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	Filing Date		
	First Named Inventor	Daniel M. Fischer	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	10254-US-CNT4 4214-01509	

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	8	5631503		1997-05-20	Cioffi	

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	2	200101330	WO	A1	2001-01-04	Cross Match Technologies, Inc.		<input type="checkbox"/>
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	1	Electric Double-Layer Capacitors, Vol. 2, Japan, Tokin Corporation, Cat. No. EC-200E, October 25, 1996, 40 pgs.	<input type="checkbox"/>
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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/J. Robert Brown, Jr./	Date (YYYY-MM-DD)	2010-02-26
Name/Print	J. Robert Brown, Jr.	Registration Number	45,438

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EP 0 684 680 B1

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(54) **Identification apparatus and method**

Verfahren und Vorrichtung zur Identifikation

Procédé et appareil d'identification

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(73) Proprietor: **NOKIA MOBILE PHONES LTD.**
24101 Salo (FI)

(72) Inventor: **Hakkarainen, Kalle**
SF-24100 Salo (FI)

(74) Representative: **Frain, Timothy John et al**
Nokia IPR Department
Nokia (UK) Limited
Summit Avenue
Southwood
Farnborough Hampshire GU14 0NZ (GB)

(56) References cited:
EP-A- 0 038 877 **EP-A- 0 409 226**
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Description

[0001] The present invention relates to identification apparatus and a method therefor. In particular, it relates to such apparatus and method for accessory devices of electronic devices such as portable telephones.

[0002] There are many types of peripheral devices used with electronic devices. A particularly common accessory device is a battery charger for portable devices such as portable telephones. The present invention will now be discussed in terms of the state of the art and by way of example, with reference to battery chargers.

[0003] There are a number of known methods for charging rechargeable batteries for portable devices, such as nickel-cadmium batteries. Many of these chargers require the removal of the batteries from the device to enable recharging. Removal of the batteries from the device is considered a drawback, since the device is out of operation during the recharging. However, a number of different chargers have been developed which can be attached to a battery powered device and the batteries charged in situ in the device. In this way, the functionality of the device can be maintained while charging the batteries. Even though the functionality of the device is maintained, a portable device, such as a mobile phone, is unavailable for operation in the manner intended, i.e., as a portable device. Since chargers often recharge a battery using a fairly low charging current, the battery powered device is not available for portable operation for extended periods of time, such as eight hours or more during which time the batteries are being recharged.

[0004] Many battery powered devices, such as mobile phones, are extremely energy intensive, expending considerable amounts of power during the receive functions and more particularly during the transmit functions. Because of lengthy recharging times, "rapid" chargers have been developed which can charge batteries fairly rapidly, for example in less than an hour as compared with the charging time of eight hours for previous battery chargers.

[0005] In order to charge batteries rapidly, numerous problems had to be overcome. One of the most serious problems was overcharging of the batteries, resulting in turn in overheating of the batteries. Overheating may damage the battery case seals, resulting in rupturing of the battery case and in extreme instances in explosive rupturing of the battery case.

[0006] In known "rapid" battery chargers most of these problems have been solved in one way or another, e.g., by monitoring given battery parameters, such as the charging rate of the battery, internal battery temperatures or charge state of the battery. In some "rapid" chargers, attempts have been made to prevent overcharging of the batteries by utilizing timed charging of the battery. However, using these known solutions it is not always possible to prevent overcharging of batteries, for instance, when the charger type is not exactly a

correct one or designed to be used with the battery being charged.

[0007] Numerous different types of chargers are on the market which comprise different charging capacities and charging parameters for charging rechargeable batteries of portable devices. Some chargers can even be unsuitable, i.e., hazardous for the batteries. Consequently, portable devices should be able to somehow identify the charger and its properties. Similar problems exist for accessory devices generally for all types of electronic device, not just battery charges or portable telephones.

[0008] EP-A-0 409 226 discloses an identification apparatus for a load comprising coupling means for coupling the load to a power supply and modulating means for modulating a signal according to the identity data from the load.

[0009] According to a first aspect of the present invention, there is provided identification apparatus for an accessory device, comprising coupling means for coupling the accessory device to a mobile telephone and modulation means for modulating a signal on the coupling means in accordance with identity data from the accessory device.

[0010] According to a second aspect of the present invention, there is provided an identification method for an accessory device, comprising transmitting an identity signal from the accessory device to a mobile telephone coupled thereto by modulating a signal transmitted therebetween in accordance with identity data from the accessory device.

[0011] This has the advantage that the accessory device can indicate to an electronic device to which it is connected which peripheral device it is. Thus, there is provided a solution to a problem of identifying accessory devices.

[0012] In a preferred embodiment the modulation means comprises a switch means operable to activate and de-activate the coupling means.

[0013] Preferably, the identification apparatus further comprises a bit generator or corresponding charger for generating the identity data.

[0014] Suitably, there is provided control means adopted to control the modulation means in accordance with the identity data for superimposing a pulse ratio, pulse length, pulse count or the like signal on the signal on the coupling means.

[0015] Advantageously, there is provided timing means for determining a time during which the modulation means is operable, in particular the timing means comprises a timer and a switch operable in accordance with the timer to decouple the identity data from the control and/or modulation means.

[0016] Optionally, the switch means comprises a switching transistor or field effect transistor.

[0017] Identification may be implemented after a certain start-up period, before operation, e.g. charging, is started or in the initial stage of operation of the acces-

sory device.

[0018] Embodiments in accordance with the invention are now described, by way of example only, and with reference to the appended drawings in which:

Fig. 1 shows a diagrammatic illustration of the implementation of apparatus in accordance with the invention,

Fig. 2 shows a more detailed diagrammatic illustration of the apparatus of Fig. 1

[0019] In a device in accordance with the invention a battery charger for a transportable device transmits an identification code for the charger via a charging cable, by switching the charging voltage on and off using a certain pulse ratio or pulse length or pulse count. Such identification can be implemented after a certain start-up time or before starting an actual charging routine. It can also be carried out in the initial stage of charging after having switched the charging on or entered a charging routine.

[0020] Fig. 1 shows an implementation of an embodiment in accordance with the invention. The identification of the charger is formed by using bit generator 1 from which the identification is taken via switching block 2, controlled by timing block 3, to control block 4 of a pulse width modulator. A switching transistor or field effect transistor functions as switch 8 and takes a charging voltage containing the identification as a modulation imposed thereon, via inductance 6 to the output of the charger. Timing block 3 can also operate to control switch 8 to stay on after the pulse identification has been transmitted from the charger. The main circuit comprises, in a known manner, parallel diode 5 and parallel capacitor 7 coupled to ground. The charging voltage may be the output of a DC/DC converter, the output of which is then switched on or off by switch 8.

[0021] Fig. 2 shows a slightly more detailed diagrammatic illustration of the apparatus in accordance with the invention. The identification of the charger is formed by using logic NAND circuit 9 (an AND circuit having an inverting output), from where the identification is transmitted to control block 4 of the pulse width modulator. The resistances shown in Figure 2 are marked with numbers 10 and 11 and the capacitors are marked with numbers 12 and 13. A switching transistor or field effect transistor functions as switch 8 and takes the charging voltage containing the identification via inductance 6 to the output of the charger. The pulse identification is formed until capacitor 12 is charged, switch 8 being left switched on thereafter.

[0022] In view of the foregoing description it will be evident to a person skilled in the art that various modifications may be made within the scope of the invention. For example, the accessory device need not be a battery charger but could be some other accessory, and the electronic device need not be just a portable telephone.

Additionally, the modulation of the charging voltage may comprise varying the charging voltage as well as switching it on or off.

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Claims

1. Identification apparatus for an accessory device, comprising coupling means for coupling the accessory device to a mobile telephone and modulation means for modulating a signal on the coupling means in accordance with identity data from the accessory device.
2. Identification apparatus according to claim 1, wherein the modulation means comprises a switch means operable to activate and de-activate the coupling means.
3. Identification apparatus according to claim 1 or claim 2, further comprising a bit generator or corresponding charger for generating the identity data.
4. Identification apparatus according to any preceding claim, wherein there is provided control means adapted to control the modulation means in accordance with the identity data for superimposing a pulse ratio, pulse length, pulse count or the like signal on the signal on the coupling means.
5. Identification apparatus according to any preceding claim, wherein there is provided timing means for determining a time during which the modulation means is operable.
6. Identification apparatus according to claim 5, wherein the timing means comprises a timer and a switch operable in accordance with the timer to decouple the identity data from the control and/or modulation means.
7. Identification apparatus according to any preceding claim, wherein the switch means comprises a switching transistor or field effect transistor.
8. Identification apparatus according to claim 1, further comprising:
 - a logic NAND circuit,
 - resistance, and
 - capacitance, wherein
 the identity data is formed by using the logic NAND circuit, from where the identity data is taken to control block for a pulse width modulator.
9. A battery charger comprising identification apparatus according to any preceding claim, wherein the

coupling means is adapted to carry a charging voltage, and the signal on the coupling means is a charging voltage.

10. An identification method for an accessory device, comprising transmitting an identity signal from the accessory device to a mobile telephone coupled thereto by modulating a signal transmitted therebetween in accordance with identity data from the accessory device.
11. A method according to claim 10, wherein the signal is modulated by switching the signal on or off.

Patentansprüche

1. Identifikationsvorrichtung für ein Zusatzgerät, mit Kopplungsmitteln zur Kopplung des Zusatzgeräts an ein Mobiltelefon, und Modulationsmitteln zur Modulation eines Signals an den Kopplungsmitteln gemäß Identitätsdaten von dem Zusatzgerät.
2. Identifikationsvorrichtung nach Anspruch 1, bei der die Modulationsmittel Schaltmittel enthalten, die zur Aktivierung und Deaktivierung der Kopplungsmittel betreibbar sind.
3. Identifikationsvorrichtung nach Anspruch 1 oder 2, mit einem Bitgenerator oder einem korrespondierenden Ladegerät zur Erzeugung der Identitätsdaten.
4. Identifikationsvorrichtung nach irgendeinem der vorangegangenen Ansprüche, bei der zur Steuerung der Modulationsmittel gemäß den Identitätsdaten Steuermittel bereitgestellt sind, um ein Pulsverhältnis, eine Pulslänge, eine Pulszahl oder ein ähnliches Signal mit dem Signal an den Kopplungsmitteln zu überlagern.
5. Identifikationsvorrichtung nach irgendeinem der vorangegangenen Ansprüche, bei der zur Bestimmung einer Zeit während der die Modulationsmittel betreibbar sind Zeitsteuerungsmittel vorgesehen sind.
6. Identifikationsvorrichtung nach Anspruch 5, bei der die Zeitsteuerungsmittel einen Zeitgeber und einen Schalter enthalten, der gemäß dem Zeitgeber betreibbar ist, um die Identitätsdaten von den Steuer- und/oder Modulationsmitteln zu trennen.
7. Identifikationsvorrichtung nach irgendeinem der vorangegangenen Ansprüche, bei der die Schaltmittel einen Schalttransistor oder einen Feldeffekttransistor enthalten.

8. Identifikationsvorrichtung nach Anspruch 1, mit:

- einer NAND-Logikschaltung;
- einem Widerstand; und
- einer Kapazität, wobei die Identitätsdaten unter Verwendung der NAND-Logikschaltung gebildet werden, von wo aus die Identitätsdaten einem Steuerblock für einen Pulsbreitenmodulator zugeführt werden.

9. Batterieladegerät mit einer Identifikationsvorrichtung nach irgendeinem der vorangegangenen Ansprüche, wobei die Kopplungsmittel zur Übertragung einer Ladespannung vorgesehen sind, und das Signal an den Kopplungsmitteln eine Ladespannung ist.

10. Identifikationsverfahren für ein Zusatzgerät, mit einem Schritt zur Übertragung eines Identitätssignals vom Zusatzgerät an ein mit diesem gekoppeltes Mobiltelefon, und zwar mittels Modulation eines zwischen ihnen übertragenen Signals gemäß den Identitätsdaten vom Zusatzgerät.

11. Verfahren nach Anspruch 10, bei dem das Signal moduliert wird, indem es ein- oder ausgeschaltet wird.

Revendications

1. Appareil d'identification pour un dispositif auxiliaire, comprenant un moyen de couplage pour coupler le dispositif auxiliaire à un téléphone mobile et un moyen de modulation pour moduler un signal sur le moyen de couplage conformément à des données d'identité à partir du dispositif auxiliaire.
2. Appareil d'identification selon la revendication 1, dans lequel le moyen de modulation comprend un moyen de commutation pouvant être utilisé pour activer et désactiver le moyen de couplage.
3. Appareil d'identification selon la revendication 1 ou la revendication 2, comprenant en outre un générateur de bit ou un chargeur correspondant pour générer les données d'identité.
4. Appareil d'identification selon l'une quelconque des revendications précédentes, dans lequel il est prévu un moyen de contrôle adapté pour contrôler le moyen de modulation conformément aux données d'identité pour superposer un rapport d'impulsions, une longueur d'impulsion, un nombre d'impulsions ou un signal similaire sur le signal sur le moyen de couplage.
5. Appareil d'identification selon l'une quelconque des

revendications précédentes, dans lequel il est prévu un moyen de mesure du temps pour déterminer un temps pendant lequel le moyen de modulation est utilisable.

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6. Appareil d'identification selon la revendication 5, dans lequel le moyen de mesure du temps comprend une horloge et un commutateur pouvant être utilisé en accord avec l'horloge pour découpler les données d'identité à partir du moyen de contrôle et/ou de modulation.

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7. Appareil d'identification selon l'une quelconque des revendications précédentes, dans lequel le moyen de commutation comprend un transistor de commutation ou un transistor à effet de champ.

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8. Appareil d'identification selon la revendication 1, comprenant en outre :

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- un circuit logique NAND
- une résistance, et
- un condensateur, dans lequel

les données d'identité sont activées en utilisant le circuit logique NAND, à partir duquel les données d'identité sont saisies pour contrôler un bloc pour un modulateur de largeur d'impulsion.

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9. Chargeur d'accumulateurs comprenant un appareil d'identification selon l'une quelconque des revendications précédentes, dans lequel le moyen de couplage est adapté pour porter une tension de charge, et le signal sur le moyen de couplage est une tension de charge.

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10. Méthode d'identification pour un dispositif auxiliaire, comprenant la transmission d'un signal d'identité depuis un dispositif auxiliaire vers un téléphone mobile couplé à celui-ci en modulant un signal transmis entre eux conformément à des données d'identité à partir du dispositif auxiliaire.

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11. Méthode selon la revendication 10, dans laquelle le signal est modulé en commutant le signal en position marche ou arrêt.

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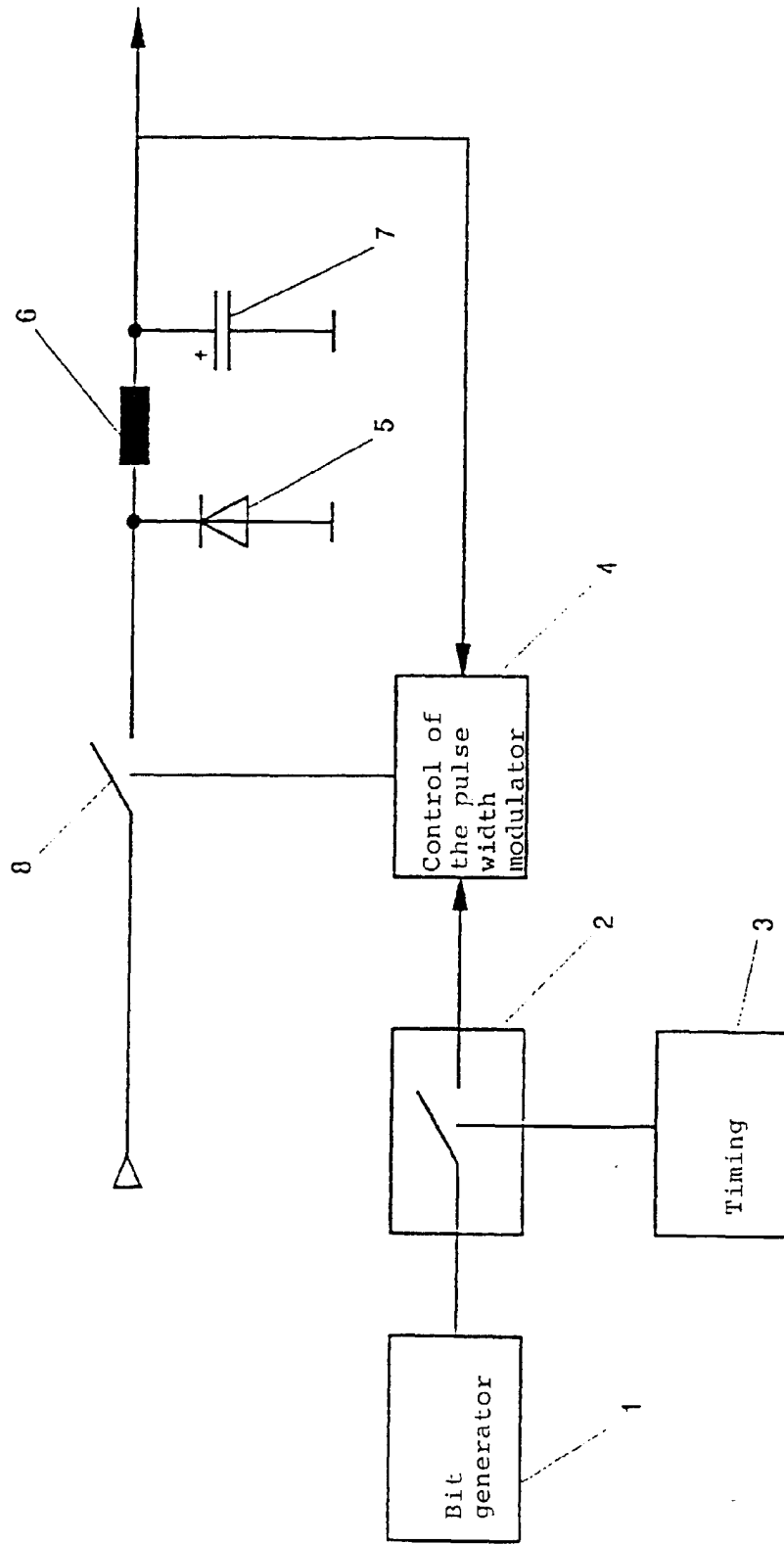


Fig. 1

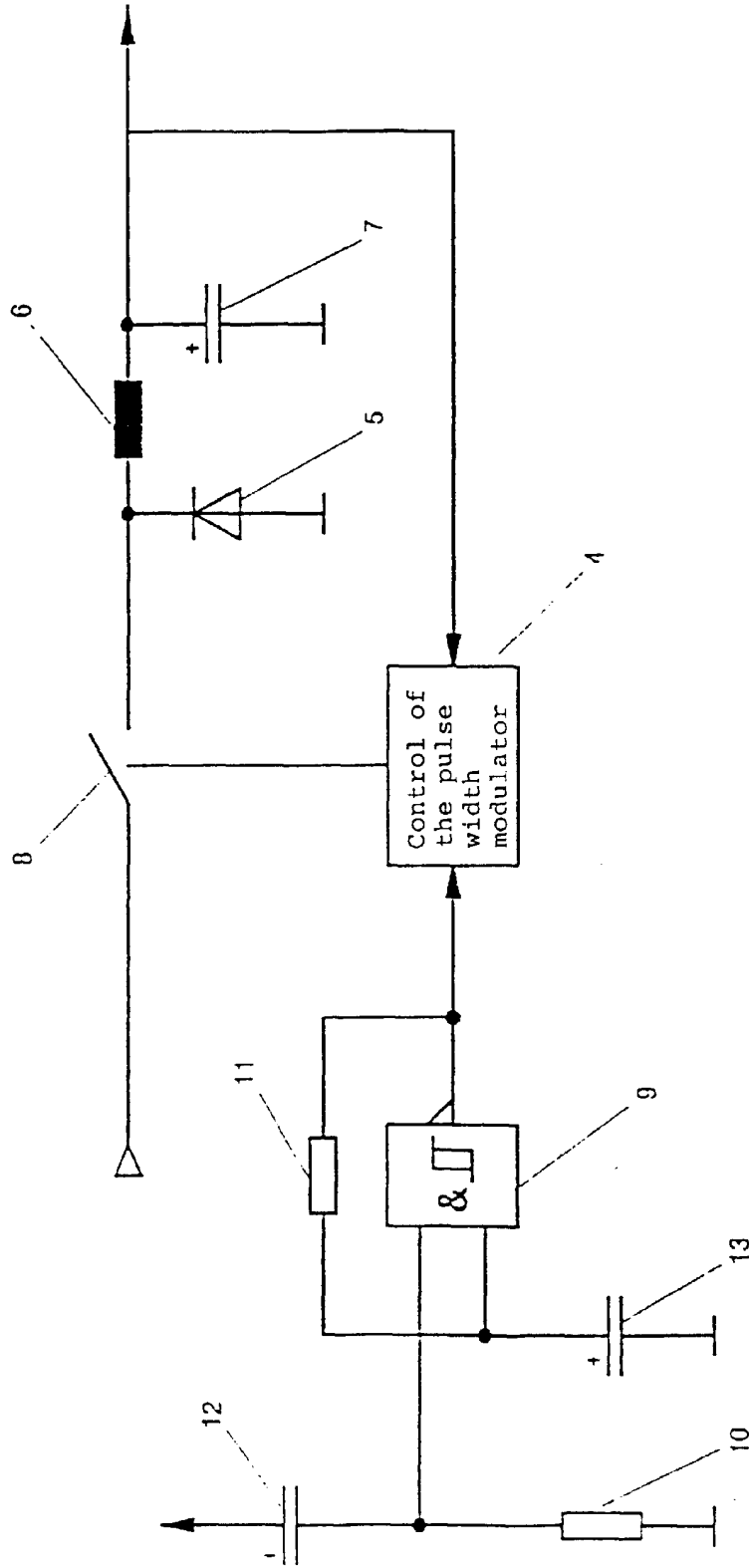


Fig. 2

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
4 January 2001 (04.01.2001)

PCT

(10) International Publication Number
WO 01/01330 A1

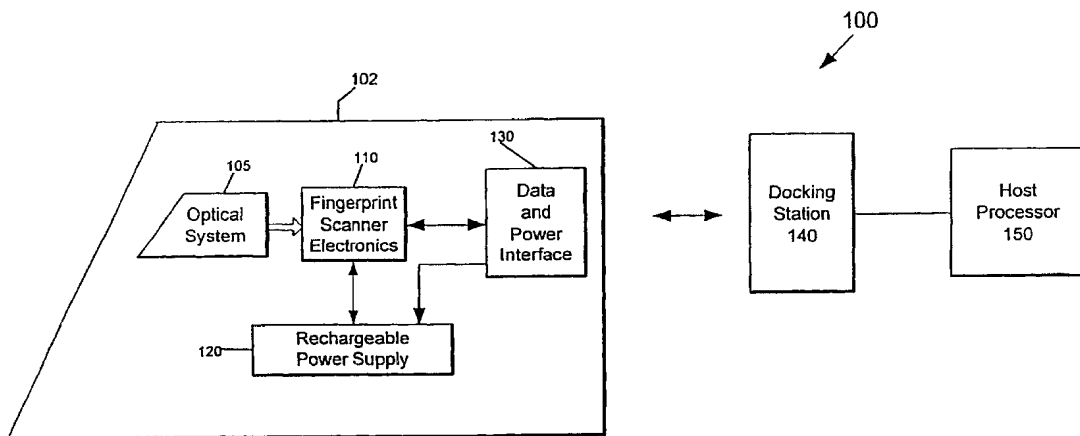
- (51) International Patent Classification⁷: **G06K 9/00**
- (21) International Application Number: PCT/US99/22709
- (22) International Filing Date: 1 October 1999 (01.10.1999)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/140,754 25 June 1999 (25.06.1999) US
- (71) Applicant (for all designated States except US): **CROSS MATCH TECHNOLOGIES, INC.** [US/US]; Phillips Point East Tower, Suite 1200, 777 South Flagler Drive, West Palm Beach, FL 33401 (US).
- (74) Agents: **KESSLER, Edward, J.** et al.; Sterne, Kessler, Goldstein & Fox P.L.L.C., Suite 600, 1100 New York Avenue, N.W., Washington, DC 20005-3934 (US).
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- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **MCCLURG, George, W.** [US/US]; 2166 N.E. Ocapa Court, Jensen Beach, FL 34957 (US). **BRUNELL, David** [US/US]; 200 Avila Road, West Palm Beach, FL 33405 (US). **SCOTT, Walter, G.** [NZ/US]; 11662 Lake Shore Place, North Palm Beach, FL 33408 (US).

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(54) Title: RECHARGEABLE MOBILE HAND-HELD FINGERPRINT SCANNER WITH A DATA AND POWER COMMUNICATION INTERFACE



(57) Abstract: A mobile, hand-held fingerprint scanner is recharged by a data and power communication interface. The mobile, hand-held fingerprint scanner includes a rechargeable power supply and a data and power communication interface. The rechargeable power supply powers the fingerprint scanner during mobile use. In one example, the rechargeable power supply includes at least one rechargeable battery, a charging circuit, and a voltage regulator circuit. Data and recharging power is carried over the same interface. A separate plug for power is not needed. The fingerprint scanner can then be inserted quickly and easily in a docking station as only a single data and power communication interface need be coupled. This is particularly advantageous in law enforcement applications where mobile use is important and safety can be compromised if a mobile scanner does not couple to a docking station quickly and easily.



WO 01/01330 A1

Rechargeable Mobile Hand-Held Fingerprint Scanner With a Data and Power Communication Interface

Background of the Invention

1. Field of the Invention

The present invention relates generally to fingerprint scanning and imaging.

2. Related Art

Biometrics are a group of technologies that provide a high level of security. Fingerprint capture and recognition is an important biometric technology. Law enforcement, banking, voting, and other industries increasingly rely upon fingerprints as a biometric to recognize or verify identity. See, *Biometrics Explained*, v. 2.0, G. Roethenbaugh, International Computer Society Assn. Carlisle, PA 1998, pages 1-34 (incorporated herein by reference in its entirety).

Fingerprint scanners are available which capture an image of a fingerprint. A signal representative of the captured image is then sent over a data communication interface to a host computer for further processing. For example, the host can perform one-to-one or one-to-many fingerprint matching.

However, such fingerprint scanners are typically attached or tethered to a computer. These fingerprint scanners can rely upon power from a separate plug or through a Universal Serial Bus (USB) interface. See, e.g., fingerprint scanners made by Digital Persona, Veridcom, and SecurGen.

Mobile use is increasingly desired in biometric applications, such as law enforcement. Police and other users need a portable, hand-held device to easily

capture fingerprint images in the field. The portable hand-held device must be powered reliably. Conventional fingerprint scanners tethered to a personal computer cannot meet this need.

Summary of the Invention

5 The present invention provides a mobile, hand-held fingerprint scanner that is recharged by a powered data communication interface. Data and recharging power is carried over the same interface. A separate plug for power is not needed. The fingerprint scanner can then be inserted quickly and easily in a docking station as only a single data and power communication interface need be coupled. This
10 is particularly advantageous in law enforcement applications where mobile use is important and safety can be compromised if a mobile scanner does not couple to a docking station quickly and easily.

 In one embodiment, the mobile, hand-held fingerprint scanner includes a rechargeable power supply and a data and power communication interface. The
15 rechargeable power supply powers the fingerprint scanner during mobile use. In one example implementation, the rechargeable power supply includes at least one rechargeable battery, a charging circuit, and a voltage regulator circuit. The charging circuit regulates the charging (*i.e.* the rate) of a rechargeable battery when the fingerprint scanner is receiving power through the data and power
20 communication interface. The voltage regulator circuit maintains a substantially constant output system voltage from the rechargeable battery during mobile use. Further, in one preferred example, the data and power communication interface is a universal serial bus (USB). The data and power interface of the present invention is not limited to USB. In general, any data communication interface that
25 provides for power in its protocol may be used, such as, an IEEE 1394 interface.

Further features and advantages of the present invention, as well as the structure and operation of various embodiments of the present invention, are described in detail below with reference to the accompanying drawings.

Brief Description of the Drawings

5 The accompanying drawings, which are incorporated herein and form part of the specification, illustrate the present invention and, together with the description, further serve to explain the principles of the invention and to enable a person skilled in the pertinent art to make and use the invention.

10 FIG. 1 is a diagram of a mobile, hand-held fingerprint scanner and docking system according to one embodiment of the present invention.

 FIG. 2 is a diagram of a mobile, hand-held fingerprint scanner according to one embodiment of the present invention.

15 FIGs. 3A and 3B are drawings of an example implementation of a mobile, hand-held fingerprint scanner used in a law enforcement application according to the present invention.

 The present invention is described with reference to the accompanying drawings. In the drawings, like reference numbers indicate identical or functionally similar elements. Additionally, the left-most digit(s) of a reference number identifies the drawing in which the reference number first appears.

Detailed Description of the Embodiments

20 According to the present invention, a mobile, hand-held fingerprint scanner is recharged by a data and power communication interface. The term “data and power interface” refers to any communication interface that transfers data and provides power. The data and power interface of the present invention can
25 include, but is not limited to, Universal Serial Bus (USB) or IEEE 1394.

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FIG. 1 shows a mobile, hand-held fingerprint scanner and docking system 100 according to one embodiment of the present invention. System 100 includes a mobile, hand-held fingerprint scanner 102, docking station 140 and a host processor 150. Fingerprint scanner 102 is a portable, hand-held scanner that detects and stores images representing part or all of a fingerprint. For convenience, the term "fingerprint image" is used herein to refer to any type of detected fingerprint including but not limited to an image of all or part of one or more fingerprints, a rolled fingerprint, a flat stationary fingerprint, a palm print, and/or prints of multiple fingers. Fingerprint scanner 102 is detachably coupled to docking station 140. Stored images are then downloaded from fingerprint scanner 102 through docking station 140 to a host processor 150.

In one embodiment, fingerprint scanner 102 includes an optical system 105. For example, optical system 105 can include a prism and a lens system, as described in U.S. Patent No. 5,900,993 (incorporated herein by reference). Other optical systems can be used in the present invention as would be apparent to a person skilled in the art.

Optical system 105 outputs a fingerprint image to fingerprint scanner electronics 110. Fingerprint scanner electronics 110 detects the image and generates an electrical signal representative of the detected signal. The signal is then stored in a memory for subsequent download through data and power interface 130.

According to the present invention, rechargeable power supply 120 is coupled to fingerprint scanner electronics 110 (and electrical components, if any, in optical system 105) and data and power interface 130. Rechargeable power supply 120 provides power for the electronic components in fingerprint scanner 102, including fingerprint scanner electronics 110 and any electrical components in optical system 105, such as, a shutter, lens cover, or drive unit(s) for the lens system. Rechargeable power supply 120 is able to power the fingerprint scanner 102 when the scanner is in active, mobile use out of the docking station 140.

According to a further feature, when the fingerprint scanner 102 is returned to docking station 140, power is provided through data and power interface 130 to recharge rechargeable power supply 120. No separate plug or power connection is needed. This is especially important in time-sensitive and safety critical applications, such as law enforcement. A police officer needs to be able to return fingerprint scanner 102 to docking station 140 in a simple and rapid fashion such that a connection is made quickly and reliably.

In one preferred example, data and power interface 130 is a universal serial bus (USB). A USB includes four pins (or channels). Two pins (+,-) carry a differential data signal, a third pin carries power, and a fourth pin is ground. The data and power interface of the present invention is not limited to USB. In general, any data communication interface that provides for power in its protocol may be used, such as, the IEEE 1394 High Performance Serial Bus (also called a FIREWIRE interface). See, e.g., Randall, "Solutions: Tutor, a Serial Bus on Speed," *PC Magazine* May 25, 1999, pp. 201-203 (incorporated herein by reference).

Docking station 140 can hold fingerprint scanner 102 in a variety of configurations depending upon a particular application and environment. For example, in a law enforcement application, docking station 140 may be a holder mounted in a police car. Host processor 150 can be any type of computer, processor(s), or logic which can receive and process fingerprint images detected by the fingerprint scanner 102. In one example, host processor 150 includes software for performing one-to-one or one-to-many fingerprint matching and recognition.

In another example, host processor 150 transmits detected fingerprint data to another processor for matching and recognition. For instance, if host processor 150 is in a law enforcement vehicle, host processor 150 can transmit detected fingerprint data to another processor at a police station or FBI office with access to a larger database for matching and recognition over a broader range of data.

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In a law enforcement application, host processor 150 can further assemble the detected images into a format compatible with a local, county, or state AFIS or the NCIC or NCIC 2000 service. National Crime Information Center (NCIC) is an on-line information service jointly maintained by the Federal Bureau of Investigation (FBI) and criminal justice agencies throughout the United States and its territories. NCIC is being replaced by NCIC 2000, which will provide all NCIC services and new services. The new services include fingerprint matching, additional information files, and image files.

FIG. 2 is a diagram showing mobile, hand-held fingerprint scanner 102 in further detail according to one embodiment of the present invention. Fingerprint scanner electronics 110 includes a camera board 212 and a capture board 214. Camera board 212 includes a CMOS square pixel array. For example, a CMOS camera manufactured by Motorola Corporation can be used. Capture board 214 includes a memory for storing detected fingerprint images. Other circuitry and/or processing capability, such as, a frame grabber, analog/digital converter, and system controller can be provided as would be apparent to a person skilled in the art given this description. Such functionality can be provided all or in part, as desired, in the camera card 212, capture card 214, a stand-alone component, docking station 140 or host processor 150. In one example, image processing and finger print matching and recognition operations are carried out primarily in host processor 150. Processing operations related to detecting and storing a detected image signal are carried out in capture board 214.

Rechargeable power supply 120 includes voltage regulator circuit 222, at least one rechargeable battery 224, and charging circuit 226. Data and power interface 230 is a Universal Serial Bus (USB). Voltage regulator circuit 222 maintains a substantially constant output system voltage from rechargeable battery 224 during mobile use and while nested in docking station 140. In one preferred example, a relatively low system voltage of about 3 volts can be output to power a CMOS camera (compared to 12 volts for a charge-coupled-device (CCD))

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camera). Charging circuit 226 regulates the charging (i.e., the rate of charging) of a rechargeable battery 224 when fingerprint scanner 102 is receiving power through Universal Serial Bus 230. In one example, charging circuit 226 is connected to charge voltage regulator circuit 222 and rechargeable battery 224 with power from USB 230. Rechargeable battery 224 is coupled to voltage regulator circuit 222. Other configurations and arrangements can be used. Any known charging circuit and voltage regulator circuit can be used in accordance with this description as would be apparent to a person skilled in the art.

Example Mobile Hand-Held Fingerprint Scanner

FIGs. 3A and 3B are drawings of an example implementation of a mobile, hand-held fingerprint scanner (also called a live scan device) used in a law enforcement application according to the present invention. FIG. 3A shows two views (top view and a view from an angle) of an example fingerprint scanner 102 according to the present invention. Fingerprint scanner 102 can be used with a FBI Mobile Imaging Unit (MIU) software application in host processor 150 to support NCIC 2000 functions in mobile law enforcement vehicles. The MIU provides a user interface, supports various peripheral devices, and transmits information in NCIC 2000-defined formats. The mobile fingerprint live scan device 102 can operate as a peripheral to the MIU (or to a processor that performs MIU-equivalent functions).

Fingerprint scanner 102 captures single (right or left index) fingerprint images in the environment of a law enforcement vehicle (see FIG. 3B). Fingerprint scanner 102 communicates the fingerprint images to a mobile host processor 150 in the vehicle. Fingerprint scanner 102 does not compromise officer safety when used by a single officer working with an unknown subject in a remote location. Hence, its small size, light weight, and mobility in the vicinity of the patrol car are vital to law enforcement. The ability to provide electrical

power to fingerprint scanner 102 and support data transfer to the mobile host processor 150 without a tether is also highly desirable to law enforcement.

Further, fingerprint scanner 102 is sufficiently rugged for extended use in a mobile environment. The housing for fingerprint scanner 102 is a machined aluminum enclosure providing a rugged, durable device that can sustain the rigors of harsh temperature environments associated with portable/mobile use with mass handling.

Host processor 150 includes or is coupled through a wireless communication link to other system databases or services (such as NCIC 2000). A software interface which is TWAIN compliant is included for easy integration and Plug and Play (PnP) connectivity.

Fingerprint scanner 102 integrates optical system 105 and an internal processor in electronics 110 to make up a complete, self-contained unit. The optics provide forensic quality image capture that meets or exceeds most image matching requirements.

The hardware interface of the fingerprint scanner 102 utilizes an industry standard USB connection 230 in one example. USB interface 230 eliminates the need for costly digitizer boards, providing immediate return on investment.

Fingerprint scanner 102 is ergonomically designed to fit the hand naturally. The oblong, cylindrical shape (similar to a flashlight), does not contain sharp edges. The device is small enough to be gripped by large or small hands without awkward or unnatural movement. The device is comfortable to use without muscle strain on the operator or subject. In one example, fingerprint scanner 102 is 1.5 x 8.0 x 1.5 inches (height x length x width), weighs about 340 grams (12 oz.), and has an image platen size of about 1" x 1".

Fingerprint scanner 102 has controls and status indicators on the front-face of the unit for single (left or right) hand operation. The non-intimidating appearance of the fingerprint scanner 102 is designed to resemble a typical flashlight - a device that is not generally threatening to the public. Fingerprint

scanner 102 has no sharp edges and is constructed of a light-weight aluminum housing that is coated with a polymer to give the device a "rubberized" feel. Because fingerprint scanner 102 is small and lightweight, it may be carried on the officer's utility belt upon exiting a vehicle. The device is designed for one hand use, allowing the officer to have a free hand for protective actions. Fingerprint scanner 102 is designed for harsh environments to sustain issues such as dramatic temperature changes and non-intentional abuse.

