

# PETITIONER'S TRIAL HEARING DEMONSTRATIVES

APPLE INC.,  
Petitioner,

V.

PROXENSE, LLC,  
Patent Owner.

IPR2024-00782, IPR2024-00783<sup>1</sup>

TRIAL HEARING  
AUGUST 18, 2025

<sup>1</sup> Apple Inc. is joined as Petitioner to these proceedings via joinders granted in IPR2024-01399 and IPR2025-00075

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# Overview of Proceedings

- Asserted Grounds for '042 claims:

| Ground | Claim(s) Challenged  | 35 U.S.C. § | Reference(s)    |
|--------|----------------------|-------------|-----------------|
| 1      | 10                   | 103         | Dua             |
| 2      | 10                   | 103         | Dua, Kotola     |
| 3      | 1, 3-6, 8-15, and 17 | 103         | Buer            |
| 4      | 2                    | 103         | Buer, Lee       |
| 5      | 12                   | 103         | Buer, Nishikawa |
| 6      | 3 and 18-20          | 103         | Buer, Hoffmann  |

# Overview of Proceedings

- Asserted Grounds for '289 claims:

| Ground | Claim(s) Challenged         | 35 U.S.C. § | Reference(s)              |
|--------|-----------------------------|-------------|---------------------------|
| 1      | 1-6, 8-11, and 14-19        | 103         | Dua, Giobbi157            |
| 2      | 1-6, 8-11, and 14-19        | 103         | Dua, Giobbi157,<br>Kotola |
| 3      | 1-7, 10-11, and 14-19       | 103         | Buer                      |
| 4      | 4, 8-10, 12, 13, 17, and 20 | 103         | Buer, Giobbi157           |
| 5      | 4                           | 103         | Buer, Nishikawa           |

# Overview of Issues

| Issue | Basis                                                                                                                                 |
|-------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Whether the claims of the '042 and '289 patents should be interpreted under 35 U.S.C. §112(f).                                        |
| 2     | Applying the proper construction of the claims, whether the prior art invalidates the challenged claims of the '042 and '289 patents. |

# Overview of '042 Patent

- Title: Hybrid Device Having a Personal Digital Key and Receiver-Decoder Circuit and Methods of Use
- Earliest Claimed Priority: Dec. 6, 2007
- 20 Claims
  - Independent: 1 (system), 10 (method)

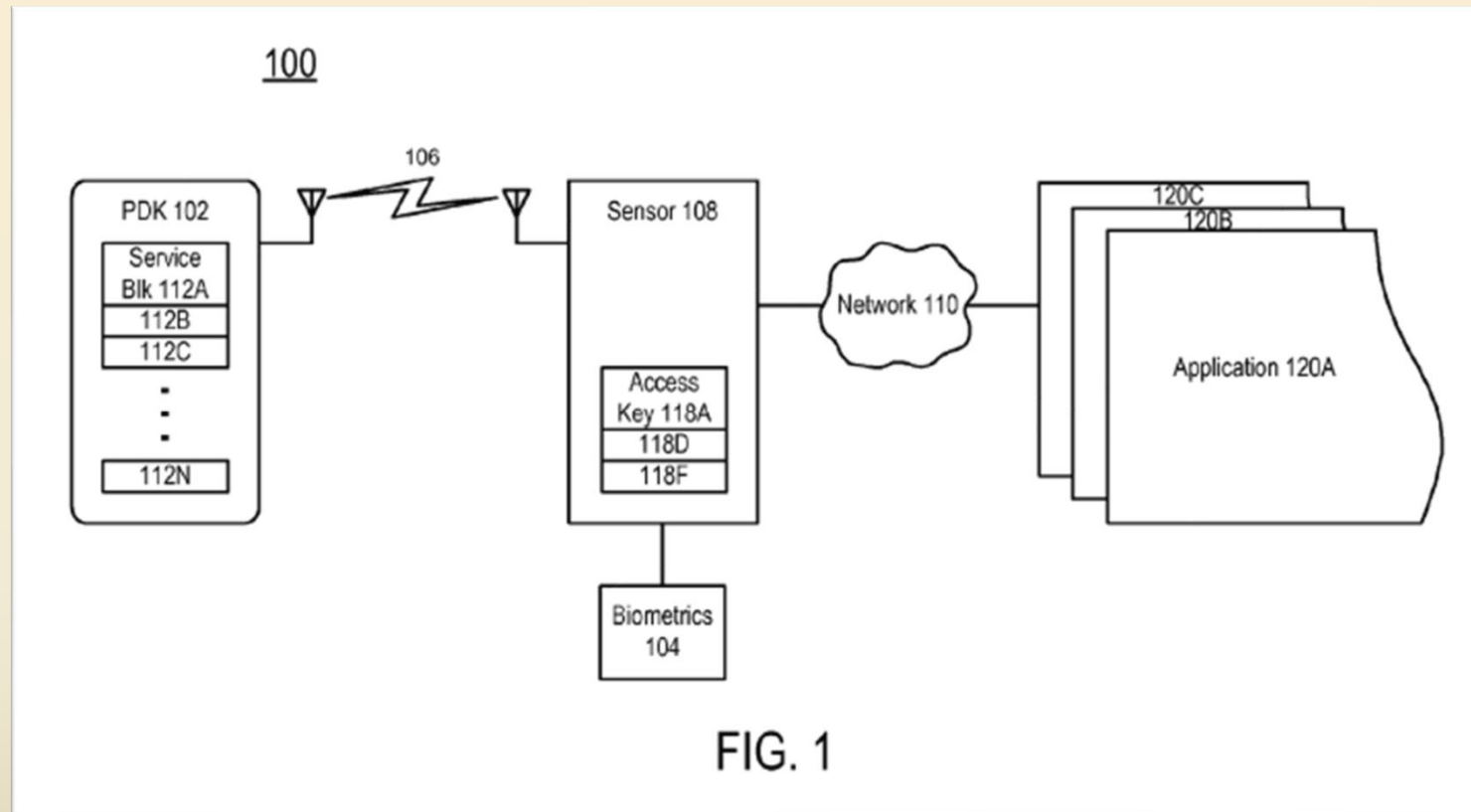
|                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (12) <b>United States Patent</b><br><b>Brown</b>                                                                                                                                                           | (10) <b>Patent No.:</b> <b>US 8,646,042 B1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                            | (45) <b>Date of Patent:</b> <b>*Feb. 4, 2014</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| (54) <b>HYBRID DEVICE HAVING A PERSONAL DIGITAL KEY AND RECEIVER-DECODER CIRCUIT AND METHODS OF USE</b>                                                                                                    | 5,422,632 A 6/1995 Bacholtz et al.<br>5,450,489 A 9/1995 Ostrover et al.<br>5,619,251 A 4/1997 Kuroiwa et al.<br>5,629,980 A 5/1997 Stefik et al.<br>5,644,354 A 7/1997 Thompson et al.<br>(Continued)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| (75) Inventor: <b>David L. Brown</b> , Jupiter, FL (US)                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (73) Assignee: <b>Proxense, LLC</b> , Bend, OR (US)                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.<br>This patent is subject to a terminal disclaimer.                               | FOREIGN PATENT DOCUMENTS<br>WO WO 00/62505 A1 10/2000<br>WO WO 01/22724 A1 3/2001<br>(Continued)<br>OTHER PUBLICATIONS<br>"Alliance Activities: Publications: Identity—Smart Card Alliance," Smart Card Alliance, 1997-2007, [online] [Retrieved on Jan. 7, 2007] Retrieved from the Internet <URL: http://www.smartcardalliance.org/publications-identity>, 3 pages.<br>(Continued)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| (21) Appl. No.: <b>13/445,825</b>                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (22) Filed: <b>Apr. 12, 2012</b>                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Related U.S. Application Data</b>                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (63) Continuation of application No. 12/329,329, filed on Dec. 5, 2008, now Pat. No. 8,171,528.                                                                                                            | <i>Primary Examiner</i> — Morshed Mehedi<br>(74) <i>Attorney, Agent, or Firm</i> — Patent Law Works LLP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| (60) Provisional application No. 60/992,953, filed on Dec. 6, 2007.                                                                                                                                        | (57) <b>ABSTRACT</b><br>A hybrid device includes a personal digital key (PDK) and a receiver-decoder circuit (RDC). In one embodiment, the hybrid device also provides a physical interconnect for connecting to other devices to send and receive control signals and data, and receive power. The hybrid device operates in one of several modes including: PDK only, RDC only, or PDK and RDC. This allows a variety of system configurations for mixed operation including: PDK/RDC, RDC/RDC or PDK/PDK. The disclosure also includes a number of system configurations for use of the hybrid device including: use of the hybrid device in a cell phone; simultaneous use of the PDK and the RDC functionality of hybrid device; use of multiple links of hybrid device to generate an authorization signal, use of multiple PDK links to the hybrid device to generate an authorization signal; and use of the hybrid device for authorization inheritance. |
| (51) <b>Int. Cl.</b><br><b>G06F 21/00</b> (2013.01)                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (52) <b>U.S. Cl.</b><br>USPC: 726/3; 726/32; 713/171; 713/176;<br>380/255; 380/280; 380/282; 709/229; 455/15;<br>455/456                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (58) <b>Field of Classification Search</b><br>USPC: 726/3<br>See application file for complete search history.                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (56) <b>References Cited</b><br><b>U.S. PATENT DOCUMENTS</b><br>4,759,060 A 7/1988 Hayashi et al.<br>5,187,352 A 2/1993 Blair et al.<br>5,296,641 A 3/1994 Stelzel<br>5,392,433 A 2/1995 Hammersley et al. | <b>20 Claims, 15 Drawing Sheets</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

