UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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| APPLICATION NO. | ISSUE DATE | PATENT NO. | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 13/126,601 | 06/21/2016 | 9372098 | 11-575-WO-US | 4470 |

20306 7590 06/01/2016

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

# 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 411 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

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

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

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

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

Bryan Jerrel Busropan, Leidschendam, NETHERLANDS;
Johannes Maria van Loon, Zoetermeer, NETHERLANDS;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

## 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)

20306 7590 02/25/2016
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

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

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

| |
|---|
| (Depositor's name) |
| (Signature) |
| (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

TITLE OF INVENTION: Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | UNDISCOUNTED | $960 | $0 | $0 | $960 | 05/25/2016 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| JAIN, ANKUR | 2649 | 455-507000 |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

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

1 McDonnell Boehnen Hulbert
2 & Berghoff LLP
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) |
|---|---|
| Koninklijke KPN N.V. | The Hague, Netherlands |
| Nederlandse Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek TNO | Delft, Netherlands |

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

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

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 13-2490 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
  NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
  NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ☐ Applicant changing to regular undiscounted fee status.
  NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /David A. Grabelsky/ Date May 18, 2016
Typed or printed name David A. Grabelsky Registration No. 59,208



PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 13126601 |
| **Filing Date:** | 03-Jun-2011 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Filer:** | David A. Grabelsky/Holly Mueller |
| **Attorney Docket Number:** | 11-575-WO-US |

Filed as Large Entity

**Filing Fees for U.S. National Stage under 35 USC 371**

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| Utility Appl Issue Fee | 1501 | 1 | 960 | 960 |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Extension-of-Time:** | | | | |
| **Miscellaneous:** | | | | |
| | | | **Total in USD ($)** | **960** |

# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 25814072 |
| **Application Number:** | 13126601 |
| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
| **Filer:** | David A. Grabelsky |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 11-575-WO-US |
| **Receipt Date:** | 18-MAY-2016 |
| **Filing Date:** | 03-JUN-2011 |
| **Time Stamp:** | 15:09:15 |
| **Application Type:** | U.S. National Stage under 35 USC 371 |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | Deposit Account |
| Payment was successfully received in RAM | $960 |
| RAM confirmation Number | 1530 |
| Deposit Account | 132490 |
| Authorized User | GRABELSKY, DAVID ANDREW |

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

Charge any Additional Fees required under 37 CFR 1.492 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 CFR 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 CFR 1.19 (Document supply fees)

Charge any Additional Fees required under 37 CFR 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 CFR 1.21 (Miscellaneous fees and charges)

Charge any Additional Fees required under 37 CFR 1.492(a) (basic national fee only)

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Issue Fee Payment (PTO-85B) | 11_575_WO_US_issuefee.pdf | 89888<br>b9551eb1bc76cffc2a6cf0c97c8cf3f42b5ddd55 | no | 1 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Fee Worksheet (SB06) | fee-info.pdf | 31043<br>b9eee332e5c402812ad7f41d640177a02f61111f | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 120931 | | |

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

**New Applications Under 35 U.S.C. 111**

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

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

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

**New International Application Filed with the USPTO as a Receiving Office**

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

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# NOTICE OF ALLOWANCE AND FEE(S) DUE

20306 7590 02/25/2016

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

| EXAMINER | |
|---|---|
| JAIN, ANKUR | |
| ART UNIT | PAPER NUMBER |
| 2649 | |

DATE MAILED: 02/25/2016

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

TITLE OF INVENTION: Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | UNDISCOUNTED | $960 | $0 | $0 | $960 | 05/25/2016 |

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

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

**HOW TO REPLY TO THIS NOTICE:**

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

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

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



ERICSSON EXHIBIT 1002, Page 7

## PART B - FEE(S) TRANSMITTAL

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**or Fax (571)-273-2885**

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

20306 7590 02/25/2016
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

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

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

| |
|---|
| (Depositor's name) |
| (Signature) |
| (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

TITLE OF INVENTION: Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | UNDISCOUNTED | $960 | $0 | $0 | $960 | 05/25/2016 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| JAIN, ANKUR | 2649 | 455-507000 |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
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 submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

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

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

20306 7590 02/25/2016

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

| EXAMINER | |
|---|---|
| JAIN, ANKUR | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2649 | |

DATE MAILED: 02/25/2016

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

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B 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.

## Privacy Act Statement

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

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

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

| Notice of Allowability | Application No. 13/126,601 | Applicant(s) BUSROPAN ET AL. | |
|---|---|---|---|
| | Examiner ANKUR JAIN | Art Unit 2649 | AIA (First Inventor to File) Status No |

***-- 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 *5/29/15*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1, 3-9, 12, 16-18, 20-22, and 24-33*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   **Certified copies:**

   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**.

5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
   ☐ 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. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☒ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/ANKUR JAIN/
Primary Examiner, Art Unit 2649

## EXAMINER'S AMENDMENT

### *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/29/2015 has been entered.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with **Attorney David Grabelsky**
.

The application has been amended as follows:

1. (Currently amended) A method of transferring data from a communication module to a machine-to-machine server over a telecommunications network, the method comprising:

receiving a wireless signalling message from said communication module at a sigalling termination node of the telecommunications network, said received wireless signalling message having inserted in it non-signalling application data generated for a machine-to-machine function by the communication module, wherein wireless signalling messages of the telecommunications network are ~~configured~~ of a message type specified for carrying signalling data for managing connections in the telecommunications network;

retrieving said non-signalling application data from the received wireless signalling message; and

terminating further transmission of the received wireless signalling message and transferring said retrieved non-signalling application data to said machine-to-machine server.

3. (Currently amended) The method according to ~~claim 2~~ claim 1, wherein the wireless signalling message is a network attach request message.

16. (Currently amended) A telecommunications network ~~being configured~~ for transferring data from a communication ~~module~~ apparatus to a machine-to-machine server, said telecommunications network ~~configured for performing a set of steps~~ comprising:

a signalling termination node; and

one or more processors for carrying out operations including:

receiving a wireless signalling message from said communication ~~module~~ apparatus at [[a]] the sigalling termination node ~~of the telecommunications network~~, said received wireless signalling message having inserted in it non-signalling application data generated for a machine-

to-machine function by the communication ~~module~~ apparatus, wherein wireless signalling messages of the telecommunications network are ~~configured~~ of a message type specified for carrying signalling data for managing connections in the telecommunications network;

retrieving said non-signalling application data from the received wireless signalling message; and

terminating further transmission of the received wireless signalling message and transferring said retrieved non-signalling application data to said machine-to-machine server.

17. (Currently amended) A node in a telecommunications network, said telecommunications network being configured for transferring data from a communication ~~module~~ apparatus to a machine-to-machine server, said node being ~~configured for performing a set of steps~~ comprising:

one or more processors for carrying out operations including:

receiving a wireless signalling message from said communication ~~module~~ apparatus, said received wireless signalling message having inserted in it non-signalling application data generated for a machine-to-machine function by the communication ~~module~~ apparatus, wherein wireless signalling messages of the telecommunications network are ~~configured~~ of a message type specified for carrying signalling data for managing connections in the telecommunications network;

retrieving said non-signalling application data from the received wireless signalling message; and

terminating further transmission of the received wireless signalling message and transferring said retrieved non-signalling application data to said machine-to-machine server.

18. (Currently amended) A communication ~~module~~ device comprising: ~~a processor and a transmitter, wherein the communication module is configured for~~

a transmitter; and

a processor for causing the communication device to carry out operations including:

(i) generating~~, via the processor,~~ non-signalling application data for a machine-to-machine function, (ii) encapsulating said non-signalling application data in one or more signalling messages from said communication ~~module~~ device over a telecommunications network to a machine-to-machine server, wherein wireless signalling messages of the telecommunications network are ~~configured~~ of a message type specified for carrying signalling data for managing connections in the telecommunications network, and (iii) transmitting, via the transmitter, said signalling messages containing said non-signalling application data to a sigalling termination node of said telecommunications network for termination of said signalling messages and transfer of said non-signalling application data to the machine-to-machine server.

24. (Currently amended) A communication ~~module~~ device according to claim 18, wherein the non-signalling application data comprises alarming data.

27. (Currently amended) The communication ~~module~~ device according to claim 18, wherein the non-signalling application data comprises measurement data.

28. (Currently amended) The communication ~~module~~ device according to claim 27, further comprising one or more sensors, wherein the measurement data comprises measurement data obtained using the one or more sensors.

31. (Currently amended) The telecommunications network of claim 16, wherein said telecommunications network is configured for transferring non-signalling data from the communication ~~module~~ apparatus to the machine-to-machine server in a machine-to-machine communications setting; and

wherein transferring said non-signalling application data to said machine-to-machine server comprises transferring said non-signalling application data to said machine-to-machine server while avoiding to establish a complete circuit-switched or packet-switched connection between said communication ~~module~~ apparatus and said telecommunications network.

32. (Currently amended) The node of claim 17, wherein the telecommunications network is configured for transferring non-signalling application data from the communication ~~module~~ apparatus to the machine-to-machine server in a machine-to-machine communications setting; and

wherein transferring said non-signalling application data to said machine-to-machine server comprises transferring said non-signalling application data to said machine-to-machine server, while avoiding to establish a complete circuit-switched or packet-switched connection between said communication ~~module~~ apparatus and said telecommunications network.

33. (Currently amended) The communication ~~module~~ device of claim 18,

wherein the processor is configured for generating non-signalling application data in a machine-to-machine communications setting run by the communication ~~module~~ device; and

wherein the transmitter is configured for transmitting said signalling messages containing said non-signalling application data to said telecommunications network, while avoiding to establish a complete circuit-switched or packet-switched connection between said communication ~~module~~ device and said telecommunications network.

## *Allowable Subject Matter*

Claims 1, 3-9, 12, 16-18, 20-22, and 24-33 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art does NOT teach:

A telecommunications network ~~being configured~~ for transferring data from a communication ~~module~~ apparatus to a machine-to-machine server, said telecommunications network ~~configured for performing a set of steps~~ comprising:

a signalling termination node; and

one or more processors for carrying out operations including:

receiving a wireless signalling message from said communication ~~module~~ apparatus at [[a]] the sigalling termination node ~~of the telecommunications network~~, said received wireless signalling message having inserted in it non-signalling application data generated for a machine-

to-machine function by the communication ~~module~~ apparatus, wherein wireless signalling messages of the telecommunications network are ~~configured~~ of a message type specified for carrying signalling data for managing connections in the telecommunications network;

retrieving said non-signalling application data from the received wireless signalling message; and

terminating further transmission of the received wireless signalling message and transferring said retrieved non-signalling application data to said machine-to-machine server.

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."

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANKUR JAIN whose telephone number is (571)272-9747. The examiner can normally be reached on M-F, 9:00 am to 4:00 pm, EST.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANKUR JAIN/

Primary Examiner, Art Unit 2649

**EAST Search History**

**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 1 | 13/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/19 16:47 |
| L2 | 17 | (Busropan near3 Bryan)".INV. " | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/19 16:48 |
| L3 | 63 | (van near4 Loon near4 Johannes)".INV. " | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/19 16:48 |
| L4 | 66 | 2 or 3 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/19 16:48 |
| L5 | 0 | L4 AND (server SAME signal$6).CLM. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/19 16:52 |
| L6 | 13 | L4 AND (server).CLM. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/19 16:52 |
| S1 | 0 | 12/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |
| S2 | 1 | 13/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |
| S3 | 1 | 13/126601.APP. AND IMSI | US-PGPUB; | OR | ON | 2013/06/05 16:33 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | USPAT; EPO; JPO; IBM_TDB | | | |
| S4 | 843 | (IMSI ADJ attach$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:35 |
| S5 | 561 | (IMSI ADJ attach$6) AND "455".CLAS. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:36 |
| S6 | 102 | (M2M ADJ server$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:51 |
| S7 | 1 | 13/126601.APP. AND RAN | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 17:19 |
| S8 | 655 | (IMSI ADJ attach$4) AND (MSC or SGSN) AND HLR | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:56 |
| S9 | 457 | S8 AND "455".CLAS. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:57 |
| S10 | 7 | S9 AND (M2M) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:57 |
| S11 | 411 | S9 AND ((packet$4 or circuit$4) near5 switch$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:59 |
| S12 | 15 | (IMSI ADJ attach$4 ADJ request$4) AND (MSC or SGSN) AND HLR | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:02 |
| S13 | 23 | (IMSI ADJ attach$4 ADJ request$4) | US-PGPUB; | OR | ON | 2013/06/06 12:02 |

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|---|---|---|---|---|---|---|
| | | | USPAT; EPO; JPO; IBM_TDB | | | |
| S14 | 13 | S13 AND (type$2 near3 attach$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:37 |
| S15 | 2 | "20050215253" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:33 |
| S16 | 1 | "20070232306" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:34 |
| S17 | 1 | "2008096553" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:35 |
| S18 | 5 | "20080096553" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:35 |
| S19 | 1 | 13/126601.APP. And (encapsulat$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 15:05 |
| S20 | 1 | 13/126601.APP. AND (program WITH application$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:31 |
| S21 | 0 | (transmi$7 or report$4 or output$6 or send$4 or sent$4 or emit$5 or generat$6 or creat$6 or communicat$3 or forward$3 or retransmi$7 or transfer$4) near8 ((alarm$4 or measur$6) near5 data$2) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:43 |
| S22 | 0 | (transmi$7 or report$4 or output$6 or send$4 or sent$4 or emit$5 or generat$6 or creat$6 or communicat$3 or forward$3 or retransmi$7 or transfer$4) near8 (alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:44 |

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|---|---|---|---|---|---|---|
| S23 | 0 | (alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:45 |
| S24 | 0 | ((alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6)) WITH (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:48 |
| S25 | 95 | ((alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6)) AND (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:48 |
| S26 | 1 | S25 AND (MSC or SGSN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:50 |
| S27 | 21 | (MSC or SGSN) near6 (extract$7) near6 (alarm$4 or measur$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:01 |
| S28 | 190 | (MSC or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:09 |
| S29 | 197 | (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:09 |
| S30 | 126 | S29 AND ("455".CLAS. or "370".CLAS.) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:10 |
| S31 | 241 | (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (retriev$4 ) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:09 |
| S32 | 196 | S31 AND ("455".CLAS. or "370".CLAS.) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:10 |

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|---|---|---|---|---|---|---|
| S33 | 3 | S31 SAME PLMN SAME request$4 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:11 |
| S34 | 15 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2013/06/07 11:14 |
| S35 | 1 | S34 AND (((MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2))) SAME PLMN SAME request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:16 |
| S36 | 1 | 08/633862.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:19 |
| S37 | 9 | S34 AND (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:19 |
| S38 | 6 | S37 AND (PLMN AND request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:21 |
| S39 | 1 | S34 AND ((MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) AND PLMN AND IMSI AND GPRS AND (attach$4 near4 request$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:28 |
| S40 | 1 | 13/126601.APP. AND (address$6 WITH process$5) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 19:01 |
| S41 | 15 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2013/06/08 11:50 |
| S42 | 1 | S41 AND XML | US-PGPUB; USPAT; | OR | ON | 2013/06/08 11:50 |

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|---|---|---|---|---|---|---|
| | | | EPO; JPO; IBM_TDB | | | |
| S43 | 0 | (XML ADJ messag$5) SAME (MSC or SGSN) SAME (PLMN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:00 |
| S44 | 12 | (XML ADJ messag$5) AND (MSC or SGSN) AND (PLMN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:00 |
| S45 | 1 | (XML ADJ messag$5) AND 13/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:01 |
| S46 | 6 | S44 AND (attach$4 near3 messag$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:08 |
| S47 | 1 | 13/126601.APP. AND (monitor$4 WITH signal$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 14:57 |
| S48 | 2 | "20060262742" AND (monitor$5 WITH (signal$6 or messag$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 15:06 |
| S49 | 1 | 13/126601.APP. AND (deriv$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 15:38 |
| S50 | 1 | 13/126601.APP. AND (encapsulation WITH modul$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/09 12:13 |
| S51 | 1 | 13/126601.APP. AND node$2 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 14:54 |
| S52 | 1 | 13/126601.APP. AND alarm$5 | US-PGPUB; USPAT; | OR | ON | 2013/11/27 15:05 |

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|---|---|---|---|---|---|---|
| | | | EPO; JPO; IBM_TDB | | | |
| S53 | 16 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$ or US-20100203898-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2013/11/27 15:07 |
| S54 | 0 | 13/126601.APP. AND (sensor$4 WITH measur$5) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:07 |
| S55 | 0 | 13/126601.APP. AND (sensor$4 WITH measur$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:07 |
| S56 | 1 | 13/126601.APP. AND (sensor$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:07 |
| S57 | 1 | S53 AND alarm$5 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:17 |
| S58 | 0 | ((attach ADJ request$4) near6 (measurement$2) near6 (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:55 |
| S59 | 0 | ((attach ADJ request$4) WITH (measur$6) WITH (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:55 |
| S60 | 0 | ((attach ADJ request$4) SAME (measur$6) SAME (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:55 |
| S61 | 48 | ((attach ADJ request$4) WITH (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:56 |
| | | | | | | |

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|---|---|---|---|---|---|---|
| S62 | 11 | ((attach ADJ request$4) WITH (measurement$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 16:10 |
| S63 | 4 | ((sensor$4) WITH (measurement ADJ data)) AND ((attach ADJ request$4) or SGSN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 16:44 |
| S64 | 6 | 2004/0192251 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:17 |
| S65 | 2 | "20040192251" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:17 |
| S66 | 1 | "20040147266" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:17 |
| S67 | 1 | "20100322162" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:18 |
| S68 | 1 | 13/126601.APP. AND (sensor$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/05 17:09 |
| S69 | 1 | 13/126601.APP. AND avoid$4 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/05 17:26 |
| S70 | 1 | 13/126601.APP. AND (circuit$4 WITH packet$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/05 17:28 |
| S71 | 124 | (Islam).INV. and (RAT) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/05 17:31 |

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|---|---|---|---|---|---|---|
| S72 | 66 | (Islam).INV. and (RAT) AND switch$4 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/05 17:31 |
| S73 | 1 | 13/126601.APP. AND (encapsulat$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 14:50 |
| S74 | 1 | 13/126601.APP. AND (encapsulat$6 WITH module$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 14:52 |
| S75 | 1 | 13/126601.APP. AND (machine WITH communication$2 WITH data$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 15:03 |
| S76 | 19 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$ or US-20100203898-$ or US-20040192251-$ or US-20040147266-$ or US-20100322162-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2014/03/20 15:05 |
| S77 | 11 | S76 AND ((circuit$4 or packet$4) WITH switch$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 15:05 |
| S78 | 10 | S76 AND ((circuit$4 or packet$4) near5 switch$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 15:06 |
| S79 | 1 | 13/126601.APP. AND (machine$2 near3 machine$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 15:17 |
| S80 | 2 | "20080220772" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 15:18 |
| S81 | 20 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253- | US-PGPUB; | OR | ON | 2014/03/20 17:07 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | $ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$ or US-20100203898-$ or US-20040192251-$ or US-20040147266-$ or US-20100322162-$ or US-20080220772-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | USPAT | | | |
| S82 | 11 | S81 AND ((circuit$4 or packet$4) near5 switch$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 17:07 |
| S83 | 6 | S81 AND ((circuit$4 or packet$4) near5 switch$4) AND GSM AND CDMA | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 17:08 |
| S84 | 1 | "20100322162" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 17:18 |
| S85 | 1 | 13/126601.APP. AND (sensor$4 WITH data$2 WITH communication$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 17:23 |
| S86 | 1 | 13/126601.APP. AND (communication ADJ module$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/12/12 14:48 |
| S87 | 1 | 13/126601.APP. AND (machine near4 machine$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/12/12 15:08 |
| S88 | 1 | 13/126601.APP. AND ((machine near4 machine$2) or M2M) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/12/12 15:11 |
| S89 | 1 | 13/126601.APP. AND ((machine near4 machine$2) or (M2M ADJ server$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/12/12 15:11 |
| S90 | 1 | "20070232306" | US-PGPUB; USPAT; EPO; | OR | ON | 2014/12/12 15:25 |

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|---|---|---|---|---|---|---|
| | | | JPO; IBM_TDB | | | |
| S91 | 0 | "20070232306" AND (operator WITH process$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/12/12 15:26 |
| S92 | 0 | "20070232306" AND (operator$2 WITH process$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/12/12 15:26 |
| S93 | 1 | "20070232306" AND (operator$2 SAME process$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/12/12 15:26 |
| S94 | 1 | "20070232306" AND (operator$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/12/12 15:26 |
| S95 | 1 | 13/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/16 16:34 |
| S96 | 0 | 13/126601.APP. AND (insert$4 WITH (non near4 signal$6)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/16 16:35 |
| S97 | 0 | 13/126601.APP. AND ((non near4 signal$6)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/16 16:38 |
| S98 | 1 | 13/126601.APP. AND ((signal$6)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/16 16:38 |
| S99 | 1 | 14/148751.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/16 18:13 |
| S100 | 1 | 14/744808.APP. | US-PGPUB; USPAT; EPO; | OR | ON | 2016/02/17 12:17 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | JPO; IBM_TDB | | | |
| S101 | 1 | "8965313".pn. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/17 12:19 |
| S102 | 1 | "7343141".pn. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/17 12:21 |
| S103 | 1 | "7171174".pn. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/17 12:22 |
| S104 | 1 | 14/599018.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2016/02/17 12:26 |

**2/19/2016 5:39:54 PM**
**C:\Users\ajain1\Documents\EAST\Workspaces\13126601.wsp**

| Issue Classification | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 13126601 | BUSROPAN ET AL. |
| | **Examiner** | **Art Unit** |
| | ANKUR JAIN | 2649 |

| CPC | | | | | | |
|---|---|---|---|---|---|---|
| **Symbol** | | | | | **Type** | **Version** |
| G01D | | 4 | / | 002 | F | 2013-01-01 |
| H04W | | 4 | / | 005 | I | 2013-01-01 |
| H04W | | 4 | / | 14 | A | 2013-01-01 |
| H04W | | 4 | / | 20 | I | 2013-01-01 |
| Y02B | | 90 | / | 241 | A | 2013-01-01 |
| Y02B | | 90 | / | 246 | A | 2013-01-01 |
| Y04S | | 20 | / | 32 | A | 2013-01-01 |
| Y04S | | 20 | / | 42 | A | 2013-01-01 |
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| CPC Combination Sets | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Symbol** | | | | | **Type** | **Set** | **Ranking** | **Version** |
| | | | / | | | | | |
| | | | / | | | | | |

| NONE | | **Total Claims Allowed:** | |
|---|---|---|---|
| (Assistant Examiner) | (Date) | 25 | |
| /ANKUR JAIN/<br>Primary Examiner.Art Unit 2649 | 2/19/16 | O.G. Print Claim(s) | O.G. Print Figure |
| (Primary Examiner) | (Date) | 15 | FIG. 1 |

| Issue Classification | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 13126601 | BUSROPAN ET AL. |
| | **Examiner** | **Art Unit** |
| | ANKUR JAIN | 2649 |

| US ORIGINAL CLASSIFICATION | | INTERNATIONAL CLASSIFICATION | |
|---|---|---|---|
| CLASS | SUBCLASS | CLAIMED | NON-CLAIMED |
| 455 | 507 | H 0 4 B 7 / 00 (2006.01.01) | |
| | | H 0 4 B 15 / 00 (2006.01.01) | |

| CROSS REFERENCE(S) | | | | | |
|---|---|---|---|---|---|
| CLASS | SUBCLASS (ONE SUBCLASS PER BLOCK) | | | | |
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| NONE | | Total Claims Allowed: | |
|---|---|---|---|
| (Assistant Examiner) | (Date) | 25 | |
| /ANKUR JAIN/<br>Primary Examiner.Art Unit 2649 | 2/19/16 | O.G. Print Claim(s) | O.G. Print Figure |
| (Primary Examiner) | (Date) | 15 | FIG. 1 |

| Issue Classification | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 13126601 | BUSROPAN ET AL. |
| | **Examiner** | **Art Unit** |
| | ANKUR JAIN | 2649 |

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

| Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 17 | 17 | 25 | 33 | | | | | | | | | | |
| | 2 | 21 | 18 | | | | | | | | | | | | |
| 2 | 3 | | 19 | | | | | | | | | | | | |
| 3 | 4 | 18 | 20 | | | | | | | | | | | | |
| 4 | 5 | 19 | 21 | | | | | | | | | | | | |
| 5 | 6 | 10 | 22 | | | | | | | | | | | | |
| 6 | 7 | | 23 | | | | | | | | | | | | |
| 7 | 8 | 22 | 24 | | | | | | | | | | | | |
| 8 | 9 | 11 | 25 | | | | | | | | | | | | |
| | 10 | 12 | 26 | | | | | | | | | | | | |
| | 11 | 23 | 27 | | | | | | | | | | | | |
| 9 | 12 | 24 | 28 | | | | | | | | | | | | |
| | 13 | 13 | 29 | | | | | | | | | | | | |
| | 14 | 14 | 30 | | | | | | | | | | | | |
| | 15 | 16 | 31 | | | | | | | | | | | | |
| 15 | 16 | 20 | 32 | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| NONE<br><br>(Assistant Examiner) | (Date) | **Total Claims Allowed:**<br>25 | |
| /ANKUR JAIN/<br>Primary Examiner.Art Unit 2649<br><br>(Primary Examiner) | 2/19/16<br><br>(Date) | O.G. Print Claim(s)<br>15 | O.G. Print Figure<br>FIG. 1 |

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 13126601 | BUSROPAN ET AL. |
| | Examiner | Art Unit |
| | ANKUR JAIN | 2649 |

| CPC- SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| | | |

| CPC COMBINATION SETS - SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| | | |

| US CLASSIFICATION SEARCHED | | | |
|---|---|---|---|
| Class | Subclass | Date | Examiner |
| 455 | 507 | 6/9/2013 | AJ |

| SEARCH NOTES | | |
|---|---|---|
| Search Notes | Date | Examiner |
| EAST Search Attached. Consulted TQAS Daniel Swerdlow regarding 112 6th Paragraph and 101 issues. | 6/9/2013 | AJ |

| INTERFERENCE SEARCH | | | |
|---|---|---|---|
| US Class/ CPC Symbol | US Subclass / CPC Group | Date | Examiner |
| 455 | 507 | 2/19/2016 | AJ |

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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# REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
## (Submitted Only via EFS-Web)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Application Number | 13126601 | Filing Date | 2011-06-03 | Docket Number (if applicable) | 11-575-WO-US | Art Unit | 2649 |
| First Named Inventor | Bryan Jerrel Busropan | | | Examiner Name | Ankur Jain | | |

**This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.**
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

### SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☐ Enclosed

- ☐ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

### MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

### FEES

**The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 132490

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature
☐ Applicant Signature

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| Signature of Registered U.S. Patent Practitioner | | | |
|---|---|---|---|
| Signature | /David A. Grabelsky/ | Date (YYYY-MM-DD) | 2015-05-29 |
| Name | David A. Grabelsky | Registration Number | 59208 |

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

# Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 13126601 |
| **Filing Date:** | 03-Jun-2011 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Filer:** | David A. Grabelsky |
| **Attorney Docket Number:** | 11-575-WO-US |

Filed as Large Entity

**Filing Fees for U.S. National Stage under 35 USC 371**

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

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Miscellaneous:** | | | | |
| RCE- 2nd and Subsequent Request | 1820 | 1 | 1700 | 1700 |
| | | **Total in USD ($)** | | **1700** |

# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 22484061 |
| **Application Number:** | 13126601 |
| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
| **Filer:** | David A. Grabelsky |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 11-575-WO-US |
| **Receipt Date:** | 29-MAY-2015 |
| **Filing Date:** | 03-JUN-2011 |
| **Time Stamp:** | 14:32:04 |
| **Application Type:** | U.S. National Stage under 35 USC 371 |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | Deposit Account |
| Payment was successfully received in RAM | $1700 |
| RAM confirmation Number | 789 |
| Deposit Account | 132490 |
| Authorized User | GRABELSKY, DAVID ANDREW |

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

Charge any Additional Fees required under 37 C.F.R. 1.492 (National application filing, search, and examination fees)

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

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

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

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

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Transmittal Letter | 11-575-WO-US_Request_for_Continued_Examination_Transmittal_15Dec14_FOA.pdf | 104207<br>564bfd43c1d1380a9ba845520d23604afacd3538 | no | 1 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Request for Continued Examination (RCE) | 11-575-WO-US_Request_for_Continued_Examination_15Dec14_FOA.pdf | 697785<br>0f29747000559940a6d998db6313db15364643e0 | no | 3 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 3 | Fee Worksheet (SB06) | fee-info.pdf | 30918<br>3bbcfc1b8805a20b37d374816a46cbe9d854cbc4 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 832910 | | |

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

**New Applications Under 35 U.S.C. 111**

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

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

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

**New International Application Filed with the USPTO as a Receiving Office**

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

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**(Case No. 11-575-WO-US)**

| | | |
|---|---|---|
| **In re Application of:** | ) | |
| | ) | |
| **Bryan Jerrel Busropan, et al.** | ) | |
| | ) | **Examiner: Ankur Jain** |
| **Serial No.: 13/126,601** | ) | |
| | ) | **Art Unit: 2649** |
| **Filed: June 3, 2011** | ) | |
| | ) | **Confirmation No.: 4470** |
| **For: Telecommunications Network and Method of Transferring User Data in Signaling Messages from a Communication Unit to a Data Processing Centre** | ) | |

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**SUBMISSION PURSUANT TO 37 C.F.R. § 1.114**

In response to the Final Office Action mailed December 15, 2014 and the Advisory Action mailed May 26, 2015, Applicants submit a request for continued examination under 37 C.F.R. § 1.114, along with requisite fees. Please consider the amendments and remarks in Applicants' After Final Response filed May 21, 2015.