Fingerprint scanner 102 exchanges data with the mobile host processor 150 via a docking station 140. The docking station 140 serves as a cradle that easily guides the fingerprint scanner 102 into position blindly, allowing the officer to focus on safety issues rather than the device operation. Docking station 140 is small and compact for easy placement in a tight space. Using a simple USB cable, the docking station 140 transmits data and charges the rechargeable battery 224 through a simple, single connection.

Fingerprint scanner 102 captures a single image and stores the captured image in any type of portable media (not shown). Such portable media for example can be memory integral to or coupled to receive output from camera board 212. Random-access memory (RAM) backed-up by rechargeable battery 224 is used in one embodiment of the present invention. Rechargeable battery 224 can be a Commercial Off The Shelf (COTS) Nickel Cadmium battery. The low-voltage battery (3.3 VDC) powers fingerprint scanner 102. Other types of memory (flash memory, non-volatile memory, floppy drives, disks, mini-floppy drives, etc.) can be used in alternative embodiments of the present invention.

In one embodiment of the present invention, a captured image of a fingerprint print is stored locally in memory in fingerprint scanner electronics 110. For example, the memory can store the print without having to transmit the print using expensive radio-frequency transmission. Captured images of prints can be stored in mini-floppy drives (such as the available from Sandisk Corp. or Intel Corp.). In this way, multiple prints can be stored locally. This is especially

important in border control and accident sight markets. A crime scene can also be better documented as prints of all people present can be captured. Such captured prints can then be distinguished from other latent images which are uncovered.

5 Fingerprint scanner 102 can meet the most strict NIST (ANSI-NIST CSL 1998) image requirements.

10 Fingerprint scanner 102 contains a simple push button and set of 3 LED's that provide user activation and status indication. The user need only press one button to activate the unit. Once activated, the fingerprint scanner 102 awaits a finger to be introduced to the fingerprint capture platen. The digital image (or analog) is automatically captured when an adequate image area is detected. The image is then tested for quality of data prior to notifying the operator with an indication (e.g., visual indication and/or audible tone) for acceptance. The detected image is scalable to conform to FBI provided software (cropped or padded to 512 pixels by 512 pixels), although the standard image size is 1" X 1", 15 500 dpi, 256 levels of gray-scale (ANSI-NIST).

20 The digital fingerprint image output is stored in raw data format within memory (preferably a memory in fingerprint scanner 102). The raw data is then sent via the USB interface to host processor 150. Host processor 150 reformats the raw data into any desired or required image format. Scanner 102 can also store information that identifies the format of the raw data. Host processor 150 can then receive this information to determine what reformatting (e.g. cropping and/or padding), if any, is needed. For example, the raw data can be stored ins canner 102 in a 504 x 480 pixel image format. Host processor 150 can then 25 reformat the 504 x 480 pixel format to a 512 x 512 image format or any other desired format.

 In an example environment, fingerprint scanner 102 can meet the following criteria:

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* A WINDOWS operating system environment and FBI-provided fingerprint image processing algorithms are used in NCIC 2000 fingerprint transactions;

* Fingerprint image sampling rate: 500 pixels per inch

* Size at input to FBI-provided Software: Cropped or padded to 512 pixels by 512 pixels

* Software interface from live scan device to MIU: TWAIN

* Image Quality: Electronic Fingerprint Transmission Specification, FBI Criminal Justice Information Services

1) Appendix F, IAFIS Image Quality Specification Section 2 Fingerprint Scanners and

2) Appendix G, Interim IAFIS Image Quality Specification for Scanners; MIU Processing: FBI-provided fingerprint image processing in mobile computer.

Fingerprint scanner 102 is held in either hand and used to capture a person's fingerprint. The fingerprint is captured from a cooperative individual (frontal approach) or an uncooperative individual (handcuffed subject - most commonly face down). Fingerprint scanner 102 can be operated with one-hand, allowing the officer to have a hand ready for protective actions. The officer need not have fingerprinting knowledge to capture the fingerprint.

The fingerprint capture process is simple as pressing a button and applying the subject's finger. The fingerprint is automatically captured and a quality check is performed immediately. The unit emits a tone to indicate a completed process. The officer may introduce the unit to the docking station blindly, maintaining his eyes on the subject for safety. Once seated in the docking station, the fingerprint is automatically transferred to the mobile computer without operator intervention. The unit's batteries are charged while within the docking station and ready for the next operation.

Thus, the present invention provides a mobile, hand-held fingerprint scanner that is recharged by a powered data communication interface. Data and recharging power is carried over the same interface. A separate plug for power

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is not needed. The fingerprint scanner can then be inserted quickly and easily in a docking station, as only a single data and power communication interface need be coupled. This is particularly advantageous in law enforcement applications where mobile use is important and safety can be compromised if a mobile scanner does not couple to a docking station quickly and easily.

5

Conclusion

While various embodiments of the present invention have been described above, it should be understood that they have been presented by way of example only, and not limitation. It will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the spirit and scope of the invention as defined in the appended claims. Thus, the breadth and scope of the present invention should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims and their equivalents.

10

15

What Is Claimed Is:

1. A mobile, hand-held fingerprint scanner, comprising:
an interface charged rechargeable power supply that powers the
fingerprint scanner during mobile use; and

5 a data and power communication interface that couples data
between the fingerprint scanner and a docking station, and that provides power to
charge said interface charged rechargeable power supply; whereby, a dedicated
plug for recharging a power supply separate from a data interface can be avoided.

10 2. The mobile, hand-held fingerprint scanner of claim 1, wherein said
interface charged rechargeable power supply includes at least one rechargeable
battery.

15 3. The mobile, hand-held fingerprint scanner of claim 2, wherein said
interface charged rechargeable power supply includes a charging circuit that
regulates the charging of said at least one rechargeable battery when the
fingerprint scanner is receiving power through the powered interface.

4. The mobile, hand-held fingerprint scanner of claim 3, wherein said
charging circuit regulates the rate of charging of said at least one rechargeable
battery.

20 5. The mobile, hand-held fingerprint scanner of claim 2, wherein said
interface charged rechargeable power supply includes a voltage regulator circuit
that maintains a substantially constant output system voltage from the
rechargeable battery during mobile use.

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6. The mobile, hand-held fingerprint scanner of claim 2, wherein said powered interface comprises a universal serial bus (USB).

7. The mobile, hand-held fingerprint scanner of claim 2, wherein said powered interface comprises an IEEE1394 compatible interface.

5 8. The mobile, hand-held fingerprint scanner of claim 3, wherein said charging circuit regulates the rate of charging of said at least one rechargeable battery.

9. The mobile, hand-held fingerprint scanner of claim 2, wherein said at least one rechargeable battery comprises at least one nickel cadmium battery.

10 10. A method for charging a mobile fingerprint scanner comprising the step of:

charging a rechargeable power supply in the mobile fingerprint scanner with power carried over a data and communication interface.

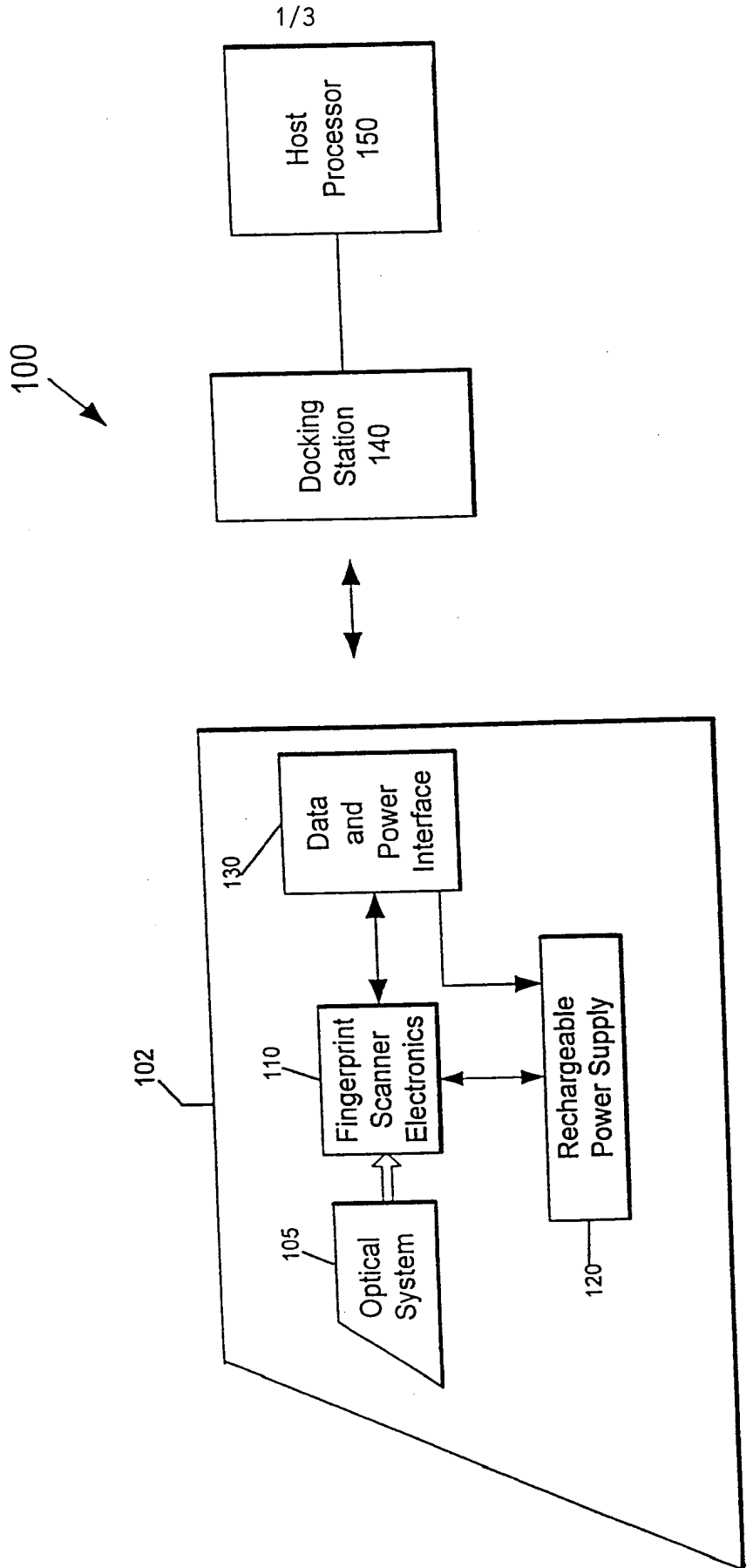


FIG. 1

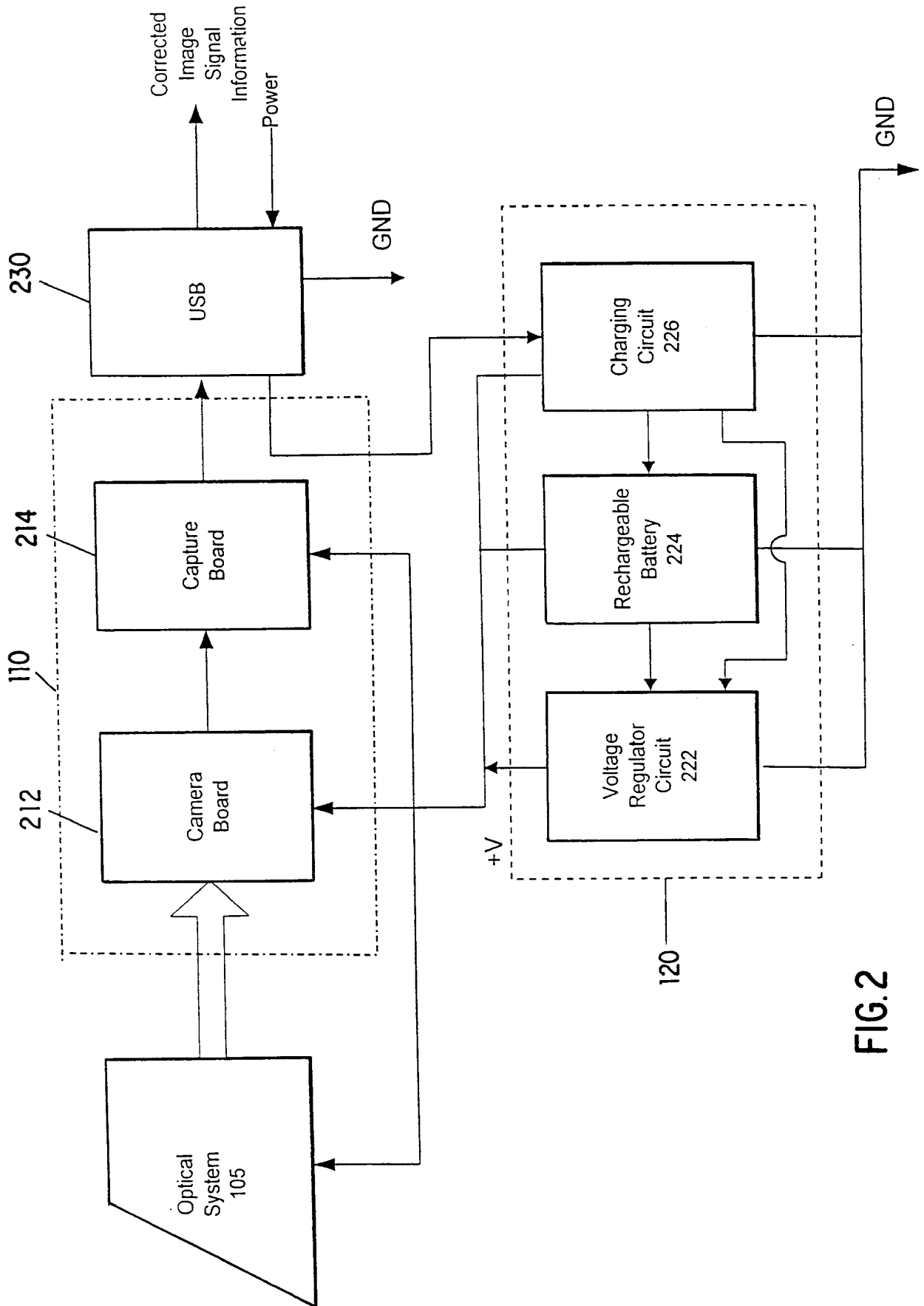
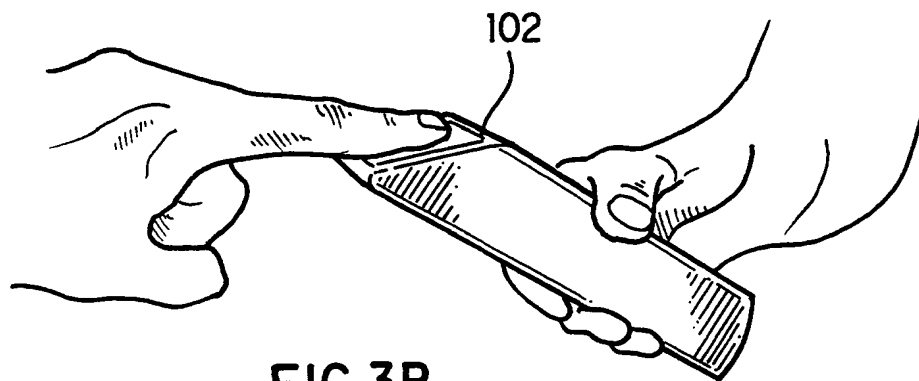
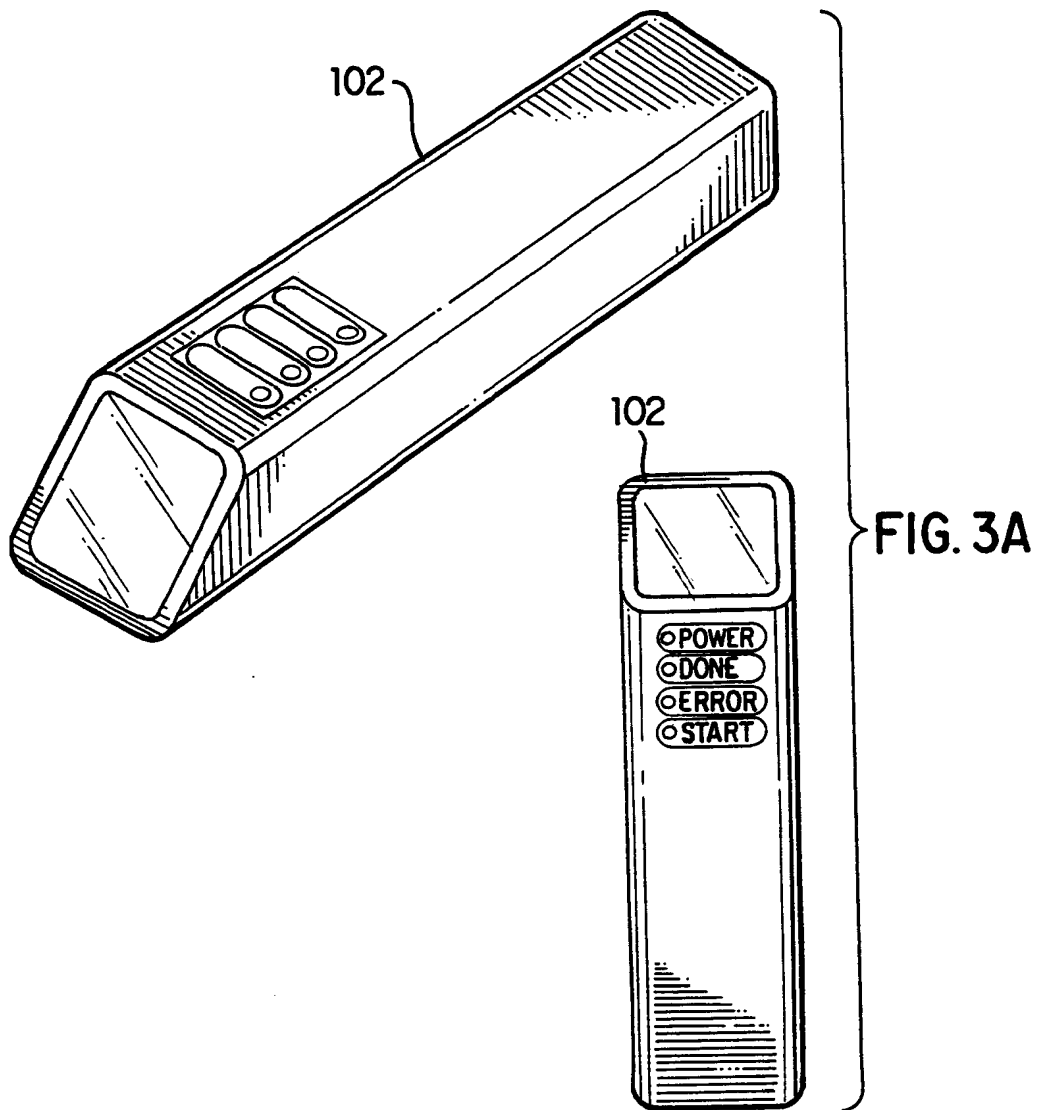


FIG. 2



2 . **STATEMENT CONCERNING NON-PREJUDICIAL DISCLOSURES OR EXCEPTIONS TO LACK OF NOVELTY**

Due to a possible disclosure by the inventors on or after October 1, 1998, the applicant respectfully requests that the subject International application be granted the respective provisions under National laws concerning Exceptions to Lack of Novelty in each of the designated countries. This is not an admission that the subject invention lacks novelty or inventive step over this disclosure. Exception to Lack of Novelty is hereby requested for purposes of disclosure and precautionary measures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/22709

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06K9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

INSPEC, WPI Data, IBM-TDB, PAJ, EPO-Internal, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2 313 441 A (MOTOROLA ISRAEL LTD) 26 November 1997 (1997-11-26) abstract	1-10
Y	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 14, 31 December 1998 (1998-12-31) & JP 10 262071 A (FUJI PHOTO FILM CO LTD), 29 September 1998 (1998-09-29) abstract	1-10

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search 10 July 2000	Date of mailing of the international search report 20/07/2000
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Granger, B Petitioners Ex. 1002

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/22709

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	<p>SLUIJS F ET AL: "An on-chip USB-powered three-phase up/down DC/DC converter in a standard 3.3 V CMOS process" 2000 IEEE INTERNATIONAL SOLID-STATE CIRCUITS CONFERENCE. DIGEST OF TECHNICAL PAPERS (CAT. NO.00CH37056), 2000 IEEE INTERNATIONAL SOLID-STATE CIRCUITS CONFERENCE. DIGEST OF TECHNICAL PAPERS, SAN FRANCISCO, CA, USA, 7-9 FEB. 2000, pages 440-441, XP000923437 2000, Piscataway, NJ, USA, IEEE, USA ISBN: 0-7803-5853-8 the whole document</p> <p style="text-align: center;">----</p>	1-10
P, X	<p>PATENT ABSTRACTS OF JAPAN vol. 1999, no. 14, 22 December 1999 (1999-12-22) & JP 11 252489 A (MINOLTA CO LTD), 17 September 1999 (1999-09-17) abstract</p> <p style="text-align: center;">-----</p>	1-10

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/22709

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2313441 A	26-11-1997	NONE	
JP 10262071 A	29-09-1998	NONE	
JP 11252489 A	17-09-1999	NONE	

Petitioners Ex. 1002

IPR USP 7,834,586

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(74) Representative: Körber, Martin, Dipl.-Phys. et al
Mitscherlich & Partner
Patentanwälte
Sonnenstrasse 33
80331 München (DE)

(71) Applicant: Sony International (Europe) GmbH
10785 Berlin (DE)

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(Article 93 (2) EPC). Claim number 7 is missing.

(72) Inventor: Tong, Zhao, c/o Digital Telecom. Europe
85609 Aschheim (DE)

(54) Charging circuit for charging a mobile terminal through an USB interface

(57) The present invention relates to a charging circuit (1) for charging a mobile terminal (2) of a wireless telecommunication system through a USB interface of a computer (3), with first connection means (4) for connection with the USB interface of a computer (3), second connection means (5) for connection with a mobile terminal (2) to be charged, and adaptation means (6; 7; 8)

for adapting power received from the USB interface to the power requirements of a mobile terminal to be charged. The present invention further relates to a mobile terminal (2) adapted to be connected and charged by such a charging circuit (1). The present invention enables charging of a mobile terminal through a USB interface of a computer in a simple and flexible way.

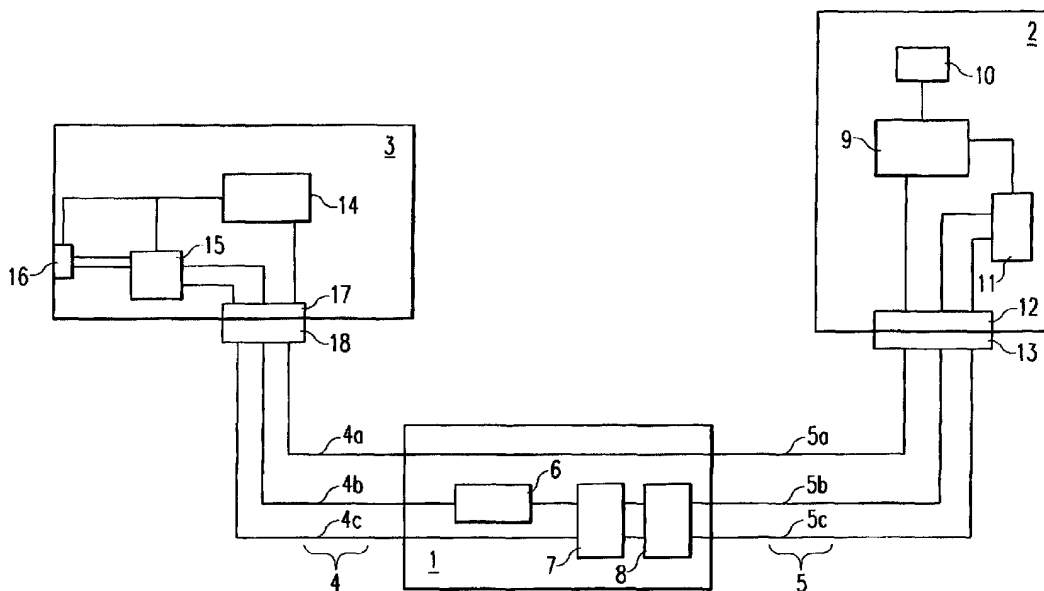


Fig. 1

Description

[0001] The present invention relates to a charging circuit for charging a mobile terminal of a wireless telecommunication system through a USB interface of a computer and to a mobile terminal for a wireless telecommunication system adapted to be connected to and charged by such a charging circuit.

[0002] Charging circuits for charging batteries or accumulators of mobile terminals are known in the art. For example, US 5,870,615 discloses a specially designed PCMCIA card comprising a charging circuit for charging the battery of a cellular phone and an adapter cable having a battery characteristic encoder integrated at one end. However, a PCMCIA card can only be used with portable computers, such as laptops, notebooks or the like so that the proposed way of charging a mobile terminal is limited to these applications.

[0003] The object of the present invention is therefore to propose a charging circuit for charging a mobile terminal of a wireless telecommunication system and a mobile terminal adapted to be connected to and charged by such a charging circuit, which can be used with different kinds of computers in a simple and effective way.

[0004] The above object is achieved by a charging circuit for charging a mobile terminal of a wireless telecommunication system through a USB interface of a computer, with first connection means for a connection with the USB interface of a computer, second connection means for a connection with a mobile terminal to be charged, and adaptation means for adapting power received from said USB interface to the power requirements of a mobile terminal to be charged.

[0005] Most of the available computers, such as PCs, laptops, notebooks and the like, are equipped with a USB interface (universal serial bus interface) for connection with other devices. The USB interface is realised with a standardised USB port in the computers, to which a corresponding USB plug from a USB data cable is connected. The USB interface comprises four lines, namely two data lines, one power line and one ground line. The charging circuit according to the present invention therefore presents a very flexible and universally usable way of charging a mobile terminal of a wireless telecommunication system. Particularly, the charging circuit according to the present invention has the advantage that a mobile terminal for a wireless telecommunication system can be charged at any place of the world with only a single charging circuit. Normal charging cables for mobile terminals are only adapted to the specific power supply system used in the respective country. A USB interface, however, is an internationally used and standardised way of connecting devices to computers.

[0006] Advantageously, the adaptation means of the charging circuit according to the present invention comprises a current limiter to limit the current received from the USB interface to a maximum charging current of the mobile terminal. The current limiter is advantageous in

respect of protection against TDMA bursts and other kinds of bursts used in the mobile terminal for the wireless transmission of data. Further advantageously, the adaptation means comprises a short circuit protection means for protecting the mobile terminal and/or the computer against short circuits. Further advantageously, the adaptation means comprises a voltage regulator for regulating the voltage received from the USB interface to the charging requirements of the mobile terminal.

The voltage regulator is particularly advantageous for stabilising the voltage supplied to the mobile terminal.

[0007] It has to be understood, that in the present application, the expression charging a mobile terminal means charging of the battery or the accumulator of a mobile terminal.

[0008] Further advantageously, the first connection means is a USB cable for connection with a USB port of the computer and the second connection means is a mobile terminal cable for connection with a corresponding data input/output and charge port of the mobile terminal. Here, the charging circuit according to the present invention is an independent device with respective cables for the connection with the computer and the mobile terminal. Alternatively, the charging circuit according to the present invention can be built in the mobile terminal or the computer to that an integrated solution is realised. In further alternative solutions, the charging circuit according to the present invention could have a USB port as the first connection means and/or a respective mobile terminal cable port as the second connection means. Here, standardised cables and plugs could be used as the cable connections between the computer as a charging circuit and the charging circuit and the mobile terminal. A further advantage of this solution is that the charging circuit according to the present invention could be used with different kinds of mobile terminals having different kinds of data input/output and charge ports for the connection with the charging circuit.

[0009] Further, the charging circuit according to the present invention advantageously comprises a data line for transmitting power supply status information from the computer to the mobile terminal. The charging circuit according to the present invention as described above does not necessarily need to enable a data transfer between the computer and the mobile terminal and the conversion and adaptation of power received from the computer to the power requirements for charging the mobile terminal is generally sufficient for the purpose of the present invention. However, the communication of data between the computer and the mobile terminal is necessary for embodiments in which the charging of the mobile terminal is controlled in dependence of the status of the power supply of the computer.

[0010] The above object is further achieved by a mobile terminal for a wireless telecommunication system according to claim 8, which comprises a battery providing power supply, connection means adapted to be con-

nected to a charging circuit of the above described kind, and control means for controlling the charging of the battery from a USB interface of a computer.

[0011] The battery of the mobile terminal according to the present invention which is to be charged by the charging circuit as above described, is for example part of a removable battery pack or accumulator of the mobile terminal. The connection means of the mobile terminal adapted to be connected to the inventive charging circuit is for example a data input/output and charge port of the mobile terminal, which serves also for other purposes, such as connecting a hands free kit or the like. The control means for controlling the charging of the battery is for example the central control microchip or microprocessor of the mobile terminal responsible for controlling the common functionalities. The wireless telecommunication system, in which the mobile terminal according to the present invention operates, can for example be the GSM and/or the UMTS and/or any other wireless telecommunication system.

[0012] Advantageously, the control means of the mobile terminal detects the charge level of the battery and controls the charging of the battery from a USB interface through a connected charging circuit on the basis of the detected charge level. Hereby, the control means advantageously charges the battery if the detected charge level is below a pre-set value. This value can for example be about 5% of the entire battery capacity. In this example of the mobile terminal according to the present invention, charging of the battery is performed only on the basis of the charge level of the battery and no further other information is used. Thus, the charging circuit can be reduced to the pure power conversion and adaptation function in order to deliver the specific voltage and current to the mobile terminal. The charging process is only controlled by the mobile terminal itself and not by the computer or the user. Alternatively, the charging circuit can, additionally to the power lines, comprise data lines for communicating data between the computer and the mobile terminal. In this way, the mobile terminal can be charged via the USB interface, while at the same time the data communication, for example for downloading or uploading data from and to the computer, can be performed.

[0013] In a further alternative example of the mobile terminal according to the present invention, the control means is adapted to receive a power supply status information of a computer through a connected charging circuit and controls the charging of the battery from a USB interface of the computer through the connected charging circuit on the basis of the received power supply status information. Here, charging of the battery of the mobile terminal is performed only if the received power supply status information indicates that the power supply status of the computer allows charging of the battery of the mobile terminal. Advantageously, the control means charges the battery if the received power supply status information indicates that the computer is con-

nected to and powered by an external power supply. In this case, the battery of the mobile terminal is thus charged through the external power supply of the computer in any case in which the battery of the mobile terminal is not fully charged. Further advantageously, the control means is adapted to detect the charge level of the battery and charges the battery if the received power supply status information indicates that the computer is powered by an internal power supply and that the detected charge level is below a pre-set value. The pre-set value is advantageously about 5% of the entire battery capacity. Here, in order to save power for the computer, the battery is only charged if its charge level is so low that there is a risk that the mobile terminal cannot be further operated due to a lack of power. The last case is particularly applicable to mobile computers, such as laptops, notebooks and the like, which have an internal power supply in form of a detachable battery pack, an accumulator or the like. Here it is very important that the power resources of the computer as well as the mobile terminal are carefully controlled to ensure proper operation.

[0014] It is to be noted that in the example of the mobile terminal controlling the charging of its battery on the basis of a power supply status information received from the computer, the computer needs an appropriate driver software which detects the power status of the computer and transmits a corresponding information via the USB interface to the mobile terminal. Hereby, the data line of the charging circuit according to the present invention used for the transmission of the power supply status information between the computer and the mobile terminal can also be used for the communication of download/upload data and the like.

[0015] In the following description, the present invention is explained in more detail in relation to the enclosed only Figure 1, which shows a schematic block diagram of a charging circuit and a mobile terminal according to the present invention being connected to a computer.

[0016] Particularly, Fig. 1 shows a block diagram of a charging circuit 1 according to the present invention for charging a mobile terminal 2 of a wireless telecommunication system through a USB interface of a computer 3. Fig. 1 thereby shows an embodiment in which the charging circuit 1 comprises a connection cable 4 connected to the computer 3 and a connection cable 5 connected to the mobile terminal 2. In another embodiment of the charging circuit 1 according to the present invention, the connection cables 4 and 5 can be separate devices to be detachably connected to the charging circuit 1.

[0017] The connection cable 5 connecting the charging circuit 1 and the computer 3 is a USB data cable (universal serial bus data cable), which comprises at least one data line 4a, one power line 4b and one ground line 4c. The power line 4b is considered for powering USB devices and delivers usually $5V \pm 5\%$ voltage and 500mA/100mA current so that the charging specifica-

tions of most mobile terminals for wireless telecommunication systems, such as the UMTS and/or the GSM system, are met.

[0018] The charging circuit 1 comprises adaptation means for adapting the power received from the USB interface of the computer 3 to the power requirements of the mobile terminal 2 to be charged. The adaptation means hereby comprise a current limiter 6 to limit the current in the power line 4b to the maximum charging current of the mobile terminal 2. The adaptation means further comprise a short circuit protection means 7 for protecting the mobile terminal 2 and/or the computer 3 against short circuits. The voltage received from the USB interface is regulated by a voltage regulator 8 to meet the charging requirements of the mobile terminal 2.

[0019] The connection cable 5 between the charging circuit 1 and the mobile terminal 2 comprises at least one data line 5a which is connected to the data line 4a of the connection cable 4 so that data are communicated between the computer 3 and the mobile terminal 2 via the data line 4a and the data line 5a. The connection cable 5 comprises a connector plug 13 for connection with a input/output and charge board 12 of the mobile terminal 2. Hereby, the power line 5b and the ground line 5c are connected to a battery 11 of the mobile terminal 2. The battery 11 can be an integral battery or a removable battery/accumulator. Further, the data line 5a is herewith connected to a control means 9 of the mobile terminal 2, which is connected to a memory means 10 for storing data and/or software application programs. The control means 9 controls the charging of the battery 11 from the USB interface of the computer 3 through the charging circuit 1.

[0020] The USB interface of the computer 3 is realised in a USB port 17, to which a USB plug 18 of the connection cable 4 of the charging circuit 1 is connected. Hereby, the power line 4b and the ground line 4c are connected to either an internal battery/accumulator 15 of the computer means 3 or to an external power supply socket 16, to which an external power source for the computer 3 can be connected. Thus, the battery 11 of the mobile terminal 2 is either charged from the internal battery/accumulator 15 of the computer 3 or an external power supply connected to the external power supply socket 16 of the computer 3.

[0021] The control means 9 of the mobile terminal 2 can control the charging process of the battery 11 in two ways. The first way is that the charging process is exclusively controlled by the control means 9, which, after detection that the mobile terminal 2 is connected to a USB interface of a computer 3 and that the battery level of the battery 11 is below a pre-set value starts to charge the battery 11. The charging circuit 1 will then deliver the specific voltage and current through the power lines 4b, 5b and the ground lines 4c, 5c to the battery 11. The current limiter and the voltage regulator are thereby set to the specific power requirements of the battery 11. In

case that the charging circuit 1 is to be used with different kinds of mobile terminals 2, the necessary current and voltage values could for example be externally set by a user through a corresponding input means to the charging circuit 1. The power control software for controlling the charging of the battery is implemented in the memory 10 of the mobile terminal 2 and used by the control means 9 for detecting if the mobile terminal 2 is connected to an USB interface of a computer 3, to detect the charge level of the battery 11 and to control the charging process correspondingly. The pre-set value, from which charging of the battery 11 starts, can for example be 5% of the entire battery capacity. The control means 9 is for example a microchip or a microprocessor of the mobile terminal 2 which also controls other important functions of the mobile terminal.

[0022] In a second way of controlling the charging process of the battery 11 of the mobile terminal 2, the control means 9 receives a power supply status information of the computer 3 through the data lines 4a and 5a and controls the charging of the battery on the basis of the received power supply information. The power supply status information received from the computer 3 indicates if the computer 3 is connected to an internal battery/accumulator 15 or to an external power supply via the external power supply socket 16. The power supply status information is thereby detected in the computer 3 by a control means 14 and supplied via the data line 4a and the data line 5a to the control means 9 of the mobile terminal 2. In case that the received power supply status information indicates that the computer 3 is connected to an external power supply, the control means 9 charges the battery 11 independent of its charge level. If, on the other hand, the power control status information indicates that the computer 3 is only connected to and powered by an internal power supply, such as the battery/accumulator 15, the control means 9 detects the charge level of the battery 11 and only starts charging of the battery 11 via the charging circuit 1 if the charge level is below a pre-set value, as for example 5% of the entire battery capacity. Here, the control means 14 of the computer 3 may for example use the Microsoft Power Manager and a further special software application, as for example a USB data cable driver, to detect the power supply status of the computer 3 and supply a corresponding power status information to a connected mobile terminal 2. Each time a USB cable, as for example a connection cable 4 of the charging circuit 1 is connected to the USB port 17 of the computer 3, the USB data cable driver will start automatically and activate the Microsoft Power Manager to get the status of the power supply of the computer 3. After the USB cable is disconnected, the USB data cable driver will be automatically closed. Thus, no further special applications or software is needed on the computer 3 and the charging circuit 1 can be used as a so-called plug and play device. Further, the USB data cable driver only runs when a USB data cable is connected to the USB port

17, instead running the whole time in the background. Hereby, computer resources are saved. The USB data cable driver could also protect itself at questring and sending power supply information to a mobile terminal 2 by other drivers of other manufacturers.

[0023] The present invention is particularly advantageous, since the battery 11 of the mobile terminal 2 can be charged while the user works on the basis of the data connection between the mobile terminal 2 and the computer 3, for example while down- or uploading data or the like.

Claims

1. Charging circuit (1) for charging a mobile terminal (2) of a wireless telecommunication system through a USB interface of a computer (3), with first connection means (4) for connection with the USB interface of a computer (3), second connection means (5) for connection with a mobile terminal (2) to be charged, and

adaptation means (6, 7, 8) for adapting power received from said USB interface to the power requirements of a mobile terminal to be charged.

2. Charging circuit (1) according to claim 1, **characterized in, that** said adaptation means comprises a current limiter (6) to limit the current received from the USB interface to a maximum charging current of the mobile terminal (2).