# Overview of '289 Patent

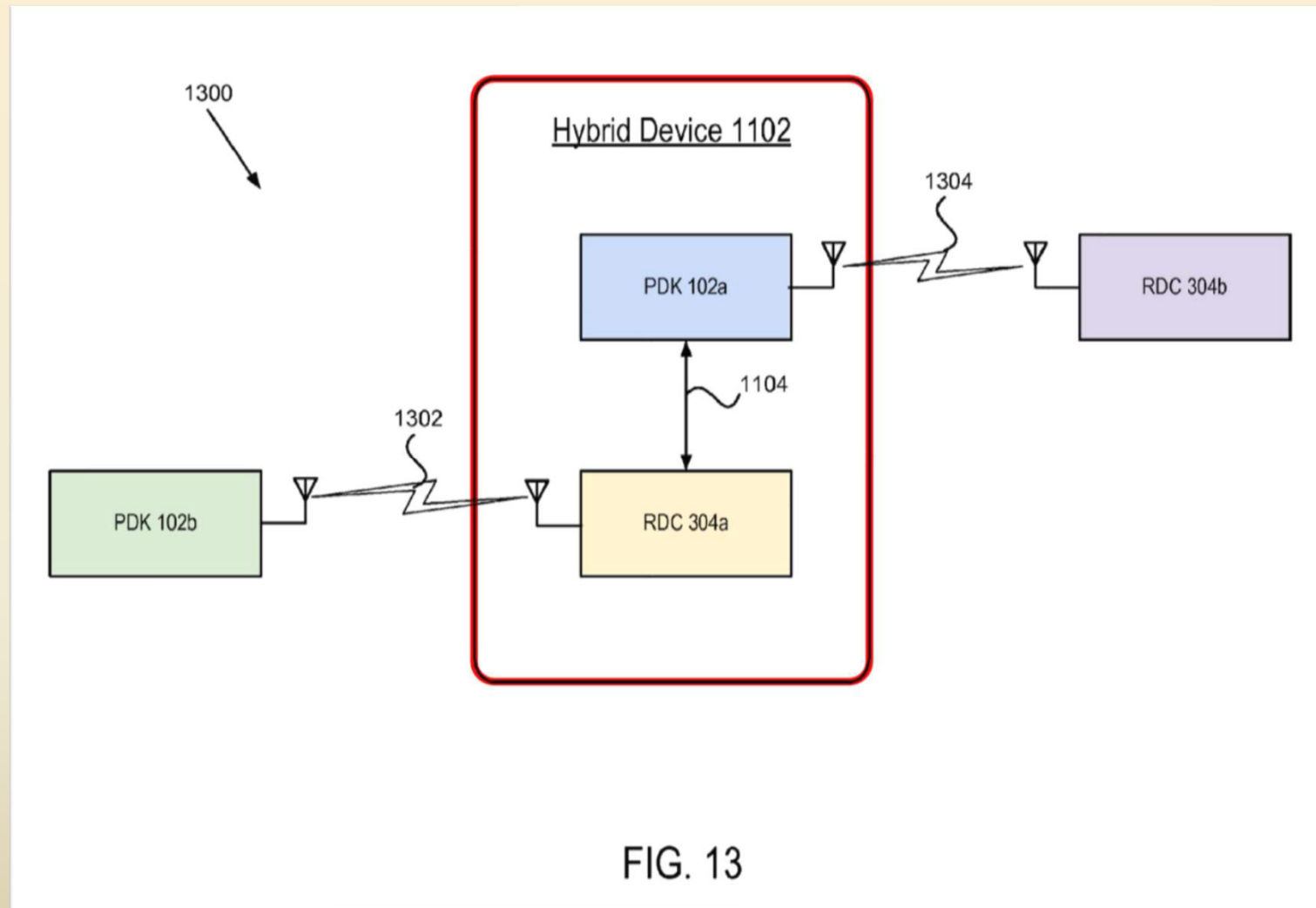
- Title: Hybrid Device Having a Personal Digital Key and Receiver-Decoder Circuit and Methods of Use
- Earliest Claimed Priority: Dec. 6, 2007
- 20 Claims
  - Independent: 1 (system), 14 (method)
  - Same specification as '042 Patent

|                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (12) <b>United States Patent</b><br><b>Brown</b>                                                                                                                                                                                                                                                                                                                                                                                  |  | (10) <b>Patent No.:</b> <b>US 9,679,289 B1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | (45) <b>Date of Patent:</b> <b>*Jun. 13, 2017</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| (54) <b>HYBRID DEVICE HAVING A PERSONAL DIGITAL KEY AND RECEIVER-DECODER CIRCUIT AND METHODS OF USE</b>                                                                                                                                                                                                                                                                                                                           |  | (52) <b>U.S. CL.</b><br>CPC ..... <i>G06Q 20/363</i> (2013.01); <i>G06F 21/32</i> (2013.01); <i>G06F 21/35</i> (2013.01); <i>G06Q 20/40145</i> (2013.01); <i>H04L 63/0492</i> (2013.01); <i>H04L 63/0861</i> (2013.01); <i>H04L 63/10</i> (2013.01); <i>H04W 12/04</i> (2013.01); <i>H04W 12/08</i> (2013.01); <i>H04W 88/02</i> (2013.01)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (71) Applicant: <b>Proxense, LLC</b> , Bend, OR (US)                                                                                                                                                                                                                                                                                                                                                                              |  | (58) <b>Field of Classification Search</b><br>USPC ..... 726/3<br>See application file for complete search history.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| (72) Inventor: <b>David L. Brown</b> , Jupiter, FL (US)                                                                                                                                                                                                                                                                                                                                                                           |  | (56) <b>References Cited</b><br><br>U.S. PATENT DOCUMENTS<br><br>5,623,552 A 4/1997 Lane<br>6,728,397 B2 4/2004 McNeal<br>(Continued)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.<br><br>This patent is subject to a terminal disclaimer.                                                                                                                                                                                                                                                  |  | Primary Examiner — Jason Lee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (21) Appl. No.: <b>14/961,645</b>                                                                                                                                                                                                                                                                                                                                                                                                 |  | (74) Attorney, Agent, or Firm — Patent Law Works LLP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| (22) Filed: <b>Dec. 7, 2015</b>                                                                                                                                                                                                                                                                                                                                                                                                   |  | (57) <b>ABSTRACT</b><br>A hybrid device includes a personal digital key (PDK) and a receiver-decoder circuit (RDC). The PDK and RDC of the hybrid device are coupled for communication with each other. In one embodiment, the hybrid device also provides a physical interconnect for connecting to other devices to send and receive control signals and data, and receive power. The hybrid device operates in one of several modes including, PDK only, RDC only, or PDK and RDC. This allows a variety of system configurations for mixed operation including: PDK/RDC, RDC/RDC or PDK/PDK. The present invention also includes a number of system configurations for use of the hybrid device including: use of the hybrid device in a cell phone; simultaneous use of the PDK and the RDC functionality of hybrid device; use of multiple links of hybrid device to generate an authorization signal, use of multiple PDK links to the hybrid device to generate an authorization signal; and use of the hybrid device for authorization inheritance. |
| <b>Related U.S. Application Data</b>                                                                                                                                                                                                                                                                                                                                                                                              |  | <b>20 Claims, 15 Drawing Sheets</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| (63) Continuation of application No. 14/677,893, filed on Apr. 2, 2015, now Pat. No. 9,235,700, which is a continuation of application No. 14/171,705, filed on Feb. 3, 2014, now Pat. No. 9,049,188, which is a continuation of application No. 13/445,825, filed on Apr. 12, 2012, now Pat. No. 8,646,042, which is a continuation of application No. 12/329,329, filed on Dec. 5, 2008, now Pat. No. 8,171,528.<br>(Continued) |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| (51) <b>Int. Cl.</b><br><i>H04L 29/06</i> (2006.01)<br><i>G06Q 20/36</i> (2012.01)<br><i>H04W 12/04</i> (2009.01)<br><i>H04W 12/08</i> (2009.01)<br><i>G06F 21/32</i> (2013.01)<br><i>G06F 21/35</i> (2013.01)<br><i>G06Q 20/40</i> (2012.01)<br><i>H04W 88/02</i> (2009.01)                                                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

# Overview of '042 and '289 Patents



# Overview of '042 and '289 Patents



# Claim Construction

# Claim Construction

- Claim Terms in Dispute for '042 Patent:

| Term                                                                | Claim |
|---------------------------------------------------------------------|-------|
| “integrated PDK” (Personal Digital Key)                             | I     |
| “integrated RDC” (Receiver-Decoder Circuit)                         | I     |
| “enablement signal”                                                 | I0    |
| “enabling one or more of an application, a function, and a service” | I, I0 |

# Claim Construction

- Claim Terms in Dispute for '289 Patent:

| Term                                                                                                      | Claim  |
|-----------------------------------------------------------------------------------------------------------|--------|
| “local, secured information stored by the integrated, secure memory”                                      | I      |
| “integrated RDC communicating wirelessly with the at least one external device within the proximity zone” | I      |
| “enablement signal ”                                                                                      | I 4    |
| “enabling one or more of an application, a function and a service”                                        | I, I 4 |

# Claim Construction

- Positions of the Parties:

| Party        | Position                                  |
|--------------|-------------------------------------------|
| Patent Owner | Claim terms invoke § 112, ¶ 6             |
| Petitioner   | Claim terms are not subject to § 112, ¶ 6 |

# Claim Construction

- § 112, ¶ 6 Is Presumed Not to Apply for ‘042 Patent:

None of the elements of the Challenged Claims—including the terms “integrated PDK,” “integrated RDC,” and “enablement signal”—use the word “means” or its counterpart “step for.” EX-1001, claims 1, 10. Thus, it is presumed that §112, ¶6 does not apply. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348-1349 (Fed. Cir. 2015).

# Claim Construction

- Challenged Claims of the '042 Patent do not use the word “means” or “step for”:

1. A hybrid device comprising:  
an integrated personal digital key (PDK) for storing information and capable of communicating wirelessly with at least one external receiver-decoder circuit (RDC); and  
an integrated RDC for communicating wirelessly with at least one external PDK within a proximity zone, the integrated RDC coupled to the integrated PDK by a first signal line for communication, the integrated RDC coupled to at least one other component of the hybrid device by a second signal line, one or more of the integrated RDC and integrated PDK enabling one or more of an application, a function, and a service on one or more of the hybrid device and a device associated with the external RDC.

10. A method comprising:  
creating a first wireless link between an integrated receiver-decoder circuit (RDC) of a hybrid device and an external personal digital key (PDK), the hybrid device including an integrated PDK and the integrated RDC;  
receiving a first signal at the integrated RDC via the first wireless link from the external PDK;  
generating an enablement signal enabling one or more of an application, a function and a service on one or more of the hybrid device and a device associated with an external RDC; and  
sending the enablement signal to one or more of the hybrid device and the device associated with an external RDC.

# Claim Construction

- § 112, ¶ 6 Is Presumed Not to Apply for '289 Patent:

None of the elements of the Challenged Claims—including the terms “local, secured information stored by the integrated, secure memory,” “integrated RDC communicating wirelessly with the at least one external device within the proximity zone,” and “enablement signal”—use the word “means” or its counterpart “step for.” EX-1001, claims 1, 14. Thus, it is presumed that § 112, ¶ 6 does not apply. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348-1349 (Fed. Cir. 2015).

# Claim Construction

- Challenged Claims of the '289 Patent do not use the word “means” or “step for”:

1. A hybrid device comprising:  
an integrated, secure memory storing local, secured information; and  
an integrated reader-decoder circuit (RDC) for communicating wirelessly with at least one external device within a proximity zone, the integrated RDC communicatively coupled to the integrated, secure memory for communication with the integrated, secure memory, wherein one or more of (a) the integrated RDC communicating wirelessly with the at least one external device within the proximity zone and (b) the local, secured information stored by the integrated, secure memory enables one or more of an application, a function, and a service.

14. A method comprising:  
creating a first wireless link between an integrated receiver-decoder circuit (RDC) of a hybrid device and an external device, the hybrid device including an integrated, secure memory and the integrated RDC, wherein the integrated, secure memory stores local, secured information;  
receiving a first signal, at the integrated RDC, via the first wireless link, from the external device; and  
generating an enablement signal enabling one or more of an application, a function and a service.

# Claim Construction

- Overcoming the Presumption Against § 112, ¶ 6 Claiming:

The presumption against applying § 112, ¶ 6 can be overcome “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.’” *Williamson*, 792 F.3d at 1348. The essential inquiry remains “whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Id.* As demonstrated below,

# Claim Construction

- Patent Owner's Position for '042 Patent:

- Claims 1 and 10 Invoke 35 U.S.C. § 112, Paragraph 6**

Independent claims 1 and 10 each recite the function of “enabling one or more of an application, a function and a service.” Accordingly, it must be determined if each of claims 1 and 10 recite a sufficiently definite structure for performing that function, other than a general-purpose computer. Here, the claims do not recite a sufficiently definite structure for performing the function, but rather a general-purpose computer. Therefore, the claims invoke 35 U.S.C. § 112, ¶ 6, and the claims must be construed to cover only the structure, material, or acts described in the specification as corresponding to the claimed structure. With respect to claims 1 and 10, the structure is the algorithm the general-purpose computers are programmed to perform.