Please note that a Petition for Extension of Time under 37 C.F.R. § 1.136(a) for thee months was filed on May 21, 2015, along with requisite fees. The Commissioner is hereby authorized to charge Deposit Account No. 132490 for any additional fee due or to refund any overpayment.

Respectfully submitted,

**McDONNELL BOEHNEN HULBERT & BERGHOFF LLP**

Date: May 29, 2015

By: /David A. Grabelsky/
David A. Grabelsky
Reg. No. 59,208



McDONNELL BOEHNEN
HULBERT & BERGHOFF LLP
300 SOUTH WACKER DRIVE
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PTO/SB/06 (09-11)
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| PATENT APPLICATION FEE DETERMINATION RECORD<br>Substitute for Form PTO-875 | Application or Docket Number<br>13/126,601 | Filing Date<br>06/03/2011 | ☒ To be Mailed |
|---|---|---|---|

**ENTITY**: ☒ LARGE ☐ SMALL ☐ MICRO

## APPLICATION AS FILED – PART I

| | (Column 1) | (Column 2) | | |
|---|---|---|---|---|
| FOR | NUMBER FILED | NUMBER EXTRA | RATE ($) | FEE ($) |
| ☐ BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | |
| ☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | |
| ☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | |
| TOTAL CLAIMS (37 CFR 1.16(i)) | minus 20 = | * | X $ = | |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | minus 3 = | * | X $ = | |
| ☐ APPLICATION SIZE FEE (37 CFR 1.16(s)) | If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | |
| ☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) | | | | |
| * If the difference in column 1 is less than zero, enter "0" in column 2. | | | TOTAL | |

## APPLICATION AS AMENDED – PART II

| | | (Column 1) | | (Column 2) | (Column 3) | | |
|---|---|---|---|---|---|---|---|
| | **05/29/2015** | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
| AMENDMENT | Total (37 CFR 1.16(i)) | * 25 | Minus | ** 25 | = 0 | X $80 = | 0 |
| | Independent (37 CFR 1.16(h)) | * 4 | Minus | ***4 | = 0 | X $420 = | 0 |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | |
| | | | | | | TOTAL ADD'L FEE | **0** |

| | | (Column 1) | | (Column 2) | (Column 3) | | |
|---|---|---|---|---|---|---|---|
| | | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
| AMENDMENT | Total (37 CFR 1.16(i)) | * | Minus | ** | = | X $ = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | X $ = | |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | |
| | | | | | | TOTAL ADD'L FEE | |

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

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

LIE
/Katrina Harling/

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

20306 7590 05/26/2015

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

| EXAMINER | |
|---|---|
| JAIN, ANKUR | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2649 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 05/26/2015 | PAPER |

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

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

| **Advisory Action Before the Filing of an Appeal Brief** | **Application No.** 13/126,601 | **Applicant(s)** BUSROPAN ET AL. | |
|---|---|---|---|
| | **Examiner** ANKUR JAIN | **Art Unit** 2649 | **AIA (First Inventor to File) Status** No |

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

THE REPLY FILED 21 May 2015 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires *3* months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires months from the mailing date of *the prior Advisory Action* or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.
   *Examiner Note*: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   b) ☐ They raise the issue of new matter (see NOTE below);
   c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: *See Continuation Sheet*. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): (a) ☒ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
13. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
14. ☒ Other: AFCP 2.0 Form attached.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:
    Claim(s) allowed: .
    Claim(s) objected to: .
    Claim(s) rejected: 1,3-9,12,16-18,20-22 and 24-33.
    Claim(s) withdrawn from consideration: .

/ANKUR JAIN/
Primary Examiner, Art Unit 2649

Continuation of 3. NOTE: The Examiner would like to note that the claim amendments present limitations which would require more than 3 hours to search according to the Examiner's experience with signaling in machine-to-machine networks. Tthe Examiner does agree that these limitations move prosecution forward. Applicant's request for entry into AFCP 2.0 is acknowledged, but is denied because the response cannot be reviewed and a search conducted in the limited amount of time authorized for this pilot program. Therefore, the response is being reviewed under pre-pilot practice.

| AFCP 2.0 Decision | Application No. | Applicant(s) |
|---|---|---|
| | 13/126,601 | BUSROPAN ET AL. |
| | Examiner | Art Unit |
| | ANKUR JAIN | 2649 |

This is in response to the After Final Consideration Pilot request filed 5/21/15.

1. **Improper Request** – The AFCP 2.0 request is improper for the following reason(s) and the after final amendment submitted with the request will be treated under pre-pilot procedure.

   ☐ An AFCP 2.0 request form PTO/SB/434 (or equivalent document) was not submitted.

   ☐ A non-broadening amendment to at least one independent claim was not submitted.

   ☐ A proper AFCP 2.0 request was submitted in response to the most recent final rejection.

   ☐ Other:

2. **Proper Request**

   **A.** After final amendment submitted with the request will not be treated under AFCP 2.0.
   The after final amendment cannot be reviewed and a search conducted within the guidelines of the pilot program.

   ☒ The after final amendment will be treated under pre-pilot procedure.

   **B.** Updated search and/or completed additional consideration.
   The examiner performed an updated search and/or completed additional consideration of the after final amendment within the time authorized for the pilot program. The result(s) of the updated search and/or completed additional consideration are:

   ☐ 1. All of the rejections in the most recent final Office action are overcome and a Notice of Allowance is issued herewith.

   ☐ 2. The after final amendment would not overcome all of the rejections in the most recent final Office action. See attached interview summary for further details.

   ☐ 3. The after final amendment was reviewed, and it raises a new issue(s). See attached interview summary for further details.

   ☐ 4. The after final amendment raises new issues, but would overcome all of the rejections in the most recent final Office action. A decision on determining allowability could not be made within the guidelines of the pilot. See attached interview summary for further details, including any newly discovered prior art.

   ☐ 5. Other:

   Examiner Note: Please attach an interview summary when necessary as described above.

Doc Code: A.NE.AFCP
Document Description: After Final Consideration Pilot Program Request

PTO/SB/434 (05-13)

# CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0

| Practitioner Docket No.: | Application No.: | Filing Date: |
|---|---|---|
| 11-575-WO-US | 13/126,601 | October 22, 2010 |
| **First Named Inventor:** | **Title:** | |
| Bryan Jerrel Busropan | Telecommunications Network and Method of Transferring User Data in Signaling Messages from a Communication Unit to a Data Processing Centre | |

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116.

1. The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application (*e.g.*, a continuation or divisional application) is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c).
2. The above-identified application contains an outstanding final rejection.
3. Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect.
4. This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection.
5. Applicant is willing and available to participate in any interview requested by the examiner concerning the present response.
6. This certification and request is being filed electronically using the Office's electronic filing system (EFS-Web).
7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.]
8. By filing this certification and request, applicant acknowledges the following:
    - Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0.
    - The examiner will verify that the AFCP 2.0 submission is compliant, *i.e.*, that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions:
        - The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, by mailing an advisory action.
        - If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview.
            - The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate.
            - If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116.

| Signature | Date |
|---|---|
| /David A. Grabelsky/ | May 21, 2015 |
| **Name (Print/Typed)** David A. Grabelsky | **Practitioner Registration No.** 59,208 |

***Note**: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.*

[✓] * Total of 1 forms are submitted.

# Privacy Act Statement

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

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

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

PTO/SB/22 (03-13)
Approved for use through 3/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): 11-575-WO-US

Application Number: 13/126,601

Filed: June 3, 2011

For: Telecommunications Network and Method of Transferring User Data in Signaling Messages from a Communication Unit to a Data Processing Centre

Art Unit: 2649

Examiner: Ankur Jain

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

| | Fee | Small Entity Fee | Micro Entity Fee | |
|---|---|---|---|---|
| ☐ One month (37 CFR 1.17(a)(1)) | $200 | $100 | $50 | $ |
| ☐ Two months (37 CFR 1.17(a)(2)) | $600 | $300 | $150 | $ |
| ☑ Three months (37 CFR 1.17(a)(3)) | $1,400 | $700 | $350 | $ 1,400 |
| ☐ Four months (37 CFR 1.17(a)(4)) | $2,200 | $1,100 | $550 | $ |
| ☐ Five months (37 CFR 1.17(a)(5)) | $3,000 | $1,500 | $750 | $ |

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 132490.

☐ Payment made via EFS-Web.

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

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. 37 CFR 3.73(b) statement is enclosed (Form PTO/SB/96).

☑ attorney or agent of record. Registration number 59208.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/David A. Grabelsky/ — Signature

May 21, 2015 — Date

David A. Grabelsky — Typed or printed name

312-913-3353 — Telephone Number

**NOTE:** This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☑ * Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**(Attorney Docket No. 11-575-WO-US)**

| | | |
|---|---|---|
| **In re Application of:** | ) | |
| | ) | |
| **Bryan Jerrel Busropan, et al.** | ) | |
| | ) | **Examiner: Ankur Jain** |
| **Serial No.: 13/126,601** | ) | |
| | ) | **Art Unit: 2649** |
| **Filed: June 3, 2011** | ) | |
| | ) | **Confirmation No.: 4470** |
| **For: Telecommunications Network and Method of Transferring User Data in Signaling Messages from a Communication Unit to a Data Processing Centre** | ) | |

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**RESPONSE TO FINAL OFFICE ACTION MAILED DECEMBER 15, 2014**

In response to the Final Office Action mailed December 15, 2014, Applicants submit the following amendments and remarks. In addition, a request for consideration under the After Final Consideration Pilot 2.0 is included, as well as a Petition for Extension of Time under 37 C.F.R. § 1.136(a) (three-month), along with requisite fees.

**Amendments to the Claims** begin on page 2 of this submission.

**Remarks** begin on page 10 of this submission.



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## Amendments to the Claims

1. (Currently amended) A method of transferring data from a communication module to a machine-to-machine server over a telecommunications network, the method comprising:

~~wirelessly~~ receiving a wireless signalling message from said communication module at a sigalling termination node of the telecommunications network, said received wireless signalling message ~~containing~~ having inserted in it non-signalling application data ~~of a program run~~ generated for a machine-to-machine function by the communication module, wherein wireless signalling messages of the telecommunications network are configured for carrying signalling data for managing connections in the telecommunications network; ~~and~~

retrieving said non-signalling application data from the received wireless signalling message; and

terminating further transmission of the received wireless signalling message and transferring said retrieved non-signalling application data ~~of said program run by the communication module~~ to said machine-to-machine server.

2. (Canceled)

3. (Currently amended) The method according to claim 2, wherein the wireless signalling message is a network attach request message.



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4. (Original) The method according to claim 3, wherein said network attach request message is a location updating request message with a location updating type information element indicating an IMSI attach.

5. (Original) The method according to claim 3, wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach.

6. (Previously presented) The method according to claim 3, further comprising:

transmitting a network attach accept message to the communication module;

transmitting further data to and/or receiving further data from the communication module; and

receiving a network detach message from the communication module.

7. (Previously presented) The method according to claim 3, further comprising transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module.

8. (Previously presented) The method according to claim 3, wherein said communication module is not authenticated in said telecommunications network.

9. (Previously presented) The method according to claim 1 wherein normal location updating procedure is not performed in said communication module.



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10. (Canceled)

11. (Canceled)

12. (Currently amended) The method according to claim 1, wherein said received wireless signalling message contains address information indicative of said machine-to-machine server.

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Currently amended) A telecommunications network being configured for transferring data from a communication module to a machine-to-machine server, said telecommunications network configured for performing a set of steps comprising:

~~wirelessly~~ receiving a wireless signalling message from said communication module at a sigalling termination node of the telecommunications network, said received wireless signalling message ~~containing~~ having inserted in it non-signalling application data ~~of a program run~~ generated for a machine-to-machine function by the communication module, wherein wireless



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signalling messages of the telecommunications network are configured for carrying signalling data for managing connections in the telecommunications network; ~~and~~

retrieving said non-signalling application data from the received wireless signalling message; and

terminating further transmission of the received wireless signalling message and transferring said retrieved non-signalling application data ~~of said program run by the communication module~~ to said machine-to-machine server.

17. (Currently amended) A node in a telecommunications network, said telecommunications network being configured for transferring data from a communication module to a machine-to-machine server, said node being configured for performing a set of steps comprising:

~~wirelessly~~ receiving a wireless signalling message from said communication module, said received wireless signalling message ~~containing~~ having inserted in it non-signalling application data ~~of a program run~~ generated for a machine-to-machine function by the communication module, wherein wireless signalling messages of the telecommunications network are configured for carrying signalling data for managing connections in the telecommunications network; ~~and~~

retrieving said non-signalling application data from the received wireless signalling message; and

terminating further transmission of the received wireless signalling message and transferring said retrieved non-signalling application data ~~of said program run by the communication module~~ to said machine-to-machine server.



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18. (Currently amended) A communication module comprising a processor and a transmitter, wherein the communication module is configured for (i) ~~processing~~ generating, via the processor, non-signalling application data for a machine-to-machine function ~~of a program run by the communication module~~, (ii) encapsulating said non-signalling application data in one or more signalling messages from said communication module over a telecommunications network to a machine-to-machine server, wherein wireless signalling messages of the telecommunications network are configured for carrying signalling data for managing connections in the telecommunications network, and (iii) transmitting, via the transmitter, said signalling messages containing said non-signalling application data ~~of said program run by the communication module~~ to a sigalling termination node of said telecommunications network.

19. (Canceled)

20. (Previously presented) A node according to claim 17, wherein the node is a serving GPRS support node.

21. (Previously presented) A node according to claim 17, wherein the node is a signalling monitor.

22. (Currently amended) The method according to claim 1, wherein the non-signalling application data comprises alarming data.

23. (Canceled)



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24. (Currently amended) A communication module according to claim 18, wherein the non-signalling application data comprises alarming data.

25. (Currently amended) The method according to claim 1, wherein the non-signalling application data comprises measurement data.

26. (Previously presented) The method according to claim 25, wherein the communication module comprises one or more sensors, and wherein the measurement data comprises measurement data obtained using the one or more sensors.

27. (Currently amended) The communication module according to claim 18, wherein the non-signalling application data comprises measurement data.

28. (Previously presented) The communication module according to claim 27, further comprising one or more sensors, wherein the measurement data comprises measurement data obtained using the one or more sensors.

29. (Currently amended) The method of claim 1,

wherein said method is a method of transferring non-signalling data from the communication module to the machine-to-machine server over the telecommunications network in a machine-to-machine communications setting; and



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wherein transferring said non-signalling application ~~data of said program run~~ generated for a machine-to-machine function by the communication module to said machine-to-machine server comprises transferring said non-signalling application data ~~of said program run by the communication module~~ to said machine-to-machine server while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.

30. (Currently amended) The method of claim 1, wherein said received wireless signalling message comprises data derived from a sensor of the communication module.

31. (Currently amended) The telecommunications network of claim 16,

wherein said telecommunications network is configured for transferring non-signalling data from the communication module to the machine-to-machine server in a machine-to-machine communications setting; and

wherein transferring said non-signalling application data to said machine-to-machine server comprises transferring said non-signalling application data to said machine-to-machine server while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.

32. (Currently amended) The node of claim 17,

wherein the telecommunications network is configured for transferring non-signalling data from the communication module to the machine-to-machine server in a machine-to-machine communications setting; and



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wherein transferring said non-signalling application data to said machine-to-machine server comprises transferring said application data to said machine-to-machine server, while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.

33. (Previously presented) The communication module of claim 18,

wherein the processor is configured for ~~processing~~ generating non-signalling application data ~~of the program~~ in a machine-to-machine communications setting run by the communication module; and

wherein the transmitter is configured for transmitting said signalling messages containing said non-signalling application data ~~of said program run by the communication module~~ to said telecommunications network, while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.



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## Remarks

### 1. Summary of Office Action

In the Final Office Action mailed December 15, 2014, the Examiner rejected claims 1, 3-9, 12, 16-18, and 20-21 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Pat. App. Pub. No. 2007/0232306 (Johan) in view of U.S. Pat. App. Pub. No. 2006/0262742 (Domm). Further, the Examiner rejected claims 22 and 24 as allegedly being unpatentable over Johan in view of Domm in view of U.S. Pat. App. Pub. No. 2004/0192251 (Zhao). Still further, the Examiner rejected claims 25 and 27 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johan in view of Domm in view of U.S. Pat. App. Pub. No. 2004/0147266 (Hwang). In addition, the Examiner rejected claims 26, 28, and 30 under 35 U.S.C. § 103(a) as allegedly being obvious over Johan in view of Domm in view of U.S. Pat. Pat Pub. No. 2010/0322162 (Krco). Finally, the Examiner rejected claims 29 and 31-33 under 35 U.S.C. § 103(a) as allegedly being obvious over Johan in view of Domm in view of U.S. Pat. Pat Pub. No. 2008/0220772 (Islam).

### 2. Status of the Claims

Currently pending are claims 1, 3-9, 12, 16-18, 20-22, and 24-33, of which claims 1, 16, 17, and 18 are independent and the remainder of which are dependent. Applicants have amended various claims as follows.

Applicants have amended each of independent claims 1, 16, 17, and 18 to more particularly point out and distinctly claim aspects of the invention. Support for the amendment can be found generally throughout the original application, an specifically at least at page 2, lines 24-29; page 2, line 34 – page 3, line 3; page 6, line 33 – page 7, line 9; and Figures 1 and 2.



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Applicants have amended each of dependent claims 3, 12, 22, 24, 25, 27, 29, 30, 31, 32, and 33 to ensure consistency of antecedent basis with its respective base claim.

**3. Response to Rejections under 35 U.S.C. § 103(a)**

**a. Claims 1, 3-9, 12, 16-18, and 20-21**

As noted above, the Examiner rejected claims 1, 3-9, 12, 16-18, and 20-21 under 35 U.S.C. § 103(a) as allegedly being unpatentable Johan in view of Domm. Applicants submit that modifying the teachings of Johan with those of Domm does not logically or reasonably lead to any of claims 1, 3-9, 12, 16-18, or 20-21, and that the rejections are therefore improper and should be withdrawn. Applicants first address claim 1, subsequently addresses claims 3-9, 12, 16-18, and 20-21.

**Modifying the teachings of Johan with those of Domm does not logically or reasonably lead to "receiving a wireless signalling message from said communication module at a sigalling termination node of the telecommunications network, said received wireless signalling message having inserted in it non-signalling application data generated for a machine-to-machine function by the communication module, wherein wireless signalling messages of the telecommunications network are configured for carrying signalling data for managing connections in the telecommunications network"**

The Examiner cited to paragraphs [0027], [0033], and Figure 4 of Johan as teaching receiving a signalling message (Current Final Office Action, page 2). However, there is no teaching in Johan of the "received wireless signalling message having inserted in it non-signalling application data generated for a machine-to-machine function by the communication module." At most, Johan teaches that a "MS 16 periodically reports its location to the mobile network using, for example, a Location Updating Request message, an Attach Request message, or a Routing Area Update Request message" (paragraph [0027]), or that the "MS 16 sends a Non-Access-Stratum (NAS) signaling message to the mobile network 401" (paragraph [0033]). However, even to the extent that any of these messages sent by the "MS 16" is received by "a sigalling termination node of the telecommunications network," there is no teaching in Johan that



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any of these messages has "inserted in it non-signalling application data generated for a machine-to-machine function by the communication module."

Domm discloses (paragraph 0034) a serving GPRS support node (SGSN) 303 that receives a particular type of signalling message, namely an attach request message from a mobile station (MS) 301. Further Domm discloses extracting four types of data from the attach request message, namely an International Mobile Security Identity (IMSI), a Temporary Mobile Packet Subscriber Identity (PTMSI) for a packet network, a Temporary Logical Link Identity (TLLI), and a Routing Area Id (RAI). As explained in Applicants' Response filed February 4, 2014, Domm expressly teaches that these data are "parameters that may be associated with a particular subscriber's connection." Applicants therefore submit that the signalling message of Domm, like that of Johan, also does not have "inserted in it non-signalling application data generated for a machine-to-machine function by the communication module."

For at least the reasons above, Applicants submit that modifying the teachings of Johan with those of Domm does not logically or reasonably lead to "receiving a wireless signalling message from said communication module at a sigalling termination node of the telecommunications network, said received wireless signalling message having inserted in it non-signalling application data generated for a machine-to-machine function by the communication module, wherein wireless signalling messages of the telecommunications network are configured for carrying signalling data for managing connections in the telecommunications network."

**Modifying the teachings of Johan with those of Domm does not logically or reasonably lead to "retrieving said non-signalling application data from the received wireless signalling message"**

For at least the reason that the combined teachings of Johan and Domm do not logically or reasonably lead to a received wireless signalling message having "inserted in it non-signalling application data generated for a machine-to-machine function by the communication module," it



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follows that the combined teachings of Johan and Domm cannot logically or reasonably lead to "retrieving said non-signalling application data from the received wireless signalling message."

**Modifying the teachings of Johan with those of Domm does not logically or reasonably lead to "terminating further transmission of the received wireless signalling message and transferring said retrieved non-signalling application data to said machine-to-machine server"**

For at least the reason that the combined teachings of Johan and Domm do not logically or reasonably lead to a received wireless signalling message having "retrieving said non-signalling application data from the received wireless signalling message," it follows that the combined teachings of Johan and Domm cannot logically or reasonably lead to "transferring said retrieved non-signalling application data to said machine-to-machine server." Moreover, neither Johan nor Domm teaches "terminating further transmission of [a] received wireless signalling message" from which any type of data has been retrieved, and then transferring the retrieved data to a "machine-to-machine server."

For at least the reasons above, Applicants submit that modifying the teachings of Johan with those of Domm does not logically or reasonably lead to claim 1, and that claim 1 is therefore allowable.

Each of independent claims 16, 17, and 18 includes, *inter alia*, limitation similar to those of claim 1 that make claim 1 allowable. Applicants submit that claims 16, 17, and 18 are each therefore allowable for at least the reasons that claim 1 is allowable.

Each of claims 3-9, 12, and 20-21 depends from one of claims 1, 16, 17, or 18, all four of which are allowable for at least the reasons above. Applicants submit that each of claims 3-9, 12, and 20-21 are therefore allowable for at least the reason that each depends from an allowable claim. Further, Applicants do not concede any of the Examiner's specific assertions in connection with any of claims 3-9, 12, or 20-21.



