


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.

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 OBTAIN 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	
<p>The owner*, <u>Research In Motion Limited</u>, of <u>100</u> 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 <u>12/268,297</u>, filed on <u>November 10, 2008</u>, 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.</p>	
<p>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.</p>	
Check either box 1 or 2 below, if appropriate.	
1. <input type="checkbox"/> 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.	
<p>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.</p>	
2. <input checked="" type="checkbox"/> The undersigned is an attorney or agent of record. Reg. No. <u>45,438</u>	
	May 25, 2010 Date
J. Robert Brown, Jr. Typed or printed name	
<u>972/731-2288</u> Telephone Number	
<input type="checkbox"/> 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-2033.	
*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/06 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 1460, Alexandria, VA 22313-1460.

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
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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>2711.04387.2a484226c39a74ca94421ac 913d7</small>	no	1

Warnings:

Information:

FISI00001043

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 1455
Alexandria, Virginia 22313-1455
www.uspto.gov

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
36652	7590	05/14/2010	EXAMINER	
CONLEY ROSE, P.C. 5601 GRANITE PARKWAY, SUITE 750 PLANO, TX 75024			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
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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

PTO-90C (Rev. 04-03)

FISI00001046

Huawei v. FISI Exhibit No. 1002 - 76/208



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 <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 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	

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.

CHANGE OF CORRESPONDENCE ADDRESS <i>Application</i> 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 /s. 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.

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

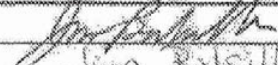
OR

<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	519-885-7465
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
 S.A. [initials]

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 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.

FISI00001051

Huawei v. FISI Exhibit No. 1002 - 81/208

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.

FISI00001052

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 2f025432702a74679d6192d016112c0ba04157c	no	1

Warnings:

Information:

FISI00001053

2	Power of Attorney	4214-00000_ConleyRoseGener alPowerofAttorney.PDF	302990 <small>639e475966c1475db158d7285f45d9824 694e</small>	no	2
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73(b).	4214-01509_AssigneeStateme nt373.pdf	477323 <small>3d6f65282c4b2245cd083cc5b8c083308e c4f0</small>	no	2
Warnings:					
Information:					
Total Files Size (in bytes):					1105116
<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>					

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

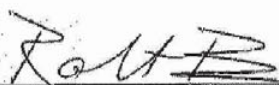
TERMINAL DISCLAIMER	<input type="checkbox"/> APPROVED	<input checked="" type="checkbox"/> DISAPPROVED
Date Filed: 03/29/2010	This patent is subject to a Terminal Disclaimer	

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

U.S. Patent and Trademark Office

FISI00001055

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 OBTAIN A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION	Docket Number (Optional) 10254-US-CNT4 (4214-01508)
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	
<p>The owner*, <u>Research In Motion Limited</u>, of <u>100</u> 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 <u>12/268,297</u>, filed on <u>November 10, 2008</u>, 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.</p> <p>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.</p> <p>Check either box 1 or 2 below, if appropriate.</p> <p>1. <input type="checkbox"/> 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.</p> <p>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.</p> <p>2. <input checked="" type="checkbox"/> The undersigned is an attorney or agent of record. Reg. No. <u>45,438</u></p> <p style="text-align: center;"><u>March 29, 2010</u></p> <p style="text-align: center;">_____ SignatureDate</p> <p style="text-align: center;">_____ J. Robert Brown, Jr. Typed or printed name</p> <p style="text-align: right;">_____ 972/731-2298 Telephone Number</p> <p><input checked="" type="checkbox"/> Terminal disclaimer fee under 37 CFR 1.20(d) is included.</p> <p style="text-align: center;">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.</p> <p><small>*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/06 may be used for making this statement. See MPEP § 324.</small></p>	

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 1460, Alexandria, VA 22313-1460.

If you need assistance in completing the form, call 1-800-PTO-5199 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:				

FISI00001057

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	
<p>The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:</p> <ul style="list-style-type: none"> 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) 	

FISI00001059

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 21ab308126abdc7252b4825c71e21073e5e96542	no	1

Warnings:

Information:

2	Fee Worksheet (PTO-875)	fee-info.pdf	30240 f50ca8800570f31099c6130f4b1160856b188	no	2
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Warnings:

Information:

Total Files Size (in bytes): 81590

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.