# Claim Construction

- Patent Owner's Position for '289 Patent:

**A. Claims 1 and 14 Invoke 35 U.S.C. § 112, Paragraph 6.**

Independent claims each recite the function of “enabling one or more of an application, a function and a service.” Accordingly, it must be determined if each of claims 1 and 14 recite a sufficiently definite structure for performing that function, other than a general-purpose computer. Here, the claims do not recite a sufficiently definite structure for performing the function, but rather a general-purpose computer. Therefore, the claims invoke 35 U.S.C. § 112, ¶ 6, and the claims must be construed to cover only the structure, material, or acts described in the specification as corresponding to the claimed structure. With respect to claims 1 and 14, the structure is the algorithm the general-purpose computer is programmed to perform.

# Claim Construction

- POSITA would have understood that “integrated personal digital key (PDK)” recites structure for ’042 Patent:
  - Term “PDK” alone is a definite structure, and that such structure encompasses at least “a collection of circuit components that includes an antenna, a transceiver, and a controller and memory for storing information particular to a user.”
  - Term “PDK,” as recited in the claims of the ’042 patent, can include any of multiple varieties of memory.
  - Term “integrated personal digital key (PDK) for storing information and capable of communicating wirelessly” recites sufficiently definite structure for performing the function of “enabling one or more of an application, a function and a service.”

# Claim Construction

- POSITA would have understood that “integrated receiver-decoder circuit (RDC)” recites structure for '042 Patent:
  - Term “RDC” alone is a definite structure, and that such structure encompasses at least “a component or collection of components, capable of wirelessly receiving data in an encrypted format and decoding the encrypted data for processing.”
  - 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.”

# Claim Construction

- POSITA would have understood that “enablement signal” recites structure for ’042 Patent:
  - Contrary to Patent Owner’s position, POSITA would not have understood the term “enablement signal” to be a meaningless nonce term.”
  - Term “generating an enablement signal” is a definite act or structure.
  - An “enablement signal” is capable of enabling certain functions. The enablement signal does what it says — it “enables” a function.
  - Term “enablement signal” recites sufficiently definite structure for performing the function of “enabling one or more of an application, a function and a service.”

# Claim Construction

- POSITA would have understood that “local, secured information stored by the integrated, secure memory” recites structure for '289 Patent:
  - Term “memory” alone is a definite structure.
  - An “integrated” memory is a subclass of memory structures that store information locally on the device (“integrated”).
  - 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.”

# Claim Construction

- POSITA would have understood that “integrated reader-decoder circuit (RDC)” recites structure for ’289 Patent:
  - Term “RDC” alone is a definite structure, and that such structure encompasses at least “a component or collection of components, capable of wirelessly receiving data in an encrypted format and decoding the encrypted data for processing.”
  - 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.”

# Claim Construction

- POSITA would have understood that “enablement signal” recites structure for ’289 Patent:
  - Contrary to Patent Owner’s position, POSITA would not have understood the term “enablement signal” to be a meaningless nonce term.”
  - Term “generating an enablement signal” is a definite act or structure.
  - An “enablement signal” is capable of enabling certain functions. The enablement signal does what it says — it “enables” a function.
  - Term “enablement signal” recites sufficiently definite structure for performing the function of “enabling one or more of an application, a function and a service.”

# Claim Construction

- Board has rejected Patent Owner's position with respect to '042 patent in IPR2024-00573:

Based on the complete record before us, we are unpersuaded that claim 1 invokes 35 U.S.C. § 112(f).

That is, we find that the “PDK” and “RDC” would be understood by a person of ordinary skill in the art to recite sufficiently definite structure. *Id.*

Based on the complete record before us, we are unpersuaded that claim 10 invokes 35 U.S.C. § 112(f).

Ex. 1032. In particular, we find persuasive Dr. Traynor's testimony that an “enablement signal” has sufficiently definite structure for performing the

# Claim Construction

- Board previously rejected Patent Owner's argument with respect to '042 patent in this proceeding:

2021))), we are unpersuaded that Patent Owner has demonstrated that “PDK,” “RDC,” and “enabling signal,” fail to recite sufficiently definite structure. Prelim. Resp. 17–20. That is, Patent Owner has not sufficiently demonstrated that the terms could not be understood by person of ordinary skill in the art “to have a sufficiently definite meaning as the name for structure for the claimed functions.” Prelim. Sur-reply 1. According to

# Claim Construction

- Board has rejected Patent Owner's position with respect to '289 patent in IPR2024-00407:

Based on the complete record before us, we are unpersuaded that claim 1 invokes 35 U.S.C. § 112(f).

recite sufficiently definite structure. PO Sur-reply 5–6. That is, we find that “memory” and “reader-decoder circuit” would be understood by a person of ordinary skill in the art to recite sufficiently definite structure. As

Based on the complete record before us, we are unpersuaded that claim 14 invokes 35 U.S.C. § 112(f).

Ex. 1032. In particular, we find persuasive Dr. Traynor's testimony that an “enablement signal” has sufficiently definite structure for performing the

# Claim Construction

- Board previously rejected Patent Owner's argument with respect to '289 patent in this proceeding:

2021))), we are unpersuaded that Patent Owner has demonstrated that “PDK,” “RDC,” “enabling signal,” and “local secured information” fail to recite sufficiently definite structure. Prelim. Resp. 14–17. That is, Patent Owner has not sufficiently demonstrated that the terms could not be understood by person of ordinary skill in the art “to have a sufficiently definite meaning as the name for structure for the claimed functions.”

# Claim Construction

- Patent Owner's proposed § 112, ¶ 6 constructions are not supported by other decisions of Board:

In view of the Specification and the general knowledge in the art, we determine that the term “PDK” for “storing local, secured biometric information” for authenticating a user, as claimed, encompasses a local memory for storing biometric information for authenticating a user, wherein the information is secured. The parties are invited to address this claim construction issue during trial, if so desired.

# Claim Construction

- Claims of the '188 Patent (related to '042 and '289):

1. A hybrid device comprising:  
an integrated personal digital key (PDK) for storing local, secured biometric information for authenticating a user and capable of communicating wirelessly with an external receiver-decoder circuit (RDC); and  
an integrated RDC for communicating wirelessly with at least one external PDK within a proximity zone, the integrated RDC coupled to the integrated PDK by a first signal line for communication, the integrated RDC coupled to at least one other component of the hybrid device by a second signal line, one or more of the integrated RDC and integrated PDK enabling one or more of an application, a function, and a service.

10. A method comprising:  
creating a first wireless link between an integrated receiver-decoder circuit (RDC) of a hybrid device and an external personal digital key (PDK), the hybrid device including an integrated PDK and the integrated RDC, wherein the integrated PDK stores local, secured biometric information for authenticating a user;  
receiving a first signal at the integrated RDC via the first wireless link from the external PDK;  
generating an enablement signal enabling one or more of an application, a function and a service.

# Claim Construction

- Patent Owner argues that its proposed constructions are consistent with District Court:

The District Court was asked to construe the term “hybrid device”, which Samsung alleged was indefinite. Consistent with the Patent Owner’s proposed claim construction, the District Court construed a “hybrid device” to be a “device comprising an integrated personal digital key (PDK) and an integrated receiver-decoder circuit [(RDC)].” Ex. 200<sup>2</sup>, at 25. The District Court then construed each of the terms PDK and RDC. Samsung and Patent Owner both proposed constructions that defined a PDK as including “antenna [and] a transceiver for communicating with the RDC and a controller and memory for storing information particular to a user.” Exhibit

# Claim Construction

- Patent Owner's proposed § 112, ¶ 6 constructions are inconsistent with Patent Owner's positions in litigation:

| Claim term                 | Construction                                                                                                                                                                               |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| "personal digital key"     | An operably connected collection of elements including an antenna and a transceiver for communicating with a RDC and a controller and memory for storing information particular to a user. |
| "receiver-decoder circuit" | A component or collection of components, capable of wirelessly receiving data in an encrypted format and decoding the encrypted data for processing.                                       |
| "enablement signal"        | No construction needed.                                                                                                                                                                    |

# Claim Construction

- Patent Owner's proposed § 112, ¶6 constructions are inconsistent with claim construction of District Court:

| Claim term                 | Construction                                                                                                                                                                               |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| "personal digital key"     | An operably connected collection of elements including an antenna and a transceiver for communicating with a RDC and a controller and memory for storing information particular to a user. |
| "receiver-decoder circuit" | A component or collection of components, capable of wirelessly receiving data in an encrypted format and decoding the encrypted data for processing.                                       |
| "enablement signal"        | No construction needed.                                                                                                                                                                    |

# Claim Construction

- Patent Owner's proposed § 112, ¶ 6 constructions are inconsistent with intrinsic evidence for '042 patent:

During prosecution of the '042 patent, the applicant did not indicate that it intended any of the claim terms to invoke § 112, ¶ 6, for example, to distinguish over prior art. *See generally* EX-1002; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (prosecution history “often inform[s] the meaning of the claim language by demonstrating how the inventor understood the invention”). Nor did the Examiner believe that the claims were subject to § 112, ¶ 6. *See generally* EX-1002.

# Claim Construction

- Patent Owner's proposed § 112, ¶ 6 constructions are inconsistent with intrinsic evidence for '289 patent:

During prosecution of the '289 patent, the applicant did not indicate that it intended any of the claim terms to invoke § 112, ¶ 6, for example, to distinguish over prior art. *See generally* EX-1002; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (prosecution history “often inform[s] the meaning of the claim language by demonstrating how the inventor understood the invention”). Nor did the Examiner believe that the claims were subject to § 112, ¶ 6. *See generally* EX-1002.

# Claim Construction

- Patent Owner's expert Dr. Jakobsson in '042 IPR:

63. The structures recited for performing the function of “enabling one or more of application, a function and service” recited in claims 1 and 10 of the 042 Patent are not used in common parlance or by persons of skill in the pertinent art to designate structure or a class of structures recognized for performing the function. Rather, the structure “integrated PDK” recited in claim 1 of the 042, is nothing more than a computer general-purpose computer with ability to wirelessly receive and send data using standards such as Bluetooth, Wi-Fi, and the like. Similarly, the “integrated RDC,” recited in claim 1 of the 042 Patent, is nothing more than general ability of general-purpose computers to decode encrypted data received via Bluetooth, Wi-Fi, and similar connection. Finally, the “enablement signal,” recited in claim 10 of the 042 Patent, is a completely meaningless nonce defined only by the intended action to be performed. Absent an algorithm, therefore, claims 1 and 10 of the 042 Patent would be meaningless.