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**b. Claims 22 and 24**

As noted above, the Examiner rejected claims 22 and 24 as allegedly being unpatentable over Johan in view of Domm in view Zhao. Each of claims 22 and 24 depends from one of claim 1 or 18, both of which are allowable for at least the reasons above. Applicants submit that each of claims 22 and 24 are therefore allowable for at least the reason that each depends from an allowable claim. Further, Applicants do not concede any of the Examiner's specific assertions in connection with any of claims 22 or 24.

**c. Claims 25 and 27**

As noted above, the Examiner rejected claims 25 and 27 as allegedly being unpatentable over Johan in view of Domm in view Hwang. Each of claims 25 and 27 depends from one of claim 1 or 18, both of which are allowable for at least the reasons above. Applicants submit that each of claims 25 and 27 are therefore allowable for at least the reason that each depends from an allowable claim. Further, Applicants do not concede any of the Examiner's specific assertions in connection with any of claims 25 or 27.

**d. Claims 26, 28, and 30**

As noted above, the Examiner rejected claims 26, 28, and 30 as allegedly being unpatentable over Johan in view of Domm in view of Krco. Each of claims 26, 28, and 30 depends from one of claim 1 or 18, both of which are allowable for at least the reasons above. Applicants submit that each of claims 26, 28, and 30 are therefore allowable for at least the reason that each depends from an allowable claim. Further, Applicants do not concede any of the Examiner's specific assertions in connection with any of claims 26, 28, or 30.



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### e. Claims 29 and 31-33

As noted above, the Examiner rejected claims 29 and 31-33 as allegedly being unpatentable over Johan in view of Domm in view of Islam. Each of claims 29 and 31-33 depends from one of claim 1, 16, 17, or 18, all four of which are allowable for at least the reasons above. Applicants submit that each of claims 29 and 31-33 are therefore allowable for at least the reason that each depends from an allowable claim. Further, Applicants do not concede any of the Examiner's specific assertions in connection with any of claims 29 or 31-33.

## 4. Conclusion

Applicants submit that the application is in good and proper form for allowance and therefore respectfully requests favorable reconsideration. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of this application, the Examiner is invited to call the undersigned, at 312-913-3353.

Respectfully submitted,
**McDonnell Boehnen**
**Hulbert & Berghoff LLP**

Date: May 21, 2015

By: /David A. Grabelsky/
David A. Grabelsky
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# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 13126601 |
| **Filing Date:** | 03-Jun-2011 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Filer:** | David A. Grabelsky |
| **Attorney Docket Number:** | 11-575-WO-US |

Filed as Large Entity

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

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| Extension - 3 months with $0 paid | 1253 | 1 | 1400 | 1400 |
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| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
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| **Application Type:** | U.S. National Stage under 35 USC 371 |

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|---|---|---|---|---|---|
| 1 | After Final Consideration Program Request | 11-575-WO-US_AFCP_Request_15Dec14_FOA.pdf | 226942<br>89e46a40d1a0591a3ae42b5c909b39c5592c68b4 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Extension of Time | 11-575-WO-US_Petition_for_three-month_Extension_of_Time.pdf | 188414<br>52fbc868394ae878e373d6375a6f592f92c54729 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 3 | Response After Final Action | 11-575-WO-US_Response_15Dec14_FOA.pdf | 143197<br>60d61d02b4a85063d5c5ee3038a135cc9c88ca6f | no | 15 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 4 | Fee Worksheet (SB06) | fee-info.pdf | 30986<br>02dc4d957fd6a0294f98ddcb937942447cb83a81 | no | 2 |
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| PATENT APPLICATION FEE DETERMINATION RECORD<br>Substitute for Form PTO-875 | Application or Docket Number<br>13/126,601 | Filing Date<br>06/03/2011 | ☐ To be Mailed |
|---|---|---|---|

**ENTITY**: ☒ LARGE ☐ SMALL ☐ MICRO

## APPLICATION AS FILED – PART I

| FOR | (Column 1) NUMBER FILED | (Column 2) NUMBER EXTRA | RATE ($) | FEE ($) |
|---|---|---|---|---|
| ☐ BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | |
| ☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | |
| ☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | |
| TOTAL CLAIMS (37 CFR 1.16(i)) | minus 20 = | * | X $ = | |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | minus 3 = | * | X $ = | |
| ☐ APPLICATION SIZE FEE (37 CFR 1.16(s)) | If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | |
| ☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) | | | | |
| * If the difference in column 1 is less than zero, enter "0" in column 2. | | | TOTAL | |

## APPLICATION AS AMENDED – PART II

AMENDMENT **05/21/2015**

| | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|
| Total (37 CFR 1.16(i)) | * 25 | Minus | ** 25 | = 0 | X $80 = | 0 |
| Independent (37 CFR 1.16(h)) | * 4 | Minus | ***4 | = 0 | X $420 = | 0 |
| ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | |
| ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | |
| | | | | | TOTAL ADD'L FEE | 0 |

AMENDMENT

| | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|
| Total (37 CFR 1.16(i)) | * | Minus | ** | = | X $ = | |
| Independent (37 CFR 1.16(h)) | * | Minus | *** | = | X $ = | |
| ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | |
| ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | |
| | | | | | TOTAL ADD'L FEE | |

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

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

LIE
/MARCIA GORDON/

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

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

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| JAIN, ANKUR |

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

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

| Office Action Summary | Application No. 13/126,601 | Applicant(s) BUSROPAN ET AL. | |
|---|---|---|---|
| | Examiner ANKUR JAIN | Art Unit 2649 | AIA (First Inventor to File) Status No |

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

**Period for Reply**

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

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

**Status**

1)☒ Responsive to communication(s) filed on *8/25/14*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ 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**

5)☒ Claim(s) *1,3-9,12,16-18,20-22 and 24-33* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1, 3-9, 12, 16-18, 20-22, and 24-33* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

**Application Papers**

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *04/28/2011* 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).

**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).

**Certified copies:**

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)).

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

**Interim copies:**

a)☐ All b)☐ Some c)☐ None of the: Interim copies of the priority documents have been received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

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 negatived by the manner in which the invention was made.

**Claims 1, 3-9, 12, 16-18, and 20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johannesson et al, US 2007/0232306 A1 (hereafter referenced as Johan), in view of Dommaraju et al, US 2006/0262742 A1 (hereafter referenced as Domm).

Regarding **Claim 1 and Claim 16**, Johan teaches a method of "transferring data from a communication module to a machine-to-machine server over a telecommunications network" (see Paragraph 0033 and Figure 4). The Examiner would like to comment that Applicant's specification discloses that a M2M server is also a data processing center, which is no different than the operators of Johan, since both Johan and Applicant's specification disclose signaling messages/attach request messages going to data processing centers in a MSC/SGSN environment, as also evidenced by Paragraph 0033 and Figures 4-5 of Johan. Johan also teaches "the method comprising the steps in the telecommunications network of: wirelessly receiving a signalling message from said communication module, said received signalling message containing" (see Paragraph 0027, 0033, and Figure 4). The claimed limitation is

equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Furthermore, this claimed limitation is equivalent to the "signalling message containing" aspect outlined in step 410. Johan also teaches "transferring said data run by a communication module to said machine-to-machine server" (see Paragraph 0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. The Examiner would again like to comment that Applicant's specification discloses that a M2M server is also a data processing center, which is no different than the operators of Johan, since both Johan and Applicant's specification disclose signaling messages/attach request messages going to data processing centers in a MSC/SGSN environment, as also evidenced by Paragraph 0033 and Figures 4-5 of Johan. Johan does not teach "comprising application data of a program run by the communication module being contained." However, Domm teaches "comprising application data of a program run by the communication module being contained" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module being contained, as taught by Domm, for the purpose of increasing the versatility and

functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 3**, Johan teaches "wherein the signalling message is a network attach request message" (see Paragraphs 0027, 0032-0033, and Figure 4).

Regarding **Claim 4**, Johan teaches "wherein said network attach request message is a location updating request message with a location updating type information element" (see Paragraph 0027 and Figure 4). The Examiner submits that the "location updating type information element" is the specific location "information element" within the "location updating request message." Domm teaches "indicating an IMSI attach" (see Paragraphs 0034-0035, 0039, and Figure 3). The claimed limitation is equivalent to IMSI extracted data within the attach request message 31. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate indicating an IMSI attach, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 5**, Domm teaches “wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach” (see Paragraphs 0011-0012). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Paragraph 0011 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0010 & Figure 1 of Domm.

Regarding **Claim 6**, Johan teaches “transmitting a network attach accept message to the communication module" (see Paragraph 0033, 0036, and Figures 4 and 6). Domm teaches “transmitting further data to and/or receiving further data from a communications module; and receiving a network detach message from the communication module” (see Paragraph 0011-0012). The claimed limitation is equivalent to the GPRS/IMSI attach procedures "from the communications module," followed by a “network detach message from the communication module,” which is equivalent to how the mobile station can initiate a GPRS detach message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate transmitting further data to and/or receiving further data

from a communications module; and receiving a network detach message from the communication module, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Paragraph 0011 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN and a GPRS environment as evidenced by Paragraphs 0020-0021 & 0036 of Johan and Paragraph 0010 & Figure 1 of Domm.

Regarding **Claim 7**, Johan teaches “transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module " (see Paragraph 0033, 0036, and Figures 4 and 6).

Regarding **Claim 8**, Domm teaches “wherein a communication module is not authenticated in said telecommunications network" (see Paragraph 0037 and Figure 3). According to page 10 lines 30-35 of Applicant’s filed specification, it is very clear that “not authenticated in said telecommunications network” can be interpreted to mean that the authentication procedure is left to another entity to authenticate the communication module. In other words, the Examiner is interpreting this claimed feature to mean that the "communication module" does not initiate authentication and does not authenticate itself. Thus, according to this meaning, the Examiner submits that this is no different than the cited portions of Domm, which discloses that the authentication request is coming from an outside source and not from MS 301, which is equivalent to the claimed “communication module is not authenticated in said telecommunications network.” It

would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein a communication module is not authenticated in said telecommunications network, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 9**, Johan teaches “wherein normal location updating procedure is not performed in said telecommunication module" (see Paragraph 0021 and 0027). Due to lack of antecedent basis, the Examiner is interpreting "telecommunication module" to mean "communication module," since it appears Applicant is trying to claim some type of module, and the only mention of a prior module was the "communication module.” The Examiner submits that the network is responsible for keeping track of the periodic reported locations of MS 16, and thus the “location updating procedure is not performed in said communication module.”

Regarding **Claim 12**, Johan teaches “wherein said <u>received signalling message contains</u> address information indicative of said machine-to-machine server” (see Paragraphs 0032-0033 and Figure 4). The claimed limitation is equivalent to the identification data (numerical value) "addressing" a specific operator, or "data processing centre."

Regarding **Claim 17**, Johan teaches “a node” (see Paragraph 0034 and Figure 5). Johan also teaches “a telecommunications network, said telecommunications network being configured for transferring data from a communication module to a machine-to-machine server” (see Paragraph 0033 and Figure 4). The Examiner would like to comment that Applicant’s specification discloses that a M2M server is also a data processing center, which is no different than the operators of Johan, since both Johan and Applicant's specification disclose signaling messages/attach request messages going to data processing centers in a MSC/SGSN environment, as also evidenced by Paragraph 0033 and Figures 4-5 of Johan. Johan also teaches “configured for performing the steps of: wirelessly receiving a signalling message from said communication module, said user data being contained in said signalling message” (see Paragraph 0027, 0032-0033, and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Johan also teaches “transferring said data to said machine-to-machine server” (see Paragraph 0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. The Examiner would again like to comment that Applicant’s specification discloses that a M2M server is also a data processing center, which is no different than the operators of Johan, since both Johan and Applicant's specification disclose signaling messages/attach request messages going to data processing centers in a MSC/SGSN environment, as also evidenced by Paragraph 0033 and Figures 4-5 of Johan. Johan does not teach “containing application data of a program run by the communication module; and application data.” However, Domm teaches “containing

application data of a program run by the communication module; and application data" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate containing application data of a program run by the communication module, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 18**, Johan teaches "a communication module comprising a processor for processing data" (see Paragraphs 0022-0024, 0032-0033, and Figures 2 and 4). Johan also teaches "encapsulating said user data in one or more signalling messages from said communication module over a telecommunications network to a machine-to-machine server" (see Paragraphs 0027, 0032-0033 and Figure 4). The Examiner would like to comment that Applicant's specification discloses that a M2M server is also a data processing center, which is no different than the operators of

Johan, since both Johan and Applicant's specification disclose signaling messages/attach request messages going to data processing centers in a MSC/SGSN environment, as also evidenced by Paragraph 0033 and Figures 4-5 of Johan. Furthermore, the Examiner submits that it is necessary for identification data to be "encapsulated" within the NAS signaling message. Johan also teaches "a transmitter for transmitting said signalling messages containing said user data to said telecommunications network" (see Paragraphs 0023, 0032-0033, and Figures 2 & 4). Johan does not teach "comprising application data of a program run by the communication module." However, Domm teaches "comprising application data of a program run by the communication module" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and

both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 20**, Domm teaches "wherein the node is a serving GPRS support node" (see Paragraph 0040 and Figures 3-6). The claimed limitation is clearly equivalent to SGSN 303. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein the node is a serving GPRS support node, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a MSC and SGSN as evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

Regarding **Claim 21**, Domm teaches "wherein the node is a signaling monitor" (see Paragraph 0015 and 0028-0029). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein the node is a signaling monitor, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a

MSC and SGSN as evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

**Claims 22 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claims 1 and 18, and further in view of Zhao et al, US 2004/0192251 A1 (hereafter referenced as Zhao).

Regarding **Claim 22 and Claim 24**, the combination of Johan and Domm teaches “application data” (see claim 1). The combination data does not teach "alarming data.” However, Zhao teaches “alarming data” (see Paragraph 0030 and Figure 4). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Zhao, for the purpose of increasing the versatility and functionality of the application data of Domm, and since both Domm and Zhao identically disclose attach request messages, as evidenced by Paragraph 0030 of Zhao and Figure 3 of Domm.

**Claims 25 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claims 1 and 18, and further in view of Hwang et al, US 2004/0147266 A1 (hereafter referenced as Hwang).

Regarding **Claim 25 and Claim 27**, the combination of Johan and Domm teaches “application data” (see claim 1). The combination data does not teach "data comprising measurement data.” However, Hwang teaches “data comprising measurement data” (see Paragraph 0093, 0122, 0128, and Figure 11B). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Hwang, for the

purpose of increasing the versatility and functionality of the application data of Domm, and since both Domm and Hwang identically disclose attach request messages, as evidenced by Figures 9B, 11B, and 12 of Hwang and Figure 3 of Domm.

**Claims 26 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm and Hwang, as applied to Claims 25 and 27, and further in view of Krco et al, US 2010/0322162 A1 (hereafter referenced as Krco).

Regarding **Claim 26 and Claim 28**, the combination of Johan, Domm, and Hwang teaches "communication module and measurement data" (see claim 1 and 25). The combination does not teach "measurement data obtained using one or more sensors." However, Krco teaches "measurement data obtained using one or more sensors" (see Paragraph 0009). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Krco, for the purpose of increasing the versatility and functionality of the MS 16 of Johan, and since both Johan and Krco identically disclose SGSN hardware and receiving signalling information as evidenced by Paragraph 0045 of Krco and Figures 4-6 of Johan.

**Claim 29 and 31-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claim 1 and 16-18, and further in view of Islam et al, US 2008/0220772 A1.

Regarding **Claim 29 and 31-33**, the combination of Johan and Domm teaches "wherein said method is a method of transferring data from the communication module to the machine-to-machine server over the telecommunications network in a machine-

to-machine communications setting" (see Paragraph 0027 and 0033; and Figure 4 of Johan). This specific type of communications setting is no different than the attach request message containing user data in the disclosed portions of Johan, which is no different procedurally from Applicant's specification of the attach request message containing user data as outlined on page 8 lines 15-35 for example. The combination also teaches "wherein transferring said application data of said program run by the communication module to said machine-to-machine server comprises transferring said application data of said program run by the communication module to said machine-to-machine server" (see claim 1 and the combination of the Johan and Domm references). The combination does not teach "while avoiding to establish a complete circuit-switched or packet-switched connection." However, Islam teaches "while avoiding to establish a complete circuit-switched or packet-switched connection" (see Paragraph 0051). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate while avoiding to establish a complete circuit-switched or packet-switched connection, as taught by Islam, for the purpose of increasing the versatility and functionality of the PLMN selection methodology of Johan (the combination), and since both Johan and Islam identically disclose circuit switching and a GSM environment, as evidenced by Paragraphs 0019-0020 and 0024 of Johan; and the Abstract and Paragraph 0051 of Islam.

**Claim 30** is rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claim 1, and further in view of Krco.

Regarding **Claim 30**, the combination of Johan and Domm teaches "wherein said received signalling message comprises data; and communication module" (see Paragraph 0033 and Figure 4 of Johan). The combination does not teach "data derived from a sensor." However, Krco teaches "data derived from a sensor" (see Paragraph 0009). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Krco, for the purpose of increasing the versatility and functionality of the MS 16 of Johan, and since both Johan and Krco identically disclose SGSN hardware and receiving signalling information as evidenced by Paragraph 0045 of Krco and Figures 4-6 of Johan.

### ***Response to Arguments***

Applicant's arguments have been fully considered but they are NOT persuasive.

With respect to pages 9-10 of the Remarks, the Examiner is maintaining the position with respect to claims 22 and 25, and the Examiner made it clear in the previous Action as to why the references are being applied in combination. Furthermore, if Applicant still insists on the Examiner issuing another Non-Final Action, the Examiner would like to comment that this will not expedite prosecution and the Examiner would like to work with Applicant to draft language which will move prosecution forward in view of the applied references.

The Examiner submits that Johan teaches a method of "transferring data from a communication module to a machine-to-machine server over a telecommunications

network" (see Paragraph 0033 and Figure 4). The Examiner would like to comment that Applicant's specification discloses that a M2M server is also a data processing center, which is no different than the operators of Johan, since both Johan and Applicant's specification disclose signaling messages/attach request messages going to data processing centers in a MSC/SGSN environment, as also evidenced by Paragraph 0033 and Figures 4-5 of Johan. Johan also teaches "the method comprising the steps in the telecommunications network of: wirelessly receiving a signalling message from said communication module, said received signalling message containing" (see Paragraph 0027, 0033, and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Furthermore, this claimed limitation is equivalent to the "signalling message containing" aspect outlined in step 410. Johan also teaches "transferring said data run by a communication module to said machine-to-machine server" (see Paragraph 0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. The Examiner would again like to comment that Applicant's specification discloses that a M2M server is also a data processing center, which is no different than the operators of Johan, since both Johan and Applicant's specification disclose signaling messages/attach request messages going to data processing centers in a MSC/SGSN environment, as also evidenced by Paragraph 0033 and Figures 4-5 of Johan. Johan does not teach "comprising application data of a program run by the communication module being contained." However, Domm teaches "comprising application data of a program run by the communication module being contained" (see

Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module being contained, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

## ***Conclusion***

**THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANKUR JAIN whose telephone number is (571)272-9747. The examiner can normally be reached on M-F, 9:00 am to 4:00 pm, EST.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANKUR JAIN/

Primary Examiner, Art Unit 2649

| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 13126601 | BUSROPAN ET AL. |
| | **Examiner** | **Art Unit** |
| | ANKUR JAIN | 2649 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ✓ | Rejected | - | Cancelled | N | Non-Elected | A | Appeal |
| = | Allowed | ÷ | Restricted | I | Interference | O | Objected |

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

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 06/09/2013 | 11/27/2013 | 12/12/2014 | | | | | | |
| | 1 | ✓ | ✓ | ✓ | | | | | | |
| | 2 | ✓ | ✓ | - | | | | | | |
| | 3 | ✓ | ✓ | ✓ | | | | | | |
| | 4 | ✓ | ✓ | ✓ | | | | | | |
| | 5 | ✓ | ✓ | ✓ | | | | | | |
| | 6 | ✓ | ✓ | ✓ | | | | | | |
| | 7 | ✓ | ✓ | ✓ | | | | | | |
| | 8 | ✓ | ✓ | ✓ | | | | | | |
| | 9 | ✓ | ✓ | ✓ | | | | | | |
| | 10 | ✓ | ✓ | - | | | | | | |
| | 11 | ✓ | - | - | | | | | | |
| | 12 | ✓ | ✓ | ✓ | | | | | | |
| | 13 | ✓ | ✓ | - | | | | | | |
| | 14 | ✓ | ✓ | - | | | | | | |
| | 15 | ✓ | - | - | | | | | | |
| | 16 | ✓ | ✓ | ✓ | | | | | | |
| | 17 | ✓ | ✓ | ✓ | | | | | | |
| | 18 | ✓ | ✓ | ✓ | | | | | | |
| | 19 | ✓ | ✓ | - | | | | | | |
| | 20 | ✓ | ✓ | ✓ | | | | | | |
| | 21 | ✓ | ✓ | ✓ | | | | | | |
| | 22 | ✓ | ✓ | ✓ | | | | | | |
| | 23 | ✓ | - | - | | | | | | |
| | 24 | ✓ | ✓ | ✓ | | | | | | |
| | 25 | | ✓ | ✓ | | | | | | |
| | 26 | | ✓ | ✓ | | | | | | |
| | 27 | | ✓ | ✓ | | | | | | |
| | 28 | | ✓ | ✓ | | | | | | |
| | 29 | | | ✓ | | | | | | |
| | 30 | | | ✓ | | | | | | |
| | 31 | | | ✓ | | | | | | |
| | 32 | | | ✓ | | | | | | |
| | 33 | | | ✓ | | | | | | |

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**(Attorney Docket No. 11-575-WO-US)**

| | | |
|---|---|---|
| **Applicant:** Bryan Jerrel Busropan, et al. | ) | |
| | ) | **Examiner:** Ankur Jain |
| **Pat. App No.:** 13/126,601 | ) | |
| | ) | **Group Art Unit:** 2649 |
| **Filed:** June 3, 2011 | ) | |
| | ) | **Confirmation No.:** 4470 |
| **Title:** Telecommunications Network and Method of Transferring User Data in… | ) | |

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313

## RESPONSE TO OFFICE ACTION

In response to the office action dated March 24, 2014, Applicant submits the following amendments and remarks:

**Amendments to the claims** begin on page 2.

**Remarks** begin on page 9.

Applicant generally authorizes the Office to charge any underpayment or credit any overpayment to Deposit Account No. 132490, and to treat any communication in this matter that requires an extension of time as incorporating a request for such an extension.



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## Amendments to the Claims

1. (Currently amended) A method of transferring data from a communication module to a ~~data processing centre~~machine-to-machine server over a telecommunications network, the method comprising:

wirelessly receiving a signalling message from said communication module, said received signalling message containing application data of a program run by the communication module; and

transferring said application data of said program run by the communication module to said ~~data processing centre~~machine-to-machine server.

2. (Canceled)

3. (Previously presented) The method according to claim 2, wherein the signalling message is a network attach request message.

4. (Original) The method according to claim 3, wherein said network attach request message is a location updating request message with a location updating type information element indicating an IMSI attach.

5. (Original) The method according to claim 3, wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach.



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6. (Previously presented) The method according to claim 3, further comprising:

transmitting a network attach accept message to the communication module;

transmitting further data to and/or receiving further data from the communication module; and

receiving a network detach message from the communication module.

7. (Previously presented) The method according to claim 3, further comprising transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module.

8. (Previously presented) The method according to claim 3, wherein said communication module is not authenticated in said telecommunications network.

9. (Previously presented) The method according to claim 1 wherein normal location updating procedure is not performed in said communication module.

10. (Canceled)

11. (Canceled)

12. (Currently amended) The method according to claim 1, wherein said received signalling message contains address information indicative of said ~~data processing centre~~machine-to-machine server.



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13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Currently amended) A telecommunications network being configured for transferring data from a communication module to a ~~data processing centre~~machine-to-machine server, said telecommunications network configured for performing a set of steps comprising:

wirelessly receiving a signalling message from said communication module, said received signalling message containing application data of a program run by the communication module; and

transferring said application data to said ~~data processing centre~~machine-to-machine server.

17. (Currently amended) A node in a telecommunications network, said telecommunications network being configured for transferring data from a communication module to a ~~data processing centre~~machine-to-machine server, said node being configured for performing a set of steps comprising:

wirelessly receiving a signalling message from said communication module, said received signalling message containing application data of a program run by the communication module; and



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transferring said application data to said ~~data processing centre~~machine-to-machine server.

18. (Currently amended) A communication module comprising ~~(i)~~ a processor and a transmitter, wherein the communication module is configured for (i) processing, via the processor, application data of a program run by the communication module, ~~(ii) an encapsulation module configured for~~ (ii) encapsulating said application data in one or more signalling messages from said communication module ~~to~~ over a telecommunications network to a machine-to-machine server, and (iii) ~~a transmitter configured for~~ transmitting, via the transmitter, said signalling messages containing said application data of said program run by the communication module to said telecommunications network.

19. (Canceled)

20. (Previously presented) A node according to claim 17, wherein the node is a serving GPRS support node.

21. (Previously presented) A node according to claim 17, wherein the node is a signalling monitor.

22. (Previously presented) The method according to claim 1, wherein the application data comprises alarming data.



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23. (Canceled)

24. (Previously presented) A communication module according to claim 18, wherein the application data comprises alarming data.

25. (Previously presented) The method according to claim 1, wherein the application data comprises measurement data.

26. (Previously presented) The method according to claim 25, wherein the communication module comprises one or more sensors, and wherein the measurement data comprises measurement data obtained using the one or more sensors.

27. (Previously presented) The communication module according to claim 18, wherein the application data comprises measurement data.

28. (Previously presented) The communication module according to claim 27, further comprising one or more sensors, wherein the measurement data comprises measurement data obtained using the one or more sensors.

