



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.
13/732,837	01/02/2013	Tal Tamir	146208USC01	3855
15055	7590	12/02/2016	EXAMINER	
Patterson & Sheridan, L.L.P. Qualcomm 24 Greenway Plaza, Suite 1600 Houston, TX 77046			WU, JIANYE	
			ART UNIT	PAPER NUMBER
			2462	
			NOTIFICATION DATE	DELIVERY MODE
			12/02/2016	ELECTRONIC

**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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

qualcomm@pattersonsheridan.com  
PAIR\_eOfficeAction@pattersonsheridan.com  
ocpat\_uspto@qualcomm.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* TAL TAMIR and DANIEL RETTIG

---

Appeal 2016-002194  
Application 13/732,837<sup>1</sup>  
Technology Center 2400

---

Before JASON V. MORGAN, DANIEL J. GALLIGAN, and  
AARON W. MOORE, *Administrative Patent Judges*.

GALLIGAN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner’s final rejection of claims 1–4, 6–17, and 20–32. We have jurisdiction under 35 U.S.C. § 6(b). Claims 5, 18, and 19 have been canceled. App. Br. 24, 26.

We AFFIRM.<sup>2</sup>

---

<sup>1</sup> The Appeal Brief identifies QUALCOMM Inc. as the real party in interest. App. Br. 3.

<sup>2</sup> Our Decision refers to Appellants’ Appeal Brief, filed July 20, 2015 (“App. Br.”); Appellants’ Reply Brief, filed December 8, 2015 (“Reply Br.”); Examiner’s Answer, mailed October 15, 2015 (“Ans.”); Final Office Action, mailed February 24, 2015 (“Final Act.”); and original Specification, filed January 2, 2013 (“Spec.”).

## STATEMENT OF THE CASE

### *Claims on Appeal*

Claims 1, 21, 26, 27, and 32 are independent claims. Claim 1 is reproduced below:

1. A wireless communication system for enabling a wireless connection between a computing device and a plurality of peripheral devices, comprising:

a host bridge of the computing device; and

a wireless docking apparatus configured to communicate with the host bridge over a wireless interconnect bus, wherein the wireless docking apparatus comprises a switch coupled to a plurality of peripheral interfaces, wherein each of the plurality of peripheral interfaces is coupled separately and independently to the switch, and wherein the plurality of peripheral interfaces are capable of being coupled to the plurality of peripheral devices to enable the wireless connection between the computing device and the plurality of peripheral devices.

### *References*

Zhang	US 2005/0075080 A1	Apr. 7, 2005
Brenner	US 2005/0246470 A1	Nov. 3, 2005

### *Examiner's Rejection*

Claims 1–4, 6–17, and 20–32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brenner and Zhang. Final Act. 2–10.

## ANALYSIS

Appellants contend the Examiner erred in finding the combination of Brenner and Zhang teaches or suggests a “wireless docking apparatus compris[ing] a switch coupled to a plurality of peripheral interfaces, wherein each of the plurality of peripheral interfaces is coupled separately and

independently to the switch,” as recited in independent claim 1. *See* App. Br. 8–14; Reply Br. 2–4. Independent claims 21, 26, 27, and 32 similarly recite coupling or connecting “separately and independently.” *See* App. Br. 26–29. The Examiner finds Figures 3 and 5 of Brenner teach these limitations. *See* Final Act. 3–4.

With respect to Figure 3 of Brenner, Appellants argue “there is no teaching or suggestion in *Brenner* that wireless port replicator 304 functions or can be considered as a switch.” App. Br. 12. Appellants further argue: “[W]hile FIG. 3 illustrates a block diagram of a wireless port replicator 304 that may be in communication with a plurality of peripheral devices 310, FIG. 3 does not illustrate a peripheral *interface* at all, but rather merely illustrates a plurality of peripheral *devices*.” App. Br. 14. Appellants also argue that Figure 3 “does not teach *how* the peripherals 310 are coupled with a switch at all,” and “[t]herefore, FIG. 3 fails to teach that the peripherals are coupled separately and independently to a switch.” App. Br. 14.

Appellants argue Figure 5 of Brenner teaches “the various connections 510 (peripheral interfaces)” connected to a microcontroller via a bus, which “by its very shared nature (as understood by any degreed electrical engineer or person having ordinary skill in the art), teaches away from each of the peripheral interfaces being coupled separately and independently to the switch.” App. Br. 12.

