IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of:	David L. Brown	Attorney Docket No.:42342-0135IP1
U.S. Patent No.:	9,679,289	
Issue Date:	June 13, 2017	
Appl. Serial No.:	14/961,645	
Filing Date:	December 7, 2015	
Title:	HYBRID DEVICE HAVING A PERSONAL DIGITAL KEY AND RECEIVER-DECODER CIRCUIT AND METHODS OF USE	

SECOND DECLARATION OF DR. PATRICK TRAYNOR

I, Patrick Gerard Traynor, of Gainesville, Florida, declare that:

INTRODUCTION AND SCOPE OF WORK

1. On January 16, 2024, I provided an initial Declaration in the IPR2024-00407 proceeding.

2. I am being compensated at my standard consulting rate for my time providing my independent analysis, plus reasonable out-of-pocket expenses. I have received no additional compensation for my work in this matter, and my compensation does not depend upon the content of my opinions, any testimony that I may provide, or the ultimate outcome of the matter. All of the opinions set forth in this declaration are my own.

3. In writing this Declaration, I have considered the following: my own knowledge and experience, including my work experience in mobile systems and networks; my experience in teaching those subjects; and my experience in working

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with others involved in those fields. In addition, I have analyzed the following publications and materials, in addition to other materials I cite in my declaration:

- U.S. Patent No 9,679,289 (MS-1001), and its accompanying prosecution history (MS-1002)
- U.S. Patent Publication No. 2007/0245157 A1 ("Giobbi-157") (MS-1005)
- U.S. Patent Publication No. 2004/0255139 A1 ("Giobbi-139") (MS-1006)
- U.S. Patent No. 9,042,819 ("Dua") (MS-1007)
- European Patent No. EP 1 536 306 A1 ("Broadcom") (MS-1008)
- Claim Construction Order, *Proxense, LLC v Samsung Electronics Co., Ltd*, 6:21-CV-00210-ADA, W.D. Tex., filed January 18, 2022 (MS-1009)
- Provisional Application No. 60/798,843 (MS-1010)
- Microsoft's Opening Claim Construction Brief, 6:23-cv-00319, W.D. Tex., filed November 6, 2023 (MS-1013)
- *Tech Terms: What Every Telecommunications and Digital Media Professional Should Know*, Jeff Rutenbeck, Ph.D, 2006 (MS-1020)
- *Wiley Electrical and Electronics Engineering Dictionary*, Steven Kaplan, 2004 (MS-1021)
- *Modern Dictionary of Electronics*, Rudolf Graf, 1999 (MS-1022)
- *Newton's Telecom Dictionary*, Harry Newton, 2007 (MS-1023)
- *IEEE 100 The Authoritative Dictionary of IEEE Standards Terms, Seventh Edition,* 2000 (MS-1024)
- *Microsoft Computer Dictionary, Fifth Edition*, 2002 (MS-1025)

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- *Dictionary of Science and Technology*, Simon Collin, 2003 (MS-1026)
- *McGraw-Hill Dictionary of Scientific and Technical Terms, Sixth Edition*, 2003 (MS-1027)
- *Dictionary of Computing, Fifth Edition*, 2004 (MS-1028)
- Payments System Research Briefing, Federal Reserve Bank of Kansas, December 2005 (MS-1029)
- Deposition of Dr. Jakobsson, December 20, 2024 (MS-1030)

SUMMARY OF OPINIONS

4. Unless otherwise indicated, my opinions and conclusions remain the same as presented in my original declaration (MS-1003).

5. I have additionally been asked to supplement my previous testimony with my interpretation of the following terms of the '289 patent set forth below. Specifically, I have been asked to provide my interpretation of these terms as they relate to 35 U.S.C. §112, ¶6 (also referred to as means-plus-function (MPF)), which I have been informed applies when claim limitations are recited in terms of their function instead of their structure.