29. (Currently amended) The method of claim 1,

wherein said method is a method of transferring data from the communication module to the ~~data processing centre~~machine-to-machine server over the telecommunications network in a machine-to-machine communications setting; and



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wherein transferring said application data of said program run by the communication module to said ~~data processing centre~~ machine-to-machine server comprises transferring said application data of said program run by the communication module to said ~~data processing centre~~machine-to-machine server while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.

30. (Previously presented) The method of claim 1, wherein said received signalling message comprises data derived from a sensor of the communication module.

31. (Currently amended) The telecommunications network of claim 16,

wherein said telecommunications network is configured for transferring data from the communication module to the ~~data processing centre~~machine-to-machine server in a machine-to-machine communications setting; and

wherein transferring said application data to said ~~data processing centre~~machine-to-machine server comprises transferring said application data to said ~~data processing centre~~machine-to-machine server while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.

32. (Currently amended) The node of claim 17,



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wherein the telecommunications network is configured for transferring data from the communication module to the ~~data processing centre~~machine-to-machine server in a machine-to-machine communications setting; and

wherein transferring said application data to said ~~data processing centre~~machine-to-machine server comprises transferring said application data to said ~~data processing centre~~machine-to-machine server, while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.

33. (Previously presented) The communication module of claim 18,

wherein the processor is configured for processing application data of the program in a machine-to-machine communications setting run by the communication module; and

wherein the transmitter is configured for transmitting said signalling messages containing said application data of said program run by the communication module to said telecommunications network, while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.



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## Remarks

### 1. Summary of Examiner Interview

On August 14, 2014, the undersigned conducted a telephonic interview with Examiner Ankur Jain to discuss example features of the claimed invention, the rejections and cited art in the current office action dated March 24, 2014, and example claim amendments similar to those presented in this Response, but no agreement was reached. The Examiner indicated that such amendments would necessitate further search and consideration. Applicant thanks the Examiner for his time and consideration of this matter.

### 2. The Current Office Action is Incomplete

37 C.F.R. § 1.104(b) states that "[t]he examiner's action will be complete as to all matters." Further, M.P.E.P. § 707.07(f) states that "[i]n order to provide a complete application file history and to enhance the clarity of the prosecution history record, an examiner must provide clear explanations of all actions taken by the examiner during prosecution of an application." (Emphasis added). Further, "[w]here the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it." (*Id.*, emphasis added).

In the office action dated December 4, 2013, the Examiner rejected claims 22 and 24 under § 35 U.S.C. § 103(a) as allegedly being obvious over U.S. App. Pub. No. 2007/0232306 to Johannesson et al. (Johan) in view of U.S. Pat. Pub. No. 2006/0262742 (Domm) in view of U.S. Pat. Pub. No. 2004/0192251 (Zhao). (Page 20). In addition, the Examiner rejected claims 25 and 27 under § 35 U.S.C. § 103(a) as allegedly being obvious over Johan in view of Domm in view of U.S. Pat. Pub. No. 2004/0147266 (Hwang). (Pages 20-21).



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In Applicant's Response dated February 4, 2014, Applicant traversed these rejections with arguments. In particular, Applicant provided a detailed argument as to how Zhao fails to teach or suggest the claim 22 feature of "said receiving signaling message containing application data of a program run by the communication module…the application data comprising alarming data." (Response, pages 14-15, emphasis added). Further, Applicant provided a detailed argument as to how Hwang fails to teach or suggest the claim 25 feature of "said receiving signaling message containing application data of a program run by the communication module…the application data comprises measurement data." (Response, pages 15-16, emphasis added).

In the current office action, the Examiner again rejected these claims on the same basis, but without responding to the substance of Applicant's arguments in accordance with 37 C.F.R. § 1.104(b) and M.P.E.P. § 707.07(f). Accordingly, the current office action is incomplete as to all matters. Therefore, Applicant respectfully requests that the Examiner mark the next office action as non-final, and that the Examiner address the substance of Applicant's arguments referenced above (and provided in the Response dated February 4, 2014) in the next office action.

**3. Summary of the Office Action**

In the current office action, the Examiner rejected claims 18, 24, and 27 under 35 U.S.C. § 112, second paragraph for allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In addition, the Examiner rejected claims 1, 3-9, 12, 16-18, and 20-21 under 35 U.S.C. § 103(a) as allegedly being obvious over Johan in view of Domm. Further, the Examiner rejected claims 22 and 24 as allegedly being obvious over Johan in view of Domm in view of Zhao. Still



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further, the Examiner rejected claims 25 and 27 under 35 U.S.C. § 103(a) as allegedly being obvious over Johan in view of Domm in view Hwang. In addition, the Examiner rejected claims 26, 28, and 30 under 35 U.S.C. § 103(a) as allegedly being obvious over Johan in view of Domm in view of U.S. Pat. Pat Pub. No. 2010/0322162 (Krco). Finally, the Examiner rejected claims 29 and 31-33 under 35 U.S.C. § 103(a) as allegedly being obvious over Johan in view of Domm in view of U.S. Pat. Pat Pub. No. 2008/0220772 (Islam).

**4. Status of the Claims**

Applicant has amended claims 1, 12, 16-18, 29, and 31-32 to more particularly point out and distinctly claim aspects of the invention. Support for these amendments are provided by at least page 6, lines 20-21 of Applicant's specification. Pending now are claims 1, 3-9, 12, 16-18, 20-22, and 24-33, of which claims 1, 16, 17, and 18 are independent and the remainder of which are dependent.

**5. Response to § 112 Claim Rejections**

As indicated above, the Examiner rejected claim 18 under 35 U.S.C. § 112, second paragraph for allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In support of this rejection, the Examiner stated that in claim 18, "there is no structural support in Applicant's specification for 'encapsulation module,' and the specification only discloses this claimed feature in terms of its functional characteristics." (Current office action, page 4). To overcome this rejection, Applicant has amended claim 18 based on the Examiner's suggestions provided during the August 14, 2014 Examiner Interview. Accordingly, Applicant respectfully requests that the Examiner withdraw the § 112 rejection of claim 18.



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For largely the same reasons discussed above with respect to claim 18, Applicant respectfully requests that the Examiner withdraw the § 112 rejection of claims 24 and 27.

**6. Response to § 103 Claim Rejections**

To establish *prima facie* obviousness of a claim over a combination of references, the combination of references must teach or suggest all elements of the claim. *See Honeywell Int'l v. United States*, 596 F.3d 800, 810 (Fed. Cir. 2010) ("Given the failure to prove that the cited references disclose [claim] element (a)(3), the government has failed to carry its burden of proving by clear and convincing evidence that the claimed invention would have been obvious to one of skill in the art.").

**a. Claim 1**

As noted above, the Examiner rejected claim 1 as allegedly being obvious over Johan in view of Domm. However, this rejection is improper and should be withdrawn because Johan in view of Domm fails to teach or suggest all of the features of claim 1.

For example, Johan in view of Domm fails to teach or suggest the claim 1 feature of "wirelessly receiving a signalling message from said communication module, said received signalling message containing application data of a program run by the communication module." In the current office action, the Examiner admitted that Johan does not teach "comprising application data of a program run by the communication module being contained," but that this is taught by Domm instead. (Pages 7-8).

Domm discloses a serving GPRS support node (SGSN) 303 that receives a particular type of signalling message, namely an attach request message from a mobile station (MS) 301. (Paragraph 0034). Further Domm discloses extracting four types of data from the attach request message, namely an International Mobile Security Identity (IMSI), a Temporary Mobile Packet



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Subscriber Identity (PTMSI) for a packet network, a Temporary Logical Link Identity (TLLI), and a Routing Area Id (RAI). (Tables 1 and 2). The Examiner argued that this extracted data amounts to application data of a program run by the communication module. (Page 8).

As argued in Applicant's Response dated February 4, 2014, Domm describes this data as "parameters that may be associated with a particular subscriber's connection," and therefore such data does not amount to "application data of a program run by the communication module" as recited in claim 1. (Paragraph 0015). In response to this argument, the Examiner stated that "[t]he Examiner firmly submits that it is necessary for MS 301 to have a 'program run by the communication module being contained' and for the attach request message to be part of a 'program run by the communication module' which allows MS 301 to send an attach request message. (Current office action, page 3). However, even assuming, *arguendo*, that the attach request message is part of a program run by the MS 301, it does not follow that the message itself contains a particular type of data, namely "application data of a program run by the communication module." Rather, as indicated above, Domm describes the data contained in the message as "parameters that may be associated with a particular subscriber's connection."

Further, Johan in view of Domm fails to teach or suggest the amended claim 1 feature of "transferring said application data of said program run by the communication module to said machine-to-machine server." As discussed above, Johan fails to teach or suggest "receiving a signalling message…containing application data of a program run by the communication module," and therefore Johan necessarily fails to teach or suggest "transmitting <u>said application data</u>" as recited in claim 1. (Emphasis added). In addressing this feature, the Examiner summarily cites to paragraph 0033 (and figure 4) of Johan, but this section merely discloses a mobile network 401 transmitting network information 402 or an accept/reject message 418 to a



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mobile station 16. Neither of these are application data, let alone "said application data" (i.e., application data of a program run by the communication module)" as recited in claim 1. Further, this section discloses transmitting data to a mobile station, whereas amended claim 1 recites "transferring said application data…to said machine-to-machine server." (Emphasis added).

Because the combination of Johan and Domm does not teach or suggest all of the features recited in claim 1, Applicant submits that the § 103 rejection of claim 1 was improper and should be withdrawn.

**b. Claims 16-18**

As noted above, the Examiner rejected claims 16-18 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johan in view of Domm. For largely the same reasons discussed above with respect to claim 1, Applicant respectfully requests that the Examiner withdraw these rejections.

**c. Claims 3-9, 12, 16-18, 20-22, and 24-33**

As noted above, the Examiner rejected claims 3-9, 12, 16-18, 20-22, and 24-33 under U.S.C. § 103(a) as allegedly being unpatentable over Johan in view of Domm and/or one or more additional references. For at least the reason that each of these claims depends from one of claims 1 or 16-18, Applicant respectfully requests that the Examiner withdraw these rejections. Further, at least one of these rejections should also be withdrawn for at least one additional reason, some examples of which are provided below.

As one example, Johan in view of Domm fails to teach or suggest the claim 8 feature of "wherein said communication module is not authenticated in said telecommunications network." In addressing this feature, the Examiner stated that the feature "can be interpreted to mean that the authentication procedure is left to another entity to authenticate the communication module,"



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and that paragraph 0037 and figure 3 of Domm amounts to a teaching of this feature. (Current office action, pages 10-11). But this interpretation by the Examiner is simply not supported by the plain language of claim 8. While claim 8 may allow for an authentication procedure to be carried out by another entity, that entity must be outside the telecommunication network since claim 8 requires that "said communication module is not authenticated in said telecommunications network." (Emphasis added). Given this proper interpretation, the cited section of Domm does not teach or suggest the claimed feature as the cited section discloses authentication within the telecommunications network.

As another example, Johan in view of Domm fails to teach or suggest the amended claim 12 feature of "wherein said received signalling message contains address information indicative of said machine-to-machine server." As best, Johan discloses a signalling message containing identification data that identifies an operator that the MS 16 wishes to connect to or a Public Land Mobile Network (PLMN) that the MS 16 wishes to connect to. (Paragraphs 0032, 0033). But neither of these amounts to information indicative of "said machine-to-machine server" as recited in claim 12.

As yet another example, Johan in view of Domm in view of Islam fails to teach or suggest the claim 29 feature of "while avoiding to establish a complete circuit-switched or packet-switched connection." In addressing this feature, the Examiner stated that paragraph 0051 of Islam amounts to a teaching of this feature. (Current office action, page 18). But this section merely discloses that a mobile device may determine that it is not being provided with a circuit-switched service, and in response, the mobile device may scan for a wireless network that provides such a service. Paragraph 0053 of Islam discloses a similar concept, but with respect to a packet-switching service.



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Although Islam provides an example where a circuit-switched or packet-switched connection is not established, Islam discloses a process whereby a mobile device attempts to establish a complete circuit-switched or packet-switched connection. The result of Islam would either be that a circuit-switched connection is established, or attempted to be (but cannot be) established, or that a packet-switched connection is established, or attempted to be (but cannot be) established. This is exactly the opposite of the claim 29 feature which recites avoiding to establish a complete circuit-switched or packet-switched connection. Islam does not teach or suggest a setup where application data can be transferred without establishing a complete circuit-switched or packet-switched connection. This same reasoning applies to the rejections of claims 31-33.

## 7. Conclusion

For the foregoing reasons, Applicant respectfully requests favorable reconsideration and allowance of all pending claims.

Applicant does not acquiesce in any assertion in the office action that is not expressly addressed by these remarks.

Should the Examiner wish to discuss this case with the undersigned, the Examiner is invited to call the undersigned at (312) 913-0001.

Respectfully submitted,

**McDONNELL BOEHNEN HULBERT & BERGHOFF LLP**

Dated: August 25, 2014

By: /Gavin J. O'Keefe/
Gavin J. O'Keefe
Reg. No. 59,916



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# PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): 11-575-WO-US

Application Number: 13/126,601

Filed: June 3, 2011

For: TELECOMMUNICATIONS NETWORK AND METHOD OF TRANSFERRING USER DATA IN SIGNALING MESSAGES FROM A COMMUNICATION UNIT TO A DATA PROCESSING CENTRE

Art Unit: 2649

Examiner: Ankur Jain

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

| | Fee | Small Entity Fee | Micro Entity Fee | |
|---|---|---|---|---|
| ☐ One month (37 CFR 1.17(a)(1)) | $200 | $100 | $50 | $ |
| ☑ Two months (37 CFR 1.17(a)(2)) | $600 | $300 | $150 | $ 600.00 |
| ☐ Three months (37 CFR 1.17(a)(3)) | $1,400 | $700 | $350 | $ |
| ☐ Four months (37 CFR 1.17(a)(4)) | $2,200 | $1,100 | $550 | $ |
| ☐ Five months (37 CFR 1.17(a)(5)) | $3,000 | $1,500 | $750 | $ |

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 13-2490.

☐ Payment made via EFS-Web.

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

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 59,916.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Gavin J. O'Keefe/ — Signature

2014-08-25 — Date

Gavin J. O'Keefe — Typed or printed name

59,916 — Telephone Number

**NOTE:** This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☑ * Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 13126601 |
| **Filing Date:** | 03-Jun-2011 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Filer:** | Gavin James O'Keefe |
| **Attorney Docket Number:** | 11-575-WO-US |

Filed as Large Entity

## U.S. National Stage under 35 USC 371 Filing Fees

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| **Extension-of-Time:** | | | | |
| Extension - 2 months with $0 paid | 1252 | 1 | 600 | 600 |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Miscellaneous:** | | | | |
| | | | **Total in USD ($)** | **600** |

# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 19949687 |
| **Application Number:** | 13126601 |
| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
| **Filer:** | Gavin James O'Keefe |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 11-575-WO-US |
| **Receipt Date:** | 25-AUG-2014 |
| **Filing Date:** | 03-JUN-2011 |
| **Time Stamp:** | 11:30:51 |
| **Application Type:** | U.S. National Stage under 35 USC 371 |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | Deposit Account |
| Payment was successfully received in RAM | $600 |
| RAM confirmation Number | 9034 |
| Deposit Account | 132490 |
| Authorized User | |

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

Charge any Additional Fees required under 37 C.F.R. 1.492 (National application filing, search, and examination fees)

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

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

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

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

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Amendment Copy Claims/Response to Suggested Claims | 11-575-WO-US_Response_to_Office_Action.pdf | 252365<br>64f70ff3c29d30c5b66f0b57e1fac6d1db565599 | no | 16 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Extension of Time | 11-575-WO-US_Ext_of_Time.pdf | 126857<br>62dfb4a0c0d8bdb04bf0683cf262cb3f820fb3f9 | no | 1 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 3 | Fee Worksheet (SB06) | fee-info.pdf | 30521<br>17dc8ff387bf60a2cc6362dbb44ad8e06d32e7cb | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 409743 | | |

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

**<u>New Applications Under 35 U.S.C. 111</u>**
**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

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

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

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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| PATENT APPLICATION FEE DETERMINATION RECORD<br>Substitute for Form PTO-875 | Application or Docket Number<br>13/126,601 | Filing Date<br>06/03/2011 | ☐ To be Mailed |
|---|---|---|---|

**ENTITY**: ☒ LARGE ☐ SMALL ☐ MICRO

## APPLICATION AS FILED – PART I

| | (Column 1) | (Column 2) | | |
|---|---|---|---|---|
| FOR | NUMBER FILED | NUMBER EXTRA | RATE ($) | FEE ($) |
| ☐ BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | |
| ☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | |
| ☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | |
| TOTAL CLAIMS (37 CFR 1.16(i)) | minus 20 = | * | X $ = | |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | minus 3 = | * | X $ = | |
| ☐ APPLICATION SIZE FEE (37 CFR 1.16(s)) | If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | |
| ☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) | | | | |
| * If the difference in column 1 is less than zero, enter "0" in column 2. | | | TOTAL | |

## APPLICATION AS AMENDED – PART II

| | | (Column 1) | | (Column 2) | (Column 3) | | |
|---|---|---|---|---|---|---|---|
| AMENDMENT | 08/25/2014 | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
| | Total (37 CFR 1.16(i)) | * 25 | Minus | ** 25 | = 0 | X $80 = | 0 |
| | Independent (37 CFR 1.16(h)) | * 4 | Minus | ***4 | = 0 | X $420 = | 0 |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | |
| | | | | | | TOTAL ADD'L FEE | **0** |

| | | (Column 1) | | (Column 2) | (Column 3) | | |
|---|---|---|---|---|---|---|---|
| AMENDMENT | | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
| | Total (37 CFR 1.16(i)) | * | Minus | ** | = | X $ = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | X $ = | |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | |
| | | | | | | TOTAL ADD'L FEE | |

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

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

LIE
/NICOLE LAWRENCE/

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

20306 7590 08/19/2014

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

| EXAMINER | |
|---|---|
| JAIN, ANKUR | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2649 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 08/19/2014 | PAPER |

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

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

| Applicant-Initiated Interview Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 13/126,601 | BUSROPAN ET AL. | |
| | Examiner | Art Unit | |
| | ANKUR JAIN | 2649 | |

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

(1) *ANKUR JAIN*. (3)_____.

(2) *Gavin J. O'Keefe* . (4)_____.

Date of Interview: *14 August 2014*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☒103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *1 and 25*.

Identification of prior art discussed: *See Non-Final Rejection*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

*References were discussed in addition to clarifying the 112 6th Paragraph issues. No promises were made and no agreement was reached. Examiner will have to perform an updated search based on the proposed amendments.*.

**Applicant recordation instructions:** 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 a non-extendable period of the longer of one month or thirty days 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

**Examiner recordation instructions**: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

| /ANKUR JAIN/<br>Primary Examiner, Art Unit 2649 | |
|---|---|

# 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.

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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 verbatim 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.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

20306 7590 03/24/2014

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
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CHICAGO, IL 60606

| EXAMINER | |
|---|---|
| JAIN, ANKUR | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2649 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 03/24/2014 | PAPER |

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

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

| Office Action Summary | Application No. 13/126,601 | Applicant(s) BUSROPAN ET AL. | |
|---|---|---|---|
| | Examiner ANKUR JAIN | Art Unit 2649 | AIA (First Inventor to File) Status No |

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

**Period for Reply**

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

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

**Status**

1)☒ Responsive to communication(s) filed on *12 February 2014*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ 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**

5)☒ Claim(s) *1,3-9,12,16-18,20-22 and 24-33* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1, 3-9, 12, 16-18, 20-22, and 24-33* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

**Application Papers**

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *04/28/2011* 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).

**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).

**Certified copies:**

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)).

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

**Interim copies:**

a)☐ All b)☐ Some c)☐ None of the: Interim copies of the priority documents have been received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/12/14 has been entered.

### *Response to Arguments*

Applicant's arguments have been fully considered but they are NOT persuasive. The Examiner firmly submits that Johan teaches a method of “transferring data from a communication module to a data processing centre over a telecommunications network” (see Paragraph 0033 and Figure 4). Johan also teaches “the method comprising the steps in the telecommunications network of: wirelessly receiving a signalling message from said communication module, said received signalling message containing” (see Paragraph 0027, 0033, and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Furthermore, this claimed limitation is equivalent to the “signalling message containing” aspect outlined in step 410. Johan also teaches “transferring said data run by a communication module to said data processing centre” (see Paragraph

0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. Johan does not teach "comprising application data of a program run by the communication module being contained." However, Domm teaches "comprising application data of a program run by the communication module being contained" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module being contained, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

***Acknowledgement for Invoking 35 USC § 112, Sixth Paragraph***

For the record, the examiner acknowledges the applicant for invoking 35 USC § 112, Sixth Paragraph, which states:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

**Claim 18** contains limitations that invoke 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function.

Regarding **Claim 18**, there is no structural equivalent in Applicant's specification for "encapsulation module," and the specification only discloses this claimed feature in terms of its functional characteristics. The closest interpretation found by the Examiner is on page 7 lines 1-5 of Applicant's filed specification, which gives no structural equivalent for the claimed "encapsulation module" and is completely silent with respect to the specific physical characteristics and circuitry of this "module."

Applicant's arguments are NOT persuasive, since Applicant has merely stated that the module "may take the form of software running on processor 11." However, this explanation is not relevant and does not constitute the necessary structural support and specific physical characteristics and circuitry of this "module." **See MPEP 2181 Section I Part A.**

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

### *Claim Rejections - 35 USC § 112*

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.

**Claims 18, 24, and 27** 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.

Regarding **Claim 18**, "if one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc). **Also, see MPEP 2181 Section II.**

Regarding **Claim 24 and Claim 27**, the claims are rejected under 112 2nd Paragraph solely due to their dependency from a base claim rejected.

Thus, since the Examiner has identified no structural equivalents for the "encapsulation module" limitation of the identified claim as explained in the 112 6th Paragraph section above, the Examiner submits that this renders the claims indefinite.

Applicant's arguments are NOT persuasive, since Applicant has merely stated that the module "may take the form of software running on processor 11." However, this explanation is not relevant and does not constitute the necessary structural support and specific physical characteristics and circuitry of this "module." **See MPEP 2181 Section I Part A.**

***Claim Rejections - 35 USC § 103***

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 negatived by the manner in which the invention was made.

**Claims 1, 3-9, 12, 16-18, and 20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johannesson et al, US 2007/0232306 A1 (hereafter referenced as Johan), in view of Dommaraju et al, US 2006/0262742 A1 (hereafter referenced as Domm).

Regarding **Claim 1 and Claim 16**, Johan teaches a method of "transferring data from a communication module to a data processing centre over a telecommunications network" (see Paragraph 0033 and Figure 4). Johan also teaches "the method comprising the steps in the telecommunications network of: wirelessly receiving a signalling message from said communication module, said received signalling message containing" (see Paragraph 0027, 0033, and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Furthermore, this claimed limitation is equivalent to the "signalling message containing" aspect outlined in step 410. Johan also teaches "transferring said data run by a communication module to said data processing centre" (see Paragraph 0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. Johan does not teach "comprising application data of a program run by the communication module being contained." However, Domm teaches "comprising application data of a program run by the communication module being

contained" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module being contained, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 3**, Johan teaches "wherein the signalling message is a network attach request message" (see Paragraphs 0027, 0032-0033, and Figure 4).

Regarding **Claim 4**, Johan teaches "wherein said network attach request message is a location updating request message with a location updating type information element" (see Paragraph 0027 and Figure 4). The Examiner submits that the "location updating type information element" is the specific location "information element" within the "location updating request message." Domm teaches "indicating an IMSI attach" (see Paragraphs 0034-0035, 0039, and Figure 3). The claimed limitation is

equivalent to IMSI extracted data within the attach request message 31. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate indicating an IMSI attach, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 5**, Domm teaches “wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach” (see Paragraphs 0011-0012). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Paragraph 0011 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0010 & Figure 1 of Domm.

Regarding **Claim 6**, Johan teaches “transmitting a network attach accept message to the communication module" (see Paragraph 0033, 0036, and Figures 4 and

6). Domm teaches “transmitting further data to and/or receiving further data from a communications module; and receiving a network detach message from the communication module” (see Paragraph 0011-0012). The claimed limitation is equivalent to the GPRS/IMSI attach procedures "from the communications module," followed by a “network detach message from the communication module,” which is equivalent to how the mobile station can initiate a GPRS detach message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate transmitting further data to and/or receiving further data from a communications module; and receiving a network detach message from the communication module, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Paragraph 0011 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN and a GPRS environment as evidenced by Paragraphs 0020-0021 & 0036 of Johan and Paragraph 0010 & Figure 1 of Domm.

Regarding **Claim 7**, Johan teaches “transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module " (see Paragraph 0033, 0036, and Figures 4 and 6).

Regarding **Claim 8**, Domm teaches “wherein a communication module is not authenticated in said telecommunications network" (see Paragraph 0037 and Figure 3). According to page 10 lines 30-35 of Applicant’s filed specification, it is very clear that

“not authenticated in said telecommunications network” can be interpreted to mean that the authentication procedure is left to another entity to authenticate the communication module. In other words, the Examiner is interpreting this claimed feature to mean that the "communication module" does not initiate authentication and does not authenticate itself. Thus, according to this meaning, the Examiner submits that this is no different than the cited portions of Domm, which discloses that the authentication request is coming from an outside source and not from MS 301, which is equivalent to the claimed “communication module is not authenticated in said telecommunications network.” It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein a communication module is not authenticated in said telecommunications network, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 9**, Johan teaches “wherein normal location updating procedure is not performed in said telecommunication module" (see Paragraph 0021 and 0027). Due to lack of antecedent basis, the Examiner is interpreting "telecommunication module" to mean "communication module," since it appears Applicant is trying to claim some type of module, and the only mention of a prior module was the "communication module.” The Examiner submits that the network is responsible for keeping track of the

periodic reported locations of MS 16, and thus the "location updating procedure is not performed in said communication module."