# Claim Construction

- Patent Owner's expert Dr. Jakobsson in '289 IPR:

65. The structures recited for performing the function of “enabling one or more of application, a function and service” recited in claims 1 and 14 of the 289 Patent and claims 1 and 14 of the 960 Patent are not used in common parlance or by persons of skill in the pertinent art to designate structure or a class of structures recognized for performing the function. Rather, the structure “local, secured information stored by the integrated, secure memory,” recited in claims 1 of the 289 Patent and claim 1 of the 960, is nothing more than a computer readable media providing the general and generic ability of general-purpose computers to securely store information within tamper-proof memory. Likewise, the “integrated wireless communication interface communicating wirelessly with the at least one external device within a proximity zone,” recited

# Claim Construction

- Patent Owner's expert Dr. Jakobsson in '289 IPR (cont.):

in claim 1 of the 960 Patent, is nothing more the general ability of general-purpose computers to receive data using standards protocols such a Bluetooth, Wi-Fi, and the like. Similarly, the “integrated RDC communicating wirelessly with the at least one external device within the proximity zone,” recited in claim 1 of the 289 Patent, is nothing more than general ability of general-purpose computers to decode encrypted data received via Bluetooth, Wi-Fi, and similar connection. Finally, the “enablement signal,” recited in claim 14 of the 289 Patent and claim 14 of the 960 Patent, is a completely meaningless nonce defined only by the intended action to be performed. Absent an algorithm, therefore, claim 1 of the 289 Patent and claim 1 of the 960 Patent would be meaningless.

# Claim Construction

- Dr. Jakobsson was not given complete information:

Proxense did not provide Dr. Jakobsson with complete information. At his deposition, Dr. Jakobsson testified that he had not been given the claim construction briefing, *Markman* orders, or infringement contentions from the various litigation cases; the expert declarations of Drs. Eldering, Traynor, and Wolfe; or even been informed that the claim terms had previously been construed or that other experts were involved in this IPR and related matters. EX-1055, 10:22-12:14, 49:20-54:12. Dr. Jakobsson further testified that he had “no idea” whether it would have been helpful for him to see the prior construction positions, and whether he would have disagreed with those constructions since “I haven’t seen them so it’s hard to say.”

# Claim Construction

- Dr. Jakobsson's analysis is flawed in '042 IPR:

Rather than considering the statement of law “when a claim term recites a function performed by a general-purpose computer, the corresponding structure is the computer as programmed to perform an algorithm” as the second step in a means-plus-function analysis (which presumes lack of structure and a generic computer that requires an algorithm), Dr. Jakobsson applied this understanding of law in an improper attempt to backdoor the “integrated PDK” and “integrated RDC” terms as words that lack structure, and thus should be construed as means-plus-function terms specifically because they are directed to a “general-purpose computer.” EX-2011,

# Claim Construction

- Challenged Claims of the '042 Patent do not use the word “means” or “step for”:

1. A hybrid device comprising:  
an integrated personal digital key (PDK) for storing information and capable of communicating wirelessly with at least one external receiver-decoder circuit (RDC); and  
an integrated RDC for communicating wirelessly with at least one external PDK within a proximity zone, the integrated RDC coupled to the integrated PDK by a first signal line for communication, the integrated RDC coupled to at least one other component of the hybrid device by a second signal line, one or more of the integrated RDC and integrated PDK enabling one or more of an application, a function, and a service on one or more of the hybrid device and a device associated with the external RDC.

10. A method comprising:  
creating a first wireless link between an integrated receiver-decoder circuit (RDC) of a hybrid device and an external personal digital key (PDK), the hybrid device including an integrated PDK and the integrated RDC;  
receiving a first signal at the integrated RDC via the first wireless link from the external PDK;  
generating an enablement signal enabling one or more of an application, a function and a service on one or more of the hybrid device and a device associated with an external RDC; and  
sending the enablement signal to one or more of the hybrid device and the device associated with an external RDC.

# Claim Construction

- Dr. Jakobsson's analysis is flawed in '289 IPR:

Rather than considering the statement of law “when a claim term recites a function performed by a general-purpose computer, the corresponding structure is the computer as programmed to perform an algorithm” as the second step in a means-plus-function analysis (which presumes lack of structure and a generic computer that requires an algorithm), Dr. Jakobsson applied this understanding of law in an improper attempt to backdoor the “local, secured information stored by the integrated, secure memory” and “integrated RDC communicating wirelessly with the at least one external device within the proximity zone” terms as words that lack structure, and thus should be construed as means-plus-function terms specifically because they are directed to a “general-purpose computer.” EX-2011, ¶36. This

# Claim Construction

- Challenged Claims of the '289 Patent do not use the word “means” or “step for”:

1. A hybrid device comprising:  
an integrated, secure memory storing local, secured information; and  
an integrated reader-decoder circuit (RDC) for communicating wirelessly with at least one external device within a proximity zone, the integrated RDC communicatively coupled to the integrated, secure memory for communication with the integrated, secure memory, wherein one or more of (a) the integrated RDC communicating wirelessly with the at least one external device within the proximity zone and (b) the local, secured information stored by the integrated, secure memory enables one or more of an application, a function, and a service.

14. A method comprising:  
creating a first wireless link between an integrated receiver-decoder circuit (RDC) of a hybrid device and an external device, the hybrid device including an integrated, secure memory and the integrated RDC, wherein the integrated, secure memory stores local, secured information;  
receiving a first signal, at the integrated RDC, via the first wireless link, from the external device; and  
generating an enablement signal enabling one or more of an application, a function and a service.

# Claim Construction

- Dr. Jakobsson contradicted by Petitioner's expert Dr. Wolfe in '042 IPR:

29. Based on my knowledge and experience, the materials that I reviewed, and my analysis, I believe that a POSITA would have understood the claim terms “integrated PDK,” “integrated RDC,” and “enablement signal” to have sufficiently definite structure as used in the context of the ‘042 patent to perform the function of “enabling one or more of an application, a function and a service,” such that these terms should not be construed as means-plus-function elements.

# Claim Construction

- Dr. Jakobsson contradicted by Petitioner's expert Dr. Wolfe in '289 IPR:

29. Based on my knowledge and experience, the materials that I reviewed, and my analysis, I believe that a POSITA would have understood the claim terms “local, secured information stored by the integrated, secure memory,” “integrated RDC communicating wirelessly with the at least one external device within the proximity zone,” and “enablement signal” to have sufficiently definite structure as used in the context of the '289 patent to perform the function of “enabling one or more of an application, a function and a service,” such that these terms should not be construed as means-plus-function elements.

# Claim Construction

- Dr. Jakobsson contradicted by Microsoft's expert Dr. Traynor in '042 IPR:

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) “Integrated PDK.”

(2) “Integrated RDC.”

(3) “Enablement signal.”

# Claim Construction

- Dr. Jakobsson contradicted by Microsoft's expert Dr. Traynor in '289 IPR:

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.”

# Claim Construction

- Dr. Jakobsson is not consistent with Patent Owner's expert Dr. Eldering in '188 IPR:

34. Because of the unique structure and nature of the hybrid device recited in claims 1-20 of the '188 Patent and claims 1-20 of the '700 Patent, the collectively claimed devices and methods enable applications, functions or services based on local, secured user information. As discussed below, the

# Claim Construction

- Board rejected Patent Owner’s argument that “enabling one or more of an application, a function and a service” is required to be performed through the exchange of “an access key” even if not interpreted under § 112, ¶ 6:

In view of the plain language of the claims and the Specification, we determine that the term “enabling an application, a function, or a service” recited in claims 1 and 10 is not limited to receiving information from a PDK in exchange for an access key. We determine no further explicit construction of this term is necessary to resolve the controversy. *See Vivid Techs.*, 200 F.3d at 803.

# Claim Construction

- Board rejected Patent Owner’s argument that “enabling one or more of an application, a function and a service” is required to be performed through the exchange of “an access key” even if not interpreted under § 112, ¶ 6:

In view of the plain language of the claims and the Specification, we determine that the term “enabl[ing] an application, a function, and a service” recited in claims 1 and 14 is not limited to receiving information from a PDK in exchange for an access key. We determine no further explicit construction of this term is necessary to resolve the controversy. *See Vivid Techs.*, 200 F.3d at 803.

# Overview of Proceedings

- Asserted Grounds for '042 claims:

| Ground | Claim(s) Challenged  | 35 U.S.C. § | Reference(s)    |
|--------|----------------------|-------------|-----------------|
| 1      | 10                   | 103         | Dua             |
| 2      | 10                   | 103         | Dua, Kotola     |
| 3      | 1, 3-6, 8-15, and 17 | 103         | Buer            |
| 4      | 2                    | 103         | Buer, Lee       |
| 5      | 12                   | 103         | Buer, Nishikawa |
| 6      | 3 and 18-20          | 103         | Buer, Hoffmann  |

# Overview of Proceedings

- Asserted Grounds for '289 claims:

| Ground | Claim(s) Challenged         | 35 U.S.C. § | Reference(s)              |
|--------|-----------------------------|-------------|---------------------------|
| 1      | 1-6, 8-11, and 14-19        | 103         | Dua, Giobbi157            |
| 2      | 1-6, 8-11, and 14-19        | 103         | Dua, Giobbi157,<br>Kotola |
| 3      | 1-7, 10-11, and 14-19       | 103         | Buer                      |
| 4      | 4, 8-10, 12, 13, 17, and 20 | 103         | Buer, Giobbi157           |
| 5      | 4                           | 103         | Buer, Nishikawa           |

