03-05-01 A/PROV.

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PTO/SB/16 (8-00)
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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

INVENTOR(S)		
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[X] *Additional inventors are being named on the* 1 *separately numbered sheets attached hereto*

TITLE OF THE INVENTION (280 characters max)

SYSTEM AND METHOD FOR ADAPTING A USB TO PROVIDE POWER FOR CHARGING A MOBILE DEVICE

Direct all correspondence to: **CORRESPONDENCE ADDRESS**

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[X] Firm or Individual Name	David B. Cochran, Esq.				
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ENCLOSED APPLICATION PARTS *(check all that apply)*

[X] Specification *Number of Pages*	16	[X] ~~CD(s), Number~~ Appendix	A - 33 pgs.
[X] Drawing(s) *Number of Sheets*	6	[X] Assignment	7 pgs.
[ ] Application Data Sheet. See 37 CFR 1.76		[X] Other (specify)	Power of Attorney for Provisional Appln. 2 pgs.

METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT

		FILING FEE AMOUNT ($)
[ ]	Applicant claims small entity status. See 37 CFR 1.27.	
[X]	A check or money order is enclosed to cover the filing fees	
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[ ]	Payment by credit card. Form PTO-2038 is attached.	

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

[X] No.

[ ] Yes, the name of the U.S. Government agency and the Government contract number are: _____

Respectfully submitted,

SIGNATURE David B. Cochran Date 3/2/01

TYPED or PRINTED NAME David B. Cochran REGISTRATION NO. *(if appropriate)* 39,142

TELEPHONE (216/586-3939) Docket Number: 555255012132

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This collection of information is required by 37 CFR 1.51. The information is used by the public to file (and by the PTO to process) a provisional application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the complete provisional application to the PTO. 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, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, D.C. 20231.

PROVISIONAL APPLICATION COVER SHEET
Additional Page

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Docket Number	555255012132	Type a plus sign (+) inside this box →	+

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Number 1 of 1

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title of the Invention

System and Method for Adapting a USB to Provide Power for Charging a Mobile Device

Inventors

Daniel M. Fischer
Dan G. Radut
Mike Habicher
Quang Luong
Jonatahan Malton

555255-012-132

TITLE OF INVENTION

System and Method for Adapting a USB to Provide Power for Charging a Mobile Device

FIELD OF INVENTION

This invention relates to rechargeable mobile devices having access to a Universal Serial Bus (USB). In particular, this invention relates to adapting power from the USB for use as a power source by the charging system of the mobile device to re-charge the portable power supply of the mobile device.

BACKGROUND OF THE INVENTION

On one hand, the Universal Serial Bus (USB) is a communications bus for connecting a USB host controller such as a computer to peripheral devices. USB peripheral devices can be differentiated based on how they obtain their power in order to operate while connected. A self-powered peripheral has access to a power supply external to USB, whereas a bus-powered peripheral derives all of its power from the USB.

On the other hand, traditional mobile devices usually have a portable power supply that provides power to the mobile device while it is in service. Some portable power supplies are rechargeable so that when power is depleted and the portable power supply becomes discharged, a charging system can be used to restore the charge in the portable power supply. The charging system obtains power from an alternate power source, such as an AC outlet of a home or office electrical network, in order to recharge the portable power supply.

Certain rechargeable mobile devices use a separate charging system such as a docking cradle. Other rechargeable mobile devices integrate a built-in charging system in order to facilitate recharging the portable power supply while it is still installed in the mobile device.

Recently the hitherto separate fields of USB and mobile devices have collided. Certain rechargeable mobile devices have evolved to access USB capabilities in order to become USB peripherals for the purpose of communicating with USB host controllers such as a computer. In some cases, USB capabilities have been incorporated into the docking cradle, whereas in other cases USB capabilities have been integrated into the rechargeable mobile device itself, in a manner analogous to the location of the traditional charging system.

Traditional rechargeable mobile devices having a USB already have access to two power supplies, specifically a portable power supply and an alternate power supply. Therefore USB capable rechargeable mobile devices traditionally operate as self-powered USB peripherals.

There is a need for a system and method of adapting the charging system of a USB capable rechargeable mobile device to use the power traditionally available on the USB as an alternate power source for recharging the portable power supply of the mobile device thereby eliminating the need for a separate charging and USB interfaces.

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