Regarding **Claim 12**, Johan teaches "wherein said received signalling message contains address information indicative of said data processing centre" (see Paragraphs 0032-0033 and Figure 4). The claimed limitation is equivalent to the identification data (numerical value) "addressing" a specific operator, or "data processing centre."

Regarding **Claim 17**, Johan teaches "a node" (see Paragraph 0034 and Figure 5). Johan also teaches "a telecommunications network, said telecommunications network being configured for transferring data from a communication module to a data processing centre" (see Paragraph 0033 and Figure 4). Johan also teaches "configured for performing the steps of: wirelessly receiving a signalling message from said communication module, said user data being contained in said signalling message" (see Paragraph 0027, 0032-0033, and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Johan also teaches "transferring said data to said data processing centre" (see Paragraph 0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. Johan does not teach "containing application data of a program run by the communication module; and application data." However, Domm teaches "containing application data of a program run by the communication module; and application data" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for

MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate containing application data of a program run by the communication module, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 18**, Johan teaches "a communication module comprising a processor for processing data" (see Paragraphs 0022-0024, 0032-0033, and Figures 2 and 4). Johan also teaches "an encapsulation module configured for encapsulating said user data in one or more signalling messages from said communication module to a telecommunications network" (see Paragraphs 0027, 0032-0033 and Figure 4). The Examiner firmly submits that it is necessary for there to be "an encapsulation module" in order to "encapsulate user data" within location updating request message, attach message, and routing area updating request message. Furthermore, the Examiner submits that it is necessary for identification data to be "encapsulated" within the NAS signaling message. Johan also teaches "a transmitter for transmitting said signalling messages containing said user data to said telecommunications network" (see

Paragraphs 0023, 0032-0033, and Figures 2 & 4). Johan does not teach "comprising application data of a program run by the communication module." However, Domm teaches "comprising application data of a program run by the communication module" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 20**, Domm teaches "wherein the node is a serving GPRS support node" (see Paragraph 0040 and Figures 3-6). The claimed limitation is clearly equivalent to SGSN 303. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein the node is a serving GPRS support node, as taught by Domm, for the purpose of increasing the

versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a MSC and SGSN as evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

Regarding **Claim 21**, Domm teaches “wherein the node is a signaling monitor” (see Paragraph 0015 and 0028-0029). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein the node is a signaling monitor, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a MSC and SGSN as evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

**Claims 22 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claims 1 and 18, and further in view of Zhao et al, US 2004/0192251 A1 (hereafter referenced as Zhao).

Regarding **Claim 22 and Claim 24**, the combination of Johan and Domm teaches “application data” (see claim 1). The combination data does not teach "alarming data.” However, Zhao teaches “alarming data” (see Paragraph 0030 and

Figure 4). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Zhao, for the purpose of increasing the versatility and functionality of the application data of Domm, and since both Domm and Zhao identically disclose attach request messages, as evidenced by Paragraph 0030 of Zhao and Figure 3 of Domm.

**Claims 25 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claims 1 and 18, and further in view of Hwang et al, US 2004/0147266 A1 (hereafter referenced as Hwang).

Regarding **Claim 25 and Claim 27**, the combination of Johan and Domm teaches “application data” (see claim 1). The combination data does not teach "data comprising measurement data.” However, Hwang teaches “data comprising measurement data” (see Paragraph 0093, 0122, 0128, and Figure 11B). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Hwang, for the purpose of increasing the versatility and functionality of the application data of Domm, and since both Domm and Hwang identically disclose attach request messages, as evidenced by Figures 9B, 11B, and 12 of Hwang and Figure 3 of Domm.

**Claims 26 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm and Hwang, as applied to Claims 25 and 27, and further in view of Krco et al, US 2010/0322162 A1 (hereafter referenced as Krco).

Regarding **Claim 26 and Claim 28**, the combination of Johan, Domm, and Hwang teaches “communication module and measurement data” (see claim 1 and 25).

The combination does not teach “measurement data obtained using one or more sensors.” However, Krco teaches “measurement data obtained using one or more sensors” (see Paragraph 0009). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Krco, for the purpose of increasing the versatility and functionality of the MS 16 of Johan, and since both Johan and Krco identically disclose SGSN hardware and receiving signalling information as evidenced by Paragraph 0045 of Krco and Figures 4-6 of Johan.

**Claim 29 and 31-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claim 1 and 16-18, and further in view of Islam et al, US 2008/0220772 A1.

Regarding **Claim 29 and 31-33**, the combination of Johan and Domm teaches “wherein said method is a method of transferring data from the communication module to the data processing centre over the telecommunications network in a machine-to-machine communications setting” (see Paragraph 0027 and 0033; and Figure 4 of Johan). This specific type of communications setting is no different than the attach request message containing user data in the disclosed portions of Johan, which is no different procedurally from Applicant's specification of the attach request message containing user data as outlined on page 8 lines 15-35 for example. The combination also teaches “wherein transferring said application data of said program run by the communication module to said data processing centre comprises transferring said application data of said program run by the communication module to said data

processing centre" (see claim 1 and the combination of the Johan and Domm references). The combination does not teach "while avoiding to establish a complete circuit-switched or packet-switched connection." However, Islam teaches "while avoiding to establish a complete circuit-switched or packet-switched connection" (see Paragraph 0051). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate while avoiding to establish a complete circuit-switched or packet-switched connection, as taught by Islam, for the purpose of increasing the versatility and functionality of the PLMN selection methodology of Johan (the combination), and since both Johan and Islam identically disclose circuit switching and a GSM environment, as evidenced by Paragraphs 0019-0020 and 0024 of Johan; and the Abstract and Paragraph 0051 of Islam.

**Claim 30** is rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claim 1, and further in view of Krco.

Regarding **Claim 30**, the combination of Johan and Domm teaches "wherein said received signalling message comprises data; and communication module" (see Paragraph 0033 and Figure 4 of Johan). The combination does not teach "data derived from a sensor." However, Krco teaches "data derived from a sensor" (see Paragraph 0009). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Krco, for the purpose of increasing the versatility and functionality of the MS 16 of Johan, and since both Johan and Krco identically disclose SGSN hardware and

receiving signalling information as evidenced by Paragraph 0045 of Krco and Figures 4-6 of Johan.

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANKUR JAIN whose telephone number is (571)272-9747. The examiner can normally be reached on M-F, 9:00 am to 4:00 pm, EST.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANKUR JAIN/

Examiner, Art Unit 2649

| Notice of References Cited | Application/Control No. 13/126,601 | Applicant(s)/Patent Under Reexamination BUSROPAN ET AL. | |
|---|---|---|---|
| | Examiner ANKUR JAIN | Art Unit 2649 | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification |
|---|---|---|---|---|---|
| * | A | US-2008/0220772 A1 | 09-2008 | ISLAM et al. | 455/432.2 |
| | B | US- | | | |
| | 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**

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|---|---|---|---|---|---|---|
| | N | | | | | |
| | O | | | | | |
| | P | | | | | |
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**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.

**EAST Search History**

**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 1 | 13/126601.APP. AND (encapsulat$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 14:50 |
| L2 | 1 | 13/126601.APP. AND (encapsulat$6 WITH module$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 14:52 |
| L3 | 1 | 13/126601.APP. AND (machine WITH communication$2 WITH data$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 15:03 |
| L4 | 19 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$ or US-20100203898-$ or US-20040192251-$ or US-20040147266-$ or US-20100322162-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2014/03/20 15:05 |
| L5 | 11 | L4 AND ((circuit$4 or packet$4) WITH switch$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 15:05 |
| L6 | 10 | L4 AND ((circuit$4 or packet$4) near5 switch$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 15:06 |
| L7 | 1 | 13/126601.APP. AND (machine$2 near3 machine$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 15:17 |
| L8 | 2 | "20080220772" | US-PGPUB; USPAT; EPO; | OR | ON | 2014/03/20 15:18 |

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| | | | JPO; IBM_TDB | | | |
| L9 | 20 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$ or US-20100203898-$ or US-20040192251-$ or US-20040147266-$ or US-20100322162-$ or US-20080220772-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2014/03/20 17:07 |
| L10 | 11 | L9 AND ((circuit$4 or packet$4) near5 switch$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 17:07 |
| L11 | 6 | L9 AND ((circuit$4 or packet$4) near5 switch$4) AND GSM AND CDMA | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 17:08 |
| L12 | 1 | "20100322162" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 17:18 |
| L13 | 1 | 13/126601.APP. AND (sensor$4 WITH data$2 WITH communication$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/20 17:23 |
| S1 | 0 | 12/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |
| S2 | 1 | 13/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |
| S3 | 1 | 13/126601.APP. AND IMSI | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |
| S4 | 843 | (IMSI ADJ attach$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:35 |
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|---|---|---|---|---|---|---|
| S5 | 561 | (IMSI ADJ attach$6) AND "455".CLAS. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:36 |
| S6 | 102 | (M2M ADJ server$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:51 |
| S7 | 1 | 13/126601.APP. AND RAN | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 17:19 |
| S8 | 655 | (IMSI ADJ attach$4) AND (MSC or SGSN) AND HLR | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:56 |
| S9 | 457 | S8 AND "455".CLAS. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:57 |
| S10 | 7 | S9 AND (M2M) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:57 |
| S11 | 411 | S9 AND ((packet$4 or circuit$4) near5 switch$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:59 |
| S12 | 15 | (IMSI ADJ attach$4 ADJ request$4) AND (MSC or SGSN) AND HLR | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:02 |
| S13 | 23 | (IMSI ADJ attach$4 ADJ request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:02 |
| S14 | 13 | S13 AND (type$2 near3 attach$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:37 |

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|---|---|---|---|---|---|---|
| S15 | 2 | "20050215253" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:33 |
| S16 | 1 | "20070232306" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:34 |
| S17 | 1 | "2008096553" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:35 |
| S18 | 5 | "20080096553" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:35 |
| S19 | 1 | 13/126601.APP. And (encapsulat$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 15:05 |
| S20 | 1 | 13/126601.APP. AND (program WITH application$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:31 |
| S21 | 0 | (transmi$7 or report$4 or output$6 or send$4 or sent$4 or emit$5 or generat$6 or creat$6 or communicat$3 or forward$3 or retransmi$7 or transfer$4) near8 ((alarm$4 or measur$6) near5 data$2) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:43 |
| S22 | 0 | (transmi$7 or report$4 or output$6 or send$4 or sent$4 or emit$5 or generat$6 or creat$6 or communicat$3 or forward$3 or retransmi$7 or transfer$4) near8 (alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:44 |
| S23 | 0 | (alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:45 |
| S24 | 0 | ((alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6)) WITH (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; | OR | ON | 2013/06/06 17:48 |

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|---|---|---|---|---|---|---|
| | | | IBM_TDB | | | |
| S25 | 95 | ((alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6)) AND (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:48 |
| S26 | 1 | S25 AND (MSC or SGSN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:50 |
| S27 | 21 | (MSC or SGSN) near6 (extract$7) near6 (alarm$4 or measur$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:01 |
| S28 | 190 | (MSC or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:09 |
| S29 | 197 | (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:09 |
| S30 | 126 | S29 AND ("455".CLAS. or "370".CLAS.) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:10 |
| S31 | 241 | (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (retriev$4 ) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:09 |
| S32 | 196 | S31 AND ("455".CLAS. or "370".CLAS.) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:10 |
| S33 | 3 | S31 SAME PLMN SAME request$4 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:11 |
| S34 | 15 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$).did. or (US-7257416-$ or US-6131024-$ | US-PGPUB; USPAT | OR | ON | 2013/06/07 11:14 |

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|---|---|---|---|---|---|---|
| | | or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | | | | |
| S35 | 1 | S34 AND (((MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2))) SAME PLMN SAME request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:16 |
| S36 | 1 | 08/633862.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:19 |
| S37 | 9 | S34 AND (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:19 |
| S38 | 6 | S37 AND (PLMN AND request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:21 |
| S39 | 1 | S34 AND ((MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) AND PLMN AND IMSI AND GPRS AND (attach$4 near4 request$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:28 |
| S40 | 1 | 13/126601.APP. AND (address$6 WITH process$5) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 19:01 |
| S41 | 15 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2013/06/08 11:50 |
| S42 | 1 | S41 AND XML | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 11:50 |
| S43 | 0 | (XML ADJ messag$5) SAME (MSC or SGSN) SAME (PLMN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:00 |
| S44 | 12 | (XML ADJ messag$5) AND (MSC or SGSN) | US- | OR | ON | 2013/06/08 |

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|---|---|---|---|---|---|---|
| | | AND (PLMN) | PGPUB; USPAT; EPO; JPO; IBM_TDB | | | 12:00 |
| S45 | 1 | (XML ADJ messag$5) AND 13/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:01 |
| S46 | 6 | S44 AND (attach$4 near3 messag$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:08 |
| S47 | 1 | 13/126601.APP. AND (monitor$4 WITH signal$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 14:57 |
| S48 | 2 | "20060262742" AND (monitor$5 WITH (signal$6 or messag$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 15:06 |
| S49 | 1 | 13/126601.APP. AND (deriv$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 15:38 |
| S50 | 1 | 13/126601.APP. AND (encapsulation WITH modul$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/09 12:13 |
| S51 | 1 | 13/126601.APP. AND node$2 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 14:54 |
| S52 | 1 | 13/126601.APP. AND alarm$5 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:05 |
| S53 | 16 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$ or US-20100203898-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2013/11/27 15:07 |

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|---|---|---|---|---|---|---|
| S54 | 0 | 13/126601.APP. AND (sensor$4 WITH measur$5) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:07 |
| S55 | 0 | 13/126601.APP. AND (sensor$4 WITH measur$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:07 |
| S56 | 1 | 13/126601.APP. AND (sensor$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:07 |
| S57 | 1 | S53 AND alarm$5 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:17 |
| S58 | 0 | ((attach ADJ request$4) near6 (measurement$2) near6 (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:55 |
| S59 | 0 | ((attach ADJ request$4) WITH (measur$6) WITH (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:55 |
| S60 | 0 | ((attach ADJ request$4) SAME (measur$6) SAME (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:55 |
| S61 | 48 | ((attach ADJ request$4) WITH (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:56 |
| S62 | 11 | ((attach ADJ request$4) WITH (measurement$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 16:10 |
| S63 | 4 | ((sensor$4) WITH (measurement ADJ data)) AND ((attach ADJ request$4) or SGSN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 16:44 |

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|---|---|---|---|---|---|---|
| S64 | 6 | 2004/0192251 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:17 |
| S65 | 2 | "20040192251" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:17 |
| S66 | 1 | "20040147266" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:17 |
| S67 | 1 | "20100322162" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:18 |
| S68 | 1 | 13/126601.APP. AND (sensor$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/05 17:09 |
| S69 | 1 | 13/126601.APP. AND avoid$4 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/05 17:26 |
| S70 | 1 | 13/126601.APP. AND (circuit$4 WITH packet$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/05 17:28 |
| S71 | 124 | (Islam).INV. and (RAT) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/05 17:31 |
| S72 | 66 | (Islam).INV. and (RAT) AND switch$4 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2014/03/05 17:31 |

**3/20/2014 5:42:48 PM**
**C:\Users\ajain1\Documents\EAST\Workspaces\13126601.wsp**

| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 13126601 | BUSROPAN ET AL. |
| | **Examiner** | **Art Unit** |
| | ANKUR JAIN | 2649 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ✓ | Rejected | - | Cancelled | N | Non-Elected | A | Appeal |
| = | Allowed | ÷ | Restricted | I | Interference | O | Objected |

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

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 06/09/2013 | 11/27/2013 | 03/20/2014 | | | | | | |
| | 1 | ✓ | ✓ | ✓ | | | | | | |
| | 2 | ✓ | ✓ | - | | | | | | |
| | 3 | ✓ | ✓ | ✓ | | | | | | |
| | 4 | ✓ | ✓ | ✓ | | | | | | |
| | 5 | ✓ | ✓ | ✓ | | | | | | |
| | 6 | ✓ | ✓ | ✓ | | | | | | |
| | 7 | ✓ | ✓ | ✓ | | | | | | |
| | 8 | ✓ | ✓ | ✓ | | | | | | |
| | 9 | ✓ | ✓ | ✓ | | | | | | |
| | 10 | ✓ | ✓ | - | | | | | | |
| | 11 | ✓ | - | - | | | | | | |
| | 12 | ✓ | ✓ | ✓ | | | | | | |
| | 13 | ✓ | ✓ | - | | | | | | |
| | 14 | ✓ | ✓ | - | | | | | | |
| | 15 | ✓ | - | - | | | | | | |
| | 16 | ✓ | ✓ | ✓ | | | | | | |
| | 17 | ✓ | ✓ | ✓ | | | | | | |
| | 18 | ✓ | ✓ | ✓ | | | | | | |
| | 19 | ✓ | ✓ | - | | | | | | |
| | 20 | ✓ | ✓ | ✓ | | | | | | |
| | 21 | ✓ | ✓ | ✓ | | | | | | |
| | 22 | ✓ | ✓ | ✓ | | | | | | |
| | 23 | ✓ | - | - | | | | | | |
| | 24 | ✓ | ✓ | ✓ | | | | | | |
| | 25 | | ✓ | ✓ | | | | | | |
| | 26 | | ✓ | ✓ | | | | | | |
| | 27 | | ✓ | ✓ | | | | | | |
| | 28 | | ✓ | ✓ | | | | | | |
| | 29 | | | ✓ | | | | | | |
| | 30 | | | ✓ | | | | | | |
| | 31 | | | ✓ | | | | | | |
| | 32 | | | ✓ | | | | | | |
| | 33 | | | ✓ | | | | | | |

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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# REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
## (Submitted Only via EFS-Web)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Application Number | 13/126,601 | Filing Date | 2011-06-03 | Docket Number (if applicable) | 11-575-WO-US | Art Unit | 2649 |
| First Named Inventor | Bryan Jerrel Busropan | | | Examiner Name | Ankur Jain | | |

**This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.**
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

### SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☐ Enclosed

- ☐ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

### MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

### FEES

**The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 132490

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature
☐ Applicant Signature

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| Signature of Registered U.S. Patent Practitioner | | | |
|---|---|---|---|
| Signature | /Gavin J. O'Keefe/ | Date (YYYY-MM-DD) | 2014-02-12 |
| Name | Gavin J. O'Keefe | Registration Number | 59916 |

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

# Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 13126601 |
| **Filing Date:** | 03-Jun-2011 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Filer:** | Gavin James O'Keefe/Irene Martinez |
| **Attorney Docket Number:** | 11-575-WO-US |

Filed as Large Entity

## U.S. National Stage under 35 USC 371 Filing Fees

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

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Miscellaneous:** | | | | |
| Request for Continued Examination | 1801 | 1 | 1200 | 1200 |
| | | **Total in USD ($)** | | **1200** |

# Electronic Acknowledgement Receipt

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|---|---|
| **EFS ID:** | 18186969 |
| **Application Number:** | 13126601 |
| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
| **Filer:** | Gavin James O'Keefe |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 11-575-WO-US |
| **Receipt Date:** | 12-FEB-2014 |
| **Filing Date:** | 03-JUN-2011 |
| **Time Stamp:** | 14:48:47 |
| **Application Type:** | U.S. National Stage under 35 USC 371 |

## Payment information:

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|---|---|
| Submitted with Payment | yes |
| Payment Type | Deposit Account |
| Payment was successfully received in RAM | $1200 |
| RAM confirmation Number | 1090 |
| Deposit Account | 132490 |
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## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Request for Continued Examination (RCE) | 11-575-WO-US_RCE_Transmittal.PDF | 797978<br>4dd0331cbcbfcb6bc935d54026b10a3e5aa84697 | no | 3 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Fee Worksheet (SB06) | fee-info.pdf | 30817<br>92d8573876cb4de450bda898e7f282d81f930311 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 828795 | | |

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**New Applications Under 35 U.S.C. 111**

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

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

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

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

20306 7590 02/07/2014

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| EXAMINER | |
|---|---|
| JAIN, ANKUR | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2649 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 02/07/2014 | PAPER |

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

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

| **Advisory Action Before the Filing of an Appeal Brief** | **Application No.** 13/126,601 | **Applicant(s)** BUSROPAN ET AL. | |
|---|---|---|---|
| | **Examiner** ANKUR JAIN | **Art Unit** 2649 | **AIA (First Inventor to File) Status** No |

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

THE REPLY FILED 04 February 2014 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires months from the mailing date of *the prior Advisory Action* or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.
   *Examiner Note*: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   b) ☐ They raise the issue of new matter (see NOTE below);
   c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: *See Continuation Sheet*. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): (a) ☒ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
13. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
14. ☐ Other: _____.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:
    Claim(s) allowed: .
    Claim(s) objected to: .
    Claim(s) rejected: 1,3-9,12,16-18,20-22 and 24-33.
    Claim(s) withdrawn from consideration: .

/ANKUR JAIN/
Examiner, Art Unit 2649

Continuation of 3. NOTE: Applicant's addition of new claims raises new issues and requires further search and consideration .

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**(MBHB Case No. 11-575-WO-US)**

| | | |
|---|---|---|
| **In re Application of:** | ) | |
| | ) | |
| **Bryan Jerrel Busropan, et al.** | ) | |
| | ) | **Group Art Unit: 2649** |
| **Serial No.: 13/126,601** | ) | |
| | ) | |
| **Filed: June 3, 2011** | ) | **Examiner: Ankur Jain** |
| | ) | |
| **For: Telecommunications Network and Method of Transferring User Data in Signaling Messages from a Communication Unit to a Data Processing Centre** | ) | **Confirmation No.: 4470** |

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## RESPONSE TO OFFICE ACTION

Dear Commissioner:

In response to the final office action dated December 04, 2013, Applicant submits the following amendments and remarks:

**Amendments to the claims** begin on page 2.

**Remarks** begin on page 9.

Applicant generally authorizes the Office to charge any underpayment or credit any overpayment to Deposit Account No. 132490, and to treat any communication in this matter that requires an extension of time as incorporating a request for such an extension.



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## Amendments to the Claims

1. (Previously Presented) A method of transferring data from a communication module to a data processing centre over a telecommunications network, the method comprising:

wirelessly receiving a signalling message from said communication module, said received signalling message containing application data of a program run by the communication module; and

transferring said application data of said program run by the communication module to said data processing centre.

2. (Canceled)

3. (Previously Presented) The method according to claim 2, wherein the signalling message is a network attach request message.

4. (Original) The method according to claim 3, wherein said network attach request message is a location updating request message with a location updating type information element indicating an IMSI attach.

5. (Original) The method according to claim 3, wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach.



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6. (Previously Presented) The method according to claim 3, further comprising:

transmitting a network attach accept message to the communication module;

transmitting further data to and/or receiving further data from the communication module; and

receiving a network detach message from the communication module.

7. (Previously Presented) The method according to claim 3, further comprising transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module.

8. (Previously Presented) The method according to claim 3, wherein said communication module is not authenticated in said telecommunications network.

9. (Previously Presented) The method according to claim 1 wherein normal location updating procedure is not performed in said communication module.

10. (Canceled)

11. (Canceled)

12. (Previously Presented) The method according to claim 1, wherein said received signalling message contains address information indicative of said data processing centre.



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13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Previously Presented) A telecommunications network being configured for transferring data from a communication module to a data processing centre, said telecommunications network configured for performing a set of steps comprising:

wirelessly receiving a signalling message from said communication module, said received signalling message containing application data of a program run by the communication module; and

transferring said application data to said data processing centre.

17. (Previously Presented) A node in a telecommunications network, said telecommunications network being configured for transferring data from a communication module to a data processing centre, said node being configured for performing a set of steps comprising:

wirelessly receiving a signalling message from said communication module, said received signalling message containing application data of a program run by the communication module; and

transferring said application data to said data processing centre.



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18. (Previously Presented). A communication module comprising (i) a processor for processing application data of a program run by the communication module, (ii) an encapsulation module configured for encapsulating said application data in one or more signalling messages from said communication module to a telecommunications network and (iii) a transmitter configured for transmitting said signalling messages containing said application data of said program run by the communication module to said telecommunications network.

19. (Canceled)

20. (Previously Presented) A node according to claim 17, wherein the node is a serving GPRS support node.

21. (Previously Presented) A node according to claim 17, wherein the node is a signalling monitor.

22. (Previously Presented) The method according to claim 1, wherein the application data comprises alarming data.

23. (Canceled)

24. (Previously Presented) A communication module according to claim 18, wherein the application data comprises alarming data.



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25. (Currently Amended) The method according to claim 1, wherein the application data comprises measurement data.

26. (Currently Amended) The method according to claim 25, wherein the communication module comprises one or more sensors, and wherein the measurement data comprises measurement data obtained using the one or more sensors.

27. (Currently Amended) The communication module according to claim 18, wherein the application data comprises measurement data.

28. (Currently Amended) The communication module according to claim 27, further comprising one or more sensors, wherein the measurement data comprises measurement data obtained using the one or more sensors.

29. (New) The method of claim 1,

wherein said method is a method of transferring data from the communication module to the data processing centre over the telecommunications network in a machine-to-machine communications setting; and

wherein transferring said application data of said program run by the communication module to said data processing centre comprises transferring said application data of said program run by the communication module to said data processing centre while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.



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30. (New) The method of claim 1, wherein said received signalling message comprises data derived from a sensor of the communication module.

31. (New) The telecommunications network of claim 16,

wherein said telecommunications network is configured for transferring data from the communication module to the data processing centre in a machine-to-machine communications setting; and

wherein transferring said application data to said data processing centre comprises transferring said application data to said data processing centre while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.

32. (New) The node of claim 17,

wherein the telecommunications network is configured for transferring data from the communication module to the data processing centre in a machine-to-machine communications setting; and

wherein transferring said application data to said data processing centre comprises transferring said application data to said data processing centre, while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.



