2. Independent Claims 1 and 57

For reasons discussed below, Petitioner has not shown a reasonable likelihood that it would prevail in establishing unpatentability of either claim 1 or claim 57 on any ground of obviousness relying in part on Bhogal.

a) pre-programmed code portion for remotely controlling an audio device or MP3 player (claims 1 and 57)

Claim 1 requires a microcontroller within the interface to execute a pre-programmed code portion that is:

> for remotely controlling the after-market audio device using the car stereo by receiving a control command from the car stereo through said first electrical connector in a format incompatible with the after-market audio device, processing the received control command into a formatted command compatible with the after-market device, and transmitting the formatted command to the after-market device through said second connector for execution by the after-market audio device.

Ex. 1001, 21:45–54. Claim 57 includes a similar limitation that differs from the above-quoted limitation of claim 1 by reciting a portable MP3 player instead of an after-market audio device. *Id.* at 22:28–37. Thus, claim 1 pertains to a car stereo remotely controlling an after-market audio device, and claim 57 pertains to a car stereo remotely controlling a portable MP3 player.

For this remote control aspect of claims 1 and 57, and aside from the specific requirement of a portable MP3 player of claim 57, Petitioner relies on Bhogal's disclosure. Bhogal pertains to an actual CD-changer and an emulator unit that emulates CD-changers, as discussed above.

According to Petitioner, Bhogal discloses the above-noted limitation for remotely controlling the audio device that is connected to the interface.

Pet. 19. Petitioner's argument is as follows:

> Bhogal explains that typically, car stereos are designed to communicate only with CD-changers made by the same manufacturer. Ex. 1004, at 4:57–62. The emulator unit in Bhogal contains a "CD-changer unit specification database 312" which "contains operational information about various models of CD-changer units and the manner in which emulator unit 302 can interface with a particular type of CD-changer unit." *Id.* at 7:1–4, FIG. 3. A signal/command interpreter unit 314 inside the emulator unit monitors for signals and commands from the car stereo intended for the selected type of CD-changer. *Id.* at 7:12–24. For example, when a user of the car stereo presses controls on the car stereo for changing CDs or for obtaining information about CDs, the emulator unit captures the commands and "performs appropriate processing." *Id.* at 8:21–26. In doing so, the emulator unit "operates in a particular manner that is compatible with the CD-changer to which the emulator unit is connected." *Id.* at 7:7–11. *See* Geier Decl., Ex. 1014, ¶¶ 53–55.

Id.

The argument is unpersuasive. None of the cited disclosure and explanations, as presented by Petitioner, pertains to remotely controlling an audio device that is connected to Bhogal's emulator unit. The operations identified by Petitioner support the emulator unit's role as an emulator, where the emulator interprets commands from the car stereo intended for an actual CD-changer, and uses the interpreted commands to access audio data files within the emulator itself that are organized as virtual CD-ROMs.

The claim limitation requires receiving a control command from the car stereo in a format incompatible with the connected audio device, processing it into a formatted control command that is compatible with the audio device, and transmitting the formatted command to the audio device. Petitioner has not identified any disclosure in Bhogal that describes

transmitting such a converted command to the connected audio device to control the audio device remotely.

There is an operation mode of the emulator called "pass-thru mode" in which the emulator passes commands from the car stereo to the audio device that is connected. Ex. 1004, 7:36–46. However, as described in Bhogal, the "pass-thru mode" does not involve any conversion of a command from a format that is incompatible with the connected audio device to a format that is compatible with the connected audio device. *Id.* In Bhogal, the car stereo and the actual CD-changer already communicate with each other compatibly, without the need for an intermediate interface to do any conversion of signals. As discussed above, Bhogal describes that when the emulator is not in the docking station, the car stereo and the actual CD-exchanger may operate together. *Id.* at 5:65–67.

In addition, there is an operation mode of the emulator called "end-unit" mode, in which the emulator replaces the CD-changer entirely and itself emulates the presence of the CD-changer. *Id.* at 7:47–49. Nothing in that mode of operation involves conversion of any command to be sent to the CD-changer to control the CD-changer remotely.

There also is an operation mode of the emulator called "combination mode," in which the emulator also reads tracks and track information from the actual CD-changer unit connected to it, "to create virtual CDs with tracks from both sources." *Id.* at 8:4–20. Petitioner identifies no disclosure in Bhogal that any conversion is performed on car stereo commands that are incompatible with the actual CD-changer to make them compatible with the CD-changer, much less transmitting such converted commands to the CD-changer to effect remote control of the CD-changer by the car stereo.

As noted above, the car stereo and the actual CD-changer already communicate with each other compatibly without need for an intermediate interface to do any conversion. Petitioner's reference to Bhogal's "processing" alone is insufficient to persuade us that Bhogal discloses the required conversion.

The foregoing reason alone constitutes sufficient basis to conclude that Petitioner has not shown reasonable likelihood that it would prevail in establishing unpatentability of any challenged claim on any ground based in part on Bhogal. We discuss below an additional deficiency with respect to claim 1 and claims dependent thereon, and an additional deficiency with respect to claim 57 and claims dependent thereon.

> b) receiving, processing, transmitting data, and converting data from incompatible format to compatible format (claim 1)

Claim 1 further requires the microcontroller within the interface to have a pre-programmed code portion that is:

> for receiving data from the after-market audio device through said second connector in a format incompatible with the car stereo, processing the received data into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo through said first connector for display by the car stereo.

Ex. 1001, 21:55–61. According to Petitioner, Bhogal discloses format conversion of the display data from the CD-changer unit for display on the car stereo. Pet. 22, 32. Specifically, Petitioner argues: "Because the car stereo [of Bhogal] is designed to communicate using proprietary formats, *see* [Ex. 1004,] 4:57–62, the emulator unit generates data 'in the necessary format' to be sent to the car stereo." Pet. 22. Petitioner's argument is unpersuasive.

Petitioner cites no disclosure in Bhogal to the effect that data from the actual CD-changer is originally incompatible with the car stereo and requires a conversion in format to be compatible with and thus understood by the car stereo. Petitioner also cites no disclosure in Bhogal to the effect that any such data conversion is performed by the emulator unit of Bhogal. Although there is a necessary format for data from the audio device to be understood by the car stereo, Petitioner identifies no disclosure in Bhogal that indicates the car stereo and the audio device do not already share the same format without involvement of the emulator.

As discussed above, Bhogal describes that when the emulator is not in the docking station, the car stereo and the actual CD-exchanger may operate together. Ex. 1004, 5:65–67. Also, although the emulator has a "pass-thru mode," operation in the pass-thru mode does not involve any conversion of data from a format that is incompatible with the car stereo to a format that is compatible with the car stereo. *Id.* at 7:36–46. As noted above, in the context of Bhogal, the car stereo and the audio device already communicate with each other compatibly without need for an interface to do any conversion of signals.

c) generating and transmitting a device presence signal (claim 57)

Claim 57 further requires the microcontroller within the interface to have a pre-programmed code portion that is "for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state." Ex. 1001, 26:22–26. According to Petitioner, neither Bhogal nor Berry discloses this limitation regarding the generation and transmission of a device presence signal, but Onishi does. Pet. 19–21. Specifically, Petitioner explains as follows:

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