Kevin Imes’s U.S. patent application no. 09/874,423 is directed to a device for communicating digital camera image and video information over a network. The Patent
Trial and Appeal Board affirmed the examiner’s rejections of all pending claims 1-14 and 16-47 as either anticipated by or obvious over various references. On appeal, Mr. Imes challenges only the rejections of independent claims 1, 34, and 43 and of their dependent claims 2-5, 35-42, and 44-47, by virtue of their dependence from the independent claims. He does not challenge the rejections of claims 6-14 and 16-33. We have jurisdiction under 28 U.S.C. § 1295(a)(4). For the reasons discussed below, we reverse and remand.

I. Rejection of Claims 1-5

Independent claim 1 recites an electronic device including a memory for storing digital images, a display for displaying the images, and an input device for receiving a request for communication. The device includes a housing that stores first and second wireless communication modules. The first wireless communication module is a cellular communication module, and the second wireless communication module is a “low power high-speed” communication module.

The examiner rejected claim 1 and dependent claims 2-5 as obvious over the combination of U.S. Patent Nos. 6,762,791 (Schuetzle), 6,223,190 (Aihara), and 7,173,651 (Knowles). The central dispute is whether Schuetzle discloses a second wireless communication module. Schuetzle discloses a system where a camera 30 can send image information to a computer system 20 via a wireless communication interface, via a tethered interface, and/or by inserting a removable memory card 35 into system 20. Schuetzle col. 1 ll. 20-30, col. 4 ll. 16-25, Fig. 1 (below).
The examiner found that Schuetzle’s wireless communication interface in Figure 1 discloses the first wireless communications module and that Schuetzle’s removable memory card 35 discloses the second wireless communications module. The examiner concluded that removable memory card 35 was “wireless” because to communicate information to computer system 20, it “must be removed from [camera] 30 and inserted into the computer system 20. In other words, no wire is utilized.” J.A. 175 (emphasis added). The examiner thus construed “wireless” as including communication along the metal contacts of the removable memory card and the computer system when the memory card is inserted into the computer. According to the examiner, the metal contacts are not a wire. The Board affirmed the rejection, noting that Schuetzle’s “wireless data communication transfer from a removable media card” discloses a “wireless communication module.”

We review the Board’s factual findings for substantial evidence and its legal conclusions de novo. In re Kotzab,
217 F.3d 1365, 1369 (Fed. Cir. 2000). In this case, we review the Board’s claim construction de novo.\textsuperscript{1}

We hold that the Board erred in concluding that Schuetzle’s removable memory card 35 discloses the claimed second wireless communication module. Whether removable memory card 35 is a wireless communication module turns on the construction of the term “wireless.” The Patent Office’s construction of “wireless” to include communications along metal contacts of the removable memory card and the computer system is inconsistent with the broadest reasonable interpretation in view of the specification. The construction of “wireless” is straightforward. The ’423 application expressly and unambiguously defines wireless: “[w]ireless refers to a communications, monitoring, or control system[] in which electromagnetic or acoustic waves carry a signal through atmospheric space rather than along a wire.” ’423 application p. 46 l. 26 - p. 47 l. 1. The ’423 application consistently uses the term “wireless” to refer to methods and devices that carry waves through atmospheric space, such as Bluetooth and various cellular protocols. \textit{E.g.}, id. p. 15 l. 20 - p. 16 l. 29, 46 ll. 20-25. The metal contacts of a removable memory card do not carry a signal through atmospheric space using electromagnetic or acoustic waves, and thus removable memory card 35 is not a wireless communication module under the broadest reasonable interpretation of that term in view of the specification.

For the first time on appeal, the Patent Office advances an additional theory for why removable card 35

\textsuperscript{1} Nothing in this case implicates the deference to fact findings contemplated by the recent decision in \textit{Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.}, 135 S. Ct. 831, 841-42 (2015).
discloses the second wireless communications module. Under this new theory, the Patent Office argues that memory 34 and removable card 35 can each communicate their data wirelessly through camera 30's wireless communication interface, such that memory 34 coupled with the wireless communication interface forms a first wireless communication module and removable card 35 coupled with the same wireless communication interface forms a second wireless communication module. This rationale was not articulated by the examiner or the Board, and we will not consider it for the first time on appeal. Even if the Board had used this reasoning below, it would have constituted a new ground of rejection because it relies on “new facts and rationales not previously raised to the applicant by the examiner.” In re Leithem, 661 F.3d 1316, 1319 (Fed. Cir. 2011). We therefore reverse the rejection of claims 1-5 without considering the Patent Office’s new rationale articulated for the first time on appeal.

II. Rejections of Claims 34-42 and Claims 43-47

Independent claims 34 and 43 each recite a communications device comprising, among other features, a “communications module . . . operable to wirelessly communicate streaming video to a destination.” The examiner rejected claim 34 as anticipated by Knowles and claim 43 as obvious over Knowles in view of U.S. Patent No. 7,372,485 (Bodnar). The examiner found that Knowles discloses the recited communications module operable to wirelessly communicate streaming video to a destination. Knowles discloses a wireless digital camera system that transmits images over the Internet. Knowles col. 6 ll. 23-29. Knowles’s camera system allows a user to take multiple consecutive still images and queues the images so that they can be serially transmitted to a server while allowing the user to take subsequent pictures without waiting for the previous picture to be transmit-
Id. Figs. 12, 18, col. 10 ll. 6-48, col. 12 l. 36 - col. 13 l. 29. The server then transmits the images via e-mail. Id. col. 13 ll. 48-60. Noting that Figure 12 of Knowles shows a repetitive loop where images are transmitted so long as they are in the queue, the examiner concluded that Knowles discloses “streaming video.” The examiner explained that “[a] continuous process of sending images is the equivalent of streaming video.” J.A. 154-55. The examiner also noted that Knowles discloses that its invention can be implemented on a Sony Vaio C1 Picturebook that incorporates a digital camera. The examiner then cited a press release explaining that the Sony Vaio C1 Picturebook can send both still images and digital video clips over the Internet as e-mail attachments.

