

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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DISH NETWORK, LLC,  
Petitioners,

v.

TQ DELTA, LLC,  
Patent Owner.

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Case IPR2016-01760  
Patent 9,094,268 B2

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Before SALLY C. MEDLEY, KALYAN K. DESHPANDE, and  
TREVOR M. JEFFERSON, *Administrative Patent Judges*.

JEFFERSON, *Administrative Patent Judge*.

DECISION  
Institution of *Inter Partes* Review  
37 C.F.R. § 42.108

## I. INTRODUCTION

Cisco Systems, Inc. (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1, 2, 4, 11, 12, 14, 16, and 18 of U.S. Patent No. 9,094,268 B2 (Ex. 1001, “the ’268 patent”). Paper 1 (“Pet.”). TQ Delta, LLC (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” After considering the Petition, the Preliminary Response, and associated evidence, we conclude that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing the unpatentability of claims 1, 2, 4, 11, 12, 14, 16, and 18 of the ’268 patent.

### A. Related Proceedings

The parties state that the ’268 patent is asserted in *TQ Delta LLC v. Comcast Cable Comms., et al.*, Case No. 1:15-cv-00611 (D. Del.); *TQ Delta LLC v. CoxCom LLC et al.*, Case No. 1:15-cv-00612 (D. Del.); *TQ Delta LLC v. DirecTV et al.*, Case No. 1:15-cv-00613 (D. Del.); *TQ Delta LLC v. DISH Network Corp. et al.*, Case No. 1:15-cv-00614 (D. Del.); *TQ Delta LLC v. Time Warner Cable Inc., et al.*, Case No. 1:15-cv-00615 (D. Del.); and *TQ Delta LLC v. Verizon Comms., Inc.*, Case No. 1:15-cv-00616 (D. Del.). Pet. 1; Paper 4, 2–3. The ’268 patent is also involved in *Dish Networks LLC v. TQ Delta LLC* IPR2016-01469 (PTAB Jul. 21, 2016). Pet. 1; Paper 4, 2–3.

*B. The '268 Patent*

The '268 patent describes “a multicarrier transmission system having a low power sleep mode and a rapid-on capability.” Ex. 1001, 3:35–37. The sleep mode idles a multicarrier transceiver when it is not needed to transmit or receive data, with transmission and reception capabilities quickly restored without requiring full initialization after inactivity. *Id.* at Abstract. The system includes a transceiver at the local central telephone office’s location (“CO transceiver”) and a transceiver at the customer’s premises (“CPE transceiver”), which communicate over a telephone line. *Id.* at 3:66–4:9.

Figure 1 reproduced below depicts a preferred embodiment of the invention.

