United States Patent and Trademark Office

Before the Patent Trial and Appeal Board

Samsung Electronics Co., Ltd. and
Samsung Electronics America, Inc.

(Petitioners)

v.

Maxell, Ltd.,

(Patent Owner)

Inter Partes Review

No. IPR2024-00717 | **U.S. Patent No. 11,223,757**

Petitioners' Presentation

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

IPR2024-00717 - Samsung
Ex. 1016 - Page 1

Claim Construction

Construction of Limitation [1i] – First Issue

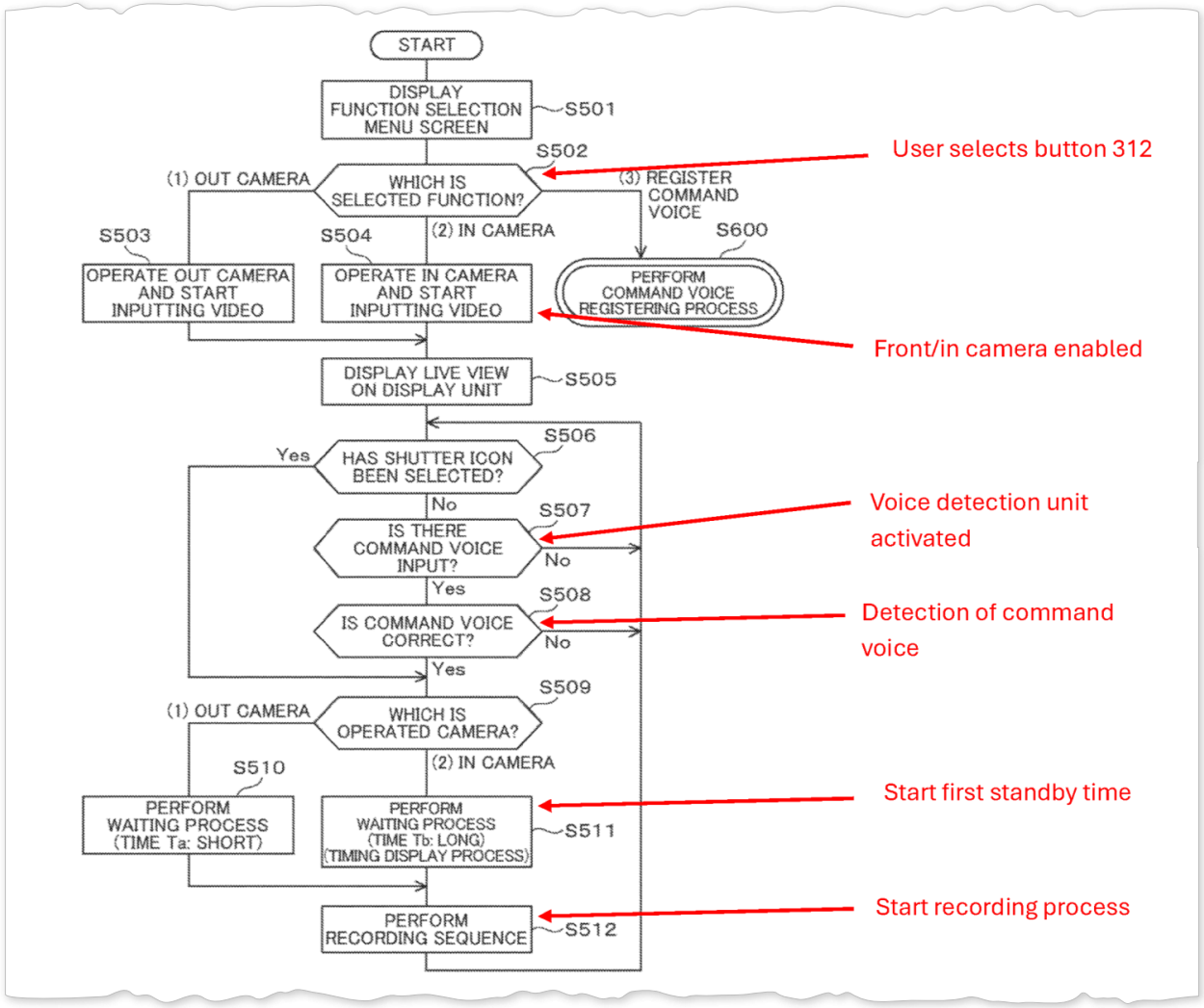
"control such that a first standby time of a case where the first camera is enabled and the second camera is disabled is longer than a second standby time of a case where the second camera is enabled and the first camera is disabled"