Appellants’ Specification does not define the phrase “coupled separately and independently,” and, as the Examiner correctly points out, “[n]either the word ‘**separately**’ nor ‘**independently**’ is mentioned in the specification.” Ans. 13. As support for the recited subject matter, Appellants cite Figures 2 and 3 of their Specification. *See* App. Br. 5

(“endpoints 260 in FIG. 2 (or I/O controllers 330 in FIG. 3) being connected separately and independently to switch 250 (or switch 320)”). Figures 2 and 3 depict separate lines between various endpoints 260 and switch 250 (Figure 2) and between various I/O controllers 330 and switch 320 (Figure 3). Appellants do not direct us to, nor do we find, any further explanation in Appellants’ Specification as to the meaning of the phrase “coupled separately and independently.” However, Appellants’ Specification states:

*[A]ny switches shown in the figures are conceptual only. Their function may be carried out through the operation of program logic, through dedicated logic, through the interaction of program control and dedicated logic, or even manually, the particular technique being selectable by the implementer as more specifically understood from the context.*

Spec. ¶ 32 (emphasis added).

In view of Appellants’ Specification, we are not persuaded the Examiner erred in finding Brenner teaches a “wireless docking apparatus compris[ing] a switch coupled to a plurality of peripheral interfaces, wherein each of the plurality of peripheral interfaces is coupled separately and independently to the switch,” as recited in claim 1. Similar to Figures 2 and 3 of Appellants’ Specification, Figure 3 of Brenner depicts separate lines going to separate places on wireless port replicator 304. Brenner describes that a “docking station can also be referred to as a port replicator because it replicates many of the ports located on the back of the laptop.” Brenner ¶ 4. With reference to the docking station side of the system, depicted in Figure 5, Brenner further describes:

*[T]he UWB chipset 502 connects to a system bus 504 in the docking station. Data transfers and bus arbitration may be handled by a microcontroller 506 or microprocessor. The various connections 510 and any combinations thereof that may*

be supported by the docking station, such as display controller, keyboard, mouse, LAN, etc. will connect to the bus. All of these functions 500 may also be integrated into a single, common I/O chipset including the UWB chipset 502.

Brenner ¶ 20.

In finding that Figure 5 teaches peripheral interfaces that couple separately and independently to the switch, the Examiner finds “[t]he bus is an internal element of the switch.” Final Act. 11. In response, Appellants contend that “a system bus is not an internal element of a switch, and the Examiner offers no evidence of his interpretive grouping.” App. Br. 13. However, Appellants do not direct us to persuasive evidence to support this assertion, nor does Appellants’ Specification prohibit a switch from including a bus. In view of Appellants’ Specification’s depiction of switches as simply boxes and its description of the depicted switches as “conceptual only” (Spec. ¶ 32), we see no error in the Examiner’s findings.

Appellants acknowledge that the “various connections 510” in Figure 5 of Brenner teach “peripheral interfaces.” *See* App. Br. 12 (“[T]he docking station/port replicator side 500 in Brenner teaches only that the various connections 510 (peripheral interfaces) for a printer, display, keyboard, etc. are connected to the microcontroller 506 via a system bus 504 (FIG. 5 and para. [0020]).”). Figure 5 depicts these as separate lines connecting to the same device, in this case a bus forming part of a switch, which is consistent with the depiction of lines connecting to switches 250 and 320 in Figures 2 and 3, respectively, of Appellants’ Specification. Figure 5 also shows ultrawideband (UWB) wireless chipset 502, which the Examiner finds teaches a wireless transceiver, coupled to the bus of the switch. *See* Final Act. 4; Brenner ¶ 20, Fig. 5.

We agree with the Examiner's conclusion that the subject matter of independent claims 1, 21, 26, 27, and 32 would have been obvious to a person of ordinary skill in the art in view of Brenner and Zhang. Therefore, we sustain the rejection of the independent claims under 35 U.S.C. § 103(a), as well as the rejection of dependent claims 2–4, 6–17, 20, 22–25, and 28–31, for which Appellants offer no additional persuasive arguments for patentability. *See* App. Br. 14, 18, and 21.

#### DECISION

We affirm the Examiner's decision to reject claims 1–4, 6–17, and 20–32 under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED