an initial power-on value iPOV and a target power-on value tPOV. *Id.* at 3:37-48. The iPOV is selected to provide a smaller degree of compensation 93

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the user of the hearing aid, and includes at least the first and second hearing correction filter, as claimed. Atlas Decl., Ex. 1108, ¶ 194. **F. [10.4.2] "provide a first signal related to the first hearing correction filter of the sequence of incremental hearing correction filters to the hearing aid through the communication channel"** Fichtl in view of Mangold discloses this limitation. As discussed in Section VII.E. [element 10.4.1], Fichtl's controller executes an acclimatization algorithm that generates power-on values for an audio processing parameter (APP) to be applied by a processor of the hearing aid, the sequence of power-on values corresponding to a sequence of incremental hearing correction filters. Fichtl's acclimatization algorithm is executed by Fichtl's controller 6 which would, as discussed above in Section VII.A. [element 10 – preamble], be incorporated into Fichtl's remote control and, as discussed above in Section VII.C. [element 10.2], communicate with Fichtl's hearing aid through a communication channel to provide audio processing parameter (APP) power-on values (rPOV) to a processor of Fichtl's hearing aid. Fichtl, Ex. 1103 at 3:23-25, 3:27-30, Fig. 1. Because the APP power-on values provided by Fichtl's remote control to the hearing aid through a communication channel are related to corresponding incremental hearing correction filters, Fichtl in view of Mangold discloses providing a first signal related to the first hearing correction filter of the sequence of incremental hearing Petition – IPR of U.S. Patent No. 8,654,999 Page 31	U.S. Patent 8,654,999 Declaration of Les Atlas, Ph.D. as compared to the tPOV, and the tPOV corresponds to a hearing aid profile. Thus, the iPOV and all incremental adjustments in-between the iPOV and the tPOV are generated to provide values between the hearing loss level associated with the user (determined during the initial fitting) and the hearing aid profile (tPOV). This sequence of incremental hearing correction filters is, accordingly, based at least in part on a magnitude of a difference between a hearing aid profile and a hearing loss level associated with the user of the hearing aid, and includes at least the first and second hearing correction filter, as claimed. **F. [Claim 10.4.2] "provide a first signal related to the first hearing correction filter of the sequence of incremental hearing correction filters to the hearing aid through the communication channel"** 195. Fichtl in view of Mangold discloses this limitation. As discussed above with respect to element 10.4.1, Fichtl's controller executes an acclimatization algorithm that generates power-on values for an audio processing parameter (APP) to be applied by a processor of the hearing aid, the sequence of power-on values corresponding to a sequence of incremental hearing correction filters. Fichtl's acclimatization algorithm is executed by Fichtl's controller 6 which would, as discussed above with respect to element 10 – preamble, be incorporated into Fichtl's remote control and, as discussed above with respect to element 10.2, communicate with Fichtl's hearing aid through a communication channel to provide audio processing parameter (APP) power-on values (rPOV) to a 94