Patent Owner's Proposed Construction	Petitioners' Proposed Construction
"the first camera is enabled and the second camera is disabled *in response* to the command voice" POR at 10; Sur-Reply at 2	no requirement that the first camera is enabled and the second camera is disabled *in response* to the command voice Reply at 6

Construction of Limitation [1i] – First Issue

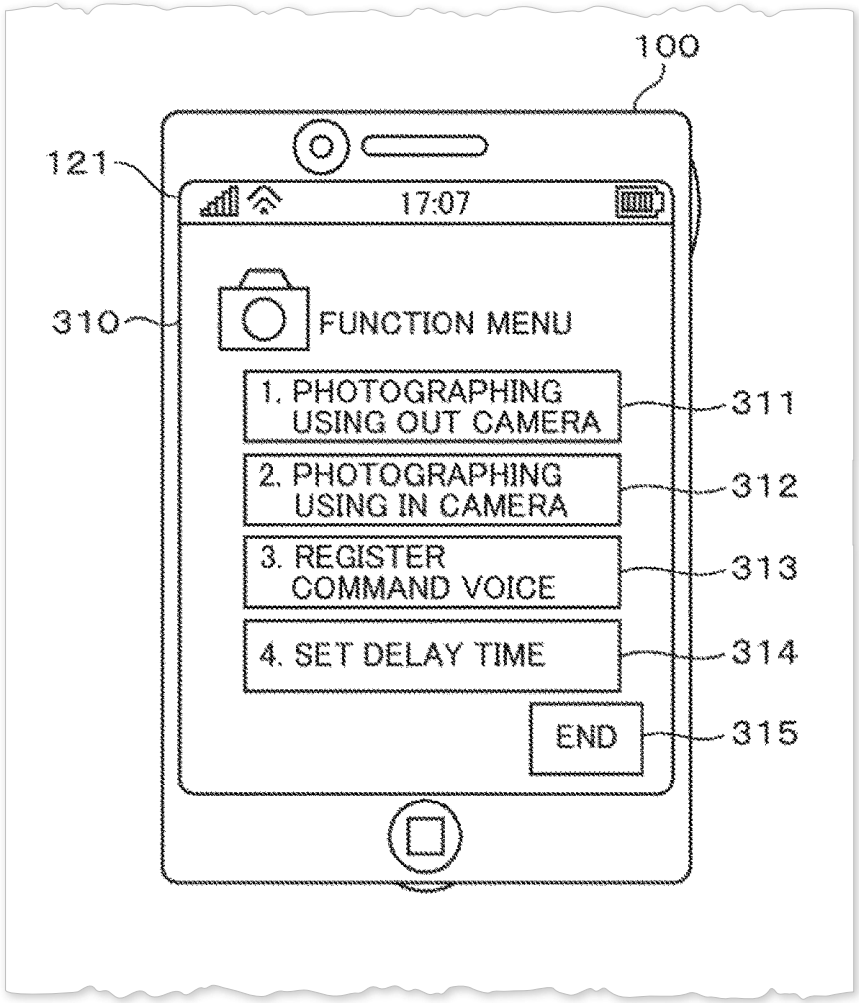
’757 Patent, Claim 1	
[1g]	wherein the controller is configured to: control such that, when the audio input interface receives the command voice giving a first instruction to start a recording of an image signal, the recorder starts a recording of the first image signal acquired by the first camera on the storage in response to the first instruction,
[1i]	control such that a first standby time of a case where the first camera is enabled and the second camera is disabled is longer than a second standby time of a case where the second camera is enabled and the first camera is disabled,
[1j]	wherein the first standby time is a time from a recognition of the first instruction to a start of the recording of the first image signal acquired by the first camera, and the second standby time is a time from a recognition of the second instruction to a start of the recording of the second image signal acquired by the second camera.