# Ground 3 '042 IPR

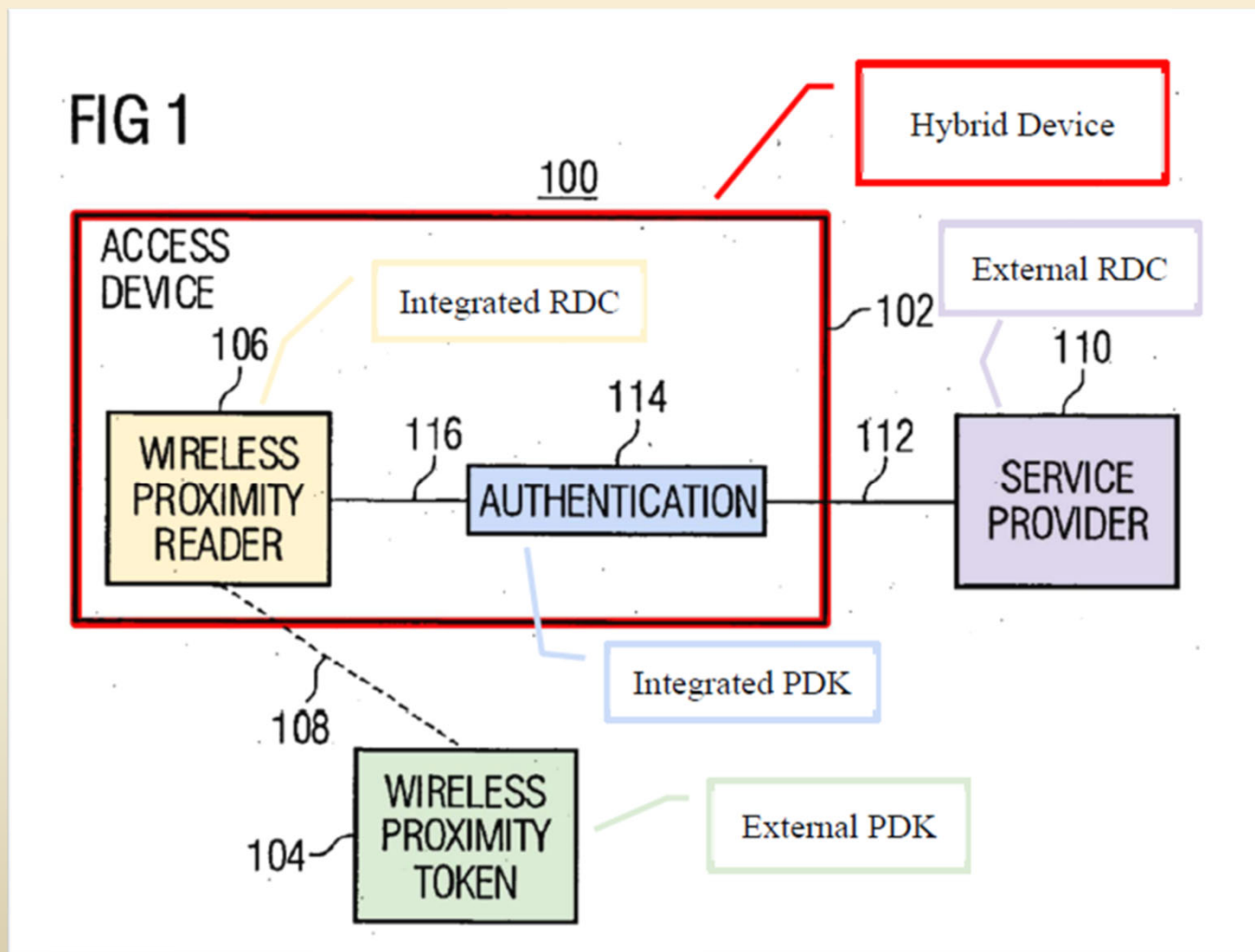
# Ground 3

- Overview of Buer:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                 |                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (19)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Europäisches Patentamt<br>European Patent Office<br>Office européen des brevets | (11) <br><b>EP 1 536 306 A1</b>                                                                                      |
| (12) <b>EUROPEAN PATENT APPLICATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                 |                                                                                                                                                                                                         |
| (43) Date of publication:<br><b>01.06.2005 Bulletin 2005/22</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                 | (51) Int Cl. <sup>7</sup> : <b>G06F 1/00</b>                                                                                                                                                            |
| (21) Application number: <b>04023384.3</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                 |                                                                                                                                                                                                         |
| (22) Date of filing: <b>30.09.2004</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                 |                                                                                                                                                                                                         |
| (84) Designated Contracting States:<br><b>AT BE BG CH CY CZ DE DK EE ES FI FR GB GR<br/>HU IE IT LI LU MC NL PL PT RO SE SI SK TR</b><br>Designated Extension States:<br><b>AL HR LT LV MK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                 | (72) Inventors:<br>• <b>Buer, Mark</b><br><b>Gilbert, AZ 85296 (US)</b><br>• <b>Frank, Edward H.</b><br><b>Atherton, CA 94027 (US)</b><br>• <b>Seshadri, Nambirajan</b><br><b>Irvine, CA 92612 (US)</b> |
| (30) Priority: <b>30.09.2003 US 507586 P</b><br><b>13.09.2004 US 609537 P</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                 | (74) Representative: <b>Jehle, Volker Armin, Dipl.-Ing.</b><br><b>Patentanwälte</b><br><b>Bosch, Graf von Stosch, Jehle,</b><br><b>Flüggensstrasse 13</b><br><b>80639 München (DE)</b>                  |
| (71) Applicant: <b>Broadcom Corporation</b><br><b>Irvine, California 92618-7013 (US)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                 |                                                                                                                                                                                                         |
| (54) <b>Proximity authentication system</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                 |                                                                                                                                                                                                         |
| <div>(57) Access to secured services may be controlled based on the proximity of a wireless token to a computing device through which access to the secured services is obtained. An authorized user may be provided access to a service only when a wireless token assigned to the user is in the proximity of the computing device. A user's credential may be stored on an RFID token and an RFID reader may be implemented within a security boundary on the computing device. Thus, the credential may be passed to the security boundary without passing through the computing device via software messages or applications. The security boundary may be provided,</div> <div>in part, by incorporating the RFID reader onto the same chip as a cryptographic processing component. Once the information is received by the RFID reader it may be encrypted within the chip. As a result, the information may never be presented in the clear outside of the chip. The cryptographic processing component may cryptographically encrypt/sign the credential received from the token so that assurance may be provided to a service provider that the credentials came from a token that was proximate to the computing device. An RFID reader, cryptographic processing components and a wireless network controller may be implemented on a single chip in a mobile device.</div> |                                                                                 |                                                                                                                                                                                                         |

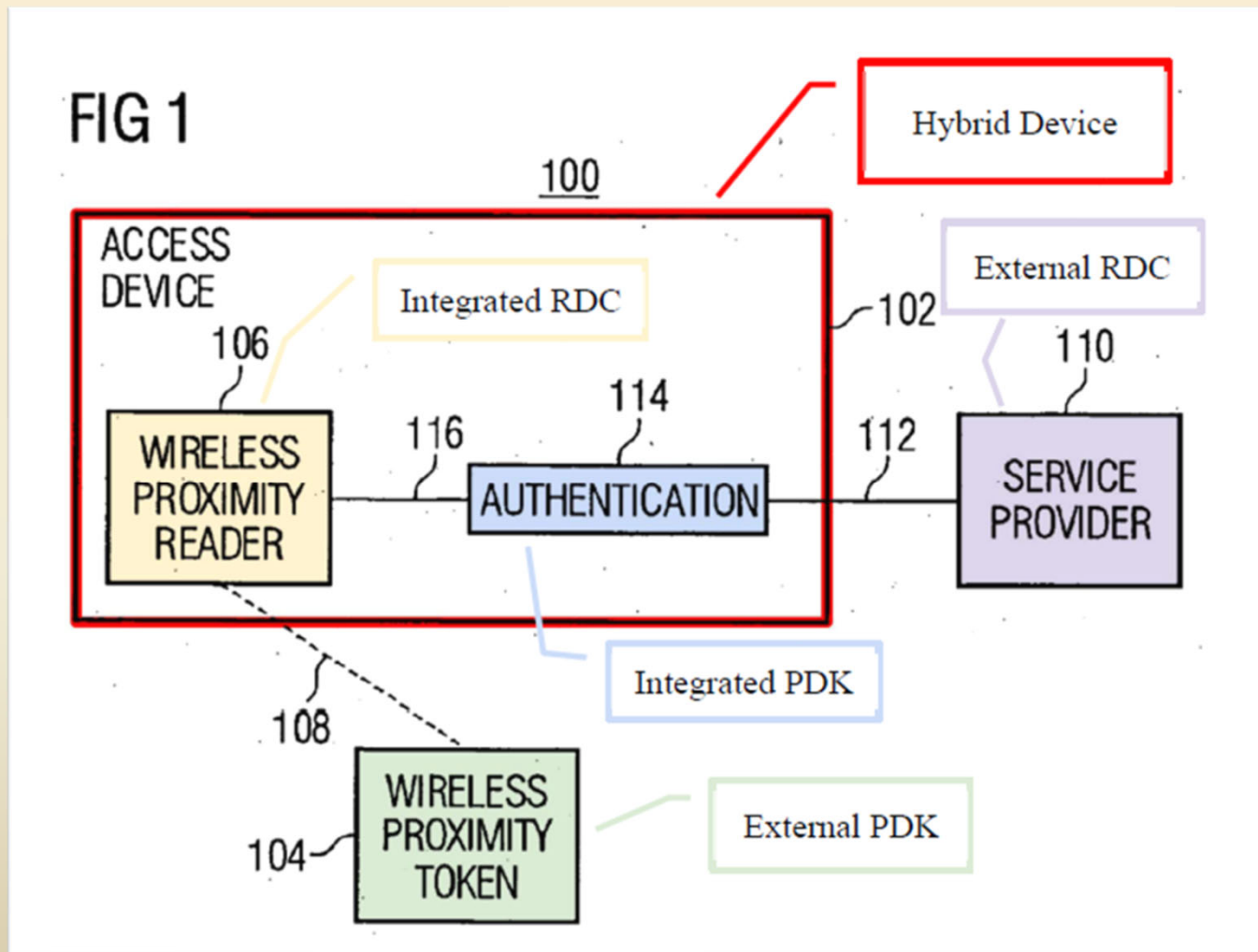
# Ground 3

- Overview of Buer:



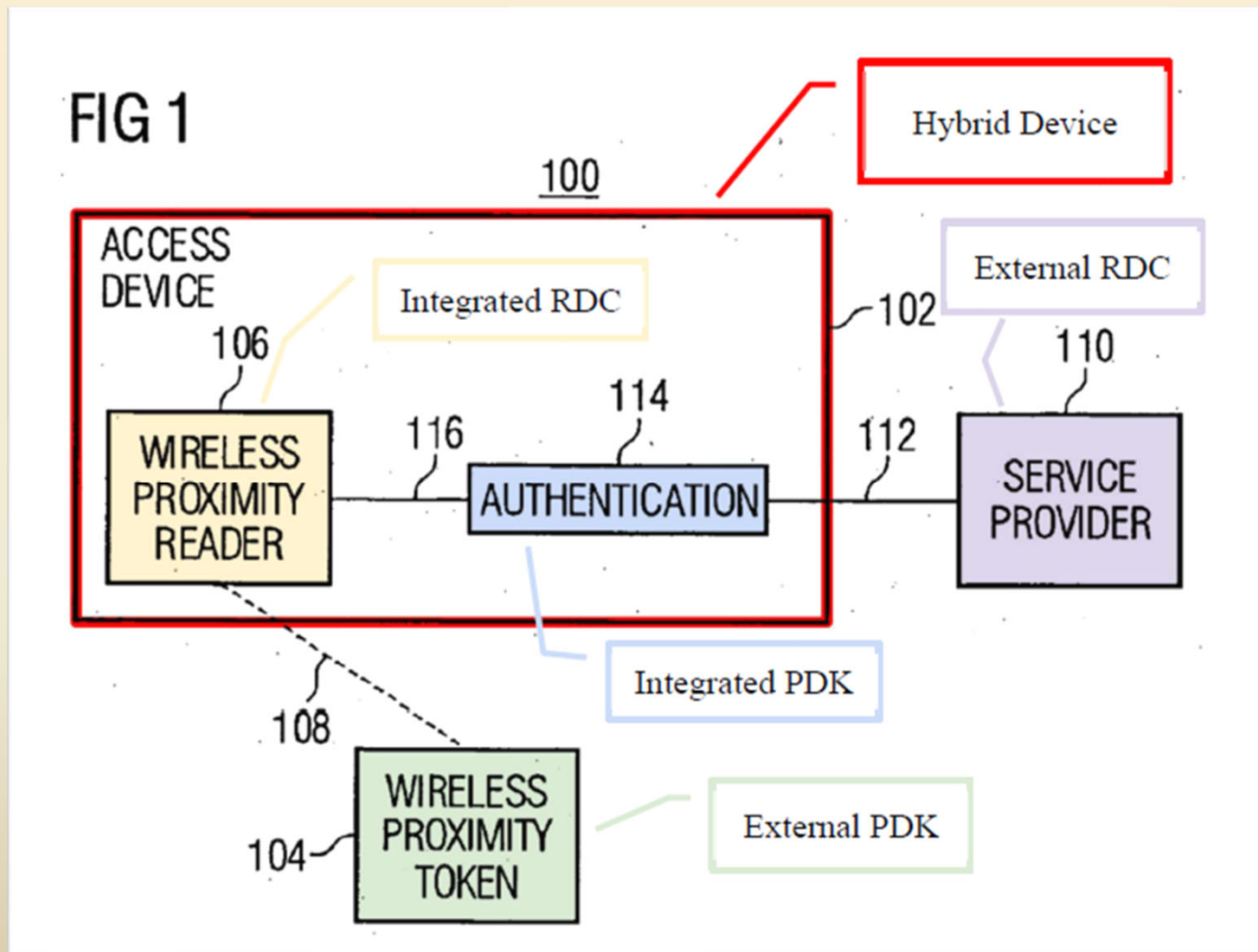
# Ground 3

- Buer discloses “integrated PDK” (blue):



