

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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NXP USA, INC.,  
Petitioner,

v.

INSIDE SECURE and NFC TECHNOLOGY, LLC,  
Patent Owner.

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Case IPR2016-00683  
Patent 7,098,770 B2

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Before KEN B. BARRETT, PATRICK M. BOUCHER, and  
CHARLES J. BOUDREAU, *Administrative Patent Judges*.

BOUDREAU, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

## I. INTRODUCTION

NXP USA, Inc.<sup>1</sup> (“NXP”) filed a Petition for *inter partes* review of claims 1–3, 6–8, 10, 11, 28–31, 34, and 35 of U.S. Patent No. 7,098,770 B2 (Ex. 1201, “the ’770 patent”). Paper 3 (“Pet.”). On September 8, 2016, we issued a Decision granting institution of *inter partes* review of claims 1–3, 6–8, 10, 11, 28–31, 34, and 35 of the ’770 patent on certain of the grounds asserted. Paper 10 (“Dec. on Inst.”), 27. Exclusive licensee NFC Technology, LLC (“NFCT”)<sup>2</sup> then filed a Patent Owner’s Response (Paper

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<sup>1</sup> According to updated mandatory notice information filed under 37 C.F.R. § 42.8, “effective November 7, 2016, original petitioner NXP Semiconductors USA, Inc. merged with and into original petitioner Freescale Semiconductor, Inc., which then changed its name to ‘NXP USA, Inc.’” Paper 18, 1. We have updated the caption accordingly.

<sup>2</sup> U.S. Patent and Trademark Office assignment records indicate that the inventors assigned the ’770 patent to Inside Technologies, in an assignment recorded on April 10, 2003 (Reel/Frame 13959/852). A name change of Inside Contactless to Inside Secure was recorded on October 28, 2013 (Reel/Frame 31505/332); and a license of the ’770 patent from Inside Secure and France Telecom S.A. to France Brevets SAS was recorded on October 1, 2013 (Reel/Frame 31317/264). Additionally, although not recorded in connection with the ’770 patent, a name change of Inside Technologies to Inside Contactless S.A., executed on August 28, 2003, was recorded on August 25, 2016, in connection with certain other patents (Reel/Frame 39542/0427). In disclosures filed in this proceeding, NFCT asserts that it and its parent company, France Brevets SAS, are the real parties in interest. Paper 6, 2. NFCT further asserts that it “possesses all substantial rights to the ’770 Patent,” “exclusively owns ‘the right to defend the validity and/or enforceability’” of the ’770 Patent,” and “has standing to step into the shoes of the Patent Owner in this proceeding.” *Id.* at 2–3. NFCT also provides

15, “PO Resp.”), and NXP filed a Reply (Paper 20, “Pet. Reply”). A consolidated hearing for this proceeding and related Cases IPR2016-00681, IPR2016-00682, and IPR2016-00684 was held on June 9, 2017. A transcript of that hearing is included in the record. Paper 26 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6, and we issue this Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed below, we determine that NXP has shown by a preponderance of the evidence that claims 1–3, 6–8, 10, 11, 28–31, 34, and 35 of the ’770 patent are unpatentable on the grounds upon which we instituted *inter partes* review.

## II. BACKGROUND

### A. *Real Parties in Interest and Related Proceedings*

NXP identifies NXP Semiconductors N.V., NXP B.V., and NXP Semiconductors Netherlands B.V. as real parties in interest with itself for this proceeding. Paper 18, 1. NFCT identifies France Brevets, S.A.S., as a real party in interest with itself for this proceeding. Paper 6, 2; *see supra* note 2.

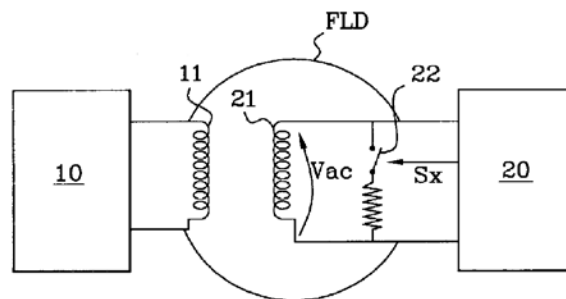
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evidence to support these assertions, namely documents that purport to be license agreements between NFCT and Inside Secure. *See* Ex. 2001; Ex. 2002. In light of NFCT’s representations, we have treated NFCT as Patent Owner throughout this proceeding and continue to do so for purposes of this Decision, as reflected by the caption.

The parties identify *NFC Technology, LLC v. Samsung Electronics Co.*, No. 2:15-cv-00283 (E.D. Tex.), as a related case. Pet. 7; Paper 6, 3. NXP also filed three other petitions challenging certain subsets of claims of the '770 patent. Case IPR2016-00681, Paper 5 (Corrected Petition); Case IPR2016-00682, Paper 5 (Corrected Petition); IPR2016-00684, Paper 3 (Petition).

*B. The '770 Patent*

The '770 patent, titled “Contactless Integrated Circuit Reader,” was issued on August 29, 2006, and claims the benefit of a French patent application filed on October 16, 2000. Ex. 1201, [30], [45], [54], [63]. The '770 patent describes a contactless integrated circuit (“CIC”) reader that includes circuits for simulating the operation of a CIC, such that the CIC reader is able to send data to another CIC reader by inductive coupling. *Id.* at [57]. Figure 1 of the '770 patent is reproduced below.



**Fig. 1**

Figure 1 is a schematic representation of a CIC reader and CIC. *Id.* at 5:6–8. With reference to Figure 1, CIC reader 10 produces alternating magnetic field FLD by means of antenna circuit 11, and transmits data by modulating

field FLD's amplitude. *Id.* at 1:15–19. Field FLD causes induced alternating voltage  $V_{ac}$  to appear in antenna circuit 21 of passive CIC 20, copying the amplitude modulations of field FLD and enabling the CIC to receive the data sent by the reader after filtering and demodulating induced voltage  $V_{ac}$ . *Id.* at 1:25–30. CIC 20 sends data to CIC reader 10 via load modulation by short circuiting antenna circuit 21 by means of a switch driven by load modulation signal  $S_x$ . *Id.* at 1:31–34. The short circuiting of antenna circuit 21 cause a disturbance of field FLD that is detected by antenna circuit 11 of reader 10. *Id.* at 1:34–36. Reader 10 can extract load modulation signal  $S_x$  by filtering the signal present in antenna circuit 11, and deduce from it the data sent by CIC 20. *Id.* at 1:36–39.

According to the '770 patent, in applications that involve several terminals, it is sometimes desirable for this information to be collected by a data centralization system. *Id.* at 2:9–11. However, collecting such data manually can be tedious or costly. *Id.* at 2:11–22. To address this issue, the '770 patent describes a CIC reader capable of switching to a passive operating mode, in which the reader operates like a CIC in communicating with another reader. *Id.* at 2:29–33. “In other terms, this reader is capable of sending data to another reader according to the load modulation principle, and of receiving data that the other reader sends by modulating the magnetic field it sends out.” *Id.* at 2:33–37. Two contactless readers can, thus, communicate by having one of the two readers switch to the passive operating mode, allowing data to be exchanged without any physical contact between them. *Id.* at 2:38–42.

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