Maxell's Construction of Limitation [1i] Excludes the Preferred Embodiment

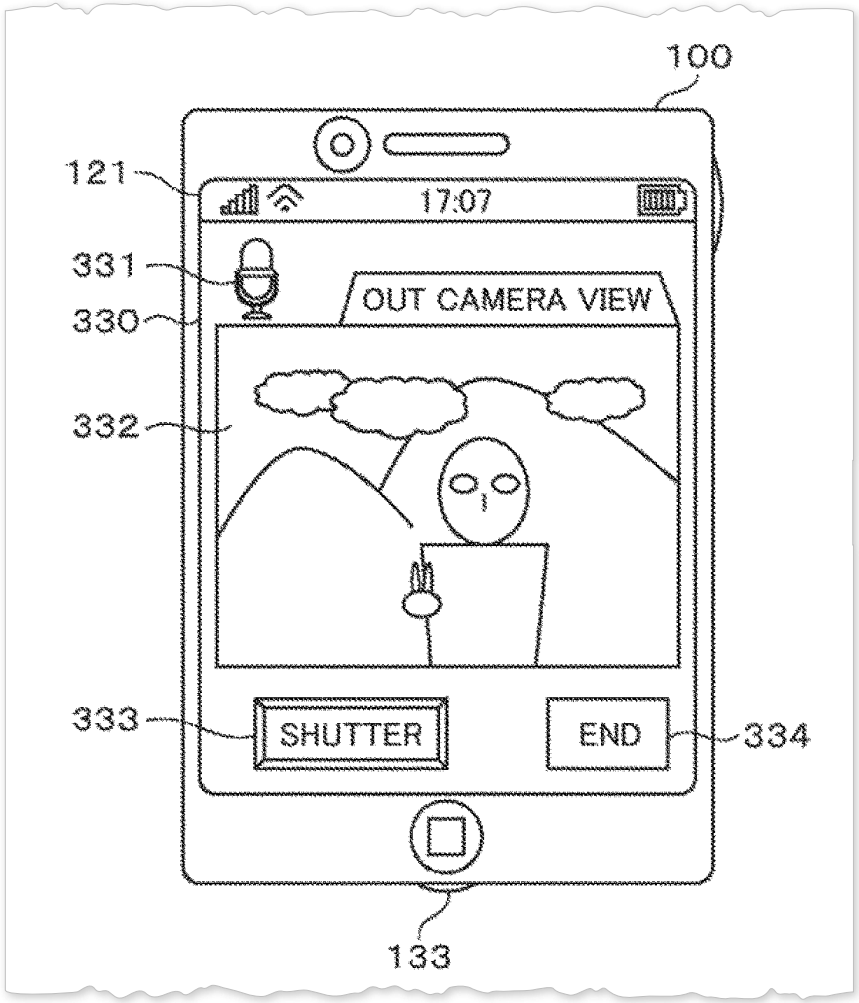


EX1001 at Fig. 10 (Reply at 12)

Maxell's Construction of Limitation [1i] Excludes the Preferred Embodiment



EX1001 at Fig. 6 (Reply at 9)



EX1001 at Fig. 8 (Reply at 10)

Maxell's Construction of Limitation [1i] Excludes the Preferred Embodiment

On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH

Second, even if the specification were less explicit in equating the term "toroid" with a generally spherical surface having a cylindrical component added thereto, the reference to the preferred embodiment as having mirrors with toroidal surfaces would give rise to a very strong inference that the claim should be construed to include such surfaces. As this court has explained before, "a claim interpretation that excludes a preferred embodiment from the scope of the claim 'is rarely, if ever, correct.'"