The Board affirmed. It construed “operable to wirelessly communicate streaming video to a destination” as “capable of wirelessly communicating continuous video transmission.” Like the examiner, it determined that the Figure 12 embodiment of Knowles and the implementation on a Sony Vaio C1 Picturebook disclose this limitation.

We see no error in the Board’s construction of the streaming video limitation as “capable of wirelessly communicating continuous video transmission.” There is, however, no substantial evidence supporting its determination that Knowles discloses streaming video. Knowles discloses a system that sends a series of individual still images as e-mail attachments. Sending a series of e-mails with attached still images is not the same as streaming video. Such a construction is unreasonable as it comports with neither the plain meaning of the term nor the specification. Streaming video is the continuous transmission of video. A series of e-mails with attachments does not meet the definition of “streaming” and still images do not meet the definition of “video.”
The ’423 application consistently distinguishes image transmission from video transmission, as does the prior art cited by the Patent Office. The ’423 application repeatedly describes embodiments where an “image,” “digital image,” or “image information” is communicated over the Internet. See, e.g., ’423 application p. 10 l. 12 - p. 16 l. 11, p. 19 l. 7 - p. 20 l. 12, p. 24 l. 13 - p. 25 l. 5. It also repeatedly associates these “images” with still pictures such as “photos” or “photographs.” E.g., id. p. 7 ll. 10-12, p. 26 ll. 6-13, p. 28 ll. 8-18, p. 30 ll. 2-15, p. 31 ll. 7-23, p. 37 ll. 2-12, p. 41 l. 26 - p. 42 l. 16. The embodiments disclosing transmission of images do not in any way disclose transmission of video. In contrast, only two embodiments in the ’423 application (one of which is the claimed streaming embodiment) disclose transmitting “streaming video,” “video files,” or “video information.” Id. p. 21 l. 6 - p. 22 l. 15, p. 32 ll. 7-13. The video embodiments describe sending video of a wedding so that a user can attend “the event in a ‘virtual’ manner,” id. p. 22 ll. 4-12, or communicating video of a baseball game captured with a digital video recorder, id. p. 32 ll. 7-13. The Sony Vaio press release cited by the Patent Office similarly distinguishes between images and video, disclosing a camera “that can capture digital still images as well as video clips.” J.A. 239. These distinctions in the specification and prior art support the common-sense conclusion that image transmission is not the same as video transmission. Thus, Knowles’s disclosure of sending a series of e-mails with images attached does not disclose streaming video.

We also hold that substantial evidence does not support the Patent Office’s finding that Knowles’s reference to a Sony Vaio C1 Picturebook discloses the streaming video limitation. Knowles itself indicates that its invention may be implemented on a number of different devices, including the Sony Vaio C1 Picturebook. Knowles col.
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6 l. 61 - col. 7 l. 13. Knowles does not mention any specific features of the Sony Vaio C1 Picturebook other than that it incorporates a digital camera. *Id.* col. 7 ll. 10-12. Instead, the examiner relied on a press release in which Sony announced its new Vaio notebook computer to show the inherent characteristics of the Sony Vaio C1 Picturebook. In particular, this press release indicates that the digital camera is capable of capturing digital still images and video clips and sending them as attachments to e-mail messages. J.A. 239-40. A second reference may be used to show that a feature is inherent in a first reference if the first reference is silent with regard to the inherent feature. *See Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1268-69 (Fed. Cir. 1991). However, the evidence must make clear that the missing characteristic is “necessarily present” in the first reference. *Id.* Here, the Sony Vaio press release does not disclose that the Sony Vaio C1 Picturebook is capable of “streaming video” or “continuous video transmission.” The press release only discloses that the Sony Vaio C1 Picturebook can send out “digital video clips and still pictures . . . attached to e-mail messages.” Sending out an e-mail message with a video file attached does not disclose streaming video or, as construed, continuous video transmission. In fact, the ’423 application distinguishes between streaming video and sending a video file: “a user may want to wirelessly communicate streaming video or a video file.” ’423 application p. 21 ll. 22-23 (emphasis added). The Sony Vaio press release does not discuss streaming or continuous transmission of anything—it merely discloses sending a video file as an attachment to an e-mail.

Nowhere in the record did the examiner or the Board explain how implementing Knowles’s disclosed image transmission method on a Sony Vaio C1 Picturebook discloses streaming video or continuous video transmis-
sion. Instead, both the Board and the examiner found that Knowles discloses continuous image transmission and that Knowles can be implemented on the Sony Vaio C1 Picturebook, which is capable of sending video files via email. J.A. 6, 9-10, 154-55. These two findings do not provide substantial evidence that Knowles discloses, expressly, inherently, or even implicitly, streaming video capabilities. For these reasons, we hold that the Board erred in concluding that Knowles discloses the claimed “communications module . . . operable to wirelessly communicate streaming video to a destination.”

CONCLUSION

Because the Board incorrectly construed “wireless” and its rejection of claims 1-5 is not supported under the correct construction, and because the Board’s conclusion that Knowles discloses a communications module operable to wirelessly communicate streaming video to a destination is not supported by substantial evidence, we reverse the rejections of claims 1-5 and 34-47 and remand.

REVERSED AND REMANDED