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33. (New) The communication module of claim 18,

wherein the processor is configured for processing application data of the program in a machine-to-machine communications setting run by the communication module; and

wherein the transmitter is configured for transmitting said signalling messages containing said application data of said program run by the communication module to said telecommunications network, while avoiding to establish a complete circuit-switched or packet-switched connection between said communication module and said telecommunications network.



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## Remarks

### 1 Request for Withdrawal of Premature Final Office Action

As an initial matter, Applicant respectfully requests that the Examiner withdraw the finality of the office action dated December 4, 2013 because in the office action, the Examiner did not address all of Applicant's arguments from Applicant's most recent response dated September 5, 2013.

According to M.P.E.P §707.07(f), "[w]here the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and address the substance of it." But in the "Response to Arguments" section of the office action, the Examiner responded to Applicant's arguments by asserting that the cited references disclose features of claims that differ different from Applicant's most recently presented claims.

For example, in addressing Applicant's argument that U.S. Pat. Pub. No. 2006/0262742 to Dommaraju (Domm) fails to disclose a particular feature of claim 1, the Examiner stated that "Domm teaches 'comprising application data of a program run by the communication module being contained.'" (Office action, page 2). However, this phrase was not recited in Applicant's most recently presented claim 1 (but instead was recited in another version of claim 1 presented earlier during the prosecution process). As such, the Examiner has yet to address Applicant's most recently presented claims. For at least this reason, Applicant respectfully requests that the Examiner withdraw the finality of the office action.

### 2. Summary of the Office Action

In the Office Action dated December 4, 2013, the Examiner rejected claims 26 and 28 under 35 U.S.C. §112(1) as allegedly failing to comply with the written description requirement. The Examiner also rejected claims 18, 24, and 27 under 35 U.S.C. § 112(2) for failing to



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particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In addition, the Examiner rejected claims 1-13 and 16-21 under 35 U.S.C. § 103(a) as being obvious over U.S. App. Pub. No. 2007/0232306 to Johannesson et al. (Johan) in view of Domm And the Examiner rejected claim 14 under 35 U.S.C. § 103(a) as being obvious over Johan in view of Domm in view of U.S. Pat. Pub. No. 2010/0203898 to Noldus et al. (Noldus). The Examiner also rejected claims 25 and 27 under 35 U.S.C. § 103(a) as being obvious over Johan in view of Domm in view of U.S. Pat. Pat Pub. No. 2004/0147266 to Hwang et al. (Hwang). Finally, the Examiner rejected claims 26 and 28 under 35 U.S.C. § 103(a) as being obvious over Johan in view of Domm in view of U.S. Pat. Pat Pub. No. 2010/0322162 to Krco et al. (Krco).

**3. Status of the Claims**

Applicant has amended claims 25-28, canceled claims 2, 10, 13, 14, and 19, and added new claims 29-33. Pending now are claims 1, 3-9, 12, 16-18, 20-22, and 24-33, of which claims 1, 16, 17, and 18 are independent and the remainder of which are dependent.

**4. Response to the Rejections of Claims 26 and 28**

As indicated above, the Examiner rejected claims 26 and 28 under 35 U.S.C. §112(1) as allegedly failing to comply with the written description requirement. In particular, the Examiner rejected these claims for reciting "wherein the measurement data comprises measurement data obtained using the one or more sensors," which the Examiner alleges constitutes new matter. According to M.P.E.P. § 2163 I.B. "newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure."



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Applicant respectfully submits that this feature does not constitute new matter because Applicant's specification expressly, implicitly, and/or inherently discloses this feature. Indeed, Applicant's specification states that "user data may comprises…measurement data" and that in one embodiment "user data U [comes] from the sensor 10." (Page 2, lines 29-31 and page 7, lines 4-5). Accordingly, this feature does not constitute new matter and therefore the rejections of claims 26 and 28 should be withdrawn.

**5. Response to the Rejections of Claims 18, 24, and 27**

As indicated above, the Examiner rejected claims 18, 24, and 27 under 35 U.S.C. § 112(2) for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In support of this rejection, the Examiner stated that the "encapsulation module" feature recited in each of these claims invokes 35 U.S.C § 112(6) and that allegedly there is no structural support in Applicant's specification for this feature.

The Examiner also stated that "[i]f applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either: (a) [amending the specification or ] or (b) [s]tating on the record what the corresponding structure, materials, or acts, which are implicitly or inherently set forth in the written description of the specification perform the claimed functions." (Office action, page 5).

Applicant's specification indicates that the claimed "encapsulation module" may take the form of "software running on processor 11," and that the "[p]rocessor 11 is configured for running one or more computer programs." (Page 6, lines 31-32 and page 7, lines 2-3). Applicant submits that it is well-known to one of ordinary skill in the art that "software" or a



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"computer program" refers to a set of program instructions stored on a structure commonly known as a data storage, such that the instructions can be accessed and run by a processor to perform a set of functions. Accordingly, Applicant respectfully submits that Applicant's specification provides sufficient structural support for this feature, and therefore the rejections of claims 18, 24, and 27 should be withdrawn.

**6. Response to the Rejections of Claims 1-10, 12-14, 16-22, and 24-28**

**a. Independent Claim 1**

As noted above, the Examiner rejected claim 1 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johan in view of Domm. However, this rejection should be withdrawn, because neither Johan nor Domm teaches or suggests at least one feature of claim 1.

For example, neither Johan nor Domm teaches or suggests the claim 1 feature of "wirelessly receiving a signalling message from said communication module, said received signalling message containing application data of a program run by the communication module." At best, Johan discloses a mobile network 401 that receives a non-access-stratum signalling message that "includes an identification data corresponding to the selected [public land mobile network] PLMN from the plurality of available PLMNs that [mobile station] MS 16 wishes to connect to." (Paragraph 0033). However, even assuming, *arguendo*, that the non-access-stratum signalling message and the MS of Johan amount to the signalling message and the communication module claim 1, the signalling message of Johan includes PLMN-identification data, not application data, let alone application data of a program run by the MS (the communication module) as recited in claim 1.

Further, Domm fails to disclose this deficiency of Johan. Domm discloses a serving GPRS support node (SGSN) 303 that receives a particular type of signalling message, namely an



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attach request message from a mobile station (MS) 301. (Paragraph 0034). Further Domm discloses extracting four types of data from the attach request message, namely an International Mobile Security Identity (IMSI), a Temporary Mobile Packet Subscriber Identity (PTMSI) for a packet network, a Temporary Logical Link Identity (TLLI), and a Routing Area Id (RAI). (Tables 1 and 2). But Domm describes these as "parameters that may be associated with a particular subscriber's connection." (Paragraph 0015). Accordingly, they do not amount to "application data of a program run by communication module" as recited in claim1.

Further, neither Johan nor Domm teaches or suggests the claim 1 feature of "transferring said application data of said program run by the communication module to said data processing centre." As discussed above, Johan fails to disclose "receiving a signalling message…containing application data of a program run by the communication module," and therefore Johan necessarily fails to disclose "transmitting said application data" as recited in claim 1. (Emphasis added). In addressing this feature, the Examiner summarily cites to paragraph 0033 (and Figure 4) of Johan, but this sections merely disclose a mobile network 401 transmitting network information 402 or an accept/reject message 418 to a mobile station 16. But neither of these are application data, let alone "said application data" (i.e., application data of a program run by the communication module)" as recited in claim 1. For at least this reason the rejection of claim 1 should be withdrawn.

**b. Independent Claims 16-18**

As noted above, the Examiner rejected claims 16-18 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johan in view of Domm. For largely the same reasons discussed above with respect to claim 1, Applicant respectfully requests that the Examiner withdraw these rejections.



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### c. Dependent Claims 3-9, 12, 16-18, 20-22, and 24-33

As noted above, the Examiner rejected claims 3-9, 12, 16-18, 20-22, and 24-33 under U.S.C. § 103(a) as allegedly being unpatentable over Johan in view of Domm and/or one or more additional references. For at least the reason that each of these claims depends from one of allowable claims 1 or 16-18, Applicant respectfully requests that the Examiner withdraw these rejections. Further, at least one of these rejections should also be withdrawn for at least one additional reason, some examples of which are provided below.

As noted above, the Examiner rejected claim 12 under 35 U.S.C. §103(a) as allegedly being obvious over Johan in view of Domm. But this rejection should be withdrawn because the Examiner based the rejection on an assertion that Johan teaches a feature that Johan does not actually teach. In particular, the Examiner asserted that Johan discloses "wherein said received signalling message contains address information indicative of said processing centre." In addressing this feature, the Examiner argued that the "identification data (numerical value)" referenced in paragraphs 0032-0033 (and Figure 4) of Johan amounts to the "address indicative information of said data processing centre" as recited in claim 1. However, this cannot be the case as claim 1 recites that the address information is indicative of "said data processing centre" (i.e., the data processing centre to which said application data is transferred to). And as discussed above, Johan fails to disclose transmitting said application data to a data processing centre, and therefore at best, Johan discloses transmitting a traditional attach request message to a data processing centre that is identified by address information.

As noted above, the Examiner rejected claims 22 under 35 U.S.C. § 103(a) as allegedly being obvious over Johan in view of Domm in view of Zhao. But this rejection should be withdrawn because the Examiner based the rejection on an assertion that Johan teaches a feature



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that Johan does not actually teach. In particular, the Examiner asserted that Johan discloses the claimed feature of "alarming data." In addressing this feature, the Examiner cited to paragraph 0030 of Zhao, which discloses that "the subscriber device transmits another attach request including a limited attached indicator, for example, an emergency attach indicator notifying the network that the subscriber is requesting attachment for emergency sessions only." But this merely discloses that a subscriber device can characterize an attachment request as urgent. Moreover, even if Zhao discloses "alarming data" generally, Johan in view of Domm in view of Zhao fails to teach or suggest the claim 22 feature of "said received signalling message containing application data of a program run by the communication module…the application data comprises alarming data." (Emphasis added). Indeed, the discussion in paragraph 0030 of Zhao has nothing to do with application data of a program run by the communication module, but instead merely refers to a traditional attach request message that is used in establishing a connection with a network. Given this, the disclosure of Johan in view of Domm in view of Zhao would still not amount to the claimed invention.

For largely the same reasons discussed above with respect to claim 22, Applicant respectfully requests that the Examiner withdraw the rejection of claim 24.

As noted above, the Examiner rejected claim 25 under 35 U.S.C. § 103(a) as allegedly being obvious over Johan in view of Domm in view of Hwang. But this rejection should be withdrawn because Johan in view of Domm in view of Hwang fails to teach or suggest the claim 25 feature of "said received signalling message containing application data of a program run by the communication module…the application data comprises measurement data." (Emphasis added). Indeed, Hwang merely discloses that "the [servicing radio network controller] SRNC 920 transmits an ID of the [user equipment] UE 910…through an [multimedia



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broadcast/multimedia service] MBMS attach message request according to the measurement result reported by the UE 910." (Paragraph 0093). But Hwang fails to provide any indication that this "measurement result" has anything to do with application data of a program run by the user equipment (the communication module) as recited in claim 25. Instead, the cited section merely refers to a traditional attach request message that is used in establishing a connection with a network. Given this, the disclosure of Johan in view of Domm in view of Hwang would still not amount to the claimed invention.

For largely the same reasons discussed above with respect to claim 25, Applicant respectfully requests that the Examiner withdraw the rejections of claim 26-28.

## 7. Conclusion

For the foregoing reasons, Applicant respectfully requests favorable reconsideration and allowance of all pending claims.

Applicant does not acquiesce in any assertion in the office action that is not expressly addressed by these remarks.

Should the Examiner wish to discuss this case with the undersigned, the Examiner is invited to call the undersigned at (312) 913-0001.

Respectfully submitted,

**McDONNELL BOEHNEN HULBERT & BERGHOFF LLP**

Dated: February 4, 2014

By: /Gavin J. O'Keefe/
Gavin J. O'Keefe
Reg. No. 59,916



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# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 18115845 |
| **Application Number:** | 13126601 |
| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
| **Filer:** | Gavin James O'Keefe |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 11-575-WO-US |
| **Receipt Date:** | 04-FEB-2014 |
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| **Application Type:** | U.S. National Stage under 35 USC 371 |

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## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | | ResponseOA.pdf | 152525<br>cac06b1d2f752baa9db02d763b463b1a2cb32d2e | yes | 16 |

| | Multipart Description/PDF files in .zip description | | |
|---|---|---|---|
| | **Document Description** | **Start** | **End** |
| | Response After Final Action | 1 | 1 |
| | Claims | 2 | 8 |
| | Applicant Arguments/Remarks Made in an Amendment | 9 | 16 |
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| PATENT APPLICATION FEE DETERMINATION RECORD<br>Substitute for Form PTO-875 | Application or Docket Number<br>13/126,601 | Filing Date<br>06/03/2011 | ☐ To be Mailed |
|---|---|---|---|

**ENTITY:** ☒ LARGE ☐ SMALL ☐ MICRO

## APPLICATION AS FILED – PART I

| FOR | (Column 1) NUMBER FILED | (Column 2) NUMBER EXTRA | RATE ($) | FEE ($) |
|---|---|---|---|---|
| ☐ BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | |
| ☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | |
| ☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | |
| TOTAL CLAIMS (37 CFR 1.16(i)) | minus 20 = | * | X $ = | |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | minus 3 = | * | X $ = | |
| ☐ APPLICATION SIZE FEE (37 CFR 1.16(s)) | If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | |
| ☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) | | | | |
| * If the difference in column 1 is less than zero, enter "0" in column 2. | | | TOTAL | |

## APPLICATION AS AMENDED – PART II

| AMENDMENT | 02/04/2014 | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|
| | Total (37 CFR 1.16(i)) | * 25 | Minus | ** 25 | = 0 | X $80 = | 0 |
| | Independent (37 CFR 1.16(h)) | * 4 | Minus | ***4 | = 0 | X $420 = | 0 |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | |
| | | | | | | TOTAL ADD'L FEE | 0 |

| AMENDMENT | | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|
| | Total (37 CFR 1.16(i)) | * | Minus | ** | = | X $ = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | X $ = | |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | |
| | | | | | | TOTAL ADD'L FEE | |

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

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

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

20306 7590 12/04/2013

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| EXAMINER | |
|---|---|
| JAIN, ANKUR | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2649 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 12/04/2013 | PAPER |

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

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

| Office Action Summary | Application No. 13/126,601 | Applicant(s) BUSROPAN ET AL. | |
|---|---|---|---|
| | Examiner ANKUR JAIN | Art Unit 2649 | AIA (First Inventor to File) Status No |

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

**Period for Reply**

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

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

**Status**

1)☒ Responsive to communication(s) filed on *5 September 2013*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ 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**

5)☒ Claim(s) *1-10,12-14,16-22 and 24-28* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-10,12-14,16-22 and 24-28* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

**Application Papers**

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *04/28/2011* 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).

**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).

**Certified copies:**

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)).

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

**Interim copies:**

a)☐ All b)☐ Some c)☐ None of the: Interim copies of the priority documents have been received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments have been fully considered but they are NOT persuasive. The Examiner firmly submits that with respect to the argument raised for claim 1 on pages 10-12 of the Remarks, the Examiner firmly submits that Johan teaches a method of "transferring data from a communication module to a data processing centre over a telecommunications network" (see Paragraph 0033 and Figure 4). Johan also teaches "the method comprising the steps in the telecommunications network of: wirelessly receiving a signalling message from said communication module, said received signalling message containing" (see Paragraph 0027, 0033, and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Furthermore, this claimed limitation is equivalent to the "signalling message containing" aspect outlined in step 410. Johan also teaches "transferring said data run by a communication module to said data processing centre" (see Paragraph 0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. Johan does not teach "comprising application data of a program run by the communication module being contained." However, Domm teaches "comprising application data of a program run by the communication module being contained" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to

have a “program run by the communication module being contained” and for the attach request message to be a part of a “program run by the communication module” which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module being contained, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

With respect to Applicant’s arguments for claim 7 raised on pages 12-13 of the Remarks, the Examiner submits that Johan teaches “transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module " (see Paragraph 0033, 0036, and Figures 4 and 6).

### *Acknowledgement for Invoking 35 USC § 112, Sixth Paragraph*

For the record, the examiner acknowledges the applicant for invoking 35 USC § 112, Sixth Paragraph, which states:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

**Claim 18** contains limitations that invoke 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function.

Regarding **Claim 18**,

There is no structural equivalent in Applicant's specification for "encapsulation module," and the specification only discloses this claimed feature in terms of its functional characteristics. The closest interpretation found by the Examiner is on page 7 lines 1-5 of Applicant's filed specification, which gives no structural equivalent for the claimed "encapsulation module" and is completely silent with respect to the specific physical characteristics and circuitry of this "module."

Applicant's arguments are NOT persuasive, since Applicant has merely stated that the module "may take the form of software running on processor 11." However, this explanation is not relevant and does not constitute the necessary structural support and specific physical characteristics and circuitry of this "module."

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

### *Claim Rejections - 35 USC § 112*

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.

**Claims 26 and 28** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claimed limitation, "wherein the measurement data comprises measurement data obtained using the one or more sensors" is considered new matter, since Applicant's specification is completely silent with respect to sensors sensing measurement data. The specification is silent with respect to what specific data is sensed by the sensors, and thus this constitutes new matter.

The Examiner suggests Applicant amend the claims to be in better accord with the specification in order to advance prosecution and advance towards allowance.

### *Claim Rejections - 35 USC § 112*

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.

**Claims 18, 24, and 27** 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.

Regarding **Claim 18**, "if one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc). **Also, see MPEP 2181 Section II.**

Regarding **Claim 24 and Claim 27**, the claims are rejected under 112 2nd Paragraph solely due to their dependency from a base claim rejected.

Thus, since the Examiner has identified no structural equivalents for the "encapsulation module" limitation of the identified claim as explained in the 112 6th Paragraph section above, the Examiner submits that this renders the claims indefinite.

Applicant's arguments are NOT persuasive, since Applicant has merely stated that the module "may take the form of software running on processor 11." However, this explanation is not relevant and does not constitute the necessary structural support and specific physical characteristics and circuitry of this "module."

***Claim Rejections - 35 USC § 103***

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 negatived by the manner in which the invention was made.

**Claims 1-13 and 16-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johannesson et al, US 2007/0232306 A1 (hereafter referenced as Johan), in view of Dommaraju et al, US 2006/0262742 A1 (hereafter referenced as Domm).

Regarding **Claim 1 and Claim 16**, Johan teaches a method of "transferring data from a communication module to a data processing centre over a telecommunications network" (see Paragraph 0033 and Figure 4). Johan also teaches "the method

comprising the steps in the telecommunications network of: wirelessly receiving a signalling message from said communication module, said received signalling message containing" (see Paragraph 0027, 0033, and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Furthermore, this claimed limitation is equivalent to the "signalling message containing" aspect outlined in step 410. Johan also teaches "transferring said data run by a communication module to said data processing centre" (see Paragraph 0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. Johan does not teach "comprising application data of a program run by the communication module being contained." However, Domm teaches "comprising application data of a program run by the communication module being contained" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module being contained, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request

message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 2**, Johan teaches "retrieving said data from said received signalling message in said telecommunications network" (see Paragraphs 0032-0033). Domm teaches "application data" (see claim 1). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate the teachings as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 3**, Johan teaches "wherein the signalling message is a network attach request message" (see Paragraphs 0027, 0032-0033, and Figure 4).

Regarding **Claim 4**, Johan teaches "wherein said network attach request message is a location updating request message with a location updating type information element" (see Paragraph 0027 and Figure 4). The Examiner submits that the "location updating type information element" is the specific location "information element" within the "location updating request message." Domm teaches "indicating an IMSI attach" (see Paragraphs 0034-0035, 0039, and Figure 3). The claimed limitation is equivalent to IMSI extracted data within the attach request message 31. It would have

been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate indicating an IMSI attach, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 5**, Domm teaches “wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach” (see Paragraphs 0011-0012). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Paragraph 0011 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0010 & Figure 1 of Domm.

Regarding **Claim 6**, Johan teaches “transmitting a network attach accept message to the communication module" (see Paragraph 0033, 0036, and Figures 4 and 6). Domm teaches “transmitting further data to and/or receiving further data from a

communications module; and receiving a network detach message from the communication module" (see Paragraph 0011-0012). The claimed limitation is equivalent to the GPRS/IMSI attach procedures "from the communications module," followed by a "network detach message from the communication module," which is equivalent to how the mobile station can initiate a GPRS detach message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate transmitting further data to and/or receiving further data from a communications module; and receiving a network detach message from the communication module, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Paragraph 0011 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN and a GPRS environment as evidenced by Paragraphs 0020-0021 & 0036 of Johan and Paragraph 0010 & Figure 1 of Domm.

Regarding **Claim 7**, Johan teaches "transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module " (see Paragraph 0033, 0036, and Figures 4 and 6).

Regarding **Claim 8**, Domm teaches "wherein a communication module is not authenticated in said telecommunications network" (see Paragraph 0037 and Figure 3). According to page 10 lines 30-35 of Applicant's filed specification, it is very clear that "not authenticated in said telecommunications network" can be interpreted to mean that

the authentication procedure is left to another entity to authenticate the communication module. In other words, the Examiner is interpreting this claimed feature to mean that the "communication module" does not initiate authentication and does not authenticate itself. Thus, according to this meaning, the Examiner submits that this is no different than the cited portions of Domm, which discloses that the authentication request is coming from an outside source and not from MS 301, which is equivalent to the claimed "communication module is not authenticated in said telecommunications network." It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein a communication module is not authenticated in said telecommunications network, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 9**, Johan teaches "wherein normal location updating procedure is not performed in said telecommunication module" (see Paragraph 0021 and 0027). Due to lack of antecedent basis, the Examiner is interpreting "telecommunication module" to mean "communication module," since it appears Applicant is trying to claim some type of module, and the only mention of a prior module was the "communication module." The Examiner submits that the network is responsible for keeping track of the

periodic reported locations of MS 16, and thus the "location updating procedure is not performed in said communication module."

Regarding **Claim 10**, Domm teaches "said application data" (see claim 1). Domm teaches "at least a part is encrypted" (see Paragraphs 0003 and 0017). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate application data; and at least a part is encrypted, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 11**, Johan teaches "said user data" (see claim 1). Domm teaches "comprises application data of a program run by a communication module" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module being

contained, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 12**, Johan teaches “wherein said received signalling message contains address information indicative of said data processing centre” (see Paragraphs 0032-0033 and Figure 4). The claimed limitation is equivalent to the identification data (numerical value) "addressing" a specific operator, or "data processing centre."

Regarding **Claim 13**, Johan teaches “wherein said data is transferred to said data processing centre” (see discussion of claim 2 and Paragraphs 0032-0033 of Johan). Domm teaches “application data” (see claim 1). Domm teaches “one or more SMS messages” (see Paragraph 0010). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate application data, and one or more SMS messages, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Figures 5-6 & Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 17**, Johan teaches “a node” (see Paragraph 0034 and Figure 5). Johan also teaches “a telecommunications network, said telecommunications network being configured for transferring data from a communication module to a data processing centre” (see Paragraph 0033 and Figure 4). Johan also teaches “configured for performing the steps of: wirelessly receiving a signalling message from said communication module, said user data being contained in said signalling message” (see Paragraph 0027, 0032-0033, and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Johan also teaches “transferring said data to said data processing centre” (see Paragraph 0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. Johan does not teach “containing application data of a program run by the communication module; and application data.” However, Domm teaches “containing application data of a program run by the communication module; and application data” (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a “program run by the communication module being contained” and for the attach request message to be a part of a “program run by the communication module” which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate containing application data of a program run by the communication module, as taught by Domm, for the purpose of increasing the versatility and

functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 18**, Johan teaches "a communication module comprising a processor for processing data" (see Paragraphs 0022-0024, 0032-0033, and Figures 2 and 4). Johan also teaches "an encapsulation module configured for encapsulating said user data in one or more signalling messages from said communication module to a telecommunications network" (see Paragraphs 0027, 0032-0033 and Figure 4). The Examiner firmly submits that it is necessary for there to be "an encapsulation module" in order to "encapsulate user data" within location updating request message, attach message, and routing area updating request message. Furthermore, the Examiner submits that it is necessary for identification data to be "encapsulated" within the NAS signaling message. Johan also teaches "a transmitter for transmitting said signalling messages containing said user data to said telecommunications network" (see Paragraphs 0023, 0032-0033, and Figures 2 & 4). Johan does not teach "comprising application data of a program run by the communication module." However, Domm teaches "comprising application data of a program run by the communication module" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a

"program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 19**, Domm teaches "wherein the node is a Mobile Switching Centre" (see Paragraphs 0003, 0010, and Figure 2). The claimed limitation is clearly equivalent to MSC 110. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein the node is a Mobile Switching Centre, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a MSC and SGSN as evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

Regarding **Claim 20**, Domm teaches "wherein the node is a serving GPRS support node" (see Paragraph 0040 and Figures 3-6). The claimed limitation is clearly equivalent to SGSN 303. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein the node is a serving GPRS support node, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a MSC and SGSN as evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

Regarding **Claim 21**, Domm teaches "wherein the node is a signaling monitor" (see Paragraph 0015 and 0028-0029). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein the node is a signaling monitor, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a MSC and SGSN as evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

Regarding **Claim 23**, Johan teaches “wherein the user data furthermore contain address information indicating the data processing center to which the user data are transferred” (see Paragraphs 0032-0033 and Figure 4). The claimed limitation is equivalent to the identification data (numerical value) "address information" for a specific operator, or “data processing center.”

**Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claim 1, and further in view of Noldus et al, US 2010/0203898 A1 (hereafter referenced as Noldus).

Regarding **Claim 14**, the combination of Johan and Domm teaches “wherein said data is transferred to said data processing centre” (see Paragraphs 0032-0033 of Johan and discussion of claim 2). The combination also teaches “application data” (see claim 1). The combination does not teach “one or more XML messages." However, Noldus teaches “one or more XML messages” (see Paragraph 0018). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate one or more XML messages, as taught by Noldus, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Noldus identically disclose a terminal sending an attach message as evidenced by Paragraphs 0038 of Noldus and Figure 4 of Johan, and both references identically disclose a MSC receiving location information of a terminal as evidenced by Paragraphs 0036-0038 & Figure 2 of Noldus, and Paragraphs 0021, 0027, & Figure 6 of Johan.

**Claims 22 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claims 1 and 18, and further in view of Zhao et al, US 2004/0192251 A1 (hereafter referenced as Zhao).

Regarding **Claim 22 and Claim 24**, the combination of Johan and Domm teaches “application data” (see claim 1). The combination data does not teach "alarming data.” However, Zhao teaches “alarming data” (see Paragraph 0030 and Figure 4). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Zhao, for the purpose of increasing the versatility and functionality of the application data of Domm, and since both Domm and Zhao identically disclose attach request messages, as evidenced by Paragraph 0030 of Zhao and Figure 3 of Domm.

**Claims 25 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claims 1 and 18, and further in view of Hwang et al, US 2004/0147266 A1 (hereafter referenced as Hwang).

Regarding **Claim 25 and Claim 27**, the combination of Johan and Domm teaches “application data” (see claim 1). The combination data does not teach "data comprising measurement data.” However, Hwang teaches “data comprising measurement data” (see Paragraph 0093, 0122, 0128, and Figure 11B). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Hwang, for the purpose of increasing the versatility and functionality of the application data of Domm,

and since both Domm and Hwang identically disclose attach request messages, as evidenced by Figures 9B, 11B, and 12 of Hwang and Figure 3 of Domm.

**Claims 26 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm and Hwang, as applied to Claims 25 and 27, and further in view of Krco et al, US 2010/0322162 A1 (hereafter referenced as Krco).

Regarding **Claim 26 and Claim 28**, the combination of Johan, Domm, and Hwang teaches "communication module and measurement data" (see claim 1 and 25). The combination does not teach "measurement data obtained using one or more sensors." However, Krco teaches "measurement data obtained using one or more sensors" (see Paragraph 0009). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate the teachings, as taught by Krco, for the purpose of increasing the versatility and functionality of the MS 16 of Johan, and since both Johan and Krco identically disclose SGSN hardware and receiving signalling information as evidenced by Paragraph 0045 of Krco and Figures 4-6 of Johan.

## *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANKUR JAIN whose telephone number is (571)272-9747. The examiner can normally be reached on M-F, 9:00 am to 4:00 pm, EST.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANKUR JAIN/

Examiner, Art Unit 2649

| Notice of References Cited | Application/Control No. 13/126,601 | Applicant(s)/Patent Under Reexamination BUSROPAN ET AL. | |
|---|---|---|---|
| | Examiner ANKUR JAIN | Art Unit 2649 | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification |
|---|---|---|---|---|---|
| * | A | US-2004/0147266 A1 | 07-2004 | Hwang et al. | 455/445 |
| * | B | US-2004/0192251 A1 | 09-2004 | Zhao et al. | 455/404.1 |
| * | C | US-2010/0322162 A1 | 12-2010 | Krco et al. | 370/329 |
| | 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.

**EAST Search History**

**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 1 | 13/126601.APP. AND node$2 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 14:54 |
| L2 | 1 | 13/126601.APP. AND alarm$5 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:05 |
| L3 | 16 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$ or US-20100203898-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2013/11/27 15:07 |
| L4 | 0 | 13/126601.APP. AND (sensor$4 WITH measur$5) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:07 |
| L5 | 0 | 13/126601.APP. AND (sensor$4 WITH measur$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:07 |
| L6 | 1 | 13/126601.APP. AND (sensor$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:07 |
| L7 | 1 | L3 AND alarm$5 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:17 |
| L8 | 0 | ((attach ADJ request$4) near6 (measurement$2) near6 (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:55 |

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|---|---|---|---|---|---|---|
| L9 | 0 | ((attach ADJ request$4) WITH (measur$6) WITH (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:55 |
| L10 | 0 | ((attach ADJ request$4) SAME (measur$6) SAME (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:55 |
| L11 | 48 | ((attach ADJ request$4) WITH (alarm$4 or emergenc$4 or warning$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 15:56 |
| L12 | 11 | ((attach ADJ request$4) WITH (measurement$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 16:10 |
| L13 | 4 | ((sensor$4) WITH (measurement ADJ data)) AND ((attach ADJ request$4) or SGSN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 16:44 |
| L14 | 6 | 2004/0192251 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:17 |
| L15 | 2 | "20040192251" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:17 |
| L16 | 1 | "20040147266" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:17 |
| L17 | 1 | "20100322162" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/11/27 17:18 |
| S1 | 0 | 12/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |

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|---|---|---|---|---|---|---|
| S2 | 1 | 13/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |
| S3 | 1 | 13/126601.APP. AND IMSI | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |
| S4 | 843 | (IMSI ADJ attach$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:35 |
| S5 | 561 | (IMSI ADJ attach$6) AND "455".CLAS. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:36 |
| S6 | 102 | (M2M ADJ server$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:51 |
| S7 | 1 | 13/126601.APP. AND RAN | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 17:19 |
| S8 | 655 | (IMSI ADJ attach$4) AND (MSC or SGSN) AND HLR | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:56 |
| S9 | 457 | S8 AND "455".CLAS. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:57 |
| S10 | 7 | S9 AND (M2M) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:57 |
| S11 | 411 | S9 AND ((packet$4 or circuit$4) near5 switch$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:59 |

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|---|---|---|---|---|---|---|
| S12 | 15 | (IMSI ADJ attach$4 ADJ request$4) AND (MSC or SGSN) AND HLR | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:02 |
| S13 | 23 | (IMSI ADJ attach$4 ADJ request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:02 |
| S14 | 13 | S13 AND (type$2 near3 attach$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:37 |
| S15 | 2 | "20050215253" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:33 |
| S16 | 1 | "20070232306" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:34 |
| S17 | 1 | "2008096553" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:35 |
| S18 | 5 | "20080096553" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:35 |
| S19 | 1 | 13/126601.APP. And (encapsulat$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 15:05 |
| S20 | 1 | 13/126601.APP. AND (program WITH application$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:31 |
| S21 | 0 | (transmi$7 or report$4 or output$6 or send$4 or sent$4 or emit$5 or generat$6 or creat$6 or communicat$3 or forward$3 or retransmi$7 or transfer$4) near8 ((alarm$4 or measur$6) near5 data$2) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:43 |

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|---|---|---|---|---|---|---|
| S22 | 0 | (transmi$7 or report$4 or output$6 or send$4 or sent$4 or emit$5 or generat$6 or creat$6 or communicat$3 or forward$3 or retransmi$7 or transfer$4) near8 (alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:44 |
| S23 | 0 | (alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:45 |
| S24 | 0 | ((alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6)) WITH (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:48 |
| S25 | 95 | ((alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6)) AND (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:48 |
| S26 | 1 | S25 AND (MSC or SGSN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:50 |
| S27 | 21 | (MSC or SGSN) near6 (extract$7) near6 (alarm$4 or measur$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:01 |
| S28 | 190 | (MSC or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:09 |
| S29 | 197 | (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:09 |
| S30 | 126 | S29 AND ("455".CLAS. or "370".CLAS.) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:10 |
| S31 | 241 | (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (retriev$4 ) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:09 |

| | | | | | | |
|---|---|---|---|---|---|---|
| S32 | 196 | S31 AND ("455".CLAS. or "370".CLAS.) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:10 |
| S33 | 3 | S31 SAME PLMN SAME request$4 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:11 |
| S34 | 15 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2013/06/07 11:14 |
| S35 | 1 | S34 AND (((MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2))) SAME PLMN SAME request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:16 |
| S36 | 1 | 08/633862.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:19 |
| S37 | 9 | S34 AND (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:19 |
| S38 | 6 | S37 AND (PLMN AND request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:21 |
| S39 | 1 | S34 AND ((MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) AND PLMN AND IMSI AND GPRS AND (attach$4 near4 request$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:28 |
| S40 | 1 | 13/126601.APP. AND (address$6 WITH process$5) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 19:01 |
| S41 | 15 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742- | US-PGPUB; USPAT | OR | ON | 2013/06/08 11:50 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | $).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | | | | |
| S42 | 1 | S41 AND XML | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 11:50 |
| S43 | 0 | (XML ADJ messag$5) SAME (MSC or SGSN) SAME (PLMN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:00 |
| S44 | 12 | (XML ADJ messag$5) AND (MSC or SGSN) AND (PLMN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:00 |
| S45 | 1 | (XML ADJ messag$5) AND 13/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:01 |
| S46 | 6 | S44 AND (attach$4 near3 messag$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:08 |
| S47 | 1 | 13/126601.APP. AND (monitor$4 WITH signal$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 14:57 |
| S48 | 2 | "20060262742" AND (monitor$5 WITH (signal$6 or messag$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 15:06 |
| S49 | 1 | 13/126601.APP. AND (deriv$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 15:38 |
| S50 | 1 | 13/126601.APP. AND (encapsulation WITH modul$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/09 12:13 |

**11/27/2013 5:24:27 PM**
**C:\Users\ajain1\Documents\EAST\Workspaces\13126601.wsp**

| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 13126601 | BUSROPAN ET AL. |
| | Examiner | Art Unit |
| | ANKUR JAIN | 2649 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ✓ | Rejected | - | Cancelled | N | Non-Elected | A | Appeal |
| = | Allowed | ÷ | Restricted | I | Interference | O | Objected |

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

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 06/09/2013 | 11/27/2013 | | | | | | | |
| | 1 | ✓ | ✓ | | | | | | | |
| | 2 | ✓ | ✓ | | | | | | | |
| | 3 | ✓ | ✓ | | | | | | | |
| | 4 | ✓ | ✓ | | | | | | | |
| | 5 | ✓ | ✓ | | | | | | | |
| | 6 | ✓ | ✓ | | | | | | | |
| | 7 | ✓ | ✓ | | | | | | | |
| | 8 | ✓ | ✓ | | | | | | | |
| | 9 | ✓ | ✓ | | | | | | | |
| | 10 | ✓ | ✓ | | | | | | | |
| | 11 | ✓ | - | | | | | | | |
| | 12 | ✓ | ✓ | | | | | | | |
| | 13 | ✓ | ✓ | | | | | | | |
| | 14 | ✓ | ✓ | | | | | | | |
| | 15 | ✓ | - | | | | | | | |
| | 16 | ✓ | ✓ | | | | | | | |
| | 17 | ✓ | ✓ | | | | | | | |
| | 18 | ✓ | ✓ | | | | | | | |
| | 19 | ✓ | ✓ | | | | | | | |
| | 20 | ✓ | ✓ | | | | | | | |
| | 21 | ✓ | ✓ | | | | | | | |
| | 22 | ✓ | ✓ | | | | | | | |
| | 23 | ✓ | - | | | | | | | |
| | 24 | ✓ | ✓ | | | | | | | |
| | 25 | | ✓ | | | | | | | |
| | 26 | | ✓ | | | | | | | |
| | 27 | | ✓ | | | | | | | |
| | 28 | | ✓ | | | | | | | |

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**(MBHB Case No. 11-575-WO-US)**

| | | |
|---|---|---|
| **In re Application of:** | ) | |
| | ) | |
| **Bryan Jerrel Busropan, et al.** | ) | |
| | ) | **Group Art Unit: 2649** |
| **Serial No.: 13/126,601** | ) | |
| | ) | |
| **Filed: June 3, 2011** | ) | **Examiner: Ankur Jain** |
| | ) | |
| **For: Telecommunications Network and Method of Transferring User Data in Signaling Messages from a Communication Unit to a Data Processing Centre** | ) | **Confirmation No.: 4470** |

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313

## RESPONSE TO OFFICE ACTION

Dear Sir:

In response to the Office Action dated June 20, 2013, Applicant submits the following amendments and remarks:

**Amendments to the claims** begin on page 2.

**Remarks** begin on page 8.

Applicant generally authorizes the Office to charge any underpayment or credit any overpayment to Deposit Account No. 132490, and to treat any communication in this matter that requires an extension of time as incorporating a request for such an extension.



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## Amendments to the Claims

1. (Currently Amended) A method of transferring ~~user~~ data from a communication module to a data processing centre over a telecommunications network, the method comprising ~~the steps in the telecommunications network of~~:

wirelessly receiving a signalling message from said communication module, said ~~user data comprising~~ received signalling message containing application data of a program run by the communication module ~~being contained in said signalling message~~; and

transferring said ~~user data comprising said~~ application data of said program run by the communication module to said data processing centre.

2. (Currently Amended) The method according to claim 1, further comprising ~~the steps of~~:

retrieving said ~~user~~ application data from said received signalling message in said telecommunications network~~; and~~

~~transferring said retrieved user data to said data processing centre~~.

3. (Previously Presented) The method according to claim 2, wherein the signalling message is a network attach request message.

4. (Original) The method according to claim 3, wherein said network attach request message is a location updating request message with a location updating type information element indicating an IMSI attach.



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5. (Original) The method according to claim 3, wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach.

6. (Currently Amended) The method according to claim 3, further comprising ~~the step of~~:

transmitting a network attach accept message to the communication module;

transmitting further data to and/or receiving further data from the ~~communications~~ communication module; and

receiving a network detach message from the communication module.

7. (Currently Amended) The method according to claim 3, further comprising ~~the step of~~ transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module.

8. (Previously Presented) The method according to claim 3, wherein said communication module is not authenticated in said telecommunications network.

9. (Currently Amended) The method according to ~~claim 3~~claim 1 wherein normal location updating procedure is not performed in said ~~tele~~communication module.

10. (Currently Amended) The method according to claim 1, wherein at least a part of said ~~user~~ application data is encrypted.



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11. (Canceled)

12. (Currently Amended) The method according to claim 1~~claim 3~~, wherein said ~~user data comprises~~received signalling message contains address information indicative of said data processing centre.

13. (Currently Amended) The method according to claim 1~~claim 3~~, wherein said ~~user~~ application data is transferred to said data processing centre using one or more SMS messages.

14. (Currently Amended) The method according to claim 1~~claim 3~~, wherein said ~~user~~ application data is transferred to said data processing centre using one or more XML messages.

15. (Cancelled)

16. (Currently Amended) A telecommunications network being configured for transferring ~~user~~ data from a communication module to a data processing centre, said telecommunications network configured for performing ~~the~~ a set of steps ~~of~~comprising:

wirelessly receiving a signalling message from said communication module, said ~~user~~ received ~~data being contained in said~~ signalling message containing application data of a program run by the communication module; and

transferring said ~~user~~ application data to said data processing centre.



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17. (Currently Amended) A node in a telecommunications network, said telecommunications network being configured for transferring ~~user~~ data from a communication module to a data processing centre, said node being configured for performing ~~the~~ a set of steps ~~of~~ comprising:

wirelessly receiving a signalling message from said communication module, said ~~user data~~ received signalling message containing application data of a program run by the communication module ~~being contained in said signalling message~~; and

transferring said ~~user~~ application data to said data processing centre.

18. (Currently Amended). A communication module comprising (i) a processor for processing ~~user~~ application data of a program run by the communication module, (ii) an encapsulation module configured for encapsulating said ~~user data comprising~~ application data ~~of a program run by the communication module~~ in one or more signalling messages from said communication module to a telecommunications network and (iii) a transmitter configured for transmitting said signalling messages containing said ~~user data comprising sais~~ application data of said program run by the communication module to said telecommunications network.

19. (Previously Presented) A node according to claim 17, wherein the node is a Mobile Switching Centre.

20. (Previously Presented) A node according to claim 17, wherein the node is a serving GPRS support node.



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21. (Currently Amended) A node according to claim 17, wherein the node is a signalling monitor.

22. (Currently Amended) The method according to claim 1, wherein the ~~user~~ application data ~~furthermore~~ comprises alarming data~~, measurement data or derivates thereof~~.

23. (Canceled)

24. (Currently Amended) A communication module according to claim 18, wherein the ~~user~~ application data ~~furthermore~~ comprises alarming data~~, measurement data or derivates thereof~~.

25. (New) The method according to clam 1, wherein the application data comprises measurement data.

26. (New) The method according to clam 25, wherein the communication module comprises one or more sensors, and wherein the measurement data comprises measurement data obtained using the one or more sensors.

27. (New) The communication module according to clam 18, wherein the application data comprises measurement data.



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28. (New) The communication module according to clam 27, further comprising one or more sensors, wherein the measurement data comprises measurement data obtained using the one or more sensors.



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## Remarks

### 1. Summary of the Office Action

In the Office Action dated June 20, 2013, the Examiner objected to claims 6-7, 15-18, and 22-24 because of various informalities.

The Examiner then asserted that claim 18 contains a limitation that invokes 35 U.S.C § 112(6) and that allegedly there is no structural support in Applicant's specification for that limitation.

Further, the Examiner rejected claims 1-24 on various grounds. First, the Examiner rejected claims 9, 17-21, and 24 under 35 U.S.C. § 112(2) as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter, which the applicant regards as the invention. Second, the Examiner rejected claim 15 under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Third, the Examiner rejected claim 16 under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Pat. App. Pub. No. 2007/0232306 to Johannesson et al. (Johan). Fourth, the Examiner rejected claims 1-13, 15, and 17-24 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johannesson in view of U.S. Pat. Pub. No. 2006/0262742 to Dommaraju (Domm). And fifth, the Examiner rejected claim 14 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johan in view of Domm in view of U.S. Pat. App. Pub. No. 2010/0203898 to Noldus et al. (Noldus).

### 2. Status of the Claims

Applicant has amended claims 1-2, 6-7, 9-10, 12-14, 16-18, 21-22, and 24, canceled claims 11, 15, and 23, and added new claims 25-28. Pending now are claims 1-28, of which claims 1, 16, 17, and 18 are independent and the remainder of which are dependent.



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### 3. Response to the Claim Objections

As noted above, the Examiner objected to claims 6-7, 15-18, 22, and 24 because of various informalities. Applicant has amended these claims to overcome the respective objections. Therefore, Applicant respectfully requests that the Examiner withdraw these objections.

### 4. Response to the 35 U.S.C. § 112(6) Issue

The Examiner asserted that the "encapsulation module" in claim 18 invokes 35 U.S.C § 112(6) and that allegedly there is no structural support in Applicant's specification for this limitation. However, Applicant respectfully submits that Applicant's specification provides sufficient structural support for this limitation.

Pursuant to M.P.E.P. 2181(II)(B), "[f]or a computer-implemented means-plus-function claim limitation invoking 35 U.S.C. 112, sixth paragraph, a general purpose computer is usually sufficient for the corresponding structure for performing a general computing function (e.g., 'means for storing data')," This section is applicable to the "encapsulation module" limitation of claim 18. Indeed, Applicant's specification indicates that an encapsulation module may take the form of "software running on processor 11" (i.e., a general purpose computer). And as recited in claim 18, the encapsulation module is "configured for encapsulating [data] in one or more signalling messages from said communication module to a telecommunications network" (i.e., the encapsulating module is configured for performing the general computing function of encapsulating data into a message). For these reasons, Applicant respectfully submits that Applicant's specification provides sufficient structural support for this limitation.



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## 5. Response to the 35 U.S.C. § 112(2) Rejections

As noted above, the Examiner rejected claims 9, 17-21, and 24 under 35 U.S.C. § 112(2) as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter, which the applicant regards as the invention. Applicant has amended claims 9, 17, 19-21, and 24 to address the respective rejections. Further, Applicant submits that the rejection of claim 18 is improper and should be withdrawn for at least the reasons set forth in Section 4 above. Therefore, Applicant respectfully requests that the Examiner withdraw these rejections.

## 6. Response to the 35 U.S.C. § 103 Rejections

### a. Independent Claim 1

As noted above, the Examiner rejected claim 1 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johan in view of Domm. However, this rejection should be withdrawn, because neither Johan nor Domm teaches or suggests at least one feature of claim 1.

For example, neither Johan nor Domm teaches or suggests the claim 1 feature of "application data of a program run by the communication module being contained in said signalling message." The Examiner acknowledges that Johan does not teach this feature (Office Action, pg. 9), but instead relies on Domm as teaching this feature.

Domm teaches "[a] system and method for subscriber tracking and creating subscriber records in a GPRS network." (Abstract). Further, Domm teaches that one or more parameters of a subscriber record may be extracted from a message (e.g., an attach request) sent from a mobile station (MS) 301 (Paragraphs 0031-0032). As described in Domm, these parameters include an International Mobile Security Identity (IMSI), a Temporary Mobile Packet Subscriber Identity for the Packet Network (PTMSI), a Temporary Logical Link Identity (TLLI), or a Routing Area Id (RAI). (Tables 1 and 2).



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In addressing the claim 1 feature recited above, the Examiner summarily cited to paragraphs 0039, 0042, 0045, 0049, and Figures 3-6 of Domm and stated that "the claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message [and that] it is necessary for MS 301 to have a 'program run by the communication module being contained' and for the attach request message to be part of a 'program run by the communication module' which allows MS 301 to send an attach request message." (Office Action, pg. 14, ll. 14-19). However, none of these parameters (i.e., IMSI, PTMSI, TLLI, and RAI) disclosed in Domm amount to "application data of a program run by the communication module" as recited in claim 1.

As understood by a person of ordinary skill in the art, the well-known Open Systems Interconnection (OSI) model partitions functions of a communication system into multiple abstraction layers. Among these layers are a network layer and an application layer. The network layer provides switching and routing functionality (i.e., connectivity between two nodes in the same network), while the conceptually higher-level application layer supports software applications and end-user processes. As described in Domm, the IMSI, PTMSI, TLLI, and RAI parameters are used for setting up, maintaining or ending connections between nodes in the same network. Accordingly, at best the parameters disclosed in Domm amount to network data, but certainly not to application data as recited in claim 1.

Notably, Johan and Domm fail to disclose transferring application data in general, let alone transferring application data by extending signalling messages to incorporate application data. Further, in view of the OSI model, a person of ordinary skill in the art would be prejudiced to keep network data and application data separate. This is exactly contrary to the technique for



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transferring application data as recited in claim 1. For at least reasons, Applicant respectfully requests that the Examiner withdraw the § 103(a) rejection of claim 1.

**b. Independent Claims 16-18**

As noted above, the Examiner rejected claims 16-18 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johan in view of Domm. For largely the same reasons discussed above with respect to claim 1, Applicant respectfully requests that the Examiner withdraw these rejections.

**c. Dependent Claims 2-10, 12-14, 19-22, and 24**

As noted above, the Examiner rejected claims 2-10, 12-14, 19-22, and 24 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johan in view of Domm. For at least the reason that each of these claims depends from one of allowable claims 1 or 16-18, Applicant respectfully requests that the Examiner withdraw these rejections.

At least one of these rejections should also be withdrawn for an additional reason. For example, the rejection of claim 7 should be withdrawn because the Examiner based the rejection on an assertion that Johan teaches a feature that Johan does not actually teach. In particular, the Examiner asserted that Johan teaches "transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module," but Johan does not teach this feature.

In support this assertion, the Examiner cited to paragraphs 0033 and 0036 of Johan. But at best, these sections merely teach that an acknowledgement message is transmitted from the mobile network 401 to the MS 16 indicating if the MS 16 selection is accepted or denied. Even assuming, *arguendo*, that transmitting the acknowledgement message to the mobile station amounts to "transmitting an attach reject message to said communication module " as recited in



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claim 7, Johan fails to teach that "said attach reject message comprising data for said communication module" as further recited in claim 7. Indeed, Johan fails to disclose that any data for the communication module is contained in the acknowledgement message. Therefore, for at least this additional reason, Applicant respectfully requests that the Examiner withdraw the rejection of claim 7.

**7. Response to the 35 U.S.C. § 102 Rejection**

As noted above, the Examiner rejected claim 16 under 35 U.S.C. § 102(b) as allegedly being anticipated by Johan. As amended, claim 16 recites, among other things, "said received signalling message containing application data of a program run by the communication module." For largely the same reasons discussed above with respect to claim 1, Applicant respectfully requests that the Examiner withdraw this rejection.

**8. Conclusion**

For the foregoing reasons, Applicant respectfully requests favorable reconsideration and allowance of all pending claims.

Applicant does not acquiesce in any assertion in the office action that is not expressly addressed by these remarks.

Should the Examiner wish to discuss this case with the undersigned, the Examiner is invited to call the undersigned at (312) 913-0001.

Respectfully submitted,

**McDONNELL BOEHNEN HULBERT & BERGHOFF LLP**

Dated: September 5, 2013

By: /Gavin J. O'Keefe/
Gavin J. O'Keefe
Reg. No. 59,916



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# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 16767586 |
| **Application Number:** | 13126601 |
| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
| **Filer:** | Gavin James O'Keefe |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 11-575-WO-US |
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| 1 | Amendment/Req. Reconsideration-After Non-Final Reject | 11-575-WO-US_Response_to_OA.pdf | 147622<br>667c3ac309efcc17def532623d82ff2691cfed5b | no | 13 |

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| PATENT APPLICATION FEE DETERMINATION RECORD<br>Substitute for Form PTO-875 | Application or Docket Number<br>13/126,601 | Filing Date<br>06/03/2011 | ☐ To be Mailed |
|---|---|---|---|

**ENTITY**: ☒ LARGE ☐ SMALL ☐ MICRO

## APPLICATION AS FILED – PART I

| | (Column 1) | (Column 2) | | |
|---|---|---|---|---|
| FOR | NUMBER FILED | NUMBER EXTRA | RATE ($) | FEE ($) |
| ☐ BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | |
| ☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | |
| ☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | |
| TOTAL CLAIMS (37 CFR 1.16(i)) | minus 20 = | * | X $ = | |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | minus 3 = | * | X $ = | |
| ☐ APPLICATION SIZE FEE (37 CFR 1.16(s)) | If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | |
| ☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) | | | | |
| * If the difference in column 1 is less than zero, enter "0" in column 2. | | | TOTAL | |

## APPLICATION AS AMENDED – PART II

| | | (Column 1) | | (Column 2) | (Column 3) | | |
|---|---|---|---|---|---|---|---|
| | **09/05/2013** | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
| AMENDMENT | Total (37 CFR 1.16(i)) | * 25 | Minus | ** 24 | = 1 | X $80 = | 80 |
| | Independent (37 CFR 1.16(h)) | * 4 | Minus | ***4 | = 0 | X $420 = | 0 |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | |
| | | | | | | TOTAL ADD'L FEE | **80** |

| | | (Column 1) | | (Column 2) | (Column 3) | | |
|---|---|---|---|---|---|---|---|
| | | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
| AMENDMENT | Total (37 CFR 1.16(i)) | * | Minus | ** | = | X $ = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | X $ = | |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | |
| | | | | | | TOTAL ADD'L FEE | |

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

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

LIE
/JAMES ELLIOTT/

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

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US | 4470 |

20306 7590 06/20/2013

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| EXAMINER | |
|---|---|
| JAIN, ANKUR | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2649 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 06/20/2013 | PAPER |

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

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

| Office Action Summary | Application No. 13/126,601 | Applicant(s) BUSROPAN ET AL. | |
|---|---|---|---|
| | Examiner ANKUR JAIN | Art Unit 2649 | AIA (First Inventor to File) Status No |

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

**Period for Reply**

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

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

**Status**

1)☒ Responsive to communication(s) filed on *3 June 2011*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ 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**

5)☒ Claim(s) *1-24* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-24* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

**Application Papers**

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *04/28/2011* 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).