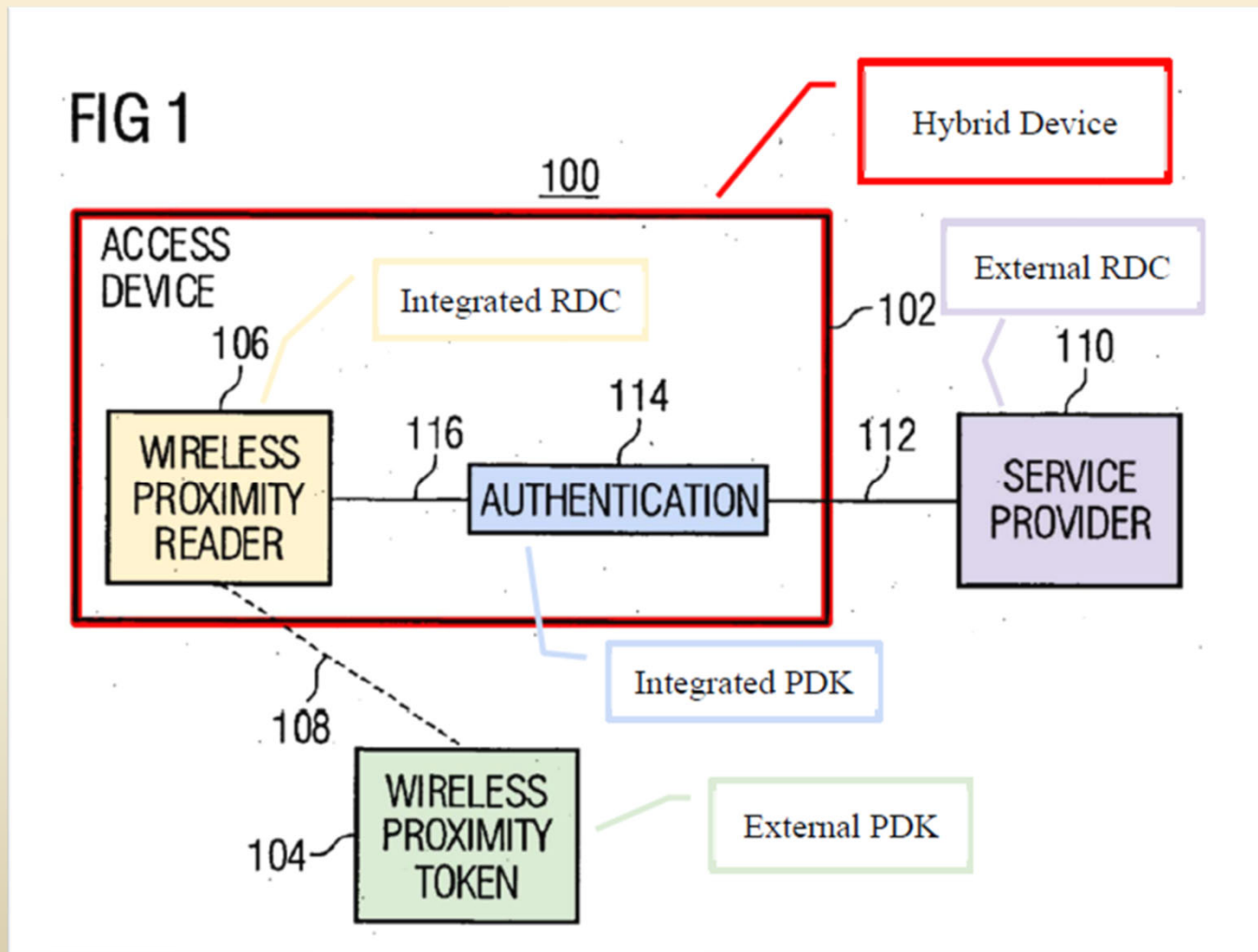
# Ground 3

- Buer discloses “integrated RDC” (yellow):



# Ground 3

- Buer discloses “enablement signal”:



# Ground 3

- Patent Owner's argument to distinguish Buer is based on its construction:

As Buer fails to disclose “enabling one or more of an application, a function, and a service” as the term has been construed by the District Court, the Petition fails to establish that Buer invalidates independent claims 1 and 10. Lee, Nishikawa, and Hoffmann each fail to cure the deficiencies of Buer and therefore the Petition fails to establish that Buer in combination with Lee, Nishikawa, and/or Hoffmann invalidate claims 1-6, 8-15, and 17-20.

# Ground 3

- Patent Owner's construction should be rejected:

As discussed above, contrary to Proxense's arguments, the claim terms of the '042 patent are not subject to interpretation under §112, ¶6. Thus, Proxense's attempts to distinguish over the prior art on this basis fail.

Furthermore, to the extent Proxense is arguing that the claimed “enabling one or more of an application, a function and a service” is required to be performed through the exchange of “an access key” even if not interpreted under §112, ¶6, the Board already considered and rejected this argument in the Institution Decision. ID,

# Ground 1 '042 IPR

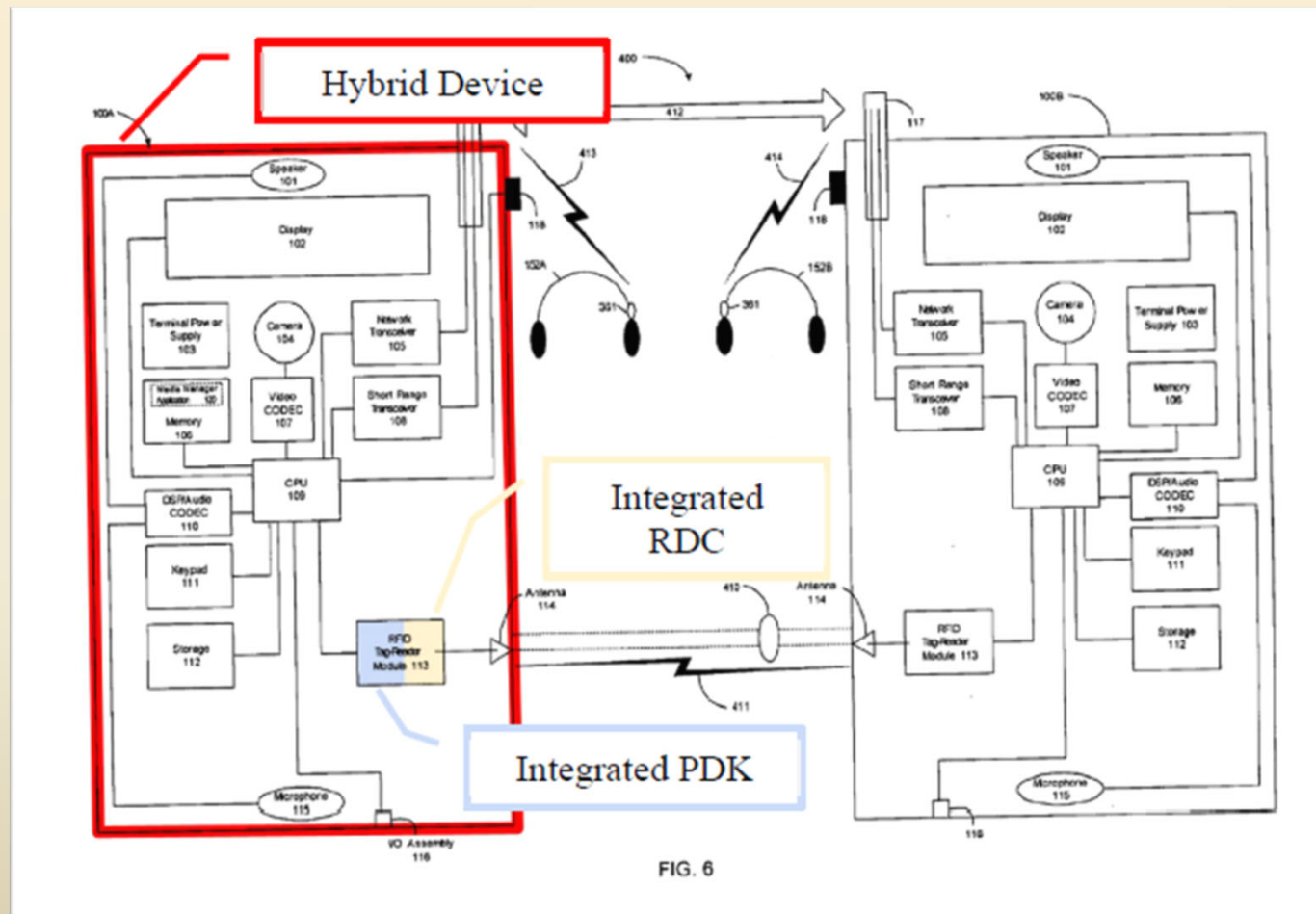
# Ground 1

- Overview of Dua:

|                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>US 20060258289A1                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (19) <b>United States</b>                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (12) <b>Patent Application Publication</b>                                                                                                                                              | (10) <b>Pub. No.: US 2006/0258289 A1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Dua</b>                                                                                                                                                                              | (43) <b>Pub. Date: Nov. 16, 2006</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <hr/>                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (54) <b>WIRELESS MEDIA SYSTEM AND PLAYER<br/>AND METHOD OF OPERATION</b>                                                                                                                | (57) <b>ABSTRACT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| (76) Inventor: <b>Robin Dua</b> , Vienna, VA (US)                                                                                                                                       | <p>A wireless media player and a related system and methodology are disclosed. One aspect of the wireless media player system pertains to a virtual connector system, apparatus, and method for the automatic establishment of wireless connectivity with other electronic devices. In one embodiment, the media player device employs the use of integrated Radio Frequency Identification (RFID) technology to exchange communication settings, media capability, and other parameters with an external device that also has integrated RFID technology. The automatic exchange of settings and other information via a proximity-based RFID data exchange allows a media player to quickly establish a secure communication link with another device via a commonly supported wireless protocol such as Ultra Wideband (UWB) or Bluetooth. Another aspect of the media player system pertains to a method of using the captured media capability of the connecting device to customize certain menu options and software parameters in the media player.</p> |
| Correspondence Address:<br><b>Charles B. Lobsenz</b><br><b>Roberts, Mlotkowski &amp; Hobbes, PC</b><br><b>Suite 850</b><br><b>8270 Greensboro Drive</b><br><b>McLean, VA 22102 (US)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (21) Appl. No.: <b>11/127,979</b>                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (22) Filed: <b>May 12, 2005</b>                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Publication Classification</b>                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (51) <b>Int. CL</b><br><b>H04B 7/00</b> (2006.01)                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (52) <b>U.S. CL</b> ..... <b>455/41.3; 455/41.2</b>                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