FISI00001060

Atty Dkt. No.: 10254-US-CNT4
4214-01509

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: 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 §
Group Art Unit: §
Examiner: §
Confirmation: 6230 §

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.

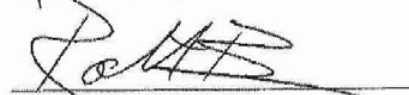
Applicants hereby respectfully request issuance of a corrected *Filing Receipt* for the above-identified application. Applicants also submit concurrently herewith a supplemental application data sheet listing the corrected priority claims as well as a marked-up copy of the Filing Receipt. Since these 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.

Respectfully submitted,

CONLEY ROSE, P.C.



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

ATTORNEY FOR APPLICANTS

Date:

March 17, 2010

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



UNITED STATES PATENT AND TRADEMARK OFFICE

Adk
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	ORF ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOF CLAIMS	IND CLAIMS
12/714,204	02/26/2010	2858	1310	10254-US-CNT4(4214-01509)	13	4

CONFIRMATION NO. 6230

FILING RECEIPT

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



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

which
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

FISI00001064

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

page 2 of 3

FISI00001065

Huawei v. FISI Exhibit No. 1002 - 95/208

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 Residence¹	CA	
Citizenship under 37 CFR 1.41(b)¹		CA			
Mailing Address of Applicant:					
Address 1	295 Phillip Street				
Address 2					
City	Waterloo		State/Province	ON	
Postal Code	N2L 3W8		Country¹	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 Residence¹	CA	
Citizenship under 37 CFR 1.41(b)¹		CA			
Mailing Address of Applicant:					
Address 1	295 Phillip Street				
Address 2					
City	Waterloo		State/Province	ON	
Postal Code	N2L 3W8		Country¹	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 Residence¹	CA	

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"/>
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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
	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
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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
	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
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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		
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	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	7453233	2008-11-18

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		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)
11175885	Continuation of	10087629	2002-03-01	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)
10087629	non provisional of	60273021	2001-03-01		
Prior Application Status		Patented		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.					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		
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			

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.**

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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.
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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. 213(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 31697471171650956231683c7271b681b622	no	3

Warnings:

Information:

FISI00001073

2	Request for Corrected Filing Receipt	4214-01509_MarkedUpFilingReceipt.pdf	110628 339284761f11a939ee35616d7c623c1a0928bc	no	3
Warnings:					
Information:					
3	Application Data Sheet	4214-01509_SupplementalApplicationDataSheet.pdf	1325166 25ec9c1d66a7e90274c3ef0298576c31c393740e	no	6
Warnings:					
Information:					
Total Files Size (in bytes):					1506469
<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>					

FISI00001074

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-975				Application or Docket Number 12/714,204		Filing Date 02/26/2010		<input type="checkbox"/> To be Mailed			
APPLICATION AS FILED – PART I											
(Column 1)			(Column 2)			SMALL ENTITY <input type="checkbox"/>		OR		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR		RATE (\$)	FEE (\$)			
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (g), or (e))</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		OR		N/A				
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(e), (f), or (g))</small>	N/A	N/A	N/A				N/A				
TOTAL CLAIMS <small>(37 CFR 1.18(i))</small>	minus 20 = *	*	X \$ =		OR		X \$ =				
INDEPENDENT CLAIMS <small>(37 CFR 1.18(h))</small>	minus 3 = *	*	X \$ =				X \$ =				
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(e))</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).					OR					
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>								OR			
			TOTAL		OR		TOTAL				
							OR				
APPLICATION AS AMENDED – PART II											
(Column 1)			(Column 2)			SMALL ENTITY		OR		OTHER THAN SMALL ENTITY	
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 \$ =				X \$ =	0	
	Independent <small>(37 CFR 1.16(j))</small>	* 4	Minus *** 4	= 0	X \$ =		X \$ =	0			
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>					OR					
	<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	
							OR				
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 \$ =				X \$ =		
	Independent <small>(37 CFR 1.16(j))</small>	*	Minus ***	=	X \$ =		X \$ =				
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>					OR					
	<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				
							OR				