3. Charging circuit (1) according to claim 1 or 2, **characterized in, that** said adaptation means comprises a short circuit protection means (7) for protecting the mobile terminal (2) and/or the computer (3) against short circuits.

4. Charging circuit (1) according to claim 1, 2 or 3, **characterized in, that** said adaptation means comprises a voltage regulator (8) for regulating the voltage received from the USB interface to the charging requirements of the mobile terminal (2).

5. Charging circuit (1) according to one of the claims 1 to 4, **characterized in, that** said first connection means (4) is a USB cable for connection with a USB port (17) of the computer and said second connection means (5) is a mobile terminal cable for connection with a corresponding data input/output and charge port (12) of the mobile terminal (2).

6. Charging circuit (1) according to one of the claims

1 to 5,

characterized by

a data line (4a, 5a) for transmitting power supply status information from the computer (3) to the mobile terminal (2).

8. Mobile terminal (2) for a wireless telecommunication system, comprising

a battery (11) providing power supply, connection means (12) adapted to be connected to a charging circuit (1) according to one of the claims 1 to 6, and control means (9) for controlling the charging of the battery (11) from a USB interface of a computer (3).

9. Mobile terminal (2) according to claim 8, **characterized in, that** the control means (9) detects the charge level of the battery (11) and controls the charging of the battery (11) from a USB interface through a connected charging circuit (1) on the basis of the detected charge level.

10. Mobile terminal (2) according to claim 9, **characterized in, that** the control means (9) charges said battery (11) if the detected charge level is below a preset value.

11. Mobile terminal (2) according to claim 10, **characterized in, that** the control means (9) charges said battery if the detected charge level is below about 5% of the entire battery capacity.

12. Mobile terminal (2) according to claim 8, **characterized in, that** the control means (9) is adapted to receive a power supply status information of a computer (3) through a connected charging circuit (1) and controls the charging of the battery from a USB interface of the computer (3) through the connected charging circuit (1) on the basis of the received power supply status information.

13. Mobile terminal (2) according to claim 12, **characterized in, that** the control means (9) charges said battery if the received power supply status information indicates that the computer (3) is connected to an external power supply.

14. Mobile terminal (2) according to claim 12 or 13, **characterized in, that** the control means (9) is adapted to detect the charge level of said battery and charges said battery if the received power supply status information

indicates that the computer (3) is powered by an internal power supply and that the detected charge level is below a preset value.

15. Mobile terminal (2) according to claim 14, **characterized in, that** the preset value is about 5% of the entire battery capacity.

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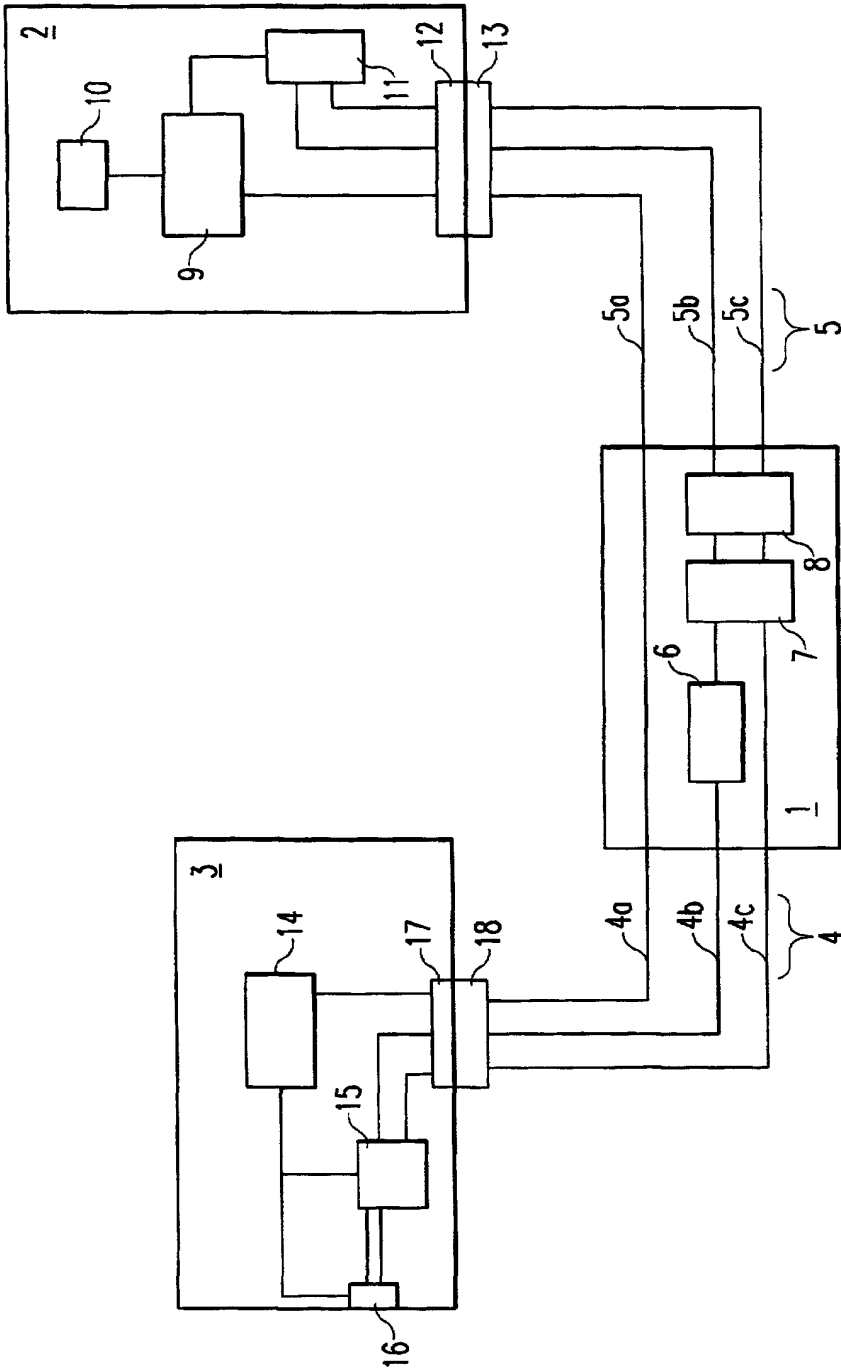


Fig. 1



European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 12 2142

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	DE 200 04 691 U (YANG WEN CHIN) 29 June 2000 (2000-06-29) * page 1, paragraph 3 - paragraph 4 *	1,3-5, 8-10	H02J7/00
Y	* page 4, line 28 - line 30 *	6,12	
Y	--- PATENT ABSTRACTS OF JAPAN vol. 1998, no. 12, 31 October 1998 (1998-10-31) & JP 10 201127 A (NEC CORP), 31 July 1998 (1998-07-31) * abstract *	6,12	
A	--- PATENT ABSTRACTS OF JAPAN vol. 2000, no. 09, 13 October 2000 (2000-10-13) & JP 2000 165513 A (KYOCERA CORP), 16 June 2000 (2000-06-16) * abstract *	6,12-14	
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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		13 March 2001	Moyle, J
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		& : member of the same patent family, corresponding document	

EPO FORM 1503 (3.8.02) (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 12 2142

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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13-03-2001

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JP 2000139032 A	16-05-2000	NONE	

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	System and Method for Charging a Battery in a Mobile Device
First Named Inventor/Applicant Name:	Daniel M. Fischer
Filer:	J. Robert Brown/Karen Harris
Attorney Docket Number:	10254-US-CNT4 4214-01509

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility application filing	1011	1	330	330
Utility Search Fee	1111	1	540	540
Utility Examination Fee	1311	1	220	220

Pages:

Claims:

Independent claims in excess of 3	1201	1	220	220
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Miscellaneous-Filing:

Petition:

Petitioners Ex. 1002

IPR USP 7,834,586

Page 46 of 295

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD (\$)	1310

Electronic Acknowledgement Receipt

EFS ID:	7101776
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	System and Method for Charging a Battery in a Mobile Device
First Named Inventor/Applicant Name:	Daniel M. Fischer
Customer Number:	30652
Filer:	J. Robert Brown/Karen Harris
Filer Authorized By:	J. Robert Brown
Attorney Docket Number:	10254-US-CNT4 4214-01509
Receipt Date:	26-FEB-2010
Filing Date:	
Time Stamp:	18:14:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

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Payment Type	Deposit Account
Payment was successfully received in RAM	\$1310
RAM confirmation Number	5472
Deposit Account	501515
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Petitioners Ex. 1002
IPR USP 7,834,586

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		4214-01509_Specification.pdf	746959 51ff9042401bee61e2db2ad69d9ae5e8f9391975	yes	29
Multipart Description/PDF files in .zip description					
	Document Description		Start		End
	Specification		1		23
	Claims		24		28
	Abstract		29		29
Warnings:					
Information:					
2	Drawings-only black and white line drawings	4214-01509_Drawings.pdf	74324 5853ceea3465968e5d8e14a8b8276407de484d7f1	no	4
Warnings:					
Information:					
3	Oath or Declaration filed	4214-01509_Declaration.pdf	232778 9402ccc43f415535f4b0192b16401748e97ebb78d	no	8
Warnings:					
Information:					
4	Application Data Sheet	4214-01509_ApplicationDataSheet.pdf	1554444 3e298b744c17702e739b7d9c3b84561fed4a2ff0	no	6
Warnings:					
Information:					
5	Information Disclosure Statement (IDS) Filed (SB/08)	4214-01509_InformationDisclosureStatement.pdf	1017596 49f7ec1cfad6180b4d0e63bf0bb28c02f6c6cd7a	no	7
Warnings:					
Information:					
6	Foreign Reference	EP684680.pdf	46100 dacd3474d3518e84fb5c903c3d62194ebf839174	no	7
Warnings:					

Information:					
7	Foreign Reference	WO200101330.pdf	802574 185b2119f4bccc5f4e7ddb0708d50ecd966996c	no	22
Warnings:					
Information:					
8	Foreign Reference	EP1198049.pdf	160110 cbd5d2d756b7ec06711c66d04e029d1c83898305	no	9
Warnings:					
Information:					
9	NPL Documents	ElectricDoublelayerCapacitors.PDF	1323773 c63a129fec98d53fe3059430577f851013d30f77	no	40
Warnings:					
Information:					
10	NPL Documents	Supercapacitor.PDF	2441473 5f5717dfe68d500a0562b8f9bd3237dc61325b09	no	47
Warnings:					
Information:					
11	NPL Documents	ChargingBigSupercaps.PDF	66023 c121ce72d87d39e84e21dd39331981d7362f7c71	no	1
Warnings:					
Information:					
12	Fee Worksheet (PTO-875)	fee-info.pdf	36213 c7b054e8c28512411c3c98626d97e567404b2404	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			8502367		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

System and Method for Charging a Battery in a Mobile Device

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This is a continuation application of U.S. Patent Application No. 12/268,297 filed November 10, 2008 by Daniel M. Fischer, et al. and entitled "System and Method for Charging a Battery in a Mobile Device", which claims priority from U.S. Patent No. 7,453,233 issued on November 18, 2008 by Daniel M. Fischer, et al. and entitled "Multifunction Charger System and Method", which claims priority from U.S. Patent No. 7,239,111 issued on July 3, 2007, by Daniel M. Fischer, et al. and entitled "Universal Serial Bus Adapter for a Mobile Device", which claims priority from U.S. Patent No. 6,936,936 issued on August 30, 2005, by Daniel M. Fischer, et al. and entitled "Multifunctional Charger System and Method", which claims priority from U.S. Provisional Application No. 60/273,021 filed March 1, 2001, by Daniel M. Fischer, et al. and entitled "System and Method for Adapting a USB to Provide Power for Charging a Mobile Device" and U.S. Provisional Application No. 60/330,486 filed October 23, 2001, by Daniel M. Fischer, et al. and entitled "Multifunctional Charger System and Method" and all incorporated herein by reference for all purposes.

BACKGROUND

[0002] This invention relates generally to power adapters. More particularly, the invention relates to power adapters for use with mobile devices.

[0003] Providing an external source of power to a mobile device, such as a personal digital assistants ("PDA"), mobile communication device, cellular phone, wireless two-way e-mail communication device, and others, requires design considerations with

respect to both the mobile device and the power source. With regard to the mobile device, most mobile devices provide a distinct power interface for receiving power from a power source, for instance to recharge a battery, and a separate data interface for communicating. For example, many mobile devices presently use USB (Universal Serial Bus) interfaces for communicating and use a separate power interface, such as a barrel connector, for receiving power.

[0004] It is desirable, however, to have a combined power and data interface. The mobile devices that do have combined power and data interfaces typically use non-standard and sometimes proprietary interfaces. Consequently, combined interfaces for a particular manufacturer's mobile device may not be compatible with combined interfaces for mobile devices provided by other manufacturers.

[0005] Although the USB interface can be used as a power interface, the USB is typically not used for that purpose by mobile devices. In accordance with the USB specification, typical USB power source devices, such as hubs and hosts, require that a USB device participate in a host-initiated process called enumeration in order to be compliant with the current USB specification in drawing power from the USB interface. Although a mobile device could be adapted to participate in enumeration when drawing power over the USB interface, it would be preferable in many situations, such as when a host would not be available, as often happens during normal use of a mobile device, to be able to utilize alternate power sources such as conventional AC outlets and DC car sockets that are not capable of participating in enumeration to supply power to the mobile device via a USB interface.

SUMMARY

[0006] An adapter for providing a source of power to a mobile device through an industry standard port is provided. In accordance with one aspect of the invention, the adapter comprises a plug unit, a power converter, a primary connector, and an identification subsystem. The plug unit is operative to couple the adapter to a power socket and operative to receive energy from the power socket. The power converter is electrically coupled to the plug unit and is operable to regulate the received energy from the power socket and to output a power requirement to the mobile device. The primary connector is electrically coupled to the power converter and is operative to couple to the mobile device and to deliver the outputted power requirement to the mobile device. The identification subsystem is electrically coupled to the primary connector and is operative to provide an identification signal.

[0007] In accordance with another aspect, a USB adapter for providing a source of power to a mobile device through a USB port is provided. The USB adapter comprises a plug unit, a power converter, a primary USB connector, and an identification subsystem. The plug unit is operative to couple the USB adapter to a power socket and operative to receive energy from the power socket. The power converter is electrically coupled to the plug unit and is operable to regulate the received energy from the power socket and to output a power requirement to the mobile device. The primary USB connector is electrically coupled to the power converter and is operative to couple to the mobile device and to deliver the outputted power requirement to the mobile device. The identification subsystem is electrically coupled to the primary connector and is operative to provide an identification signal.

[0008] Another aspect provides a USB adapter for providing a source of power to a mobile device through a USB port. The USB adapter comprises a plug unit, a power converter, a primary USB connector, and an auxiliary USB adapter. The plug unit is operative to couple the USB adapter to a power socket and operative to receive energy from the power socket. The power converter is electrically coupled to the plug unit and is operable to regulate the received energy from the power socket and to output a power requirement to the mobile device. The primary USB connector is electrically coupled to the power converter and is operative to couple to the mobile device and to deliver the outputted power requirement to the mobile device. The auxiliary USB connector has data lines that are electrically coupled to the data lines of the primary USB connector.

[0009] Yet another aspect provides a method for providing energy to a mobile device using a USB adapter that comprises a plug unit, a primary USB connector, a power converter electrically coupled between the plug unit and the primary USB connector, and an identification subsystem electrically coupled to the primary USB connector. The method comprising the steps of coupling the USB connector to the mobile device, coupling the plug unit to a power socket, outputting a power requirement to the mobile device via the power converter and the USB connector, and providing an identification signal to the mobile device, via the identification subsystem and the USB connector, that is operative to inform the mobile device that the USB adapter is not limited by the power limits imposed by the USB specification.

[0010] In accordance with another aspect, a powering system for a mobile device having a USB connector is provided. The powering system comprises a power distribution subsystem in the mobile device that is operable to receive energy through

the USB connector and to distribute the energy to at least one component in the mobile device and a USB adapter that is operative to couple to the USB connector. The USB adapter comprises a plug unit for coupling to a power socket and that is operable to receive energy from the power socket, a power converter electrically coupled to the plug unit for regulating the received energy and for providing a power requirement to the power distribution subsystem, and an identification subsystem that is operable to transmit an identification signal that is operative to identify the USB adapter as not being limited by the power limits imposed by the USB specification.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] In order that the invention identified in the claims may be more clearly understood, preferred embodiments thereof will be described in detail by way of example, with reference to the accompanying drawings, in which:

[0012] Fig. 1 is a schematic diagram of an exemplary mobile device which has an industry standard interface;

[0013] Fig. 2 is a schematic diagram of a first embodiment of a USB adapter that is coupled to an exemplary mobile device;

[0014] Fig. 3 is a flow chart illustrating an exemplary use of a USB adapter with a mobile device; and

[0015] Fig. 4 is a schematic diagram of an additional exemplary embodiment of a USB adapter that is coupled to both an exemplary mobile device and an external battery.

DETAILED DESCRIPTION

Exemplary Mobile Device

[0016] Turning now to the drawing figures, shown in Fig. 1 is a schematic diagram of an exemplary mobile communication device **10** which has an industry standard interface. The mobile communication device **10** is preferably a two-way communication device having at least voice or data communication capabilities. Preferably, the mobile device **10** is also capable of communicating over the Internet, for example, via a radio frequency ("RF") link. Examples of types of devices that could be classified as a mobile device **10** include a data messaging device, a two-way pager, a cellular telephone with data messaging capabilities, a wireless Internet appliance, a data communication device (with or without telephony capabilities), a personal digital assistants ("PDA"), a wireless two-way e-mail communication device, and others.

[0017] The exemplary mobile device **10** comprises a microprocessor **12**, a communication subsystem **14**, input/output ("I/O") devices **16**, an industry standard interface **18** which in this example is a USB port, and a power subsystem **20**. The microprocessor **12** controls the overall operation of the mobile device **10**. The communication subsystem **14** provides the mobile device **10** with the ability to communicate wirelessly with external devices such as other mobile devices and other computers. The I/O devices **16** provide the mobile device **10** with input/output capabilities for use with a device user. The USB port **18** provides the mobile device **10** with a serial port for linking directly with other computers and/or a means for receiving power from an external power source. The power subsystem **20** provides the mobile device **10** with a local power source.

[0018] The exemplary communication subsystem **14** comprises components such as a receiver **22**, a transmitter **24**, antenna elements **26** and **28**, local oscillators (LOs) **30**, and a processing module such as a digital signal processor (DSP) **32**. The particular design of the communication subsystem **14** and the components used therein can vary. It would be apparent to one of ordinary skill in the art to design an appropriate communication subsystem using conventional methods and components to operate over a communication network **34** based on the parameters necessary to operate over that communication network. For example, a mobile device **10** geographically located in North America may include a communication subsystem **14** designed to operate within the Mobitex™ mobile communication system or DataTAC™ mobile communication system, whereas a mobile device **10** intended for use in Europe may incorporate a General Packet Radio Service (GPRS) communication subsystem **14**.

[0019] Network access requirements will also vary depending upon the type of network **34**. For example, in the Mobitex and DataTAC networks, mobile devices **10** are registered on the network using a unique personal identification number or PIN associated with each device. In GPRS networks however, network access is associated with a subscriber or user of a mobile device **10**. A GPRS device therefore requires a subscriber identity module (not shown), commonly referred to as a SIM card, in order to operate on a GPRS network. Without a SIM card, a GPRS device will not be fully functional. Local or non-network communication functions (if any) may be operable, but the mobile device **10** will be unable to carry out any functions involving communications over the network **34**.

[0020] When required, after the network registration or activation procedures have been completed, a mobile device **10** may send and receive communication signals over the network **34**. Signals received by the receiver antenna **26** through a communication network **34** are input to the receiver **22**, which may perform such common receiver functions as signal amplification, frequency down conversion, filtering, channel selection and the like, and in the exemplary system shown in Fig. 1, analog to digital conversion. Analog to digital conversion of a received signal allows more complex communication functions such as demodulation and decoding to be performed in a DSP **32**. Similarly, signals to be transmitted are processed, including modulation and encoding for example, by the DSP **32** and input to the transmitter **24** for digital to analog conversion, frequency up conversion, filtering, amplification and transmission over the communication network **34** via the transmitter antenna **28**.

[0021] Also, in the exemplary communication subsystem **14**, the DSP **32** processes communication signals and also provides for receiver and transmitter control. For example, the gains applied to communication signals in the receiver **22** and transmitter **24** may be adaptively controlled through automatic gain control algorithms implemented in the DSP **32**.

[0022] In implementing its control function, the microprocessor **12** in the exemplary mobile device **10** executes an operating system. The operating system software used by the microprocessor **12** is preferably stored in a persistent store such as flash memory **36**, or alternatively read only memory (ROM) or similar storage element. The microprocessor **12** may also enable the execution of specific device applications, which preferably are also stored in a persistent store. The operating system, specific device

applications, or parts thereof, may also be temporarily loaded into a volatile store such as in RAM 38.

[0023] A predetermined set of applications which control basic device operations, including at least data and voice communication applications for example, will normally be installed on the mobile device 10 during manufacture. One such application loaded on the mobile device 10 could be a personal information manager (PIM) application. The PIM application preferably is an application for organizing and managing user inputted data items such as e-mail, calendar events, voice mails, appointments, and task items. The PIM data items may be stored in the RAM 38 and/or the flash memory 36.

[0024] The PIM application preferably has the ability to send and receive data items, via the wireless network 34. The PIM data items are preferably seamlessly integrated, synchronized and updated, via the wireless network 34, with corresponding data items stored or associated with a host computer system (not shown) used by the device user. The synchronization of PIM data items is a process by which the PIM data items on the mobile device 10 and the PIM data items on the host computer system can be made to mirror each other.

[0025] There are several possible mechanisms for loading applications onto the mobile device 10. For example, applications may be loaded onto the mobile device 10 through the wireless network 34, an auxiliary I/O subsystem 40, the serial port 18, a short-range communications subsystem 42, such as an infrared ("IR") communication system, or any other suitable subsystem 44. When loading the applications onto the mobile device 10, the device user may install the applications in the RAM 38, the flash

memory **36**, or preferably a non-volatile store (not shown) such as ROM for execution by the microprocessor **12**. The available application installation mechanisms can increase the utility of the mobile device **10** by providing the device user with a way of upgrading the mobile device **10** with additional and/or enhanced on-device functions, communication-related functions, or both. For example, a secure communication application may be loaded onto the mobile device **10** that allows for electronic commerce functions or other financial transactions to be performed using the mobile device **10**.

[0026] The I/O devices **16** may be used to display and/or compose data communication messages. In one mode of operation, a signal received by the mobile device **10**, such as a text message or web page download, will be received and processed by the communication subsystem **14**, forwarded to the microprocessor **12**, which will preferably further process the received signal, and provide the processed signal to one or more of the I/O devices **16** such as a display **46**. Alternatively, a received signal such as a voice signal can be provided to a speaker **48**, or alternatively to an auxiliary I/O device **40**. In another mode of operation a device user may compose a data item such as an e-mail message using a keyboard **50** in cooperation with the display **46** and possibly an auxiliary I/O device **40**. Alternatively, a device user may compose a voice message via a microphone **52**. The composed data item may then be transmitted over a communication network **34** using the communication subsystem **14**.

[0027] A short-range communications subsystem **42** may be provided in the mobile device **10** to allow the mobile device **10** to communicate with other systems or devices, which need not necessarily be similar to device **10**. For example, the short-range

communications subsystem **42** may include an infrared device and associated circuitry and components or a Bluetooth™ communication module to allow the device **10** to communicate with similarly-enabled systems and devices.

[0028] The USB port **18** provides the mobile device **10** with a serial port for linking directly with other computers to exchange data and/or to receive power. The USB port **18** also provides the mobile device **10** with a means for receiving power from an external power source. For example, in a personal digital assistant (PDA)-type communication device, the USB port **18** could be used to allow the mobile device **10** to synchronize data with a user's desktop computer (not shown). The USB port **18** could also enable a user to set parameters in the mobile device **10** such as preferences through the use of an external device or software application. In addition the USB port **18** may also be used to provide a means for downloading information or software to the mobile device **10** without using the wireless communication network **34**. The USB port **18** can provide a direct and thus reliable and trusted connection that may for example be used to load an encryption key onto the mobile device **10** thereby enabling secure device communication.

[0029] Coupled to the USB port **18** is a USB connector **54**. The USB connector **54** is the physical component that couples the USB port to the outside world. In the exemplary mobile device **10**, the USB connector **54** is used to transmit and receive data from an external data/power source **56**, receive power from the external data/power source **56**, direct the transmitted/received data from/to the USB port **18**, and direct the received power to the power subsystem **20**.

[0030] The exemplary power subsystem **20** comprises a charging and power distribution subsystem **58** and a battery **60**. The charging and power distribution subsystem **58** performs many functions. It may be used to transfer energy to the battery **60** from the external data/power source **56** to charge the battery **60** and also to distribute power to the many power requiring components within the mobile device **10**. The charging subsystem **58** may be capable of determining the presence of a battery **60** and/or a power circuit coupled to the mobile device **10**, such as an AC adapter, USB connection, or car adapter, which alternatively can act as power sources **56** to provide power for the mobile device **10** and to charge the battery **60**. Additionally, the charging subsystem **58** may have the ability to determine if a power source **56** is coupled to the mobile device **10** and, in the absence of such a coupling, cause the mobile device **10** to be powered by the battery **60**.

[0031] The power distributed by the charging and power distribution subsystem **58** may be derived from energy stored in the battery **60** and/or energy received from the external data/power source **56**. When the battery **60** is depleted, the charging and power distribution subsystem **58** transfers energy from the power source **56** to recharge the battery **60**. Optionally, the charging and power distribution subsystem **58** may also transfer energy from the power source **56** to other components in the mobile device **10** to power the mobile device **10** when the battery **60** has been depleted and is recharging. When the data/power source **56** is not connected to the mobile device **10**, power for the device **10** is derived from the battery **60**.

Exemplary USB Adapter

[0032] Fig. 2 is a schematic diagram of a first embodiment of an adapter **100** that can be used to couple the mobile device **10** of fig. 1 to the data/power source **56** of fig. 1. In this example the adapter **100** is a USB adapter **100** that comprises a primary USB connector **102**, a power converter **104**, a plug unit **106**, and an identification subsystem **108**. The power converter is a known element in the art and typically includes at least one of the following components: switching converter, transformer, DC source, voltage regulator, linear regulator and rectifier. In the embodiment shown in fig. 2, the USB adapter **100** is shown coupling a mobile device **10** to one of one or more types of power sockets **110N**, **110D**, **110B**, and **100**. Also shown in fig. 2 is an optional auxiliary USB connector **112** that can be used to couple the mobile device **10** to a data source (not shown) such as a personal computer.

[0033] In the embodiment shown in fig. 2, the primary USB connector **102** is configured to mate with the USB connector **54** of the mobile device **10**. The USB adapter **100** is operable to provide power to the mobile device **10** through the Vbus and Gnd power pins in the USB connectors **54** and **102**. The USB adapter **100** also optionally provides a communication path for data across the D+ and D- data pins in the USB connectors **54** and **102**.

[0034] The plug unit **106** is preferably a conventional plug unit that can be used to couple with a conventional power socket to receive power therefrom. For example, the plug unit **106** can be a two prong or three prong plug of the type used in North America that can couple to a North American AC power socket **110N** that provides 115 VAC. In the embodiment shown in figure 2, the plug unit **106** can accept one or more types of

plug adapters **114N**, **114B**, **114D**, and **114** that are configured to couple to the plug unit **106** and are further configured to directly mate with one or more types of power sockets **110N**, **110D**, **110B**, and **100**. The plug unit **106** can be configured to receive energy from a power socket **110N**, **110D**, **110B**, or **100**, either directly or through the use of a plug adapter, and is operative to transfer the received energy to the power converter **104**.

[0035] The power converter **104** is operative to receive energy from a power socket **110N**, **110D**, **110B**, or **100** and to convert that received energy to a form that can be used by the mobile device **10**. For example, the power converter **104** can be of conventional construction such as a switching power converter that converts 115 VAC to 5 VDC. Also, the power converter **104** could comprise a D.C. regulator circuit that converts a D.C. input to a D.C. output. The power converter **104** could also be adapted to accept a wide range of input energy levels and frequencies. Alternatively, the power converter **104** could be adapted to accept a limited range of input energy levels and frequencies, wherein the plug adapters are operable to convert the possible input energy levels and frequencies to a range that the power converter can accommodate. The power converter **104** provides its energy output to the mobile device **10** via the Vbus and Gnd pins of the primary USB connector **102**.

[0036] Through the use of a variety of different types of plug adapters, the USB adapter **100** can be adapted to receive energy from various types of power sockets **110N**, **110D**, **110B**, or **100**. For example, using the appropriate plug adapter **114**, **114B**, **114D**, and **114N**, the USB adapter **100** can receive energy from a power socket such as

an 115 VAC North American power socket **110N**, or a 12 VDC automobile power socket, or an air power socket, or others.

[0037] For example, in North America, a type “N” power socket is commonly available. The plug adapter **114N** can be releasably attached to the plug unit **106** thereby allowing any North American power socket **114N** to be used as a power source. When traveling to a locale which does not have the North American power socket **114N**, an alternate plug adapter such as adapters **114**, **114B**, or **114D** may be selected by the user, according to the power socket **110D**, **110B**, or **100** available at the locale. The plug adapter **114**, **114B**, or **114D** may then be releasably attached to plug unit **106** in place of the plug adapter **114N**, thereby allowing the USB power adapter **100** to connect to a local power supply via the local power socket . Various other plug adapters are envisioned that can be configured to operate with alternate power sources such as for instance car sockets.

[0038] The power distribution and charging subsystem **58** of the mobile device **10** can selectively use the power provided on the Vbus and Gnd lines of the USB connector **54** to provide power to the mobile device **10**, charge the battery **60**, or both. A more detailed discussion of how the charging function of mobile device **10** can be implemented is described in United States Provisional Application No. 60/273021 filed on March 1st, 2001 and entitled “System and Method for Adapting a USB to Provide Power for Charging a Mobile Device” which has been incorporated herein by reference.

[0039] Typically when a mobile device **10** receives power over the USB from a USB host, it is required to draw power in accordance with the USB specification. The USB

specification specifies a process for transferring energy across the USB called enumeration and limits the electrical current that can flow across the USB.

[0040] The USB adapter **100** contributes to a system wherein a device **10** that follows the USB specification when coupled to a typical USB host via its USB port can be informed that the USB adapter **100** has been coupled to the device **10** and that the device **10** can now draw power without regard to the USB specification and the USB specification imposed limits.

[0041] The identification subsystem **108** provides an identification signal to the mobile device **10** that the power source is not a USB limited source. The identification signal could be the communication of a single voltage on one or more of the USB data lines, different voltages on the two data lines, a series of pulses or voltage level changes, or other types of electrical signals. The identification subsystem **108** that generates the identification signal could have multiple types of configurations. In one embodiment, the identification subsystem **108** comprises a hard-wired connection of a single voltage level to both data lines. In another embodiment, the identification subsystem **108** comprises a USB controller that is operable to communicate an identification signal to the mobile device. Additional embodiments are contemplated. The identification subsystem **108** may optionally be configured to have the capability of electrically connecting or disconnecting the power output from the power converter **104** from the USB connector **102** and/or to connect or disconnect any data inputs from the USB adapter **100** to the USB connector **102**.

[0042] In addition to providing power to the mobile device **10** over the primary USB connector **102**, the USB adapter **100** may optionally be equipped with an auxiliary USB

connector **112** that allows the USB adapter **100** to create a communication path between the mobile device **10** and some other device capable of communicating over the USB such as a personal computer, another mobile device or some other type of device.

[0043] The USB adapter **100** preferably provides a communication path between the D+ and D- pins of the Primary USB connector **102** and the D+ and D- pins of the auxiliary USB connector **112**. In the embodiment shown, the communication path also traverses the identification subsystem **108**. Alternatively, the communication path could bypass the identification subsystem **108**. The USB adapter **100** can thus act as a pass through device for communication between a USB hub or host and a mobile device **10**.

[0044] Optionally, the USB adapter **100** could also transfer energy from the power converter **104** to the auxiliary USB connector **112** thereby providing a device coupled to the auxiliary USB connector **112** with power. In this arrangement, the identification subsystem **108** could also provide an identification signal to the device coupled to the auxiliary USB connector **112** to inform that device that the power source is not a USB limited source.

Exemplary Illustration Of The Use of A USB Adapter With A Mobile Device

[0045] When a USB adapter **100** is connected to a mobile device **10**, the identification subsystem **108** of the USB adapter **100** preferably provides an identification signal to the mobile device **10** to notify the mobile device **10** that the device **10** is connected to a power source that is not subject to the power limits imposed by the USB specification. Preferably, the mobile device **10** is programmed to recognize the identification signal and therefore recognizes that an identification signal has been

transmitted by the USB adapter **100**. After recognizing a valid identification signal, the mobile device **10**, draws power through the USB adapter **100** without waiting for enumeration or charge negotiation.

[0046] The detection of the identification signal may be accomplished using a variety of methods. For example, the microprocessor **12** may detect the identification signal by detecting the presence of an abnormal data line condition at the USB port **18**. The detection may also be accomplished through the use of other device subsystems **44** in the mobile device **10**. The preferred identification signal results from the application of voltage signals greater than 2 volts to both the D+ and D- lines in the USB connector. The preferred method of identification is described below in greater detail with reference to Fig. 3.

[0047] At step **210**, the mobile device **10** detects the presence of a voltage on the Vbus line of the USB connector **54** via the USB port **18**. At step **220**, the mobile device checks the state of the D+ and D- lines of the USB connector. In the example shown in the drawings, the D+ and D- lines are compared to a 2V reference. Also, in this example, the identification subsystem **108** of the USB adapter **100** may have applied a logic high signal, such as +5V reference, to both the D+ and D- lines to identify the attached device as a USB adapter **100**. If the voltages on both the D+ and D- lines of the USB connector are greater than 2 Volts (step **220**), then the mobile device **10** determines that the device connected to the USB connector **54** is not a typical USB host or hub and that a USB adapter **100** has been detected (step **230**). The mobile device **10** can then charge the battery or otherwise use power provided via the Vbus and Gnd lines in the USB connector **54** (step **260**) without waiting for enumeration.

[0048] If, however, after the mobile device **10** detects the presence of a voltage on the Vbus line of the USB connector **54** and determines that the voltages on both the D+ and D- lines of the USB connector are not greater than 2 Volts (step **220**), then the mobile device **10** determines that a USB host or hub has been detected (step **240**). A typical USB host or hub weakly holds its D+ and D- lines at zero volts when it is not connected to another device. The mobile device **10** can then signal the USB host or hub to initiate the enumeration process (step **250**) and can charge the battery or otherwise use power provided via the Vbus and Gnd lines in the USB connector (step **260**) in accordance with the power limits imposed by the USB specification. The enumeration process is typically initiated after the mobile device **10** applies approximately zero volts to the D- line and approximately 5 volts to the D+ line to inform the host of the mobile device's **10** presence and communication speed.

[0049] Therefore, when a USB adapter **100** is coupled to the mobile device **10** and has been identified as a USB adapter **100**, the mobile device **10** can forego the enumeration process and charge negotiation process and immediately draw energy from the USB power adapter **100** at a desired rate, for instance at 5 unit loads, i.e. 500mA. While the mobile device **10** charges its battery using the USB adapter **100**, the mobile device **10** can disable its typical USB functions. If, however, the mobile device **10** detects that a USB host or hub is coupled to the mobile device **10**, the mobile device **10** can apply a voltage to the D+ line to indicate to the USB host or hub that the mobile device **10** is coupled thereto and await enumeration and USB charge negotiation.

[0050] If the USB adapter **100**, is coupled to the mobile device **10**, and the mobile device **10** does not identify the USB adapter **100** through communications with the

identification module **108**, the mobile device **10** may stop drawing energy from the Vbus and Gnd lines of the USB connector **54**. This may occur, for example, if the mobile device **10** is not programmed to identify the USB adapter **100**. The mobile device **10** may mistakenly identify the USB adapter **100** as a typical USB host or hub and await enumeration before drawing substantial energy. To guard against this, the USB adapter **100** can optionally be adapted to function with mobile devices that are not programmed to recognize the USB adapter **100**.

[0051] In that scenario, the USB adapter **100** can be adapted to provide energy to a mobile device by using the knowledge that the mobile device will draw energy from a connected device for a period of time before it stops drawing energy due to lack of enumeration. The USB adapter **100** can optionally provide power for charging a battery **60** in a mobile device by periodically switching the voltages on the Vbus and Gnd lines between on and off states. When the USB adapter **100** is coupled to the mobile device, the identification subsystem **108** can apply an on-voltage (5 V for example) between the Vbus and Gnd lines. The mobile device will draw energy while awaiting enumeration. After a period of time, the identification subsystem **108** can apply an off-voltage (0 volts) between the Vbus and Gnd lines thereby fooling the mobile device into determining that the unidentified USB device has been disconnected from the mobile device. The identification subsystem **108** can then reapply an on-voltage between the Vbus and Gnd lines. The mobile device will draw energy again while awaiting enumeration. This cycle can be repeated to periodically apply energy to the mobile device, for example, to recharge the battery **60** of the mobile device.

Additional Exemplary Embodiments Of USB Adapters

[0052] Shown in fig. 4 is a schematic diagram of an additional exemplary embodiment of a USB adapter **300** that is coupled to a mobile device **10**. The exemplary USB adapter **300** comprises a USB connector **302**, a power converter **304**, a plug unit **306**, and an identification subsystem **308**. The USB connector **302**, plug unit **306**, and identification subsystem **308**, preferably correspond to the USB connector **102**, plug unit **106**, and identification subsystem **108** which were described earlier with respect to the first embodiment. Similar to the first embodiment, the additional embodiment may optionally be equipped with various plug adapters **314N**, **314D**, **314B**, and **314** that preferably are releasably attachable to plug unit **306** so that the appropriate plug adapter **314N**, **314D**, **314B**, or **314** can be selected by a user to allow the USB adapter **300** to couple to and receive energy from an available power socket **310N**, **310D**, **310B**, or **310**. The exemplary USB power converter **300** further comprises a charging subsystem **316** and battery receptacle **318** for coupling the USB adapter **300** to an external battery **320** that may be optionally coupled thereto.

