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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,923	04/15/2008	7360004	200304427-2	5162

7590 03/26/2008
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 470 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Michael J. Dougherty, Houston, TX;
Kenneth W. Stufflebeam, Houston, TX;
Rahul V. Lakdawala, Cypress, TX;
Thomas P. Sawyers, Hempstead, TX;



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Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

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JUL 17 2006

OFFICE OF PETITIONS

In re Application of :
Dougherty, et al. : DECISION ON PETITION
Application No. 10/674,923 :
Filed: September 30, 2003 :
Docket No.: 200304427-2 :

This is a decision on the petition to withdraw the holding of abandonment under 37 CFR 1.181, filed June 16, 2006.

This application was held abandoned March 16, 2006 for failure to timely submit a proper reply to the Notice of Allowance and Issue Fee Due (Notice) December 15, 2005. Notice of Abandonment was mailed April 21, 2006.

Petitioners assert that the issue fee transmittal submitted March 10, 2006 inadvertently failed to authorize the Office to charge the issue fee and publication fee payments to applicants' deposit account. However, petitioners argue that this is a forgivable oversight within the meaning of MPEP 1306.

The arguments advanced by petitioners have been carefully reviewed and found convincing.

In view thereof, the petition is hereby GRANTED.

The Notice of Abandonment is hereby VACATED and the holding of abandonment is WITHDRAWN.

The application file is being forwarded to the Office of Patent Publication for further processing.

Telephone inquiries concerning this matter may be directed to the undersigned at (571) 272-3205.

Alesia M. Brown
Petitions Attorney
Office of Petitions

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JUN 16 2006

 ORIGINAL

HEV/LETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200304427-2

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al.

Confirmation No.: 5182

Application No.: 10/674,923

Examiner: J. S. Cerullo

Filing Date: 09/30/2003

Group Art Unit: 2112

Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

Mail Stop Petition
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

PETITION FOR WITHDRAWAL OF ABANDONMENT

1. Applicant petitions that the abandonment set forth in the notice mailed by the office on 03/21/2006 be withdrawn.

2. Submitted herewith is:

- A copy of the page of the response mailed on _____ showing a Certificate of Mailing executed on _____.
- A copy of the post card identifying the papers filed and showing the US PTO receipt stamp dated _____.
- A copy of the complete response previously filed.
- A copy of the attorney's Deposit Account Statement in which the item corresponding to the response referred to above is checked.
- A statement in support of the petition for withdrawal of abandonment.

3. Please proceed with further examination of this application on the basis of:

- The original papers filed, which have now reached the appropriate area of the PTO, and/or
- The attached copy of the papers originally filed.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed. A duplicate copy of this letter is enclosed.

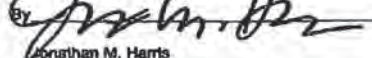
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Commissioner for Patents, Alexandria, VA 22313-1450
Date of Deposit:

OR

I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number (571)273-8300.
Date of facsimile: 06-16-06
Typed Name: Colleen F. Brown
Signature: Colleen F. Brown

Respectfully submitted,

Michael J. DOUGHERTY et al.

By 

Jonathan M. Harris

Attorney/Agent for Applicant(s)

Reg No.: 44,144

Date: 06-16-06

Telephone: (713) 238-8000

Rev. 1005 (Abandon)

07/17/2006 CKHLOK 00000011 082025 10674923

01-FC:1501 1400.00 DA
02-FC:1504 300.00 DA

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HEV/LETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200304427-2

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al. Confirmation No.: 5162
Application No.: 10/674,923 Examiner: J. S. Cerullo
Filing Date: 09/30/2003 Group Art Unit: 2112

Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

Mail Stop Petition
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

PETITION FOR WITHDRAWAL OF ABANDONMENT

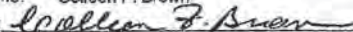
- Applicant petitions that the abandonment set forth in the notice mailed by the office on 03/21/2006 be withdrawn.
- Submitted herewith is:
 - A copy of the page of the response mailed on _____ showing a Certificate of Mailing executed on _____.
 - A copy of the post card identifying the papers filed and showing the US PTO receipt stamp dated _____.
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 - A copy of the attorney's Deposit Account Statement in which the item corresponding to the response referred to above is checked.
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Date of Deposit:

OR

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Date of facsimile: 06-16-06
Typed Name: Colleen F. Brown
Signature: 

Respectfully submitted,

Michael J. DOUGHERTY et al.

By 

Jonathan M. Harris

Attorney/Agent for Applicant(s)

Reg No. : 44,144

Date : 06-16-06

Telephone : (713) 238-8000

Re- 1005 (AbdWtd)

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Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200304427-2

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al.

Confirmation No.: 5182

Application No.: 10/874,923

Examiner: J. S. Cerullo

Filing Date: 09/30/2003

Group Art Unit: 2112

Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

Mail Stop Petition
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

PETITION FOR WITHDRAWAL OF ABANDONMENT

1. Applicant petitions that the abandonment set forth in the notice mailed by the office on 03/21/2006 be withdrawn.

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- A copy of the page of the response mailed on _____ showing a Certificate of Mailing executed on _____.
- A copy of the post card identifying the papers filed and showing the US PTO receipt stamp dated _____.
- A copy of the complete response previously filed.
- A copy of the attorney's Deposit Account Statement in which the item corresponding to the response referred to above is checked.
- A statement in support of the petition for withdrawal of abandonment.

3. Please proceed with further examination of this application on the basis of:

- The original papers filed, which have now reached the appropriate area of the PTO, and/or
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At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed. A duplicate copy of this letter is enclosed.

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Date of facsimile: 06-16-06

Typed Name: Colleen F. Brown

Signature: Colleen F. Brown

Respectfully submitted,

Michael J. DOUGHERTY et al.

By Jonathan M. Harris
Jonathan M. Harris

Attorney/Agent for Applicant(s)

Reg No.: 44,144

Date: 06-16-06

Telephone: (713) 238-8000

Rev 10/05 (AddWind)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Michael J. DOUGHERTY et al.	§	Confirmation No.:	5162
Serial No.:	10/674,923	§	Group Art Unit:	2112
Filed:	09/30/2003	§	Examiner:	Jeremy S. Cerullo
For:	Powering a Notebook Across a USB Interface	§	Docket No.:	200304427-2

**STATEMENT IN SUPPORT OF THE
PETITION FOR WITHDRAWAL OF ABANDONMENT**

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

Date: June 16, 2006

Sir:

The Office issued a Notice of Abandonment on April 21, 2006, on the basis that Applicants allegedly failed to timely pay the issue fee. Upon filing the above-identified application, Applicants gave the Office a general authorization to charge the deposit account in the event any fees were owed during the pendency of this case. Applicants also timely filed an executed issue fee transmittal form in response to the Notice of Allowance and "checked" the box indicating that the issue fee was enclosed. Applicants, however, inadvertently did not check the box explicitly authorizing the Office to charge the appropriate deposit account for the amount of the issue and publication fees owed.

37 C.F.R. § 1.311 (b) provides that:

- (b) An authorization to charge the issue fee or other post-allowance fees set forth in § 1.18 to a deposit account may be filed in an individual application only after mailing of the notice of allowance. The submission of either of the following after the mailing of a notice of allowance will operate as a request to charge the correct issue fee or any publication fee due to any deposit account identified in a previously filed authorization to charge such fees:
 - (1) An incorrect issue fee or publication fee; or
 - (2) A fee transmittal form (or letter) for payment of issue fee or publication fee.

Appl. No. 10/674,923
Amdt. dated November 18, 2005
Reply to Office action of August 22, 2005

The MPEP's commentary on this rule specifically notes that:

Where it is clear that an applicant actually intends to pay the issue fee and required publication fee, but the proper fee payment is not made, for example, an incorrect issue fee amount is supplied, or a PTOL-85B Fee(s) Transmittal form is filed without payment of the issue fee, a general authorization to pay fees or a specific authorization to pay the issue fee, submitted prior to the mailing of a notice of allowance, will be allowed to act as payment of the correct issue fee.

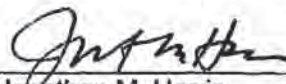
MPEP § 1306 (citing 37 C.F.R. § 1.311(b)).

Thus, Applicants' prior general authorization to charge the deposit account coupled with timely submission of a properly executed issue fee transmittal form complies with 37 C.F.R. § 1.311(b). Accordingly, Applicants respectfully request that this Petition for Withdrawal of Abandonment be granted and that the application permitted to issue.

It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

To the extent any fees are owed by Applicants and charged to the above-identified deposit account, Applicants hereby request a refund of such fees on the basis that this application was improperly abandoned by the Office.

Respectfully submitted,



Jonathan M. Harris
PTO Reg. No. 44,144
CONLEY ROSE, P.C.
(713) 238-8000 (Phone)
(713) 238-8008 (Fax)
ATTORNEY FOR APPLICANTS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
Legal Dept., M/S 35
P.O. Box 272400
Fort Collins, CO 80527-2400



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,923	09/30/2003	Michael J. Dougherty	200304427-2	5162
	7590 04/21/2006			
HEWLETT-PACKARD COMPANY Intellectual Property Administration P. O. Box 272400 Fort Collins, CO 80527-2400			EXAMINER CERULLO, JEREMY S	
			ART UNIT	PAPER NUMBER
			2112	

DATE MAILED: 04/21/2006

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

Notice of Abandonment

Application No.

10/674,923

Applicant(s)

DOUGHERTY

Examiner

CERULLO

Art Unit

2112

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

This application is abandoned in view of:

1. Applicant's failure to timely file a proper reply to the Office letter mailed on _____.
 - (a) A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
 - (b) A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
 - (c) A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
 - (d) No reply has been received.
2. Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
 - (a) The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
 - (b) The submitted fee of \$0 is insufficient. A balance of \$1700 is due.
The issue fee required by 37 CFR 1.18 is \$1400. The publication fee, if required by 37 CFR 1.18(d), is \$300.
 - (c) The issue fee and publication fee, if applicable, has not been received.
3. Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
 - (a) Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
 - (b) No corrected drawings have been received.
4. The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. The reason(s) below:

lgd

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

PART B - FEE(S) TRANSMITTAL



Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 or Fax (571) 273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address, and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmittal.

7590 12/15/2005 HEWLETT-PACKARD COMPANY Intellectual Property Administration P. O. Box 272400 Fort Collins, CO 80527-2400

Certificate of Mailing or Transmittal I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Shannan Sullivan (Depositor's name) Shannan Sullivan (Signature) March 10/2006 (Date)

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Values: 10/674,923, 09/30/2003, Michael J. Dougherty, 200304427-2, 5162

TITLE OF INVENTION: POWERING A NOTEBOOK ACROSS A USB INTERFACE

Table with 6 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE, PUBLICATION FEE, TOTAL FEE(S) DUE, DATE DUE. Values: nonprovisional, NO, \$1400, \$300, \$1700, 03/15/2006

Table with 3 columns: EXAMINER, ART UNIT, CLASS-SUB CLASS. Values: CERULLO, JEREMY S, 2112, 710-303000

- 1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). 2. For printing on the patent from page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no names will be printed.

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type). PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Hewlett-Packard Development Company, L.P. (B) RESIDENCE: (CITY and STATE OR COUNTRY): Houston, Texas

Please check the appropriate assignee category or categories (will not be printed on the patent): [] Individual [X] Corporation or other private group entity [] Government

- 4a. The following fee(s) are enclosed: [X] Issue Fee [X] Publication Fee (No small entity discount permitted) [] Advance Order - # of Copies 4b. Payment of Fee(s): [] A check in the amount of the fee(s) is enclosed. [] Payment by credit card. Form PTO-2038 is attached. [] The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above) [] a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. [] b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid Issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant, a registered attorney or agent, or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature: [Signature] Date: March 8, 2006 Typed or printed name: Joy Griebenow Registration No.: 33,704

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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

NOTICE OF FEE DUE

DATE: 03-10-06
TO: Issue fee
FROM: Office of Initial Patent Examination
SUBJECT: Fee Due

APPLICATION NUMBER 10/674,923

A fee is due for the attached document submitted to the U.S. Patent and Trademark Office for the following reason. Please check the application for the appropriate authorizations to charge a deposit account if an authorization is present. please charge the Appropriate Fee. If and authorization is not present, notify the applicant of the fee deficiency.

- Insufficient fee by check
- Insufficient funds in deposit amount
- Insufficient by Credit Card
- Declined credit card
- Non-authorization for charge to deposit account
- No fee submitted per requirement

The correct fee code:	_____	Amount	\$ <u>1700-00</u>
The suspended fee code:	1999	Amount	\$ _____
The suspended	1622	Amount	\$ _____
The suspended	2622	Amount	\$ _____
Fee Due		Amount	\$ <u>1700-00</u>

Terminal Operator Hai Nguyen



NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 12/15/2005
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

CERULLO, JEREMY S

ART UNIT PAPER NUMBER

2112

DATE MAILED: 12/15/2005

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,923	09/30/2003	Michael J. Dougherty	200304427-2	5162

TITLE OF INVENTION: POWERING A NOTEBOOK ACROSS A USB INTERFACE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$1700	03/15/2006

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
 Commissioner for Patents
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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7590 12/15/2005
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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,923	09/30/2003	Michael J. Dougherty	200304427-2	5162

TITLE OF INVENTION: POWERING A NOTEBOOK ACROSS A USB INTERFACE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$1700	03/15/2006

EXAMINER	ART UNIT	CLASS-SUB CLASS
CERULLO, JEREMY S	2112	710-303000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.563).
 Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
 "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list
 (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. _____ 2
 _____ 3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)
 PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE _____ (B) RESIDENCE: (CITY and STATE OR COUNTRY) _____

Please check the appropriate assignee category or categories (will not be printed on the patent): Individual Corporation or other private group entity Government

4a. The following fee(s) are enclosed:
 Issue Fee
 Publication Fee (No small entity discount permitted)
 Advance Order - # of Copies _____

4b. Payment of Fee(s):
 A check in the amount of the fee(s) is enclosed.
 Payment by credit card. Form PTO-2038 is attached.
 The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)
 a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____
 Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,923	09/30/2003	Michael J. Dougherty	200304427-2	5162

7590 12/15/2005
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

CERULLO, JEREMY S

ART UNIT	PAPER NUMBER
2112	

2112

DATE MAILED: 12/15/2005

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571) 272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

Notice of Allowability

Application No.	Applicant(s)	
10/674,923	DOUGHERTY ET AL.	
Examiner	Art Unit	
Jeremy S. Cerullo	2112	

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. This communication is responsive to _____.
- 2. The allowed claim(s) is/are _____.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
- 4. Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. Notice of Informal Patent Application (PTO-152)
- 6. Interview Summary (PTO-413), Paper No./Mail Date _____
- 7. Examiner's Amendment/Comment
- 8. Examiner's Statement of Reasons for Allowance
- 9. Other _____

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:
2. In light of the applicant's arguments, Claim 1 is considered allowable, particularly due to the limitation in Claim 1 "wherein the device determines if the laptop is capable of being powered across the power lines of the communication bus by communication with the laptop across the power lines of said communication bus." This limitation is not present in the prior art of record.
3. In light of the applicant's arguments, Claim 10 is considered allowable, particularly due to the limitation in Claim 10 of "powering said laptop computer from said docking station across said USB interface with a voltage in excess of five volts." This limitation is not present in the prior art of record.
4. In light of the applicant's arguments, Claim 20 is considered allowable, particularly due to the limitation in Claim 20 that the computer comprises "a docking logic that provides power to said laptop over the power rails of the USB interface at a voltage greater than five volts." This limitation is not present in the prior art of record.
5. In light of the applicant's arguments, Claim 26 is considered allowable, particularly the limitations in Claim 26 that the laptop operates in two modes, a first mode in which it operates under the USB protocol, in that it can supply power across the power lines of the bus, and a second mode in which it can receive power across the same power lines. This combination of features is not present in the prior art of record.

6. In light of the applicant's arguments, Claim 30 is considered allowable, particularly the limitations in Claim 30 that the laptop operates in two modes, a first mode in which it operates under the USB protocol, in that it can supply power across the power lines of the bus, and a second mode in which it can receive power across the same power lines. This combination of features is not present in the prior art of record.
7. Claim 25 is considered allowable based on its dependence on Claim 26.
8. Claim 27 and 34-36 are considered allowable based on their dependence on Claim 1.
9. Claims 28-29 are considered allowable based on their dependence on Claim 10.
10. Claims 31-33 are considered allowable based on their dependence on Claim 30.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (571) 272-3634. The examiner can normally be reached on Monday - Thursday, 8:00-4:00; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).




JSC



REHANA PERVEEN
SUPERVISORY PATENT EXAMINER
12/12/05

Issue Classification 	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/674,923	DOUGHERTY ET AL.	
	Examiner	Art Unit	
	Jeremy S. Cerullo	2112	

ISSUE CLASSIFICATION										
ORIGINAL					CROSS REFERENCE(S)					
CLASS		SUBCLASS			CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
710		303			710	305				
INTERNATIONAL CLASSIFICATION					713	300				
G	0	6	F	13/00						
G	0	6	F	13/14						
G	0	6	F	1/26						
				/						
				/						

<i>Jeremy S. Cerullo</i> Jeremy S. Cerullo 9 Dec 2005 (Assistant Examiner) (Date)	 REHANA PERVEEN SUPERVISORY PATENT EXAMINER (Primary Examiner) (Date) <i>12/12/05</i>	Total Claims Allowed: 15 <table style="width: 100%;"> <tr> <td style="text-align: center;">O.G. Print Claim(s)</td> <td style="text-align: center;">O.G. Print Fig.</td> </tr> <tr> <td style="text-align: center;">20</td> <td style="text-align: center;">2</td> </tr> </table>	O.G. Print Claim(s)	O.G. Print Fig.	20	2
O.G. Print Claim(s)	O.G. Print Fig.					
20	2					

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant		<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47			
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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	2	14	32	62	92	122	152	182	
	3	15	33	63	93	123	153	183	
	4	3	34	64	94	124	154	184	
	5	4	35	65	95	125	155	185	
	6	5	36	66	96	126	156	186	
	7		37	67	97	127	157	187	
	8		38	68	98	128	158	188	
	9		39	69	99	129	159	189	
6	10		40	70	100	130	160	190	
	11		41	71	101	131	161	191	
	12		42	72	102	132	162	192	
	13		43	73	103	133	163	193	
	14		44	74	104	134	164	194	
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	18		48	78	108	138	168	198	
	19		49	79	109	139	169	199	
9	20		50	80	110	140	170	200	
	21		51	81	111	141	171	201	
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11	25		55	85	115	145	175	205	
10	26		56	86	116	146	176	206	
2	27		57	87	117	147	177	207	
7	28		58	88	118	148	178	208	
8	29		59	89	119	149	179	209	
12	30		60	90	120	150	180	210	

Index of Claims



Application No.

10/674,923

Examiner

Jeremy S. Cerullo

Applicant(s)

DOUGHERTY ET AL.

Art Unit

2112

✓	Rejected
=	Allowed

-	(Through numeral) Cancelled
+	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date	
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Bib Data Sheet

CONFIRMATION NO. 5162

SERIAL NUMBER 10/674,923	FILING DATE 09/30/2003 RULE	CLASS 710	GROUP ART UNIT 2112	ATTORNEY DOCKET NO. 200304427-2
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APPLICANTS

Michael J. Dougherty, Houston, TX;
Kenneth W. Stufflebeam, Houston, TX;
Rahul V. Lakdawala, Cypress, TX; Thomas P. Sawyers, Hempstead, TX;

** CONTINUING DATA *****
This application is a CON of 09/608,082 06/30/2000 PAT 6,668,296

** FOREIGN APPLICATIONS *****

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
** 12/23/2003

Foreign Priority claimed 35 USC 119 (a-d) conditions met Verified and Acknowledged	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after Allowance Examiner's Signature Initials	STATE OR COUNTRY TX	SHEETS DRAWING 3	TOTAL CLAIMS 9	INDEPENDENT CLAIMS 4
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ADDRESS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO
80527-2400

TITLE

Powering a notebook across a USB interface

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- 1.17 Fees (Processing Ext. of time)
- 1.18 Fees (Issue)
- Other

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	50	("6668296" "6145029" "5933609" "5659680" "5911079" "5933322" "6029183" "6040681" "6231371" "5186646" "5436792" "5555491" "5579528" "5598539" "5598537" "5627450" "5692400" "5704212" "5751546" "5841994" "5859970" "5864708" "5873000" "5884049" "5931929" "5935244" "5991839" "5993012" "5999952" "6029215" "6044422" "6047572" "6115247" "6154798" "6170026" "6172871" "6175926" "6178474" "6181553" "6183274" "6189050" "6196850" "6202568" "6493220" "6526895" D361987 "5737185" "5886869" "5764481" "5818691").pn.	US-PGPUB; USPAT	OR	ON	2005/08/17 13:04
S2	48	("6094347" "6115245" "6135801" "6169655" "6220883" "6220883" "5402310" "5477415" "5625829" "5627974" "5668977" "5673400" "5682529" "5717571" "5751548" "5757616" "5769646" "5805412" "5837942" "5848278" "5859762" "5870283" "5870281" "5872557" "5892930" "5909560" "5941965" "5959836" "5969939" "5973917" "5982614" "6009486" "6023411" "6023587" "6061233" "6070199" "6091602" "6118654" "6123557" "6142593" "6151646" "6181994" "6182144" "6188572" "6189349" "6243727" "6285911" "6301106" "6321335").pn.	US-PGPUB; USPAT	OR	ON	2004/07/21 10:10
S3	2008	(power near1line) near4 (communication adj2 bus or USB or "Universal Serial Bus")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 10:30
S4	55	((power near1line) near4 (communication adj2 bus or USB or "Universal Serial Bus")) near4 (laptop or notebook or portable)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 12:58
S5	19218052	@ad<"20000603"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:06

S6	7	((power near1line) near4 (communication adj2 bus or USB or "Universal Serial Bus")) near4 (laptop or notebook or portable) and @ad<"20000603"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 10:36
S7	307	(710/303)".ccls"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 10:36
S8	231	(710/303).ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 10:36
S9	82642	(laptop or notebook or portable) near2 computer	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 12:59
S10	4823	dock\$3 near2 station	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 12:59
S11	91	power\$3 near4 ((laptop or notebook or portable) near2 computer) near4 (dock\$3 near2 station)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 13:00
S12	69	(power\$3 near4 ((laptop or notebook or portable) near2 computer) near4 (dock\$3 near2 station)) and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:00
S13	15	(dock\$3 near2 station) near3 (firewire or ilink or "1394")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:06
S14	5	((dock\$3 near2 station) near3 (firewire or ilink or "1394")) and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:01
S15	24	(dock\$3 near2 station) near5 (firewire or ilink or "1394")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:06

S16	19218052	@ad<"20000603"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:08
S17	7	((dock\$3 near2 station) near5 (firewire or ilink or "1394")) and @ad<"20000603"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:22
S18	12	((laptop or notebook or portable) near2 computer) near4 (dock\$3 near2 station) near4 (power near2 source)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 15:12
S19	28	(communication near1 bus) near4 (power near line)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 15:13
S20	28	(communication near1 bus) near4 (power near1 line)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 15:13
S21	2	(communication near1 bus) near4 (power near1 line) near4 (docking near1station)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 08:59
S22	91703	(laptop or notebook or portable) near3 computer	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 08:59
S23	3687	AC near2 adapter	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 08:59
S24	145	((laptop or notebook or portable) near3 computer) near4 (AC near2 adapter)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 10:51
S25	3437	(713/300-340).ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/12/08 18:41

S26	3432	(713/300-340).ccls. and @ay<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 10:58
S27	2354	(713/300-340).ccls. and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 10:58
S28	1499	(713/300-340).ccls. and @pd<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 11:09
S29	411	(713/300).ccls. and @pd<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:04
S30	149032	(com? or communicat\$4) near2 (bus or lines)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 13:54
S31	7392	((com? or communicat\$4) near2 (bus or lines)) near3 (power or source)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 13:55
S32	7	((com? or communicat\$4) near2 (bus or lines)) near3 (power or source) near3 (laptop or notebook or (portable adj computer))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 13:56
S33	217	(713/340).ccls. and @pd<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:14
S34	238	((com? or communicat\$4) near2 (bus or lines)) near3 (power or source) and usb	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:15
S35	217	((713/340).ccls. and @pd<"20000630") and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:17

S36	72	(((((com? or communicat\$4) near2 (bus or lines)) near3 (power or source)) and usb) and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:49
S37	693	laptop same power adj source	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 15:01
S38	289	(laptop same power adj source) and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:59
S39	276	laptop with power adj source	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 15:01
S40	124	laptop with power adj source and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 16:42
S41	268	(710/16).ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 16:43
S42	201	(710/16).ccls. and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 17:42
S43	4	((("6119237") or ("6530026")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/07/22 17:42
S47	1	x-10 power house	US-PGPUB; USPAT	ADJ	ON	2005/01/04 14:40
S48	1	x-10 power house	US-PGPUB; USPAT	NEAR	ON	2005/01/04 14:40
S49	9	x-10 power house	US-PGPUB; USPAT	WITH	ON	2005/01/04 15:20
S50	4	((("4200862") or ("4628440") or ("4638299") or ("5491463")).PN.	US-PGPUB; USPAT	OR	OFF	2005/01/04 15:21

S51	2	"6530026".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/01/06 14:53
S52	1	"6530026".pn.	USPAT	OR	ON	2005/01/06 14:53
S53	1	"6530026".pn. and detect	USPAT	OR	ON	2005/01/06 14:53
S54	1	"6530026".pn. and detect and threshold	USPAT	OR	ON	2005/01/06 14:53
S55	1	"18" volts charge laptop battery	US-PGPUB; USPAT	WITH	ON	2005/01/07 14:10
S56	32	710/303.ccls. and @pd>"20040731"	US-PGPUB; USPAT	OR	ON	2005/01/10 10:02
S57	2	(("6704133") or ("6445489")).PN.	US-PGPUB; USPAT	OR	OFF	2005/08/05 15:17
S58	0	"voltages higher than" and S57	US-PGPUB; USPAT	OR	ON	2005/08/05 15:17
S59	1	"voltages higher" and S57	US-PGPUB; USPAT	OR	ON	2005/08/05 15:18
S60	1	"display overlay" and S57	US-PGPUB; USPAT	OR	ON	2005/08/05 15:24
S61	2	S57 and voltage	US-PGPUB; USPAT	OR	ON	2005/08/05 15:24
S62	2	laptop with usb with charger	US-PGPUB; USPAT	OR	ON	2005/08/08 13:27
S63	113743	(laptop or notebook or portable) near2 computer	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/08 13:28
S66	113743	(laptop or notebook or portable) near2 computer	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/08 13:29
S68	9	((laptop or notebook or portable) near2 computer) with usb with (charge charger)	US-PGPUB; USPAT	OR	ON	2005/08/08 13:40
S70	1	("6633932").PN.	US-PGPUB; USPAT	OR	OFF	2005/08/08 15:17
S71	13	USB with laptop with battery	US-PGPUB; USPAT	OR	ON	2005/08/08 15:18
S72	111	charge with battery with USB	US-PGPUB; USPAT	OR	ON	2005/08/08 15:18
S73	3087726	@ad<"20000630"	US-PGPUB; USPAT	OR	ON	2005/08/08 15:20