* 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/

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-975				Application or Docket Number 12/714,204		Filing Date 02/26/2010		<input type="checkbox"/> To be Mailed			
APPLICATION AS FILED – PART I											
(Column 1)			(Column 2)			SMALL ENTITY <input type="checkbox"/>		OR		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR		RATE (\$)	FEE (\$)			
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (g), or (e))	N/A	N/A	N/A				N/A				
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A		OR		N/A				
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(e), (f), or (g))	N/A	N/A	N/A				N/A				
TOTAL CLAIMS (37 CFR 1.18(i))	minus 20 = *	*	X \$ =		OR		X \$ =				
INDEPENDENT CLAIMS (37 CFR 1.18(h))	minus 3 = *	*	X \$ =				X \$ =				
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(e))	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).					OR					
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))											
			TOTAL		OR		TOTAL				
* If the difference in column 1 is less than zero, enter "0" in column 2.											
APPLICATION AS AMENDED – PART II											
(Column 1)			(Column 2)		(Column 3)		SMALL ENTITY		OR		OTHER THAN SMALL ENTITY
AMENDMENT	03/17/2010	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR		RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 13	Minus ** 20	= 0	X \$ =				X \$ =	0	
	Independent (37 CFR 1.16(j))	* 4	Minus *** 4	= 0	X \$ =		X \$ =	0			
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					OR					
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
					TOTAL ADD'L FEE		OR		TOTAL ADD'L FEE 0		
			TOTAL		OR		TOTAL				
AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR		RATE (\$)	ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))	*	**	=	X \$ =				X \$ =		
	Independent (37 CFR 1.16(j))	*	***	=	X \$ =		X \$ =				
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					OR					
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
					TOTAL ADD'L FEE		OR		TOTAL ADD'L FEE		
			TOTAL		OR		TOTAL				
* 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.											

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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

FILING RECEIPT

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



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

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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>.

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See attached certification statement.

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

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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
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(54) **Identification apparatus and method**
 Verfahren und Vorrichtung zur Identifikation
 Procédé et appareil d'identification

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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.

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.

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

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.
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.
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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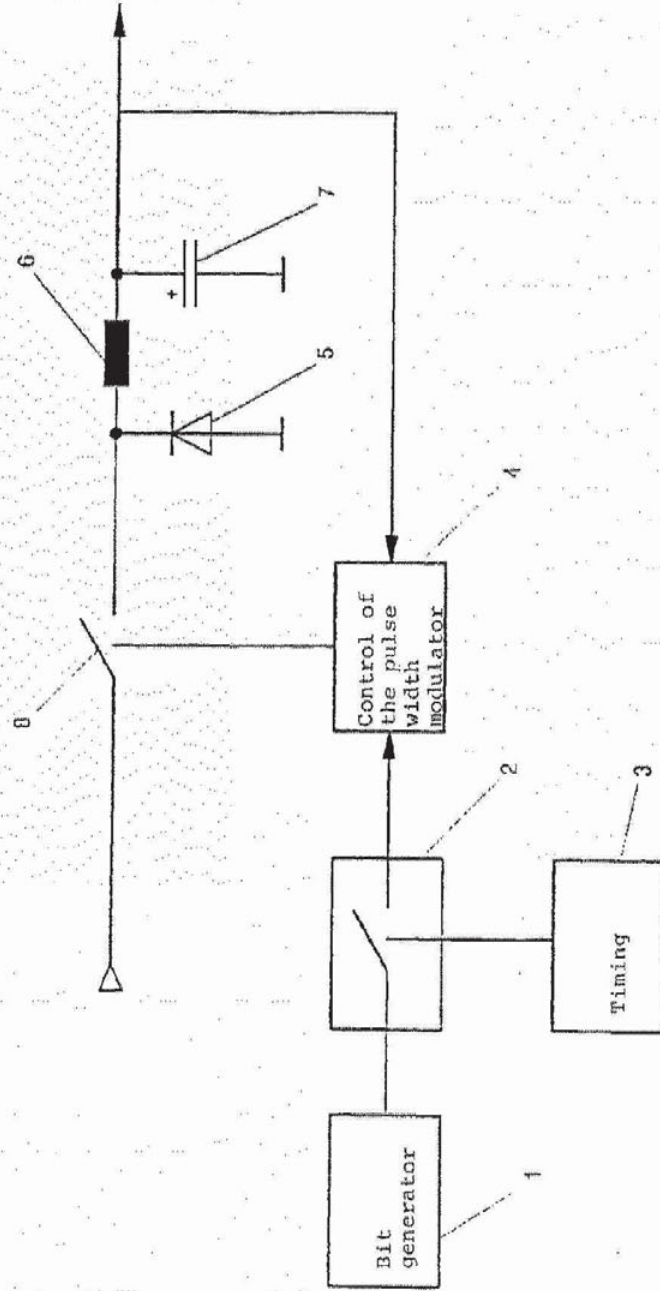