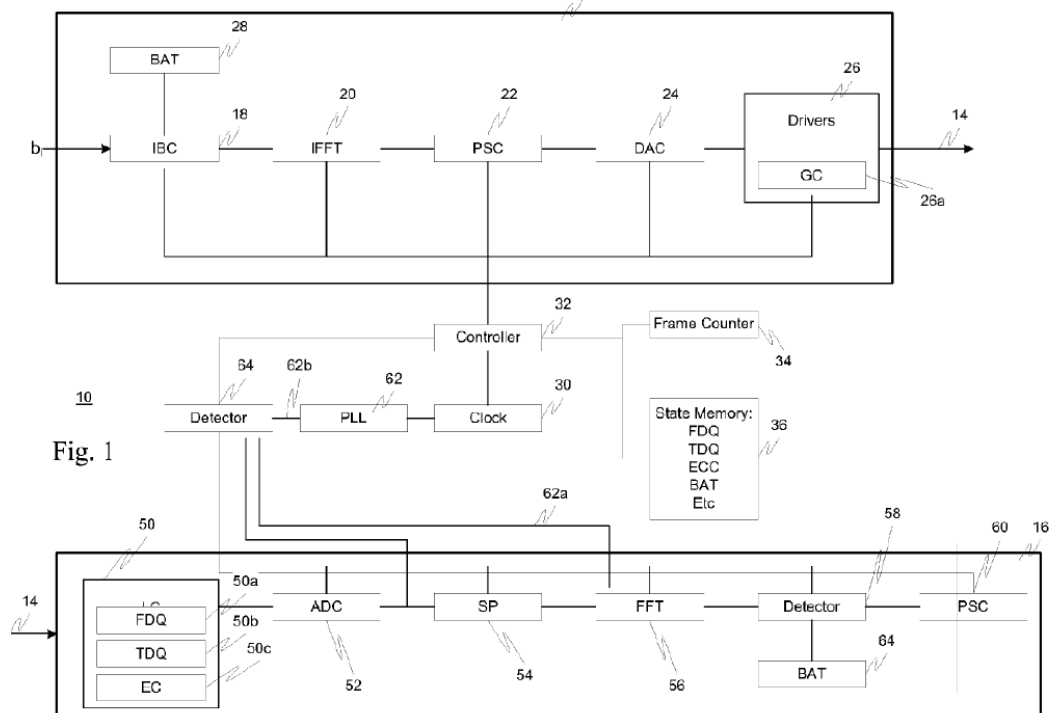


Figure 1 shows a block diagram of a multicarrier transmission system. *Id.* at 3:50–53. Each transceiver includes “DSL transceiver 10” with “transmitter section 12 for transmitting data over a digital subscriber line 14 and a

receiver section 16 for receiving data from the line.” *Id.* at 4:18–21, FIG. 1. In one embodiment, the transmitter and receiver sections 12, 16 enter a low power mode (or “sleep” mode), where power is reduced or cut off to the digital modulators/demodulator portions (sections 12, 16) of the transmitter and receiver sections (corresponding to the IFFT 20 (data modulator) and FFT 56 (demodulator) of the CPE transceiver of Figure 1). *Id.* at 6:66–7:21. In another embodiment, the transceiver is placed into a “partial” sleep mode “in which only part of each transceiver is powered down.” *Id.* at 8:52–60.

The ’268 patent specification discloses that a transceiver entering a low power mode must first store a variety of line parameters comprising its “state memory.” *Id.* at 6:66–7:14. During sleep mode state, the CO transceiver monitors data subscriber line 14 for an “Exiting Sleep Mode” signal from the CPE transceiver. *Id.* at 7:64–69. The CPE transceiver transmits this signal when the “controller receives an ‘Awaken’ indication. . . . In response to the ‘Awaken’ signal, the CPE transceiver retrieves its stored state from the state memory 38; [and] restores full power to its circuitry.” *Id.* at 7:64–8:6.

### *C. Illustrative Claims*

Claims 1, 11, 14, and 16 are independent and reproduced below as illustrative of the claims at issue:

1. A method, in a multicarrier transceiver, comprising:  
transmitting or receiving a message to enter a low power mode; and  
entering the low power mode, wherein a transmitter portion of the transceiver does not transmit data during the low power mode and a receiver portion of the transceiver receives data during the low power mode, wherein the

transceiver is a device that is capable of transmitting or receiving internet and video data.

11. A method, in a multicarrier transceiver, comprising:  
transmitting or receiving a message to enter a low power mode for a transmitter portion while a receiver portion remains in a full power mode; and

entering the low power mode for the transmitter portion while the receiver portion remains in the full power mode, wherein the transceiver is a device that is capable of transmitting or receiving internet and video data.

14. A method, in a multicarrier transceiver, comprising:  
transmitting or receiving a message to enter a low power mode for a transmitter portion while a receiver portion remains in a full power mode;

entering the low power mode for the transmitter portion while the receiver portion remains in the full power mode; and storing during the low power mode at least one parameter associated with the full power mode.

16. A method, in a multicarrier transceiver, comprising:  
transmitting or receiving a message to enter a low power mode for a transmitter portion while a receiver portion remains in a full power mode; and

entering the low power mode for the transmitter portion while the receiver portion remains in the full power mode, wherein the transmitter portion of the transceiver does not transmit user data during the low power mode.

Ex. 1001, 10:6–14, 10:64–11:4, 11:12–19, 11:24–31.

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