On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH, 386 F.3d 1133, 1138 (Fed. Cir. 2004) *(citing Globetrotter Software, Inc. v. Elan Computer Group, Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004), *Vitronics Corp. v. Conceptronic, Inc.*,90 F.3d 1576, 1583 (Fed. Cir. 1996), *Int'l Rectifier Corp. v. IXYS Corp.*, 61 F.3d 1363, 1371 (Fed. Cir. 2004), and *Modine Mfg. Co. v. U.S. Int'l Trade Comm'n*, 75 F.3d 1545, 1550 (Fed. Cir. 1996)); Reply at 7

Maxell's Construction of Limitation [1i] Excludes the Preferred Embodiment

Rather than "reading out the embodiment," Petitioners would require the impossible: "If everything in the specification were required to be read into the claims, or if structural claims were to be limited to devices operated precisely as a specification-described embodiment is operated, there would be no need for claims." *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985). Further, "[i]t is the claims that measure the invention." *Id.* (citing *Aro Mfg. Co., Inc. v. Convertible Top Replacement Co., Inc.*, 365 U.S. 336, 339 (1961)). Petitioners' analysis of the specification and Figure 10 should be given no weight. Particularly where the "law does not require the impossible. Hence, it does not require that an applicant describe in his specification every conceivable and possible future embodiment of his invention." *Id.*

Sur-Reply at 4-5

Maxell's Construction of Limitation [1i] Renders Claim 2 Superfluous

'757 Patent

> **2**. The image recording device according to claim **1**, wherein the first camera is enabled in accordance with the command voice.

EX1001 ('757 Patent) at Claim 2; Reply at 13-14

Patent Owner's Proposed Construction of Claim 1

"the first camera is enabled and the second camera is disabled *in response* to the command voice" POR at 10; Sur-Reply at 2

Maxell's Construction of Limitation [1i] Renders Claim 2 Superfluous

Sur-Reply

3. The Plain Reading Does Not Render Claim 2 Superfluous

Petitioners' skewed reading of the '757 Patent continues into claim 2. The natural reading of claim 2 is narrower than claim 1. Independent claim 1 describes two cases where different cameras as enabled or disabled. Claim 2 describes an addition case—an additional functionality—required by the image processing device. For example, as explained by Dr. Wobbrock, claim 2 describes a third case where the first camera is enabled and the second camera is not considered. *See* EX1015, 54:7-55:2. Thus, the scope of claim 2 encompasses a device with more capabilities than claim 1 and is narrower.

Sur-Reply at 5

Claim 2 Not Further Limiting Under Maxell's Construction of Limitation [1i]

Petitioners' Reply

According to Dr. Wobbrock's explanation, claim 2 is actually broader than claim 1 because ***it does not require the disabling of the second camera*** as recited in claim 1:

> So claim 2 would result in a device – a device that meets claim 2 would need to be able to enable the first camera. And if the second camera is already enabled, it would not disable it, which claim 1 would require. Claim 2 doesn't require that.

EX1015, 55:3-7.

Reply at 14

Claim 2 Not Further Limiting Under Maxell's Construction of Limitation [1i]

35 U.S.C. § 112, ¶4

Subject to subsection (e), a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed.

35 U.S.C. § 112, ¶4

Pfizer, Inc. v. Ranbaxy Labs., Ltd.



"a violation of § 112, ¶ 4 renders a patent invalid just as violations of other paragraphs of § 112 would"

Pfizer, Inc. v. Ranbaxy Labs.,Ltd., 457 F.3d 1284, 1291-92 (Fed. Cir. 2006)
(holding a dependent claim invalid for failing to comply with pre-AIA 35 U.S.C. 112, ¶ 4)

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Construction of Limitation [1i] – Second Issue

"control such that a first standby time of a case where the first camera is enabled and the second camera is disabled is longer than a second standby time of a case where the second camera is enabled and the first camera is disabled"

Patent Owner's Proposed Construction	Petitioners' Proposed Construction
"the controller must select the lengths of the standby times" POR at 20; Sur-Reply at 7	controller can control using standby times selected by the user Reply at 17-18

Limitation [1i] Does Not Preclude User-Selected Standby Times

- Claims do not specify how standby times are determined

- Even when user selects standby times, controller controls system to implement those user-selected times

Reply at 17-18

Ground 1: Chinn, Takahashi and EX-V7

Chinn Discloses First Standby Time > Second Standby Time

’368 Patent | Chinn

[0027] In some embodiments, camera control system **175** may output audible notifications by speaker **140** when responding to commands by affirming that a command is executed. For example, in response to a “set timer: 10 seconds” command, camera control system **175** may output an audible notification by speaker **140** such as “timer set”, and camera control system **175** may then proceed to output an audible countdown to camera activation. In response to a “set flash: on” command, a “set flash: off” command, or a “set flash: auto” command, camera control system **175** may output an audible notification by speaker **140** such as “flash on”, “flash off”, or “automatic flash”. Camera control system **175** may then optionally continue listening and may output a subsequent audible notification by speaker **140** such as, “now listening”. Camera control system **175** may output similarly appropriate audible notifications by speaker **140** in response to “set focus”, “set ISO/speed”, and/or a “set scene” commands, and may optionally return to listening thereafter.

EX1004 Chinn (’368 Patent) at [0027]; Petition at 30

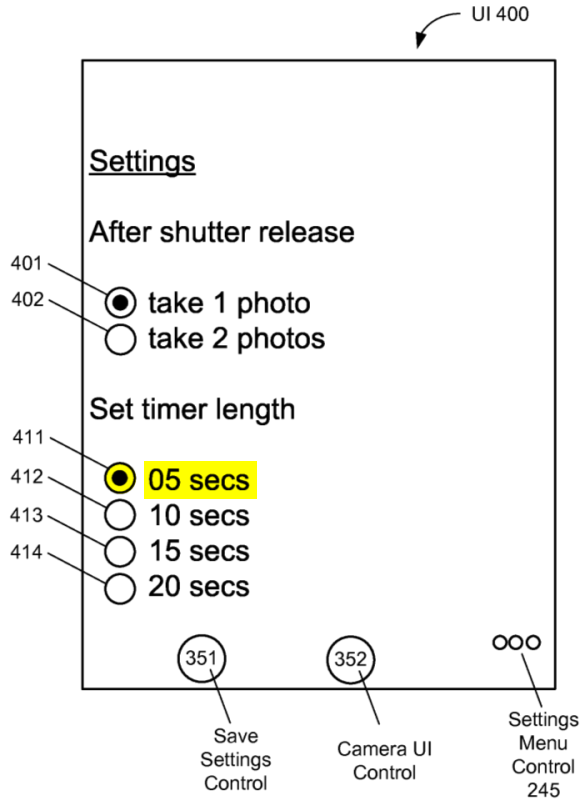


FIG. 4

EX1004 Chinn (’368 Patent) at Fig. 4; Petition at 30

Chinn, Takahashi and EX-V7 Render Obvious Limitations [1.g] and [1.j]

’368 Patent | Chinn

[0027] In some embodiments, camera control system **175** may output audible notifications by speaker **140** when responding to commands by affirming that a command is executed. For example, in response to a “set timer: 10 seconds” command, camera control system **175** may output an audible notification by speaker **140** such as “timer set”, and camera control system **175** may then proceed to output an audible countdown to camera activation. In response to a “set flash: on” command, a “set flash: off” command, or a “set flash: auto” command, camera control system **175** may output an audible notification by speaker **140** such as “flash on”, “flash off”, or “automatic flash”. Camera control system **175** may then optionally continue listening and may output a subsequent audible notification by speaker **140** such as, “now listening”. Camera control system **175** may output similarly appropriate audible notifications by speaker **140** in response to “set focus”, “set ISO/speed”, and/or a “set scene” commands, and may optionally return to listening thereafter.

EX1004 Chinn (’368 Patent) at [0027]; Petition at 26; Reply at 16

Chinn Discloses First and Second Cameras Being Disabled

’368 Patent | Chinn

[0032] Flash control **241** may be adapted to change a flash setting applied by camera control system **175**. For example, a flash setting may be changed between flash on, auto, and off settings. Camera control system **175** may apply a next flash setting in response to each successive user selection of flash control **241**. Camera selection control **242** may be adapted to change a camera selection setting applied by camera control system **175**. For example, a camera selection setting may be changed between front camera **110** and back camera **125** settings. Camera control system **175** may apply a next camera selection setting in response to each successive user selection of camera selection control **242**.