S74	6	S72 and S73	US-PGPUB; USPAT	OR	ON	2005/08/08 15:24
S75	7	usb with power with bi-directional	US-PGPUB; USPAT	OR	ON	2005/08/08 15:24
S79	3692764	"greater than" "in excess of" "more than" "at least" above "at minimum"	US-PGPUB; USPAT	OR	ON	2005/08/10 14:23
S80	48077	"five volts" "5v" "5 volts"	US-PGPUB; USPAT	OR	ON	2005/08/10 13:49
S81	2967	S79 with S80	US-PGPUB; USPAT	OR	ON	2005/08/10 13:49
S82	7	S81 with USB	US-PGPUB; USPAT	OR	ON	2005/08/10 13:49
S83	2817096	"over" "higher than"	US-PGPUB; USPAT	OR	ON	2005/08/10 14:23
S84	1401	S83 with S80	US-PGPUB; USPAT	OR	ON	2005/08/10 14:23
S85	16	S84 with usb	US-PGPUB; USPAT	OR	ON	2005/08/10 15:16
S86	1	("5884086").PN.	US-PGPUB; USPAT	OR	OFF	2005/08/12 18:11
S87	1	09/599255	US-PGPUB; USPAT	OR	ON	2005/08/12 18:12
S88	87	mcclurg.in.	US-PGPUB; USPAT	OR	ON	2005/08/12 18:12
S89	176	mcclurg.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/12 18:12
S90	6	mcclurg.in. and brunell.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/12 18:12
S91	0	(USB adj hub) with (inside adj device)	US-PGPUB; USPAT	OR	ON	2005/08/17 13:07
S92	2	(USB adj hub) with (inside near3 device)	US-PGPUB; USPAT	OR	ON	2005/08/17 13:08
S93	69	(USB adj hub) with integrated	US-PGPUB; USPAT	OR	ON	2005/08/17 13:14
S94	19	(USB adj hub) with integrated with peripheral	US-PGPUB; USPAT	OR	ON	2005/08/17 13:52
S95	78757	(shutting adj down) (powering adj off) (turning adj off)	US-PGPUB; USPAT	OR	ON	2005/08/17 13:52
S96	1	S95 with power with USB with disconnect	US-PGPUB; USPAT	OR	ON	2005/08/17 14:36

S97	0	S95 with power with (docking adj station) with disconnect	US-PGPUB; USPAT	OR	ON	2005/08/17 14:37
S98	0	S95 with power with (docking near2 station) with disconnect	US-PGPUB; USPAT	OR	ON	2005/08/17 14:37
S99	6	S95 with power with (docking near2 station)	US-PGPUB; USPAT	OR	ON	2005/08/17 14:40
S100	518201	S95 cutting	US-PGPUB; USPAT	OR	ON	2005/08/17 14:40
S101	8	S100 with power with (docking near2 station)	US-PGPUB; USPAT	OR	ON	2005/08/17 14:41
S102	4390	docking near2 station	US-PGPUB; USPAT	OR	ON	2005/08/17 14:41
S103	328	port near2 replicator	US-PGPUB; USPAT	OR	ON	2005/08/17 14:42
S104	4506	S102 S103	US-PGPUB; USPAT	OR	ON	2005/08/17 14:42
S105	20	S104 with power with disconnect	US-PGPUB; USPAT	OR	ON	2005/08/17 14:45
S106	1	S104 with (terminate near2 power)	US-PGPUB; USPAT	OR	ON	2005/08/17 14:45
S107	2182	710/303.ccls. 710/205.ccls. 713/300.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/12/08 18:41
S108	431	S107 and usb	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/12/08 18:42
S109	221	S107 and usb	US-PGPUB	OR	ON	2005/12/08 18:42
S110	109228	laptop portable	US-PGPUB	OR	ON	2005/12/08 18:42
S111	116993	notebook S110	US-PGPUB	OR	ON	2005/12/08 18:42
S112	149	S109 and S111	US-PGPUB	OR	ON	2005/12/08 18:42
S113	1610	S111 with (usb "universal serial bus")	US-PGPUB	OR	ON	2005/12/08 18:43
S114	32	S107 and S113	US-PGPUB	OR	ON	2005/12/08 18:43

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PATENT APPLICATION

ATTORNEY DOCKET NO. 200304427-2

Inventor(s): Michael J. DOUCHERTY et al.
Application No.: 10/674,923
Filing Date: 09/30/2003

Confirmation No.: 5162
Examiner: J. S. Cerullo
Group Art Unit: 2112

Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

Mail Stop Amendment
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1460

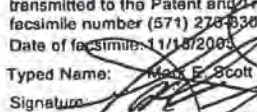
TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Transmitted herewith is/are the following in the above-identified application:

- Response/Amendment Petition to extend time to respond
 New fee as calculated below Supplemental Declaration
 No additional fee
 Other

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY							Fee\$
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES	
TOTAL CLAIMS	15	MINUS	20	= 0	X \$50	\$ 0	
INDEP. CLAIMS	5	MINUS	4	= 1	X \$200	\$ 200	
<input type="checkbox"/> FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM						+ \$360	\$ 0
EXTENSION FEE	<input type="checkbox"/> 1st Month \$120	<input type="checkbox"/> 2nd Month \$450	<input type="checkbox"/> 3rd Month \$1020	<input type="checkbox"/> 4th Month \$1590		\$ 0	
OTHER FEES						\$	
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$	200

Charge \$ 200 to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number (571) 273-8300.
Date of facsimile: 11/18/2005
Typed Name: Mark E. Scott
Signature: 

Respectfully submitted:
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By: 
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Michael J. DOUGHERTY et al.	§	Confirmation No.:	5162
Serial No.:	10/674,923	§	Group Art Unit:	2112
Filed:	09/30/2003	§	Examiner:	Jeremy S. Cerullo
For:	Powering a Notebook Across a USB Interface	§	Docket No.:	200304427-2

RESPONSE TO OFFICE ACTION DATED AUGUST 22, 2005

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

Date: November 18, 2005

AMENDMENT

Sir:

In response to the Office action of August 22, 2005, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims that begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A computer system, comprising:
a device; and
a laptop computer coupled to said device by way of a communication bus operated under a communication protocol, the communication bus comprising communication lines and power lines;
wherein the device determines if the laptop computer is capable of being powered across the power lines of the communication bus by communication with the laptop across the power lines of said communication bus.
- 2.-9. (Canceled).
10. (Previously presented) In a computer system comprising a laptop computer adapted to dock to a docking station by way of a USB interface, a method of operating said computer system comprising:
powering said laptop computer from said docking station across said USB interface with a voltage in excess of five volts.
- 11.-19. (Canceled).
20. (Previously presented) A docking station for mating with a laptop computer comprising:
a Universal Serial Bus (USB) interface having data signal lines and power rails that couple to the laptop computer; and
a docking logic that provides power to said laptop over the power rails of the USB interface at a voltage of greater than five volts.

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21.-24. (Canceled).

25. (Previously presented) The computer system as defined in claim 26 wherein the device further comprises a docking station.

26. (Currently amended) A computer system, comprising:
a device having power available therein;
a laptop computer coupled to said device by way of a communication bus that, in a first mode, operates under the Universal Serial Bus (USB) protocol and is capable of supplying power across power lines of communication bus; and
in a second mode of operation said laptop computer powered by said device across the power lines of said communication bus.

27. (Previously presented) The computer system of claim 1 wherein the laptop computer is capable of providing power to external devices across the communication bus when the laptop is not coupled to the device.

28. (Previously presented) The method of claim 10 further comprising powering the laptop computer from the docking station across the USB interface with substantially 18 volts.

29. (Previously presented) The method of claim 10 further comprising shutting off power to the communication bus when a laptop computer is detached from the docking station.

30. (Previously presented) A method comprising:
powering downstream devices by power rails of a bus interface of a laptop computer, the bus interface operated in compliance with the Universal Serial Bus (USB) protocol, and the powering in a first mode of operation; and

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accepting, in a second mode of operation, power by the laptop computer on the power rails of the bus interface.

31. (Previously presented) The method as defined in claim 30 further comprising accepting power from a docking station on the power rails of the bus interface.

32. (Previously presented) The method as defined in claim 30 further comprising accepting power at a voltage in excess of five volts.

33. (Previously presented) The method as defined in claim 32 further comprising accepting power at a voltage level of substantially 18 volts.

34. (New) The computer system as defined in claim 1 wherein the communication bus operates under the Universal Serial Bus (USB) protocol.

35. (New) The computer system as defined in claim 1 wherein the laptop computer is capable of supplying power across power lines of communication bus.

36. (New) The computer system as defined in claim 1 wherein the device further comprises a docking station.

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REMARKS/ARGUMENTS

Applicants have received the Office action dated August 22, 2005, in which the Examiner: 1) rejected claims 25-26 as allegedly anticipated by McClurg (U.S. Pat. No. 6,886,104); 2) rejected claims 10 and 20 as allegedly unpatentable over McClurg in view of Wood (U.S. Pat. No. 6,178,514); 3) rejected claim 28 as allegedly unpatentable over McClurg and Wood and further in view of Atkinson (U.S. Pat. No. 5,884,049); 4) rejected claim 29 as allegedly unpatentable over McClurg and Wood in view of Cho (U.S. Pat. No. 6,119,237); 5) rejected claims 30-31 as allegedly unpatentable over McClurg in view of Beckert (U.S. Pat. No. 6,009,363); 6) rejected claim 32 as allegedly unpatentable over McClurg and Beckert and further in view of Wood; 7) rejected claim 33 as allegedly unpatentable over McClurg, Beckert and Wood and further in view of Atkinson; and 8) allowed claims 1 and 27.

With this Response, Applicants amend claim 26, and present new claims 34-36. Reconsideration is respectfully requested.

I. ALLOWED AND EFFECTIVELY ALLOWED CLAIMS

The Office action dated August 22, 2005 allowed claim 1, and objected to claim 27 as being dependent upon a rejected base claim, but otherwise allowable. However, claim 27 is dependent from claim 1, and thus is not dependent from a rejected base claim. Thus, claim 27 should also be in a condition for allowance.

Further, Applicants present new claims 34-36, which depend directly from allowed claim 1, and thus these claims should be allowed.

II. SECTION 102 REJECTIONS

A. Claim 26

Claim 26 stands rejected as allegedly anticipated by McClurg. Applicants amend claim 26 to obviate the interpretation of the Office action that the claimed modes are not mutually exclusive. However, a laptop computer operating under the USB protocol is a master capable of supplying power, and thus the amendments are not narrowing amendments.

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McClurg is directed to a rechargeable mobile hand-held fingerprint scanner with data and power communication interface. (McClurg Title). In particular, McClurg discloses a fingerprint scanner that has an internal rechargeable power supply 120 for standalone operation, and when the fingerprint scanner is docked for exchange of data, the rechargeable power supply is recharged. (McClurg Col. 3, lines 8-28). McClurg further discloses an example of a data and power interface 130 that allows data exchange and recharging to be a USB interface. (McClurg Col. 3, lines 29-32). McClurg does not appear to disclose, however, that the fingerprint scanner should provide power to any external device. In fact, the Office action agrees with this and admits this fact as a matter of law, "McClurg does not teach that his device powers downstream devices." (Office action dated August 22, 2005, page 7, number paragraph 15.)

Claim 26, by contrast, specifically recites, "a laptop computer coupled to said device by way of a communication bus that, in a first mode, operates under the Universal Serial Bus (USB) protocol and is capable of supplying power across the power lines communication bus... ." "McClurg does not teach that his device powers downstream devices." (Office action dated August 22, 2005, page 7, number paragraph 15.)

Based on the foregoing, Applicants respectfully submit that claim 26, and all claims that depend from claim 26 (claims 25 and 28-29), should be allowed.

III. SECTION 103 REJECTIONS

A. Claim 10

Claim 10 stands rejected as allegedly obvious over McClurg in view of Wood.

McClurg is directed to a rechargeable mobile hand-held fingerprint scanner with data and power communication interface. (McClurg Title). In particular, McClurg discloses a fingerprint scanner that has an internal rechargeable power supply 120 for standalone operation, and when the fingerprint scanner is docked for exchange of data, the rechargeable power supply is recharged. (McClurg Col. 3, lines 8-28). McClurg further discloses an example of a data and power

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interface 130 that allows data exchange and recharging to be a USB interface. (McClurg Col. 3, lines 29-32).

Wood is directed to a method and apparatus for connecting a device to a bus carrying power and a signal. (Wood Title). In particular, Wood appears to be directed to an apparatus which draws power from a bus in conformance with a bus-standard (e.g., USB) and stores the energy, then provides power to a device (e.g., a speaker) which would otherwise instantaneously draw too much power under the bus-standard. (See e.g., Wood Abstract).

Claim 10, by contrast, specifically recites, "In a computer system comprising a laptop computer adapted to dock to a docking station by way of a USB interface, a method of operating said computer system comprising: powering said laptop computer from said docking station across said USB interface with a voltage in excess of five volts." Applicants respectfully submit that McClurg and Wood do not teach or fairly suggest the limitations of claim 10. The Office action relies on McClurg's fingerprint scanner for a teaching of the claimed laptop computer; however, McClurg's fingerprint scanner is not a laptop computer, and more importantly is not a USB host or master device capable of sourcing power. (See, e.g., Specification page 9, line 10 through page 10, line 6). If hypothetically the teachings of Wood are precisely as the Office action suggests (which Applicants do not admit), the combination still fails to teach or suggest the limitations of claim 10 at least because the combination fails to teach a laptop computer that breaks with USB protocol and accepts power across the USB interface. For this reason alone claims 10 should be allowed.

Moreover, Applicants respectfully traverse the assertion that Wood teaches "powering ... across said USB interface with a voltage in excess of five volts." Wood's apparatus is specifically designed to be "a model USB citizen," (Wood Col. 12, line 22), and thus does not teach breaking with USB protocol (which powering in excess of five volts would be). While the voltage supplied to Wood's speaker may be in excess of five volts, the signal provided to the speaker is not across a USB interface. Thus, McClurg and Wood fail to teach or suggest

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"powering said laptop computer from said docking station across said USB interface with a voltage in excess of five volts."

Based on the foregoing, Applicants respectfully submit that claim 10 should be allowed.

B. Claim 20

Claim 20 stands rejected as allegedly obvious over McClurg in view of Wood.

Claim 20 specifically recites, "A docking station for mating with a laptop computer comprising: a Universal Serial Bus (USB) interface having data signal lines and power rails that couple to the laptop computer; and **a docking logic that provides power to said laptop over the power rails of the USB interface at a voltage of greater than five volts.**" As taught by the Wood reference, devices connected by USB are either a master USB hub that source power, or USB devices that sink power. (Wood Col. 9, lines 44-62). Moreover, Wood teaches strict adherence to USB protocol, saying its devices are "model USB citizen[s]." (Wood Col. 12, line 22). Thus, if hypothetically McClurg's fingerprint scanner is considered to be the recited laptop computer (which Applicants do not admit is proper for at least the reasons discussed above), McClurg and Wood still fail to teach or suggest parting with USB protocol and "provid[ing] power to said laptop over the power rails of the USB interface at a voltage of greater than five volts," as this breaks with not only USB voltage specifications, but changes the master designation of the laptop.

Based on the foregoing, Applicants respectfully submit that claim 20 should be allowed.

C. Claim 30

Claim 30 stands rejected as allegedly obvious over McClurg in view of Beckert.

Claim 30 specifically recites, "**powering** downstream devices by power rails of a bus interface **of a laptop computer**, the bus interface operated in compliance with the Universal Serial Bus (USB) protocol, and the powering in a first mode of operation; **and accepting**, in a second mode of operation, **power**

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by the laptop computer on the power rails of the bus interface." The Office action relies on McClurg's fingerprint scanner for a teaching of the claimed laptop computer; however, McClurg's fingerprint scanner is not a laptop computer, and more importantly is not a USB host or master device capable of sourcing power. (See, e.g., Specification page 9, line 10 through page 10, line 6; Wood Col. 9, lines 44-62). Thus, if hypothetically the teachings of Beckert are precisely as the Office action suggests (which Applicants do not admit), McClurg and Beckert still fail to teach or suggest the limitations of claim 30 because there is no suggestion or motivation to power external devices by the fingerprint scanner, much less to power external devices across the bus rails of the USB interface. For this reason alone claim 30 should be allowed.

Moreover, claim 30 specifically recites, "powering downstream devices **by power rails of a bus interface** of a laptop computer, **the bus interface operated in compliance with the Universal Serial Bus (USB) protocol**, and the powering in a first mode of operation; and accepting, in a second mode of operation, power by the laptop computer **on the power rails** of the bus interface." Thus, claim 30 defines that the powering, and being powered, are across the same bus rails of a bus interface operated in compliance with the USB protocol. If hypothetically Beckert's USB hub is combined with McClurg's fingerprint scanner (which Applicants do not admit is proper), McClurg and Beckert still fail to teach that power should flow both ways on the same power rails.

Based on the foregoing, Applicants respectfully submit that claim 30, and all claims which depend from claim 30 (claims 31-33), should be allowed.

IV. CONCLUSION

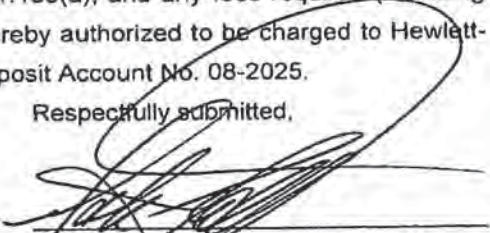
In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may

Appl. No. 10/674,923
Amdt. dated November 18, 2005
Reply to Office action of August 22, 2005

be other distinctions between the claims and the cited art which have yet to be raised, but which may be raised in the future.

Applicants respectfully request reconsideration and that a timely Notice of Allowance be issued in this case. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,



Mark E. Scott
PTO Reg. No. 43,100
CONLEY ROSE, P.C.
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(713) 238-8008 (Fax)
ATTORNEY FOR APPLICANTS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
Legal Dept., M/S 35
P.O. Box 272400
Fort Collins, CO 80527-2400

PATENT APPLICATION FEE DETERMINATION RECORD
Effective January 1, 2003

Application or Docket Number

10/074923
200364427-2

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	9	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	9 minus 20 =	* 0
INDEPENDENT CLAIMS	4 minus 3 =	* 1
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

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

*IFWJ
AND
10-26-04*

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	* 12 Minus ** 20 =	0
	Independent	* 5 Minus *** 4 =	1
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

11-18-05

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	* 15 Minus ** 20 =	0
	Independent	* 5 Minus *** 5 =	0
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	* Minus ** =	
	Independent	* Minus *** =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

* 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.

SMALL ENTITY TYPE **OR** **OTHER THAN SMALL ENTITY**

RATE	FEE	OR	RATE	FEE
BASIC FEE	375.00	OR	BASIC FEE	750.00
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	84
+140=		OR	+280=	
TOTAL		OR	TOTAL	834

SMALL ENTITY TYPE **OR** **OTHER THAN SMALL ENTITY**

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	88.00
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	88.00

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,923	09/30/2003	Michael J. Dougherty	200304427-2	5162

7590 08/22/2005
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

CERULLO, JEREMY S

ART UNIT PAPER NUMBER

2112

DATE MAILED: 08/22/2005

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

DETAILED ACTION

1. Claims 1, 10, 20, and 25-33 are pending in the following action.

Response to Arguments

2. In view of the appeal brief filed on 19 May 2005, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:


REHANA PERVEEN
PRIMARY EXAMINER
8/18/05

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,886,104 ("McClurg" et al.).

5. As for Claim 26, McClurg discloses a computer system comprising a device having power available therein (Figure 1, Docking Station 140; Column 4, Lines 20-40 discusses that the scanner receives power over USB from the docking station), a laptop computer (interpreted as a portable device capable of processing information, in this case hand-held fingerprint scanner 102 in Figure 1; Column 5, Lines 12-16) coupled to the device (docking station) by way of a Universal Serial Bus, and wherein the laptop computer (fingerprint scanner) is powered by the device (docking station) across the power lines of the communication bus (See Column 3, Lines 28-39 and Column 4, Lines 20-40). While McClurg does not disclose separate modes of operation, there is no requirement that a "first" mode and a "second" mode be exclusive. McClurg discloses the limitations of both of the claimed modes (operating under USB and the powering of the laptop over the communication bus) as occurring concurrently.

6. As for Claim 25, McClurg discloses all of the limitations inherited from Claim 26. McClurg also discloses that the device comprises a docking station. See Figure 1, Docking Station 140.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClurg in view of U.S. Patent No. 6,178,514 ("Wood").

10. As for Claim 10, McClurg teaches a computer system comprising a laptop computer (interpreted as a portable device capable of processing information, in this

case hand-held fingerprint scanner 102 in Figure 1; Column 5, Lines 12-16), adapted to dock to a docking station (Figure 1, Item 140) by way of a USB interface (Figure 1, Item 130; Column 3, Lines 28-39). McClurg teaches powering the laptop computer (fingerprint scanner) over the USB interface, but not with a voltage in excess of five volts. However, Wood teaches a system in which a USB device that requires a voltage higher than 5 volts can still be powered by the USB interface (See Figures 7 and 9; Column 18, Lines 30-61). It would have been obvious to one of ordinary skill in the art at the time of the invention to have included the boosting circuitry of Wood in the system of McClurg in order to allow for powering of a device that requires voltages in excess of 5 volts, such as a fingerprint scanner with a CCD camera instead of a CMOS camera (Column 4, Lines 20-40).

11. As for Claim 20, McClurg teaches a docking station (Figure 1, Item 140) for mating with a laptop computer (interpreted as a portable device capable of processing information, in this case hand-held fingerprint scanner 102 in Figure 1; Column 5, Lines 12-16) comprising a USB interface (Figure 1, Item 130; Column 3, Lines 28-39). McClurg teaches powering the laptop computer (fingerprint scanner) over the USB interface, but not with a voltage in excess of five volts. However, Wood teaches a system in which a USB device that requires a voltage higher than 5 volts can still be powered by the USB interface (See Figures 7 and 9; Column 18, Lines 30-61). It would have been obvious to one of ordinary skill in the art at the time of the invention to have included the boosting circuitry of Wood in the system of McClurg in order to allow for

Art Unit: 2112

powering of a device that requires voltages in excess of 5 volts, such as a fingerprint scanner with a CCD camera instead of a CMOS camera (Column 4, Lines 20-40).

12. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over McClurg and Wood as applied to Claim 10 above, and further in view of U.S. Patent No. 5,884,049 ("Atkinson"). As discussed above, Wood teaches a system in which a USB device that requires a voltage higher than 5 volts can still be powered by the USB interface (See Figures 7 and 9; Column 18, Lines 30-61). However what voltage is actually required would depend on the exact type of device connected to the docking station. According to McClurg, it may be five or twelve volts depending on the type of camera in the scanner (Column 4, Lines 20-40). Neither McClurg nor Wood teach that the voltage supplied is substantially 18 volt. However, Atkinson teaches that power provided to a laptop computer through an AC/DC converter (sufficient power to charge the battery) would be in the range of 8-18 volts. It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the power to a laptop in the method taught by McClurg and Wood with a voltage in the range as taught by Atkinson in order to provide adequate power a laptop computer.

13. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over McClurg and Wood as applied to claim 10 above, and further in view of U.S. Patent No. 6,119,237 ("Cho"). McClurg and Wood teach all of the limitations inherited from Claim 10, but they do not teach shutting off power to the communication bus when the

computer is detached from the docking station. However, Cho teaches a method for shutting off a power source for powering a laptop from a docking station when the laptop disconnects from the docking station (Figure 7; Column 9, Lines 19-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the method for disconnecting power as taught by Cho within the method of McClurg and Wood in order to prevent electronic damage or data loss that may occur if the device is improperly docked (Cho: Column 2, Lines 13-26).

14. Claims 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClurg in view of U.S. Patent No. 6,009,363 ("Beckert" et al.)

15. As for Claim 30, McClurg teaches a computer system comprising a laptop computer (interpreted as a portable device capable of processing information, in this case hand-held fingerprint scanner 102 in Figure 1; Column 5, Lines 12-16), adapted to dock to a docking station (Figure 1, Item 140) by way of a USB interface (Figure 1, Item 130; Column 3, Lines 28-39). McClurg teaches powering the laptop computer (fingerprint scanner) over the USB interface. McClurg does not teach that his device powers downstream devices. However, Beckert teaches the use of a USB hub, capable of transferring data and power to downstream devices. Beckert also teaches that the USB hub can be integrated into a USB device. See Column 5, Line 63 – Column 6, Line 6. It would have been obvious to one of ordinary skill in the art at the time of the invention to have included the USB hub of Beckert in the device of McClurg in order to

allow for the powering of downstream devices that may be needed in conjunction with the fingerprint scanner, such as USB lights.

16. As for Claim 31, McClurg teaches powering the laptop computer (fingerprint scanner) by a docking station over the USB interface. See Figure 1, Item 130; Column 3, Lines 28-39.

17. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over McClurg and Beckert as applied to claim 30 above, and further in view of Wood. McClurg teaches all of the limitations inherited from Claim 30. McClurg also teaches powering the laptop computer (fingerprint scanner) over the USB interface, but not with a voltage in excess of five volts. However, Wood teaches a system in which a USB device that requires a voltage higher than 5 volts can still be powered by the USB interface (See Figures 7 and 9; Column 18, Lines 30-61). It would have been obvious to one of ordinary skill in the art at the time of the invention to have included the boosting circuitry of Wood in the system of McClurg in order to allow for powering of a device that requires voltages in excess of 5 volts, such as a fingerprint scanner with a CCD camera instead of a CMOS camera (Column 4, Lines 20-40).

18. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over McClurg, Beckert, and Wood as applied to claim 32 above, and further in view of U.S. Patent No. 5,884,049 ("Atkinson"). As discussed above, Wood teaches a system in which a USB device that requires a voltage higher than 5 volts can still be powered by

the USB interface (See Figures 7 and 9; Column 18, Lines 30-61). However what voltage is actually required would depend on the exact type of device connected to the docking station. According to McClurg, it may be five or twelve volts depending on the type of camera in the scanner (Column 4, Lines 20-40). Neither McClurg, Beckert, nor Wood teach that the voltage supplied is substantially 18 volt. However, Atkinson teaches that power provided to a laptop computer through an AC/DC converter (sufficient power to charge the battery) would be in the range of 8-18 volts. It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the power to a laptop in the method taught by McClurg, Beckert, and Wood with a voltage in the range as taught by Atkinson in order to provide adequate power a laptop computer.

Allowable Subject Matter

19. The following is a statement of reasons for the indication of allowable subject matter:

20. In light of the applicant's arguments, Claims 1 and 27 are considered to contain allowable subject matter, particularly the limitation in Claim 1 "wherein the device determines if the laptop is capable of being powered across the power lines of the communication bus by communication with the laptop across the power lines of said communication bus." This limitation is not present in the prior art of record.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 5,884,086; U.S. Patent No. 6,633,932; U.S. Patent No. 6,184,652; and U.S. Patent No. 6,011,486.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (571) 272-3634. The examiner can normally be reached on Monday - Thursday, 7:00-4:30; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JSC


REHANA PERVEEN
PRIMARY EXAMINER
8/18/05

Interview Summary	Application No. 10/674,923	Applicant(s) DOUGHERTY ET AL.	
	Examiner Jeremy S. Cerullo	Art Unit 2112	

All participants (applicant, applicant's representative, PTO personnel):

(1) Jeremy S. Cerullo. (3) _____.

(2) Mark Scott. (4) _____.

Date of Interview: 05 August 2005.

Type: a) Telephonic b) Video Conference
c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.
If Yes, brief description: _____.

Claim(s) discussed: 1, 10, 20, 26, and 30.

Identification of prior art discussed: N/A.


Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Examiner Cerullo contacted Applicant's Representative Scott in order to propose an amendment to claims. The amendment would have incorporated the allowable subject matter from Claim 1 into the rest of the independent claims. The Applicant's Representative said he would discuss the amendment with his client. The Representative later contacted the Examiner and informed him that the Applicant decided against the amendment.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbalim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Notice of References Cited	Application/Control No. 10/674,923	Applicant(s)/Patent Under Reexamination DOUGHERTY ET AL.	
	Examiner Jeremy S. Cerullo	Art Unit 2112	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
A	US-6,009,363 A	12-1999	Beckert et al.	701/33
B	US-6,178,514 B1	01-2001	Wood, Bradley C.	713/300
C	US-6,886,104 B1	04-2005	McClurg et al.	713/300
D	US-5,884,086 A	03-1999	Amoni et al.	713/300
E	US-6,633,932 B1	10-2003	Bork et al.	710/72
F	US-6,011,486 A	01-2000	Casey, M. Sean	340/7.29
G	US-6,184,652 B1	02-2001	Yang, Wen-Chin	320/110
H	US-			
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

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



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Bib Data Sheet

CONFIRMATION NO. 5162

Table with 5 columns: SERIAL NUMBER (10/674,923), FILING DATE (09/30/2003), CLASS (710), GROUP ART UNIT (2112), ATTORNEY DOCKET NO. (200304427-2)

APPLICANTS

Michael J. Dougherty, Houston, TX;
Kenneth W. Stuffbeam, Houston, TX;
Rahul V. Lakdawala, Cypress, TX; Thomas P. Sawyers, Hempstead, TX;

** CONTINUING DATA **

This application is a CON of 09/608,082 06/30/2000 PAT 6,668,296

** FOREIGN APPLICATIONS **

IF REQUIRED, FOREIGN FILING LICENSE GRANTED

** 12/23/2003

Table with 5 columns: Foreign Priority claimed, STATE OR COUNTRY, SHEETS, TOTAL CLAIMS, INDEPENDENT CLAIMS

ADDRESS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins , CO
80527-2400

TITLE

Powering a notebook across a USB interface

Table with 2 columns: FILING FEE RECEIVED (922), FEES: Authority has been given in Paper... and a list of fee checkboxes (All Fees, 1.16 Fees, 1.17 Fees, 1.18 Fees, Other)

Index of Claims



Application No.

10/674,923

Examiner

Jeremy S. Cerullo

Applicant(s)

DOUGHERTY ET AL.

Art Unit

2112

√	Rejected
=	Allowed

-	(Through numeral) Cancelled
+	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date	
Final	Original		
	8-17-05		
1			
2			
3			
4			
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20	√		
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23			
24			
25	√		
26	√		
27	=		
28	√		
29	√		
30	√		
31	√		
32	√		
33	√		
34			
35			
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Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	(USB adj hub) with (inside adj device)	US-PGPUB; USPAT	OR	ON	2005/08/17 13:07
L2	2	(USB adj hub) with (inside near3 device)	US-PGPUB; USPAT	OR	ON	2005/08/17 13:08
L3	69	(USB adj hub) with integrated	US-PGPUB; USPAT	OR	ON	2005/08/17 13:14
L4	19	(USB adj hub) with integrated with peripheral	US-PGPUB; USPAT	OR	ON	2005/08/17 13:52
L5	78757	(shutting adj down) (powering adj off) (turning adj off)	US-PGPUB; USPAT	OR	ON	2005/08/17 13:52
L6	1	I5 with power with USB with disconnect	US-PGPUB; USPAT	OR	ON	2005/08/17 14:36
L7	0	I5 with power with (docking adj station) with disconnect	US-PGPUB; USPAT	OR	ON	2005/08/17 14:37
L8	0	I5 with power with (docking near2 station) with disconnect	US-PGPUB; USPAT	OR	ON	2005/08/17 14:37
L9	6	I5 with power with (docking near2 station)	US-PGPUB; USPAT	OR	ON	2005/08/17 14:40
L10	518201	I5 cutting	US-PGPUB; USPAT	OR	ON	2005/08/17 14:40
L11	8	I10 with power with (docking near2 station)	US-PGPUB; USPAT	OR	ON	2005/08/17 14:41
L12	4390	docking near2 station	US-PGPUB; USPAT	OR	ON	2005/08/17 14:41
L13	328	port near2 replicator	US-PGPUB; USPAT	OR	ON	2005/08/17 14:42
L14	4506	I12 I13	US-PGPUB; USPAT	OR	ON	2005/08/17 14:42
L15	20	I14 with power with disconnect	US-PGPUB; USPAT	OR	ON	2005/08/17 14:45
L16	1	I14 with (terminate near2 power)	US-PGPUB; USPAT	OR	ON	2005/08/17 14:45

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S1	50	("6668296" "6145029" "5933609" "5659680" "5911079" "5933322" "6029183" "6040681" "6231371" "5186646" "5436792" "5555491" "5579528" "5598539" "5598537" "5627450" "5692400" "5704212" "5751546" "5841994" "5859970" "5864708" "5873000" "5884049" "5931929" "5935244" "5991839" "5993012" "5999952" "6029215" "6044422" "6047572" "6115247" "6154798" "6170026" "6172871" "6175926" "6178474" "6181553" "6183274" "6189050" "6196850" "6202568" "6493220" "6526895" D361987 "5737185" "5886869" "5764481" "5818691").pn.	US-PGPUB; USPAT	OR	ON	2005/08/17 13:04
S2	48	("6094347" "6115245" "6135801" "6169655" "6220883" "6220883" "5402310" "5477415" "5625829" "5627974" "5668977" "5673400" "5682529" "5717571" "5751548" "5757616" "5769646" "5805412" "5837942" "5848278" "5859762" "5870283" "5870281" "5872557" "5892930" "5909560" "5941965" "5959836" "5969939" "5973917" "5982614" "6009486" "6023411" "6023587" "6061233" "6070199" "6091602" "6118654" "6123557" "6142593" "6151646" "6181994" "6182144" "6188572" "6189349" "6243727" "6285911" "6301106" "6321335").pn.	US-PGPUB; USPAT	OR	ON	2004/07/21 10:10
S3	2008	(power near1line) near4 (communication adj2 bus or USB or "Universal Serial Bus")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 10:30
S4	55	((power near1line) near4 (communication adj2 bus or USB or "Universal Serial Bus")) near4 (laptop or notebook or portable)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 12:58
S5	19218052	@ad<"20000603"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:06
S6	7	((power near1line) near4 (communication adj2 bus or USB or "Universal Serial Bus")) near4 (laptop or notebook or portable)) and @ad<"20000603"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 10:36

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S7	307	(710/303)".ccls"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 10:36
S8	231	(710/303).ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 10:36
S9	82642	(laptop or notebook or portable) near2 computer	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 12:59
S10	4823	dock\$3 near2 station	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 12:59
S11	91	power\$3 near4 ((laptop or notebook or portable) near2 computer) near4 (dock\$3 near2 station)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 13:00
S12	69	(power\$3 near4 ((laptop or notebook or portable) near2 computer) near4 (dock\$3 near2 station)) and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:00
S13	15	(dock\$3 near2 station) near3 (firewire or ilink or "1394")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:06
S14	5	((dock\$3 near2 station) near3 (firewire or ilink or "1394")) and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:01
S15	24	(dock\$3 near2 station) near5 (firewire or ilink or "1394")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:06
S16	19218052	@ad<"20000603"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:08

EAST *JK*

S17	7	((dock\$3 near2 station) near5 (firewire or ilink or "1394")) and @ad<"20000603"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 14:22
S18	12	((laptop or notebook or portable) near2 computer) near4 (dock\$3 near2 station) near4 (power near2 source)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 15:12
S19	28	(communication near1 bus) near4 (power near line)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 15:13
S20	28	(communication near1 bus) near4 (power near1 line)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/21 15:13
S21	2	(communication near1 bus) near4 (power near1 line) near4 (docking near1station)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 08:59
S22	91703	(laptop or notebook or portable) near3 computer	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 08:59
S23	3687	AC near2 adapter	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 08:59
S24	145	((laptop or notebook or portable) near3 computer) near4 (AC near2 adapter)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 10:51
S25	3437	(713/300-340).ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/01/06 14:52
S26	3432	(713/300-340).ccls. and @ay<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 10:58

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S27	2354	(713/300-340).ccls. and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 10:58
S28	1499	(713/300-340).ccls. and @pd<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 11:09
S29	411	(713/300).ccls. and @pd<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:04
S30	149032	(com? or communicat\$4) near2 (bus or lines)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 13:54
S31	7392	((com? or communicat\$4) near2 (bus or lines)) near3 (power or source)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 13:55
S32	7	((com? or communicat\$4) near2 (bus or lines)) near3 (power or source)) near3 (laptop or notebook or (portable adj computer))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 13:56
S33	217	(713/340).ccls. and @pd<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:14
S34	238	((com? or communicat\$4) near2 (bus or lines)) near3 (power or source)) and usb	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:15
S35	217	((713/340).ccls. and @pd<"20000630") and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:17
S36	72	((com? or communicat\$4) near2 (bus or lines)) near3 (power or source)) and usb) and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:49

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S37	693	laptop same power adj source	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 15:01
S38	289	(laptop same power adj source) and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 14:59
S39	276	laptop with power adj source	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 15:01
S40	124	laptop with power adj source and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 16:42
S41	268	(710/16).ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 16:43
S42	201	(710/16).ccls. and @ad<"20000630"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/07/22 17:42
S43	4	((("6119237") or ("6530026")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/07/22 17:42
S47	1	x-10 power house	US-PGPUB; USPAT	ADJ	ON	2005/01/04 14:40
S48	1	x-10 power house	US-PGPUB; USPAT	NEAR	ON	2005/01/04 14:40
S49	9	x-10 power house	US-PGPUB; USPAT	WITH	ON	2005/01/04 15:20
S50	4	((("4200862") or ("4628440") or ("4638299") or ("5491463")).PN.	US-PGPUB; USPAT	OR	OFF	2005/01/04 15:21
S51	2	"6530026".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/01/06 14:53
S52	1	"6530026".pn.	USPAT	OR	ON	2005/01/06 14:53

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S53	1	"6530026".pn. and detect	USPAT	OR	ON	2005/01/06 14:53
S54	1	"6530026".pn. and detect and threshold	USPAT	OR	ON	2005/01/06 14:53
S55	1	"18" volts charge laptop battery	US-PGPUB; USPAT	WITH	ON	2005/01/07 14:10
S56	32	710/303.ccls. and @pd>"20040731"	US-PGPUB; USPAT	OR	ON	2005/01/10 10:02
S57	2	(("6704133") or ("6445489")).PN.	US-PGPUB; USPAT	OR	OFF	2005/08/05 15:17
S58	0	"voltages higher than" and S57	US-PGPUB; USPAT	OR	ON	2005/08/05 15:17
S59	1	"voltages higher" and S57	US-PGPUB; USPAT	OR	ON	2005/08/05 15:18
S60	1	"display overlay" and S57	US-PGPUB; USPAT	OR	ON	2005/08/05 15:24
S61	2	S57 and voltage	US-PGPUB; USPAT	OR	ON	2005/08/05 15:24
S62	2	laptop with usb with charger	US-PGPUB; USPAT	OR	ON	2005/08/08 13:27
S63	113743	(laptop or notebook or portable) near2 computer	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/08 13:28
S66	113743	(laptop or notebook or portable) near2 computer	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/08 13:29
S68	9	((laptop or notebook or portable) near2 computer) with usb with (charge charger)	US-PGPUB; USPAT	OR	ON	2005/08/08 13:40
S70	1	("6633932").PN.	US-PGPUB; USPAT	OR	OFF	2005/08/08 15:17
S71	13	USB with laptop with battery	US-PGPUB; USPAT	OR	ON	2005/08/08 15:18
S72	111	charge with battery with USB	US-PGPUB; USPAT	OR	ON	2005/08/08 15:18
S73	3087726	@ad<"20000630"	US-PGPUB; USPAT	OR	ON	2005/08/08 15:20
S74	6	S72 and S73	US-PGPUB; USPAT	OR	ON	2005/08/08 15:24
S75	7	usb with power with bi-directional	US-PGPUB; USPAT	OR	ON	2005/08/08 15:24
S79	3692764	"greater than" "in excess of" "more than" "at least" above "at minimum"	US-PGPUB; USPAT	OR	ON	2005/08/10 14:23

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S80	48077	"five volts" "5v" "5 volts"	US-PGPUB; USPAT	OR	ON	2005/08/10 13:49
S81	2967	S79 with S80	US-PGPUB; USPAT	OR	ON	2005/08/10 13:49
S82	7	S81 with USB	US-PGPUB; USPAT	OR	ON	2005/08/10 13:49
S83	2817096	"over" "higher than"	US-PGPUB; USPAT	OR	ON	2005/08/10 14:23
S84	1401	S83 with S80	US-PGPUB; USPAT	OR	ON	2005/08/10 14:23
S85	16	S84 with usb	US-PGPUB; USPAT	OR	ON	2005/08/10 15:16
S86	1	("5884086").PN.	US-PGPUB; USPAT	OR	OFF	2005/08/12 18:11
S87	1	09/599255	US-PGPUB; USPAT	OR	ON	2005/08/12 18:12
S88	87	mcclurg.in.	US-PGPUB; USPAT	OR	ON	2005/08/12 18:12
S89	176	mcclurg.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/12 18:12
S90	6	mcclurg.in. and brunell.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2005/08/12 18:12

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Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	docketing adj station	JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 20:42
L2	1140	docking adj station	JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 20:44
L3	4537	port near6 power	JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 20:44
L4	4	2 same 3	JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 20:44
L5	8	2 and 3	JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 20:44
L6	2105	docking adj station	USPAT	OR	OFF	2005/08/04 20:44
L7	12845	port near6 power	USPAT	OR	OFF	2005/08/04 20:45
L8	55	6 same 7	USPAT	OR	OFF	2005/08/04 21:14
L9	16	usb.clm. and sumati.xp.	USPAT	OR	OFF	2005/08/04 21:03
L10	10481	usb	USPAT	OR	OFF	2005/08/04 21:15
L11	18289	("5" or five) adj (volt or voltage)	USPAT	OR	OFF	2005/08/04 21:15
L12	36192	("5" or five) adj (volt\$1 or voltage)	USPAT	OR	OFF	2005/08/04 21:16
L13	609	(over or more or excess) adj4 12	USPAT	OR	OFF	2005/08/04 21:16
L14	0	usb same 13	USPAT	OR	OFF	2005/08/04 21:17
L15	2	usb and 13	USPAT	OR	OFF	2005/08/04 21:17
L16	57190	higher adj2 volt\$4	USPAT	OR	OFF	2005/08/04 21:17
L17	5	usb with 16	USPAT	OR	OFF	2005/08/04 21:27
L18	15	usb same 16	USPAT	OR	OFF	2005/08/04 22:03
L19	243	usb near6 volt\$4	USPAT	OR	OFF	2005/08/04 21:29
L20	12	19 with charg\$3	USPAT	OR	OFF	2005/08/04 21:29
L21	1	"5871368".PN.	USPAT; USOCR	OR	OFF	2005/08/04 21:34
L22	4	("5871368" "5884086" "5969750" "6006088").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 21:36
L23	29	("5884086").URPN.	USPAT	OR	OFF	2005/08/04 21:44

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L24	13	("4782355" "4884287" "4901217" "5121500" "5179710" "5313642" "5408669" "5483656" "5493684" "5514859" "5560022" "5652895" "5742514").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 21:58
L25	4	"6633932"	USPAT	OR	OFF	2005/08/04 22:03
L26	21	("5884086" "5935224" "5991546" "6000042" "6003138" "6044428" "6105097" "6105143" "6131125" "6131134" "6138242" "6147682" "6151653" "6170062" "6178514" "6184652" "6255800" "6263392" "6279060" "6334160" "6334793").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 22:07
L27	91453	voltage near3 convert\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 22:23
L28	45	usb with 27	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 22:21
L29	1	28 with higher	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 22:08
L30	14	27 same 28	USPAT	OR	OFF	2005/08/04 22:21
L31	65624	voltage near3 convert\$3	JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 22:22
L32	16	31 with usb	JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 22:22
L33	129687	volt\$4 near6 convert\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 22:23
L34	93363	volt\$4 near6 convert\$3	USPAT	OR	OFF	2005/08/04 22:23
L35	24	34 with usb	USPAT	OR	OFF	2005/08/04 22:31
L36	6636	universal serial	USPAT	ADJ	OFF	2005/08/04 22:24
L37	5	34 with 36	USPAT	ADJ	OFF	2005/08/04 22:24
L38	3804	34 with higher	USPAT	OR	OFF	2005/08/04 22:31
L39	13	38 and usb	USPAT	OR	OFF	2005/08/04 23:06
L40	859	34 with larger	USPAT	OR	OFF	2005/08/04 23:07
L41	0	40 same usb	USPAT	OR	OFF	2005/08/04 23:07
L42	24	34 with usb	USPAT	OR	OFF	2005/08/04 23:07

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L43	350	usb with convert\$3	USPAT	OR	OFF	2005/08/04 23:07
L44	39	43 same high\$2	USPAT	OR	OFF	2005/08/04 23:08
L45	39	43.ab.	USPAT	OR	OFF	2005/08/04 23:10
L46	70069	higher near2 volt\$4	USPAT	OR	OFF	2005/08/04 23:11
L47	18	46 same usb	USPAT	OR	OFF	2005/08/04 23:15
L48	8860	boost\$3 near3 voltage	USPAT	OR	OFF	2005/08/04 23:20
L49	6	48 same usb	USPAT	OR	OFF	2005/08/04 23:19
L50	26210	more adj3 voltage	USPAT	OR	OFF	2005/08/04 23:20
L51	2	50 with usb	USPAT	OR	OFF	2005/08/04 23:20
L52	23834	boost\$3 with voltage	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 23:21
L53	10	52 same usb	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 23:39
L54	0	higher adj than	USPAT	OR	OFF	2005/08/04 23:40
L55	0	higher adj "than"	USPAT	OR	OFF	2005/08/04 23:40
L56	82473	increas\$3 near2 voltage	USPAT	OR	OFF	2005/08/04 23:40
L57	2	56 with usb	USPAT	OR	OFF	2005/08/04 23:41
L58	3	56 same usb	USPAT	OR	OFF	2005/08/04 23:41
L59	418	usb same (mobile or phone)	USPAT	OR	OFF	2005/08/04 23:42
L60	28	59 same voltage	USPAT	OR	OFF	2005/08/04 23:42

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200304427-2

ORIGINAL
IN THE

UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al.

Confirmation No.: 5162

Application No.: 10/674,923

Examiner: J. S. Cerullo

Filing Date: 09/30/2003

Group Art Unit: 2112

Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

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TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 03/21/2005.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(e) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

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- () three months \$1020.00
- () four months \$1590.00

() The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Number of pages: 25

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants:	Michael J. Dougherty et al.	§	Confirmation No.:	5162
		§		
Serial No.:	10/674,923	§	Group Art Unit:	2112
		§		
Filed:	09/30/2003	§	Examiner:	Jeremy S. Cerullo
		§		
For:	Powering A Notebook	§	Docket No.:	200304427-2
	Across A USB Interface	§		

APPEAL BRIEF

Mall Stop Appeal Brief – Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Date: May 19, 2005

Sir:

Appellants hereby submit this Appeal Brief in connection with the above-identified application. A Notice of Appeal was filed via facsimile on March 21, 2005.

05/23/2005 LWONDIM1 00000067 082025 10674923

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Reply to Office action of January 12, 2005

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I. APPEAL OF A NON-FINAL ACTION IS PROPER

With regard to the propriety of an appeal, 37 CFR § 41.31¹ explicitly states:

Every applicant, any of whose claims have been twice rejected may appeal the decision of the examiner to the Board by filing a notice of appeal...²

In the instant case, the Examiner issued a first Office action dated July 30, 2004, rejecting all the pending claims in some form. The Examiner also issued a second (though non-final) Office action dated January 12, 2005, maintaining the claim rejections. Thus, the claims of the pending case have been twice rejected, making appeal available under the rules.

¹ Formerly found at 37 CFR §1.191.

² 37 CFR §41.31.

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II. REAL PARTY IN INTEREST

The real party in interest is the Hewlett-Packard Development Company (HPDC), a Texas Limited Partnership, having its principal place of business in Houston, Texas, through its merger with Compaq Computer Corporation (CCC) which owned Compaq Information Technologies Group, L.P. (CITG). The assignment from the inventors to CCC was recorded on June 30, 2000 at Reel/Frame 010911/0742. The assignment from CCC to CITG was recorded on January 16, 2002 at Reel/Frame 012394/0048. The assignment from CITG to HPDC was recorded on December 12, 2003 at Reel/Frame 014177/0428.

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III. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

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IV. STATUS OF THE CLAIMS

Originally filed claims: 1-23.
Added claims: 24-33.
Claim cancellations: 2-9, 11-19 and 21-23 (in favor of those same
claims in the parent case), and claim 24.
Presently pending claims: 1, 10, 20 and 25-33.
Presently appealed claims: 1, 10, 20 and 25-33.

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V. STATUS OF THE AMENDMENTS

No claims were amended after the Office action dated January 12, 2005.

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VI. SUMMARY OF THE CLAIMED SUBJECT MATTER

The various embodiments of the invention are directed to powering a notebook computer across a USB interface.³ At least some of the illustrative embodiments may be a computer system comprising a device,⁴ and a laptop computer coupled to said device by way of a communication bus operated under a communication protocol⁵ (the communication bus comprising communication lines and power lines.)⁶ The device determines if the laptop computer is capable of being powered across the power lines of the communication bus by communication with the laptop across the power lines of said communication bus.⁷

Other illustrative embodiments may be a method of operating a computer system comprising a laptop computer adapted to dock to a docking station by way of a USB interface, the method comprising powering said laptop computer from said docking station across said USB interface with a voltage in excess of five volts.⁸

Yet still other illustrative embodiments may be a docking station⁹ for mating with a laptop computer¹⁰ comprising a Universal Serial Bus (USB) interface having data signal lines and power rails that couple to the laptop computer,¹¹ and a docking logic that provides power to said laptop over the power rails of the USB interface at a voltage of greater than five volts.¹²

³ Specification Title.

⁴ See, e.g., Specification Page 5, lines 20-21; Figures 1 and 2. Hereinafter, citations to the Appellants' specification take the form ([page(s)], lines [lines on the page]). Thus, the current citation in the shorthand notation has the form (Page 5, lines 20-21).

⁵ (Page 8, lines 15-20); Figure 2.

⁶ (Page 8, lines 5-14); Figures 1 and 2.

⁷ (Page 8, lines 12-14).

⁸ (Page 12, lines 3-7).

⁹ (Page 5, lines 20-21).

¹⁰ (Page 5, lines 20-21).

¹¹ (Page 8, lines 10-14).

¹² (Page 12, lines 3-7).

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Other illustrative embodiments may be a computer system comprising a device having power available therein,¹³ a laptop computer coupled to said device by way of a communication bus¹⁴ that, in a first mode, operates under the Universal Serial Bus (USB) protocol,¹⁵ and in a second mode of operation said laptop computer powered by said device across the power lines of said communication bus.¹⁶

Yet still other illustrative embodiments may be a method comprising powering downstream devices by power rails of a bus interface of a laptop computer (the bus interface operated in compliance with the Universal Serial Bus (USB) protocol, and the powering in a first mode of operation),¹⁷ and accepting (in a second mode of operation) power by the laptop computer on the power rails of the bus interface.¹⁸

¹³ See, e.g., (Page 5, lines 20-21).

¹⁴ (Page 8, lines 15-20); Figure 2.

¹⁵ (Page 8, line 19 – Page 9, line 2).

¹⁶ (Page 12, lines 11-13).

¹⁷ (Page 8, line 19 – Page 9, line 2).

¹⁸ (Page 12, lines 11-13).

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VII. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims¹⁹ 1, 25-26 and 30-31 are unpatentable over Bard (U.S. Pat. No. 6,530,026).

Whether claims 10, 20, 28-29 and 32-33 are unpatentable over Bard in view of Atkinson (U.S. Pat. No. 5,884,049).

Whether claims 10, 28-29 are unpatentable under 35 USC § 112, first and second paragraphs.

¹⁹ The Office action dated January 12, 2005 does not make a specific rejection of claim 1, but given that Atkinson is relied upon for a voltage teaching (which is not recited in claim 1), it is presumed that the rejection of claim 1 is same as that of claims 25-26 and 30-31.

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VIII. ARGUMENT

A. Claims 10 and 28-29 Are Not Unpatentable Under Section 112.

Claims 10 and 28-29 stand rejected under Section 112, first and second paragraphs. Claim 10 is illustrative of this grouping of claims. This grouping is for purposes of this appeal only, and should not be construed to mean the patentability of any of the claims may be determined, in later actions before a court, based on the grouping. Rather, the presumption of 35 U.S.C. § 282 shall apply to each claim individually.

The Office action dated July 30, 2004 rejected this grouping of claims as being based on a disclosure which is allegedly not enabling, and for alleged indefiniteness problems.²⁰ The Office action dated January 12, 2005 maintains the rejections under 35 USC § 112.²¹ Each of these rejections will be addressed in turn.

1. The Claims Are Based On An Enabling Disclosure.

The Office action dated July 30, 2004, and likewise the Office action dated January 12, 2005 based on maintaining the previous rejections, rejects this grouping of claims²² under Section 112, first paragraph, stating, "The modification of USB interfaces critical or essential to the practice the invention ... is not enabled by the disclosure. ... By claiming powering of the laptop by a device over USB power lines, the invention is not enabled because it is not within the scope of the USB specification to do so."²³

The Manual for Patent Examining Procedures (MPEP) defines the test for enablement under Section 112 as follows:

[W]hether that disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention. ... [E]ven though the statute does not use the term "undue experimentation," it has been interpreted to require that the claimed invention be enabled

²⁰ Office action dated July 30, 2004, number paragraphs 2 and 4.

²¹ Office action dated January 12, 2005, numbered paragraph 2.

²² And others, but some of the rejections were dropped in the latest Office action.

²³ Office action dated July 30, 2004, number paragraph 2.

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so that any person skilled in the art can make and use the invention without undue experimentation.²⁴

Appellants' specification provides a docking logic 134 in the laptop that, in some modes, operates under an illustrative USB protocol.

Under standard USB protocol, the laptop computer 100 provides power to USB devices downstream of the laptop computer 100. **Thus, in normal operation, the USB protocol voltage control unit 140 receives a five volt input signal 142 which it couples to the positive power rail 144 of the power conductors 138.** Downstream USB devices may draw current through the positive power rail 144. If a user of the laptop computer 100 plugs in, for example, a USB mouse into the USB connector 136, that mouse under USB protocol may draw power across the power conductors 138 for its operational use.²⁵

In other modes, however, the laptop turns off the power provided on the power rails, and instead receives power on those power rails, such as from a docking station.²⁶ In order to accomplish this role reversal for the illustrative USB power lines, the specification describes hardware (both in the laptop and the docking station and including part numbers) and related methods to test for compatibility of the laptop to receive power prior to assertion of power.²⁷

While in some modes the various embodiments may part with the illustrative USB protocol, illustrative hardware and methods to depart from the standard are provided and enabled by the disclosure. For this reason alone the rejection of this grouping of claims under Section 112 should be reversed.

Further, the assertion of the Office action dated July 30, 2004 and January 12, 2005 seem to imply that the enabling disclosure must appear in the claims.

Although the applicant does disclose that his invention contains circuitry to allow a laptop to accept power over the power rails of a

²⁴ MPEP 2164.01 (8th Ed., Rev. 2, May 2004), Page 2100-185.

²⁵ (Page 8, line 19 – Page 9, line 2) (emphasis added); Figure 2.

²⁶ (Page 9, line 19 – Page 10, line 6).

²⁷ (Page 8, line 15 – Page 12, line 13); (Page 11, line 5 – Page 12, line 2).

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modified USB interface, such modifications are not claims [sic] in Claim 10, nor either of its dependents...²⁸

Appellants respectfully submit that the Office action applies an incorrect test for enablement. As discussed above, the test is not whether the claims contain the enabling disclosure, but rather whether the "disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention." For the reasons discussed above, Appellants submit to the Board that the disclosure enables this illustrative grouping of claims. For this additional reason the rejection of this grouping of claims under Section 112 should be reversed.

2. Claims 10 and 28-29 Are Not Indefinite For Parting With The USB Protocol.

The Office action dated July 30, 2004, and likewise the Office action dated January 12, 2005 based on maintaining the previous rejections, rejects this grouping of claims under Section 112, second paragraph, stating:

The applicant claims the powering of a laptop computer by a device over USB power lines. The USB specification states that: "No device shall apply (source) current on VBUS at its upstream facing port at any time. From VBUS on its upstream port, a device may only draw (sink) current." ... The claim is therefore indefinite because the use of the term USB is different from the accepted standard use.²⁹

Thus, the rejection seems to imply that because the direction of power flow is claimed in some modes opposite of that defined in the USB specification, that the claims are allegedly indefinite.

The specification clearly discloses a dual purpose interface that, in some modes may operate, e.g., as an USB interface³⁰, and in other modes departs with the illustrative USB specification and accepts power to power the laptop.³¹ Appellants respectfully submit to the Board that the mere departure from a known

²⁸ Office action dated January 12, 2005, numbered paragraph 2 (emphasis added).

²⁹ Office action dated July 30, 2004, numbered paragraph 4.

³⁰ (Page 8, line 19 – Page 9, line 2); Figure 2.

³¹ (Page 9, line 19–Page 10, line 6).

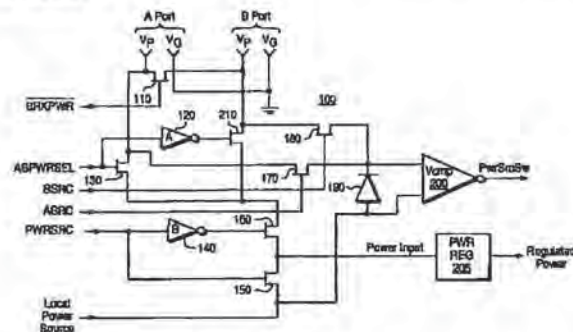
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standard does not result in statutory indefiniteness, that these Section 112, second paragraph, rejections have no basis in law or fact, and thus that the rejections be overturned.

B. Art-Based Rejections of Claim 1.

Claim 1 stands rejected as allegedly obvious over Bard.

Bard is directed to a circuit and method for power distribution management.³² Bard's Figure 1, reproduced immediately below, is illustrative of a circuit placed within each "node" of a Bard system to control power flow into, out of, or through the node.³³



Starting at the top of the figure and working clockwise, the "A Port" and "B Port" are power ports, through which power may either be delivered or received.³⁴ The "PwrSrcSw" is a signal that becomes asserted when a voltage on one of the power ports becomes greater than voltage of a local power source.³⁵ The "Regulated Power" is regulated power of the "Power Input," which power input may come from any of the power ports or the "Local Power Source" (lower left corner of the figure).³⁶

³² Bard Title.

³³ Bard Col. 4, lines 8-10.

³⁴ Bard Col. 3, lines 28-29.

³⁵ Bard Col. 3, lines 67 – Col. 4, line 3.

³⁶ Bard Col. 3, lines 62-67.

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The circuit of Bard's Figure 1 also has a plurality of signals along the left side that control power flow within the circuit. In particular, the "PWRSRC" signal, when asserted, configures the device 100 to couple the local power source to the power regulator 205, and when not asserted configures the device 100 to couple power from one of the power ports.³⁷ When the "ASRC" signal is asserted, power from the local power source is delivered out of the A Port.³⁸ When the "BSRC" signal is asserted, power from the local power source is delivered out of the B Port.³⁹ When power is delivered to the node containing the illustrative device 100 of Bard's Figure 1, the "ABPWRSEL" signal selects from which power port that power is taken.⁴⁰ Finally, the "BRKPWR" signal controls whether the flow of power from power port to power port is allowed.⁴¹ All of these control signals are derived externally of the respective node, such as by software on a PC.⁴² Thus, signaling for purposes of power flow control takes place over the plurality of signals (along the left side of the figure), and these signals are different than the lines that carry the power (V_p , V_g).

Illustrative claim 1, by contrast, specifically requires, "a laptop computer coupled to said device by way of a communication bus operated under a communication protocol, the communication bus comprising communication lines and power lines; wherein the device determines if the laptop computer is capable of being powered across the power lines of the communication bus **by communication with the laptop across the power lines of said communication bus.**" Appellants respectfully submit to the Board that Bard does not teach or fairly suggest the limitations of illustrative claim 1. As discussed above, Bard has separate power and control signals, and thus does not teach or

³⁷ Bard Col. 3, lines 50-55.

³⁸ Bard Col. 3, lines 48-50.

³⁹ Bard Col. 3, lines 47-48.

⁴⁰ Bard Col. 3, lines 33-39.

⁴¹ Bard Col. 4, lines 13-19 (such as when the node containing the device 100 is self powered, but where nodes downstream of the instant node are being provided power from upstream nodes).

⁴² Bard Col. 3, lines 3-18.

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suggest determining "if the laptop computer is capable of being powered across the power lines of the communication bus by communication with the laptop across the power lines of said communication bus." For this reason alone the rejections of this grouping should be reversed and the claims set for issue.

The Office action dated January 12, 2005 cites Bard Col. 4, line 61 – Col. 5, line 18 for an alleged teaching of communication over the power lines, but the citation, and Bard in general, falls woefully short. The cited location discusses a feature where a device 100 of Bard in a node may automatically switch from the Local Power Source to power from a power port if the power port has higher voltage.⁴³ The Office action dated January 12, 2005 asserts that the increased voltage is a "communication" which causes the switch.⁴⁴ Illustrative claim 1 requires, however, that "the device determines if the **laptop computer is capable of being powered** across the power lines of the communication bus by communication with the laptop across the power lines of said communication bus." If the increased voltage from the upstream node is considered a communication (which Appellants do not admit is a proper interpretation of a mere power line voltage increase), the only information that could be gleaned from the "communication" is that the upstream node is **capable of providing power**. Thus, if the upstream node is the claimed laptop, no information regarding whether the laptop can accept power can be gleaned from an increased voltage on a power bus. Even if the voltage level drops, Bard teaches only that the current node should switch back to its Local Power Source, not that the upstream node is capable of being powered across those power lines. For this additional reason, the rejections of this grouping of claims should be reversed and the claims set for issue.

Based on the foregoing, Appellants respectfully submit that the rejections of the claims in this first grouping be reversed, and the claims set for issue.

⁴³ Bard Col. 4, line 61 – Col. 5, line 18.

⁴⁴ Office action dated January 12, 2005, numbered paragraph 1.

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C. Art-Based Rejections of Claims 25-26 and 30-31.

Claims 25-26 and 30-31 stand rejected as allegedly obvious over Bard. Claim 26 is illustrative of this grouping. This grouping is for purposes of this appeal only, and should not be construed to mean the patentability of any of the claims may be determined, in later actions before a court, based on the grouping. Rather, the presumption of 35 U.S.C. § 282 shall apply to each claim individually.

Illustrative claim 26 requires, "a device having power available therein; a laptop computer coupled to said device by way of a communication bus that, in a first mode, operates under the Universal Serial Bus (USB) protocol; and in a second mode of operation said laptop computer powered by said device across the power lines of said communication bus." The Office action dated January 12, 2005 asserts that, in view of Bard, one of ordinary skill in the art would know to part with the USB standard and supply power to the laptop over the power rails.⁴⁵ The assertion of the Office action is apparently based on Bard's alleged teaching that, "One problem that has not been addressed in connection with such high performance serial buses ... is how power is to be managed and allocated..."⁴⁶ In the case of USB, however, the Examiner has admitted as a matter of law that allocation and management has been addressed:

The USB specification states that: "No device shall apply (source) current on VBUS at its upstream facing port at any time. From VBUS on its upstream port, a device may only draw (sink) current."⁴⁷

Appellants therefore respectfully submit that Bard does not teach or suggest a departure from the USB standard to have a first mode operation that operates under the USB protocol, and a second mode of operation where a laptop is powered by power lines that, under the USB protocol, should only source power. For this additional reason, the rejection of this grouping of claims should be reversed and the claims set for issue.

⁴⁵ Office action dated January 12, 2005, numbered paragraph 5.

⁴⁶ Bard Col. 2, lines 5-8.

⁴⁷ Office action dated July 30, 2004, numbered paragraph 4.

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Based on the foregoing, Appellants respectfully submit that the rejections of the claims in this first grouping be reversed, and the claims set for issue.

D. Art-Based Rejections of Claims 10, 20, 28-29 and 32-33.

Claims 10, 20, 28-29 and 32-33 stand rejected as allegedly obvious over Bard in view of Atkinson. Claim 20 is illustrative of this grouping of claims. This grouping is for purposes of this appeal only, and should not be construed to mean the patentability of any of the claims may be determined, in later actions before a court, based on the grouping. Rather, the presumption of 35 U.S.C. § 282 shall apply to each claim individually.

Illustrative claim 20 specifically recites a docking station comprising "a Universal Serial Bus (USB) interface having data signal lines and power rails that couple to the laptop computer; and a docking logic that provides power to said laptop over the power rails of the USB interface at a voltage of greater than five volts." Thus, not only does the docking station of illustrative claim 20 part with the USB protocol and provide power to an attached laptop, but the claim also requires that voltage on the power rails exceed the USB protocol. Appellants respectfully submit that Bard does not teach or suggest a departure from USB protocol, and even if the teachings of Atkinson are precisely as the Office action suggests (which Appellants do not admit), and for the reasons discussed in the immediately preceding section, Bard and Atkinson still fail to teach "a docking logic that provides power to said laptop over the power rails of the USB interface... ." For this reason alone, the rejection of this grouping of claims should be overturned and the claims set for issue.

Even if it is hypothetically assumed that Bard teaches a departure from the USB protocol **regarding directions of power flow** (which Appellants do not admit), Bard does not teach or suggest a departure from USB protocol **regarding supplied voltage**. Thus, even if the teachings of Atkinson are precisely as the Office action suggests (which Appellants do not admit), Bard and Atkinson still fail to teach "a docking logic that provides power to said laptop at a voltage of greater than five volts" in direct contravention of the USB protocol. For this additional

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reason, the rejection of this grouping of claims should be overturned and the claims set for issue.

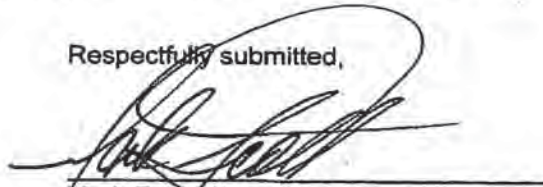
Based on the foregoing, Appellants respectfully submit that the rejections of the claims in this second grouping be reversed, and the grouping set for issue.

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IX. CONCLUSION

For the reasons stated above, Appellants respectfully submit that the Examiner erred in rejecting all pending claims. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,



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X. CLAIMS APPENDIX

1. (Previously presented) A computer system, comprising:
a device; and
a laptop computer coupled to said device by way of a communication bus operated under a communication protocol, the communication bus comprising communication lines and power lines;
wherein the device determines if the laptop computer is capable of being powered across the power lines of the communication bus by communication with the laptop across the power lines of said communication bus.

- 2.-9. (Canceled).

10. (Previously presented) In a computer system comprising a laptop computer adapted to dock to a docking station by way of a USB interface, a method of operating said computer system comprising:
powering said laptop computer from said docking station across said USB interface with a voltage in excess of five volts.

- 11.-19. (Canceled).

20. (Previously presented) A docking station for mating with a laptop computer comprising:
a Universal Serial Bus (USB) interface having data signal lines and power rails that couple to the laptop computer; and
a docking logic that provides power to said laptop over the power rails of the USB interface at a voltage of greater than five volts.

- 21.-24. (Canceled).

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25. (Previously presented) The computer system as defined in claim 26 wherein the device further comprises a docking station.

26. (Previously presented) A computer system, comprising:
a device having power available therein;
a laptop computer coupled to said device by way of a communication bus that, in a first mode, operates under the Universal Serial Bus (USB) protocol; and
in a second mode of operation said laptop computer powered by said device across the power lines of said communication bus.

27. (Previously presented) The computer system of claim 1 wherein the laptop computer is capable of providing power to external devices across the communication bus when the laptop is not coupled to the device.

28. (Previously presented) The method of claim 10 further comprising powering the laptop computer from the docking station across the USB interface with substantially 18 volts.

29. (Previously presented) The method of claim 10 further comprising shutting off power to the communication bus when a laptop computer is detached from the docking station.

30. (Previously presented) A method comprising:
powering downstream devices by power rails of a bus interface of a laptop computer, the bus interface operated in compliance with the Universal Serial Bus (USB) protocol, and the powering in a first mode of operation; and
accepting, in a second mode of operation, power by the laptop computer on the power rails of the bus interface.

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31. (Previously presented) The method as defined in claim 30 further comprising accepting power from a docking station on the power rails of the bus interface.

32. (Previously presented) The method as defined in claim 30 further comprising accepting power at a voltage in excess of five volts.

33. (Previously presented) The method as defined in claim 32 further comprising accepting power at a voltage level of substantially 18 volts.

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EXAMINER JEREMY S. CERULLO, GROUP ART UNIT 2112**

FIRM: **U.S. PATENT & TRADEMARK OFFICE**

CITY: **ALEXANDRIA, VA**

FAX NO: **(703) 872-9306**

REMARKS: **Serial No. 10/674,923, filed 09/30/2003
Attached hereto is a Notice of Appeal from the Examiner to the Board of
Patent Appeals and Interferences for filing with the U.S. Patent and
Trademark Office. Please acknowledge receipt of this facsimile.**

Total Number of Pages (Including This One): **THREE (3)**

FROM: Mark E. Scott, Direct Dial No. 713/238-8049

DATE: March 21, 2005

CLIENT/MATTER NO. 1662-22601 (200304427-2)

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400



PATENT APPLICATION

ATTORNEY DOCKET NO. 200304427-2

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al.

Confirmation No.: 5162

Application No.: 10/674,923

Examiner: J. S. Cerullo

Filing Date: 09/30/2003

Group Art Unit: 2112

Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

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

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MAR 21 2005

NOTICE OF APPEAL FROM THE EXAMINER TO THE
BOARD OF PATENT APPEALS AND INTERFERENCES

Sir:

Applicant hereby appeals to the Board of Patent Appeals and Interferences from the decision of the examiner dated, 01/12/2005, rejecting the following claims 1, 10, 20 & 25-33. The fee for this Notice of Appeal is (37 CFR 1.17(b)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

- () one month \$120.00
- () two months \$450.00
- () three months \$1020.00
- () four months \$1590.00

() The extension fee has already been filed in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

() I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450. Date of Deposit: _____

OR

(X) I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number (703) 872-9306 on 03/21/2005

Number of pages: 2

Typed Name: Colleen F. Brown

Signature: *Colleen F. Brown*

Respectfully submitted,

Michael J. DOUGHERTY et al.

By *Mark E. Scott*

Mark E. Scott

Attorney/Agent for Applicant(s)

Reg. No. 43,100

Date: 03/21/2005

Telephone No.: (713) 238-8000

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200304427-2

COPY
IN THE

UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al. Confirmation No.: 5162
 Application No.: 10/674,923 Examiner: J. S. Cerullo
 Filing Date: 09/30/2003 Group Art Unit: 2112
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Number of pages: 2

Typed Name: Colleen F. Brown

Signature: *Colleen F. Brown*

Respectfully submitted,

Michael J. DOUGHERTY et al.

By *Mark E. Scott*

Mark E. Scott

Attorney/Agent for Applicant(s)

Reg. No. 43,100

Date: 03/21/2005

Telephone No.: (713) 238-8000

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400



PATENT APPLICATION
ATTORNEY DOCKET NO. 200304427-2

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al. Confirmation No.: 5162
Application No.: 10/874,823 Examiner: J. S. Cerullo
Filing Date: 09/30/2003 Group Art Unit: 2112
Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

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

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MAR 21 2005

NOTICE OF APPEAL FROM THE EXAMINER TO THE
BOARD OF PATENT APPEALS AND INTERFERENCES

Sir:

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The fee for this Notice of Appeal is (37 CFR 1.17(b)) \$500.00.

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The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

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 - () two months \$450.00
 - () three months \$1020.00
 - () four months \$1590.00

() The extension fee has already been filed in this application.

- (X) (b) Applicant believes that no extension of time is required. However, a conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time. ^{03/28/2005 DWL} ^{01/14/01} ^{500.00 DA}

Please charge to Deposit Account 08-2025 the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.26. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Number of pages: 2

Typed Name: Colleen F. Brown

Signature: *Colleen F. Brown*

Respectfully submitted,

Michael J. DOUGHERTY et al.

By *[Signature]*

Mark E. Scott

Attorney/Agent for Applicant(s)

Reg. No. 43,100

Date: 03/21/2005

Telephone No.: (713) 238-8000

HN



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,923	09/30/2003	Michael J. Dougherty	200304427-2	5162

7590 01/12/2005
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER
CERULLO, JEREMY S

ART UNIT 2112
PAPER NUMBER

DATE MAILED: 01/12/2005

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

Office Action Summary	Application No.	Applicant(s)	
	10/674,923	DOUGHERTY ET AL.	
	Examiner	Art Unit	
	Jeremy S. Cerullo	2112	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 October 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1, 10, 20 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1, 10, 20 and 25-33 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

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

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the applicant's Remarks/Arguments regarding Claims 1 and 27, stating that the cited art does not contain the limitation that the device communicates with the laptop across the power lines of the communication bus, the examiner submits that Bard (U.S. Patent No. 6,530,026) does teach communication between devices over the power lines of a communication bus. In Column 4, Line 61 through Column 5, Line 18, Bard teaches automatic response circuitry that causes the device to switch from internal power to bus power in response to the voltage provided by another device on the bus. Since a response is triggered due to data (voltage level) on the power bus, it is considered communication. It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed this communication method to prevent a laptop computer from being damaged by an inappropriate voltage on the bus.

2. Regarding the applicant's Remarks/Arguments as to the validity of the examiner's rejections of 10, 20, 26, 28, and 29, the examiner drops his rejections of Claim 26 under 35 U.S.C. 112 in light of the amendment of said claim. However, with respect to Claims 10 and 28-29, the examiner maintains his rejection under 35 U.S.C. 112. Although the applicant does disclose that his invention contains circuitry to allow a laptop to accept power over the power rails of a modified USB interface, such modifications are not claims in Claim 10, nor either of its dependents (Claims 28-29). The examiner accepts the applicant's arguments regarding Claim 20 and drops his rejection of Claim 20 under 35 U.S.C. 112.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 25-26 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bard (U.S. Patent No. 6,530,026). Bard teaches a power distribution system for distributing power between devices over a communication bus (Claims 1-2). More specifically, Bard explicitly suggests the use of an IEEE 1394 compliant bus to enable a docking station to provide power to a notebook computer (Column 1, lines 22-25). Bard also explicitly suggests that although his embodiment was illustrated with the 1394 specification, any serial data bus specification may be employed (Column 5, Lines 53-64). One of ordinary skill in the art at the time of the invention would be motivated by

Bard to use a docking station to power a docked laptop computer over the power lines of any serial data bus, and it would have been obvious to one to have used USB, as it was a common and easily accessible protocol at the time of the invention.

6. Claims 10, 20, 28-29 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bard as applied to claims 25-26 and 30-31 above, and further in view of U.S. Patent No. 5,884,049 (Atkinson). The method as taught by Bard does not specify the voltage of the power accepted by the laptop. However, Atkinson teaches that power provided to a laptop through an AC/DC converter (sufficient power to charge the laptop battery) would be in the range of 8-18 volts. This reads upon the limitations of both Claim 32 (in excess of 5 volts) and Claim 33 (substantially 18 volts). It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the power to the laptop in the method taught by Bard with a voltage in the range as taught by Atkinson in order to provide adequate power the laptop computer.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,281,784.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (571) 272-3634. The examiner can normally be reached on Monday - Thursday, 7:00-4:30; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on (571) 272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JSC



MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Notice of References Cited	Application/Control No. 10/674,923	Applicant(s)/Patent Under Reexamination DOUGHERTY ET AL.	
	Examiner Jeremy S. Cerullo	Art Unit 2112	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
A	US-5,884,049	03-1999	Atkinson, Lee W.	710/303
B	US-6,281,784	08-2001	Redgate et al.	340/310.01
C	US-			
D	US-			
E	US-			
F	US-			
G	US-			
H	US-			
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

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

Index of Claims



Application No.

10/674,923

Examiner

Jeremy S. Cerullo

Applicant(s)

DOUGHERTY ET AL.

Art Unit

2112

√	Rejected
=	Allowed

-	(Through numeral) Cancelled
+	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date			
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Bib Data Sheet

CONFIRMATION NO. 5162

Table with 5 columns: SERIAL NUMBER (10/674,923), FILING DATE (09/30/2003), CLASS (710), GROUP ART UNIT (2112), ATTORNEY DOCKET NO. (200304427-2)

APPLICANTS

Michael J. Dougherty, Houston, TX;
Kenneth W. Stufflebeam, Houston, TX;
Rahul V. Lakdawala, Cypress, TX; Thomas P. Sawyers, Hempstead, TX;

** CONTINUING DATA **

This application is a CON of 09/608,082 06/30/2000 PAT 6,668,296

** FOREIGN APPLICATIONS **

IF REQUIRED, FOREIGN FILING LICENSE GRANTED

** 12/23/2003

Table with 5 columns: Foreign Priority claimed, 35 USC 119 (a-d) conditions met, STATE OR COUNTRY (TX), SHEETS DRAWING (3), TOTAL CLAIMS (9), INDEPENDENT CLAIMS (4)

ADDRESS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins , CO
80527-2400

TITLE

Powering a notebook across a USB interface

Table with 2 columns: FILING FEE RECEIVED (922), FEES: Authority has been given in Paper No. to charge/credit DEPOSIT ACCOUNT No. for following: (List of fees: All Fees, 1.16 Fees, 1.17 Fees, 1.18 Fees, Other, Credit)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	32	710/303.ccls. and @pd>"20040731"	US-PGPUB; USPAT	OR	ON	2005/01/10 10:02
S1	50	("6668296" "6145029" "5933609" "5659680" "5911079" "5933322" "6029183" "6040681" "6231371" "5186646" "5436792" "5555491" "5579528" "5598539" "5598537" "5627450" "5692400" "5704212" "5751546" "5841994" "5859970" "5864708" "5873000" "5884049" "5931929" "5935244" "5991839" "5993012" "5999952" "6029215" "6044422" "6047572" "6115247" "6154798" "6170026" "6172871" "6175926" "6178474" "6181553" "6183274" "6189050" "6196850" "6202568" "6493220" "6526895" D361987 "5737185" "5886869" "5764481" "5818691").pn.	US-PGPUB; USPAT	OR	ON	2005/01/10 10:01
S55	1	"18" volts charge laptop battery	US-PGPUB; USPAT	WITH	ON	2005/01/07 14:10
S54	1	"6530026".pn. and detect and threshold	USPAT	OR	ON	2005/01/06 14:53
S53	1	"6530026".pn. and detect	USPAT	OR	ON	2005/01/06 14:53
S52	1	"6530026".pn.	USPAT	OR	ON	2005/01/06 14:53
S51	2	"6530026".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/01/06 14:53
S25	3437	(713/300-340).ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/01/06 14:52
S50	4	((("4200862") or ("4628440") or ("4638299") or ("5491463")),PN.	US-PGPUB; USPAT	OR	OFF	2005/01/04 15:21
S49	9	x-10 power house	US-PGPUB; USPAT	WITH	ON	2005/01/04 15:20
S48	1	x-10 power house	US-PGPUB; USPAT	NEAR	ON	2005/01/04 14:40
S47	1	x-10 power house	US-PGPUB; USPAT	ADJ	ON	2005/01/04 14:40

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Michael J. Dougherty et al.	§	Confirmation No.:	5162
Serial No.:	10/674,923	§	Group Art Unit:	2112
Filed:	09/30/2003	§	Examiner:	Jeremy S. Cerullo
For:	Powering A Notebook Across A USB Interface	§	Docket No.:	200304427-2

RESPONSE TO OFFICE ACTION DATED JULY 30, 2004

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

Date: October 26, 2004

AMENDMENT

Sir:

In response to the Office action of July 30, 2004, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims that begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Appl. No. 10/674,923
Amdt. dated October 26, 2004
Reply to Office action of July 30, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A computer system, comprising:
a device; and
a laptop computer coupled to said device by way of a communication bus operated under a communication protocol, the communication bus comprising communication lines and power lines;
wherein the device determines if the laptop computer is capable of being powered across the power lines of the communication bus by communication with the laptop across the power lines of said communication bus.
- 2.-9. (Canceled).
10. (Previously presented) In a computer system comprising a laptop computer adapted to dock to a docking station by way of a USB interface, a method of operating said computer system comprising:
powering said laptop computer from said docking station across said USB interface with a voltage in excess of five volts.
- 11.-19. (Canceled).
20. (Previously presented) A docking station for mating with a laptop computer comprising:
a Universal Serial Bus (USB) interface having data signal lines and power rails that couple to the laptop computer; and
a docking logic that provides power to said laptop over the power rails of the USB interface at a voltage of greater than five volts.