[0053] The battery receptacle **318** provide a location for releasably coupling an external battery **320** thereto so that the external battery can be charged via the USB adapter **300**. This provides the USB adapter **300** with a mechanism for charging, for example, a mobile device's primary or spare battery when the battery has been separated from or is not coupled to the mobile device **10**.

[0054] To accommodate this functionality, the power converter **304** is capable of providing the proper voltage levels for the USB connector **302** and also capable of providing necessary voltage and current levels to drive a battery charging subsystem

316. The power converter **304** is preferably a dual power converter that may be constructed using conventional or non-conventional architectures. With respect to the portion of the power converter **304** that provides energy to the USB connector **302**, that portion is preferably similar in construction and function to the power converter **104** of the first embodiment.

[0055] Preferably, the charging subsystem **316** performs in a substantially similar manner to charging subsystem **58** of the mobile device **10**. But, for efficiency and simplicity of design, certain aspects of the dual power converter **304** and the charging subsystem **316** may be combined, as both are local to the USB adapter **300**.

[0056] Other alternative embodiments of the USB adapter may include various combinations of components described above with respect to the first and additional embodiments. Another embodiment of the USB adapter may include a second or more auxiliary USB connectors. A USB adapter having one or more auxiliary USB connectors may optionally be configured such that one or more of the auxiliary USB connectors may have power from the USB adapter's power converter made available to it so that multiple USB devices may draw power simultaneously. Preferably, a USB adapter having multiple auxiliary USB connectors will be configured such that the data lines in the auxiliary connectors can, on a selective basis, be electrically connected to or disconnected from the data lines in the primary USB connector. This allows a mobile device connected to the primary USB connector to receive energy from the adapter regardless of whether a USB host or hub is connected to an auxiliary USB connector. It is also contemplated that a USB adapter may be embodied in a USB host or hub.

Conclusion

[0057] The embodiments described herein are examples of structures, systems or methods having elements corresponding to the elements of the invention recited in the claims. This written description may enable those skilled in the art to make and use embodiments having alternative elements that likewise correspond to the elements of the invention recited in the claims. The intended scope of the invention thus includes other structures, systems or methods that do not differ from the literal language of the claims, and further includes other structures, systems or methods with insubstantial differences from the literal language of the claims. Although the embodiments have been described with reference to the USB interface, it is contemplated that the invention could be applicable to devices and systems that use other standard interfaces such as the IEEE 1394 interface.

CLAIMS

What is claimed is:

1. A mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:

a Universal Serial Bus ("USB") interface configured to allow reception of a USB cable;

a charging subsystem, the charging subsystem operably connected to the USB interface V-bus power line;

the charging subsystem operably connectable to a battery, and configured to charge a battery if a battery is operably connected;

the charging system further configured to use power from the V-bus power line for the charging of a battery; and,

where the mobile device is configured to detect an identification signal at a D+ and a D- data line of the USB interface, the identification signal being different than USB enumeration.

2. The mobile device of claim 1 wherein the identification signal comprises a voltage level that is applied to at least one data line in the USB connector.

3. The mobile device of claim 1 wherein the identification signal is a result of using a resistance between the D+ and D- data lines.

4. The mobile device of claim 1 wherein the identification subsystem comprises a hard-wired connection of a voltage level to one or more data lines in the USB connector.

5. A mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:

a Universal Serial Bus ("USB") interface configured to allow reception of a USB cable;

a charging subsystem, the charging subsystem operably connected to the USB interface V-bus power line;

the charging subsystem operably connectable to a battery, and configurable to charge a battery;

the charging system further configured to use power from the V-bus power line for the charging of a battery;

where data lines D+ and D- at the USB interface are configured to receive signals;

a microprocessor and memory usable to process the received signals, configured such that before USB enumeration an identification signal received at the D+ and D- lines indicating a charging connection is available is recognized by the device.

6. The mobile device of claim 5 wherein the identification signal comprises a voltage level that is applied to at least one data line in the USB connector.

7. The mobile device of claim 5 wherein the identification signal is a result of using a resistance between the D+ and D- data lines.

8. A method of charging a battery in a mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:

providing a Universal Serial Bus ("USB") interface configured to allow reception of a USB cable, and, receiving power on a V-bus power line at the USB interface;

providing an operable connection between the power received at the USB interface on the V-bus power line and a charging subsystem;

having a battery in operable connection to the charging subsystem;

providing power to the battery using the charger subsystem; and,

detecting an identification signal at a D+ and a D- data line of the USB interface, the identification signal being different than USB enumeration.

9. The method claim 8 wherein the identification signal comprises a voltage level at least one data line in the USB connector.

10. The method claim 8 wherein the identification signal is a result of using a resistance between the D+ and D- data lines.

11. A method for charging a battery in a mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:

providing a Universal Serial Bus ("USB") interface configured to allow reception of a USB cable, and, to receiving power on a V-bus power line at the USB interface;

providing an operable connection between the power received at the USB interface on the V-bus power line and a charging subsystem;

having a battery in operable connection to the charging subsystem;

providing power to the battery using the charger subsystem in one of a plurality of charge modes;

using a microprocessor and memory to process the signals received on the USB interface data lines, such that an identification signal received at the D+ and D- lines indicating a charging connection is available is recognized by the device.

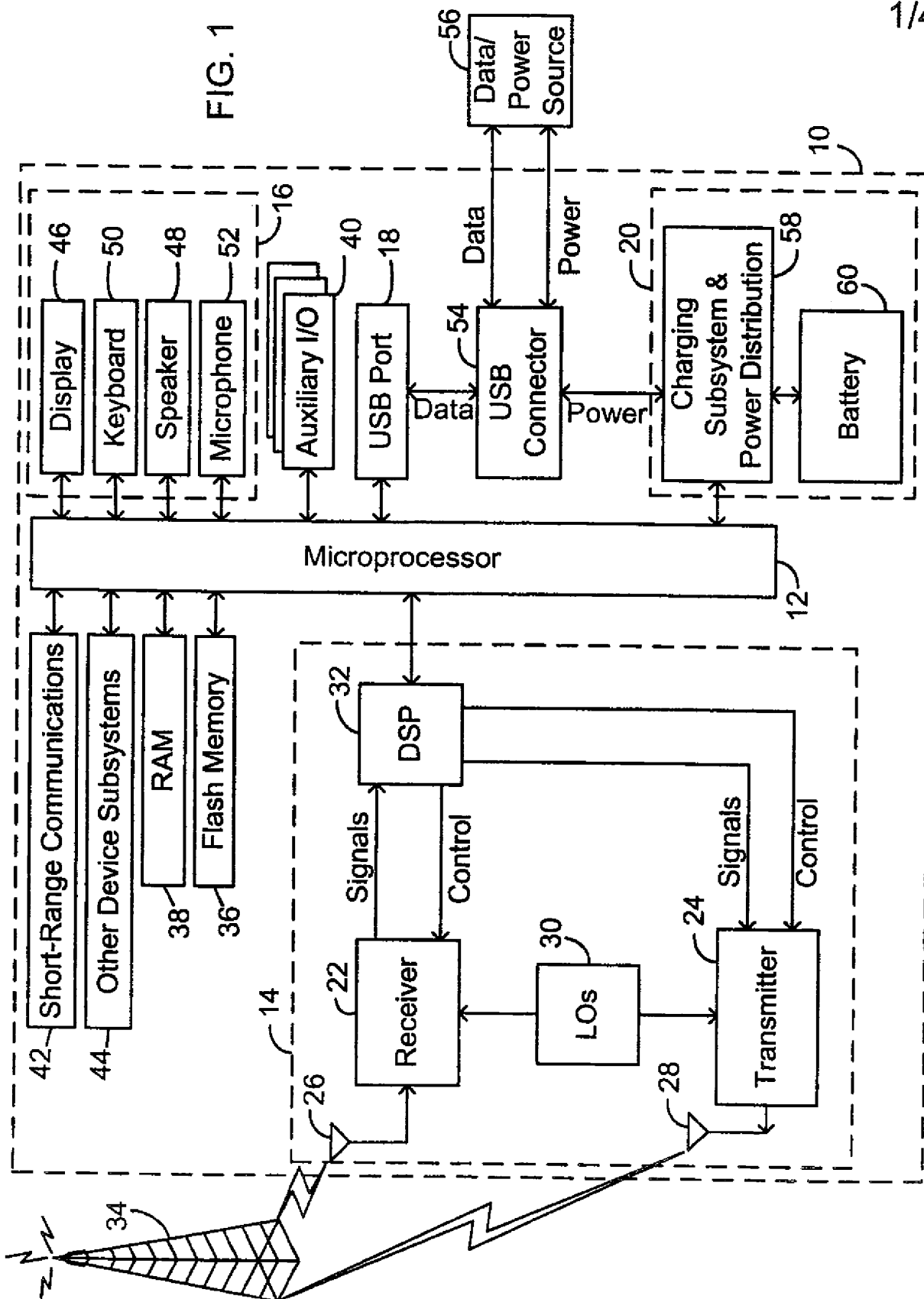
12. The method claim 11 wherein the identification signal comprises a voltage level at least one data line in the USB connector.

13. The method claim 11 wherein the identification signal is a result of using a resistance between the D+ and D- data lines.

ABSTRACT

An adapter for providing a source of power to a mobile device through an industry standard port is provided. In accordance with one aspect of the invention, the adapter comprises a plug unit, a power converter, a primary connector, and an identification subsystem. The plug unit is operative to couple the adapter to a power socket and operative to receive energy from the power socket. The power converter is electrically coupled to the plug unit and is operable to regulate the received energy from the power socket and to output a power requirement to the mobile device. The primary connector is electrically coupled to the power converter and is operative to couple to the mobile device and to deliver the outputted power requirement to the mobile device. The identification subsystem is electrically coupled to the primary connector and is operative to provide an identification signal.

FIG. 1



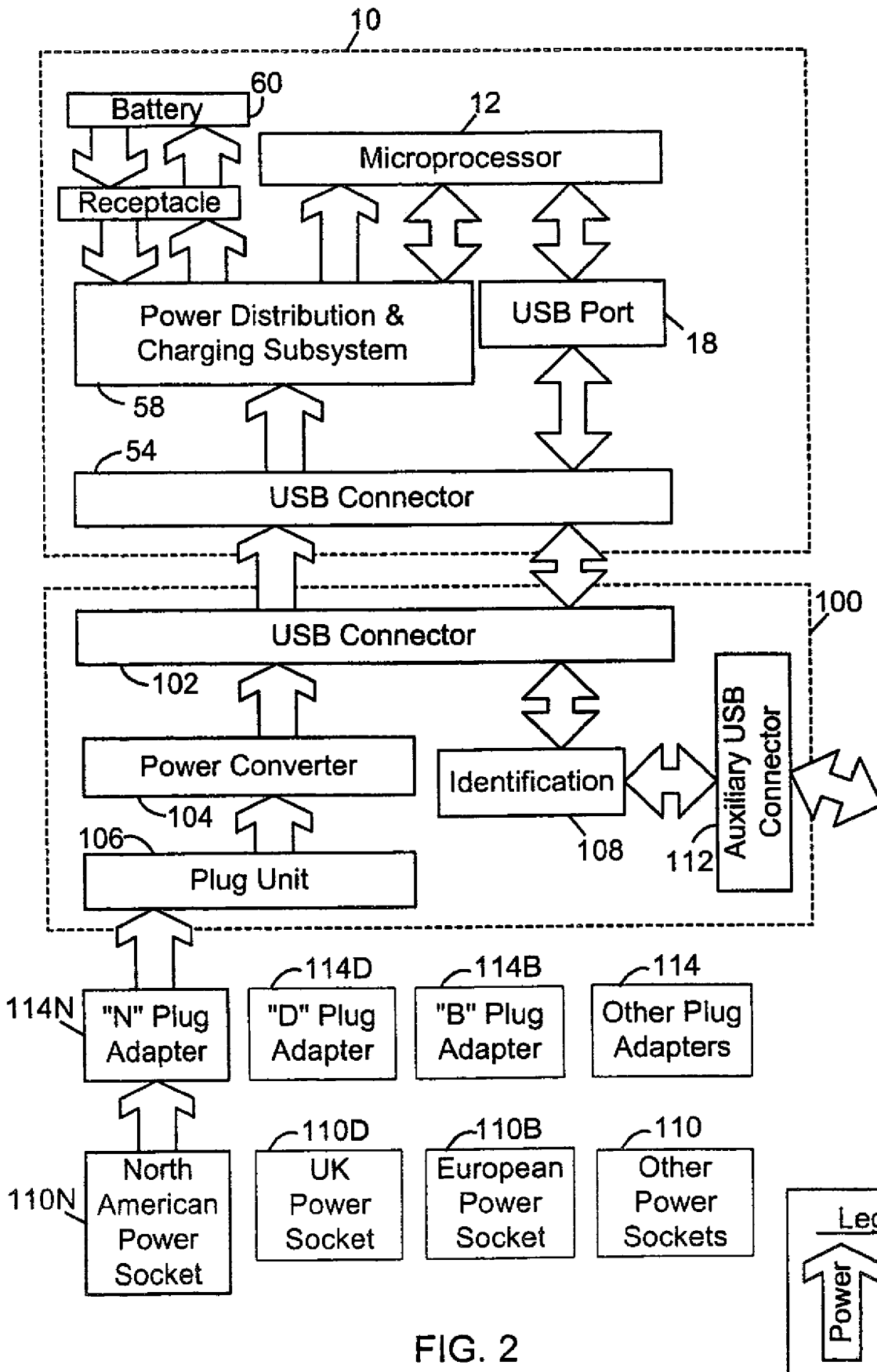


FIG. 2

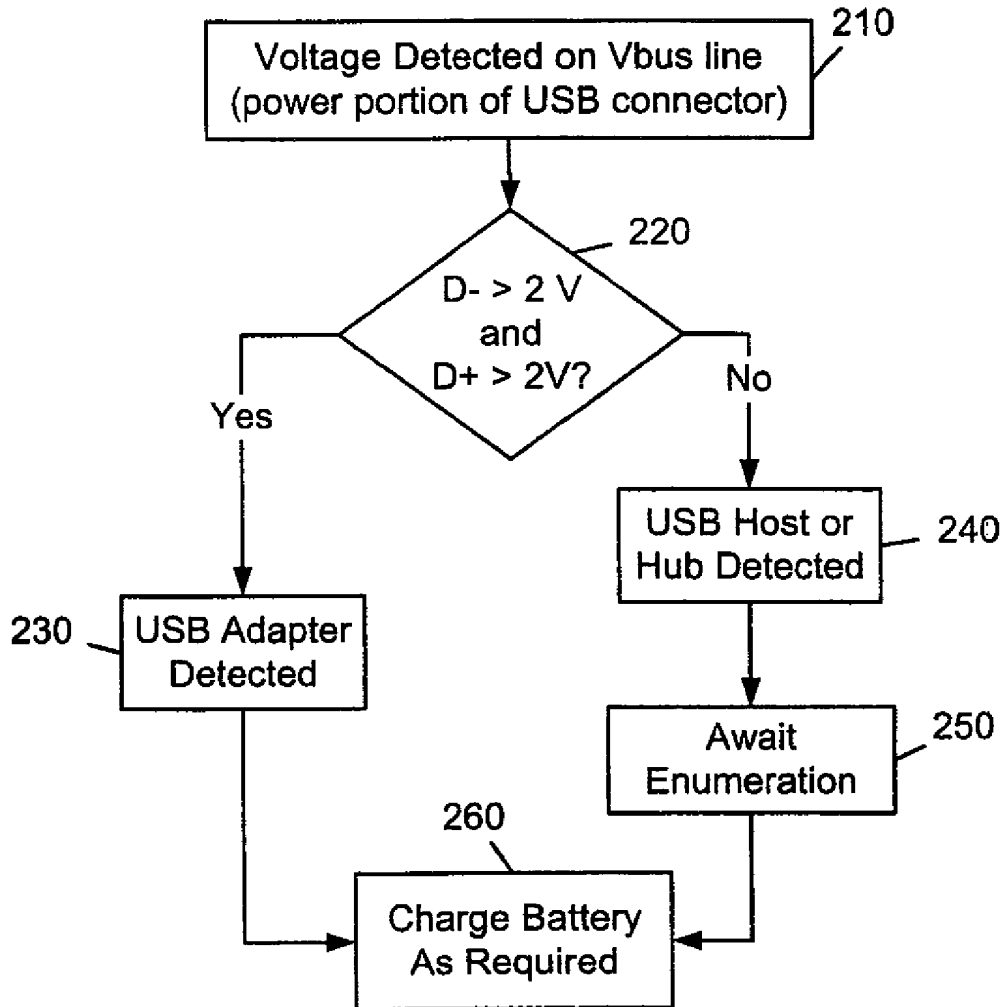


FIG. 3

4/4

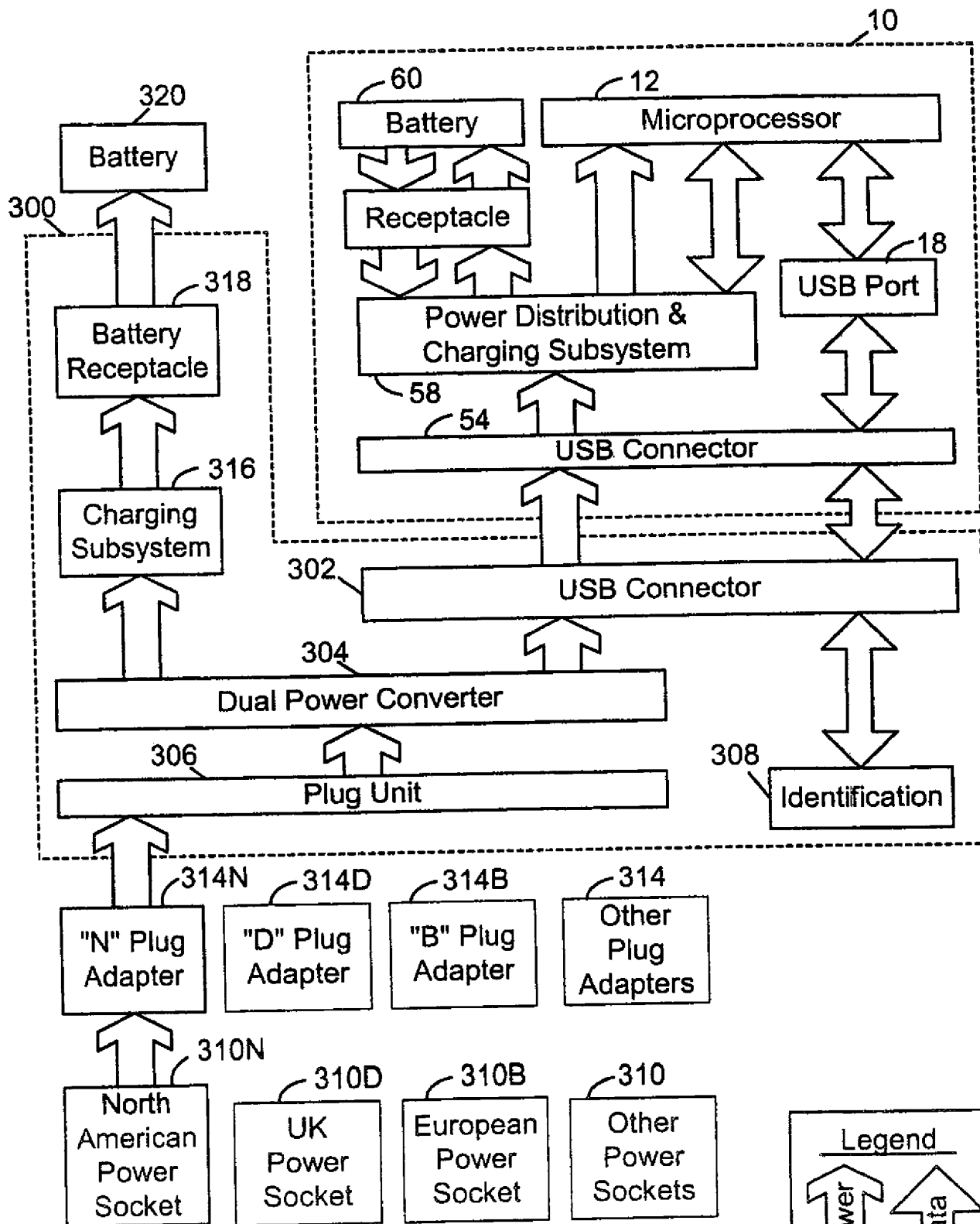


FIG. 4

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)	Attorney Docket Number	555255012294
	First Named Inventor	Daniel M. FISCHER
	COMPLETE IF KNOWN	
	Application Number	10 / 087/629
	Filing Date	March 01/02
	Group Art Unit	
Examiner Name		

Declaration Submitted with Initial Filing
 Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)

As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD

(Title of the Invention)

the specification of which

is attached hereto

OR

was filed on (MM/DD/YYYY) **03/01/2002** as United States Application Number or PCT International

Application Number **10/087,629** and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

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DECLARATION — Utility or Design Patent ApplicationDirect all correspondence to: Customer Number or Bar Code Label OR Correspondence address below**F. Drexel Feeling, Esq.**

Name

Jones, Day, Reavis & Pogue

Address North Point, 901 Lakeside Avenue

Cleveland
CityOhio
State

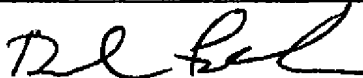
ZIP 44114-1190

USA
Country

Telephone (216) 586-3939

Fax (216) 579-0212

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: A petition has been filed for this unsigned inventorGiven Name Daniel M.
(first and middle [if any])Family Name FISCHER
or SurnameInventor's
Signature

Date Mar 1, 2002

Residence: City Waterloo

State Ontario

Country CANADA

Canadian
Citizenship

Mailing Address 295 Phillip Street

Waterloo
City

State Ontario

ZIP N2L 3W8

Country CANADA

NAME OF SECOND INVENTOR: A petition has been filed for this unsigned inventorGiven Name Dan G.
(first and middle [if any])Family Name RADUT
or SurnameInventor's
Signature

Date

Residence: City Waterloo

State Ontario

Country CANADA

Canadian
Citizenship

Mailing Address 295 Phillip Street

Waterloo
City

State Ontario

ZIP N2L 3W8


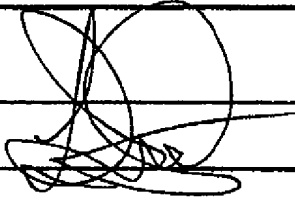
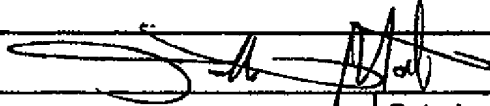
Country CANADA

 Additional Inventors are being named on the 2 supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.

[Page 2 of 2]

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DECLARATION**ADDITIONAL INVENTOR(S)
Supplemental Sheet
Page 1 of 2**

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Michael F.		HABICHER	
Given Name		Family Name or Surname	
		2002 - Feb - 28,	
Inventor's Signature		Date	
Cambridge	Ontario	CANADA	Canadian
Residence: City	State	Country	Citizenship
295 Phillip Street			
Mailing Address			
Mailing Address			
Waterloo	Ontario	N2L 3W8	CANADA
City	State	ZIP	Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Quang A.		LUONG	
Given Name		Family Name or Surname	
		Date Feb 28, 2002	
Inventor's Signature		Date	
Kitchener	Ontario	CANADA	Canadian
Residence: City	State	Country	Citizenship
295 Phillip Street			
Mailing Address			
Mailing Address			
Waterloo	Ontario	N2L 3W8	CANADA
City	State	ZIP	Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Jonathan T.		MALTON	
Given Name		Family Name or Surname	
		Date Feb 28 / 2002	
Inventor's Signature		Date	
Kitchener	Ontario	CANADA	Canadian
Residence: City	State	Country	Citizenship
295 Phillip Street			
Mailing Address			
Mailing Address			
Waterloo	Ontario	N2L 3W8	CANADA
City	State	ZIP	Country

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DAN G. RADUT
300 REGINA STREET, NORTH
BUILDING 1, APT. 1207
WATERLOO, ONTARIO N2J 3B8
CANADA

COPY MAILED

SEP 09 2002

In re Application of
Fischer, et al.
Application No. 10/087,629
Filed: March 1, 2002
Attorney Docket No. 555255012294
For: MULTIFUNCTIONAL CHARGER SYSTEM:
AND METHOD

LETTER

OFFICE OF PETITIONS

Dear Sir:

You are named as an inventor in the above-identified United States patent application filed under the provisions of 35 U.S.C. 116 (United States Code) and 37 C.F.R. § 1.47(a), Rules of Practice in Patent Cases. Should a patent be granted on the application you will be designated therein as a joint inventor.

As a named inventor you are entitled to inspect any paper in the file wrapper of the application, order copies of all or any part thereof (at a prepaid cost as per 37 C.F.R. § 1.19) or make your position of record in the application. Alternatively, you may arrange to do any of the preceding through a registered patent attorney or agent presenting written authorization from you. If you care to join the application, counsel of record (see below) would presumably assist you. Joining in the application would entail the filing of an appropriate oath or declaration by you pursuant to 37 C.F.R. § 1.63.

Telephone inquiries regarding this communication should be directed to the undersigned at (703) 305-0310. Requests for information regarding your application should be directed to the File Information Unit at (703) 308-2733. Information regarding how to pay for and order a copy of the application, or a specific paper in the application, should be directed to Certification Division at (703) 308-9726 or 1-800-972-6382 (outside the Washington D.C. area).

Alesia M. Brown
Petitions Attorney
Office of Petitions
Office of the Deputy Commissioner
for Patent Examination Policy

CC: F. Drexel Feeling, Esq.
Jones, Day, Reavis & Pogue
901 Lakeside Avenue/North Point
Cleveland, OH 44114

DOCKETED
COPY TO CLIENT

Petitioners Ex. 1002

IPR USP 7,834,586

Page 88 of 295

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Daniel M. Fischer, Dan G. Radut, Michael F. Habicher, Quang A. Luong, Jonathan T. Malton

Serial No.: 10/087,629

Filed: March 1, 2002

For: MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD

Art Unit: Not yet assigned

Examiner: Not yet assigned

ASSISTANT COMMISSIONER OF PATENTS
 WASHINGTON, D.C. 20231

**PETITION FOR FILING BY OTHER THAN
 ALL THE INVENTORS UNDER 37 CFR § 1.47**

In accordance with 37 CFR § 1.47 and MPEP §409.03(a) and (d), applicants Fischer, Habicher, Luong, and Malton hereby petition the Assistant Commissioner to accept the filing of this patent application on behalf of themselves and the joint inventor, Dan G. Radut, who refuses to join in the application for patent. The petition fee of \$130 under 37 CFR § 1.17(I) accompanies this petition.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on the date indicated below.

Debra L. Pejeau

 Name

July 29, 2002

 Date

Debra L. Pejeau

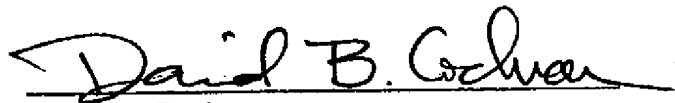
 Signature

As required by MPEP § 409.03(d), applicants enclose herein proof of the refusal of Mr. Radut to execute the application papers, in the form of a Declaration of David B. Cochran to whom the refusal to sign was made. In the Declaration, Mr. Cochran states that a bona fide attempt was made to present a copy of the application papers to Mr. Radut, and that Mr. Radut refused to sign the application papers. The Declaration by Mr. Cochran is deemed by the applicants to be sufficient proof of the refusal of Mr. Radut to sign.

In accordance with MPEP § 409.03(a) and (d), a Declaration signed by Messrs./Mmes. Fischer, Habicher, Luong and Malton with the signature block of Mr. Radut left blank is enclosed herein. The last known address of Mr. Radut is "300 Regina Street, North, Building I, Apt. 1207, Waterloo, Ontario N2J 3B8 Canada."

The Assistant Commissioner is hereby authorized to charge any additional fees which may be required by this paper only to Jones, Day Reavis & Pogue Deposit Account No. 501432, order no. 555255012294.

Respectfully Submitted,



David B. Cochran
Registration No. 39,142
JONES, DAY, REAVIS & POGUE
901 Lakeside Avenue/North Point
Cleveland, OH 44114
(216) 586-3939

Date: _____

7/29/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Daniel M. Fischer, Dan G. Radut, Michael F. Habicher, Quang A. Luong, Jonathan T. Malton

Serial No.: 10/087,629

Filed: March 1, 2002

For: MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD

Art Unit: Not yet assigned

Examiner: Not yet assigned

ASSISTANT COMMISSIONER OF PATENTS
WASHINGTON, D.C. 20231

DECLARATION OF DAVID B. COCHRAN

I hereby declare and state as follows:

1. I represent Research In Motion Limited ("RIM") in connection with the above-referenced patent application. This application names five inventors, Daniel M. Fischer, Dan G. Radut, Michael F. Habicher, Quang A. Luong, and Jonathan T. Malton.
2. Four of these inventors, Fischer, Habicher, Luong, and Malton, have signed the Declaration and Power of Attorney documents, which is being submitted to the USPTO along with this paper. Mr. Radut, however, who is no longer in the employ of RIM, refuses to sign the documents despite the fact that he signed an employment contract when beginning his employ obligating him to assist RIM in pursuing any such applications, even after his employment had ceased.
3. Prior to filing this application, a copy thereof was provided to each of the named inventors for their review and approval, including Mr. Radut.

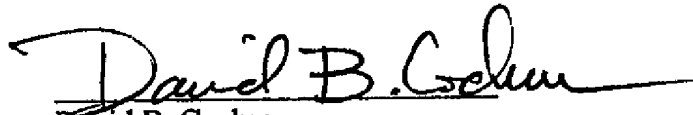
4. On May 2, 2002, another copy of the application, along with the Declaration and Power of Attorney, was mailed to Mr. Radut's home address. Mr. Radut refused to sign the documents.

5. Between May 8 and May 15, 2002, Mr. Radut was contacted by telephone on several occasions regarding his willingness to sign the Declaration and Power of Attorney, and he refused to do so.

6. On June 19, 2002, I forwarded another copy of the application and the Declaration and Power of Attorney to Mr. Radut, again asking that he sign and return the papers, by June 27, 2002. I also called him on his home phone number to inquire as to whether he would be signing and returning the papers. He has refused to return any of my phone calls or to return the papers.

7. The last known address of Mr. Radut is 300 Regina Street, North, Building 1, Apt. 1207, Waterloo, Ontario N2J 3B8.

8. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and the such willful false testimony may jeopardize the validity of the application or any patent issuing thereon.


David B. Cochran

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	10254-US-CNT4(4214-01509)
	Application Number	
Title of Invention	System and Method for Charging a Battery in a Mobile Device	
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>		

Secrecy Order 37 CFR 5.2

Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1					Remove
Applicant Authority <input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Daniel	M.	FISCHER		
Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Waterloo	Country Of Residenceⁱ	CA		
Citizenship under 37 CFR 1.41(b) ⁱ		CA			
Mailing Address of Applicant:					
Address 1		295 Phillip Street			
Address 2					
City	Waterloo	State/Province	ON		
Postal Code	N2L 3W8	Countryⁱ	CA		
Applicant 2					Remove
Applicant Authority <input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Dan	G.	RADUT		
Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Waterloo	Country Of Residenceⁱ	CA		
Citizenship under 37 CFR 1.41(b) ⁱ		CA			
Mailing Address of Applicant:					
Address 1		295 Phillip Street			
Address 2					
City	Waterloo	State/Province	ON		
Postal Code	N2L 3W8	Countryⁱ	CA		
Applicant 3					Remove
Applicant Authority <input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Michael	F.	HABICHER		
Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Cambridge	Country Of Residenceⁱ	CA		

Petitioners Ex. 1002

IPR USP 7,834,586

Page 93 of 295

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	10254-US-CNT4(4214-01509)
		Application Number	
Title of Invention	System and Method for Charging a Battery in a Mobile Device		

Citizenship under 37 CFR 1.41(b) i	CA		
Mailing Address of Applicant:			
Address 1	295 Phillip Street		
Address 2			
City	Waterloo	State/Province	ON
Postal Code	N2L 3W8	Country ⁱ	CA

Applicant 4				<input type="button" value="Remove"/>
Applicant Authority	<input checked="" type="radio"/> Inventor	<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix
	Quang	A.	LUONG	
Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
City	Kitchener	Country Of Residence ⁱ	CA	

Citizenship under 37 CFR 1.41(b) i	CA		
Mailing Address of Applicant:			
Address 1	295 Phillip Street		
Address 2			
City	Waterloo	State/Province	ON
Postal Code	N2L 3W8	Country ⁱ	CA

Applicant 5				<input type="button" value="Remove"/>
Applicant Authority	<input checked="" type="radio"/> Inventor	<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix
	Jonathan	T.	MALTON	
Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
City	Kitchener	Country Of Residence ⁱ	CA	

Citizenship under 37 CFR 1.41(b) i	CA		
Mailing Address of Applicant:			
Address 1	295 Phillip Street		
Address 2			
City	Waterloo	State/Province	ON
Postal Code	N2L 3W8	Country ⁱ	CA

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button.

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
<input type="checkbox"/> An Address is being provided for the correspondence information of this application.	
Customer Number	30652

Petitioners Ex. 1002

IPR USP 7,834,586

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	10254-US-CNT4(4214-01509)
		Application Number	
Title of Invention	System and Method for Charging a Battery in a Mobile Device		

Email Address		<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>
---------------	--	--	---

Application Information:

Title of the Invention	System and Method for Charging a Battery in a Mobile Device		
Attorney Docket Number	10254-US-CNT4(4214-01509)	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	4	Suggested Figure for Publication (if any)	2

Publication Information:

<input type="checkbox"/>	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/>	Request Not to Publish. I hereby request that the attached application not be published under 35 U.S. C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.			
Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	30652		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.					
Prior Application Status	Patented		<input type="button" value="Remove"/>		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
	Continuation of	11749680	2007-05-16	7453233	2008-11-18
Prior Application Status	Patented		<input type="button" value="Remove"/>		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11749680	Continuation of	11175885	2005-07-06	7239111	2007-07-05

Petitioners Ex. 1002
IPR USP 7,834,586

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	10254-US-CNT4(4214-01509)		
		Application Number			
Title of Invention	System and Method for Charging a Battery in a Mobile Device				
Prior Application Status	Pending		Remove		
Application Number	Continuity Type		Prior Application Number	Filing Date (YYYY-MM-DD)	
	Continuation of		12268297	2008-11-10	
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
	Continuation of	11749680	2007-05-16	7453233	2008-11-18
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11749680	Continuation of	11175885	2005-07-06	7239111	2007-07-03
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
10087692	non provisional of	60273021	2001-03-01	6936936	2005-08-30
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
10087692	non provisional of	60330486	2001-10-23	6936936	2005-08-30
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					Add

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).			
Remove			
Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			<input type="radio"/> Yes <input checked="" type="radio"/> No
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.	
Remove	
Assignee 1	
If the Assignee is an Organization check here. <input checked="" type="checkbox"/>	
Organization Name	Research In Motion Limited

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	10254-US-CNT4(4214-01509)
	Application Number	
Title of Invention	System and Method for Charging a Battery in a Mobile Device	

Mailing Address Information:			
Address 1	295 Phillip Street		
Address 2			
City	Waterloo	State/Province	ON
Country i	CA	Postal Code	N2L 3W8
Phone Number		Fax Number	
Email Address			
Additional Assignee Data may be generated within this form by selecting the Add button.			<input type="button" value="Add"/>

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.					
Signature	/J. Robert Brown, Jr./			Date (YYYY-MM-DD)	2010-02-26
First Name	J. Robert	Last Name	Brown, Jr.	Registration Number	45438

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Date: **02/26/10**

Approved for use through 7/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/714,204
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APPLICATION AS FILED – PART I			SMALL ENTITY		OR		OTHER THAN SMALL ENTITY	
(Column 1) (Column 2)			RATE (\$)	FEE (\$)			RATE (\$)	FEE (\$)
FOR	NUMBER FILED	NUMBER EXTRA	N/A	N/A			N/A	330
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	N/A			N/A	540
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	N/A			N/A	220
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	x\$26		OR		x\$52	
TOTAL CLAIMS (37 CFR 1.16(i))	13	minus 20 =	x\$110				x\$220	220
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4	minus 3 =						
INDEPENDENT CLAIMS (37 CFR 1.16(h))								1310
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$260 (\$130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR		195				390	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			TOTAL				TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II					SMALL ENTITY		OR		OTHER THAN SMALL ENTITY		
(Column 1) (Column 2) (Column 3)					RATE (\$)	ADDITIONAL FEE (\$)			RATE (\$)	ADDITIONAL FEE (\$)	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	X	=			X	=	
	Total (37 CFR 1.16(i))	*	**	=	X	=			X	=	
	Independent (37 CFR 1.16(h))	*	***	=					N/A		
	Application Size Fee (37 CFR 1.16(s))					N/A				N/A	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A				N/A	
					TOTAL ADD'T FEE				TOTAL ADD'T FEE		

APPLICATION AS AMENDED – PART II					SMALL ENTITY		OR		OTHER THAN SMALL ENTITY		
(Column 1) (Column 2) (Column 3)					RATE (\$)	ADDITIONAL FEE (\$)			RATE (\$)	ADDITIONAL FEE (\$)	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	X	=			X	=	
	Total (37 CFR 1.16(i))	*	**	=	X	=			X	=	
	Independent (37 CFR 1.16(h))	*	***	=					N/A		
	Application Size Fee (37 CFR 1.16(s))					N/A				N/A	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A				N/A	
					TOTAL ADD'T FEE				TOTAL ADD'T FEE		

- * If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
- ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
- *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
- † The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/714,204, 02/26/2010, 2858, 1310, 10254-US-CNT4(4214-01509), 13, 4

CONFIRMATION NO. 6230

30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

FILING RECEIPT



Date Mailed: 03/11/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Daniel M. FISCHER, Waterloo, CANADA;
Dan G. RADUT, Waterloo, CANADA;
Michael F. HABICHER, Cambridge, CANADA;
Quang A. LUONG, Kitchener, CANADA;
Jonathan T. MALTON, Kitchener, CANADA;

Assignment For Published Patent Application

RESEARCH IN MOTION LIMITED, Waterloo, CANADA

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 11/749,680 05/16/2007 PAT 7,453,233
which is a CON of 11/175,885 07/06/2005 PAT 7,239,111
This application 12/714,204
is a CON of 12/268,297 11/10/2008
and is a CON of 11/749,680 05/16/2007 PAT 7,453,233
which is a CON of 11/175,885 07/06/2005 PAT 7,239,111

Foreign Applications

If Required, Foreign Filing License Granted: 03/10/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/714,204

Projected Publication Date: 06/17/2010

Non-Publication Request: No

Early Publication Request: No
Title

System and Method for Charging a Battery in a Mobile Device

Preliminary Class

320

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

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For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Daniel M. Fischer, et al.	§	
		§	Group Art Unit:
Application No.:	12/714,204	§	
		§	Examiner:
Filed:	February 26, 2010	§	
		§	Confirmation: 6230
For:	SYSTEM AND METHOD FOR	§	
	CHARGING A BATTERY IN A MOBILE	§	
	DEVICE	§	

Mail Stop: Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF EFS-WEB TRANSMISSION

Pursuant to 37 C.F.R. §1.8, I hereby certify that this correspondence is being electronically submitted to the U.S. Patent and Trademark Office website, www.uspto.gov, on:

March 17, 2010
Date of Transmission

Karen Harris
Karen Harris

PRELIMINARY AMENDMENT AND REQUEST FOR CORRECTED FILING RECEIPT

Sir:

Prior to examination of the referenced application, Applicants respectfully request that the Examiner enter the following amendments and consider the remarks that follow.