Fig. 1

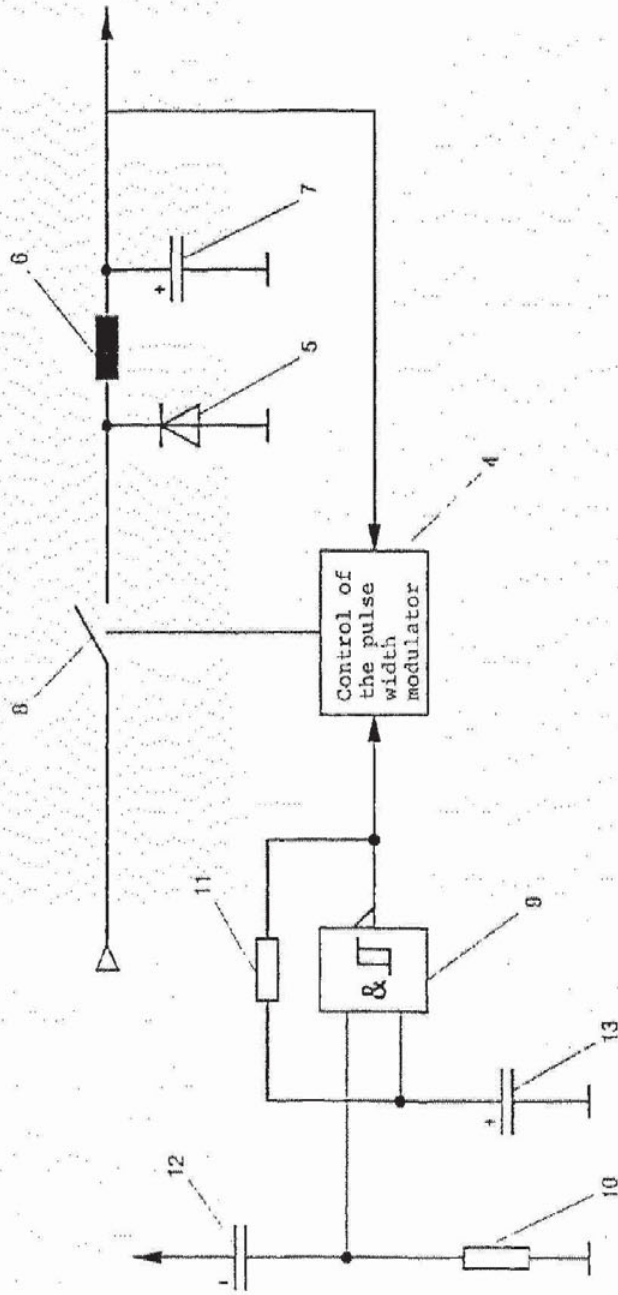


Fig. 2

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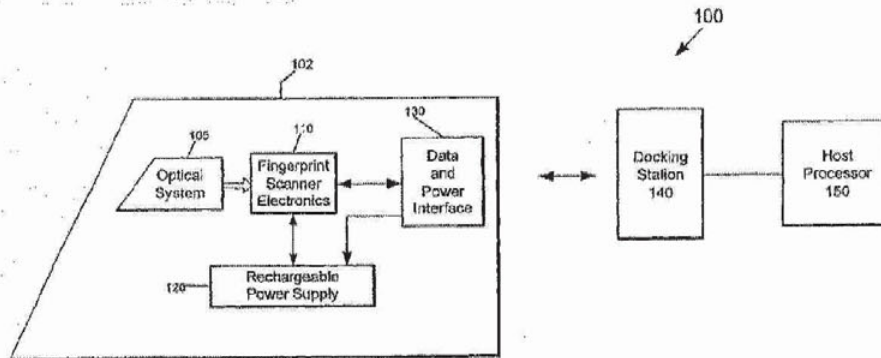
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(54) Title: RECHARGEABLE MOBILE HAND-HELD FINGERPRINT SCANNER WITH A DATA AND POWER COMMUNICATION INTERFACE



(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.