EX1004 Chinn (’368 Patent) at [0032]; Petition at 26

Chinn Renders Obvious First and Second Cameras Being Disabled

Guidash

100. Chinn discloses or renders obvious activating the front camera 110 (i.e., first camera) to output image signals when a voice command is received and the front camera is selected via, e.g., via the camera selection control 242. *See* limitation [1g]. A POSITA, in my opinion, would have understood that the need to activate the front camera 110 means that it was previously disabled. It is also my opinion that a POSITA would have understood that because only the front camera 110 is activated, the back camera 125 (i.e., second camera) would remain disabled. To the extent not expressly disclosed in Chinn, it is my opinion that a POSITA would have found it obvious to configure Chinn's camera control system 175 to keep rear camera 125 disabled while capturing an image using the front camera 110 and vice-versa. Given that a camera module is relatively high power consumption component in a mobile device, at least one significant benefit of doing so would be to reduce power consumption and increase battery life.

EX1003 (Guidash Decl.) at ¶ 100; Petition at ¶ 29

Chinn Renders Obvious First and Second Cameras Being Disabled

Guidash

101. Likewise, Chinn discloses activating the back camera 125 (i.e., second camera) in response to the user selection of the camera activation control 233 on the touch panel 105/UI 200 when the back camera is selected via the camera selection control 242. *See* limitation [1h]. In my opinion, a POSITA would have understood that the need to activate the back camera 125 means that it was previously disabled. It is also my opinion that a POSITA would have understood or at least found obvious that because only the back camera 125 is activated, the front camera 110 (i.e., first camera) remains disabled. Given that a camera module is relatively high power consumption component in a mobile device, at least one significant benefit of doing so would be to reduce power consumption and increase battery life.

EX1003 (Guidash Decl.) at ¶ 101; Petition at ¶ 30

Chinn Renders Obvious First and Second Cameras Being Disabled

Guidash

Q. So you would agree that the ’757 patent describes a situation where the front and back camera are both enabled?

A. Yes, and my point is that it was the ubiquitous state in dual camera devices; that only one camera was enabled unless it was an application, such as described in the ’757 patent, where image capture from both cameras was being used for another purpose.

EX2007 (Guidash Depo. Tr.) at 32:4-12

Ground 3: Kim, Yamamoto and Thorn

Kim, Yamamoto, And Thorn Render Obvious Limitation [1j]

’815 Patent | Yamamoto

[0249] Here, there is a case in which an image is captured after a certain period of time (for example, 0.5 seconds) passes after, in general, “Say Cheese” or the like has uttered (after /z/ has uttered).

[0250] In consideration of this, in the first embodiment, the image pickup unit **103** captures an image after a predetermined delay time passes after the speech detection unit **106** has performed the detection operation for detecting the end of utterance “Say Cheese”.

EX1009 Yamamoto (’815 Patent) at [0249-0250]; Reply at 21

Kim-Yamamoto-Thorn Render Obvious
First Standby Time > Second Standby Time

'815 Patent | Yamamoto

[0249] Here, there is a case in which an image is captured after a certain period of time (for example, 0.5 seconds) passes after, in general, "Say Cheese" or the like has uttered (after /z/ has uttered).

EX1009 Yamamoto ('815 Patent) at [0249]; Petition at 76

Thorn

[0060] In block **46**, the process may be delayed a period of time to reduce the probability that one or more of the subjects will be blinking at the time that the flash **18** is fired and the sensor **16** captures image data for the photograph. In one embodiment, the delay may be based on the blink history for the subject who blinked (e.g., subject X in the example). For instance, the delay may be the average blink time that has been calculated for the subject that blinked. In another embodiment, the delay may be the average blink time of the subject minus the logged duration of the subject's current blink measured from the start of the blink to the time that the shutter key was pressed. This difference may be a reasonable approximation of the time remaining before the subject's blink ends. Other delay approaches may be possible. For instance, the delay may be the average blink time of a large sample of persons, such as the above-mentioned 250 ms. In

EX1011 Thorn at [0060]; Petition at 77

Claim 2

’757 Patent

> **2**. The image recording device according to claim **1**, wherein the first camera is enabled in accordance with the command voice.

EX1001 (’757 Patent) at Claim 2

- Separate arguments for patentability of claim 2 were not in POR and are therefore waived

- Disclosed in EX1004 paragraph [0027] (Petition at 31)