Appl. No. 10/674,923
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21.-24. (Canceled).

25. (Currently amended) The computer system as defined in claim 24-26 wherein the device further comprises a docking station.

26. (Currently amended) A computer system, comprising:
a device having power available therein;
a laptop computer coupled to said device by way of a communication bus
that, in a first mode, operates under the ~~The computer system as~~
~~defined in claim 24 wherein the communication protocol further~~
~~comprises a Universal Serial Bus (USB) protocol; and~~
in a second mode of operation said laptop computer powered by said
device across the power lines of said communication bus.

27. (Previously presented) The computer system of claim 1 wherein the laptop computer is capable of providing power to external devices across the communication bus when the laptop is not coupled to the device.

28. (Previously presented) The method of claim 10 further comprising powering the laptop computer from the docking station across the USB interface with substantially 18 volts.

29. (Previously presented) The method of claim 10 further comprising shutting off power to the communication bus when a laptop computer is detached from the docking station.

30. (New) A method comprising:
powering downstream devices by power rails of a bus interface of a laptop computer, the bus interface operated in compliance with the Universal Serial Bus (USB) protocol, and the powering in a first mode of operation; and

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accepting, in a second mode of operation, power by the laptop computer on the power rails of the bus interface.

31. (New) The method as defined in claim 30 further comprising accepting power from a docking station on the power rails of the bus interface.
32. (New) The method as defined in claim 30 further comprising accepting power at a voltage in excess of five volts.
33. (New) The method as defined in claim 32 further comprising accepting power at a voltage level of substantially 18 volts.

Appl. No. 10/674,923
Amdt. dated October 26, 2004
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REMARKS/ARGUMENTS

Receipt of the Office action dated July 30, 2004 is hereby acknowledged. In that Action the Examiner: 1) rejected claims 10, 20, 26, 28 and 29 as allegedly invalid under Section 112, first paragraph; 2) rejected claims 10, 20, 26, 28 and 29 as allegedly indefinite; 3) rejected claims 1 and 24-27 for alleged obviousness-type double patenting; 4) rejected claims 24-25 as allegedly unpatentable over Bard (U.S. Pat. No. 6,530,026); 5) rejected claims 1 and 27 as allegedly obvious over Bard taken with Cho (U.S. Pat. No. 6,119,237).

With this Response, Applicants amend claims 25 and 26, cancel claim 24, and present new claims 30-33. Reconsideration is respectfully requested.

I. SECTION 112, FIRST PARAGRAPH REJECTIONS

The Office action dated July 30, 2004 rejects claims 10, 20, 26, 28 and 29 under Section 112, first paragraph, stating, "The modification of USB Interfaces critical or essential to the practice the invention, but not included in the claim(s), is not enabled by the disclosure. ... By claiming powering of the laptop by a device over USB power lines, the invention is not enabled because it is not within the scope of the USB specification to do so." Applicants respectfully traverse the assertion of the Office action that claiming a departure from a previous standard results in non-enablement.

The Manual for Patent Examining Procedures (MPEP) defines the test for enablement under Section 112 as follows:

[W]hether that disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention. ... [E]ven though the statute does not use the term "undue experimentation," it has been interpreted to require that the claimed invention be enabled so that any person skilled in the art can make and use the invention without undue experimentation.

(MPEP 2164.01).

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Applicants' specification provides a docking logic 134 in the laptop that, in some modes, operates under an illustrative USB protocol.

Under standard USB protocol, the laptop computer 100 provides power to USB devices downstream of the laptop computer 100. **Thus, in normal operation, the USB protocol voltage control unit 140 receives a five volt input signal 142 which it couples to the positive power rail 144 of the power conductors 138.** Downstream USB devices may draw current through the positive power rail 144. If a user of the laptop computer 100 plugs in, for example, a USB mouse into the USB connector 136, that mouse under USB protocol may draw power across the power conductors 138 for its operational use.

(Specification Figure 2; page 8, line 19 – page 9, line 2 (emphasis added)). In other modes, however, the laptop turns off the power provided on the power rails, and instead receives power on those power rails, such as from a docking station. (Specification Page 9, line 19 – page 10, line 6). In order to accomplish this role reversal for the illustrative USB power lines, the specification describes hardware (both in the laptop and the docking station and including part numbers) and related methods to test for compatibility of the laptop to receive power prior to assertion of power. (Specification page 8, line 15 – page 12, line 13; page 11, line 5 – page 12, line 2).

While in some modes the various embodiments may part with the illustrative USB protocol, the hardware and methods used to depart from the standard are enabled. Thus, Applicants respectfully submit one skilled in the pertinent art could make and use the claimed invention in spite of the departure from the illustrative USB protocol, and thus the mere fact of the departure from the illustrative USB protocol in some modes of operation does not render the claims invalid.

II. SECTION 112, SECOND PARAGRAPH REJECTIONS

The Office action dated July 30, 2004 rejected claims 10, 20, 26, 28 and 29 under Section 112, second paragraph, alleging indefiniteness. As best understood, the rejection seems to imply that because power flow is claimed in

Appl. No. 10/674,923
Amdt. dated October 26, 2004
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some modes opposite of that defined in the USB specification, that the claims are allegedly indefinite. Applicants respectfully traverse this rejection.

The specification clearly discloses a dual purpose interface that, in some modes may operate, e.g., as an USB interface (Specification Figure 2; page 8, line 19 – page 9, line 2), and in other modes departs with the illustrative USB specification and accepts power to power the laptop (Specification Page 9, line 19–page 10, line 6). Applicants respectfully submit that claiming additional functionality of an illustrative USB interface does not render the claims indefinite.

III. DOUBLE PATENTING

In order not to hinder further prosecution of this matter, but without acknowledging the propriety of the double-patenting rejection of the Office action, Applicants submit concurrently herewith a terminal disclaimer over U.S. Patent number 6,668,296, thus negating the obviousness-type double patenting rejections.

IV. ART-BASED CLAIM REJECTIONS

A. Claim 1

Claim 1 stands rejected as allegedly obvious over Bard in view of Cho.

Bard appears to be directed to a circuit and method for power distribution management. (Bard Title). Referring to Bard's Figures 1 or 3, it appears that control signals for control of the power distribution are separate and apart from the power lines Vp and Vg. (See Bard Col. 3, line 26 – Col. 5, line 64 (discussing power flow in relation to states of the various control signals)). Cho appears to be directed to regulating power supplied from a docking station to a portable computer. (Cho Title). In particular, Cho appears to verify whether a secure electrical connection has been made between the portable computer and the docking station, and whether the portable computer has a secure mechanical lock, before supplying power. (Cho Abstract).

Claim 1, by contrast, specifically recites, "wherein the device determines if the laptop computer is capable of being powered across the power lines of the communication bus **by communication with the laptop across the power lines of said communication bus.**" Bard and Cho do not teach or fairly suggest a

Appl. No. 10/674,923
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determination of whether a laptop is capable of being powered across power lines of a communication bus, or that such a determination should be made by communication across the power lines of the communication bus.

Based on the forgoing, Applicants respectfully submit that claim 1, and all claims which depend from claim 1 (claims 28 and 29), should be allowed.

V. NEW CLAIMS

With this Response, Applicants present new claims 30-33. Applicants respectfully submit that new claims 30-33 are not taught or rendered obvious by the cited art.

VI. CLAIM CANCELLATIONS

With this Response, Applicants cancel claim 24 without prejudice to later asserting this claim, such as in a continuation application. Because of the cancellation of claim 24, Applicants re-write claim 26 into independent form, and amend claim 25 to depend from claim 26 rather than claim 24.

VII. CONCLUSION

Applicants respectfully request reconsideration and allowance of the pending claims. If the Examiner feels that a telephone conference would expedite the resolution of this case, he is respectfully requested to contact the undersigned.

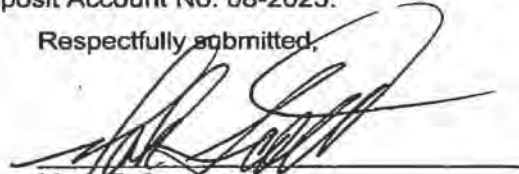
In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the cited art which have yet to be raised, but which may be raised in the future.

Applicants respectfully request reconsideration and that a timely Notice of Allowance be issued in this case. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of

**Appl. No. 10/674,923
Amdt. dated October 26, 2004
Reply to Office action of July 30, 2004**

time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,



Mark E. Scott
PTO Reg. No. 43,100
CONLEY ROSE, P.C.
(713) 238-8000 (Phone)
(713) 238-8008 (Fax)
ATTORNEY FOR APPLICANTS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
Legal Dept., M/S 35
P.O. Box 272400
Fort Collins, CO 80527-2400

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

ORIGINAL

PATENT APPLICATION
ATTORNEY DOCKET NO. 200304427-2

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al.

Confirmation No.: 5162

Application No.: 10/674,923

Examiner: J. S. Cerullo

Filing Date: 09/30/2003

Group Art Unit: 2112

Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

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

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TERMINAL DISCLAIMER
RESPONSIVE TO A DOUBLE PATENTING REJECTION

Sir:

Petitioner, Hewlett-Packard Development Company, L.P. is the owner of 100 percent interest in the instant application. Petitioner 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 defined in 35 U.S.C. 154 to 156 and 173 as shortened by any terminal disclaimer of prior Patent No. 6,668,296 to Hewlett-Packard Development Company, L.P. which issued on 12/23/2003 and is commonly owned by Petitioner. Petitioner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, petitioner 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 to 156 and 173 of the prior patent as shortened by any terminal disclaimer filed prior to the patent grant, in the event that any such granted patent: 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.

For submissions on behalf of an organization (e.g., corporation), the undersigned is empowered to act on behalf of the organization.

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

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(continued)

ATTORNEY DOCKET NO. 200304427-2

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Number of pages: 4

Typed Name: Christina L. Paz

Signature: *Christina L. Paz*

Respectfully submitted,

Michael J. DOUGHERTY et al

By *Mark E. Scott*

Mark E. Scott

Attorney/Agent for Applicant(s)

Reg. No. 43,100

Date: 10/26/2004

Telephone No.: (713) 238-8000

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

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PATENT APPLICATION
ATTORNEY DOCKET NO. 200304427-2

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al.
Application No.: 10/674,923
Filing Date: 09/30/2003
Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

Confirmation No.: 5162
Examiner: J. S. Cerullo
Group Art Unit: 2112

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

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Petitioner, Hewlett-Packard Development Company, L.P. is the owner of 100 percent interest in the instant application. Petitioner 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 defined in 35 U.S.C. 154 to 156 and 173 as shortened by any terminal disclaimer of prior Patent No. 6,668,296 to Hewlett-Packard Development Company, L.P. which issued on 12/23/2003 and is commonly owned by Petitioner. Petitioner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

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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.

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Respectfully submitted,

Michael J. DOUGHERTY et al

By

Mark E. Scott

Attorney/Agent for Applicant(s)

Reg. No. 43,100

Date: 10/26/2004

Telephone No.: (713) 238-8000

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REMARKS: Serial No. 10/674,923, filed 09/30/2003
Attached hereto is the Response to Office Action dated July 30, 2004 for
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Total Number of Pages (Including This One): **FIFTEEN (15)**

FROM: Mark E. Scott, Direct Dial No. 713/238-8049

DATE: October 26, 2004

CLIENT/MATTER NO. 1662-22601 (200304427-2)

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ORIGINAL

PATENT APPLICATION
ATTORNEY DOCKET NO. 200304427-2

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al. Confirmation No.: 5162
Application No.: 10/674,923 Examiner: J. S. Cerullo
Filing Date: 09/30/2003 Group Art Unit: 2112
Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

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

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- () No additional fee
- (X) Other: Terminal Disclaimer (fee \$ _____)

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY						
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES
TOTAL CLAIMS	12	MINUS	20	= 0	X \$18	\$ 0
INDEP. CLAIMS	5	MINUS	4	= 1	X \$88	\$ 88
[] FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM					+ \$300	\$ 0
EXTENSION FEE	1ST MONTH \$110.00	2ND MONTH \$430.00	3RD MONTH \$980.00	4TH MONTH \$1530.00		\$ 0
OTHER FEES						\$
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$ 88

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Respectfully submitted,

Michael J. DOUGHERTY et al.

By

Mark E. Scott

Attorney/Agent for Applicant(s)
Reg. No. 43,100

Date: 10/26/2004

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Signature: *Christina L. Paz*

Telephone No.: (713) 238-8000

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PATENT APPLICATION

ATTORNEY DOCKET NO. 200304427-2

IN THE
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Inventor(s): Michael J. DOUGHERTY et al. Confirmation No.: 5162
 Application No.: 10/674,923 Examiner: J. S. Cerullo
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Respectfully submitted,

Michael J. DOUGHERTY et al

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By

Mark E. Scott

Typed Name: Christina L. Paz

Signature: Christina L. Paz

Attorney/Agent for Applicant(s)
 Reg. No. 43,100

Date: 10/26/2004

Fax 10/04 (TrnAmFdx)

Telephone No.: (713) 238-8000

- Attach as First Page to Transmitted Papers -

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Intellectual Property Administration
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Fort Collins, Colorado 80527-2400

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PATENT APPLICATION

ATTORNEY DOCKET NO. 200304427-2

819

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al.

Confirmation No.: 5162

Application No.: 10/674,923

Examiner: J. S. Cerullo

Filing Date: 09/30/2003

Group Art Unit: 2112

Title: POWERING A NOTEBOOK ACROSS A USB INTERFACE

Mail Stop Amendment
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01 RL21014 110.00 DR
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TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

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- Response/Amendment Petition to extend time to respond
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- Other: Terminal Disclaimer (fee \$ _____)

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY						
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EXTENSION FEE	1ST MONTH \$110.00	2ND MONTH \$430.00	3RD MONTH \$980.00	4TH MONTH \$1530.00		\$ 0
OTHER FEES						\$
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$ 88

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Respectfully submitted,

Michael J. DOUGHERTY et al.

By

Mark E. Scott

Attorney/Agent for Applicant(s)
Reg. No. 43,100

Date: 10/26/2004

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Signature: Christina L. Paz

PATENT APPLICATION FEE DETERMINATION RECORD
Effective January 1, 2003

Application or Docket Number

10/674923
200364427-2

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	9	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	9 minus 20 = *	0
INDEPENDENT CLAIMS	4 minus 3 = *	1
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

SMALL ENTITY TYPE OR OTHER THAN SMALL ENTITY

RATE	FEE	OR	RATE	FEE
BASIC FEE	375.00		BASIC FEE	750.00
X\$ 9=			X\$18=	
X42=			X84=	84
+140=			+280=	
TOTAL			TOTAL	834

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

*FEW
Amend
10-26-04*

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	* 12	Minus ** 20	= 0
Independent	* 5	Minus *** 4	= 1
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

SMALL ENTITY OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=			X\$18=	
X42=			X84=	88.00
+140=			+280=	
TOTAL ADDIT. FEE			TOTAL ADDIT. FEE	88.00


	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=			X\$18=	
X42=			X84=	
+140=			+280=	
TOTAL ADDIT. FEE			TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=			X\$18=	
X42=			X84=	
+140=			+280=	
TOTAL ADDIT. FEE			TOTAL ADDIT. FEE	

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

Application Number 	Application No. 10/674,923	Applicant(s) DOUGHERTY ET AL.

TERMINAL DISCLAIMER	<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> DISAPPROVED
Document Code - DISQ INTERNAL DOCUMENT - DO NOT MAIL	This patent is subject to a Terminal Disclaimer	

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,923	09/30/2003	Michael J. Dougherty	200304427-2	5162

7590 07/30/2004
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

CERULLO, JEREMY S

ART UNIT PAPER NUMBER

2112

DATE MAILED: 07/30/2004

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

Office Action Summary

Application No. 10/674,923	Applicant(s) DOUGHERTY ET AL.	
Examiner Jeremy S. Cerullo	Art Unit 2112	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 30 September 2003.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1, 10, 20 and 24-29 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1, 10, 20 and 24-29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 September 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

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

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

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Claims 1, 10, 20, and 24-29 are pending in this application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 10, 20, 26, 28, and 29 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The modification of USB interfaces critical or essential to the practice of the invention, but not included in the claim(s), is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The USB specification states that: "No device shall supply (source) current on VBUS at its upstream facing port at any time. From VBUS on its upstream port, a device may only draw (sink) current." (Universal Serial Bus Specification Revision 2.0, Section 7.2.1, last paragraph; April 27, 2000) By claiming powering of the laptop by a device over USB power lines, the invention is not enabled because it is not within the scope of the USB specification to do so.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2112

4. Claims 10, 20, 26, 28, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant claims the powering of a laptop computer by a device over USB power lines. The USB specification states that: "No device shall supply (source) current on VBUS at its upstream facing port at any time. From VBUS on its upstream port, a device may only draw (sink) current." (Universal Serial Bus Specification Revision 2.0, Section 7.2.1, last paragraph; April 27, 2000) The claim is therefore indefinite because the use of the term USB is different from the accepted standard use.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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

6. Claims 1 and 24-27 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 of U.S.

Patent No. 6,668,296. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1-2 of U.S. Patent No. 6,668,296 contains all of the limitations of claims 1 and 24-27 of the instant application.

7. Claim 1 of U.S. Patent No. 6,668,296 contains every element of claims 24-27 of the instant application and as such anticipates claims 24-27 of the instant application.

8. Claim 2 of U.S. Patent No. 6,668,296 contains every element of claim 1 of the instant application and as such anticipates claim 1 of the instant application.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of

Art Unit: 2112

35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 24-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Bard (U.S. Patent No. 6,530,026). Bard teaches a power distribution system for distributing power between devices over a communication bus (Claims 1-2).

More specifically, Bard explicitly suggests the use of an IEEE 1394 compliant bus to enable a docking station to provide power to a notebook computer (Column 1, lines 22-25). Therefore, one of ordinary skill in the art at the time of the invention would be motivated by Bard to use a docking station to power a docked laptop computer over an IEEE 1394 compliant bus.

12. Claims 1 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bard as applied to claims 24-25 above, and further in view of Cho (U.S. Patent No. 6,119,237). Cho teaches a method for determining if a laptop computer is capable of receiving power from a docking station (Figure 6 and Column 9, lines 6-18). In order to protect the circuitry of both the laptop computer and the docking station, one of ordinary skill in the art at the time of the invention would use a method of determining the capability of the computer to receive power as taught by Cho in the power distribution system taught by Bard.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number

Application/Control Number: 10/674,923
Art Unit: 2112


Page 6

is (703) 305-6435. The examiner can normally be reached on Monday -
Thursday, 6:45-4:15; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the
examiner's supervisor, Mark H. Rinehart can be reached on (703) 305-4815.
The fax phone number for the organization where this application or proceeding
is assigned is 703-872-9306.

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JSC



MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

PATENT APPLICATION

Sheet 1 of 2

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO.	APPLICATION NO.	CONFIRMATION NO.
	200304427-2		
	APPLICANT Michael J. DOUGHERTY et al.		
	FILING DATE	GROUP	
	Herewith		

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
<i>M</i>	1A 6,362,610	03-2002	Yang	Previously cited in the parent case Serial No. 09/608,082.
<i>M</i>	1B 6,357,011	03-2002	Gilbert	Previously cited in the parent case Serial No. 09/608,082.
<i>M</i>	1C 6,308,215	10-2001	Kolbet et al.	Previously cited in the parent case Serial No. 09/608,082.
<i>M</i>	1D 6,283,789	09-2001	Tsai	Previously cited in the parent case Serial No. 09/608,082.
<i>M</i>	1E 6,211,649	04-2001	Matsuda	Previously cited in the parent case Serial No. 09/608,082.
<i>M</i>	1F 6,105,097	08-2000	Larky et al.	Previously cited in the parent case Serial No. 09/608,082.
<i>M</i>	1G 6,094,700	07-2000	Deschepper et al.	Previously cited in the parent case Serial No. 09/608,082.
<i>M</i>	1H 6,046,571	04-2000	Bovio et al.	Previously cited in the parent case Serial No. 09/608,082.
<i>M</i>	1I 6,044,422	03-2000	Tran	Previously cited in the parent case Serial No. 09/608,082.
<i>M</i>	1J 5,884,049	03-1999	Atkinson	Previously cited in the parent case Serial No. 09/608,082.
<i>M</i>	1K 5,675,813	10-1997	Holmadahl	Previously cited in the parent case Serial No. 09/608,082.

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L				
	1M				
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	1P				

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

1Q	
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EXAMINER <i>Gregory C. Bell</i>	DATE CONSIDERED <i>July 19, 2004</i>
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Rev 09/03 (PTO 1449)

PATENT APPLICATION

Sheet 2 of 2

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY, DOCKET NO. 200304427-2	APPLICATION NO.	CONFIRMATION NO.
	APPLICANT Michael J. DOUGHERTY et al.		
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REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
<i>[Signature]</i>	1A 5,265,238	11-1993	Canova et al.	Previously cited in the parent case Serial No. 09/608,082.
<i>[Signature]</i>	1B 2001/0034250	10-2001	Chadha	Previously cited in the parent case Serial No. 09/608,082.
<i>[Signature]</i>	1C 5,841,424	11-1998	Kikinis	Previously cited in the parent case Serial No. 09/608,082.
	1D			
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FOREIGN PATENT DOCUMENTS

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OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

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EXAMINER <i>[Signature]</i>	DATE CONSIDERED July 19, 2004
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Rev 05/03 (PTO1449)

Notice of References Cited	Application/Control No. 10/674,923	Applicant(s)/Patent Under Reexamination DOUGHERTY ET AL.	
	Examiner Jeremy S. Cerullo	Art Unit 2112	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
A	US-6,119,237	09-2000	Cho, Hwan-Cheol	713/300
B	US-6,530,026	03-2003	Bard, Steven R.	713/320
*	C US-6,668,296	12-2003	Dougherty et al.	710/303
D	US-			
E	US-			
F	US-			
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H	US-			
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FOREIGN PATENT DOCUMENTS

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N					
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NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	Universal Serial Bus Specification, Revision 2.0 - April 27, 2000 - Section 7.2.1
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
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CONFIRMATION NO. 5162

SERIAL NUMBER 10/674,923	FILING DATE 09/30/2003 RULE	CLASS 710	GROUP ART UNIT 2112	ATTORNEY DOCKET NO. 200304427-2
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APPLICANTS

Michael J. Dougherty, Houston, TX;
Kenneth W. Stufflebeam, Houston, TX;
Rahul V. Lakdawala, Cypress, TX; Thomas P. Sawyers, Hempstead, TX;

** CONTINUING DATA *****
This application is a CON of 09/608,082 06/30/2000 PAT 6,668,296

** FOREIGN APPLICATIONS *****

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
** 12/23/2003

Foreign Priority claimed <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	STATE OR	SHEETS	TOTAL	INDEPENDENT
35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after Allowance	COUNTRY	DRAWING	CLAIMS	CLAIMS
Verified and Acknowledged Examiner's Signature: <i>[Signature]</i> Initials: <i>[Initials]</i>	TX	3	9	4

ADDRESS
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins , CO
80527-2400

TITLE
Powering a notebook across a USB interface

FILING FEE RECEIVED 834	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 _____
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Index of Claims



Application No.

10/674,923

Examiner

Jeremy S. Cerullo

Applicant(s)

DOUGHERTY ET AL.

Art Unit

2112

✓	Rejected
=	Allowed

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A	Appeal
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Claim		Date			
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713	149032	(com? or communicat\$4) near2 (bus or lines)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 13:54
714	7392	((com? or communicat\$4) near2 (bus or lines)) near3 (power or source)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 13:55
715	7	((com? or communicat\$4) near2 (bus or lines)) near3 (power or source) near3 (laptop or notebook or (portable adj computer))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 13:56
716	217	(713/340).ccls. and @pd<20000630	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 14:14
717	238	((com? or communicat\$4) near2 (bus or lines)) near3 (power or source) and usb	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 14:15
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721	289	(laptop same power adj source) and @ad<20000630	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 14:59
722	276	laptop with power adj source	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 15:01
723	124	laptop with power adj source and @ad<20000630	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 16:42
724	268	(710/16).ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 16:43

725	201	(710/16).ccls. and @ad<20000630	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB USPAT; US-PGPUB	2004/07/22 16:43
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-	231	(710/303).ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/21 10:36
-	82642	(laptop or notebook or portable) near2 computer	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/21 12:59
-	4823	dock\$3 near2 station	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/21 12:59
-	91	power\$3 near4 ((laptop or notebook or portable) near2 computer) near4 (dock\$3 near2 station)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/21 13:00
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-	28	(communication near1 bus) near4 (power near line)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/21 15:13
-	28	(communication near1 bus) near4 (power near1 line)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/21 15:13
-	2	(communication near1 bus) near4 (power near1 line) near4 (docking near1 station)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 08:59
-	91703	(laptop or notebook or portable) near3 computer	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 08:59
-	3687	AC near2 adapter	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 08:59
-	145	((laptop or notebook or portable) near3 computer) near4 (AC near2 adapter)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 10:51
-	3437	(713/300-340).ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 10:58
-	3432	(713/300-340).ccls. and @ay<20000630	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 10:58
-	2354	(713/300-340).ccls. and @ad<20000630	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 10:58
-	1499	(713/300-340).ccls. and @pd<20000630	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 11:09
-	411	(713/300).ccls. and @pd<20000630	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/07/22 14:04

PLUS Search Results for S/N 10674923, Searched July 01, 2004

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present. PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

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5818691	

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PATENT APPLICATION

ATTORNEY DOCKET NO. 200304427-2

ORIGINAL

IN THE
U.S. PATENT AND TRADEMARK OFFICE



Anticipated Classification of this application:

Class _____ Subclass _____

Prior application:

Examiner: X. M. Chung Trans

Art Unit: 2833

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

(X) I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on 09/30/2003 and is addressed to the Commissioner for Patents, Alexandria, VA 22313-1450

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Number of pages:

Typed Name: Colleen F. Brown

Signature: Colleen F. Brown

REQUEST FOR A CONTINUING APPLICATION UNDER 37 CFR 1.53(b)

Sir:

This is a request for filing a continuing application under 37 CFR 1.53(b) a

- (X) continuation application of:
- () divisional application of:

Pending Prior Application

Application No. 09/608,082 filed 06/30/2000

Title POWERING A NOTEBOOK ACROSS A USB INTERFACE

Name of applicant(s) Michael J. DOUGHERTY, Kenneth W. STUFFLEBEAM, Rahul V. LAKDAWALA and Thomas P. SAWYERS

Copy of Application

- (X) Enclosed is a copy of the prior application, including the drawings.
- () Enclosed is a new specification, including new drawings.

Oath or Declaration

- (X) Enclosed is a copy of the prior Declaration (37 CFR 1.63(d)).
- () Enclosed is a newly executed Declaration (original or copy).

Foreign Priority - 35 USC 119

- () Foreign priority under 35 U.S.C. 119 has been claimed in prior Application No. _____ filed on _____ in _____
- () The certified copy has been filed in prior Application No. _____ filed _____
- () A separate paper claiming direct priority to a foreign application is enclosed herewith. A certified copy of the foreign application will be provided in due course.

Relate Back - 35 USC 120

(X) Amend the specification after the title by inserting the following heading:

--Cross Reference To Related Application(s)--;

and add the paragraph:

--This is a (X) continuation () divisional

of copending application number 09/608,082 filed on 06/30/2000

which is hereby incorporated by reference herein.

ORIGINAL

Inventorship Statement

- () Delete the following named individuals as inventors in this application in accordance with 37 CFR 1.53(b) as a result of a change in the claimed subject matter:

Appointment of Associate Attorney

- () Recognize as Associate Attorney or Agent _____
Registration No. _____
() authorization is hereby granted by signature below of the Attorney or Agent of record
() the Associate Attorney or Agent may not have the authority to appoint other Attorneys or Agents

Communications

- (X) Address all future communications to: Direct telephone calls to:
HEWLETT-PACKARD COMPANY L.Joy Griebenow
Intellectual Property Administration (970) 898-3884
P. O. Box 272400
Fort Collins, Colorado 80527-2400

Other Amendments

- (X) Before calculating the filing fee, amend the prior application as follows:
() Cancel the following claims _____ of the prior application before calculating the filing fee. (At least one original independent claim must be retained for filing purposes).
(X) Enter the enclosed Preliminary Amendment.

Fee Calculation

- (X) The filing fee is calculated below for (X) Utility () Design

CLAIMS AS FILED BY OTHER THAN A SMALL ENTITY				
(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) TOTALS
TOTAL CLAIMS	9 — 20	0	X \$18	\$ 0
INDEPENDENT CLAIMS	4 — 3	1	X \$84	\$ 84
ANY MULTIPLE DEPENDENT CLAIMS	0		\$280	\$ 0
BASIC FEE: Design (\$330.00); Utility (\$750.00)				\$ 750
TOTAL FILING FEE				\$ 834
TOTAL CHARGES TO DEPOSIT ACCOUNT				\$ 834

Charge \$ 834 to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

Respectfully submitted,
Michael J. DOUGHERTY et al.
By 
Mark E. Scott
Attorney/Agent for Applicant(s)
Reg. No. 43,100
Date: 09/30/2003
Telephone No.: (713) 238-8049

1662-22600
P99-2885

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
APPLICATION FOR UNITED STATES LETTERS PATENT

POWERING A NOTEBOOK ACROSS A USB INTERFACE

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POWERING A NOTEBOOK ACROSS A USB INTERFACE

CROSS-REFERENCE TO RELATED APPLICATIONS

5 Not applicable.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable.

BACKGROUND OF THE INVENTION

10 Field of the Invention

The present invention relates generally to docking a laptop computer to a docking station. More particularly, the invention relates to powering the laptop through the docking station when the laptop is in the docked position. More particularly still, the invention relates to powering the laptop across a USB interface when in the docked position.

15 Background of the Invention

Computer systems come in many shapes, sizes and computational ability. For persons who work in designated locations, a standard desktop computer may be sufficient to fulfill that person's needs. However, for a user who travels frequently and needs computing power in those travels, a portable or laptop computer is desirable.

20 Laptop computers are characterized in that the entire computing functionality is incorporated into a single package. That is, the motherboard, hard drive, disk drives, CD ROM drives, keyboard and display are all packaged in a compact device typically weighing less than ten pounds. Laptop computers are fully functional in that they may execute the very same programs, for example word processors and spreadsheet programs, as full sized or desktop computers.

Laptop computers have a battery that allows for remote operation of the laptop even in locations where alternating current (AC) wall socket power is not available.

While laptop computers may address portable computing needs, they are not without their limitations. For example, the keyboards of most laptop computers are a non-standard size. That is, the keys may be slightly closer together and not as ergonomically placed as a standard keyboard. Further, standard keyboards typically have function keys, cursor control keys and a full numerical keypad. In laptop computers these keys are incorporated onto the standard keys by means of shift and function control. A further limitation of laptops, given the relatively small size, is they only have a limited number of communication ports available. That is, a laptop may support only a single parallel port, a single serial port and a single Universal Serial Bus (USB) port. Also, the display devices for laptop computers are typically small, as compared to desktop monitors, to keep the overall size of the laptop computer small.

Many laptop users address limitations of laptops by some form of docking station. When the user returns to the home or office, the laptop is “docked” with a non-portable unit. Docking in this manner may expand the capabilities of the laptop computer to include a full size keyboard, a full size monitor, more serial ports, and other functionality typically associated only with desktop computing devices.

The docking station can take many forms. For example, the docking station may extend one of the expansion buses within the laptop computer, e.g. a peripheral components interconnect (PCI) bus, to the docking station such that full computing functionality may be housed within the docking station. Expanding the PCI bus gives the docking station the ability to include a hard drive, expansion cards and the like. For laptop computers that dock to this type of docking station,

the docking station typically provides power to the laptop within the docking connector between the laptop and the docking station.

A second type of docking station, while extending the laptop's capabilities, it is not as extensive as the dock station that extends one of the expansion buses of the laptop. This second type docking station is commonly referred to as a port replication docking station. By port replication it is meant that by plugging the laptop into the docking station, more serial and parallel ports are available for connection to printers, scanners, full size display devices, serial or parallel pointing devices and the like. As with the full docking station explained above, these port replication docks typically also include power connections in the docking connector.

Another method of expanding the capabilities of a laptop may be a form of port replication across a USB port. A user connects a laptop, via a USB connection, to a port replication device which generates plurality of communication ports for use as described above. However, in situations where port replication is accomplished across the USB connector, the laptop user also plugs the laptop into a separate source of power, or operates the laptop on battery power. Given that the user most likely intends to use the laptop for an extended period of time in the location where port replication is desirable, a user of the such a system plugs the AC/DC power converter (also known as a power "brick") into a standard AC wall socket on its input and its output into the laptop computer. Thus, in this situation the user is required to plug in at least the USB expansion connection as well as a power cable. Also, there are prior art devices that have the appearance of a full docking station, that is the laptop may physically couple to a non-portable docking station where the act of docking couples the USB ports; however, these devices still require the user to separately apply power to the laptop.

Thus, it would be desirable to have a USB based docking station that has the capability of both operating the laptop computer and charging the batteries in the laptop computer while docked without the need to plug in a separate power connection, thus reducing the time and complexity to couple the laptop to the docking unit. Despite the desirability of such systems, none are available
5 in the prior art.

BRIEF SUMMARY OF THE INVENTION

The problems noted above are solved in large part by a laptop computer and related docking station adapted to supply power from the docking station to the laptop computer across the USB connection. To accomplish this, the laptop computer is modified to have circuitry which is
10 capable of being detected across USB power rails by the docking station and also capable of turning off the five volts typical supplied by the laptop onto the USB port, and instead, receiving power at 18.5 volts, from the docking station across the USB connections. The laptop computer may be operated by the dock unit supplied power and, if necessary, the laptop's battery may be charged. Likewise, the docking station contains circuitry coupled to the power rails of the USB
15 port which allows the docking station to detect whether the laptop computer coupled to the docking station is capable of receiving power.

Thus, a laptop user need only plug the laptop into the docking station via the USB port, even if the battery for the laptop computer is drained. Once physically coupled to the docking station, the docking station detects whether or not the attached laptop is capable of receiving power
20 across the USB port. If so, the docking station ramps power to the laptop computer to facilitate its operation.

BRIEF DESCRIPTION OF THE DRAWINGS

For a detailed description of the preferred embodiments of the invention, reference will now be made to the accompanying drawings in which:

Figure 1 shows an exemplary computer system of the preferred embodiment;

5 Figure 2 shows a partial block diagram electrical schematic of a docked laptop and docking station; and

Figure 3 shows a more detailed electrical schematic of the reactive signaling circuit of the preferred embodiment.

NOTATION AND NOMENCLATURE

10 Certain terms are used throughout the following description and claims to refer to particular system components. As one skilled in the art will appreciate, computer companies may refer to a component by different names. This document does not intend to distinguish between components that differ in name but not function. In the following discussion and in the claims, the terms “including” and “comprising” are used in an open-ended fashion, and thus should be interpreted to
15 mean “including, but not limited to...”. Also, the term “couple” or “couples” is intended to mean either an indirect or direct electrical connection. Thus, if a first device couples to a second device, that connection may be through a direct electrical connection, or through an indirect electrical connection via other devices and connections.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

20 The preferred embodiment of this invention, as illustrated in Figures 1-3, comprises a laptop computer 100 and an associated docking station 200. The computer system 100 may be coupled to the docking station 200 and thus be in a “docked” configuration. Likewise, the

computer system 100 may be de-coupled from a docking station 200 and therefore be in an “undocked” configuration.

Figure 1 illustrates a laptop computer 100 in accordance with a preferred embodiment of the invention. Laptop computer 100 generally includes a processor or CPU 102 coupled to a main memory array 104 and a variety of other peripheral computer system components through an integrated Host bridge logic device 106. The CPU 102 preferably couples to bridge logic 106 via a CPU bus 108, or the bridge logic 106 may be integrated into the CPU 102. The CPU 102 may comprise, for example, a Pentium® III microprocessor. It should be understood, however, that computer system 100 could include other alternative types of microprocessors. Further, an embodiment of computer system 100 may include multiple processors, with each processor coupled through the CPU bus 108 to the bridge logic unit 106.

The main memory array 104 preferably couples to the bridge logic unit 106 through a memory bus 110, and the bridge logic 106 preferably includes a memory control unit (not shown) that controls transactions to the main memory 104 by asserting the necessary control signals during memory accesses. The main memory 104 functions as the working memory for the CPU 102 and generally includes a conventional memory device or array of memory devices in which program instructions and data are stored. The main memory array may comprise any suitable type of memory such as dynamic random access memory (DRAM) or any of the various types of DRAM devices such as synchronous DRAM (SDRAM), extended data output DRAM (EDO DRAM), or Rambus™ DRAM (RDRAM).

The laptop computer 100 also preferably includes a graphics controller 112 that couples to the bridge logic 106 via an expansion bus 114. As shown in Fig. 1, the expansion bus 114 preferably comprises an Advanced Graphics Port (AGP) bus. Alternatively, the graphics

controller 112 may couple to bridge logic 106 through a Peripheral Component Interconnect (PCI) bus 116. As one skilled in the art understands, the graphics controller 112 controls the rendering of text and images on a display device 118. The graphics controller 112 may embody a typical graphics accelerator generally known in the art to render three-dimensional data structures on display 118. These data structures can be effectively shifted into and out of main memory 104 via bridge logic 106. The graphics controller 112 therefore may be a master of the expansion bus (either PCI or AGP bus) enabling the graphics controller 112 to request and receive access to a target interface within the bridge logic unit 106, including the memory control unit. This mastership capability permits the graphics controller 112 to access main memory 104 without the assistance of the CPU 102. A dedicated graphics bus accommodates rapid retrieval of data from main memory 104. As will be apparent to one skilled in the art, the bridge logic 106 includes an AGP interface (not specifically shown) to permit master cycles to be transmitted and received by bridge logic 106. The display 118 comprises any suitable electronic display device upon which an image or text can be represented. A suitable display device may include, for example, a liquid crystal display (LCD), a thin film transistor (TFT), a virtual retinal display (VRD), or any other type of suitable display device for a laptop computer system.

The laptop computer system 100 preferably comprises another bridge logic device 120 that bridges the primary expansion bus 122 to various secondary buses including a low pin count ("LPC") bus 124 and the PCI bus 116. In accordance with the preferred embodiment, the bridge device 120 is an Input/Output Controller Hub ("ICH"). The ICH 120 supports the LPC bus 124, the PCI bus 116, the USB bus 126 as well as various other secondary buses, either directly or by way of further bus bridges.

In the preferred embodiment of Fig. 1, the primary expansion bus 122 comprises a Hub-link bus which is a proprietary bus of the Intel[®] Corporation. However, laptop computer system 100 is not limited to any particular type of primary expansion bus 122, and thus other suitable buses may be used.

5 The preferred embodiment of laptop computer 100 also has docking logic 134. Docking logic 134 is a set of circuitry coupled to the USB port 136 power lines 138. More specifically, the standard USB communication cable has four conductors. Two of these conductors are serial communication conductors 126 which allow communication between devices using USB protocol. The other two conductors carry power between USB devices. Under USB protocol, the power
10 conductors 138 carry five volts. Referring to Fig. 1, the laptop computer 100 of the preferred embodiment does not modify operation of the serial communication conductors 126 of the USB protocol. Preferably, all communications to establish whether laptop computer 100 is capable of receiving power from the docking station 200 take place over the power conductors or power rails 138 of the USB cable connector.

15 Fig. 2 shows in more detail the docking logic 134 of the laptop computer 100 coupled to docking logic 234 of the docking station 200. Docking of these two logic circuits is preferably through USB connector 136 of the laptop computer 100 and a mating USB connector 236 of the docking station 200.

 Under standard USB protocol, the laptop computer 100 provides power to USB devices
20 downstream of the laptop computer 100. Thus, in normal operation, the USB protocol voltage control unit 140 receives a five volt input signal 142 which it couples to the positive power rail 144 of the power conductors 138. Downstream USB devices may draw current through the positive power rail 144. If a user of the laptop computer 100 plugs in, for example, a USB mouse into the

USB connector 136, that mouse under USB protocol may draw power across the power conductors 138 for its operational use.

Assume for purposes of explanation that laptop computer 100 has a charged battery and is in an operational state. In such a condition, the laptop computer 100 preferably provides five volt
5 power across the power conductors 138. Further assume that the user docks the laptop 100 with a docking station 200 of the preferred embodiment. In so doing, the user either physically plugs in a USB cable to the connector 136 or slides the laptop computer 100 into a docking station 200. In this instance, with the laptop computer 100 on and fully functional, the laptop computer 100 attempts to provide power across the USB cable to the docking station 200.

10 Under normal USB protocol, coupling of USB devices requires a series of USB handshaking protocols to identify both the host or master device, which would be the laptop computer 100, and any downstream device, which in this exemplary case is the docking station 200. In the preferred embodiment of this invention, this handshaking protocol between the laptop computer 100 and the docking station 200 reveals to software running in the laptop
15 computer 100 that the docking station 200 is capable of providing power across the power rails 138 of the USB interface. It will be understood that this handshaking protocol between the laptop computer 100 and the docking station 200 occurs over the serial communication lines 126, and these lines are not shown in Fig. 2.

Based on the handshaking between the two devices, operating system software loads a
20 driver specifically used with the docking station 200. Though this driver may provide many functions, the function of concern is that the driver preferably turns off the laptop computer's ability to provide five volts to the power rails 138. More specifically, the driver loaded by the operating system of the laptop computer 100 preferably commands the Super I/O controller 130 to

issue a five volt shut-off command signal 148, preferably through one of its digital outputs. This five volt shut-off command couples to the USB protocol voltage control unit 140 of the docking logic 134. Upon receiving this five volt shut-off command signal 148, the USB protocol voltage control unit 140 preferably de-couples the five volt input line 142 from the positive power rail 144.

5 Thus, the laptop computer 100 breaks with standard USB protocol and the power rails 138 are no longer capable of providing power to downstream devices.

As far as docking logic 234 of the docking station 200 is concerned, the situation where laptop computer 100 turns off the five volt supply presents itself in the same manner as coupling a laptop computer 100 that either does not have a battery, and therefore is not operational, or whose
10 battery is completely discharged. Thus, the following description is equally applicable to both situations. It is possible that laptop computers that do not have the capability of receiving power across the USB port may be docked with docking station 200. Therefore, docking station dock logic 234 must establish that the laptop computer to which it is docked is capable of receiving power. Preferably this is done by attempting to establish communications across the power rails
15 138 of the USB connector.

Initially voltage ramp logic 210 (Fig. 2) provides no voltage whatsoever to the positive power rail 244 on the docking station 200 side of the connection. Upon detecting no voltage on the USB power rails, communication and control logic 250 commands the voltage ramp logic 210 to ramp-up a small voltage, preferably 3.1 volts, onto power rail 244. Positive power rail 244 couples
20 to the power rail 144 on the laptop side of the connection and therefore also couples to the reactive signaling circuit 150. Communication and control circuit 250 couples to reactive signaling circuit 150 across these power rails. In broad terms, the communication and control circuit 250 of the docking logic 234 attempts to establish communication with the reactive signaling circuit 150

of the laptop docking logic 134. If communication and control circuit 250 establishes positive communication with reactive signaling circuit 150, the docking station 200 has made a positive identification that the laptop to which it is docked is capable of receiving power across the USB connection.

5 More specifically, communication and control circuit 250 preferably communicates with reactive signaling circuit 150 by serially communicating across the positive power rail 144. While there may be many protocols and devices capable of this communication, the preferred embodiment of the reactive signaling circuit 150 comprises a Dallas Semiconductor device part number DS2401, as shown in Fig. 3. This DS2401 has the characteristic that it stores charge
10 drawn from its signaling line, and then, in response to a specific pattern of high and low voltages on its signaling line, transmits a series of high and low pulses across the signaling line to uniquely identify the device. Preferably, the communication and control logic 250 performs the necessary steps to initiate communication with the DS2401 device and receives any return communication issued thereby.

15 Upon receiving the communication from the DS2401 of the reactive signaling circuit 150, the communication and control circuit 250 preferably performs checks on the information received to verify whether the laptop to which it is docked is capable of receiving power across the USB connection. Dallas Semiconductor makes another device, a DS2480, which is specifically made to communicate with the DS2401. However, in the preferred embodiment this device is not used and
20 instead a Programmable Array Logic ("PAL") is used. A PAL has the characteristic that it may be field programmed to execute certain steps or states and is therefore considered a field programmable state machine. The PAL of the preferred embodiment performs all steps necessary to communicate with the reactive signaling circuit 150 to establish positive identification that the

laptop to which the docking station 200 is docked is capable of receiving power across its USB connector.

The communication and control logic 250, after positively identifying the laptop as capable of receiving power, informs the voltage ramp logic 210 across the ramp signal line 212 to ramp the voltage on the positive USB power rail 244, 144 up to approximately 18 volts. Voltage ramp logic 210 couples to an 18 volt supply ^{212 OK} ~~212~~ which preferably comes from a power supply (not specifically shown).

Voltage ramp logic 210, upon receiving the ramp indication from the communication and control logic 250, preferably ramps the voltage to 18 volts over a period of 20-50 milli-seconds.

10 Thus, the voltage on positive power rail 144 with respect to the negative power rail 146 in the laptop computer begins to rise toward 18 volts. Laptop computer 100 preferably operates using the 18 volt power supplied by the docking station 200 across the USB interface. Also, the laptop computer may charge its battery, if needed, with this same supply.

It is possible that laptop computers that are not capable of receiving power across their

15 USB interfaces may be coupled to the docking station 200. Indeed, it may be possible that a user quickly changes or swaps the USB connection from a laptop capable of receiving power to a laptop not capable of receiving power. The docking station 200 preferably detects that a computer user has de-coupled the USB port. Detection must be fast enough to insure that the dock station docking logic 234 removes the 18 volt power supply before the user couples it to another

20 computer. This capability is preferably accomplished by a combination of functionality in the laptop docking logic 134, specifically the reactive signaling circuit 150, and the dock station docking logic 234, specifically current sense logic 220.

Reactive signaling circuit 150 in the laptop computer 100 in combination with current sense logic 220 in the docking station 200 operate to detect that a user has unplugged or de-coupled the laptop computer 100 and the docking station 200. More specifically, after voltage ramp circuit 210 of the docking logic 234 ramps voltage on the positive power rail 244, 144 above a predetermined value, preferably 6 volts, the reactive signaling circuit 150 preferably draws a small amount of current from the docking station 200. This small amount of current, a coupling current, is detected by current sense logic 220 of the dock station docking logic 234. This small coupling current is monitored by the dock station docking logic 234 as an indication that two compatible devices remain coupled together. When the dock station 200 provides power for full operation of the laptop computer 100, as many as 2.5 amps of current may flow from the dock station 200 to the laptop computer 100 across the USB connectors 136, 236. The coupling current is part of that 2.5 amp power flow. That is to say, when the laptop computer 100 is operating from power supplied by the dock station 200, the coupling current may be undistinguishable from the power drawn by the laptop.

As long as current sense logic 220 detects at least an amount of current equal to the coupling current, the dock station docking logic 234 is assured that the laptop computer 100 is capable of receiving power across the USB port. If the laptop computer system user unplugs the USB connection, or de-couples the laptop from the docking station, current sense logic 220 detects the loss of current flow and immediately notifies the communication control logic 250 across logic line 252. Communication and control logic 250 instructs voltage ramp logic 210 to cease providing power to the power rails 138 of the USB interface. Thus, the current sense logic 220, in combination with reactive signal circuit 150, assures a system user cannot dock a laptop that is not capable of receiving power to a powered USB port.

Current sense logic 220 is preferably implemented with a Schottky diode in parallel with a resistor of small resistance. The voltage across this parallel combination is preferably detected by a comparator or operational amplifier whose output quickly saturates as current flow exceeds the coupling current minimum. One of ordinary skill in the art, now understanding the functionality of the current sense logic 220, could implement many circuits to perform this function including the use of precision current sense resistors. Likewise, current logic 156, as indicated in Fig. 3, preferably comprises 1 k Ω resistor coupled across the power rails. However, this 1 k Ω resistance couples across the power rails only as the voltage on those rails reaches and exceeds the threshold voltage of 6 volts. Below the threshold voltage, which includes the voltage that the laptop supplies in conformance with standard USB protocol, the 1 k Ω resistance does not draw current from the positive power rail.

Because powering the laptop computer across the USB interface power rails requires voltages that may exceed breakdown voltages of the signaling device 152, the reactive signaling circuit 150 preferably also comprises a self-protection logic 154 coupled across the positive and negative USB power rails. The self protection circuit 154 electrically floats the signaling device 152 when the supply voltage exceeds the threshold voltage preferably set at 6 volts, but in any case set below the breakdown voltage of device 152.

In operation, a user takes a laptop computer 100 that either does not have battery, or has a discharged battery, and docks it to docking station 200. Dock station docking logic 234 places a small voltage across the power rails 138, preferably 3.1 volts. Communication and control logic 250 attempts to communicate with the reactive signaling circuit 150 serially over the positive USB power rail 144, 244. It will be understood that in the preferred implementation of the reactive signaling circuit 150, the device 152, though being part of a laptop computer that is without power,

is capable of serial communication powered by current drawn and stored from the 3.1 volts applied to the power rails by dock logic 234. Once the communication and control logic 250 establishes positive communication with the reactive signaling circuit 150, the voltage ramp logic 210 ramps the voltage on the positive power rails 144, 244 to 18 volts. As the voltage exceeds 6 volts, 5 coupling current logic 156 couples a resistance across the power rails of approximately 1 k Ω , and self protection logic 154 electrically floats signally device 152. Coupling resistance across the power rails results in a current flow to the laptop computer 100 of approximately six milliamps. Current sense logic 220 senses this six milliamp current as a continuing indication that the laptop computer 100 is capable of receiving power across the USB interface. As the voltage approaches 10 18 volts, the laptop computer preferably draws sufficient current through the USB connector 136, 236, and through the diode 158, or an equivalent circuit thereof, to operate the laptop computer. The term "operate" includes not only running the power supply, but also, if necessary, charging the system battery 132.

It is also possible that an operating laptop, providing five volts on the power rails 138 of the 15 USB interface in conformance with USB protocol, may be coupled to the docking station 200. When this is the case, the communication and control logic 250 senses the five volts supplied by the laptop computer 100 and takes no action to attempt to power the laptop. However, in this powered case, the laptop computer 100 preferably establishes communication across the signal lines 126 of the USB interface to the docking station 200 in conformance with standard USB 20 protocol. In this situation, the laptop establishes that the docking station 200 to which it is coupled is capable of providing power. The laptop computer 100 preferably loads a software driver associated with the laptop computer which preferably notifies the Super I/O controller 130 to issue a five volt shut off command signal 148 to the USB protocol voltage control unit 140 of the

docking logic 134. Responsive to this five volt shut off command, the USB protocol voltage control unit 140 turns off the five volt power supplied across the power rails 138. Communication between the laptop computer 100 and the docking station 200 then proceeds as described above with respect to coupling a laptop with a dead battery or no battery to the docking station 200.