6. Counsel has informed me that a rebuttable presumption that MPF treatment does not apply is created when a claim does not recite the phrase "means for," and that to overcome this presumption, the claim must fail to recite sufficiently definite structure, as understood by a POSITA. I understand that a "nonce term" (a structureless term) may take the place of "means for" in a MPF claim term. I further understand that the claim as a whole must be considered

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when evaluating if a limitation recites sufficiently definite structure. I have additionally been informed that, for terms that are subject to interpretation as MPF, the corresponding structure in the specification is what defines the scope of the limitation. I have also been informed that, for MPF limitations that are performed by a generic computing device or processor, the corresponding structure includes a processor programmed to perform an algorithm to perform the recited function as disclosed in the specification.

7. Based on my knowledge and experience, I believe that a POSITA would have understood the below terms to have sufficiently definite structure, such that a MPF interpretation is improper.

(1) "Local, secured information stored by the integrated, secure memory."

(2) "Integrated RDC communicating wirelessly with the at least one external device within the proximity zone."

(3) "Enablement signal."

THE CLAIM TERMS AT ISSUE RECITE SUFFICIENTLY DEFINITE STRUCTURE

I. Local, secured information stored by the integrated, secure memory

8. I have reviewed Proxense's arguments for MPF treatment of this claim term, which are reproduced below:

> Claim 1 attributes the function of the "enabling one or more of an application, a function and service" to "local, secured information

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> stored by the integrated, secure memory." "§ 112 para. 6 will apply if the challenger demonstrates that ***the claim term fails to recite sufficiently definite structure*** or else recites function without reciting sufficient structure for performing that function." *Raining Computing* [*sic*], 989 F.3d at 1005 (emphasis added). The term "local, secured information stored by the integrated, secure memory" is not a structure recognized by those of ordinary skill in the art to provide a sufficiently definite structure for performing the function of "enabling on [*sic*] or more of an application, a function and a service". Jakobsson Decl., ¶¶ 18 and 36. Accordingly, claim 1 invokes § 112, ¶ 6. POR, 8-9 (emphasis added).

9. The term "memory" alone has a definite structure. For example, *memory* is defined as the "capacity of a computer or integrated computer system for short and medium-term retention of digital data" and speaks to a broad class of structures used to retain data for various purposes. MS-1020, 5[1]. For example, "Memory integrated circuit" is defined as "flash-memory chips. . . [a]lso called memory IC [integrated circuit], IC memory, or chip memory." MS-1021, 6. The below figure further demonstrates examples of memory that is not integrated (e.g., discs) and memory that would be physically part of, i.e., integrated into, an IC (e.g., Random Access Memory (RAM)).

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[1] Unless otherwise stated, pagination references the PDF page.

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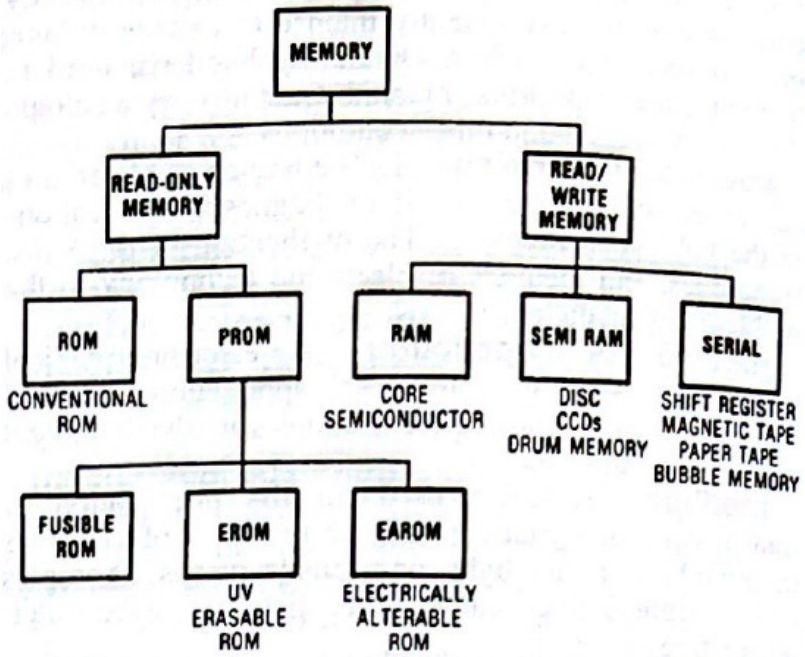

Memory types.

