

**UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

**Signal Coding LLC,**

**Plaintiff,**

**v.**

**Texas Instruments, Inc.**

**Defendant.**

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**Case No. 6:19-cv-512**

**JURY TRIAL DEMANDED**

**ORIGINAL COMPLAINT AND JURY DEMAND**

This is an action for patent infringement in which Plaintiff Signal Coding LLC (“Signal Coding”) complains against Defendant Texas Instruments, Inc. (hereinafter referred to as “Texas Instruments” or “Defendant”) as follows:

**PARTIES**

1. Plaintiff Signal Coding is a Delaware limited liability company having a principal place of business in Texas.
2. On information and belief, Texas Instruments is a Delaware corporation with a place of business at 12357 Riata Trace Pkwy, Austin, TX.

**JURISDICTION AND VENUE**

3. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction pursuant to 28 U.S.C. 1331 and 1338(a).
4. This Court has personal jurisdiction over Defendants because, directly or through intermediaries, each has committed acts within the District giving rise to this action

and/or has established minimum contacts with the District such that the exercise of jurisdiction would not offend traditional notions of fair play and substantial justice.

5. Venue is proper in this district under 28 U.S.C. §§ 1391(b) and (c) and 1400(b). Upon information and belief, venue is proper in this District pursuant to 28 U.S.C. § 1400(b) because TI has committed acts of infringement in the District and has a regular and established place of business in the District.

### **COUNT I**

#### **INFRINGEMENT OF U.S. PATENT NO. 7,145,490 B2**

6. Plaintiff Signal Coding is the owner by assignment of United States Patent No. 7,145,490 B2 (“the ‘490 patent”), entitled “Automatic gain control system and method” – including all rights to recover for past and future acts of infringement. Plaintiff contends that the claims of the ‘490 Patent are entitled to at least an earliest effective filing date of September 15, 2004.
7. The ‘490 patent was duly and legally issued on December 5, 2006. A true and correct copy of the ‘490 patent is attached as Exhibit A.
8. The ‘490 patent is generally related to automatic gain control products that comprise a number of variable gain stages connected in series and a number of sensors, the input of each sensor being connected to a respective output of the variable gain stages. As set forth in Exhibit B, upon information and belief, TI makes, uses and/or sells products that directly infringe one or more claims of the ‘490 patent.
9. As set forth in Exhibit B, upon information and belief, all limitations of at least one asserted claim are present literally. To the extent that any specific limitation of the asserted claim is found to not be present literally or if there are any differences between

the claim elements and the products listed, upon information and belief the differences are insubstantial and the products would therefore infringe under the doctrine of equivalents.

10. Defendant is thus liable under at least 35 U.S.C. § 271(a) for direct infringement for at least making, using and/or selling at least the products identified in Exhibit B.

## **COUNT II**

### **INFRINGEMENT OF U.S. PATENT NO. 7,376,881 B2**

11. Plaintiff Signal Coding is the owner by assignment of United States Patent No. 7,376,881 B2 (“the ‘881 patent”), entitled “Encoder system, a decoder system, a coding/decoding apparatus, an encoding method and a decoding method” – including all rights to recover for past and future acts of infringement. Plaintiff contends that the claims of the ‘881 Patent are entitled to at least an earliest effective filing date of June 9, 2004.
12. The ‘881 patent was duly and legally issued on May 20, 2008. A true and correct copy of the ‘881 patent is attached as Exhibit C.
13. The ‘881 patent is generally related to an encoder system for encoding a signal according to any number of FEC and/or channel codes comprises a shift register, an array of MOD/XOR stages, and a generator matrix stage for controlling the connections between the shift register and the MOD/XOR stages and altering these connections according to a coding format selected by an encoder selection stage. There is also disclosed a decoder system for decoding a signal encoded according to a number of FEC and/or channel codes comprising a decoding stage, and a generator matrix stage for configuring the decoding stage to a decoding code format to be applied an incoming encoded signal. As

set forth in Exhibit D, upon information and belief TI at least makes, uses and/or sells products that directly infringe one or more claims of the '881 patent.

14. As set forth in Exhibit D, upon information and belief, all limitations of at least one asserted claim are present literally. To the extent that any specific limitation of the asserted claim is found to not be present literally or if there are any differences between the claim elements and the products listed, upon information and belief the differences are insubstantial and the products would therefore infringe under the doctrine of equivalents.
15. Defendant is thus liable under at least 35 U.S.C. § 271(a) for direct infringement for at least making, using and/or selling at least the products identified in Exhibit D.

### **COUNT III**

#### **INFRINGEMENT OF U.S. PATENT NO. 7,103,117 B2**

16. Plaintiff Signal Coding is the owner by assignment of United States Patent No. 7,103,117 B2 ("the '117 patent"), entitled "Reduced-complexity multipath interference cancellation" – including all rights to recover for past and future acts of infringement. Plaintiff contends that the claims of the '117 patent are entitled to at least an earliest effective filing date of March 12, 2002.
17. The '117 patent was duly and legally issued on September 5, 2006. A true and correct copy of the '117 patent is attached as Exhibit E.
18. The '117 patent is generally related to cancelling multipath interference in a received wireless signal by generating an estimated duplicate of the interference and subtracting it from the received signal. The interference duplication is performed in a truncated manner, based on a determination of which multipath signals are present, so as to reduce

the complexity and processing requirement of the interference duplication. As set forth in Exhibit F, upon information and belief TI at least makes, uses and/or sells products that directly infringe one or more claims of the '117 patent.

19. As set for in Exhibit F, upon information and belief, all limitations of at least one asserted claim are present literally. To the extent that any specific limitation of the asserted claim is found to not be present literally or if there are any differences between the claim elements and the products listed, upon information and belief the differences are insubstantial and the products would therefore infringe under the doctrine of equivalents.
20. Defendant is thus liable under at least 35 U.S.C. § 271(a) for direct infringement for at least making, using and/or selling at least the products identified in the chart above.

#### **PRAYER FOR RELIEF**

WHEREFORE, Signal Coding respectfully requests that this Court enter judgment in its favor as follows:

- A. Holding that Defendant has directly infringed the '490 Patent, either literally or under the doctrine of equivalents, under 35 U.S.C. § 271;
- B. Holding that the Defendant has infringed the '881 Patent, either literally or under the doctrine of equivalents, under 35 U.S.C. § 271;
- C. Holding that the Defendant has infringed the '117 Patent, either literally or under the doctrine of equivalents, under 35 U.S.C. § 271;
- D. Awarding to Signal Coding the damages to which it is entitled under 35 U.S.C. § 284 for Defendant's infringement;
- E. Declaring this to be an exceptional case and awarding Signal Coding attorneys' fees under 35 U.S.C. § 285;

- F. Awarding Signal Coding costs and expenses in this action;
- G. Awarding Signal Coding pre- and post-judgment interest on its damages; and
- H. Awarding Signal Coding such other and further relief in law or in equity as this Court deems just and proper.

**JURY DEMAND**

Signal Coding requests a trial by jury of any and all issues so triable.

Respectfully Submitted,

**SIGNAL CODING LLC**

*/s/Papool S. Chaudhari*

Dated: August 30, 2019

By: \_\_\_\_\_

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**ATTORNEYS FOR PLAINTIFF  
SIGNAL CODING LLC**