Amendments to the Specification begin on page 2 of this paper.

Remarks begin on page 3 of this paper.

AMENDMENTS TO THE SPECIFICATION

Please amend paragraph [0001] as follows:

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This is a continuation application of U.S. Patent Application No. 12/268,297 filed November 10, 2008 by Daniel M. Fischer, et al. and entitled “System and Method for Charging a Battery in a Mobile Device”, which **is a continuation of and** claims priority from **U.S. Patent Application No. 11/749,680, filed May 16, 2007, now** No. 7,453,233 issued on November 18, 2008 by Daniel M. Fischer, et al. and entitled ~~“Multifunction Charger System and Method”~~ “Adapter System and Method for Powering a Device”, which **is a continuation of and** claims priority from **U.S. Patent Application No. 11/175,885, filed on July 6, 2005, now** U.S. Patent No. 7,239,111 issued on July 3, 2007, by Daniel M. Fischer, et al. and entitled “Universal Serial Bus Adapter for a Mobile Device”, which **is a continuation of and** claims priority from **U.S. Patent Application No. 10/087,629, filed on Mar. 1, 2002, now** U.S. Patent No. 6,936,936 issued on August 30, 2005, by Daniel M. Fischer, et al. and entitled “Multifunctional Charger System and Method”, which claims priority from U.S. Provisional Application No. 60/273,021 filed March 1, 2001, by Daniel M. Fischer, et al. and entitled “System and Method for Adapting a USB to Provide Power for Charging a Mobile Device” and U.S. Provisional Application No. 60/330,486 filed October 23, 2001, by Daniel M. Fischer, et al. and entitled “Multifunctional Charger System and Method” and all incorporated herein by reference for all purposes.

REMARKS

By this Preliminary Amendment, Applicants respectfully request that the above-referenced corrections in the "Cross-Reference to Related Applications" be entered in the record prior to examination of this application.

Applicants hereby respectfully request issuance of a corrected *Filing Receipt* for the above-identified application. Applicants also submit concurrently herewith a supplemental application data sheet listing the corrected priority claims as well as a marked-up copy of the Filing Receipt. Since these corrected priority claims are being made within four months of the filing date of this application under Rule 37 CFR § 1.78, Applicants respectfully submit that no fee should be due for this request for corrected filing receipt.

CONCLUSION

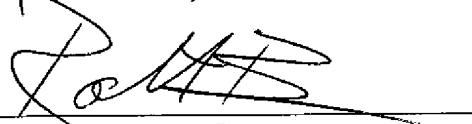
The Applicants respectfully submit that the present application as amended is in condition for examination and allowance. If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting examination of the application, he is encouraged to telephone the undersigned at (972) 731-2288. The Commissioner is hereby authorized to charge payment of any fee associated with any of the papers submitted herewith to Deposit Account No. 50-1515, Conley Rose, P.C.

Date: March 17, 2010

5601 Granite Parkway, Suite 750
Plano, Texas 75024
Telephone: (972) 731-2288
Facsimile: (972) 731-2289

Respectfully submitted,

CONLEY ROSE, P.C.



J. Robert Brown, Jr.
Reg. No. 45,438

ATTORNEY FOR APPLICANTS



UNITED STATES PATENT AND TRADEMARK OFFICE

AMK
3/16/10

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
12/714,204	02/26/2010	2858	1310	10254-US-CNT4(4214-01509)	13	4

CONFIRMATION NO. 6230

30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

FILING RECEIPT



Date Mailed: 03/11/2010

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Applicant(s)

Daniel M. FISCHER, Waterloo, CANADA;
Dan G. RADUT, Waterloo, CANADA;
Michael F. HABICHER, Cambridge, CANADA;
Quang A. LUONG, Kitchener, CANADA;
Jonathan T. MALTON, Kitchener, CANADA;

Assignment For Published Patent Application

RESEARCH IN MOTION LIMITED, Waterloo, CANADA

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 11/749,680 05/16/2007 PAT 7,453,233
which is a CON of 11/175,885 07/06/2005 PAT 7,239,111

This application 12/714,204
is a CON of 12/268,297 11/10/2008

and is a CON of 11/749,680 05/16/2007 PAT 7,453,233
which is a CON of 11/175,885 07/06/2005 PAT 7,239,111

Foreign Applications

which is a CON of 10/089,629 03/01/2002 PAT 6,936,936
and claims benefit of 60/293,021 03/01/2001
and claims benefit of 60/330,486 10/23/2001

If Required, Foreign Filing License Granted: 03/10/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/714,204**

Projected Publication Date: 06/17/2010

Non-Publication Request: No

Early Publication Request: No
Title

System and Method for Charging a Battery in a Mobile Device

Preliminary Class

320

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where

page 2 of 3

the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	10254-US-CNT4(4214-01509)
		Application Number	
Title of Invention	System and Method for Charging a Battery in a Mobile Device		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1					Remove
Applicant Authority		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Daniel	M.	FISCHER		
Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Waterloo	Country Of Residenceⁱ	CA		
Citizenship under 37 CFR 1.41(b) ⁱ		CA			
Mailing Address of Applicant:					
Address 1	295 Phillip Street				
Address 2					
City	Waterloo	State/Province	ON		
Postal Code	N2L 3W8	Countryⁱ	CA		
Applicant 2					Remove
Applicant Authority		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Dan	G.	RADUT		
Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Waterloo	Country Of Residenceⁱ	CA		
Citizenship under 37 CFR 1.41(b) ⁱ		CA			
Mailing Address of Applicant:					
Address 1	295 Phillip Street				
Address 2					
City	Waterloo	State/Province	ON		
Postal Code	N2L 3W8	Countryⁱ	CA		
Applicant 3					Remove
Applicant Authority		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Michael	F.	HABICHER		
Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Cambridge	Country Of Residenceⁱ	CA		

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	10254-US-CNT4(4214-01509)
		Application Number	
Title of Invention	System and Method for Charging a Battery in a Mobile Device		

Citizenship under 37 CFR 1.41(b) i	CA		
Mailing Address of Applicant:			
Address 1	295 Phillip Street		
Address 2			
City	Waterloo	State/Province	ON
Postal Code	N2L 3W8	Country ⁱ	CA

Applicant 4				<input type="button" value="Remove"/>
Applicant Authority	<input checked="" type="radio"/> Inventor	<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix
	Quang	A.	LUONG	
Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
City	Kitchener	Country Of Residence ⁱ	CA	
Citizenship under 37 CFR 1.41(b) i	CA			

Mailing Address of Applicant:				
Address 1	295 Phillip Street			
Address 2				
City	Waterloo	State/Province	ON	
Postal Code	N2L 3W8	Country ⁱ	CA	

Applicant 5				<input type="button" value="Remove"/>
Applicant Authority	<input checked="" type="radio"/> Inventor	<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix
	Jonathan	T.	MALTON	
Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
City	Kitchener	Country Of Residence ⁱ	CA	
Citizenship under 37 CFR 1.41(b) i	CA			

Mailing Address of Applicant:				
Address 1	295 Phillip Street			
Address 2				
City	Waterloo	State/Province	ON	
Postal Code	N2L 3W8	Country ⁱ	CA	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.				
<input type="button" value="Add"/>				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
<input type="checkbox"/> An Address is being provided for the correspondence Information of this application.	
Customer Number	30652
Petitioners Ex. 1002 IPR USP 7,834,586	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	10254-US-CNT4(4214-01509)
		Application Number	
Title of Invention	System and Method for Charging a Battery in a Mobile Device		

Email Address		<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>
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Application Information:

Title of the Invention	System and Method for Charging a Battery in a Mobile Device		
Attorney Docket Number	10254-US-CNT4(4214-01509)	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	4	Suggested Figure for Publication (if any)	2

Publication Information:

<input type="checkbox"/>	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/>	Request Not to Publish. I hereby request that the attached application not be published under 35 U.S. C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.			
Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	30652		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.					
Prior Application Status	Pending	<input type="button" value="Remove"/>			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
	Continuation of	12268297	2008-11-10		
Prior Application Status	Patented	<input type="button" value="Remove"/>			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12268297	Continuation of	11749680	2007-05-16	7459239	2008-10-05

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	10254-US-CNT4(4214-01509)		
		Application Number			
Title of Invention	System and Method for Charging a Battery in a Mobile Device				

Prior Application Status		Patented			<input type="button" value="Remove"/>
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11749680	Continuation of	11175885	2005-07-06	7239111	2007-07-03
Prior Application Status		Patented			<input type="button" value="Remove"/>
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11175885	Continuation of	10087629	2002-03-01	6936936	2005-08-30
Prior Application Status		Patented			<input type="button" value="Remove"/>
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
10087629	non provisional of	60273021	2001-03-01		
Prior Application Status		Patented			<input type="button" value="Remove"/>
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
10087629	non provisional of	60330486	2001-10-23		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					<input type="button" value="Add"/>

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).			
			<input type="button" value="Remove"/>
Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			<input type="radio"/> Yes <input checked="" type="radio"/> No
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			<input type="button" value="Add"/>

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.			
Assignee 1			<input type="button" value="Remove"/>
If the Assignee is an Organization check here. <input checked="" type="checkbox"/>			
Organization Name	Research In Motion Limited		
Mailing Address Information:			
Address 1	295 Phillip Street		
Address 2			
City	Waterloo	State/Province	ON
Country ⁱ	CA	Postal Code	N2L 3W8
Phone Number		Fax Number	
Email Address			

Petitioners Ex. 1002
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	10254-US-CNT4(4214-01509)
	Application Number	
Title of Invention	System and Method for Charging a Battery in a Mobile Device	

Additional Assignee Data may be generated within this form by selecting the **Add** button.

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/J. Robert Brown, Jr./		Date (YYYY-MM-DD)	2010-03-17	
First Name	J. Robert	Last Name	Brown, Jr.	Registration Number	45438

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	7231260
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	System and Method for Charging a Battery in a Mobile Device
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	30652
Filer:	J. Robert Brown/Karen Harris
Filer Authorized By:	J. Robert Brown
Attorney Docket Number:	10254-US-CNT4(4214-01509)
Receipt Date:	17-MAR-2010
Filing Date:	26-FEB-2010
Time Stamp:	17:08:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Preliminary Amendment	4214-01509_PreliminaryAmendment.pdf	70675 <small>3b8f9471b7fb508c962c1c83bc72f7bd8cde8622</small>	no	3

Warnings:

Information:

Petitioners Ex. 1002
IPR USP 7,834,586

2	Request for Corrected Filing Receipt	4214-01509_MarkedUpFilingReceipt.pdf	110628	no	3
			39378d761f41a939e3661fdd70623c1a0332be		

Warnings:

Information:

3	Application Data Sheet	4214-01509_SupplementalApplicationDataSheet.pdf	1325166	no	6
			25e4d4d66a7e90274c9c6a23f65f6c5f59374de		

Warnings:

Information:

Total Files Size (in bytes):			1506469		
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/714,204	Filing Date 02/26/2010	<input type="checkbox"/> To be Mailed
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APPLICATION AS FILED – PART I			OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	SMALL ENTITY <input type="checkbox"/>	OR			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =		OR	X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =			X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	(Column 3)		SMALL ENTITY	OR			
AMENDMENT	03/17/2010	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	* 13	Minus ** 20	= 0	X \$ =		OR	X \$52=	0
	Independent <small>(37 CFR 1.16(h))</small>	* 4	Minus ***4	= 0	X \$ =		OR	X \$220=	0
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

	(Column 1)	(Column 2)	(Column 3)		SMALL ENTITY	OR			
AMENDMENT	Total <small>(37 CFR 1.16(i))</small>	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	*	Minus	**	=	X \$ =		OR	X \$ =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	X \$ =		OR	X \$ =	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

Legal Instrument Examiner:
 /PAMELA ROGERS/

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/714,204	Filing Date 02/26/2010	<input type="checkbox"/> To be Mailed
---	---	----------------------------------	---------------------------------------

APPLICATION AS FILED – PART I			OTHER THAN SMALL ENTITY			
	(Column 1)	(Column 2)	SMALL ENTITY <input type="checkbox"/>	OR		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A		N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A		N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A		N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =		X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =		X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).					
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>						
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL		TOTAL	

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY			
	(Column 1)	(Column 2)	(Column 3)		SMALL ENTITY	OR		
AMENDMENT	03/17/2010	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	* 13	Minus ** 20	= 0	X \$ =		OR X \$52=	0
	Independent <small>(37 CFR 1.16(h))</small>	* 4	Minus ***4	= 0	X \$ =		OR X \$220=	0
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>							
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>							
					TOTAL ADD'L FEE		OR TOTAL ADD'L FEE	0

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY			
	(Column 1)	(Column 2)	(Column 3)		SMALL ENTITY	OR		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	*	Minus **	=	X \$ =		OR X \$ =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus ***	=	X \$ =		OR X \$ =	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>							
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>							
					TOTAL ADD'L FEE		OR TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
 /PAMELA ROGERS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**TERMINAL DISCLAIMER TO OBIVATE A PROVISIONAL DOUBLE PATENTING
REJECTION OVER A PENDING "REFERENCE" APPLICATION**

Docket Number (Optional)

10254-US-CNT4 (4214-01509)

In re Application of: Daniel M. Fischer, et al.

Application No.: 12/714,204

Filed: February 26, 2010

For: SYSTEM AND METHOD FOR CHARGING A BATTERY IN A MOBILE DEVICE

The owner*, Research In Motion Limited, of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending **reference** Application Number 12/268,297, filed on November 10, 2008, as such term is defined in 35 U.S.C. 154 and 173, and as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the **reference** application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of any patent granted on said **reference** application, "as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application," in the event that: any such patent: granted on the pending **reference** application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

Check either box 1 or 2 below, if appropriate.

1. For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

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

2. The undersigned is an attorney or agent of record. Reg. No. 45,438

Signature

Date

J. Robert Brown, Jr.

Typed or printed name

972/731-2288

Telephone Number

- Terminal disclaimer fee under 37 CFR 1.20(d) is included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this statement. See MPEP § 324.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal

Application Number:	12714204
Filing Date:	26-Feb-2010
Title of Invention:	System and Method for Charging a Battery in a Mobile Device
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Filer:	J. Robert Brown/Karen Harris
Attorney Docket Number:	10254-US-CNT4(4214-01509)

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Statutory disclaimer	1814	1	140	140
Total in USD (\$)				140

Electronic Acknowledgement Receipt

EFS ID:	7307014
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	System and Method for Charging a Battery in a Mobile Device
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	30652
Filer:	J. Robert Brown/Karen Harris
Filer Authorized By:	J. Robert Brown
Attorney Docket Number:	10254-US-CNT4(4214-01509)
Receipt Date:	29-MAR-2010
Filing Date:	26-FEB-2010
Time Stamp:	16:07:13
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$140
RAM confirmation Number	2765
Deposit Account	501515
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Petitioners Ex. 1002
IPR USP 7,834,586

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer Filed	4214-01509_TerminalDisclaimer.pdf	51350 21ab30812babde7252bd825c71e21070e5e96642	no	1

Warnings:

Information:

2	Fee Worksheet (PTO-875)	fee-info.pdf	30240 fd5dce8b90678f01088cb6198f9b8160fd66b188	no	2
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Warnings:

Information:

Total Files Size (in bytes): 81590

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New Applications Under 35 U.S.C. 111


If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Application Number 	Application/Control No. 12714204	Applicant(s)/Patent Under Reexamination FISCHER ET AL.
Document Code - DISQ		Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	<input type="checkbox"/> APPROVED	<input checked="" type="checkbox"/> DISAPPROVED
Date Filed: 03/29/2010	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:	
karen c.	Attorney not of record.

U.S. Patent and Trademark Office

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**CHANGE OF
CORRESPONDENCE ADDRESS
Application**Address to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	12/714,204
Filing Date	February 26, 2010
First Named Inventor	Daniel M. Fischer
Art Unit	2858
Examiner Name	Unknown
Attorney Docket Number	10254-US-CNT4 4214-01509

Please change the Correspondence Address for the above-identified patent application to:

 The address associated with
Customer Number:

30652

OR Firm or
Individual Name

Address

City

State

Zip

Country

Telephone

Email

This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).

I am the:

- Applicant/Inventor
- Assignee of record of the entire interest.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).
- Attorney or agent of record. Registration Number 45,438.
- Registered practitioner named in the application transmittal letter in an application without an executed oath or declaration. See 37 CFR 1.33(a)(1). Registration Number _____.

Signature /J. Robert Brown, Jr./

Typed or Printed Name J. Robert Brown, Jr.

Date May 10, 2010

Telephone 972-731-2288

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

 *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Petitioners Ex. 1002**IPR USP 7,834,586****Page 125 of 295**

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

 Practitioners associated with the Customer Number:

30652

OR

 Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

 The address associated with Customer Number:

30652

OR

<input type="checkbox"/> Firm or Individual Name	Conley Rose, P.C.		
Address			
City	State	Zip	
Country			
Telephone	Email		


Assignee Name and Address:

Research In Motion Limited
 295 Phillip Street
 Waterloo, Ontario, CANADA N2L 3W8

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	March 23/09
Name	Jim Balsillie	Telephone	519-888-7465
Title	CO-CEO		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Legal OK

Petitioners Ex. 1002

IPR USP 7,834,586

Page 126 of 295

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Research In Motion Limited

Application No./Patent No.: 6,936,936 B2 Filed/Issue Date: August 30, 2005

Titled: **MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD**

Research In Motion Limited, a Corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

- 1. the assignee of the entire right, title, and interest in;
- 2. an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or
- 3. the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 013155, Frame 0301, or for which a copy therefore is attached.

OR

B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/J. Robert Brown, Jr./
Signature

May 10, 2010
Date

J. Robert Brown, Jr.
Printed or Typed Name

Attorney of Record
Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THE ADDRESS ABOVE. TO THE COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450.

Revisions Ex. 1002

IPR USP 7,834,586

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	7581362
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	System and Method for Charging a Battery in a Mobile Device
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	30652
Filer:	J. Robert Brown/Karen Harris
Filer Authorized By:	J. Robert Brown
Attorney Docket Number:	10254-US-CNT4(4214-01509)
Receipt Date:	10-MAY-2010
Filing Date:	26-FEB-2010
Time Stamp:	15:44:07
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Change of Address	4214-01509_ChangeCorrespondenceAddress.pdf	324803 <small>2b0354327b2a74fb76a8192a016112e8ba04151c</small>	no	1

Warnings:

Information:

Petitioners Ex. 1002
IPR USP 7,834,586

2	Power of Attorney	4214-00000_ConleyRoseGeneralPowerofAttorney.PDF	302990	no	2
			6c0ed75960c1475cb15fdd7289f43d98e246944a		

Warnings:

Information:

3	Assignee showing of ownership per 37 CFR 3.73(b).	4214-01509_AssigneeStatement373.pdf	477323	no	2
			de656528264b2243cb083cef9b8c083308ec4d10		

Warnings:

Information:

Total Files Size (in bytes):			1105116		
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
12/714,204 02/26/2010 Daniel M. FISCHER 10254-US-CNT4(4214-01509) 6230

30652 7590 05/14/2010
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

EXAMINER

TSO, EDWARD H

ART UNIT PAPER NUMBER

2858

MAIL DATE DELIVERY MODE

05/14/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office

Address : COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
12714204 01509)	2/26/2010	FISCHER ET AL.	10254-US-CNT4(4214-

CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

EXAMINER

Edward Tso

ART UNIT	PAPER
2858	20100508

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

The Terminal Disclaimer filed 3/29/2010 is disapproved because the attorney Robert Brown is NOT of record. A power of attorney is needed.

/Edward Tso/
Primary Examiner, Art Unit 2858


UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

BIB DATA SHEET
CONFIRMATION NO. 6230

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
12/714,204	02/26/2010	320	2858 10254	US-CNT4(4214-01509)		
APPLICANTS						
Daniel M. FISCHER, Waterloo, CANADA; Dan G. RADUT, Waterloo, CANADA; Michael F. HABICHER, Cambridge, CANADA; Quang A. LUONG, Kitchener, CANADA; Jonathan T. MALTON, Kitchener, CANADA;						
** CONTINUING DATA *****						
This application is a CON of 11/749,680 05/16/2007 PAT 7,453,233 which is a CON of 11/175,885 07/06/2005 PAT 7,239,111 This application 12/714,204 02/26/2010 is a CON of 12/268,297 11/10/2008 and is a CON of 11/749,680 05/16/2007 PAT 7,453,233 which is a CON of 11/175,885 07/06/2005 PAT 7,239,111						
** FOREIGN APPLICATIONS *****						
** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 03/10/2010						
Foreign Priority claimed 35 USC 119(a-d) conditions met Verified and Acknowledged	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No /EDWARD H TSO/ Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY CANADA	SHEETS DRAWINGS 4	TOTAL CLAIMS 13	INDEPENDENT CLAIMS 4
ADDRESS						
CONLEY ROSE, P.C. 5601 GRANITE PARKWAY, SUITE 750 PLANO, TX 75024 UNITED STATES						
TITLE						
System and Method for Charging a Battery in a Mobile Device						
FILING FEE RECEIVED 1310	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit			

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TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION	Docket Number (Optional) 10254-US-CNT4 (4214-01509)
---	--

In re Application of: Daniel M. Fischer, et al.

Application No.: 12/714,204

Filed: February 26, 2010

For: SYSTEM AND METHOD FOR CHARGING A BATTERY IN A MOBILE DEVICE

The owner*, Research In Motion Limited, of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending **reference** Application Number 12/268,297, filed on November 10, 2008, as such term is defined in 35 U.S.C. 154 and 173, and as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the **reference** application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

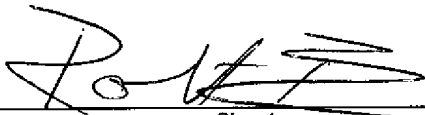
In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of any patent granted on said **reference** application, "as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application," in the event that: any such patent: granted on the pending **reference** application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

Check either box 1 or 2 below, if appropriate.

1. For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

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

2. The undersigned is an attorney or agent of record. Reg. No. 45,438



Signature

May 25, 2010
Date

J. Robert Brown, Jr.
Typed or printed name

972/731-2288
Telephone Number

- Terminal disclaimer fee under 37 CFR 1.20(d) is included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this statement. See MPEP § 324.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	7686969
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	System and Method for Charging a Battery in a Mobile Device
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	30652
Filer:	J. Robert Brown/Karen Harris
Filer Authorized By:	J. Robert Brown
Attorney Docket Number:	10254-US-CNT4(4214-01509)
Receipt Date:	25-MAY-2010
Filing Date:	26-FEB-2010
Time Stamp:	19:14:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer Filed	4214-01509_TerminalDisclaime r052510.pdf	51252 <small>271b84387e2a48427a6c34a74dae94421ee943d7</small>	no	1

Warnings:

Information:

Petitioners Ex. 1002
IPR USP 7,834,586

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111


If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

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Application Number 	Application/Control No. 12/714,204	Applicant(s)/Patent under Reexamination FISCHER ET AL.

Document Code - DISQ	Internal Document – DO NOT MAIL
-----------------------------	--

TERMINAL DISCLAIMER	<input type="checkbox"/> APPROVED	<input checked="" type="checkbox"/> DISAPPROVED
Date Filed : 5/25/10	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by: Janice Ford note terminal disclaimer checklist
--

TERMINAL DISCLAIMER INFORMAL CHECKLIST

APPL. S.N.: 12/714,204

DATE: 6/9/2010

EXAMINER:

ART UNIT:

PARALEGAL: /JANICE M. FORD/

MAIL ROOM DATE: 5/25/2010

NUMBER OF TD(s) FILED: 1

INSTRUCTIONS: The paralegal has reviewed the submitted TD with the results as set forth below.

If you agree, please use the appropriate form paragraphs identified by this informal memo in your next Office action to notify applicant about the TD. If you disagree, please contact a QAS.

THIS CHECKLIST IS AN INFORMAL, INTERNAL CHECKLIST ONLY. IT MUST NOT BE MAILED TO APPLICANT. IT WILL BE SOFT SCANNED AND NOT VIEWABLE TO THE PUBLIC.

- The TD is PROPER and has been accepted and recorded. (See FP 14.23.)
- The TD is NOT PROPER and has not been accepted for the reason(s) checked below. (See FP 14.24.)
- The disclaimer fee under 37 CFR 1.20(d) in the amount of \$ _____ has not been submitted, nor is there any pre authorization in the application to charge to a deposit account. (See FP 14.24 and 14.26.07.)
- The LIE has not processed fee for TD (the Paralegal should ask LIE to process the fee).
- The TD does not satisfy 37 CFR 1.32(b) (3) in that the person who signed the TD has not stated either: (a) the extent of his/her ownership interest, or (b) the extent of the business/organization entity's ownership interest on whose behalf the person signed. (See FPs 14.26 and 14.26.01.)
- The TD lacks the – enforceable only during the period of common ownership – clause needed to overcome a double patenting 37 CFR 1.321(c). (See FP 14.27.01).
- The TD lacks 37 CFR 1.321(d) statement for joint research agreement under 35 U.S.C. 103(c) (2) & (3). It doesn't include the waiver and enforceability provisions of 37 CFR 1.321(d). (See FP 14.27.011.)
- TD is directed to a particular claim(s); this is not acceptable, since the disclaimer must be of a terminal portion of the entire patent to be granted, MPEP 1490. (See FPs 14.26 and 14.26.02).
- The person who signed the terminal disclaimer:
- failed to state his/her capacity to sign for the business/organization entity. (See FP 14.28.)
- is not recognized as an officer of the assignee. (See FP 14.29.)
- does not have power of attorney, and thus, is not of record. (See FP 14.29.01.)

(Note: PoA can be given to a customer number, wherein all practitioners listed under the customer number have PoA. If PoA is established by a list of practitioners, the list may not comprise more than 10 practitioners. A representative of the assignee, who is not of record, cannot sign the TD unless it is established that the representative is a party authorized to act on behalf of the assignee.)

- The TD is not supported by evidence of chain of title to the assignee signing the TD due to a failure to submit either: (a) documentary evidence of a chain of title from the original inventor(s) to the assignee and a statement affirming that the documentary evidence was, or concurrently is being, submitted for recordation; or (b) the reel and frame number(s) where such documentary evidence is recorded in the Office. 37 CFR 3.73(b). (See FPs 14.30 and 14.34)

NOTE: This documentary evidence or the specifying of the reel and frame number may be found in the TD or in a separate paper submitted by applicant.)

- The TD is not supported by adequate evidence of chain of title to the assignee signing the TD, because the person who signed the submission under 37 CFR 3.73(b):
- has failed to state his/her capacity to sign for the business entity. (See FPs 14.30.02 and 14.16.02)
 - is not recognized as an officer of the assignee. (See FP 14.30.02 and 14.16.03)

(Note: On the submission under 37 CFR 3.73(b), the signature of an attorney or agent registered to practice before the Office is not sufficient, unless the attorney or agent is authorized to act on behalf of the assignee.)

- The TD is not signed (See FPs 14.26 and 14.26.03)
- The serial number of the application (or the number of the patent) which forms the basis for the double patenting is not identified (i.e., missing or incorrect) in the TD. (See FP 14.32)
- The serial number of the application being examined (or the number of the patent under reexam or reissue) is not identified or incorrect. (See FPs 14.26 and 14.26.04 or 14.26.05)
- The TD is not signed by all owners. See FPs 14.26 and 14.26.06.
- The period disclaimed is incorrect or not specified. (See FPs 14.24, 14.27.02 or 14.27.03)
- Other Title on 3.73(b) statement different from title on terminal.



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Table with 4 columns: APPLICATION NUMBER, FILING OR 371(C) DATE, FIRST NAMED APPLICANT, ATTY. DOCKET NO./TITLE. Row 1: 12/7/14,204, 02/26/2010, Daniel M. FISCHER, 10254-US-CNT4(4214-01509)

CONFIRMATION NO. 6230

PUBLICATION NOTICE

30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024



Title: System and Method for Charging a Battery in a Mobile Device

Publication No. US-2010-0148724-A1
Publication Date: 06/17/2010

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/714,204, 02/26/2010, 2858, 1310, 10254-US-CNT4(4214-01509), 13, 4

CONFIRMATION NO. 6230

CORRECTED FILING RECEIPT



30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

Date Mailed: 07/02/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

- Daniel M. FISCHER, Waterloo, CANADA;
Dan G. RADUT, Waterloo, CANADA;
Michael F. HABICHER, Cambridge, CANADA;
Quang A. LUONG, Kitchener, CANADA;
Jonathan T. MALTON, Kitchener, CANADA;

Assignment For Published Patent Application

RESEARCH IN MOTION LIMITED, Waterloo, CANADA

Power of Attorney: The patent practitioners associated with Customer Number 60909

Domestic Priority data as claimed by applicant

This application is a CON of 12/268,297 11/10/2008 PAT 7,737,657
which is a CON of 11/749,680 05/16/2007 PAT 7,453,233
which is a CON of 11/175,885 07/06/2005 PAT 7,239,111
which is a CON of 10/087,629 03/01/2002 PAT 6,936,936
which claims benefit of 60/273,021 03/01/2001
and claims benefit of 60/330,486 10/23/2001

Foreign Applications

If Required, Foreign Filing License Granted: 03/10/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/714,204

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No
Title

System and Method for Charging a Battery in a Mobile Device

Preliminary Class

320

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



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United States Patent and Trademark Office
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www.uspto.gov

Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/714,204, 02/26/2010, 2858, 1310, 10254-US-CNT4(4214-01509), 13, 4

CONFIRMATION NO. 6230

REPLACEMENT FILING RECEIPT



30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

Date Mailed: 07/02/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

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Quang A. LUONG, Kitchener, CANADA;
Jonathan T. MALTON, Kitchener, CANADA;

Assignment For Published Patent Application

RESEARCH IN MOTION LIMITED, Waterloo, CANADA

Power of Attorney: The patent practitioners associated with Customer Number 60909

Domestic Priority data as claimed by applicant

This application is a CON of 12/268,297 11/10/2008 PAT 7,737,657
which is a CON of 11/749,680 05/16/2007 PAT 7,453,233
which is a CON of 11/175,885 07/06/2005 PAT 7,239,111
which is a CON of 10/087,629 03/01/2002 PAT 6,936,936
which claims benefit of 60/273,021 03/01/2001
and claims benefit of 60/330,486 10/23/2001

Foreign Applications

If Required, Foreign Filing License Granted: 03/10/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/714,204

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No
Title

System and Method for Charging a Battery in a Mobile Device

Preliminary Class

320

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where

the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
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Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/714,204, 02/26/2010, 2858, 1310, 10254-US-CNT4(4214-01509), 13, 4

CONFIRMATION NO. 6230

CORRECTED FILING RECEIPT



30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

Date Mailed: 07/06/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

- Daniel M. FISCHER, Waterloo, CANADA;
Dan G. RADUT, Waterloo, CANADA;
Michael F. HABICHER, Cambridge, CANADA;
Quang A. LUONG, Kitchener, CANADA;
Jonathan T. MALTON, Kitchener, CANADA;

Assignment For Published Patent Application

RESEARCH IN MOTION LIMITED, Waterloo, CANADA

Power of Attorney: The patent practitioners associated with Customer Number 30652

Domestic Priority data as claimed by applicant

This application is a CON of 12/268,297 11/10/2008 PAT 7,737,657
which is a CON of 11/749,680 05/16/2007 PAT 7,453,233
which is a CON of 11/175,885 07/06/2005 PAT 7,239,111
which is a CON of 10/087,629 03/01/2002 PAT 6,936,936
which claims benefit of 60/273,021 03/01/2001
and claims benefit of 60/330,486 10/23/2001

Foreign Applications

If Required, Foreign Filing License Granted: 03/10/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/714,204

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No
Title

System and Method for Charging a Battery in a Mobile Device

Preliminary Class

320

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CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

MAILED

JUL 15 2010

OFFICE OF PETITIONS

In re Application of	:	
Daniel M. Fischer, et. al.	:	
Application No. 12/714,204	:	DECISION UNDER 37 CFR 1.47(a)
Filed: February 26, 2010	:	
Attorney Docket No. 10254-US-CNT4	:	
(4214-01509)	:	

This is in response to the petition under 37 CFR 1.47(a) filed February 26, 2010.

As Rule 1.47(a) status was granted in prior Application No. 10/087,629, this application is hereby accorded Rule 1.47(a) status. Therefore, since no petition is necessary to accord 1.47(a) status in this application, the petition is **dismissed as moot**.

As provided in Rule 1.47(c), since notice was provided after the grant of Rule 1.47(a) status in the prior application, the Office is dispensing with the notice provision in this continuation application.

This application file is being referred to Technology Center Art Unit 2858 for examination in due course.

Telephone inquiries regarding this decision should be directed to the undersigned at (571) 272-3226.

Andrea Smith
Petitions Examiner
Office of Petitions



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Commissioner for Patents
United States Patent and Trademark Office
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Dan G. Radut
300 Regina Street, North
Building 1, Apt. 1207
Waterloo, Ontario N2J 3B8
CANADA

MAILED

JUL 15 2010

OFFICE OF PETITIONS

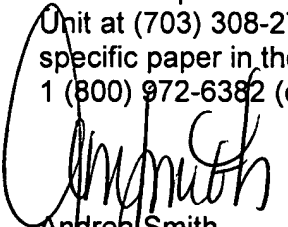
In re Application of
Daniel M. Fischer, et. al.
Application No. 12/714,204
Filed: February 26, 2010
For: SYSTEM AND METHOD FOR CHARGING A BATTERY IN A MOBILE DEVICE

Dear Mr. Radut:

You are named as a joint inventor in the above-identified United States patent application, filed under the provisions of 35 U.S.C. 116 (United States Code), and 37 CFR 1.47(a), Rules of Practice in Patent Cases. Should a patent be granted on the application you will be designated therein as a joint inventor.

As a named inventor you are entitled to inspect any paper in the file wrapper of the application, order copies of all or any part thereof (at a prepaid cost per 37 CFR 1.19) or make your position of record in the application. Alternatively, you may arrange to do any of the preceding through a registered patent attorney or agent presenting written authorization from you. If you care to join the application, counsel of record (see below) would presumably assist you. Joining the application would entail the filing of an appropriate oath or declaration by you pursuant to 37 CFR 1.63.

Telephone inquiries regarding this communication should be directed to the undersigned at (571) 272-3226. Requests for information regarding your application should be directed to the File Information Unit at (703) 308-2733. Information regarding how to pay for and order a copy of the application, or a specific paper in the application, should be directed to the Certification Division at (571) 272-3150 or 1 (800) 972-6382 (outside the Washington, DC area).



Andrea Smith
Petitions Examiner
Office of Petitions

cc: CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

12/714,204 02/26/2010 Daniel M. FISCHER 10254-US-CNT4(4214-01509) 6230

30652 7590 08/05/2010
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

EXAMINER

TSO, EDWARD H

ART UNIT PAPER NUMBER

2858

MAIL DATE DELIVERY MODE

08/05/2010 PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 12/714,204	Applicant(s) FISCHER ET AL.	
	Examiner Edward Tso	Art Unit 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-13 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. ____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/26/2010</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

The IDS filed 2/26/2010 has been considered and placed of record. An initialed copy is attached herewith.

Specification

The disclosure should be carefully reviewed to ensure that any and all grammatical, idiomatic, and spelling or other minor errors are corrected.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

Art Unit: 2858

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-13 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 7,737,657.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the pending claims are broader and would have encompassed the claimed subject matter of the patent. Moreover, some the pending claims are different variations of the patent claims.

Allowable Subject Matter

Claims 1-13 would be allowable if accompanied by an approved Terminal Disclaimer. The most recent filed TD on 5/25/2010 has been disapproved because the "Title on 3.73(b) statement different from title on terminal."

Conclusion

Any inquiry concerning this communication should be directed to the Examiner at the below-listed number. The Examiner can normally be reached on Tue-Thu and Sat from 8:00am-6:00pm.

The Examiner's SPE is Patrick Assouad and he can be reached at 571.272.2210. The fax number for the organization where this application is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800.786.9199 (IN USA OR CANADA) or 571.272.1000.