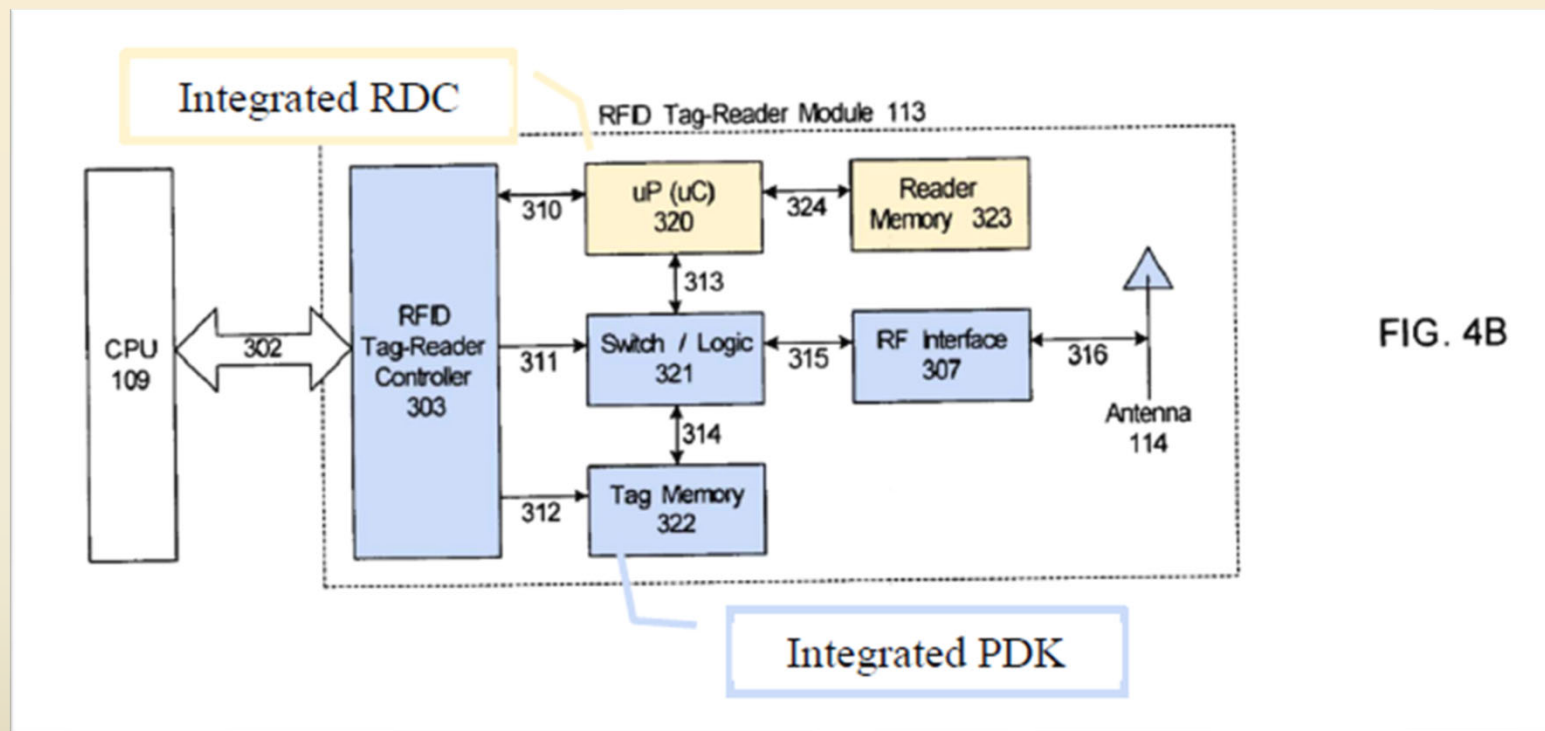
# Ground 1

- Overview of Dua:



# Ground 1

- Overview of Dua:



# Ground 1

- Patent Owner's argument to distinguish Dua is based on its claim construction:

As Dua fails to disclose “enabling one or more of an application, a function, and a service” as the term has been construed by the District Court, and given that the Petition fails to assert Kotola discloses this element, the Petition fails to establish the combination of Dua and Kotola invalidates claim 10.

# Ground 1

- Patent Owner's construction should be rejected:

As discussed above, contrary to Proxense's arguments, the claim terms of the '042 patent are not subject to interpretation under §112, ¶6. Thus, Proxense's attempts to distinguish over the prior art on this basis fail.

Furthermore, to the extent Proxense is arguing that the claimed “enabling one or more of an application, a function and a service” is required to be performed through the exchange of “an access key” even if not interpreted under §112, ¶6, the Board already considered and rejected this argument in the Institution Decision. ID,

# Ground 3 '289 IPR

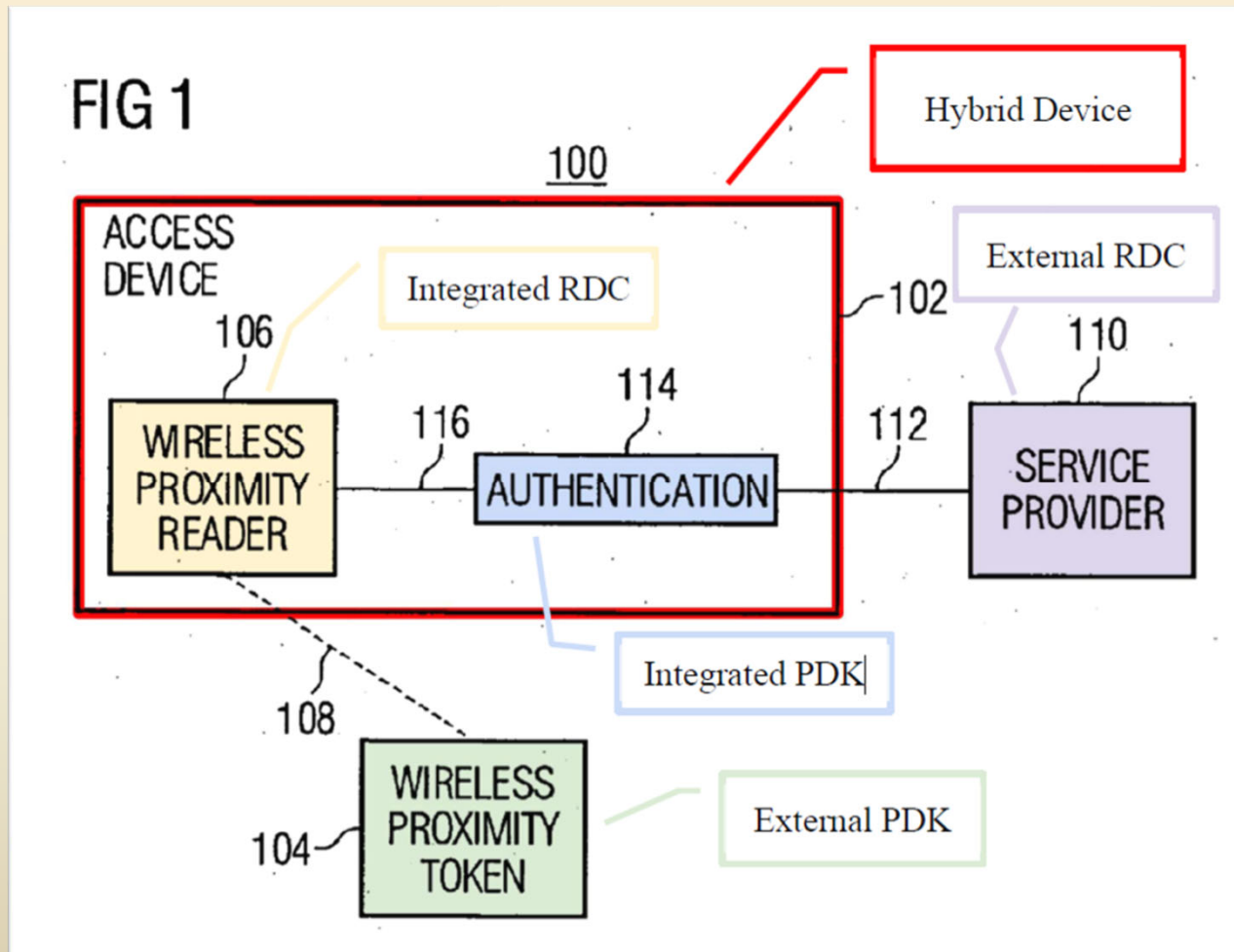
# Ground 3

- Overview of Buer:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                 |                                                                                                                                                                                    |
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| (19)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Europäisches Patentamt<br>European Patent Office<br>Office européen des brevets | <br>(11) <b>EP 1 536 306 A1</b>                                                                 |
| (12) <b>EUROPEAN PATENT APPLICATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                 |                                                                                                                                                                                    |
| (43) Date of publication:<br><b>01.06.2005 Bulletin 2005/22</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                 | (51) Int Cl. <sup>7</sup> : <b>G06F 1/00</b>                                                                                                                                       |
| (21) Application number: <b>04023384.3</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                 |                                                                                                                                                                                    |
| (22) Date of filing: <b>30.09.2004</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                 |                                                                                                                                                                                    |
| (84) Designated Contracting States:<br><b>AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR</b><br>Designated Extension States:<br><b>AL HR LT LV MK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                 | (72) Inventors:<br>• <b>Buer, Mark</b><br>Gilbert, AZ 85296 (US)<br>• <b>Frank, Edward H.</b><br>Atherton, CA 94027 (US)<br>• <b>Seshadri, Nambirajan</b><br>Irvine, CA 92612 (US) |
| (30) Priority: <b>30.09.2003 US 507586 P</b><br><b>13.09.2004 US 609537 P</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                 | (74) Representative: <b>Jehle, Volker Armin, Dipl.-Ing.</b><br>Patentanwälte<br>Bosch, Graf von Stosch, Jehle,<br>Flüggensstrasse 13<br>80639 München (DE)                         |
| (71) Applicant: <b>Broadcom Corporation</b><br>Irvine, California 92618-7013 (US)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                 |                                                                                                                                                                                    |
| (54) <b>Proximity authentication system</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                 |                                                                                                                                                                                    |
| (57) Access to secured services may be controlled based on the proximity of a wireless token to a computing device through which access to the secured services is obtained. An authorized user may be provided access to a service only when a wireless token assigned to the user is in the proximity of the computing device. A user's credential may be stored on an RFID token and an RFID reader may be implemented within a security boundary on the computing device. Thus, the credential may be passed to the security boundary without passing through the computing device via software messages or applications. The security boundary may be provided, in part, by incorporating the RFID reader onto the same chip as a cryptographic processing component. Once the information is received by the RFID reader it may be encrypted within the chip. As a result, the information may never be presented in the clear outside of the chip. The cryptographic processing component may cryptographically encrypt/sign the credential received from the token so that assurance may be provided to a service provider that the credentials came from a token that was proximate to the computing device. An RFID reader, cryptographic processing components and a wireless network controller may be implemented on a single chip in a mobile device. |                                                                                 |                                                                                                                                                                                    |

# Ground 3

- Overview of Buer:



# Ground 3

- Patent Owner's argument to distinguish Buer is based on its construction:

As Buer fails to disclose “enabling one or more of an application, a function, and a service” as the term has been construed by the District Court, the Petition fails to establish that Buer invalidates claims 1-20. Given that the Petition does not assert Giobbi ‘157 or Nishikawa discloses this element, the Petition fails to establish the combination of Buer, Giobbi ‘157, and Nishikawa invalidates claims 1-20.