MS-1022, 6.

10. Further, not only does memory connote structure, but a POSITA would have recognized that memory can participate in "enabl[ing] one or more of an application, a function, and a service" by simply storing information, such as access information, necessary to access or otherwise invoke that application, function, or service. For example, the '289 patent describes RFID systems, and an RFID tag is a structure such as a microchip that stores information in memory and responds through an antenna when probed. MS-1001, 1:63-2:11; MS-1023, 3. Accordingly, the information of the RFID tag is stored in memory and used to enable a function. *Id*. Thus, a POSITA would have understood that the "local,

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secured information" stored in the memory is capable of enabling functions like the information stored in memory in an RFID tag. *Id*.

11. Even further, the claims here recite more than just a "memory," rather, an "integrated, secured memory." First, an "integrated" memory would have been understood to represent a subclass of memory structures that store information locally to the device ("integrated"). *Id*.; Pet., 28-29. Second, "secure" memory denotes a further subclass of memory structures, including tamper-proof memory structures. Pet., 28-29, 35. These adjective qualifiers also indicate structure by narrowing the scope of the claim feature to particular subsets of "memory."

12. Finally, in the context of short-range communication devices used to enable a function, application, or service, (e.g., RFID) as contemplated by the '289 patent, a POSITA would have understood that a memory can, for example, enable a function, application, or service through a basic exchange of locally stored information between the memory and another device seeking access to the stored information to authorize the enabling, i.e., the activation of the application, function, or service. MS-1001, claims 1 and 14. For example, the definition of "activate" is "[t]o start an operation, usually by application of an appropriate enabling signal" and this signal would either be generated from memory or carry the information stored within the memory. MS-1019.

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13. Accordingly, the claim term "local, secured information stored by the integrated, secure memory" recites sufficiently definite structure for performing the function of "enabling one or more of an application, a function and a service."

II. Integrated RDC communicating wirelessly with the at least one external device within the proximity zone

14. I have reviewed Proxense's arguments for MPF treatment of this claim term, which are reproduced below:

> "[t]he term 'integrated RDC communicating wireless [*sic*] with the at least one external device within a proximity zone' is not a structure recognized by those of ordinary skill in the art to provide a sufficiently definite structure for performing the function . . . [a]ccordingly, claim 1 invokes § 112, ¶ 6." POR, 19-20 (citing EX-2014. ¶¶18 and 36).

15. An "RDC communicating wirelessly with the at least one external device within the proximity zone" has sufficiently definite structure for performing the function of "enabling one or more of an application, a function and a service." In the context of the specification's example use cases, and example components, a POSITA would have understood that an "reader-decoder circuit" or "RDC" speaks to a class of structures used to communicate wirelessly. MS-1001, 1:62-2:21, 7:39-57 ("The RDC 304 provides the wireless interface to the PDK 102. Generally, the RDC 304 wirelessly receives data from the PDK 102 in an encrypted format and decodes the encrypted data for processing by the processor 306."). For

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example, "wireless cards" were known before the Critical Date and consisted of hardware enabling a computer to "connect [] to a wireless network (local or long distance), which connect to digital RAM (e.g., from digital cameras) or cards that drive several external monitors." MS-1023, 5. More broadly, "transceivers" were well known examples of wireless communication interfaces. For example, a transceiver is defined as: "[a] device that both transmits and receives data . . .[and] that connects a host interface to a network." MS-1024, 7. In addition, the "receiver/reader" and "decoder" denote definite structure to a POSITA. MS-1021, 4 ("decoder 1. A circuit, device, or program which converts that which has been encoded back into its original form. . . A circuit which responds to a given coded signal, while rejecting all others"); MS-1021, 8 ("RFID Reader[:] In an RFID system, a device which sends an interrogating signal which is responded to by an RFID tag."). Further, based on the definitions of "wireless," "wireless communication," "transceiver," "communications interface equipment," "decoder," "receiver," and "RFID reader" a POSITA would have recognized that an RDC or "a wireless communication interface" implicates a variety of structures used for wireless communication. MS-1025, 3-4; MS-1021, 11-12; MS-1024, 5-7. In view of the above definitions alone, a POSITA would have understood that a "RDC" denotes structure.