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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.

10 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, 15 *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 20 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 25 made by Digital Persona, Veridoom, 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 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.

10 In one embodiment, 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 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 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 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.

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Detailed Description of the Embodiments

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 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.

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))

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.

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
10 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
15 padded to 512 pixels by 512 pixels), although the standard image size is 1" X 1", 500 dpi, 256 levels of gray-scale (ANSI-NIST).

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
20 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:

* 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

5 * 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

10 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.

15 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.

20 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.

25 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

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
5 does not couple to a docking station quickly and easily.

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
10 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
15 accordance with the following claims and their equivalents.

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.

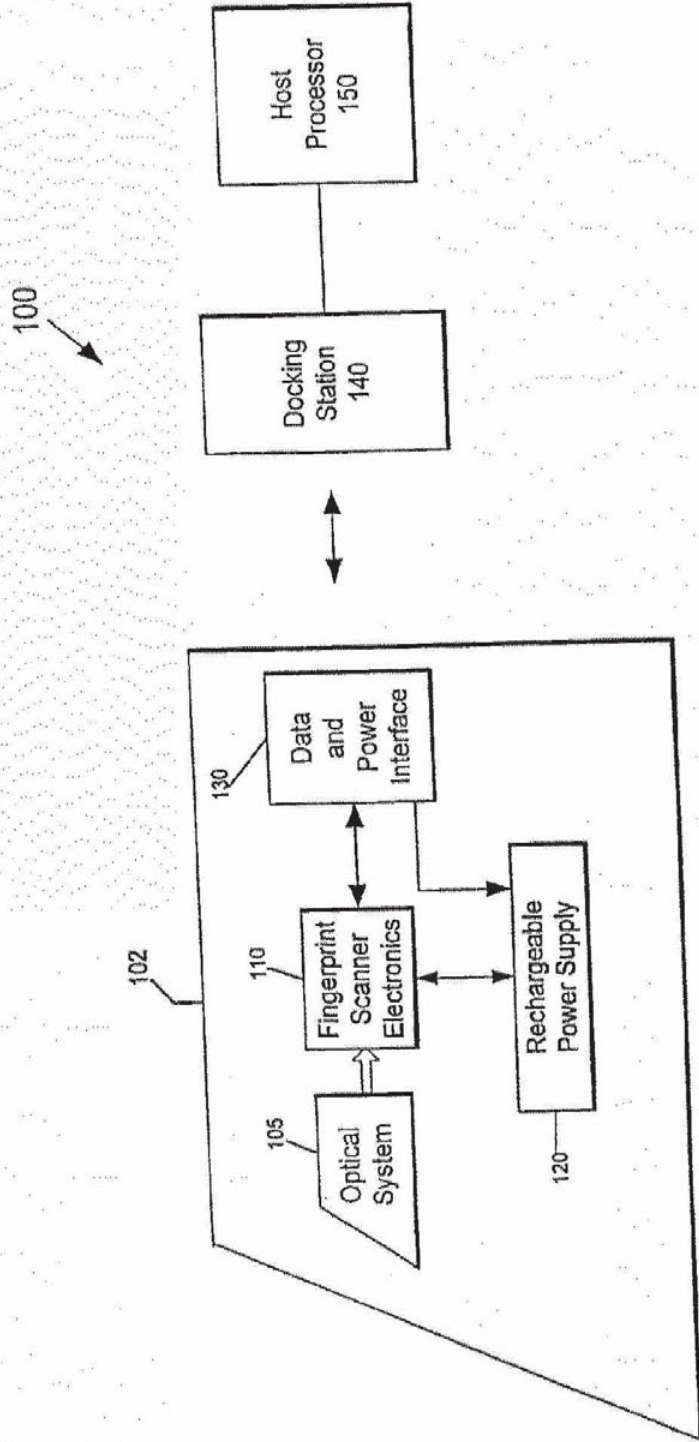


FIG. 1

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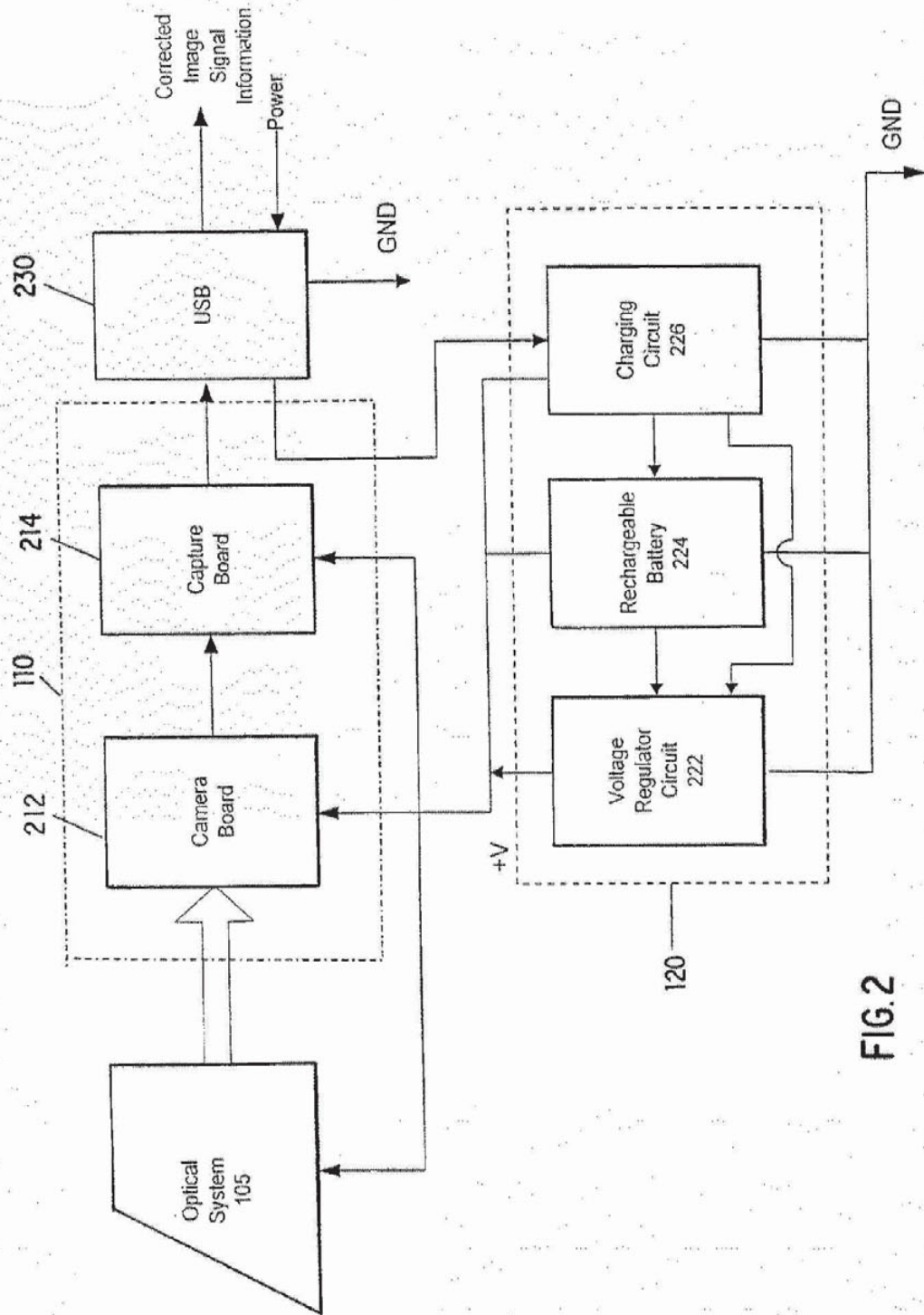


FIG. 2

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