By: /Edward H Tso/
EDWARD H TSO
Primary Examiner, AU 2858
571.272.2087

Notice of References Cited	Application/Control No. 12/714,204	Applicant(s)/Patent Under Reexamination FISCHER ET AL.	
	Examiner Edward Tso	Art Unit 2858	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-2006/0181241	08-2006	Veselic, Dusan	320/107
*	B US-2007/0108938	05-2007	Veselic, Dusan	320/111
*	C US-2009/0128091	05-2009	Purdy et al.	320/106
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N				
	O				
	P				
	Q				
	R				
	S				
	T				

NON-PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)				
	U				
	V				
	W				
	X				

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Receipt date: 02/26/2010

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12/714,204
	Filing Date		2/26/2010
	First Named Inventor	Daniel M. Fischer	
	Art Unit		2858
	Examiner Name	Tso, e	
	Attorney Docket Number		10254-US-CNT4 4214-01509

U.S.PATENTS							Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	
	1	3775659		1973-11-27	Carlsen, II		
	2	4433251		1984-02-21	Banks, et al.		
	3	4510431		1985-04-09	Winkler		
	4	5173855		1992-12-22	Nielsen, et al.		
	5	5229649		1993-07-20	Nielsen, et al.		
	6	5272475		1993-12-21	Eaton, et al.		
	7	5444378		1995-08-22	Rogers		
	8	5631503		1997-05-20	Cioffi		

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH BY PETITIONERS

Petitioners Ex. 1002

IPR USP 7,834,586

Page 159 of 295

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12/714,204	
	Filing Date		2/26/2010	
	First Named Inventor	Daniel M. Fischer		
	Art Unit		2858	
	Examiner Name	Tso, e		
	Attorney Docket Number		10254-US-CNT4 4214-01509	

9	5638540		1997-06-10	Aldous	
10	5651057		1997-07-22	Blood, et al.	
11	5769877		1998-06-23	Barreras, Sr.	
12	5850113		1998-12-15	Weimer, et al.	
13	5939860		1999-08-17	William	
14	6006088		1999-12-21	Couse	
15	6104162		2000-08-15	Sainsbury, et al.	
16	6104759		2000-08-15	Carkner, et al.	
17	6130518		2000-10-10	Gabehart, et al.	
18	6138242		2000-10-24	Massman, et al.	
19	6184652		2001-02-06	Yang	

Petitioners Ex. 1002

Receipt date: 02/26/2010 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12/714,204	
	Filing Date		2/26/2010	
	First Named Inventor	Daniel M. Fischer		
	Art Unit		2858	
	Examiner Name	Tso, e		
	Attorney Docket Number		10254-US-CNT4 4214-01509	

	20	6211649		2001-04-03	Matsuda	
	21	6252375		2001-06-26	Richter, et al.	
	22	6255800		2001-07-03	Bork	
	23	6283789	B1	2001-09-04	Tsai	
	24	6397696	B2	2002-06-04	Ogami	
	25	6668296	B1	2003-12-23	Dougherty, et al.	
	26	6738856	B2	2004-05-18	Milley, et al.	
	27	7170259	B2	2007-01-30	Veselic	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button.

Petitioners Ex. 1002

Receipt date: 02/26/2010 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12/714, 204	
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	Art Unit		2858	
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	Attorney Docket Number		10254-US-CNT4 4214-01509	

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² ;	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	0684680	EP	B1	1999-07-28	Nokia Mobile Phones, Ltd.		<input type="checkbox"/>
	2	200101330	WO	A1	2001-01-04	Cross Match Technologies, Inc.		<input type="checkbox"/>
	3	1198049	EP	A1	2002-04-17	Sony International		<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Electric Double-Layer Capacitors, Vol. 2, Japan, Tokin Corporation, Cat. No. EC-200E, October 25, 1996, 40 pgs.	<input type="checkbox"/>
	2	Supercapacitor: User's Manual, Vol. 2, Japan, Tokin Corporation, January 1997, 47 pgs.	<input type="checkbox"/>
	3	Charging Big Supercaps, Portable Design, March 1997, page 26.	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/Edward Tso/	Date Considered	7/2010
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /ET/ **Petitioners Ex. 1002**

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12/714,204
	Filing Date		2/26/2010
	First Named Inventor	Daniel M. Fischer	
	Art Unit		2858
	Examiner Name	Tso, e	
	Attorney Docket Number		10254-US-CNT4 4214-01509

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /ET/

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	("7737657").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/07/30 20:31
L2	185976	USB or ("universal serial bus")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:41
L3	799691	wireless	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:41
L4	52	v-bus	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:41
L5	2233	v adj2 bus	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:41
L6	2496720	charg\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:42
L7	1115117	battery	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:42
L8	1078139	identification	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:42

L9	1191529	mobile	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:42
L10	5138	D+	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:42
L11	9319552	D-	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:42
L12	3	2 and 3 and 5 and 6 and 7 and 8 and 9 and 10 and 11	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:42
L13	20495	fisher.in. or radut.in. or habicher.in. or luong.in. malton.in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:43
L14	20495	fisher.in. or radut.in. or habicher.in. or luong.in. or malton. in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:43
L15	2	12 and 14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:44
L16	70	2 and 3 and 6 and 7 and 8 and 9 and 10 and 11	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:44
L17	14	16 and 14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:44


L18	84866	H02J007/\$.ipc. OR H02J7/\$.ipcr.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:58
L19	135154	H01M010/\$.ipc. OR H01M10/\$.ipcr.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:58
L20	195916	18 or 19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:58
L21	37	16 and 20	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/07/30 20:58

EAST Search History (Interference)

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7/30/2010 8:59:09 PM

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Index of Claims 	Application/Control No. 12714204	Applicant(s)/Patent Under Reexamination FISCHER ET AL.
	Examiner Edward Tso	Art Unit 2858

✓	Rejected
=	Allowed


-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	07/30/2010							
	1	✓							
	2	✓							
	3	✓							
	4	✓							
	5	✓							
	6	✓							
	7	✓							
	8	✓							
	9	✓							
	10	✓							
	11	✓							
	12	✓							
	13	✓							

Search Notes 	Application/Control No. 12714204	Applicant(s)/Patent Under Reexamination FISCHER ET AL.
	Examiner Edward Tso	Art Unit 2858

SEARCHED			
Class	Subclass	Date	Examiner
320	107, 111, 114, 140		

SEARCH NOTES		
Search Notes	Date	Examiner
text search	7/2010	et
foreign IPC search	7/2010	et
inventor search	7/2010	et
parent case considered for DP	7/2010	et

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Daniel M. Fischer, et al.	§	
	§	Group Art Unit: 2858
Application No.: 12/714,204	§	
	§	Examiner: Tso, Edward H
Filed: February 26, 2010	§	
	§	Confirmation: 6230
For: SYSTEM AND METHOD FOR	§	
CHARGING A BATTERY IN A MOBILE	§	
DEVICE	§	

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF EFS-WEB TRANSMISSION

Pursuant to 37 C.F.R. §1.8, I hereby certify that this correspondence is being electronically submitted to the U.S. Patent and Trademark Office website, www.uspto.gov, on:

8/20/10

 Date of Transmission

 Susan Caglagis

RESPONSE TO OFFICE ACTION

Sir:

In response to the Office Action mailed August 5, 2010, Applicants respectfully request that the Examiner enter the following amendments and consider the remarks that follow.

Amendments to the Specification begin on page 2 of this paper.

A Listing of Claims begin on page 3 of this paper.

Remarks begin on page 7 of this paper.

AMENDMENTS TO THE SPECIFICATION

Please amend the title as follows:

~~System and Method for Charging a Battery in a Mobile Device~~

Multifunctional Charger System and Method

LISTING OF CLAIMS

1. (Original) A mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:

a Universal Serial Bus ("USB") interface configured to allow reception of a USB cable;

a charging subsystem, the charging subsystem operably connected to the USB interface V-bus power line;

the charging subsystem operably connectable to a battery, and configured to charge a battery if a battery is operably connected;

the charging system further configured to use power from the V-bus power line for the charging of a battery; and,

where the mobile device is configured to detect an identification signal at a D+ and a D- data line of the USB interface, the identification signal being different than USB enumeration.

2. (Original) The mobile device of claim 1 wherein the identification signal comprises a voltage level that is applied to at least one data line in the USB connector.

3. (Original) The mobile device of claim 1 wherein the identification signal is a result of using a resistance between the D+ and D- data lines.

4. (Original) The mobile device of claim 1 wherein the identification subsystem comprises a hard-wired connection of a voltage level to one or more data lines in the USB connector.

5. (Original) A mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:

a Universal Serial Bus ("USB") interface configured to allow reception of a USB cable;

a charging subsystem, the charging subsystem operably connected to the USB interface V-bus power line;

the charging subsystem operably connectable to a battery, and configurable to charge a battery;

the charging system further configured to use power from the V-bus power line for the charging of a battery;

where data lines D+ and D- at the USB interface are configured to receive signals;

a microprocessor and memory usable to process the received signals, configured such that before USB enumeration an identification signal received at the D+ and D- lines indicating a charging connection is available is recognized by the device.

6. (Original) The mobile device of claim 5 wherein the identification signal comprises a voltage level that is applied to at least one data line in the USB connector.

7. (Original) The mobile device of claim 5 wherein the identification signal is a result of using a resistance between the D+ and D- data lines.

8. (Original) A method of charging a battery in a mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:

providing a Universal Serial Bus ("USB") interface configured to allow reception of a USB cable, and, receiving power on a V-bus power line at the USB interface;

providing an operable connection between the power received at the USB interface on the V-bus power line and a charging subsystem;

having a battery in operable connection to the charging subsystem;

providing power to the battery using the charger subsystem; and,

detecting an identification signal at a D+ and a D- data line of the USB interface, the identification signal being different than USB enumeration.

9. (Original) The method claim 8 wherein the identification signal comprises a voltage level at least one data line in the USB connector.

10. (Original) The method claim 8 wherein the identification signal is a result of using a resistance between the D+ and D- data lines.

11. (Original) A method for charging a battery in a mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:

- providing a Universal Serial Bus ("USB") interface configured to allow reception of a USB cable, and, to receiving power on a V-bus power line at the USB interface;
- providing an operable connection between the power received at the USB interface on the V-bus power line and a charging subsystem;
- having a battery in operable connection to the charging subsystem;
- providing power to the battery using the charger subsystem in one of a plurality of charge modes;
- using a microprocessor and memory to process the signals received on the USB interface data lines, such that an identification signal received at the D+ and D- lines indicating a charging connection is available is recognized by the device.

12. (Original) The method claim 11 wherein the identification signal comprises a voltage level at least one data line in the USB connector.

13. (Original) The method claim 11 wherein the identification signal is a result of using a resistance between the D+ and D- data lines.

REMARKS

Claims 1-13 are pending. No claims are amended, canceled, or added. The Office Action indicates that the claims are allowable. However the Office Action rejected the terminal disclaimer that was submitted to overcome the asserted obviousness-type double patenting rejections over claims 1-12 of U.S. Patent 7,737,657. Applicants thank the Examiner for the indication of allowability.

The previously resubmitted terminal disclaimer submitted on May 25, 2010 was disapproved because it was asserted that the title on the 3.73(b) statement was different than the title on terminal disclaimer. The title on the rejected terminal disclaimer was "SYSTEM AND METHOD FOR CHARGING A BATTERY IN A MOBILE DEVICE." The title that appears on the "Statement Under 37 C.F.R. § 3.73(b)" is "MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD."

In order to ensure that the two titles are the same, Applicants respectfully request that this amendment be entered in order to change the title of the present application to match the title in the "Statement Under 37 C.F.R. § 3.73(b)." Once the titles are the same, the newly submitted terminal disclaimer filed with this response should be entered, and the application should proceed to allowance. Should the Examiner require anything further in order to advance this application to allowance, Applicants respectfully request that the Examiner contact the undersigned attorney.

CONCLUSION

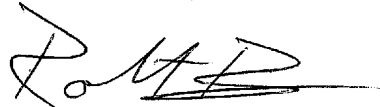
The Applicants respectfully submit that the present application as amended is in condition for examination and allowance. If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting examination of the application, he is encouraged to telephone the undersigned at (972) 731-2288. The Commissioner is hereby authorized to charge payment of any fee associated with any of the papers submitted herewith to Deposit Account No. 50-1515, Conley Rose, P.C.

Date: 8-19-10

5601 Granite Parkway, Suite 750
Plano, Texas 75024
Telephone: (972) 731-2288
Facsimile: (972) 731-2289

Respectfully submitted,

CONLEY ROSE, P.C.



J. Robert Brown, Jr.
Reg. No. 45,438

ATTORNEY FOR APPLICANTS

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**TERMINAL DISCLAIMER TO OBIVATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**Docket Number (Optional)
10254-US-CNT4 (4214-01509)

In re Application of: Daniel M. Fischer, et al.

Application No.: 12/714,204

Filed: February 26, 2010

For: MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD

The owner*, Research In Motion Limited, of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term **prior patent** No. 7,737,657 B2 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

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

2. The undersigned is an attorney or agent of record. Reg. No. 45,438

/J. Robert Brown, Jr./
Signature

August 19, 2010
Date

J. Robert Brown, Jr.
Typed or printed name

972/731-2288
Telephone Number

- Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Petitioners Ex. 1002

IPR USP 7,834,586

Page 177 of 295

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	8259336
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	System and Method for Charging a Battery in a Mobile Device
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	30652
Filer:	J. Robert Brown/Susan Caglagis
Filer Authorized By:	J. Robert Brown
Attorney Docket Number:	10254-US-CNT4(4214-01509)
Receipt Date:	20-AUG-2010
Filing Date:	26-FEB-2010
Time Stamp:	17:58:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		4214-01509- ResponseToOfficeActionDated 080510.pdf	277510 <small>5298ad5e6d00f6c53f79b25c773f7af391bf0 8a5</small>	yes	8

Multipart Description/PDF files in .zip description			
Document Description	Start	End	
Amendment/Req. Reconsideration-After Non-Final Reject	1	1	
Specification	2	2	
Claims	3	6	
Applicant Arguments/Remarks Made in an Amendment	7	8	

Warnings:

Information:

2	Terminal Disclaimer Filed	4214-01509_TerminalDisclaime r081910.pdf	210754 <small>42aa4051cabb8024e2cd8ee6c5dc3d09a377dee1</small>	no	2
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Warnings:

Information:

Total Files Size (in bytes):			488264
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/714,204	Filing Date 02/26/2010	<input type="checkbox"/> To be Mailed
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APPLICATION AS FILED – PART I			OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	SMALL ENTITY <input type="checkbox"/>	OR			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =		OR	X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =			X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	(Column 3)						
AMENDMENT	08/20/2010	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	* 13	Minus ** 20	= 0	X \$ =		OR	X \$52=	0
	Independent <small>(37 CFR 1.16(h))</small>	* 4	Minus ***4	= 0	X \$ =		OR	X \$220=	0
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

	(Column 1)	(Column 2)	(Column 3)						
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	*	Minus **	=	X \$ =		OR	X \$ =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus ***	=	X \$ =		OR	X \$ =	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.


Legal Instrument Examiner:
 /JACQUELINE E. COUPLIN/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
 If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Document code: WFEE

United States Patent and Trademark Office
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JCOUPLI1 SALE #00000001 Mailroom Dt: 08/20/2010 501515 12714204
01 FC : 1814 140.00 DA

Application Number 	Application/Control No. 12/714,204	Applicant(s)/Patent under Reexamination FISCHER ET AL.

Document Code - DISQ	Internal Document – DO NOT MAIL
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TERMINAL DISCLAIMER	<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> DISAPPROVED
Date Filed : August 19, 2010	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by: Henry D. Jefferson



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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NOTICE OF ALLOWANCE AND FEE(S) DUE

30652 7590 09/07/2010

CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

EXAMINER: TSO, EDWARD H
ART UNIT: 2858 PAPER NUMBER:
DATE MAILED: 09/07/2010

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

12/7/14,204 02/26/2010 Daniel M. FISCHER 10254-US-CNT4(4214-01509) 6230

TITLE OF INVENTION: MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional NO \$1510 \$300 \$0 \$1810 12/07/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

30652 7590 09/07/2010

CONLEY ROSE, P.C. 5601 GRANITE PARKWAY, SUITE 750 PLANO, TX 75024

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Form with fields for Depositor's name, Signature, and Date.

Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

12/714,204 02/26/2010 Daniel M. FISCHER 10254-US-CNT4(4214-01509) 6230

TITLE OF INVENTION: MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD

Table with columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional NO \$1510 \$300 \$0 \$1810 12/07/2010

Table with columns: EXAMINER, ART UNIT, CLASS-SUBCLASS

TSO, EDWARD H 2858 320-107000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
"Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): Individual Corporation or other private group entity Government

4a. The following fee(s) are submitted:

- Issue Fee
Publication Fee (No small entity discount permitted)
Advance Order - # of Copies

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- A check is enclosed.
Payment by credit card. Form PTO-2038 is attached.
The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature Date

Typed or printed name Registration No.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Petitioners Ex. 1002

IPR USP 7,834,586

Page 185 of 295



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes application details for Daniel M. FISCHER and examiner TSO, EDWARD H.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No. 12/714,204	Applicant(s) FISCHER ET AL.	
Examiner Edward Tso	Art Unit 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. This communication is responsive to an amendment filed 8/20/10.
- 2. The allowed claim(s) is/are 1-13.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____ .
 - 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.


THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
- 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
- 4. Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. Notice of Informal Patent Application
- 6. Interview Summary (PTO-413), Paper No./Mail Date _____ .
- 7. Examiner's Amendment/Comment
- 8. Examiner's Statement of Reasons for Allowance
- 9. Other _____.

/Edward Tso/
Primary Examiner, Art Unit 2858

Index of Claims 	Application/Control No. 12714204	Applicant(s)/Patent Under Reexamination FISCHER ET AL.
	Examiner Edward Tso	Art Unit 2858

✓	Rejected
=	Allowed


-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47


CLAIM		DATE							
Final	Original	07/30/2010	08/27/2010						
	1	✓	=						
	2	✓	=						
	3	✓	=						
	4	✓	=						
	5	✓	=						
	6	✓	=						
	7	✓	=						
	8	✓	=						
	9	✓	=						
	10	✓	=						
	11	✓	=						
	12	✓	=						
	13	✓	=						

Issue Classification 	Application/Control No. 12714204	Applicant(s)/Patent Under Reexamination FISCHER ET AL.
	Examiner Edward Tso	Art Unit 2858

ORIGINAL						INTERNATIONAL CLASSIFICATION								
CLASS			SUBCLASS			CLAIMED				NON-CLAIMED				
320			107			H	0	1	M	10 / 46 (2006.01.01)				
CROSS REFERENCE(S)														
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)													

<input checked="" type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input checked="" type="checkbox"/> T.D. <input type="checkbox"/> R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1														
	2														
	3														
	4														
	5														
	6														
	7														
	8														
	9														
	10														
	11														
	12														
	13														

NONE		Total Claims Allowed:	
		13	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/Edward Tso/ Primary Examiner.Art Unit 2858	08/27/2010	1	2
(Primary Examiner)	(Date)		

Search Notes 	Application/Control No. 12714204	Applicant(s)/Patent Under Reexamination FISCHER ET AL.
	Examiner Edward Tso	Art Unit 2858

SEARCHED			
Class	Subclass	Date	Examiner
320	107, 111, 114, 140		

SEARCH NOTES		
Search Notes	Date	Examiner
text search	7/2010	et
foreign IPC search	7/2010	et
inventor search	7/2010	et
parent case considered for DP	7/2010	et
update all above	8/2010	et
interference search	8/2010	et

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
320	107	8/2010	et

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BIB DATA SHEET
CONFIRMATION NO. 6230

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.	
12/714,204	02/26/2010	320	2858 10254-US-CNT4(4214-01509)		
APPLICANTS Daniel M. FISCHER, Waterloo, CANADA; Dan G. RADUT, Waterloo, CANADA; Michael F. HABICHER, Cambridge, CANADA; Quang A. LUONG, Kitchener, CANADA; Jonathan T. MALTON, Kitchener, CANADA;					
** CONTINUING DATA ***** This application is a CON of 12/268,297 11/10/2008 PAT 7,737,657 which is a CON of 11/749,680 05/16/2007 PAT 7,453,233 which is a CON of 11/175,885 07/06/2005 PAT 7,239,111 which is a CON of 10/087,629 03/01/2002 PAT 6,936,936 which claims benefit of 60/273,021 03/01/2001 and claims benefit of 60/330,486 10/23/2001					
** FOREIGN APPLICATIONS *****					
** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 03/10/2010					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input type="checkbox"/> No Verified and Acknowledged <u>/EDWARD H TSO/</u> Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials _____	STATE OR COUNTRY CANADA	SHEETS DRAWINGS 4	TOTAL CLAIMS 13	INDEPENDENT CLAIMS 4
ADDRESS CONLEY ROSE, P.C. 5601 GRANITE PARKWAY, SUITE 750 PLANO, TX 75024 UNITED STATES					
TITLE Multifunctional Charger System and Method					
FILING FEE RECEIVED 1310	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

EAST Search History**EAST Search History (Prior Art)**

<This search history is empty>

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	157386	"universal serial bus" or usb	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:07
L2	1350149	charg\$3	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:07
L3	529027	battery	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:07
L4	47	v-bus	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:07
L5	4051	D+	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:08
L6	3632315	D-	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:08
L7	2484620	power	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:08
L8	121649	data adj line	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:08
L9	20384	(id or identification) adj signal	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:08
L10	22005	enumeration	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:08
L11	4	1 and 2 and 3 and 4 and 5 and 6 and 7 and 8 and 9 and 10	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:09

L12	28	1 and 2 and 3 and 5 and 6 and 7 and 8 and 9 and 10	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:09
L13	13663	fischer.in. or radut. in. or habicher.in. or luong.in. or malton. in.	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:10
L14	10	12 and 13	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:10
L15	16726	H02J007/\$.ipc. OR H02J7/\$.ipcr.	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:12
L16	16481	H01M010/\$.ipc. OR H01M10/\$.ipcr.	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:12
L17	30932	15 or 16	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:12
L18	27	12 and 17	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:12
L19	1	(1 and 2 and 3 and 5 and 6 and 7 and 8 and 9 and 10).clm.	US-PGPUB; USPAT; UPAD	OR	ON	2010/08/27 21:12

8/27/2010 9:13:07 PM

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/714,204	02/26/2010	Daniel M. FISCHER	10254-US-CNT4(4214-01509)

CONFIRMATION NO. 6230

POA ACCEPTANCE LETTER

30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024



Date Mailed: 10/04/2010

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/10/2010.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/wctapor/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/714,204	02/26/2010	Daniel M. FISCHER	10254-US-CNT4(4214-01509)

CONFIRMATION NO. 6230

POWER OF ATTORNEY NOTICE

30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024



Date Mailed: 10/04/2010

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/10/2010.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervned as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/wctapor/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
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 or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

30652 7590 09/07/2010

CONLEY ROSE, P.C.
 5601 GRANITE PARKWAY, SUITE 750
 PLANO, TX 75024

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Susan Caglagis	(Depositor's name)
	(Signature)
10/7/10	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/714,204	02/26/2010	Daniel M. FISCHER	10254-US-CNT4(4214-01509)	6230

TITLE OF INVENTION: MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	12/07/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
TSO, EDWARD H	2858	320-107000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
 Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
 "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list
 (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1. Conley Rose, P.C.
 2. J. Robert Brown, Jr.
 3.

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)
 PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.
 (A) NAME OF ASSIGNEE: RESEARCH IN MOTION LIMITED
 (B) RESIDENCE: (CITY and STATE OR COUNTRY): WATERLOO, ONTARIO CANADA

Please check the appropriate assignee category or categories (will not be printed on the patent): Individual Corporation or other private group entity Government

4a. The following fee(s) are submitted:
 Issue Fee
 Publication Fee (No small entity discount permitted)
 Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)
 A check is enclosed.
 Payment by credit card. Form PTO-2038 is attached.
 The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 50-1515 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)
 a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature Date 10-7-10
 Typed or printed name J. Robert Brown, Jr. Registration No. 45,438

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Electronic Patent Application Fee Transmittal

Application Number:	12714204
Filing Date:	26-Feb-2010
Title of Invention:	MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Filer:	J. Robert Brown/Susan Caglagis
Attorney Docket Number:	10254-US-CNT4(4214-01509)

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	1501	1	1510	1510
Publ. Fee- early, voluntary, or normal	1504	1	300	300
			Petitioners Ex. 1002	
			IPR USP 7,834,586	

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1810

Electronic Acknowledgement Receipt

EFS ID:	8581293
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	30652
Filer:	J. Robert Brown/Susan Caglagis
Filer Authorized By:	J. Robert Brown
Attorney Docket Number:	10254-US-CNT4(4214-01509)
Receipt Date:	07-OCT-2010
Filing Date:	26-FEB-2010
Time Stamp:	16:29:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$1810
RAM confirmation Number	14324
Deposit Account	501515
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Petitioners Ex. 1002
IPR USP 7,834,586

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	4214-01509_IssueFeePayment.pdf	161740 8e8b3fc8420598e0536e5d32b5c71de150b39216	no	1

Warnings:

Information:

2	Fee Worksheet (PTO-875)	fee-info.pdf	32096 2315fe29809fb98f45d302b6c2e764e99a55fad7	no	2
---	-------------------------	--------------	---	----	---

Warnings:

Information:

Total Files Size (in bytes):

193836

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/714,204	11/16/2010	7834586	10254-US-CNT4(4214-01509)	6230

30652 7590 10/27/2010
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Daniel M. FISCHER, Waterloo, CANADA;
Dan G. RADUT, Waterloo, CANADA;
Michael F. HABICHER, Cambridge, CANADA;
Quang A. LUONG, Kitchener, CANADA;
Jonathan T. MALTON, Kitchener, CANADA;

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

Practitioners associated with the Customer Number: 93377

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number		Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

The address associated with Customer Number: 93377

OR

<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone			Email

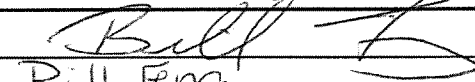
Assignee Name and Address:

Research In Motion Limited
 295 Phillip Street
 Waterloo, Ontario, Canada N2L 3W8

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	(59) 888-7465
Name	Bill Feng	Telephone	Dec. 23/09
Title	Vice President, Shared Services		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Legal OK
 Petitioners Ex. 1002
 IPR USP 7,834,686
 Page 202 of 295

RIM 01

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: RESEARCH IN MOTION LIMITED

Application No./Patent No.: 12/714,204 Filed/Issue Date: February 26, 2010

Titled:

RESEARCH IN MOTION LIMITED, a Corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

- 1. the assignee of the entire right, title, and interest in;
- 2. an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or
- 3. the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 013155, Frame 0301, or for which a copy therefore is attached.

OR

B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/BRYAN C. DINER/
Signature

November 10, 2010
Date

BRYAN C. DINER
Printed or Typed Name

Reg. No. 32,409
Title

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	8806177
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	30652
Filer:	Bryan C. Diner/Janet Weems
Filer Authorized By:	Bryan C. Diner
Attorney Docket Number:	10254-US-CNT4(4214-01509)
Receipt Date:	10-NOV-2010
Filing Date:	26-FEB-2010
Time Stamp:	11:23:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	RIM_FINNEGAN_POA.PDF	151330 <small>55ef3f27be706caa8125032df82c95a0d544e2ad</small>	no	1

Warnings:

Information:

Petitioners Ex. 1002
IPR USP 7,834,586

2	Assignee showing of ownership per 37 CFR 3.73(b).	SB96_Statement_Under_37_CFR_3_73.pdf	470970 9fb8e0cd5c66a3c4a2a7577fd2fcd5ed26507f3d	no	2
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Warnings:

Information:

Total Files Size (in bytes): 622300

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/714,204	02/26/2010	Daniel M. FISCHER	10254-US-CNT4(4214-01509)

CONFIRMATION NO. 6230

POWER OF ATTORNEY NOTICE

30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024



Date Mailed: 11/22/2010

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 11/10/2010.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/gbien-aime/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/714,204	02/26/2010	Daniel M. FISCHER	10254-US-CNT4(4214-01509)

CONFIRMATION NO. 6230

POA ACCEPTANCE LETTER



93377
RIM/FINNEGAN
901 New York Avenue NW
Washington, DC 20001

Date Mailed: 11/22/2010

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 11/10/2010.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/gbien-aime/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	12/714,204
Filing Date	February 26, 2010
First Named Inventor	Daniel M. Fischer
Title	MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD
Art Unit	2859
Examiner Name	E. H. Tso
Attorney Docket Number	TNT 3.0-001 CON CON CON CON

SIGNATURE of Applicant or Patent Practitioner			
Signature	/Richard J. Botos/	Date (Optional)	June 17, 2016
Name	Richard J. Botos	Registration Number	32,016
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

*Total of 1 forms are submitted.

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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 141762

OR

I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

The address associated with the above-mentioned Customer Number

OR

The address associated with Customer Number:

OR

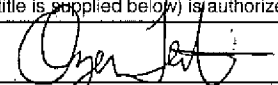
Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

- Inventor or Joint Inventor (title not required below)
- Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	June 17, 2016
Name	Ozer Feitelbaum		
Title	Vice-President, Fundamental Innovation Systems International LLC		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

Total of 1 forms are submitted.

Electronic Acknowledgement Receipt

EFS ID:	26103225
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	93377
Filer:	Arnold H. Krumholz/Sophia Buchan
Filer Authorized By:	Arnold H. Krumholz
Attorney Docket Number:	11298.0188-04000
Receipt Date:	17-JUN-2016
Filing Date:	26-FEB-2010
Time Stamp:	16:46:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	TNT_5_Transmittal_and_POA.pdf	114409 <small>c0fa2bae064cf1396283dbb989b4fff80b908fae</small>	no	2

Warnings:

Information:

Petitioners Ex. 1002

IPR USP 7,834,586

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.


UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/714,204	02/26/2010	Daniel M. FISCHER	11298.0188-04000

CONFIRMATION NO. 6230

93377
 BlackBerry Limited (Finnegan)
 2200 University Avenue East
 Waterloo, ON N2K 0A7
 CANADA



OC00000084034527

Cc: LERNER DAVID
 600 SOUTH AVENUE WEST
 WESTFIELD, NJ 07090

Date Mailed: 06/29/2016
DENIAL OF REQUEST FOR POWER OF ATTORNEY

The request for Power of Attorney filed 06/17/16 is acknowledged. However, the request cannot be granted at this time for the reason stated below.

- The Power of Attorney you provided did not comply with the new Power of Attorney rules that became effective on June 25, 2004. See 37 CFR 1.32.
- The revocation is not signed by the applicant, the assignee of the entire interest, or one particular principal attorney having the authority to revoke.
- The Power of Attorney is from an assignee and the Certificate required by 37 CFR 3.73(c) has not been received.
- The person signing for the assignee has omitted their empowerment to sign on behalf of the assignee.
- The inventor(s) is without authority to appoint attorneys since the assignee has intervened as provided by 37 CFR 3.71.
- The signature(s) of _____, a co-inventor in this application, has been omitted. The Power of Attorney will be entered upon receipt of confirmation signed by said co-inventor(s).
- The person(s) appointed in the Power of Attorney is not registered to practice before the U.S. Patent and Trademark Office.
- Only one Customer Number can be designated for the Power of Attorney in an application. The Customer Number that was captured is the first Customer Number provided on the Power of Attorney document.
- A request under 37 CFR 1.48 to add an inventor was granted in this application, however, no power of attorney consistent with the power of attorney granted by the originally named inventive entity has been

Petitioners Ex. 1002
IPR USP 7,834,586
Page 213 of 295




UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

received. Thus, the addition of the inventor has resulted in the loss of power of attorney in the application. See 37 CFR 1.32(e).

- The power of attorney has not been accepted because the party who is giving power of attorney has not been identified. Power of attorney may only be signed by the applicant for patent (37 CFR 1.42) or the patent owner. A patent owner who was not the applicant must appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. See 37 CFR 1.32(b)(4).
- The power of attorney from the inventors has not been accepted because it is a copy from a prior national application for which benefit is claimed and the continuing application names an inventor who was not named as an inventor in the prior application.
- The power of attorney from the inventors has not been accepted because the power of attorney must be signed by the applicant for patent. See 37 CFR 1.32(b)(4).
- Any request to correct or update the name of the applicant must include an application data sheet (ADS) in compliance with 37 CFR 1.76 specifying the correct or updated name of the applicant in the applicant information section. Any request to change the applicant after an original applicant has been specified under 37 CFR 1.46(b) must include a new ADS in compliance with 37 CFR 1.76 specifying the applicant in the applicant information section and comply with 37 CFR 3.71 and 3.73. See 37 CFR 1.46(c).

Any inquiries regarding this notice should be directed to the Application Assistance Unit at 571-272-4200.



Application Assistance Unit
571-272-4200



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/714,204	02/26/2010	Daniel M. FISCHER	11298.0188-04000

CONFIRMATION NO. 6230

MISCELLANEOUS NOTICE



93377
BlackBerry Limited (Finnegan)
2200 University Avenue East
Waterloo, ON N2K 0A7
CANADA

Date Mailed: 06/30/2016

A communication which cannot be delivered in electronic form has been mailed to the applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 141762

OR

I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

The address associated with the above-mentioned Customer Number

OR

The address associated with Customer Number:

OR

Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Inventor or Joint Inventor (title not required below)

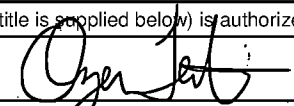
Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	June 17, 2016
Name	Ozer Peitelbaum		
Title	Vice-President, Fundamental Innovation Systems International LLC		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

Total of 1 forms are submitted.

Electronic Acknowledgement Receipt

EFS ID:	26325101
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	93377
Filer:	Richard J. Botos
Filer Authorized By:	
Attorney Docket Number:	11298.0188-04000
Receipt Date:	12-JUL-2016
Filing Date:	26-FEB-2010
Time Stamp:	14:41:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73	Statement_By_Assignee_to_Es tablish_Ownership_37_CFR_37 3c.pdf	30375 <small>2d8d66292854a1cf0398eb8175b1c11fdd9 46a36</small>	no	3

Warnings:

Petitioners Ex. 1002
IPR USP 7,834,586

Information:					
2	Power of Attorney	TNT5_General_POA.pdf	45055	no	1
			0fd9d3b377783514d0e6ad8c8eb5de181595d07e		
Warnings:					
Information:					
Total Files Size (in bytes):				75430	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: Fundamental Innovation Systems International LLCApplication No./Patent No.: 7,834,586 Filed/Issue Date: November 16, 2010Titled: MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD

Fundamental Innovation Systems
International LLC, a corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. The assignee of the entire right, title, and interest.
2. An assignee of less than the entire right, title, and interest (check applicable box):
- The extent (by percentage) of its ownership interest is _____ (%). Additional Statement(s) by the owners holding the balance of the interest **must be submitted** to account for 100% of the ownership interest.
- There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest **must be submitted** to account for the entire right, title, and interest.

3. The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest **must be submitted** to account for the entire right, title, and interest.

4. The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

- A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Daniel M. Fischer To: Research In Motion Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031533, Frame 0304, or for which a copy thereof is attached.

2. From: Dan G. Radut To: Research In Motion Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031533, Frame 0304, or for which a copy thereof is attached.

[Page 1 of 2]

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: Michael F. Habicher To: Research In Motion Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031533 , Frame 0304 , or for which a copy thereof is attached.
4. From: Quang A. Luong To: Research In Motion Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031533 , Frame 0304 , or for which a copy thereof is attached.
5. From: Jonathan T. Malton To: Research In Motion Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031533 , Frame 0304 , or for which a copy thereof is attached.
6. From: Research In Motion Limited To: Blackberry Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031558 , Frame 0922 , or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

<u>/Richard J. Botos/</u>	<u>July 12, 2016</u>
Signature	Date
<u>Richard J. Botos</u>	<u>32,016</u>
Printed or Typed Name	Title or Registration Number

[Page 2 of 2]

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with 37 CFR § 1.6(a)(4).

Dated: July 12, 2016

Electronic Signature for Richard J. Botos: /Richard J. Botos/

STATEMENT UNDER 37 CFR 3.73(c) - Supplemental Sheet

Page 1 of 1

Continuation of chain of title from the inventor(s) to the current assignee:

7. From: Blackberry Limited To: Fundamental Innovation Systems International LLC
 The document was recorded in the United States Patent and Trademark Office at
 Reel 037324 , Frame 0978 , or for which a copy thereof is attached.

8. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

9. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

10. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

11. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

12. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

13. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

14. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

15. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/714,204	02/26/2010	Daniel M. FISCHER	

141762
TNT
Lerner David
600 South Avenue West
Westfield, NJ 07090

CONFIRMATION NO. 6230
POA ACCEPTANCE LETTER



Date Mailed: 07/14/2016

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/12/2016.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/rmtturner myles/



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/714,204	02/26/2010	Daniel M. FISCHER	

93377
BlackBerry Limited (Finnegan)
2200 University Avenue East
Waterloo, ON N2K 0A7
CANADA

**CONFIRMATION NO. 6230
POWER OF ATTORNEY NOTICE**



Date Mailed: 07/14/2016

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/12/2016.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/rmtturner myles/

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:17-cv-124	DATE FILED 2/13/2017	U.S. DISTRICT COURT Eastern District of Texas, Marshall Division
PLAINTIFF Fundamental Innovation Systems International LLC		DEFENDANT ZTE Corporation, ZTE (USA), Inc. and ZTE (TX), Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,232,766 B2	7/31/2012	Fundamental Innovation Systems International LLC
2 7,834,586 B2	11/16/2010	Fundamental Innovation Systems International LLC
3 7,239,111 B2	7/3/2007	Fundamental Innovation Systems International LLC
4 8,624,550 B2	1/7/2014	Fundamental Innovation Systems International LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy **Petitioners Ex. 1002**

IPR USP 7,834,586

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:17-cv-145	DATE FILED 2/21/2017	U.S. DISTRICT COURT Eastern District of Texas, Marshall Division
PLAINTIFF Fundamental Innovation Systems International LLC		DEFENDANT Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,232,766	7/31/2012	Fundamental Innovation Systems Internaional LLC
2 7,834,586	11/16/2010	Fundamental Innovation Systems International LLC
3 7,791,319	9/7/2010	Fundamental Innovation Systems International LLC
4 8,541,983	9/24/2013	Fundamental Innovation Systems International LLC
5 7,893,655	2/22/2011	Fundamental Innovation Systems International LLC

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy **Petitioners Ex. 1002**

IPR USP 7,834,586

AO 120 (Rev. 08/10)

TO: <p style="text-align: center;">Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450</p>	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Marshall Division on the following
 Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:17-cv-124	DATE FILED 2/13/2017	U.S. DISTRICT COURT Eastern District of Texas, Marshall Division
PLAINTIFF Fundamental Innovation Systems International LLC		DEFENDANT ZTE Corporation, ZTE (USA), Inc. and ZTE (TX), Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,232,766 B2	7/31/2012	Fundamental Innovation Systems International LLC
2 7,834,586 B2	11/16/2010	Fundamental Innovation Systems International LLC
3 7,239,111 B2	7/3/2007	Fundamental Innovation Systems International LLC
4 8,624,550 B2	1/7/2014	Fundamental Innovation Systems International LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

**Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy**

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:16-cv-1424	DATE FILED 12/16/2016	U.S. DISTRICT COURT Eastern District of Texas, Marshall Division
PLAINTIFF Fundamental Innovation Systems International LLC		DEFENDANT Huawei Investment & Holding Co., Ltd. et al.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,232,766 B2	7/31/2012	Fundamental Innovation Systems International LLC
2 7,834,586 B2	11/16/2010	Fundamental Innovation Systems International LLC
3 7,893,655 B2	2/22/2011	Fundamental Innovation Systems International LLC
4 7,239,111 B2	7/3/2007	Fundamental Innovation Systems International LLC
5 8,624,550 B2	1/7/2014	Fundamental Innovation Systems International LLC

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	--

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:16-cv-1425	DATE FILED 12/16/2016	U.S. DISTRICT COURT Eastern District of Texas, Marshall Division
PLAINTIFF Fundamental Innovation Systems International LLC		DEFENDANT LG Electronics, Inc., LG Electronics U.S.A., Inc., LG Electronics MobileComm U.S.A. Inc., LG Electronics Mobile Research U.S.A. LLC, and LG Electronics Alabama, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,232,766 B2	7/31/2012	Fundamental Innovation Systems International LLC
2 7,834,586 B2	11/16/2010	Fundamental Innovation Systems International LLC
3 7,239,111 B2	7/3/2007	Fundamental Innovation Systems International LLC
4 8,624,550 B2	1/7/2014	Fundamental Innovation Systems International LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

 Practitioners associated with the Customer Number:

OR

 Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

 The address associated with Customer Number:

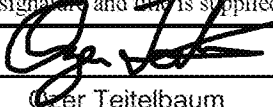
OR

<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

Assignee Name and Address:

TnT IP LLC
2900 Long Prairie Road, Suite B
Flower Mound, TX 75022**A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.****SIGNATURE of Assignee of Record**

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	April 29, 2017
Name	Peter Teitelbaum	Telephone	
Title	Co-Founder and Partner		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Petitioners Ex. 1002

IPR USP 7,834,586

Page 229 of 295

Electronic Acknowledgement Receipt

EFS ID:	29796276
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	141762
Filer:	Richard J. Botos/Seth Botos
Filer Authorized By:	Richard J. Botos
Attorney Docket Number:	TNT 3.0-001 CCCC
Receipt Date:	17-JUL-2017
Filing Date:	26-FEB-2010
Time Stamp:	10:50:34
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73	37_CFR_373c.pdf	170140 <small>a9ef45469273945d18e43135515ab3403a516db5</small>	no	3

Warnings:

**Petitioners Ex. 1002
IPR USP 7,834,586**

Information:					
2	Power of Attorney	Pre.PDF	848759	no	1
			7257765b1815b875887d3784c11da374906b7654		
Warnings:					
Information:					
Total Files Size (in bytes):				1018899	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: Fundamental Innovation Systems International LLCApplication No./Patent No.: 7,834,586 Filed/Issue Date: November 16, 2010Titled: MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD

Fundamental innovation Systems International LLC, a corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. The assignee of the entire right, title, and interest.
2. An assignee of less than the entire right, title, and interest (check applicable box):
- The extent (by percentage) of its ownership interest is _____ (%). Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Daniel M. Fischer To: Research In Motion Limited
 The document was recorded in the United States Patent and Trademark Office at
 Reel: 031533, Frame 0304, or for which a copy thereof is attached.

2. From: Dan G. Radut To: Research In Motion Limited
 The document was recorded in the United States Patent and Trademark Office at
 Reel: 031533, Frame 0304, or for which a copy thereof is attached.

[Page 1 of 2]

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

- 3. From: Michael F. Habicher To: Research In Motion Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031533 , Frame 0304 , or for which a copy thereof is attached.
- 4. From: Quang A. Luong To: Research In Motion Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031533 , Frame 0304 , or for which a copy thereof is attached.
- 5. From: Jonathan T. Maton To: Research In Motion Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031533 , Frame 0304 , or for which a copy thereof is attached.
- 6. From: Research In Motion Limited To: Blackberry Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031558 , Frame 0922 , or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

<u>/Richard J. Botos/</u>	<u>July 12, 2016</u>
Signature	Date
<u>Richard J. Botos</u>	<u>32,016</u>
Printed or Typed Name	Title or Registration Number

STATEMENT UNDER 37 CFR 3.73(c) - Supplemental Sheet

Page 1 of 1

Continuation of chain of title from the inventor(s) to the current assignee:

7. From: Blackberry Limited To: Fundamental Innovation Systems International LLC
 The document was recorded in the United States Patent and Trademark Office at
 Reel 037324 , Frame 0978 , or for which a copy thereof is attached.

8. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

9. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

10. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

11. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

12. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

13. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

14. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

15. From: _____ To: _____
 The document was recorded in the United States Patent and Trademark Office at
 Reel _____ , Frame _____ , or for which a copy thereof is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

 Practitioners associated with the Customer Number:

OR

 Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

 The address associated with Customer Number:

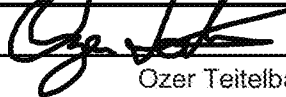
OR

<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

Assignee Name and Address:

Fundamental Innovations Systems International LLC
2900 Long Prairie Road, Suite B
Flower Mound, TX 75022**A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.****SIGNATURE of Assignee of Record**

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	April 29, 2017
Name	Ozer Teitelbaum	Telephone	
Title	Co-Founder and Partner		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Petitioners Ex. 1002

IPR USP 7,834,586

Page 235 of 295

Electronic Acknowledgement Receipt

EFS ID:	29828593
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	141762
Filer:	Richard J. Botos/Seth Botos
Filer Authorized By:	Richard J. Botos
Attorney Docket Number:	TNT 3.0-001 CCCC
Receipt Date:	19-JUL-2017
Filing Date:	26-FEB-2010
Time Stamp:	14:24:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73	a.pdf	240846 <small>3cd9f694aabb87bac84f19a3c2d021d2c69c f16d</small>	no	3

Warnings:

**Petitioners Ex. 1002
IPR USP 7,834,586**

Information:					
2	Power of Attorney	Pre.pdf	855803	no	1
			9d2dcb10ca818530f8e78aa5360dfcda7dc53c9e		
Warnings:					
Information:					
Total Files Size (in bytes):				1096649	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: Fundamental Innovation Systems International LLCApplication No./Patent No.: 7,834,586 Filed/Issue Date: November 16, 2010Titled: MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD

Fundamental innovation Systems International LLC, a corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. The assignee of the entire right, title, and interest.
2. An assignee of less than the entire right, title, and interest (check applicable box):
- The extent (by percentage) of its ownership interest is _____ (%). Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Daniel M. Fischer To: Research In Motion Limited
 The document was recorded in the United States Patent and Trademark Office at
 Reel: 031533, Frame 0304, or for which a copy thereof is attached.

2. From: Dan G. Radut To: Research In Motion Limited
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[Page 1 of 2]

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STATEMENT UNDER 37 CFR 3.73(c)

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The document was recorded in the United States Patent and Trademark Office at
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5. From: Jonathan T. Maton To: Research In Motion Limited
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6. From: Research In Motion Limited To: Blackberry Limited
The document was recorded in the United States Patent and Trademark Office at
Reel 031558 , Frame 0922 , or for which a copy thereof is attached.

 Additional documents in the chain of title are listed on a supplemental sheet(s). As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature	<u>/Richard J. Botos/</u>	Date	<u>July 12, 2016</u>
Printed or Typed Name	<u>Richard J. Botos</u>	Title or Registration Number	<u>32,016</u>

[Page 2 of 2]

STATEMENT UNDER 37 CFR 3.73(c) - Supplemental Sheet

Page 1 of 1

Continuation of chain of title from the inventor(s) to the current assignee:

7. From: Blackberry Limited To: Fundamental Innovation Systems International LLC
The document was recorded in the United States Patent and Trademark Office at
Reel 037324 , Frame 0978 , or for which a copy thereof is attached.

8. From: _____ To: _____
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9. From: _____ To: _____
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Reel _____ , Frame _____ , or for which a copy thereof is attached.

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15. From: _____ To: _____
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Reel _____ , Frame _____ , or for which a copy thereof is attached.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/714,204	02/26/2010	Daniel M. FISCHER	TNT 3.0-001 CCCC

CONFIRMATION NO. 6230

POWER OF ATTORNEY NOTICE



141762
TNT
Lerner David
600 South Avenue West
Westfield, NJ 07090

Date Mailed: 07/24/2017

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/19/2017.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mabebe/



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/714,204	02/26/2010	Daniel M. FISCHER	TNT 3.0-001 CCCC

CONFIRMATION NO. 6230

POA ACCEPTANCE LETTER



147655
Botos Churchill IP Law LLP
(TNT IP LLC)
430 Mountain Avenue, Suite 401
New Providence, NJ 07974

Date Mailed: 07/24/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/19/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mabebe/

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Northern District of Texas, Dallas Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 3:17-cv-1827-L	DATE FILED 7/12/2017	U.S. DISTRICT COURT Northern District of Texas, Dallas Division
PLAINTIFF Fundamental Innovation Systems International LLC		DEFENDANT ZTE Corporation et al
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,232,766 B2	7/31/2012	Fundamental Innovation Systems International LLC
2 7,834,586 B2	11/16/2010	Fundamental Innovation Systems International LLC
3 7,239,111 B2	7/3/2007	Fundamental Innovation Systems International LLC
4 8,624,550 B2	1/7/2017	Fundamental Innovation Systems International LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK Karen Mitchell	(BY) DEPUTY CLERK s/A. Lowe	DATE 7/12/2017
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy **Petitioners Ex. 1002**

IPR USP 7,834,586

Page 243 of 295

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

147655

OR

I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

The address associated with the above-mentioned Customer Number

OR

The address associated with Customer Number:

OR

Firm or Individual Name				
Address				
City	State	Zip		
Country				
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I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Fundamental Innovation Systems International LLC

- Inventor or Joint Inventor (title not required below)
- Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature 	Date (Optional)	April 29, 2017
Name Ozer Teitelbaum		
Title Executive Vice-President		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

Total of _____ forms are submitted.

Electronic Patent Application Fee Transmittal

Application Number:	12714204
Filing Date:	26-Feb-2010
Title of Invention:	MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Filer:	Richard J. Botos/Lesley Anne Boyd
Attorney Docket Number:	TNT 3.0-001 CCCC

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	160	160
Total in USD (\$)				160

Electronic Acknowledgement Receipt

EFS ID:	32846703
Application Number:	12714204
International Application Number:	
Confirmation Number:	6230
Title of Invention:	MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Daniel M. FISCHER
Customer Number:	147655
Filer:	Richard J. Botos/Lesley Anne Boyd
Filer Authorized By:	Richard J. Botos
Attorney Docket Number:	TNT 3.0-001 CCCC
Receipt Date:	08-JUN-2018
Filing Date:	26-FEB-2010
Time Stamp:	14:49:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$160
RAM confirmation Number	061118INTEFSW14513600
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Petitioners Ex. 1002
IPR USP 7,834,586

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Statutory disclaimers per MPEP 1490	Statutory_Disclaimer_Claims_3_7_10_and_13.pdf	1503576 4fbfcfce62cbf34294ace12f76ab646a07ebf0c	no	2

Warnings:

Information:

2	Power of Attorney	Power_of_Attorney.pdf	930163 1f5fdb66c446c865adc937d2c36b8b10b36f3537	no	1
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Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30196 483ee81598326ffd0a69dedf5c5c96d35d51959f	no	2
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Warnings:

Information:

Total Files Size (in bytes):			2463935		
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

DISCLAIMER IN PATENT UNDER 37 CFR 1.321(a)	
Name of Patentee Fundamental Innovation Systems International LLC	Docket Number (Optional) TNT 3.0-001 CCCC
Patent Number 7,834,586	Date Patent Issued November 16, 2010
Title of Invention MULTIFUNCTIONAL CHARGER SYSTEM AND METHOD	
I hereby disclaim the following complete claims in the above identified patent: <u>Claims 3, 7, 10 and 13</u>	
The extent of my interest in said patent is (if assignee of record, state liber and page, or reel and frame, where assignment is recorded): <u>100%; Assignment recorded 12/1/2016, Reel/Frame: 040792/0483</u>	
The fee for this disclaimer is set forth in 37 CFR 1.20(d).	
<input type="checkbox"/> Patentee claims small entity status. See 37 CFR 1.27. <input type="checkbox"/> Small entity status has already been established in this case, and is still proper. <input type="checkbox"/> A check in the amount of the fee is enclosed. <input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached. <input checked="" type="checkbox"/> The Director is hereby authorized to charge any fees which may be required or credit any overpayment to Deposit Account No. <u>60-1866</u> .	
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.	
Signed at <u>New Providence</u> , State of <u>NJ</u> , this <u>8</u> day of <u>June</u> 20 <u>18</u> .	
<u>/Richard J. Botos/</u> Signature	<u>32,016</u> Registration Number, if applicable
<u>Richard J. Botos</u> Typed or printed name of patentee/ attorney or agent of record	<u>908-738-1771</u> Telephone Number
<u>430 Mountain Avenue, Suite 401</u> Address	
<u>New Providence, NJ 07974</u> City, State, Zip Code or Foreign Country as applicable	

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Petitioners Ex. 1002

IPR USP 7,834,586

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Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZTE (USA) INC.,
Petitioner,

v.

FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LLC,
Patent Owner.

Case IPR2018-00274
Patent No. 7,834,586 B2

Before BRYAN F. MOORE, JON B. TORNQUIST, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

PESLAK, *Administrative Patent Judge*

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

ZTE (USA) Inc. (“Petitioner”), filed a Petition (Paper 5, “Pet”) requesting an *inter partes* review of claims 8–13 of U.S. Patent 7,834,586 B2 (Ex. 1001, “the ’586 Patent”).¹ Petitioner supports its Petition with the Declaration of Mr. James Geier. Ex. 1009. Fundamental Innovation Systems International LLC (“Patent Owner”), timely filed a Preliminary Response (Paper 9, “Prel. Resp.”). Patent Owner supports its Preliminary Response with the Declaration of Dr. Kenneth Fernald. Ex. 2001.

Subsequent to the filing of the Petition, on June 8, 2018, Patent Owner filed a Statutory Disclaimer, in compliance with 35 U.S.C. § 253(a) and 37 C.F.R. § 1.321(a), of claims 3, 7, 10 and 13 of the ’586 Patent. Ex. 2013, 3. 37 C.F.R. § 42.107(e) provides that “[n]o *inter partes* review will be instituted based on disclaimed claims.” Petitioner’s Ground 1 includes challenges to claims 10 and 13. Pet. 3. Petitioner’s Ground 2 is directed to only claims 10 and 13. Consequently, we do not consider Petitioner’s challenge to claims 10 and 13 in Ground 1 nor do we consider Petitioner’s Ground 2 herein.

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Taking into account the evidence and arguments presented in the Petition

¹ Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. were dismissed from this proceeding by Order entered July 18, 2018. Paper 13.

and the Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any challenged claim of the '586 Patent. Therefore, we do not institute an *inter partes* review.

A. Related Matters

The parties identify Civil Action No. 2:17-cv-00145, No. 2:16-cv-01424, and No. 2:16-cv-01425, pending in the Eastern District of Texas and Civil Action No. 3:17-cv-01827 pending in the Northern District of Texas as involving the '586 Patent. Pet. 1, Paper 6, 1. The parties also identify IPR2018-00485 and IPR2018-00493 as having been filed against the '586 Patent. Pet. 1, Paper 6, 3.

B. Technology Background

An overview of Universal Serial Bus ("USB") cables is helpful in understanding the technology involved in the '586 Patent which relates to charging a mobile device through a USB connector. See Ex. 1001, Fig. 3. Cables compliant with the USB 2.0 standard have four conductors: VBUS, D+, D-, and GND. Ex. 1008, 17–18, 86. The VBUS and GND conductors of the USB cable are used to deliver power to devices and the D+ and D- conductors carry communication signals between a USB host and a connected device. *Id.* at 17–18; Ex. 1001, 6:65–7:3; Ex. 1005, 4:62–66. Figure 4–2 of the USB 2.0 Specification, reproduced below, depicts these four conductors within a USB cable:

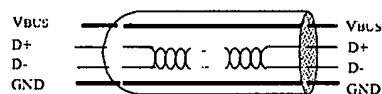


Figure 4-2. USB Cable

Ex. 1008, 17.

Figure 4–2 depicts the conductors within a USB cable.

C. The '586 Patent

The '586 Patent is directed to a Multifunctional Charger System and Method. Ex. 1001, Title. The '586 Patent discloses “a USB adapter for providing a source of power to a mobile device through a USB port.” *Id.* at 2:21–22. The '586 Patent explains that although it was understood in the art that a USB interface could be used as a power interface, it was typically not used for that purpose by mobile devices. *Id.* at 1:55–56. This is because USB hubs and hosts require USB devices to “participate in a host-initiated process called enumeration in order to be compliant” with the USB specification in drawing power from the USB interface, and “alternate power sources such as conventional AC outlets and DC car sockets” were “not capable of participating in enumeration.” *Id.* at 1:58–2:3. Additionally, “the power limits imposed by the USB specification” limit the amount of power available to charge a battery. *Id.* at 2:64–65.

In order to, *inter alia*, avoid the power limits imposed by the USB Specification, the '586 Patent discloses a USB adapter and a method for charging that is capable of providing power to a mobile device without first participating in USB enumeration. *Id.* at 9:18–34. Figure 2 of the '586 Patent, reproduced below, is a schematic diagram of the disclosed USB adapter coupled to an exemplary mobile device (*id.* at 3:25–26):

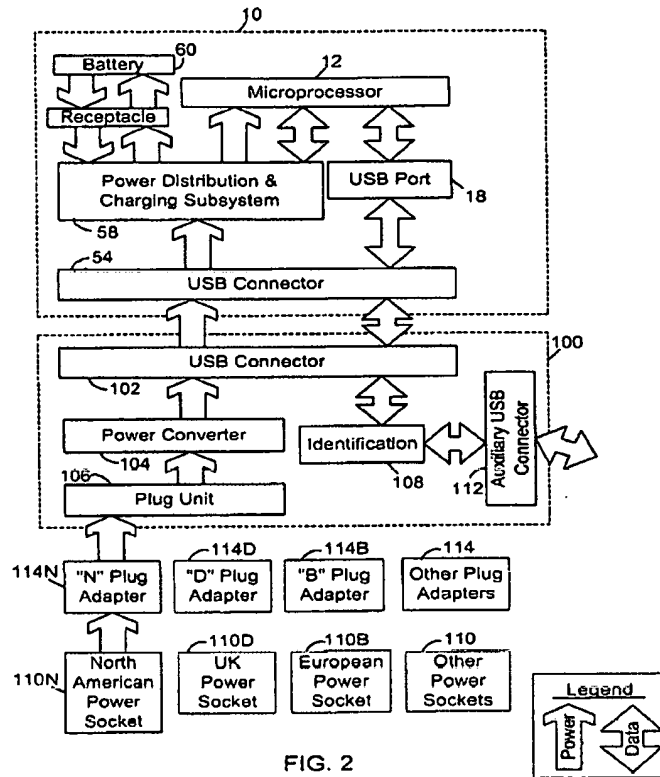


FIG. 2

As shown in Figure 2, USB adapter 100 comprises primary USB connector 102, power converter 104, plug unit 106, identification subsystem 108, and auxiliary USB connector 112. *Id.* at 6:49–60. The '586 Patent discloses that when USB adapter 100 is connected to mobile device 10 via USB connector 54 of mobile device 10 and USB connector 102 of USB adapter 100, identification subsystem 108 provides an identification signal to mobile device 10 indicating that the power source is not a USB limited source. *Id.* at 6:63–65, 8:15–17. In one embodiment, “identification subsystem 108 comprises a USB controller that is operable to communicate an identification signal to the mobile device.” *Id.* 8:25–27. The identification signal “could be the communication of a single voltage on one or more of the USB data lines, different voltages on the two data lines, a

series of pulses or voltage level changes, or other types of electrical signals.” *Id.* at 8:17–21. “The preferred identification signal,” however, “results from the application of voltage signals greater than 2 volts to both the D+ and D- lines in the USB connector.” *Id.* at 9:13–15.

An example of the method of identification is shown in Figure 3 of the '586 Patent. *Id.* 9:15–17. Figure 3, reproduced below is “a flow chart illustrating an exemplary use of a USB adapter with a mobile device.” *Id.* at 3:25–26.

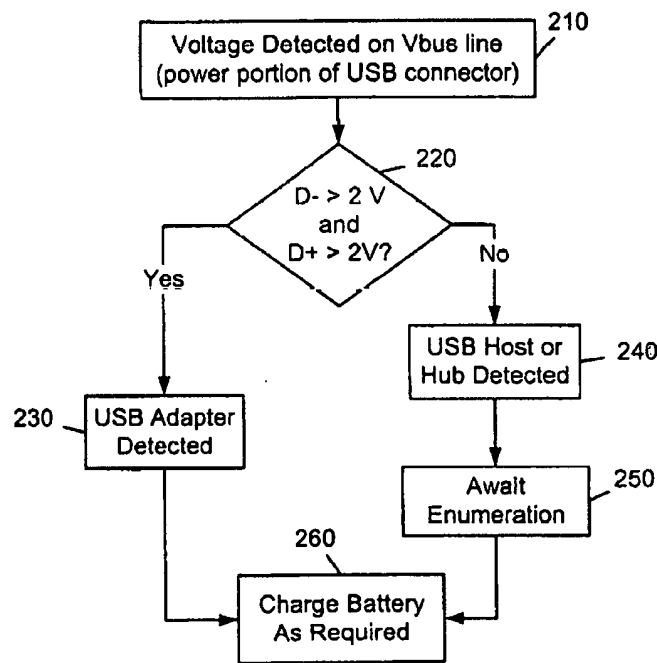


FIG. 3

As shown in Figure 3, first step 210 in the method is detection of voltage on the Vbus line of USB connector 54. *Id.* at 9:18–20. At step 220, mobile device 10 “checks the state of the D+ and D- lines of the USB connector.” *Id.* at 9:20–21. If the voltage on *both* the D+ and D- lines is greater than 2 volts, “mobile device 10 determines that the device connected to the USB

connector 54 is not a typical USB host or hub and that a USB adapter 100 has been detected (step 230).” *Id.* at 9:28–31. Thereafter, mobile device 10 can charge its battery without USB enumeration at step 260. *Id.* at 9:31–34. If the voltage on the D+ and D- lines are both less than 2V at step 220, mobile device 10 determines that a USB host or hub is detected at step 240, undergoes enumeration at step 250, and after enumeration charges the battery in accordance with the power limits imposed by the USB specification. *Id.* at 9:35–47. If mobile device 10 charges its battery by means of USB adapter 100 without enumeration, “mobile device 10 can disable its typical USB functions.” *Id.* at 9:57–59.

D. Illustrative Claims

Independent claims 8 and 11 are illustrative of the challenged claims and are reproduced below:

8. A method of charging a battery in a mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:
 - providing a Universal Serial Bus (“USB”) interface configured to allow reception of a USB cable, and, receiving power on a V-bus power line at the USB interface;
 - providing an operable connection between the power received at the USB interface on the V-bus power line and a charging subsystem;
 - having a battery in operable connection to the charging subsystem;
 - providing power to the battery using the charger subsystem; and
 - detecting an identification signal at a D+ and D- data line of the USB interface, the identification signal being different than USB enumeration.

Ex. 1001, 12:31–46.

11. A method of charging a battery in a mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:

providing a Universal Serial Bus (“USB”) interface configured to allow reception of a USB cable, and, receiving power on a V-bus power line at the USB interface;

providing an operable connection between the power received at the USB interface on the V-bus power line and a charging subsystem;

having a battery in operable connection to the charging subsystem;

providing power to the battery using the charger subsystem in one of a plurality of charge modes;

using a microprocessor and memory to process the signals received on the USB interface data lines, such that an identification signal received at the D+ and D- lines indicating a charging connection is available is recognized by the device.

Id. at 12:53–13:3.

E. Asserted Ground of Unpatentability

Petitioner challenges claims 8, 9, 11, and 12 of the ’586 Patent as unpatentable under 35 U.S.C. § 103(a) based on the combined teachings of Theobald (United States Patent No. 5,925,942, issued July 20, 1999)(Ex. 1005) and Shiga (United States Patent No. 6,625,738 B1, issued Sept. 23, 2003)(Ex. 1006). Pet. 3.

II. ANALYSIS

A. Overview

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter

pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We analyze the asserted grounds based on obviousness with these principles in mind.

B. Claim Construction

In an inter partes review, claim terms in an unexpired patent are construed according to their broadest reasonable interpretation in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard).

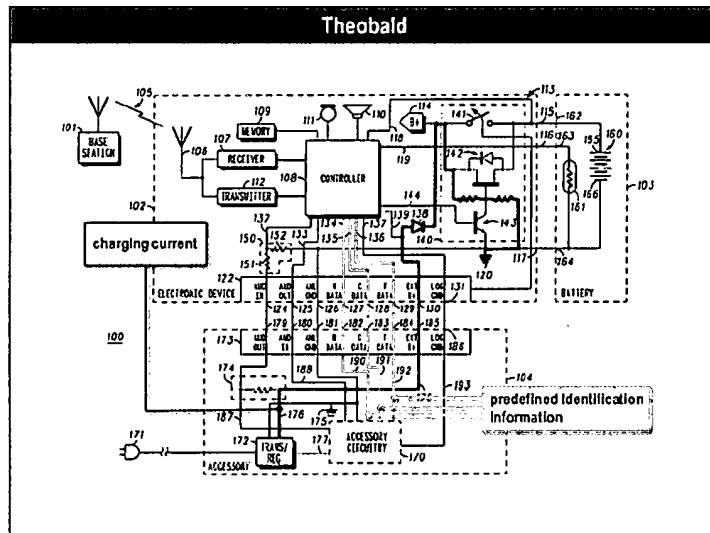
Petitioner provides a proposed construction for the term “USB enumeration.” Pet. 5–7. Patent Owner does not propose a construction for “USB enumeration” but offers a construction of the claim term “identification signal.” Prel. Resp. 15–16. Upon review of the parties’ arguments and supporting evidence, we determine that no claim terms require express construction for purposes of this Decision. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”)).

C. Claims 8 and 9

Petitioner contends that independent claim 8 and claim 9 which depends therefrom are unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Theobald and Shiga. Pet. 22–56. We begin our analysis with brief overviews of Theobald and Shiga. We then address the parties’ respective contentions with respect to the challenged claims.

1. Theobald

Theobald is directed to a method and apparatus for charging the battery in a cellular telephone using a charger coupled to the cellular telephone by a standard J3-type accessory connector. Ex. 1005, 1:53–57, 3:21–27. Figure 1 of Theobald, reproduced with Petitioner’s annotations (Pet. 29), illustrates “a charging system including an electronic device having a power supply control apparatus, a battery, and an accessory.” Ex. 1005, 1:62–65.²



² Petitioner’s annotations are not contested by the parties and illustrate unlabeled portions of the figure.

Theobald's system 100 comprises a cellular telephone 102, a battery 103, and an accessory 104. *Id.* at 2:17–19, 28–29. Accessory 104 is “a low cost mid rate charger or fast rate charger.” *Id.* at 4:30–32. Charger 104 is coupled to cellular telephone 102 by connector 122 which “is preferably the standardized eight pin J3-type accessory connector . . . but may be any other suitable multiple pin accessory connector having an external power supply pin and at least one information pin.” *Id.* at 3:21–27.”

The connector 122 shown in Figure 1 has “information pins 124, 125, 127, 128, and 129 designated as AUD IN, AUD OUT, and R, C, and T DATA, respectively; grounding pins 126 and 131 designated ANL GND and LOG GND; and an external power supply pin 130.” Ex. 1005, 2:65–3:2. Information pin 124 “is coupled to the controller 108 via audio in line 132 and an identification network 150 . . . to identify accessory 104.” *Id.* 3:2–5. The charger includes an “identification element 174 . . . to identify” the charger to the cellular telephone 102. *Id.* at 5:3–4. Identification element 174 “is selected to have a different electrical value for each different type of the accessory 104.” *Id.* at 5:6–8. Theobald discloses that identification element 174 for a mid rate charger would be a 120 k Ω resistor and for a fast rate charger would be a 36 k Ω resistor. *Id.* at 5:9–12. When cellular telephone 102 and charger 104 are coupled through connector 122, identification element 174 in charger 104 is electrically connected to identification network 150 in cellular telephone 102 and the external supply voltage of charger 104 generates a voltage level on audio in line 132 of the cellular telephone 102 of 1.72 V for a mid rate charger or 3.91 V for a fast rate charger. *Id.* at 5:59–6:6. The “controller 108 measures the voltage on

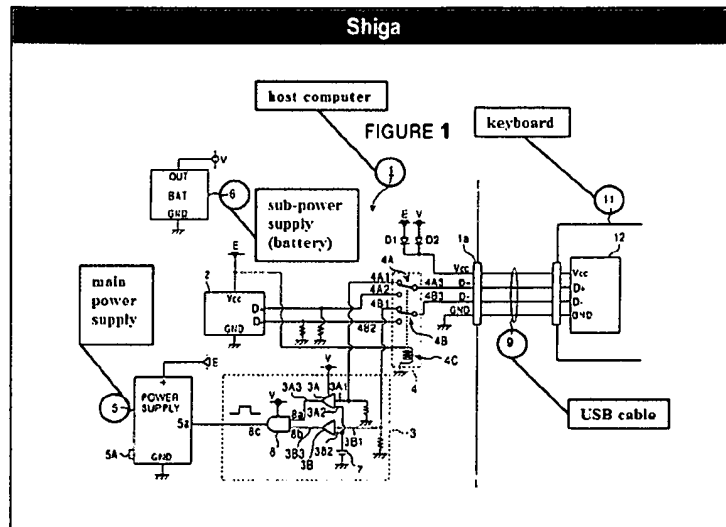
the audio in line 132” and from the measured voltage “identifies the accessory 104 from the accessory look-up table” as either the mid rate charger or the fast rate charger. *Id.* at 6:19–42.

Theobald discloses an alternate embodiment for identifying the mid rate or fast rate charger to the cellular telephone. *Id.* at 6:55–65. In the “controller embodiment,” the mid rate or fast rate chargers “could be implemented with a logic circuit or a microcontroller that communicates predefined identification information to the controller 108 via the data lines 190-192 and pins 182-184 upon attachment” of the charger 104. *Id.* at 6:60–65.

2. *Shiga*

Shiga discloses turning on a computer power supply by means of signals transmitted over signal lines “of a USB chip provided in a keyboard.” Ex. 1006, Abstract. Figure 1 of Shiga, reproduced with Petitioner’s annotations (Pet. 31), “is a structural view of an embodiment of the apparatus for turning on a computer power supply.” *Id.* at 4:6–8.³

³ Petitioner’s annotations are not contested by the parties and illustrate unlabeled portions of the figure.



As shown in Figure 1, above, Shiga's USB connected keyboard 11 starts the host computer "by a key input operation at a keyboard." *Id.* at 2:4–8.

Shiga's keyboard signals a "wake-up means" in the computer when a power-on key is pressed on the keyboard. *Id.* at 3:1–7.

Shiga explains that pursuant to the USB specification, when a host computer is in a suspended mode there are three standard signal line states. *Id.* at 5:46–54. In the first, or low speed state, signal line D+ is in an L (Hi-Z or high impedance) state and D- is in an H (high level) state. *Id.* at 5:55–57. In the second, or high speed state, signal line D+ is in the H state and signal line D- is in the L state. *Id.* at 5:58–59. In the third, or unconnected state, both D- and D+ signal lines are in the L state. *Id.* at 5:59–60. In addition to these three standard signal line states, Shiga discloses that the signal lines may also be placed into a fourth, non-standard state, wherein both the D+ and D- signal lines are in the H state.⁴ *Id.* at 5:60–62, 6:48–58. Shiga provides this non-standard, or "fourth mode" signal, to a "wakeup

⁴ Shiga's "fourth mode" state corresponds to the "SE1" state defined in the USB 2.0 Specification. *See* Ex. 1009 ¶40 (citing Ex. 1008, 123).

means” in response to a user pressing the keyboard’s power-on key. *Id.* at 3:1–3, 4:33–53, 6:59–65. Shiga explains that, because this line state is not a standard USB state and is provided as a 50 ms pulse at 3 volts, it is “easily distinguished from USB standard data signals.” *Id.* at 6:48–58.

Shiga’s keyboard contains USB chip 12 with “first signal line D+ and . . . second signal line D-.” *Id.* at 6:38–39. Shiga’s fourth mode signals “are generated by the aforementioned 8-bit microcontroller (not shown), which is a controlling means (or signal-generating means) at the keyboard 11 side.” *Id.* at 6:40-43.

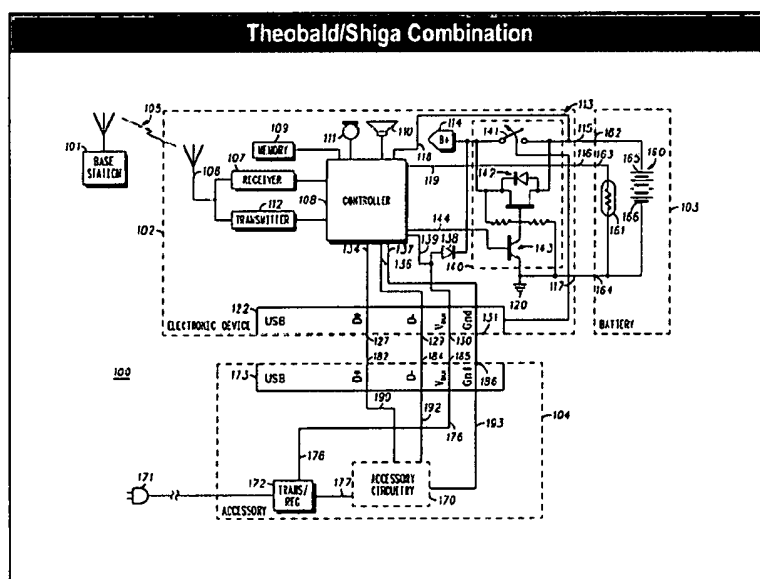
3. Analysis

Petitioner contends that USB standard architecture is “widely adopted by the industry” to provide “faster speeds and additional functionality.” Pet. 11. The standard architecture of “a USB system includes a USB host, one or more USB devices, and a USB interconnect.” *Id.* at 11–12. The USB host is responsible for various tasks such as controlling data flow between the host and USB devices and providing power to USB devices. *Id.* at 12. A mobile phone falls into one of the two categories of USB devices known as “a function.” *Id.* Under the USB Specification, a function such as a mobile phone is “connected and communicate[s] with the host” by means of a USB interconnect. *Id.*

Petitioner contends that it would have been obvious to one of ordinary skill in the art to modify Theobald’s alternative embodiment for identifying the charger with “a few trivial modifications.” Pet. 33.⁵ The “trivial modifications” are replacing Theobald’s J3 connector with a USB connector

⁵ Petitioner refers to Theobald’s alternative embodiment as the “controller embodiment.” Pet. 27.

as disclosed in Shiga, using Shiga's fourth mode signals as the "predefined identification information" that Theobald calls for, and implementing "routine programming into circuitry 170 and controller 108 in order to communicate the fourth-mode signals." *Id.* at 33–34. Petitioner submits the following modified version of Theobald's Figure 1 to illustrate the proposed modification to Theobald in light of Shiga:



Id. at 33.

Petitioner explains that in this combination,

USB connectors replace the J3 connectors, USB data lines (D+, D-) replace the J3 data lines (R,C,T), the USB power line (Vbus) replaces the J3 power line (Ext B+), and the USB ground line (Gnd) replaces the J3 ground (Log Gnd). Theobald's controller embodiment does not need or use the resistor 174 and its associated connections, so those elements are not part of the Theobald/Shiga combination. *The Theobald/Shiga combination's remaining structural elements and their connections are identical to those in Theobald's controller embodiment.*

Id. at 34–35 (emphasis added) (citing Ex. 1009 ¶¶ 60–62).

Petitioner further explains that this combination follows the same steps as Theobald’s controller embodiment to identify the charger but uses “Shiga’s fourth mode signals (as an implementation of Theobald’s ‘identification information’).” *Id.* at 35. Petitioner contends that selecting Shiga’s fourth mode signals for identification would “avoid interfering with standard USB signaling (*id.* at 42),” “USB was a commonplace interface that was widely known, used, and accepted in the industry” and therefore, one of ordinary skill in the art “would have been motivated to combine Theobald’s system with a USB interface to achieve a system with a broader industrial application.” *Id.* at 38.