# Ground 3

- Patent Owner's construction should be rejected:

As discussed above, contrary to Proxense's arguments, the claim terms of the '289 patent are not subject to interpretation under §112, ¶6. Thus, Proxense's attempts to distinguish over the prior art on this basis fail.

Furthermore, to the extent Proxense is arguing that the claimed limitations are required to be performed through the exchange of "an access key" even if not interpreted under §112, ¶6, the Board already considered and rejected this argument in the Institution Decision. ID, 8-10, 12, 17-19, 29-30, 33-34, 40, 43-44. As stated in

# Ground 1 '289 IPR

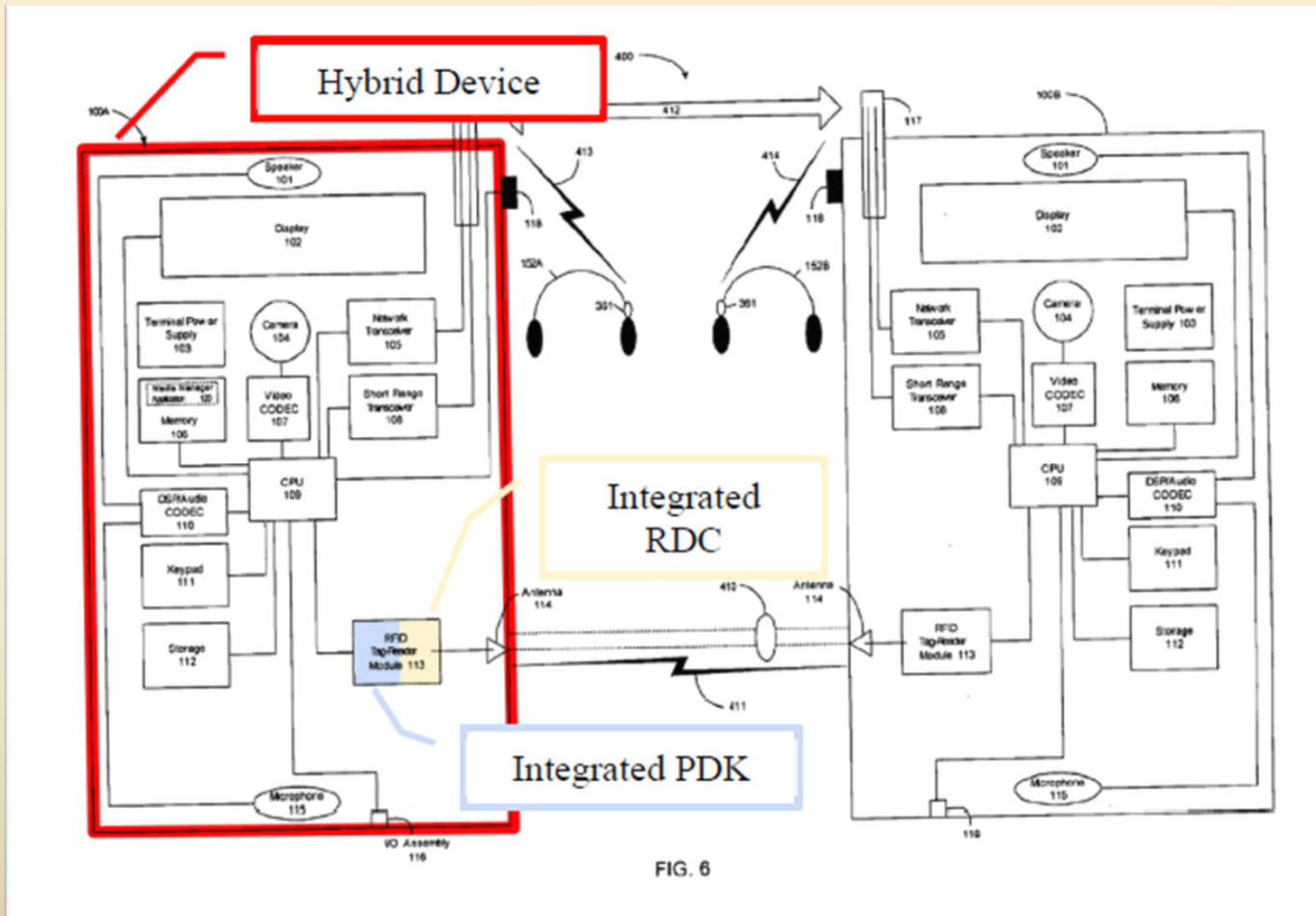
# Ground 1

- Overview of Dua:

|                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <br>US 20060258289A1                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (19) <b>United States</b>                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (12) <b>Patent Application Publication</b>                                                                                                                                              | (10) <b>Pub. No.: US 2006/0258289 A1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Dua</b>                                                                                                                                                                              | (43) <b>Pub. Date: Nov. 16, 2006</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <hr/>                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (54) <b>WIRELESS MEDIA SYSTEM AND PLAYER<br/>AND METHOD OF OPERATION</b>                                                                                                                | (57) <b>ABSTRACT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| (76) Inventor: <b>Robin Dua</b> , Vienna, VA (US)                                                                                                                                       | <p>A wireless media player and a related system and methodology are disclosed. One aspect of the wireless media player system pertains to a virtual connector system, apparatus, and method for the automatic establishment of wireless connectivity with other electronic devices. In one embodiment, the media player device employs the use of integrated Radio Frequency Identification (RFID) technology to exchange communication settings, media capability, and other parameters with an external device that also has integrated RFID technology. The automatic exchange of settings and other information via a proximity-based RFID data exchange allows a media player to quickly establish a secure communication link with another device via a commonly supported wireless protocol such as Ultra Wideband (UWB) or Bluetooth. Another aspect of the media player system pertains to a method of using the captured media capability of the connecting device to customize certain menu options and software parameters in the media player.</p> |
| Correspondence Address:<br><b>Charles B. Lobsenz</b><br><b>Roberts, Mlotkowski &amp; Hobbes, PC</b><br><b>Suite 850</b><br><b>8270 Greensboro Drive</b><br><b>McLean, VA 22102 (US)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (21) Appl. No.: <b>11/127,979</b>                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (22) Filed: <b>May 12, 2005</b>                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Publication Classification</b>                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (51) <b>Int. CL</b><br><b>H04B 7/00</b> (2006.01)                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (52) <b>U.S. CL</b> ..... <b>455/41.3; 455/41.2</b>                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

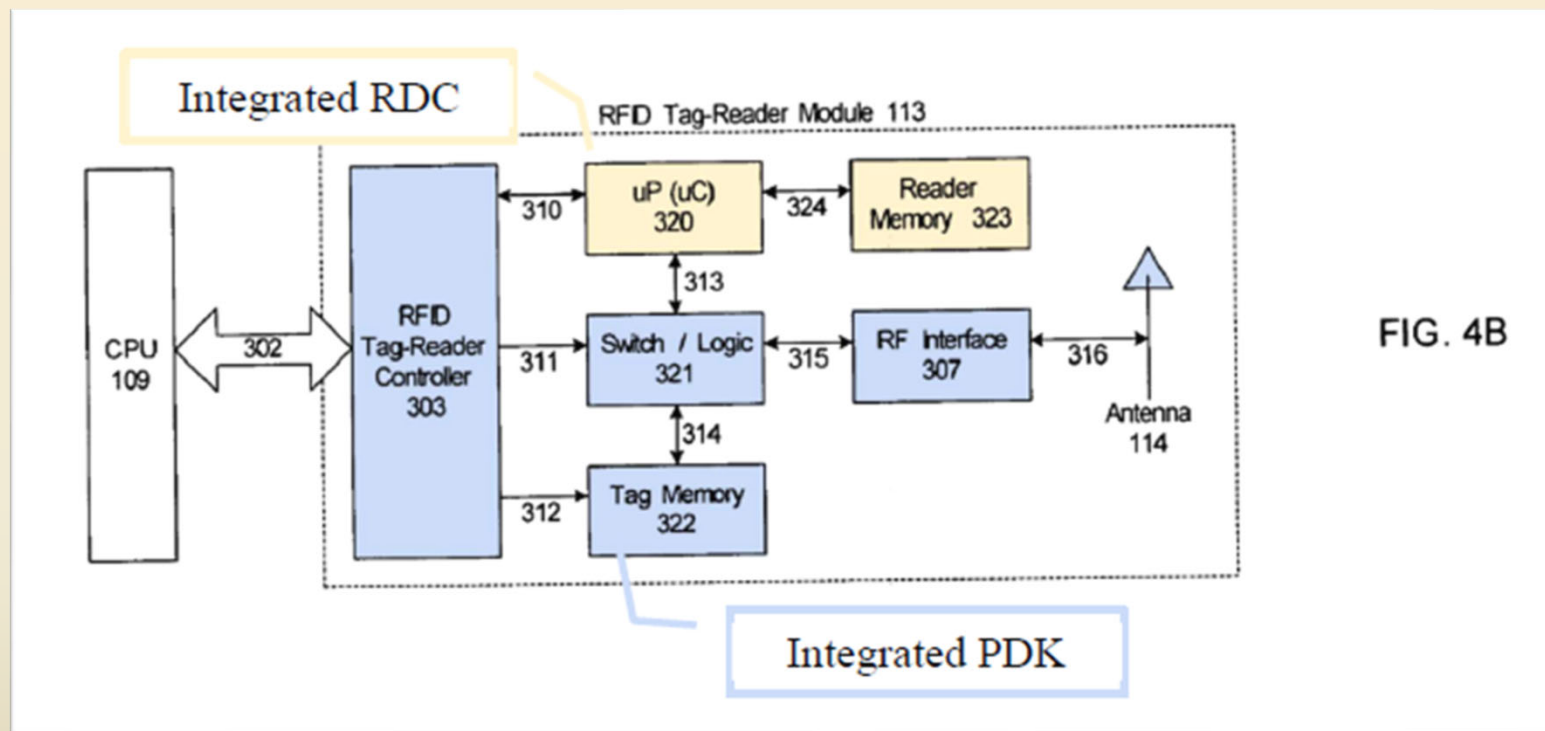
# Ground 1

- Overview of Dua:



# Ground 1

- Overview of Dua:



# Ground 1

- Patent Owner's argument to distinguish Dua is based on its claim construction:

As Dua fails to disclose “enabling one or more of an application, a function, and a service” as the term has been construed by the District Court, and given that the Petition fails to assert Giobbi ‘157 or Kotola discloses this element, the Petition fails to establish the combination of Dua, Giobbi ‘157, and Kotola invalidates claims 1-6, 8-11, and 14-19.

# Ground 1

- Patent Owner's construction should be rejected:

As discussed above, contrary to Proxense's arguments, the claim terms of the '289 patent are not subject to interpretation under §112, ¶6. Thus, Proxense's attempts to distinguish over the prior art on this basis fail.

Furthermore, to the extent Proxense is arguing that the claimed limitations are required to be performed through the exchange of "an access key" even if not interpreted under §112, ¶6, the Board already considered and rejected this argument in the Institution Decision. ID, 8-10, 12, 17-19, 29-30, 33-34, 40, 43-44. As stated in