5 The above discussion is meant to be illustrative of the principles and various embodiments of the present invention. Numerous variations and modifications will become apparent to those skilled in the art once the above disclosure is fully appreciated. For example, the preferred embodiment of the present invention is disclosed to modify operation of USB ports to power the laptop from the docking station; however, there may be other communication protocols and buses
10 coupling a laptop and docking station, and powering across these additional buses would be within the contemplation of this invention. For example, 1394 "Fire Wire" buses and DVI bus interfaces. Additionally, any self powered USB device (that is, not getting its operating power from upstream devices) could be modified to provide power and thus would be considered equivalent to powering across the USB by a docking station.

15 Likewise, there may be many devices or schemes to facilitate the communication between the communication and control logic 250 and the reactive signaling circuit 150. The preferred embodiment of this invention describes having a Dallas semiconductor device DS2401 in the reactive signaling circuit 150 and a PAL for communication and control logic 250. One of
20 ordinary skill in the art, now understanding the functionality and requirements of these two circuits, could devise other communication protocols and schemes to perform these tasks which would be within the contemplation of this invention. It is intended that the following claims be interpreted to embrace all such variations and modifications.

CLAIMS

What is claimed is:

1 1. A computer system, comprising:
2 a self powered device;
3 a laptop computer coupled to said self powered device by way of a communication bus;
4 and
5 said laptop computer powered by said self powered device across power lines of said
6 communication bus.

1 2. The computer system as defined in claim 1 further comprising:
2 said self powered device comprises a docking station;
3 said laptop computer comprising:
4 a processor;
5 a system memory coupled to said processor by way of a host bridge device;
6 a second bridge device coupled to said host bridge device by way of a primary
7 expansion bus, said second bridge device adapted to communicate over said communication bus
8 being a Universal Serial Bus (USB) interface;
9 a system battery coupled to said processor and bridge devices; and
10 a laptop docking logic coupled to said system battery and power rails of said USB
11 interface, said laptop docking logic adapted to couple power from said USB power rails to said
12 system battery; and
13 said docking station comprising a dock station docking logic adapted to determine whether
14 said laptop computer is capable of receiving power across said USB interface, said dock station

15 docking logic further adapted to provide power to said laptop on said power rails of said USB
16 interface.

1 3. The computer system as defined in claim 2 wherein said laptop docking logic further
2 comprises:

3 a voltage control unit coupled to said USB power rails and said system battery, said voltage
4 control unit adapted to couple power from said USB power rails; and

5 a signaling circuit coupled to said USB power rails, said signaling circuit adapted to
6 respond to communication signals on said power rails to identify said laptop as being capable of
7 receiving power on said USB power rails.

1 4. The computer system as defined in claim 3 wherein said voltage control unit further
2 comprises:

3 a five volt supply input signal, said voltage control unit adapted to selectively couple said
4 five volt supply input signal to said positive power rail; and

5 a shut off input signal, said voltage control unit adapted to de-couple said five volt supply
6 input signal from a positive power rail responsive to assertion of said shut off signal.

1 5. The computer system as defined in claim 3 wherein said signaling circuit further
2 comprises:

3 a line powered serial communication device coupled across said USB power rails, said
4 communication device adapted to respond to communication signals to identify said laptop
5 computer as capable of receiving power across said USB power rails; and

6 a coupling current logic coupled across said USB power rails adapted to draw a current
7 across said USB power rails to indicate the presence of a laptop computer capable of receiving
8 power across said USB power rails.

1 6. The computer system as defined in claim 5 wherein said line powered serial
2 communication device further comprises a Dallas Semiconductor device DS2401.

1 7. The computer system as defined in claim 2 wherein said dock station docking logic further
2 comprises:

3 a communication and control logic coupled to said USB power rails adapted to serially
4 communicate over said USB power rails;

5 a current sense logic adapted to sense current flowing from the docking station to the laptop
6 computer; and

7 a voltage ramp logic adapted to selectively supply power to said laptop across said USB
8 power rails.

1 8. The computer system as defined in claim 7 wherein said communication and control logic
2 further comprises a Programmable Array Logic (PAL) configured to operate as a state-machine.

1 9. The computer system as defined in claim 7 further comprising:

2 said current sense logic adapted to generate a shut-off signal when current flow from said
3 docking station to said laptop falls below a predefined minimum; and

4 said communication and control logic coupled to said shut-off signal and adapted to turn
5 off power supplied from said docking station to said laptop computer responsive to assertion of
6 said shut-off signal.

1 10. In a computer system comprising a laptop computer adapted to dock to a docking station by
2 way of a communication bus, a method of operating said computer system comprising:
3 powering said laptop computer from said docking station across said USB interface.

1 11. The method as defined in claim 10 further comprising:
2 coupling an operating laptop computer to said docking station;
3 communicating over serial communication lines of said communication bus;
4 determining that said docking station is capable of supply power across said
5 communication bus;
6 discontinuing application of voltage to power lines of said communication bus by said
7 laptop computer; and
8 providing power on said power lines of said communication bus by said docking station.

1 12. The method as defined in claim 11 wherein said communication bus is a Universal Serial
2 Bus.

1 13. The method as defined in claim 10 further comprising:
2 coupling a laptop computer to said docking station by way of said communication bus;
3 communicating over power signal lines of said communication bus;

4 determining that said laptop is capable of receiving power over said power signal lines of
5 said communication bus; and
6 providing power on said power signal lines of said communication bus by said docking
7 station.

1 14. The method as defined in claim 13 wherein said communication bus is a Universal Serial
2 Bus.

1 15. A computer comprising:
2 a processor;
3 a system memory coupled to said processor;
4 a bridge device coupled to said processor, said bridge device having a Universal Serial Bus
5 (USB) interface;
6 a system battery coupled to said processor and bridge devices; and
7 a docking logic coupled to said system battery and power rails of said USB interface, said
8 docking logic adapted to couple power from said USB power rails to said system battery.

1 16. The laptop computer as defined in claim 15 wherein said docking logic further comprises:
2 a voltage control unit coupled to said USB power rails and said system battery, said voltage
3 control unit adapted to selectively provide power to said USB power rails; and
4 a signaling circuit coupled to said USB power rails, said signaling circuit adapted to
5 respond to communication signals on said USB power rails to identify said laptop as capable of
6 receiving power on said USB power rails.

1 17. The laptop computer as defined in claim 16 wherein said voltage control unit further
2 comprises:

3 a five volt supply input signal, said voltage control unit adapted to selectively couple said
4 five volt supply input signal to a positive power rail; and

5 a shut-off input signal, said voltage control unit adapted to de-couple said five volt supply
6 input signal from said positive power rail responsive to assertion of said shut-off signal.

1 18. The laptop computer as defined in claim 16 wherein said signaling circuit further
2 comprises:

3 a line powered serial communication device coupled across said USB power rails, said
4 communication device adapted to respond to communication signals on said positive power rail to
5 identify said laptop computer as capable of receiving power across said USB power rails; and

6 a coupling current logic coupled across said USB power rails adapted to draw a current
7 from said USB power rails when a voltage on said USB power rails exceeds a threshold voltage.

1 19. The laptop computer as defined in claim 18 wherein said line powered serial
2 communication device further comprises a Dallas Semiconductor device DS2401.

1 20. A docking station for mating with a laptop computer comprising:

2 a Universal Serial Bus (USB) interface having data signal lines and power rails that couple
3 to the laptop computer; and

4 a docking logic that provides power to said laptop over the power rails of the USB
5 interface.

1 21. The docking station as defined in claim 20 wherein said docking logic further comprises:
2 a communication and control logic coupled to said USB power rails adapted to serially
3 communicate over said USB power rails;
4 a current sense logic adapted to sense current flowing from the docking station; and
5 a voltage ramp logic adapted to selectively couple power to said USB power rails.

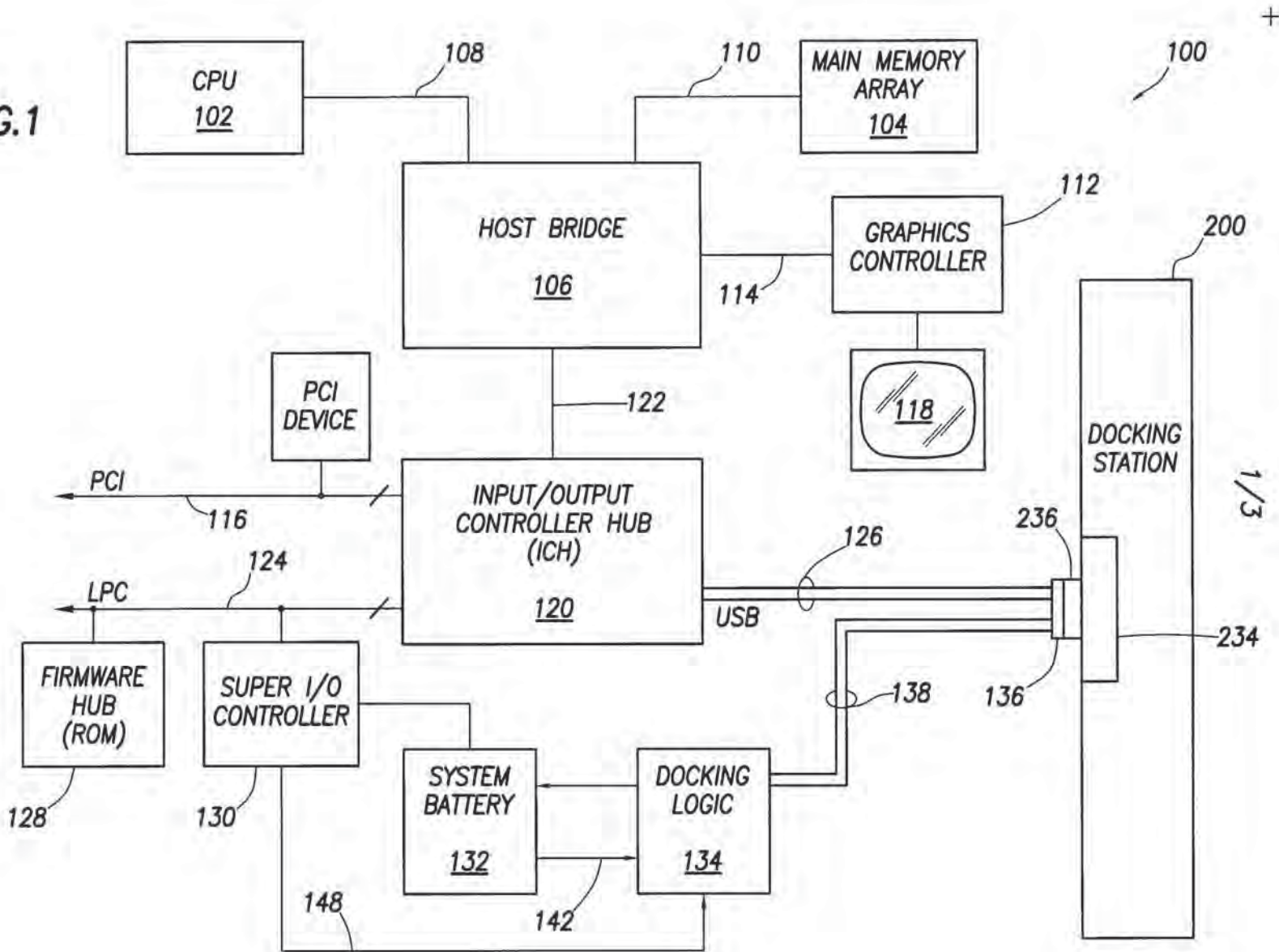
1 22. The docking station as defined in claim 21 wherein said communication and control logic
2 further comprises a Programmable Array Logic (PAL) configured to operate as a state-machine.

1 23. The docking station as defined in claim 21 further comprising:
2 said current sense logic adapted to generate a shut-off signal when current flow from said
3 docking station to said laptop falls below a predefined minimum; and
4 said communication and control logic coupled to said shut-off signal and adapted to initiate
5 cut-off of power supplied from said docking station responsive to assertion of said shut-off signal.

ABSTRACT

A laptop computer and mating docking station where the docking station provides power to the laptop computer over power rails of the Universal Serial Bus (USB) interface. The laptop computer has laptop docking logic that both provides power in accordance with standard USB protocol, and also receiving power across the power rails of the USB interface. Likewise, the docking station has a docking station dock logic that establishes communication with the laptop docking logic across the USB power rails. Once positive communication is established, the dock station provides voltages on the USB power rails sufficient to power the laptop computer as well as charge the laptop's battery.

FIG. 1



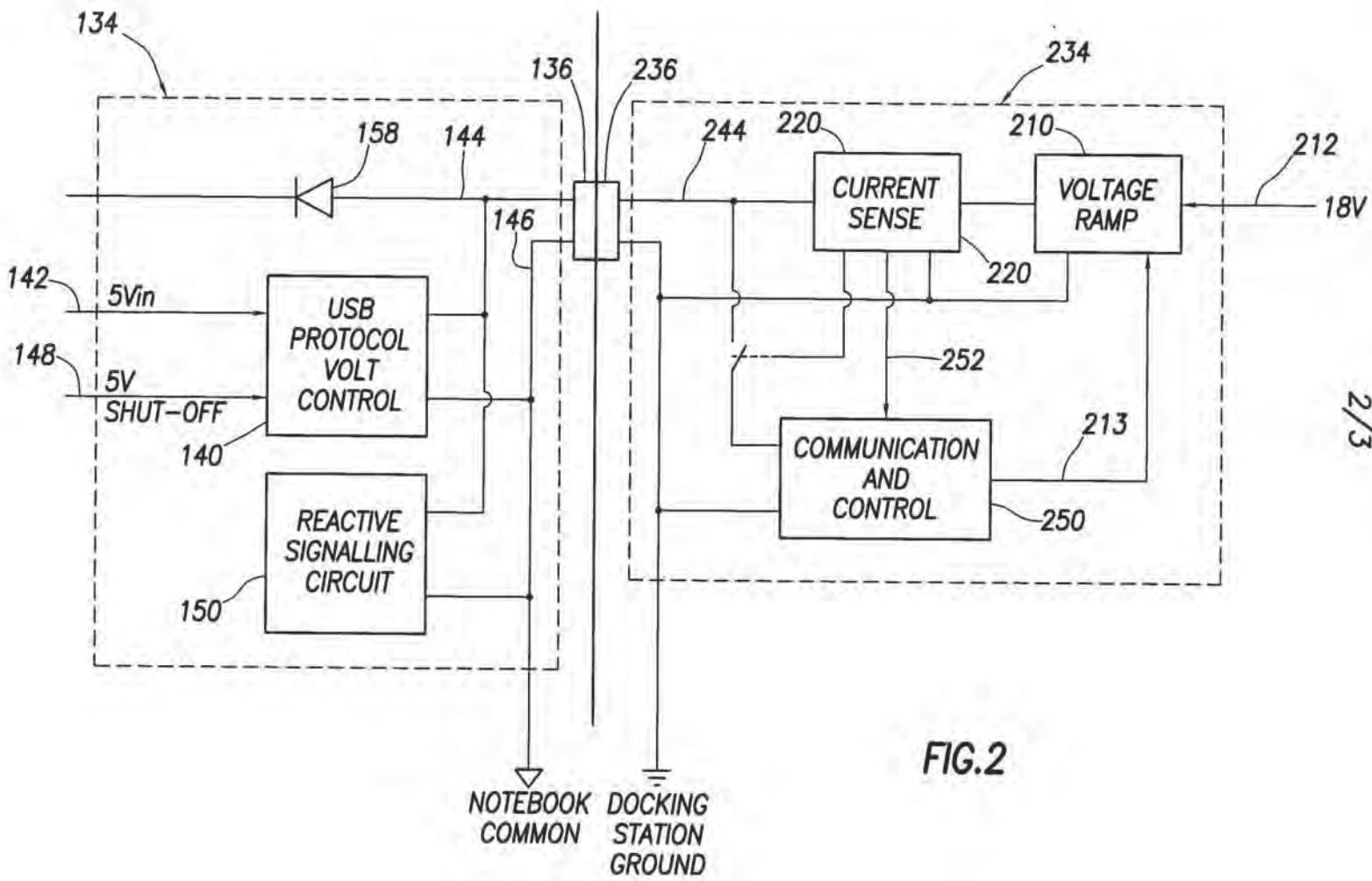


FIG.2

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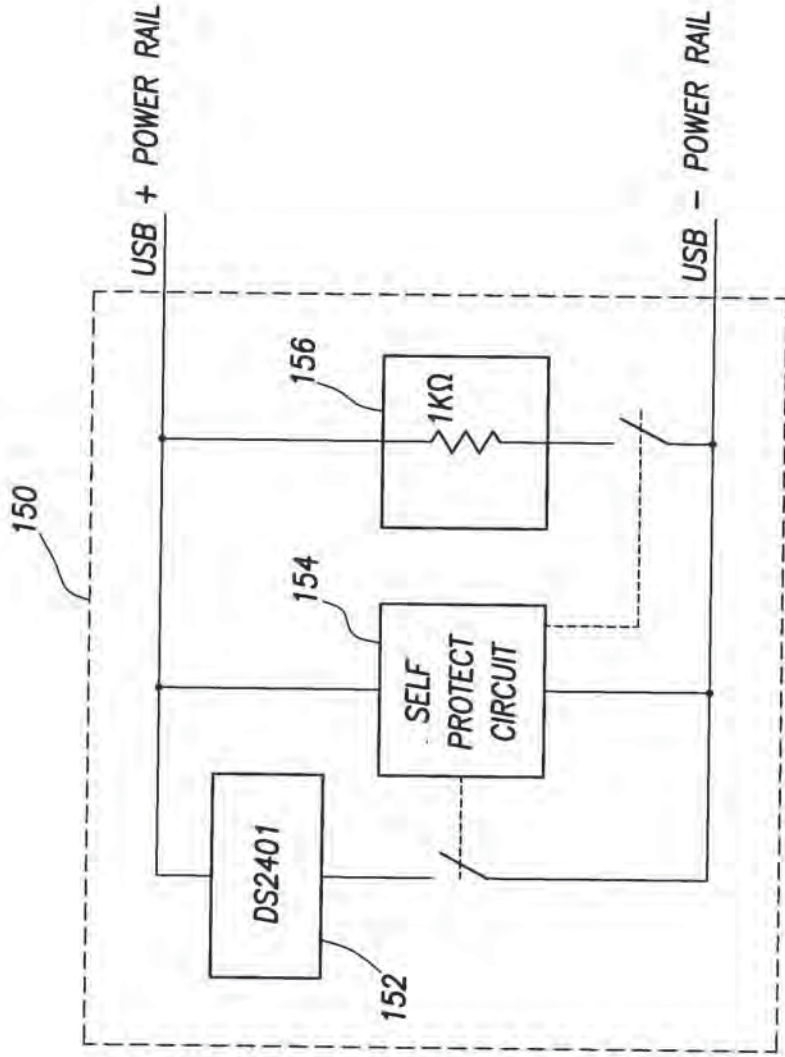


FIG.3

+

DECLARATION

**SOLE/JOINT INVENTOR
 ORIGINAL/SUBSTITUTE/CIP**

As a below named inventor, I hereby declare that: my residence, post office address, and citizenship are as stated below next to my name. I believe I am the original, first, and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **POWERING A NOTEBOOK ACROSS A USB INTERFACE** as described in the specification attached.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above; that I do not know and do not believe the same was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application; that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representative or assigns more than twelve months prior to this application; and that I acknowledge the duty to disclose information of which I am aware which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations § 1.56(a). Such information is material when it is not cumulative to information already of record or being made of record in the application, and


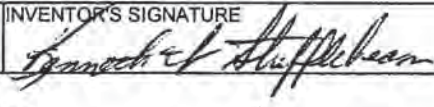
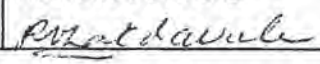
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COUNTRY	APPLICATION NUMBER	DATE OF FILING	PRIORITY CLAIMED UNDER 35 USC 119
			<input type="checkbox"/> YES <input type="checkbox"/> NO

I hereby claim the benefit under Title 35 United States Code § 120 of any United States application(s) listed below and, insofar as any subject matter of any claim of this application is not disclosed in the prior United States Application, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations § 1.56(a) which occurred between the filing date of the prior application and the national PCT international filing date of this application:

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.

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Client Docket No. P99-2885

DECLARATION (cont'd.)

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DOC DATE: 06/20/2001

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09/608,082
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5. Name and address of party to whom correspondence concerning document should be mailed:
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Internal Address: CONLEY, ROSE & TAYON, P.C.

Street Address: P.O. Box 3267

City: Houston State: Texas Zip: 77253-3267

6. Total number of patents involved: 1
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ASSIGNMENT

THIS ASSIGNMENT AGREEMENT, is effective as of May 31, 2001, at 6:00 PM Eastern Daylight Savings Time, and is made by and between COMPAQ COMPUTER CORPORATION, a Delaware corporation having its principal place of business at 20555 SH 249, Houston, Texas 77070 (hereinafter referred to as "Assignor"), and COMPAQ INFORMATION TECHNOLOGIES GROUP, L.P., a Texas limited partnership having its principal place of business at 20555 SH 249, Houston, Texas 77070 (hereinafter referred to as "Assignee").

WITNESSETH:

WHEREAS, Assignor has developed and is the owner of certain intellectual property, including patents and patent applications, copyrights, and other proprietary information ("Intellectual Property"), which it desires to assign to Assignee; and

WHEREAS, Assignor is the owner, by virtue of mergers, of Intellectual Property acquired from various third parties, including Digital Equipment Corporation, Tandem Computer Corporation, and others, but not including Microcom, Microcom International or Microcom Systems, Inc.; and

WHEREAS, Assignor is the assignee of existing and future developed Intellectual Property pursuant to agreements, including an Agreement to Share Costs and Risks of Intangible Property Development, and a License Agreement, both effective July 1, 2000 (collectively referred to as the "CCC/CCIG Agreements"), with Compaq Computer International GmbH, organized under the laws of Switzerland, with principal offices at Oberfeldstrasse 14, 8302 Kloten, Canton of Zurich ("CCIG"); and

WHEREAS, Assignee desires to acquire the existing Intellectual Property owned by Assignor in exchange for a partnership interest in Assignee; and

WHEREAS, Assignor desires to convey to and assign to Assignee the Intellectual Property it currently owns in exchange for a partnership interest in Assignee; and

WHEREAS, Assignee desires to contract with Assignor for services associated with development of strategic marketing plans and materials, product and process research and development, testing of products, and assistance in e-business solutions, and other general and administrative services related to research and development ("Services") in exchange for an ownership interest in any future Intellectual Property developed as a result of such Services; and

WHEREAS, Assignor desires to provide Services on a contract basis, and is willing to transfer ownership of any future Intellectual Property that is developed in the course of conducting such contract Services.

NOW, THEREFORE, in a tax free transaction pursuant to Section 721 of the Internal Revenue Code Section of 1986, as amended, in exchange for a partnership interest in Assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, Assignor, assigns, conveys and transfers to Assignee, and its successors in interest, the entire rights, title and interest in and to Assignor's existing Intellectual Property, including: (1) all existing U.S. and foreign patents owned by Assignor; (2) all existing U.S. and foreign patent applications, both pending and ready to be filed with one or more patent offices; (3) any and all extensions, divisionals, substitutions, continuations, continuations-in-part, reissues and reexaminations of such patents and patent applications; (4) all copyrights and copyrightable works, whether registered or not; (5) all trade secrets, know-how, and other proprietary information related to the design, development, manufacture, marketing, use, and sale of information handling systems, including, but not limited to, digital computer systems, personal device assistants, microprocessors, operating system software, application software, networking systems and solutions, storage devices,

telecommunications systems and solutions, and related products, components, peripheral devices, and services that are produced, manufactured, distributed and sold by Assignor to third parties, except for application software used exclusively by Assignor in its business and that is not commercially distributed to Assignor's customers; and (6) all common law rights in adopted trademarks and service marks and domain names, and their associated goodwill, and further, when requested by Assignee, Assignor agrees to cooperate in the generation, execution and filing of any supporting documentation necessary to identify and record title in the transferred Intellectual Property;

AND, for the same consideration, Assignor, assigns, and transfers to Assignee all Intellectual Property and other related rights and obligations acquired by Assignor from Compaq Computer International GmbH pursuant to CCC/CCIG Agreements effective July 1, 2000;

AND, for the same consideration, Assignor, assigns, transfers and conveys to Assignee and its successors in interest, all claims, demands, and causes of action, both at law and in equity, that Assignor may have or subsequently acquire, arising from infringement or misappropriation of Assignor's existing Intellectual Property prior to the date of this Agreement, and further Assignor transfers and assigns to Assignee and its successors in interest the right to sue and collect for all past and future acts of infringement and misappropriation, without recompense to Assignor;

AND, Assignor warrants that it has good and valid title to the Intellectual Property transferred herein, and shall, upon request by Assignee, execute all papers, make all oaths, testify on behalf of Assignee, provide such other material, information, and assistance as Assignee may request, and perform all other lawful acts necessary to effect the transfer of the rights enumerated in this Agreement, at Assignee's expense;

AND, Assignee, in consideration of the foregoing assignments and transfers, hereby transfers to Assignor a partnership interest in Assignee, and its successors and assigns, granting Assignor a percentage interest in Assignee, which may be assigned or transferred by Assignor without any restriction as it deems fit subject to the Limited Partnership Agreement of Compaq Information Technologies, L.P.;

AND, Assignee hereby warrants that it has rightful authority to transfer such partnership interest to Assignor, and Assignee has obtained prior written consent of all Partners of Assignee who have agreed to such transfer to Assignor;

AND, Assignee hereby agrees to compensate Assignor for Services pursuant to the terms of a Contract R&D Agreement dated May 31, 2001;

AND, Assignor, in consideration of the payment for Services, agrees to assign, transfer and convey all right, title and interest to any future Intellectual property developed in the course of performing the Services.

This Assignment Agreement will be executed in multiple copies, each of which shall for all purposes constitute an agreement, binding on the parties, and each party hereby covenants and agrees to execute all duplicates or replacement counterparts of this Agreement as may be required.