In connection with the limitation in claim 8 “detecting an identification signal at a D+ and a D- data line of the USB interface,” Petitioner argues that Theobald’s “accessory 104 identifies itself to the electronic device 102 by sending Shiga’s fourth-mode signals from the accessory circuitry 170 to the controller 108 over the D+ and D- lines of the USB interface.” Pet. 53. Theobald describes accessory circuitry 170 as “a logic circuit or a microcontroller.” Ex. 1005, 6:61–64. Petitioner submits that implementing “routine programming into circuitry 170” would result in the ability of accessory circuitry 170 to communicate Shiga’s fourth mode signals to Theobald’s controller 108. Pet. 33–34.⁶

⁶ As noted above, Shiga discloses that fourth mode signals are generated by a signal generator in combination with USB chip 12 located in Shiga’s keyboard. *See* Ex. 1006, 6:35–47. Likewise, the ’586 Patent discloses that “identification subsystem 108 comprises a USB controller that is operable to communicate an identification signal to the mobile device.” Ex. 1001, 8:25–27.

Patent Owner contends, based on a number of theories, that Petitioner fails to state an adequate motivation for combining Theobald and Shiga. *See* Prelim. Resp. 16–46. Most pertinent to our Decision is the contention that Petitioner fails to establish that the Theobald/Shiga combination renders obvious the limitation in claim 8 of “an identification signal being different than USB enumeration” because, *inter alia*, the combination deviates from standard USB signaling, thus, contradicting Petitioner’s reasoning that one of ordinary skill in the art “would be motivated by reason of a desire to ‘achieve a system with broader industrial application.’” *Id.* at 45 (citing Pet. 38.).

Although Petitioner contends that “USB was a common place interface that was widely known, used and accepted in the industry” and would result in “a broader industrial application” than a J3 connector (Pet. 38), it does not incorporate a USB interface with the standard architecture set forth in the USB 2.0 Specification into Theobald’s device. *See* Pet. 33–34. Rather, it selectively chooses only the USB connector from Shiga without a standard USB controller chip. Petitioner fails to adequately explain, however, why one of ordinary skill in the art, contemplating the use of a USB interface in Theobald, would not simply use a standard USB controller chip, as opposed to retaining Theobald’s original accessory circuitry 170 and controller 108 and attempting to reprogram Theobald’s accessory circuitry to imitate a USB-based system. For example, Petitioner does not adequately explain how the functions of a USB host can be achieved in the proposed combination without a USB controller chip, or why

one of ordinary skill in the art would have sought to implement a USB interface without providing for full USB functionality. *Id.*

The Supreme Court's directs that "[a] factfinder should be aware . . . of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *KSR*, 550 U.S. at 421 (citing *Graham v John Deere Co.*, 383 U.S. 1, 36 (1966)). In order to "reach a non-hindsight driven conclusion . . . [Petitioner] must provide some rationale, articulation or reasoned basis to explain why the conclusion of obviousness is correct." *In re Kahn*, 441 F. 3d 977, 987 (Fed. Cir. 2006).

Because Petitioner has not provided a sufficient rationale to add a USB interface in Theobald without a USB controller chip, we are not persuaded that Petitioner has demonstrated that one of ordinary skill in the art would have sought to combine Theobald and Shiga in the manner proposed in the Petition absent resort to impermissible hindsight reasoning. *See In re Cree*, 818 F.3d 694, 702 n.3 (Fed. Cir. 2016). Accordingly, Petitioner has not demonstrated a reasonable likelihood that independent claim 8 would have been obvious over Theobald and Shiga.

Petitioner's contentions concerning claim 9 which depends from claim 8 fail to add any additional evidence or arguments that would cure the deficiencies in Petitioner's claim 8 contentions. *See* Pet. 56. Therefore, for the same reasons, we conclude that Petitioner fails to establish a reasonable likelihood that claim 9 is unpatentable.

D. Claims 11 and 12

Petitioner contends that independent claim 11 is unpatentable based on the combination of Theobald and Shiga. Pet. 59–64 (citing Ex. 1009 ¶¶ 93–103). We have reviewed Petitioner's evidence and arguments relied

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on in connection with its contention that claim 11 is unpatentable. We determine, for the same reasons stated in connection with claim 8, that Petitioner fails to establish a reasonable likelihood that claim 11 is unpatentable.

Petitioner's contentions concerning claim 12 which depends from claim 11 fails to add any additional evidence or arguments that would cure the deficiencies in the claim 11 contentions. *See* Pet. 64. Therefore, for the same reasons, we conclude that Petitioner fails to establish a reasonable likelihood that claim 12 is unpatentable.

III. CONCLUSION

Upon consideration of the Petition, the Preliminary Response, and the evidence of record, we conclude that Petitioner has not demonstrated a reasonable likelihood that any of claims 8, 9, 11, or 12 of the '586 Patent are unpatentable. Accordingly, we do not institute an *inter partes* review.

IV. ORDER

It is hereby, ORDERED that the Petition is *denied* and no trial is instituted.

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PETITIONER:

Charles M. McMahon
Brian A. Jones
Thomas DaMario
MCDERMOTT WILL & EMERY
cmcmahon@mwe.com
bajones@mwe.com
tdamario@mwe.com

PATENT OWNER:

Hong Zhong
Michael Fleming
IRELL & MANELLA LLP
hzhong@irell.com
mflaming@irell.com

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:17-cv-145	DATE FILED 2/21/2017	U.S. DISTRICT COURT Eastern District of Texas, Marshall Division
PLAINTIFF Fundamental Innovation Systems International LLC		DEFENDANT Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,232,766	7/31/2012	Fundamental Innovation Systems Internaional LLC
2 7,834,586	11/16/2010	Fundamental Innovation Systems International LLC
3 7,791,319	9/7/2010	Fundamental Innovation Systems International LLC
4 8,541,983	9/24/2013	Fundamental Innovation Systems International LLC
5 7,893,655	2/22/2011	Fundamental Innovation Systems International LLC

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HUAWEI DEVICE CO., LTD.,
Petitioner,

v.

FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LLC,
Patent Owner.

Case IPR2018-00485
Patent 7,834,586 B2

Before BRYAN F. MOORE, JON B. TORNQUIST, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

TORNQUIST, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

Huawei Device Co., Ltd. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–3 and 8–13 of U.S. Patent No. 7,834,586 B2 (Ex. 1001, “the ’586 patent”). Fundamental Innovation Systems International LLC (“Patent Owner”) filed a Preliminary Response to the Petition (Paper 7, “Prelim. Resp.”).

On June 8, 2018, Patent Owner disclaimed claims 3, 7, 10, and 13 of the ’586 patent. Ex. 2016, 3.

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314. The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless the Director determines . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

After considering the Petition, the Preliminary Response, and the evidence of record, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail with respect to at least one claim challenged in the Petition. Accordingly, we do not institute *inter partes* review.

A. Related Proceedings

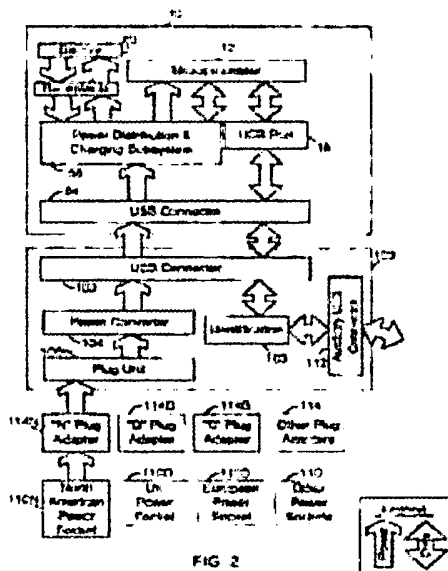
The parties identify Civil Action Nos. 2:17-cv-00145-JRG, 2:16-cv-01424-JRG-RSP, and 2:16-cv-01425-JRG-RSP, pending before the U.S. District Court for the Eastern District of Texas, as well as Civil Action No. 3:17-cv-01827-N, pending before the U.S. District Court for the Northern District of Texas, as related matters. Pet. 4; Paper 4, 1. Patent Owner notes that the ’586 patent is also the subject of IPR2018-00493. Paper 4, 3.

B. The '586 Patent

The '586 patent discloses “a USB adapter for providing a source of power to a mobile device through a USB port.” Ex. 1001, 2:22–24.

The '586 patent explains that, although it was understood in the art that a USB interface could be used as a power interface, it was typically not used for that purpose by mobile devices. *Id.* at 1:56–58. This is because a USB device must participate “in a host-initiated process called enumeration in order to be compliant” with the USB specification in drawing power from the USB interface, and “alternate power sources such as conventional AC outlets and DC car sockets” were “not capable of participating in enumeration.” *Id.* at 1:58–2:3.

To permit the recharging of mobile devices using a broader range of power sources, the '586 patent provides a USB adapter that is capable of providing power to a mobile device without first participating in enumeration. *Id.* at 8:9–14. Figure 2 of the '586 patent, reproduced below, is a schematic diagram of the disclosed USB adapter coupled to an exemplary mobile device (*id.* at 3:23–25, 6:48–50):



As shown in Figure 2, USB adapter 100 comprises primary USB connector 102, power converter 104, plug unit 106, identification subsystem 108, and auxiliary USB connector 112. *Id.* at 6:50–53, 6:59–62. The '586 patent discloses that when USB adapter 100 is connected to mobile device 10 via USB connector 54 of mobile device 10 and USB connector 102 of USB adapter 100, identification subsystem 108 provides an identification signal to mobile device 10 indicating that the power source is not a USB limited source. *Id.* at 8:15–17, 8:62–67. This identification signal “could be the communication of a single voltage on one or more of the USB data lines, different voltages on the two data lines, a series of pulses or voltage level changes, or other types of electrical signals.” *Id.* at 8:15–21. “The preferred identification signal,” however, “results from the application of voltage signals greater than 2 volts to both the D+ and D- lines in the USB connector.” *Id.* at 9:13–15. The '586 patent explains that by providing an appropriate identification signal the mobile device 10 can “forego the enumeration process and charge negotiation process” set forth in the USB specification “and immediately draw energy from the USB power adapter” at a desired rate. *Id.* at 9:52–57.

C. Illustrative Claims

Petitioner challenges claims 1–3 and 8–13 of the '586 patent. Claims 1, 8, and 11 are independent. Claims 1 and 8 are illustrative of the challenged claims and are reproduced below:

1. A mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:
a Universal Serial Bus (“USB”) interface configured to allow reception of a USB cable;

a charging subsystem, the charging subsystem operably connected to the USB interface V-bus power line;

the charging subsystem operably connectable to a battery, and configured to charge a battery if a battery is operably connected;

the charging system further configured to use power from the V-bus power line for the charging of a battery; and

where the mobile device is configured to detect an identification signal at a D+ and a D- data line of the USB interface, the identification signal being different than USB enumeration.

Ex. 1001, 11:50–64.

8. A method of charging a battery in a mobile device, the mobile device configurable for use in a wireless telecommunications network, comprising:

providing a Universal Serial Bus (“USB”) interface configured to allow reception of a USB cable, and, receiving power on a V-bus power line at the USB interface;

providing an operable connection between the power received at the USB interface on the V-bus power line and a charging subsystem;

having a battery in operable connection to the charging subsystem;

providing power to the battery using the charger subsystem; and,

detecting an identification signal at a D+ and a D- data line of the USB interface, the identification signal being different than USB enumeration.

Id. at 12:31–46.

D. The Asserted Grounds of Unpatentability

Petitioner contends claims 1–3 and 8–13 of the '586 patent are unpatentable based on the following grounds (Pet. 6):¹

References	Basis	Claims Challenged
Theobald ² , USB 2.0 ³ , and Shiga ⁴	§ 103	1–3 and 8–13
Dougherty ⁵ and Shiga	§ 103	1, 2, 8, 9, 11, and 12
Dougherty, Shiga, and TIA/EIA-644 ⁶	§ 103	3, 10, and 13

As noted above, Patent Owner has disclaimed claims 3, 7, 10, and 13 of the '586 patent. Ex. 2016, 3. Thus, we do not address these claims in the recited grounds, or address Petitioner's ground based on Dougherty, Shiga, and TIA/EIA-644 (Ex. 1025), which is directed solely to disclaimed claims 3, 10, and 13. Pet. 6.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are construed according to their broadest reasonable interpretation in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard).

¹ Petitioner also relies on a declaration from Dr. John Levy (Ex. 1005).

² US 5,859,522, issued Jan. 12, 1999 (Ex. 1006).

³ Universal Serial Bus Specification Revision 2.0, April 27, 2000.

⁴ US 6,625,738 B1, issued Sept. 23, 2003 (Ex. 1009).

⁵ US 7,360,004 B2, issued Apr. 15, 2008 (Ex. 1010).

⁶ TIA/EIA Standard, *Electrical Characteristics of Low Voltage Differential Signaling (LVDS) Interface Circuits*, March 1996 (Ex. 1025).

Petitioner contends the preambles of the independent claims are not limiting and provides a proposed construction for the term “USB enumeration.” Pet. 27–29. Patent Owner contends the preambles of the claims are limiting, but does not contest Petitioner’s proposed construction of “USB enumeration,” or contend that any additional claim terms of the ’586 patent require express construction. Prelim. Resp. 9–11.

Upon review of the parties’ arguments and supporting evidence, we determine that no claim terms of the ’586 patent require express construction for purposes of this Decision. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”)).

B. Claims 1, 2, 8, 9, 11, and 12 over Theobald and USB 2.0

Petitioner contends the subject matter of claims 1, 2, 8, 9, 11, and 12⁷ would have been obvious over the combined disclosures of Theobald and USB 2.0. Pet. 30–50.

1. Theobald

Theobald discloses “an apparatus and method used to identify an accessory to an electronic device.” Ex. 1006, 1:7–9. Theobald explains that it is commercially advantageous for electronic devices to be compatible with a large number of accessories, which serve to increase the functionality of the electronic device. *Id.* at 1:13–16. Theobald further explains that when

⁷ As noted above, we do not address the challenged claims that were subsequently disclaimed by Patent Owner. Ex. 2016, 3.

one of these accessories is connected to an electronic device via an accessory connector it must be able to identify itself to the electronic device. *Id.* at 1:15–17, 1:30–33.

Identification of an accessory is typically accomplished using a logic circuit or microcontroller within the accessory that is capable of driving high speed data communications. *Id.* at 1:30–33. “[S]uch logic circuits or microcontrollers,” however, “are expensive and oftentimes double the cost of the accessory.” *Id.* at 1:34–35. Thus, Theobald indicates a need for “a low cost apparatus and method of identifying an accessory to a device that maintains backward compatibility with existing accessories that use the accessory connector.” *Id.* at 1:36–39.

Figure 1 of Theobald is reproduced below and is a partial block and partial schematic diagram of the accessory identification system (*id.* at 1:42–45):

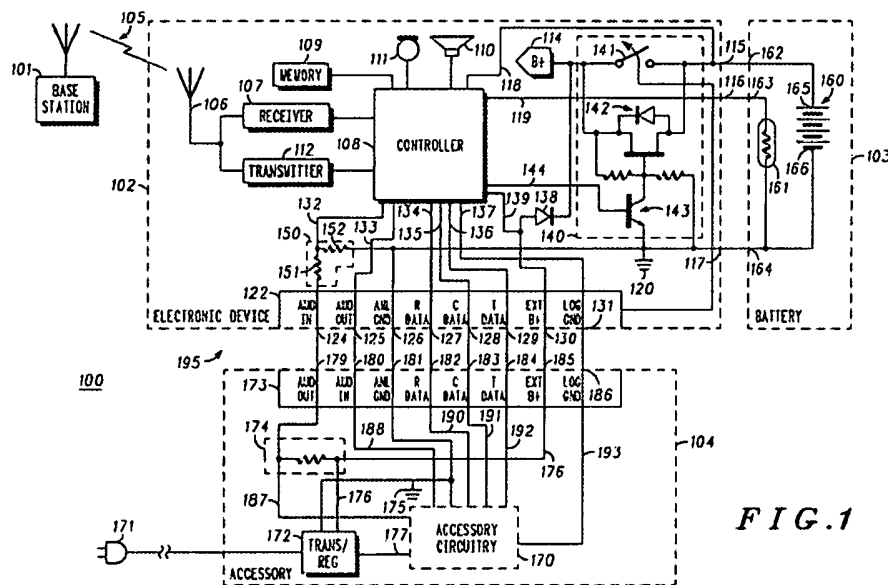


Figure 1 illustrates accessory identification system 100 of Theobald, which includes electronic device 102, battery 103, and accessory 104. *Id.* at 1:42–

45, 2:5–6. Connector 122 of electronic device 102 and connector 173 of the accessory have eight pins and serve to “physically and electrically” connect electronic device 102 to accessory 104. *Id.* at 2:47–48, 4:41–42, Fig. 1.

Identification element 174 is employed to identify accessory 104 to electronic device 102, and “is selected to have a different electrical value for each different type of accessory.” *Id.* at 4:55–62. For example, identification element 174 for a mid-rate charger accessory may have a 120 k Ω resistor, whereas the same element for a fast-rate charger may have a 36 k Ω resistor. *Id.* at 4:62–67. When an accessory is attached to electronic device 102, the external supply voltage of the accessory drives identification element 174 and identification network 150 to generate a voltage level on audio in line 132 of electronic device 102. *Id.* at 5:57–62. Controller 108 then identifies the accessory by comparing the voltage level on audio in line 132 to voltage level ranges stored in an accessory lookup table. *Id.* at 6:14–20.

In the charger embodiments of Theobald, depending on whether a mid-rate or fast-rate charger is identified using the accessory lookup table, either 340 mA of current (mid-rate charger) or 850 mA of current (fast-rate charger) are provided to electronic device 102. *Id.* at 4:29–33.

Theobald explains that, although connector 122 is depicted as a standardized eight pin J3-type accessory connector, “any other suitable multiple pin accessory connector having an external power supply pin and at least one information pin” may be used. *Id.* at 3:5–10. Theobald further explains that, although accessory circuitry 170 may be included in certain accessory embodiments, in the illustrated embodiment accessory 104 is a

mid-rate or fast-rate charger that does not include accessory circuitry 170
“and, thus, is low cost.” *Id.* at 4:10–17.

2. *USB 2.0*

The USB 2.0 specification⁸ describes an architecture and method for connecting a USB host to one or more USB devices through USB connectors and cables. Ex. 1007, 15–18, 148. In general, the USB cable has four wires: VBUS, GND, D+, and D-. *Id.* at 17–18, 85–89. The VBUS and GND lines provide power and the D+ and D- lines carry communication signals. *Id.*

The USB 2.0 standard limits the voltage and current that may be used over the USB connectors and cables. *Id.* at 178. In particular, the USB 2.0 standard limits the current that may be provided to a single device to 500 mA and the voltage to 5.25 volts. *Id.* at 171 (noting that a device can draw up to five unit loads, or 500 mA, which is “an absolute maximum, not an average over time”), 178 (setting a 500 mA maximum for supply current and a 5.25 V maximum for supply voltage).

3. *Shiga*

Shiga discloses a USB-connected keyboard that allows a host computer “to be started by a key input operation” at the keyboard. Ex. 1009, 2:4–8, Abstract. To accomplish this task, Shiga provides a signal to a “wake-up means” in the computer when a power-on key is pressed. *Id.* at 3:1–7

⁸ We alternately refer to the USB 2.0 Specification as the “USB 2.0 standard” or “USB 2.0.”

Shiga explains that, “according to the USB standards, there are three signal line state modes.” *Id.* at 5:46–47. Table 1 of Shiga, reproduced below, shows these standard signal line states:

	Low Speed	Full Speed	Unconnected
D+	L (Hi-Z)	H	L (Hi-Z)
D-	H (Hi-Z)	L (Hi-Z)	L (Hi-Z)

Id. at Table 1. In the first, or low speed state, signal line D+ is in an L (Hi-Z or high impedance) state and D- is in an H (high level) state. *Id.* at 5:55–58. In the second, or high speed state, signal line D+ is in the H state and signal line D- is in the L state. *Id.* at 5:58–59. In the third, or unconnected state, both D- and D+ signal lines are in the L state. *Id.* at 5:59–60.

In addition to the three standard signal line states, Shiga discloses that the signal lines may also be placed into a fourth, non-standard state, wherein both the D+ and D- signal lines are in the H state. *Id.* at 5:60–62, 6:48–58. Shiga provides this non-standard, or “fourth mode” signal, to a “wake-up means” in response to a user pressing the keyboard’s power-on key. *Id.* at 6:59–65. Shiga explains that, because this line state is not a standard USB state and is provided as a 50 ms pulse at 3 volts, it is “easily distinguished from USB standard data signals.” *Id.* at 6:48–58.

4. Analysis

Petitioner contends one of ordinary skill in the art would have sought to implement USB 2.0 connectors—which have an external VBUS power supply pin and D+ and D- information pins—in Theobald, because the USB standard was being widely adopted in the consumer electronics industry and Theobald expressly teaches that the mobile device’s connector “may be *any*

other suitable multiple pin accessory connector having an external power supply pin and at least one information pin.” Pet. 44.

In implementing USB 2.0 connectors in Theobald, Petitioner contends one of ordinary skill in the art would have sought to maintain Theobald’s 850 mA charging current, as fast charging capability “is a desirable feature.” *Id.* at 45. Petitioner contends “the 500 mA current or power limitation of USB 2.0 would not have been a deterrent” to using Theobald’s 850 mA charging current over a USB 2.0 connector, because “SE1 signaling over the USB connector had already been done in the prior art (Shiga, Zyskowski, Casebolt, and Cypress) and was well known, as was the problem of the current draw limitation associated with USB 2.0 (*e.g.*, Rogers and Amoni).” *Id.*

Patent Owner asserts the Petition should be denied because, among other things, Petitioner fails to present competent evidence demonstrating that one of ordinary skill in the art would have sought to combine Theobald, USB 2.0, and Shiga in the manner proposed in the Petition. Prelim. Resp. 31–33.

In the proposed combination of Theobald, USB 2.0, and Shiga, the fast-rate charger would exceed the 500 mA current limit set forth in the USB 2.0 specification. Ex. 1007, 171, 178. As noted above, Petitioner contends this violation of the USB 2.0 standard “would not have been a deterrent” to using 850 mA over a USB connector,” because SE1 signaling over a USB connector is disclosed in “Shiga, Zyskowski, Casebolt, and Cypress,” and the “problem of the current draw limitation associated with USB 2.0” was known in the art, as evidenced by Rogers and Amoni. Pet. 45.

Shiga, Zyskowski, Casebolt, and Cypress are directed to the use of an SE1 signal, which is prohibited under the USB 2.0 standard. *Id.* at 12–17; Ex. 1007, 123 (“Low-Speed and full-speed USB drivers must never ‘intentionally’ generate an SE1 on the bus.”). Petitioner does not adequately explain, however, why a violation of one USB restriction or limit, such as providing an SE1 signal over a USB connector, would teach or suggest to one of ordinary skill in the art that any other restriction or limit specified in the USB 2.0 specification could or should be violated.

Rogers discloses increasing voltage, and not current, and indicates a desire to keep current as low as possible for a particular power level. Ex. 1019, 10:29–33 (“The voltage is high so that the current required is as low as possible, for a given power level.”), 11:15–18 (disclosing a “dual-voltage accessory power system” that may “supply power at 48 VDC, instead of 5 VDC”), 11:51–55 (drawing 48 VDC from station input power 86, as shown in Figure 6 of Rogers). Amoni discloses increasing both voltage and current, but does so using an “auxiliary (or non-standard)” USB cable having additional conductors to carry the additional power to the device. Ex. 1018, 2:36–39, 3:66–4:4, Fig. 8, Abstract. Thus, Rogers avoids violating the 500 mA current limit set forth in USB 2.0 and Amoni relies on a modified USB connector to provide increased power.

Petitioner does not explain adequately why the disclosures of Rogers and Amoni, either alone or in combination with those of Shiga, Zyskowski, Casebolt, and Cypress, would teach or suggests providing greater than 500 mA of current over a standard USB 2.0 connector. Nor does Petitioner assert that one of ordinary skill in the art would have sought to use Amoni’s non-standard cables and connectors in Theobald. Thus, on this record,

Petitioner has not demonstrated sufficiently that one of ordinary skill in the art would have sought to provide 850 mA of current over a USB 2.0 connector in Theobald's mobile device, in violation of the USB 2.0 standard.

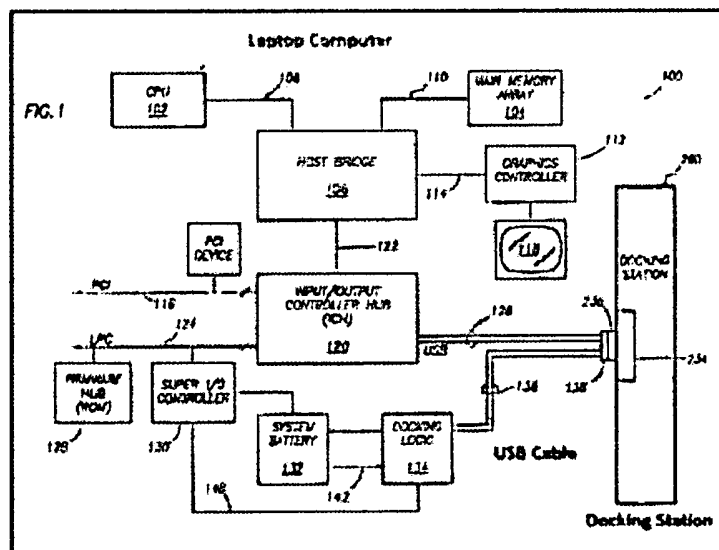
In view of the foregoing, Petitioner has not demonstrated a reasonable likelihood that claims 1, 2, 8, 9, 11, and 12 of the '586 patent would have been obvious over the combined disclosures of Theobald, USB 2.0, and Shiga.

C. Claims 1, 2, 8, 9, 11, and 12 over Dougherty and Shiga

Petitioner contends the subject matter of claims 1, 2, 8, 9, 11, and 12 would have been obvious over the combined disclosures of Dougherty and Shiga. Pet. 50–64.

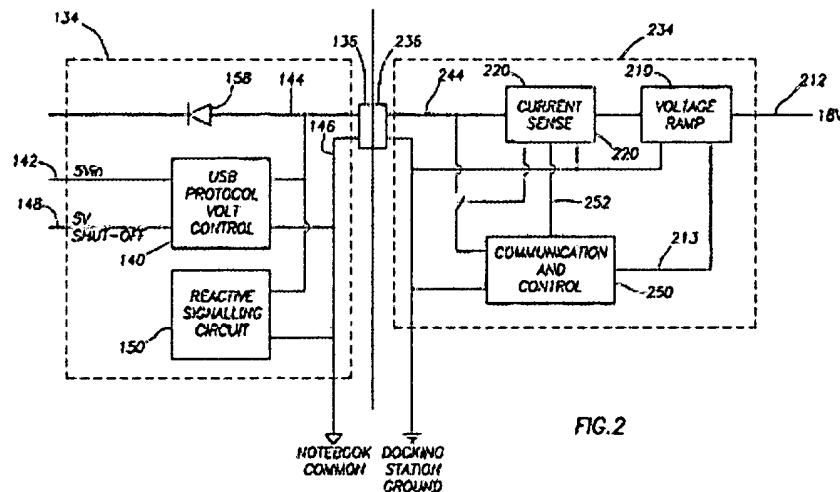
1. Dougherty

Dougherty discloses a method and system for powering a laptop across a USB interface when it is docked with a docking station. Ex. 1010, 1:21–26. Figure 1 of Dougherty, reproduced below with Petitioner's color annotations, is a schematic of a preferred embodiment of the disclosed system (Pet. 23):



As shown in Figure 1, the system of Dougherty includes laptop computer 100 (beige) and docking station 200 (blue), which are connected via serial communication conductors 126⁹, power rail 138, USB connector 136 (of laptop computer 100), and USB connector 236 (of docking station 200) (all in green). Ex. 1010, 3:44–5:7.

Figure 2 of Dougherty, reproduced below, shows in more detail the coupling of docking logic 134 of laptop computer 100 and docking logic 234 of docking station 200. *Id.* at 5:8–10; Pet. 52.



As shown in Figure 2, connection of docking logic 134 of laptop computer 100 and docking logic 234 of docking station 200 is via USB connector 136 of laptop computer 100 and USB connector 236 of docking station 200. Ex. 1010, 5:11–14. In this configuration, “[p]ositive power rail 244 couples to the power rail 144 on the laptop side of the connection and therefore also couples to the reactive signaling circuit 150.” *Id.* at 6:25–27.

⁹ Structural element 126 in Dougherty is alternatively identified as “USB bus 126,” “serial communication conductors 126,” “serial communication lines 126,” and “signal lines 126.” Ex. 1010, 4:51, 5:2–3, 5:51, 9:1.

Dougherty explains that, “[u]nder normal USB protocol, coupling of USB devices requires a series of USB handshaking protocols to identify both the host or master device, which would be the laptop computer 100, and any downstream device, which in this exemplary case is the docking station 200.” *Id.* at 5:39–43. In Dougherty, this handshaking protocol reveals to software running in laptop computer 100 that docking station 200 is capable of providing power across power rails 138. *Id.* at 5:43–48. Operating system software in laptop computer 100 then loads a driver specifically used with docking station 200 to turn “off the laptop computer’s ability to provide five volts to the power rails 138.” *Id.* at 5:53–58.

Once the 5 volt power supply of the laptop is turned off, “docking station dock logic 234 must establish that the laptop computer to which it is docked is capable of receiving power.” *Id.* at 6:9–18. This is accomplished over power rails 138, 144, and 244. *Id.* at 6:16–18. Once it is established that the laptop computer can receive power from the docking station, the voltage on positive power rails 244 and 144 may then be ramped up to 18 volts and the current increased to 2.5 amps. *Id.* at 6:19–7:19, 7:47–51.

2. *The Parties’ Arguments*

As noted above, to provide power from the docking station to the laptop computer, Dougherty requires a four-step process that includes: (1) a handshaking protocol between the laptop and the docking station; (2) loading a driver on the laptop that shuts off the laptop computer’s power supply; (3) signaling between the laptop computer and the docking station over the power rails that the laptop can receive power from the docking station; and (4) providing power from the docking station to the laptop computer. Pet. 60. Petitioner contends one of ordinary skill in the art would

have sought to replace this allegedly “elaborate four-step” docking procedure with a simpler and faster alternative that utilizes Shiga’s SE1 signals. *Id.*

In its proposed combination of Dougherty and Shiga, Petitioner replaces Dougherty’s handshaking protocols, the loading of the device driver by the laptop computer, and the signaling over the power rails, with an SE1 signal provided over the D+ and D- lines of the USB connector. *Id.* at 60–61. According to Petitioner, in this configuration Shiga’s SE1 signal would “(i) notify laptop 100 that the docking station 200 can power the laptop 100 across USB; and (ii) command the laptop to turn off its ability to power devices across USB.” *Id.* (citing Ex. 1005 ¶¶ 179–180). Then, “in response to receiving the fourth mode signal, the CPU 102” of laptop computer 100 would respond by transmitting a fourth mode signal to docking station 200 to notify it that docked laptop computer 100 can receive USB power. *Id.* at 62. In response to this fourth mode signal, docking station 200 would supply power to laptop computer 100 over the USB connector at 18 V and up to 2.5 A. *Id.*

Petitioner contends one of ordinary skill in the art would have sought to make this proposed combination of Dougherty and Shiga, as well as the proposed modifications to Dougherty’s system, because “Dougherty expressly indicates the desirability of reducing complexity and latency,” and substituting Shiga’s fourth mode signals for steps 1–3 of Dougherty identified above would achieve these goals in a predictable fashion. *Id.* at 62. Petitioner further contends that the proposed modifications would have involved “trivial changes to Dougherty’s system,” that Shiga’s fourth mode signal would have been a logical choice for signaling as it is “easily

distinguished from standard USB signals” and would not interfere with standard USB signaling, and that implementation of “non-USB standard signals in the Dougherty system” would constitute “the use of a known technique to improve a similar device in the same way.” *Id.* at 62–63.

In the alternative, Petitioner asserts that one of ordinary skill in the art could have implemented “a less sophisticated docking station which provides only fast-charging capability.” *Id.* at 61. In this embodiment, Petitioner contends a single SE1 signal from the docking station to the laptop computer could replace steps 1–3 of Dougherty identified above. *Id.* at 62.

In response, Patent Owner contends, among other things, that “Petitioner provides no explanation for why a [person of ordinary skill in the art] would eliminate Dougherty’s ‘handshaking protocol’ when doing so would eliminate Dougherty’s core functionality as a docking station with USB port replication.” Prelim. Resp. 50; *see id.* at 57–59.

3. Analysis

Dougherty discloses “a USB based docking station” that generates a plurality of communication ports for use with “printers, scanners, full size display devices, serial or parallel pointing devices and the like.” Ex. 1010, 2:12–20, 2:24–28, 2:45–51; *see also id.* at 1:43–67 (discussing the limited number of communications ports on laptop computers, and noting this issue is addressed through the use of “some form of docking station”). Patent Owner presents persuasive evidence that Dougherty’s USB handshaking protocols are required before the laptop computer can communicate with the docking station and access the functionality of the peripheral devices. Ex. 2001 ¶ 101 (citing Ex. 1010, 5:39–48); Ex. 1010, 5:39–43 (noting in

Dougherty that “[u]nder normal USB protocol, coupling of USB devices *requires* a series of USB handshaking protocols”); Ex. 1007, 243 (“Before a USB device’s function may be used, the device must be configured.”); Ex. 2010 ¶ 48; Ex. 2006, 41 (noting that application communications under USB protocol occur “[a]fter the host has exchanged enumeration information with the device and a device driver has been assigned and loaded”); Ex. 2003, 74 (“Enumeration is the initial exchange of information that enables the host’s device driver to communicate with the device.”).

As noted by Patent Owner, Petitioner does not persuasively explain how the docking station and laptop computer of Dougherty could communicate if the required USB handshaking protocols are replaced with an SE1 signal. Prelim. Resp. 50; Ex. 2001 ¶ 101 (“Without enumeration, Dougherty’s docking station could not fulfill its primary purpose of expanding the laptop’s functionality.”). Thus, we do not find persuasive Petitioner’s argument that one of ordinary skill in the art would have been motivated to make the proposed modification based on the disclosures of Dougherty and Shiga. Likewise, we do not find persuasive Petitioner’s argument that the proposed “trivial” changes to Dougherty’s system would have constituted the use of a known technique to *improve* a similar device in the same way. Pet. 62–63.

Moreover, to the extent Petitioner contends the docking station of Dougherty would both provide an SE1 signal and then later perform enumeration to allow communication between the laptop computer and the docking station, it does not persuasively explain how this configuration would reduce complexity or latency in Dougherty’s system. Thus, on this record, we are not persuaded that one of ordinary skill in the art would have

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sought to combine the disclosures of Dougherty and Shiga in the manner proposed in the Petition.

With respect to Petitioner's alternative embodiment, we are directed to no disclosure in Dougherty or Shiga of a docking station that is designed to provide only power to a laptop. Nor does Petitioner persuasively explain why one of ordinary skill in the art, seeking only to fast-charge a laptop computer, would use such a docking station, as opposed to a single power plug. Thus, we do not find persuasive Petitioner's arguments with respect to the possible alternate embodiment of Dougherty.

In view of the foregoing, Petitioner has not demonstrated sufficiently that one of ordinary skill in the art would have sought to combine the disclosures of Dougherty and Shiga to arrive at the subject matter of challenged claims 1, 2, 8, 9, 11, and 12 with a reasonable expectation of success. Accordingly, Petitioner has not demonstrated a reasonable likelihood that the subject matter of challenged claims 1, 2, 8, 9, 11, and 12 would have been obvious over the combined disclosures of Dougherty and Shiga.

III. CONCLUSION

For the foregoing reasons, Petitioner has not demonstrated a reasonable likelihood that at least one challenged claim of the '586 patent would have been obvious over the prior art of record. Accordingly, we do not institute *inter partes* review.

IV. ORDER

It is hereby,

ORDERED that, pursuant to 35 U.S.C. § 314, the Petition is denied and no *inter partes* review is instituted.

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PETITIONER:

David Garr
COVINGTON & BURLING LLP
One CityCenter, 850 Tenth Street, NW
Washington, DC 20001
dgarr@cov.com

BACK-UP COUNSEL:

Anupam Sharma
COVINGTON & BURLING LLP
333 Twin Dolphin Drive, Suite 700
Redwood Shores, CA 94065-1418
asharma@cov.com

PATENT OWNER:

Hong Annita Zhong
IRELL & MANELLA LLP
1800 Avenue of the Stars, Suite 900
Los Angeles, California 90067
hzhong@irell.com

BACK-UP COUNSEL:

Michael Fleming
IRELL & MANELLA LLP
1800 Avenue of the Stars, Suite 900
Los Angeles, California 90067
mflaming@irell.com

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:16-cv-1425	DATE FILED 12/16/2016	U.S. DISTRICT COURT Eastern District of Texas, Marshall Division
PLAINTIFF Fundamental Innovation Systems International LLC		DEFENDANT LG Electronics, Inc., LG Electronics U.S.A., Inc., LG Electronics MobileComm U.S.A. Inc., LG Electronics Mobile Research U.S.A. LLC, and LG Electronics Alabama, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,232,766 B2	7/31/2012	Fundamental Innovation Systems International LLC
2 7,834,586 B2	11/16/2010	Fundamental Innovation Systems International LLC
3 7,239,111 B2	7/3/2007	Fundamental Innovation Systems International LLC
4 8,624,550 B2	1/7/2014	Fundamental Innovation Systems International LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

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PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy **Petitioners Ex. 1002**

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PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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2 7,834,586 B2	11/16/2010	Fundamental Innovation Systems International LLC
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT ORDERED that all claims and counterclaims in this matter are DISMISSED WITH PREJUDICE

CLERK <i>David A. O'foole</i>	(BY) DEPUTY CLERK ch	DATE 10/23/18
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AO 120 (Rev. 08/10)

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Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:19-cv-00048	DATE FILED 2/11/2019	U.S. DISTRICT COURT for the Eastern District of Texas
PLAINTIFF FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LLC		DEFENDANT APPLE, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 6,936,936	8/30/2005	FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LI
2 7,239,111	7/3/2007	FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LI
3 7,834,586	11/16/2010	FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LI
4 8,232,766	7/31/2012	FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LI
5 8,624,550	1/7/2014	FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LI

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