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16. In the context of the '289 Patent's RFID background, a POSITA would have understood one such "reader-decoder circuit," "receiver-decoder circuit[2]" or "interface" structure to be part of an RFID system. An understanding of the components of an RFID system existed prior to the Critical Date. For example, the *Wiley Electrical and Electronics Engineering Dictionary* defines an RFID tag as "a transponder within an RFID system . . . usually in the form of an IC [integrated circuit], [that] responds to interrogating signals arriving from an RFID reader." MS-1021, 7-8. This definition uses an example of "a key chain wand which is waved near a reader to effect payments," which was a common form of structure in widely used systems prior to the Critical Date (e.g., SpeedPass or EZ-Pass). MS-1021, 8.

17. A POSITA also would have readily recognized that the RDC or "wireless communication interface" is often used to "enable one or more of an application, a function, and a service" by enabling wireless communication of information, such as access information, necessary to access or otherwise invoke that application, function, or service. MS-1001, 1:62-2:21, 7:39-57 ("The RDC

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[2] The specification appears to use "receiver-decoder" and the claims use "reader-decoder". MS-1001 2:25-45 ("receiver-decoder"), Claim 1 ("reader-decoder").

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304 provides the wireless interface to the PDK 102. Generally, the RDC 304 wirelessly receives data from the PDK 102 in an encrypted format and decodes the encrypted data for processing by the processor 306."). The use of a wireless communication interface for short range communications between wireless devices was common for enabling an application, a function, or a service, and the class of structures implicated by the recited wireless communication interface would have been readily recognized by a POSITA to include, in addition to the noted RFID tags, garage door openers, television remotes, gate openers, Common Access Cards (CACs), SpeedPass, and EZ-Pass. Pet., 6, 9, 11, 34. Each of these devices communicates wirelessly with at least one external device within range (e.g., a proximity zone) to enable an application, function, or service.

18. Accordingly, the claim term "integrated RDC communicating wirelessly with the at least one external device within a proximity zone" recites sufficiently definite structure for performing the function of "enabling one or more of an application, a function and a service."

III. Enablement signal

19. I have reviewed Proxense's arguments for MPF treatment of this claim term, which allege that the term "enablement signal" is a meaningless nonce term. POR, 22.

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20. An "enablement signal" has sufficiently definite structure for performing the function of "enabling one or more of an application, a function and a service." Specifically, the use of signals to enable functions was well known. MS-1022, 3, (definition for "activate - To start an operation, usually by application of an appropriate enabling signal." (emphasis added)). This is corroborated by numerous other references that, outlined below:

a. *The Dictionary of Science and Technology* from 2003 where "enabling signal" is defined as "*noun* a signal that starts a process or allows one to take place." MS-1026, 3.

b. *McGraw-Hill Dictionary of Scientific and Technical Terms* where "enable" is defined as "[t]o initiate the operation of a device or circuit by applying a trigger signal or pulse." MS-1027, 3.

c. *The Dictionary of Computing* where "enable" is defined as "[t]o selectively activate a device or function. . . selective operation can be achieved by an enabling action—such as a signal . . ." MS-1028, 3.

21. Accordingly, an "enablement signal" was understood by a POSITA to be capable of enabling certain functions. Said plainly, the enablement signal does what it says — it "enables" a function, and a POSITA is more than capable of using their general knowledge and skill to design such a signal. As a specific

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example, the SpeedPass and EZ-Pass systems operating two years before the critical date communicated wirelessly to provide a signal for enabling the function of paying for fuel. MS-1029 ("SpeedPass ***enabled*** ExxonMobile's customers to pay at the pump with the wave of a key fob") (emphasis added).

22. Accordingly, the claim term "enablement signal" recites sufficiently definite structure for performing the function of "enabling one or more of an application, a function and a service."

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CONCLUSION

23. I currently hold the opinions set expressed in this declaration. But my analysis may continue, and I may acquire additional information and/or attain supplemental insights that may result in added observations.

24. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code.

Dated: 7 January 2025 By: _____
Patrick Traynor

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