This Assignment Agreement shall be governed by and construed in accordance with the law of the State of Texas, United States of America, without regard to the conflict of laws principles thereof. All disputes arising out of this Agreement shall be subject to the exclusive jurisdiction and venue of the Texas State and federal courts, and the parties consent to the personal and exclusive jurisdiction and venue of these courts. This Assignment Agreement constitutes the entire understanding of the parties as to the subject matter hereof and supercedes and replaces all prior contemporaneous agreements, written or oral, regarding such subject matter. There are no

promises, covenants, or undertakings other than those set forth herein.

IN WITNESS THEREOF, the undersigned, being duly authorized and acting on behalf of the parties, does hereby execute this Agreement effective as of May 31, 2001.

COMPAQ COMPUTER CORPORATION

By: *B. Wells*

Ben K. Wells
Vice President and Treasurer

STATE OF TEXAS §
COUNTY OF HARRIS §

Before me, the undersigned notary public, on this day personally appeared *BEN K. WELLS*, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that the same was the act of **COMPAQ COMPUTER CORPORATION**, and that he has executed this instrument as the act of such corporation for the purpose and consideration herein expressed, and in the capacity herein stated.

Given under my hand and seal of office this *20th* day of *JUNE*, 2001.



Sharron Y. Cathey

COMPAQ INFORMATION TECHNOLOGIES GROUP, L.P.

By: Linda S. Auwers

Linda S. Auwers
Vice President and Secretary
CPQ HOLDINGS, INC., General Partner

State of Texas §

County of Harris §

Before me, the undersigned notary public, on this day personally appeared LINDA S. AUWERS, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that the same was the act of **COMPAQ INFORMATION TECHNOLOGIES GROUP, L.P.**, and that he has executed this instrument as the act of such corporation for the purpose and consideration herein expressed, and in the capacity herein stated.

Given under my hand and seal of office this 20th day of JUNE, 2001.



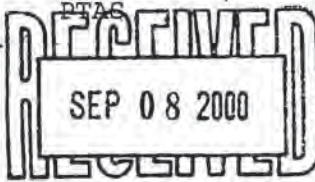
Sharron Y. Cathey



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
 ASSISTANT SECRETARY AND COMMISSIONER
 OF PATENTS AND TRADEMARKS
 Washington, D.C. 20231

SEPTEMBER 01, 2000

CONLEY, ROSE & TANYON, P.C.
 JONATHAN M. HARRIS
 P.O. BOX 3267
 HOUSTON, TX 77253-3267



Handwritten initials/signature

UNITED STATES PATENT AND TRADEMARK OFFICE
 NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 06/30/2000

REEL/FRAME: 010911/0742
 NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
 DOUGHERTY, MICHAEL J.

DOC DATE: 06/19/2000

ASSIGNOR:
 STUFFLEBEAM, KENNETH W.

DOC DATE: 06/28/2000

ASSIGNOR:
 LAKDAWALA, RAHUL V.

DOC DATE: 06/22/2000

ASSIGNOR:
 SAWYERS, THOMAS P.

DOC DATE: 06/28/2000

ASSIGNEE:
 COMPAQ COMPUTER CORPORATION
 20555 STATE HIGHWAY 249
 HOUSTON, TEXAS 77070-2698

SERIAL NUMBER: 09608082
 PATENT NUMBER:

FILING DATE: 06/30/2000
 ISSUE DATE:

010911/0742 PAGE 2

KIMBERLY WHITE, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

07-17-2000

1662-22600 (P99-2885)



U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks

101404495

copy thereof.

1. Name of conveying party(ies):

- 1. Michael J. DOUGHERTY
- 2. Kenneth W. STUFFLEBEAM
- 3. Rahul V. LAKDAWALA
- 4. Thomas P. SAWYERS

Additional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies):

Name: Compaq Computer Corporation

Internal Address: _____

Street Address: 20555 State Highway 249

City Houston State TX ZIP 77070-2698

Additional name(s) & address(es) attached? Yes No



3. Nature of Conveyance:

- Assignment
- Merger
- Security Agreement
- Change of Name
- Other _____

Execution Date: 1. June 19, 2000 2. June 28, 2000
3. June 22, 2000 4. June 28, 2000

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of this application is: 1. June 19, 2000 2. June 28, 2000
3. June 22, 2000 4. June 28, 2000

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Jonathan M. Harris
Internal Address: Conley, Rose & Tayon, P.C.
Street Address: P.O. Box 3267
City Houston State TX ZIP 77253-3267

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41):\$ 40.00

- Enclosed
- Authorized to be charged to deposit account

8. Deposit account number: 03-2769
(Attach a duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and Signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Mark E. Scott
Name of Person Signing
Reg. No. 43,100

June 30, 2000
Date

OMB No. 0651-011 (exp.4/94)

Total number of pages comprising cover sheet: 1

ASSIGNMENT

WHEREAS, We, **Michael J. DOUGHERTY, Kenneth W. STUFFLEBEAM, Rahul V. LAKDAWALA and Thomas P. SAWYERS**, are joint inventors of "POWERING A NOTEBOOK ACROSS A USB INTERFACE", application for United States Letters Patent which is executed of even date herewith; and

WHEREAS, COMPAQ COMPUTER CORPORATION, a corporation created and existing under and by virtue of the laws of the State of Delaware, is desirous of acquiring the entire right, title and interest in and to the aforesaid invention throughout the world, and all right, title and interest in, to and under any and all Letters Patent of the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, we hereby sell, assign, transfer and set over to COMPAQ COMPUTER CORPORATION, all right, title and interest in and to the said invention throughout the world, and said application for U.S. Letters Patent, and any and all divisions, continuations, and reissues thereof, and any and all Letters Patent of the United States and foreign countries which may be granted therefor, the same to be held and enjoyed by COMPAQ COMPUTER CORPORATION for its own use and benefit, and for the use and benefit of its successors, assigns, or other legal representatives, to the end of the term or terms for which said Letters Patent of the United States or foreign countries are or may be granted or reissued, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

And we hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States on said invention or resulting from said application and from any and all divisions, continuations, and reissues thereof, to COMPAQ COMPUTER CORPORATION, as assignee of our entire interest, and hereby covenant that we have the full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith.

And we further hereby covenant and agree that we will, at any time, upon request, execute and deliver any and all papers that may be necessary or desirable to perfect the title of said invention and to such Letters Patent as may be granted therefor, to COMPAQ COMPUTER CORPORATION, its successors, assigns, or other legal representatives and that if COMPAQ COMPUTER CORPORATION, its successors, assigns or other legal representatives shall desire to file any divisional or continuation applications or to secure a reissue of such Letters Patent, or to file a disclaimer relating thereto, will upon request, sign all papers, make all rightful oaths and do all lawful acts requisite for the filing of such divisional or continuation application, or such application for reissue and the procuring thereof, and for the filing of such disclaimer, without further compensation but at the expense of said assignee, its successors, or other legal representatives.

ASSIGNMENT (cont'd.)

And we do further covenant and agree that we will, at any time upon request, communicate to COMPAQ COMPUTER CORPORATION, its successors, assigns or other legal representatives, such facts relating to said invention and Letters Patent or the file history thereof as may be known to us, and testify as to the same in any interference or other litigation when requested so to do, without further compensation but at the expense of said assignee, its successors, or other legal representatives.

EXECUTED THIS 19 day of June, 2000.

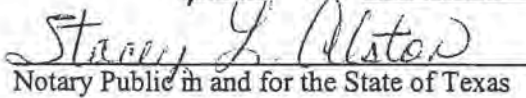

Michael J. DOUGHERTY

STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared **Michael J. DOUGHERTY**, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.



GIVEN UNDER MY HAND and seal of office this 19th day of June, 2000.


Notary Public in and for the State of Texas

EXECUTED THIS 28 day of June, 2000.

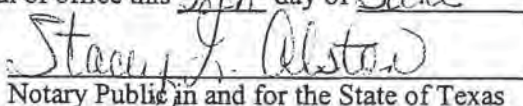

Kenneth W. STUFFLEBEAM

STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared **Kenneth W. STUFFLEBEAM**, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND and seal of office this 28th day of June, 2000.




Notary Public in and for the State of Texas

ASSIGNMENT (cont'd.)

EXECUTED THIS 22 day of June, 2000.

Rahul V. Lakdawala
Rahul V. LAKDAWALA

STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared **Rahul V. LAKDAWALA**, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND and seal of office this 22nd day of June, 2000.



Stacey L. Alston
Notary Public in and for the State of Texas

EXECUTED THIS 28 day of June, 2000.

Thomas P. Sawyers
Thomas P. SAWYERS

STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared **Thomas P. SAWYERS**, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND and seal of office this 28th day of June, 2000.



Stacey L. Alston
Notary Public in and for the State of Texas

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Michael J. DOUGHERTY	§	Anticipated
		§	Group Art Unit: 2833
Serial No.:	Not Yet Assigned	§	
		§	Anticipated
Filed:	Concurrently Herewith	§	Examiner: X.M. Chung Trans
		§	
For:	Powering A Notebook Across A USB Interface	§	Docket No.: 200304427-2
		§	

PRELIMINARY AMENDMENT

Mail Stop Patent Application
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Date: September 30, 2003

Sir:

This Preliminary Amendment is filed concurrently with the filing of a continuation application. In response to the Office Action of May 9, 2003 in the parent case, the Examiner is respectfully requested to enter the following amendment prior to the calculation of fees and the initial examination of the present continuation above-identified patent application under 1.53(b) in which the parent case 09/608,082 survives.

Amendments to the Specification begin on page 3 of this paper

Amendments to Claims are reflected in the listing of claims which begins on page 4 of this paper.

Amendments to the Drawings begin on page 6 of this paper and include both an attached replacement sheet and an annotated sheet showing changes.

Remarks/Arguments begin on page 7 of this paper.

An **Appendix** including amended drawing figures is attached following page 10 of this paper.

Amendments to the Specification

Please replace the paragraph beginning at page 1, line 5, with the following rewritten paragraph:

This application is a continuation of U.S. Application Serial No. 09/608,082, filed June 30, 2000, and entitled "Powering A Notebook Across A USB Interface."~~Not applicable.~~

Please replace the paragraph beginning at page 12, line 3, with the following rewritten paragraph:

The communication and control logic **250**, after positively identifying the laptop as capable of receiving power, informs the voltage ramp logic **210** across the ramp signal line **212-213** to ramp the voltage on the positive USB power rail **244, 144** up to approximately 18 volts. Voltage ramp logic **210** couples to an 18 volt supply **212** which preferably comes from a power supply (not specifically shown).

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A computer system, comprising:
a device; and
a laptop computer coupled to said device by way of a communication bus operated under a communication protocol, the communication bus comprising communication lines and power lines; and
wherein the device determines if the laptop computer is capable of being powered across the power lines of the communication bus by communication with the laptop ~~said laptop computer powered by said device across~~ the power lines of said communication bus.

- 2.-9. (Canceled).

10. (Currently amended) In a computer system comprising a laptop computer adapted to dock to a docking station by way of a ~~communication bus~~USB interface, a method of operating said computer system comprising:
powering said laptop computer from said docking station across said USB interface with a voltage in excess of five volts.

- 11.-19. (Canceled).

20. (Currently amended) A docking station for mating with a laptop computer comprising:
a Universal Serial Bus (USB) interface having data signal lines and power rails that couple to the laptop computer; and
a docking logic that provides power to said laptop over the power rails of the USB interface at a voltage of greater than five volts.

21.-23. (Canceled).

24. (New) A computer system, comprising:
a device having power available therein;
a laptop computer coupled to said device by way of a communication bus operated under a communication protocol that allows for powering of an external device across communication bus power lines by the laptop computer; and
said laptop computer powered by said device across the power lines of said communication bus.

25. (New) The computer system as defined in claim 24 wherein the device further comprises a docking station.

26. (New) The computer system as defined in claim 24 wherein the communication protocol further comprises a Universal Serial Bus (USB) protocol.

27. (New) The computer system of claim 1 wherein the laptop computer is capable of providing power to external devices across the communication bus when the laptop is not coupled to the device.

28. (New) The method of claim 10 further comprising powering the laptop computer from the docking station across the USB interface with substantially 18 volts.

29. (New) The method of claim 10 further comprising shutting off power to the communication bus when a laptop computer is detached from the docking station.

Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 2. This sheet, replaces the original sheet. In Figure 2, reference number 212 was used twice in drawing Figure 2, and this amendment is only to correct that duplication.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

REMARKS/ARGUMENTS

In the Office Action dated May 9, 2003, in the parent case, the Examiner: 1) rejected claims 1, 10, 20, 26-27, and 31 as allegedly anticipated by U.S. Patent Application, US 20010034250 ("*Chadha*"); 2) allowed claims 2-9, 11-12, 15-19, and 21-25; and 3) objected to claims 13-14, and 28-30 for depending upon a rejected base claim.

With this Preliminary Amendment, Applicants have cancelled claims 2-9, 11-19 and 21-23 in favor of those same claims in the parent case. Further, Applicants amend claims 1, 10 and 20, and present new claims 24-29. Applicants respectfully request reconsideration and allowance of the currently pending claims.

I. CLAIM REJECTIONS

A. Claim 1

Claim 1 is directed to a computer system comprising a device and a laptop computer coupled to the device by way of a communication bus, the communication bus comprising communication lines and power lines. The device determines if the laptop computer is capable of being powered across power lines of the communication bus by communication with the laptop across the power lines of the communication bus. The Examiner rejected claim 1 as allegedly anticipated by *Chadha*. Applicants amended claim 1 to more clearly indicate that the device determines if the laptop is capable of being powered by communication across the power lines.

"[F]or anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present." MPEP § 706.02. Claim 1 requires that the device determines if the laptop computer is capable of being powered across the power lines of the communication bus by communication with a laptop across the power lines of the communication bus. *Chadha* does not teach or fairly suggest making the claimed determination or communication across the power lines of the communication bus to make the determination.

Based on the foregoing, Applicants respectfully submit that claim 1, as well as new claim 27 which depends from claim 1, should be allowed.

B. Claim 27

Claim 27 (claim 32 in the parent application) is directed to a computer system having all the limitations of claim 1 and further requiring that the laptop computer is capable of providing power to external devices across the communication bus when the laptop is not coupled to the device.

Applicants respectfully submit that *Chadha* teaches only that power may flow from the *Chadha* docking station 130 to the *Chadha* microcomputer unit 90. Claim 27, by contrast, requires not only that the device determines if the laptop computer is capable of being powered across the power lines of the communication bus, but also that the laptop computer is capable of providing power to external devices across the same communication bus when the laptop is not coupled to the device. *Chadha* fails to teach or fairly suggest these limitation of claim 27.

Claim 27 is allowable for the same reasons as claim 1, as well as for the additional limitation therein.

C. Claim 10

Claim 10 is directed to a method of operating a computer system that comprises powering a laptop computer from a docking station across a USB interface with a voltage in excess of five volts. The Examiner rejected claim 10 as allegedly anticipated by *Chadha*. Applicants amended claim 10 to require that the powering be accomplished with a voltage in excess of five volts to more clearly distinguish over the teachings of *Chadha*.

Claim 10 requires powering the laptop computer from the docking station across a USB interface with a voltage in excess of five volts. In order to power a laptop through a USB interface in this manner, the claimed system breaks the standards USB protocol both in the direction of power flow and the voltage level on the power rails of the USB interface. "Under standard USB protocol, the laptop computer 100 provides power to USB devices downstream of the laptop computer 100." Specification, page 8, lines 19-20. "Under USB protocol, the power conductors 138 carry five volts." Specification, page 8, lines 9-10. *Chadha* does not teach or fairly suggest the departure from the USB protocol delineated in claim 10.

Based on the foregoing, Applicants respectfully submit that claim 10, and all claims which depend from claim 10 (new claims 28 and 29), should be allowed.

D. Claim 20

Claim 20 is directed to a docking station comprising a docking logic that provides power to a laptop computer over power rails of the USB interface at a voltage of greater than five volts. The Examiner rejected claim 20 as allegedly anticipated by *Chadha*. Applicants amended claim 20 to require that the powering be accomplished with a voltage in excess of five volts to more clearly distinguish over the teachings of *Chadha*.

Chadha does not teach or fairly suggest a departure from USB protocol as delineated in claim 20.

Based on the foregoing, Applicants respectfully submit that claim 20 should be allowed.

E. Claim 24

Claim 24 (claim 26 in the parent application) is directed to a computer system comprising a device having power available therein, and a laptop computer coupled to the device by way of a communication bus operated under a communication protocol. The communication protocol allows for powering of an external device across communication bus power lines by the laptop computer. The laptop computer further is powered by the device across power lines of the communication bus. The Examiner rejected claim 26 of the parent application as allegedly anticipated by *Chadha*.

Chadha teaches that the microcomputer computer unit 90 may derive power from the docking station 130 through a connector, which may be a PCMCIA or USB connector. *Chadha* fails to teach powering of an external device by the microcomputer unit 90 across the same connector.

Claim 24, by contrast, specifically requires that the communication bus that powers the laptop when coupled to the device also operates under a communication bus protocol that allows for powering of an external device by the laptop across same communication bus. *Chadha* fails to teach or fairly suggest this limitation of claim 24.

Based on the foregoing, Applicants respectfully submit that claim 24, and all claims which depend from claim 24 (claims 25 and 26), should be allowed.

II. CONCLUSION


Applicants respectfully request reconsideration and allowance of the pending claims. If the Examiner feels that a telephone conference would expedite the resolution of this case, he is respectfully requested to contact the undersigned.

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Hewlett-Packard Company Deposit Account Number 08-2025 and enter any time extension(s) necessary to prevent this case from being abandoned.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



Mark E. Scott
PTO Reg. No. 43,100
CONLEY ROSE, P.C.
(713) 238-8000 (Phone)
(713) 238-8008 (Fax)
ATTORNEY FOR APPLICANTS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
Legal Dept., M/S 35
P.O. Box 272400
Fort Collins, CO 80527-2400

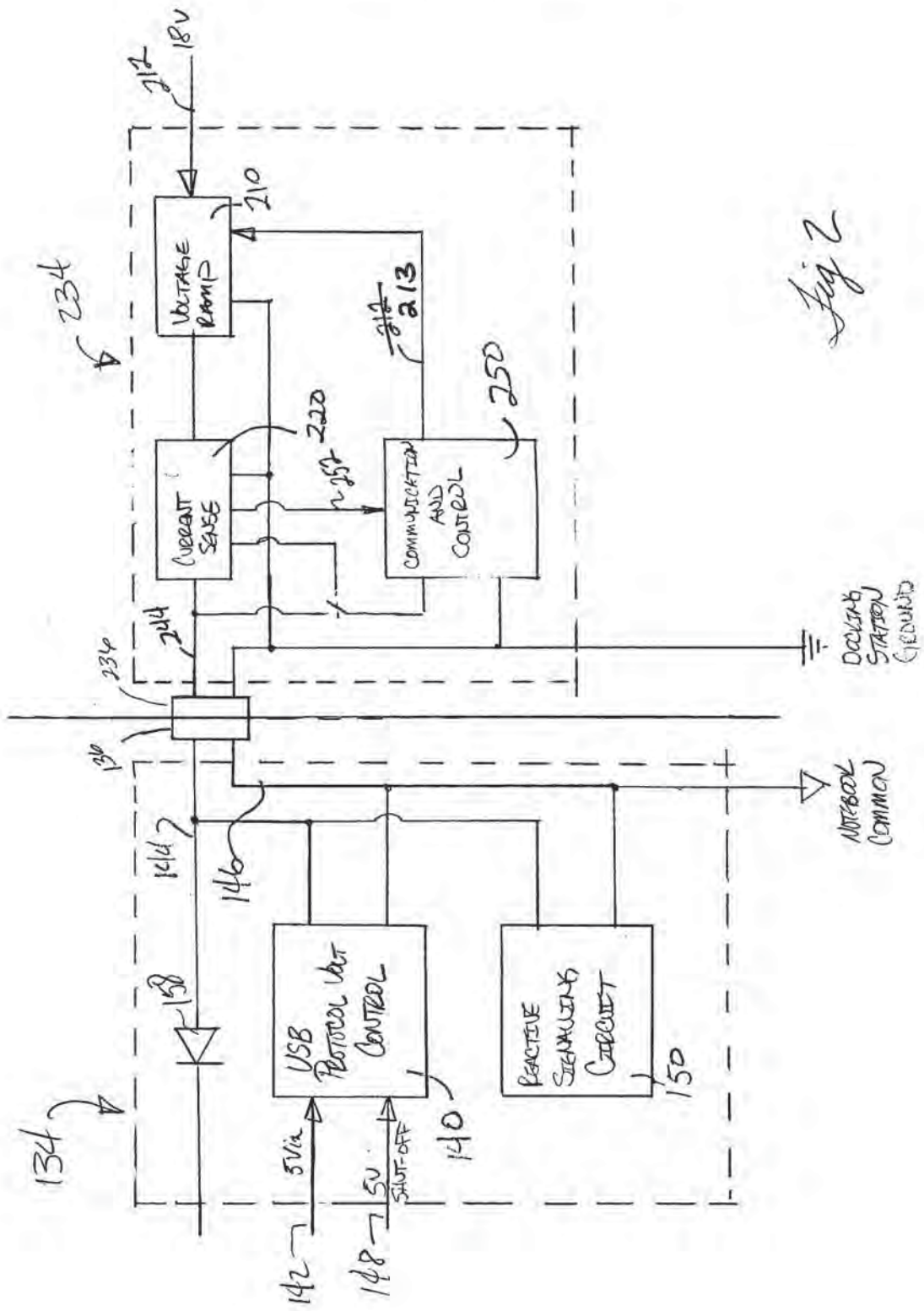


Fig 2

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION
ATTORNEY DOCKET NO. 200304427-2

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael J. DOUGHERTY et al.

Confirmation No.:

Application No.: Not Yet Assigned

Examiner:

Filing Date: Concurrently Herewith

Group Art Unit:

Title: Powering A Notebook Across A USB Interface

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

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- under 37 CFR 1.97(b), or
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- under 37 CFR 1.97(c) together with either a:
 Statement under 37 CFR 1.97(e), or
 a \$180.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- under 37 CFR 1.97 (d) together with a:
 Statement under 37 CFR 1.97(e)(1) or (2), and
 a \$180.00 fee set forth in 37 CFR 1.17(p).
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of - 0 -. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Citation. Pursuant to 37 CFR 1.98(d), copies of certain patents, publications, pending U.S. application(s) or other information, as specified in 37 CFR 1.98(a), listed in the attached Form PTO-1449 are not provided herewith, as they have been previously submitted to, or cited by, the Office in parent application Serial No. 09/608,082.

A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individuals(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. EV303486094US

Date of Deposit 09/30/2003

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

By Colleen F. Brown

Typed Name: Colleen F. Brown

Respectfully submitted,

By 

Mark E. Scott

Attorney/Agent for Applicant(s)
Reg. No. 43,100

Date: 09/30/2003

Rev 05/03 (IDSXML)

Telephone No.: (713) 238-8049

ZTE/SAMSUNG 1013-0208
IPR2018-00110

PATENT APPLICATION

Sheet 1 of 2

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO.	APPLICATION NO.	CONFIRMATION NO.
	200304427-2		
	APPLICANT		
	Michael J. DOUGHERTY et al.		
	FILING DATE	GROUP	
	Herewith		

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
1A	6,362,610	03-2002	Yang	Previously cited in the parent case Serial No. 09/608,082.
1B	6,357,011	03-2002	Gilbert	Previously cited in the parent case Serial No. 09/608,082.
1C	6,308,215	10-2001	Kolbet et al.	Previously cited in the parent case Serial No. 09/608,082.
1D	6,283,789	09-2001	Tsai	Previously cited in the parent case Serial No. 09/608,082.
1E	6,211,649	04-2001	Matsuda	Previously cited in the parent case Serial No. 09/608,082.
1F	6,105,097	08-2000	Larky et al.	Previously cited in the parent case Serial No. 09/608,082.
1G	6,094,700	07-2000	Deschepper et al.	Previously cited in the parent case Serial No. 09/608,082.
1H	6,046,571	04-2000	Bovio et al.	Previously cited in the parent case Serial No. 09/608,082.
1I	6,044,422	03-2000	Tran	Previously cited in the parent case Serial No. 09/608,082.
1J	5,884,049	03-1999	Atkinson	Previously cited in the parent case Serial No. 09/608,082.
1K	5,675,813	10-1997	Holmadahl	Previously cited in the parent case Serial No. 09/608,082.

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
1L					
1M					
1N					
1O					
1P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

1Q	
1R	
1S	

EXAMINER

DATE CONSIDERED

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO.	APPLICATION NO.	CONFIRMATION NO.
	200304427-2		
	APPLICANT		
	Michael J. DOUGHERTY et al.		
	FILING DATE	GROUP	
	H rewith		

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
1A	5,265,238	11-1993	Canova et al.	Previously cited in the parent case Serial No. 09/608,082.
1B	2001/0034250	10-2001	Chadha	Previously cited in the parent case Serial No. 09/608,082.
1C	5,841,424	11-1998	Kikinis	Previously cited in the parent case Serial No. 09/608,082.
1D				
1E				
1F				
1G				
1H				
1I				
1J				
1K				

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
1L					
1M					
1N					
1O					
1P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

1Q	
1R	
1S	

EXAMINER	DATE CONSIDERED
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PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

10/07/2003 BABRAHA1 00000001 082025 10674923

01 FC:1001	750.00 DA
02 FC:1201	84.00 DA

PTO-1556
(5/87)

*U.S. Government Printing Office: 2002 — 489-267/69033

ZTE/SAMSUNG 1013-0211
IPR2018-00110

PATENT APPLICATION FEE DETERMINATION RECORD

Effective January 1, 2003

Application or Docket Number

200364427-2

CLAIMS AS FILED - PART I

(Column 1) (Column 2)

TOTAL CLAIMS	9	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	9 minus 20= *	4
INDEPENDENT CLAIMS	4 minus 3= *	1
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

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

SMALL ENTITY TYPE

OR OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	375.00
X\$ 9=	
X42=	
+140=	
TOTAL	

RATE	FEE
BASIC FEE	750.00
X\$18=	
X84=	84
+280=	
TOTAL	834

CLAIMS AS AMENDED - PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X84=	
+280=	
TOTAL ADDIT. FEE	

(Column 1) (Column 2) (Column 3)

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

RATE	ADDITIONAL FEE
X\$ 9=	
X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X84=	
+280=	
TOTAL ADDIT. FEE	

(Column 1) (Column 2) (Column 3)

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

RATE	ADDITIONAL FEE
X\$ 9=	
X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X84=	
+280=	
TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

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