**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).

**Certified copies:**

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)).

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

**Interim copies:**

a)☐ All b)☐ Some c)☐ None of the: Interim copies of the priority documents have been received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

## DETAILED ACTION

### *Examiner's Comment*

The Examiner would like to comment that claim 15 appears to be a referential claim as outlined in MPEP 2173.05(f). Thus, the Examiner is treating the claim as such.

### *Claim Objections*

**Claims 6-7 and 15-17** are objected to because of the following informalities:

"the step of" and "the steps of" lack antecedent basis. Correction is required for this minor issue.

**Claim 6** is objected to because of the following informalities:

"the communication**s** module" should be changed to "the communication module."

**Claim 16** is objected to because of the following informalities:

Applicant needs to have consistency between whether the claim should recite "signaling" or "signalling."

**Claim 18** is objected to because of the following informalities:

"**sais** application data" should be changed to "said application data."

**Claims 22 and 24** is objected to because of the following informalities:

Examiner is assuming "derivates" should be written as "derivatives" as outlined in the Abstract and Page 2 line 31 of Applicant's filed specification. Examiner invites Applicant to take another look at this claimed feature for consistency.

**Claim 23** is objected to because of the following informalities:

Applicant needs to have consistency between using the word "center" versus "centre."

### *Acknowledgement for Invoking 35 USC § 112, Sixth Paragraph*

For the record, the examiner acknowledges the applicant for invoking 35 USC § 112, Sixth Paragraph, which states:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

**Claim 18** contains limitations that invoke 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function.

Regarding **Claim 18**,

There is no structural equivalent in Applicant's specification for "encapsulation module," and the specification only discloses this claimed feature in terms of its functional characteristics. The closest interpretation found by the Examiner is on page 7 lines 1-5 of Applicant's filed specification, which gives no structural equivalent for the claimed "encapsulation module" and is completely silent with respect to the specific physical characteristics and circuitry of this "module."

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

### *Claim Rejections - 35 USC § 112*

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.

**Claims 9, 17, and 19-21** 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.

Regarding **Claim 9**, the claim recites the limitation “said telecommunication module.” The Examiner is assuming and interpreting this claimed feature to mean “said communication module.” Nevertheless, it is unclear from a claim interpretation

standpoint Applicant's original intention. There is insufficient antecedent basis for this limitation in the claim and correction is required.

Regarding **Claim 17**, the claim recites the limitation "said signalling message." There is insufficient antecedent basis for this limitation in the claim and correction is required.

Regarding **Claims 19-21**, the claims are rejected under 112 2nd Paragraph due to their dependency from their base claim 17 rejected.

**Claims 18 and 24** 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.

Regarding **Claim 18**, "if one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc). **Also, see MPEP 2181 Section II.**

Regarding **Claim 24**, the claim is rejected under 112 2nd Paragraph solely due to its dependency from a base claim rejected.

Thus, since the Examiner has identified no structural equivalents for the "encapsulation module" limitation of the identified claim as explained in the 112 6th

Paragraph section above, the Examiner submits that this renders the claims indefinite.



### *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claim 15** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As to **claim 15**, the claim is rejected under 35 U.S.C. § 101 because the claimed invention is not supported by a process, machine, manufacture, or composition of matter as outlined in MPEP 2106. According to this section, "a computer program" is NOT directed to one of the four statutory categories, thus rendering the claim NOT patent eligible.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

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 –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 16** is rejected under 35 U.S.C. 102(b) as being anticipated by Johannesson et al, US 2007/0232306 A1 (hereafter referenced as Johan).

Regarding **Claim 16**, Johan teaches "a telecommunications network being configured for transferring user data from a communication module to a data processing centre" (see Paragraphs 0032-0033 and Figure 4). "Communication module" clearly is equivalent to MS 16, and "data processing centre" is equivalent to Operator A, for example. Johan also teaches "said telecommunications network configured for performing the steps of: wirelessly receiving a signaling message from said communication module, said user data being contained in said signalling message" (see Paragraph 0027, 0032-0033, and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. In addition, another interpretation of the claimed "signaling message" is equivalent to the NAS signaling message. Furthermore, "said user data being contained in said signalling message" is equivalent to the NAS signaling message that includes identification data, and also any of the "signaling messages" of Paragraph 0027 "containing user data" as explained in Paragraph 0027. Johan also teaches "transferring said user data to said data processing centre" (see Paragraph 0027, 0033, and Figures 4-5). The claimed limitation is equivalent to the forwarding by the RNC/BSC 401 to a selected operator.

## *Claim Rejections - 35 USC § 103*

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 negatived by the manner in which the invention was made.

**Claims 1-13, 15, and 17-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johannesson et al, US 2007/0232306 A1 (hereafter referenced as Johan), in view of Dommaraju et al, US 2006/0262742 A1 (hereafter referenced as Domm).

Regarding **Claim 1**, Johan teaches a method of "transferring user data from a communication module to a data processing centre over a telecommunications network" (see Paragraph 0033 and Figure 4). Johan also teaches "the method comprising the steps in the telecommunications network of: wirelessly receiving a signalling message from said communication module" (see Paragraph 0027 and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Johan also teaches "transferring said user data run by a communication module to said data processing centre" (see Paragraph 0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. Johan does not teach "comprising application data of a program run by the communication module being contained." However, Domm teaches "comprising application data of a program run by the communication module being contained" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS

301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module being contained, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 2**, Johan teaches "retrieving said user data from said received signalling message in said telecommunications network; and transferring said retrieved user data to said data processing centre" (see Paragraphs 0032-0033). The claimed limitation is equivalent to the "transferring" of only identification data from the NAS signalling message to the selected operator.

Regarding **Claim 3**, Johan teaches "wherein the signalling message is a network attach request message" (see Paragraphs 0027, 0032-0033, and Figure 4).

Regarding **Claim 4**, Johan teaches "wherein said network attach request message is a location updating request message with a location updating type information element" (see Paragraph 0027 and Figure 4). The Examiner submits that the "location updating type information element" is the specific location "information element" within the "location updating request message." Domm teaches "indicating an IMSI attach" (see Paragraphs 0034-0035, 0039, and Figure 3). The claimed limitation is

equivalent to IMSI extracted data within the attach request message 31. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate indicating an IMSI attach, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 5**, Domm teaches "wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach" (see Paragraphs 0011-0012). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Paragraph 0011 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0010 & Figure 1 of Domm.

Regarding **Claim 6**, Johan teaches "transmitting a network attach accept message to the communication module" (see Paragraph 0033, 0036, and Figures 4 and

6). Domm teaches “transmitting further data to and/or receiving further data from a communications module; and receiving a network detach message from the communication module” (see Paragraph 0011-0012). The claimed limitation is equivalent to the GPRS/IMSI attach procedures "from the communications module," followed by a “network detach message from the communication module,” which is equivalent to how the mobile station can initiate a GPRS detach message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate transmitting further data to and/or receiving further data from a communications module; and receiving a network detach message from the communication module, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Paragraph 0011 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN and a GPRS environment as evidenced by Paragraphs 0020-0021 & 0036 of Johan and Paragraph 0010 & Figure 1 of Domm.

Regarding **Claim 7**, Johan teaches “transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module " (see Paragraph 0033, 0036, and Figures 4 and 6).

Regarding **Claim 8**, Domm teaches “wherein a communication module is not authenticated in said telecommunications network" (see Paragraph 0037 and Figure 3). According to page 10 lines 30-35 of Applicant’s filed specification, it is very clear that

"not authenticated in said telecommunications network" can be interpreted to mean that the authentication procedure is left to another entity to authenticate the communication module. In other words, the Examiner is interpreting this claimed feature to mean that the "communication module" does not initiate authentication and does not authenticate itself. Thus, according to this meaning, the Examiner submits that this is no different than the cited portions of Domm, which discloses that the authentication request is coming from an outside source and not from MS 301, which is equivalent to the claimed "communication module is not authenticated in said telecommunications network." It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein a communication module is not authenticated in said telecommunications network, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 9**, Johan teaches "wherein normal location updating procedure is not performed in said telecommunication module" (see Paragraph 0021 and 0027). Due to lack of antecedent basis, the Examiner is interpreting "telecommunication module" to mean "communication module," since it appears Applicant is trying to claim some type of module, and the only mention of a prior module was the "communication module." The Examiner submits that the network is responsible for keeping track of the

periodic reported locations of MS 16, and thus the "location updating procedure is not performed in said communication module."

Regarding **Claim 10**, Johan teaches "said user data" (see claim 1). Domm teaches "at least a part is encrypted" (see Paragraphs 0003 and 0017). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate at least a part is encrypted, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 11**, Johan teaches "said user data" (see claim 1). Domm teaches "comprises application data of a program run by a communication module" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module being contained, as taught by Domm, for the purpose of increasing the versatility and

functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 12**, Johan teaches “wherein said user data comprises address information indicative of said data processing centre” (see Paragraphs 0032-0033 and Figure 4). The claimed limitation is equivalent to the identification data (numerical value) "addressing" a specific operator, or "data processing centre."

Regarding **Claim 13**, Johan teaches “wherein said user data is transferred to said data processing centre” (see discussion of claim 2 and Paragraphs 0032-0033 of Johan). Domm teaches “one or more SMS messages” (see Paragraph 0010). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate one or more SMS messages, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Figures 5-6 & Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 15**, Johan teaches “a computer program comprising a software code portion configured for, when run by a processor, performing the steps of the

method" (see Paragraphs 0022-0024, 0032-0033, and Figures 2 and 4). The claimed limitation is equivalent to the structural details within MS 16 which are necessary in order to perform the methodology of Paragraphs 0032-0033 of Johan.

Regarding **Claim 17**, Johan teaches "a telecommunications network, said telecommunications network being configured for transferring user data from a communication module to a data processing centre" (see Paragraph 0033 and Figure 4). Johan also teaches "configured for performing the steps of: wirelessly receiving a signalling message from said communication module, said user data being contained in said signalling message" (see Paragraph 0027, 0032-0033, and Figure 4). The claimed limitation is equivalent to the Attach Request Message, as also defined on page 8 lines 15-18 of Applicant's filed specification. Johan also teaches "transferring said user data to said data processing centre" (see Paragraph 0033 and Figures 4-5). The claimed limitation is equivalent to the plurality of operators. Johan does not teach "a node." However, Domm teaches "a node" (see Paragraphs 0003, 0010, and Figure 2). The claimed limitation is clearly equivalent to MSC 110. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate a node, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a MSC and SGSN as

evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

Regarding **Claim 18**, Johan teaches "a communication module comprising a processor for processing user data" (see Paragraphs 0022-0024, 0032-0033, and Figures 2 and 4). Johan also teaches "an encapsulation module configured for encapsulating said user data in one or more signalling messages from said communication module to a telecommunications network" (see Paragraphs 0027, 0032-0033 and Figure 4). The Examiner firmly submits that it is necessary for there to be "an encapsulation module" in order to "encapsulate user data" within location updating request message, attach message, and routing area updating request message. Furthermore, the Examiner submits that it is necessary for identification data to be "encapsulated" within the NAS signaling message. Johan also teaches "a transmitter for transmitting said signalling messages containing said user data to said telecommunications network" (see Paragraphs 0023, 0032-0033, and Figures 2 & 4). Johan does not teach "comprising application data of a program run by the communication module." However, Domm teaches "comprising application data of a program run by the communication module" (see Paragraph 0039, 0042, 0045, 0049, and Figures 3-6). The claimed limitation is equivalent to the extracted data of IMSI, PTMSI, TLLI, and RAI within the attach request message. The Examiner firmly submits that it is necessary for MS 301 to have a "program run by the communication module being contained" and for the attach request message to be a part of a "program run by the communication module" which allows MS 301 to send an attach request message.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate comprising application data of a program run by the communication module, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a SGSN as evidenced by Paragraph 0036 of Johan and Paragraph 0040 of Domm.

Regarding **Claim 19**, Domm teaches "wherein the node is a Mobile Switching Centre" (see Paragraphs 0003, 0010, and Figure 2). The claimed limitation is clearly equivalent to MSC 110. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein the node is a Mobile Switching Centre, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a MSC and SGSN as evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

Regarding **Claim 20**, Domm teaches "wherein the node is a serving GPRS support node" (see Paragraph 0040 and Figures 3-6). The claimed limitation is clearly equivalent to SGSN 303. It would have been obvious for one of ordinary skill in the art

at the time the invention was made to modify Johan to incorporate wherein the node is a serving GPRS support node, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a MSC and SGSN as evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

Regarding **Claim 21**, Domm teaches “wherein the node is a signaling monitor” (see Paragraph 0015 and 0028-0029). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Johan to incorporate wherein the node is a signaling monitor, as taught by Domm, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Domm identically disclose a terminal sending an attach request message as evidenced by Figures 3-6 of Domm and Figure 4 of Johan, and both references identically disclose a terminal in communication with a MSC and SGSN as evidenced by Paragraph 0036 & Figures 5-6 of Johan and Paragraphs 0003, 0010, 0040, & Figure 2 of Domm.

Regarding **Claim 22 and Claim 24**, Johan teaches “wherein the user data furthermore comprise alarming data, measurement data or derivates thereof” (see Paragraphs 0027, 0032-0033, and Figure 4). According to Applicant’s specification, the Examiner would like to comment that Applicant does not define the specific "derivates"

of the "alarming data" and "measurement data." Thus, according to the plain meaning and broadest reasonable interpretation according to MPEP 2111 and MPEP 2111.01, the Examiner is interpreting the specific “user data” within the location updating request message, attach request message, or a routing area update request message to be "derivates" of the "alarming data" or "measurement data." Furthermore, according to MPEP 2111 and MPEP 2111.01, the Examiner is interpreting the specific “user data” within the NAS signaling message to be "derivates" of the "alarming data" or "measurement data."

Regarding **Claim 23**, Johan teaches “wherein the user data furthermore contain address information indicating the data processing center to which the user data are transferred” (see Paragraphs 0032-0033 and Figure 4). The claimed limitation is equivalent to the identification data (numerical value) "address information" for a specific operator, or “data processing center.”

**Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Johan in view of Domm, as applied to Claim 3, and further in view of Noldus et al, US 2010/0203898 A1 (hereafter referenced as Noldus).

Regarding **Claim 14**, the combination of Johan and Domm teaches “wherein said user data is transferred to said data processing centre” (see Paragraphs 0032-0033 of Johan and discussion of claim 2). The combination does not teach “one or more XML messages." However, Noldus teaches “one or more XML messages” (see Paragraph 0018). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination to incorporate one or more XML

messages, as taught by Noldus, for the purpose of increasing the versatility and functionality of the methodology for selecting a PLMN for network sharing of Johan, since both Johan and Noldus identically disclose a terminal sending an attach message as evidenced by Paragraphs 0038 of Noldus and Figure 4 of Johan, and both references identically disclose a MSC receiving location information of a terminal as evidenced by Paragraphs 0036-0038 & Figure 2 of Noldus, and Paragraphs 0021, 0027, & Figure 6 of Johan.

## ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ankur Jain whose telephone number is 571-272-9747. The examiner can normally be reached on M-F, 9:00 am to 4:00 pm, EST.

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/Ankur Jain/

Examiner, Art Unit 2649

| Notice of References Cited | Application/Control No. 13/126,601 | Applicant(s)/Patent Under Reexamination BUSROPAN ET AL. | |
|---|---|---|---|
| | Examiner ANKUR JAIN | Art Unit 2649 | Page 1 of 1 |

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| * | C | US-2010/0203898 A1 | 08-2010 | Noldus et al. | 455/456.1 |
| | D | US- | | | |
| | E | US- | | | |
| | F | US- | | | |
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**( Not for submission under 37 CFR 1.99)**

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| Application Number | |
| Filing Date | 2011-04-28 |
| First Named Inventor | Bryan Jerrel Busropan |
| Art Unit | TBA |
| Examiner Name | TBA |
| Attorney Docket Number | 11-575-WO-US |

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| | 2 | WO2008/051716 | WO | | 2008-05-02 | Sonus Networks, Inc. | | ☐ |
| | 3 | WO2005/091661 | WO | | 2005-09-29 | Telefonaktiebolaget LM Ericsson | | ☐ |



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| | 2 | European Search Report, European Patent Application 08018761.0 dated April 16, 2009. | ☐ |

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| Application Number | 13126601 |
| Filing Date | 2011-06-03 |
| First Named Inventor | Bryan Jerrel Busropan |
| Art Unit | 2618 |
| Examiner Name | MAUNG, NAY AUNG |
| Attorney Docket Number | 11-575-WO-US |

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|---|---|---|---|---|---|---|---|---|
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| | Filing Date | 2011-06-03 |
| | First Named Inventor | Bryan Jerrel Busropan |
| | Art Unit | 2618 |
| | Examiner Name | MAUNG, NAY AUNG |
| | Attorney Docket Number | 11-575-WO-US |

| | | | |
|---|---|---|---|
| | 1 | "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile Radio Interface Layer 3 Specification; Core network protocols; Stage 3 (3GPP TS 24.008 version 8.3.0 Release 8) ETSI TS 124 008 V8.3.0 (2008-10), 557 pages. | ☐ |
| | 2 | "Digital cellular telecommunications system (Phase 2+); Mobile Switching Centre - Base Station system (MSC-BSS) Interface Layer 3 Specification (3GPP TS 48.008 version 4.10.0 Release 4), ETSI TS 148 008 V4.10.0 (2003-09), 140 pages. | ☐ |
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| | Application Number | 13126601 |
| | Filing Date | 2011-06-03 |
| | First Named Inventor | Bryan Jerrel Busropan |
| | Art Unit | 2618 |
| | Examiner Name | MAUNG, NAY AUNG |
| | Attorney Docket Number | 11-575-WO-US |

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| | Application Number | 13126601 |
| | Filing Date | 2011-06-03 |
| | First Named Inventor | Bryan Jerrel Busropan |
| | Art Unit | 2618 |
| | Examiner Name | MAUNG, NAY AUNG |
| | Attorney Docket Number | 11-575-WO-US |

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

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

| Signature | /Scott M. Miller/ | Date (YYYY-MM-DD) | 2012-06-21 |
|---|---|---|---|
| Name/Print | Scott M. Miller | Registration Number | 62967 |

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.J./

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# BIB DATA SHEET

**CONFIRMATION NO. 4470**

| SERIAL NUMBER | FILING or 371(c) DATE<br>RULE | CLASS | GROUP ART UNIT | ATTORNEY DOCKET NO. |
|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | 455 | 2649 | 11-575-WO-US |

**APPLICANTS**
Bryan Jerrel Busropan, Leidschendam, NETHERLANDS;
Johannes Maria van Loon, Zoetermeer, NETHERLANDS;

**** CONTINUING DATA ***************************
This application is a 371 of PCT/EP09/64185 10/28/2009

**** FOREIGN APPLICATIONS ***************************
EUROPEAN PATENT OFFICE (EPO) 08018761.0 10/28/2008

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
06/15/2011

| Foreign Priority claimed | 35 USC 119(a-d) conditions met | Verified and Acknowledged | Met after Allowance | STATE OR COUNTRY | SHEETS DRAWINGS | TOTAL CLAIMS | INDEPENDENT CLAIMS |
|---|---|---|---|---|---|---|---|
| ☑ Yes ☐ No | ☑ Yes ☐ No | /ANKUR JAIN/ Examiner's Signature | ☐ AJ Initials | NETHERLANDS | 6 | 21 | 4 |

**ADDRESS**

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606
UNITED STATES

**TITLE**

Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre

| FILING FEE RECEIVED | | |
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| 1562 | FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following: | ☐ All Fees<br>☐ 1.16 Fees (Filing)<br>☐ 1.17 Fees (Processing Ext. of time)<br>☐ 1.18 Fees (Issue)<br>☐ Other _____<br>☐ Credit |

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 13126601 | BUSROPAN ET AL. |
| | Examiner | Art Unit |
| | ANKUR JAIN | 2649 |

| CPC- SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| | | |

| CPC COMBINATION SETS - SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| | | |

| US CLASSIFICATION SEARCHED | | | |
|---|---|---|---|
| Class | Subclass | Date | Examiner |
| 455 | 507 | 6/9/2013 | AJ |

| SEARCH NOTES | | |
|---|---|---|
| Search Notes | Date | Examiner |
| EAST Search Attached. Consulted TQAS Daniel Swerdlow regarding 112 6th Paragraph and 101 issues. | 6/9/2013 | AJ |

| INTERFERENCE SEARCH | | | |
|---|---|---|---|
| US Class/ CPC Symbol | US Subclass / CPC Group | Date | Examiner |
| | | | |

| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 13126601 | BUSROPAN ET AL. |
| | **Examiner** | **Art Unit** |
| | ANKUR JAIN | 2649 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ✓ | Rejected | - | Cancelled | N | Non-Elected | A | Appeal |
| = | Allowed | ÷ | Restricted | I | Interference | O | Objected |

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

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 06/09/2013 | | | | | | | | |
| | 1 | ✓ | | | | | | | | |
| | 2 | ✓ | | | | | | | | |
| | 3 | ✓ | | | | | | | | |
| | 4 | ✓ | | | | | | | | |
| | 5 | ✓ | | | | | | | | |
| | 6 | ✓ | | | | | | | | |
| | 7 | ✓ | | | | | | | | |
| | 8 | ✓ | | | | | | | | |
| | 9 | ✓ | | | | | | | | |
| | 10 | ✓ | | | | | | | | |
| | 11 | ✓ | | | | | | | | |
| | 12 | ✓ | | | | | | | | |
| | 13 | ✓ | | | | | | | | |
| | 14 | ✓ | | | | | | | | |
| | 15 | ✓ | | | | | | | | |
| | 16 | ✓ | | | | | | | | |
| | 17 | ✓ | | | | | | | | |
| | 18 | ✓ | | | | | | | | |
| | 19 | ✓ | | | | | | | | |
| | 20 | ✓ | | | | | | | | |
| | 21 | ✓ | | | | | | | | |
| | 22 | ✓ | | | | | | | | |
| | 23 | ✓ | | | | | | | | |
| | 24 | ✓ | | | | | | | | |

**EAST Search History**

**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 1 | 13/126601.APP. AND (encapsulation WITH modul$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/09 12:13 |
| S1 | 0 | 12/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |
| S2 | 1 | 13/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |
| S3 | 1 | 13/126601.APP. AND IMSI | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:33 |
| S4 | 843 | (IMSI ADJ attach$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:35 |
| S5 | 561 | (IMSI ADJ attach$6) AND "455".CLAS. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:36 |
| S6 | 102 | (M2M ADJ server$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 16:51 |
| S7 | 1 | 13/126601.APP. AND RAN | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/05 17:19 |
| S8 | 655 | (IMSI ADJ attach$4) AND (MSC or SGSN) AND HLR | US-PGPUB; | OR | ON | 2013/06/06 11:56 |

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| | | | USPAT; EPO; JPO; IBM_TDB | | | |
| S9 | 457 | S8 AND "455".CLAS. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:57 |
| S10 | 7 | S9 AND (M2M) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:57 |
| S11 | 411 | S9 AND ((packet$4 or circuit$4) near5 switch$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 11:59 |
| S12 | 15 | (IMSI ADJ attach$4 ADJ request$4) AND (MSC or SGSN) AND HLR | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:02 |
| S13 | 23 | (IMSI ADJ attach$4 ADJ request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:02 |
| S14 | 13 | S13 AND (type$2 near3 attach$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 12:37 |
| S15 | 2 | "20050215253" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:33 |
| S16 | 1 | "20070232306" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:34 |
| S17 | 1 | "2008096553" | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 14:35 |
| S18 | 5 | "20080096553" | US-PGPUB; | OR | ON | 2013/06/06 14:35 |

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| | | | USPAT; EPO; JPO; IBM_TDB | | | |
| S19 | 1 | 13/126601.APP. And (encapsulat$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 15:05 |
| S20 | 1 | 13/126601.APP. AND (program WITH application$2) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:31 |
| S21 | 0 | (transmi$7 or report$4 or output$6 or send$4 or sent$4 or emit$5 or generat$6 or creat$6 or communicat$3 or forward$3 or retransmi$7 or transfer$4) near8 ((alarm$4 or measur$6) near5 data$2) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:43 |
| S22 | 0 | (transmi$7 or report$4 or output$6 or send$4 or sent$4 or emit$5 or generat$6 or creat$6 or communicat$3 or forward$3 or retransmi$7 or transfer$4) near8 (alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:44 |
| S23 | 0 | (alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6) near8 (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:45 |
| S24 | 0 | ((alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6)) WITH (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:48 |
| S25 | 95 | ((alarm$4 or measur$6) near8 (embed$7 or insert$6 or encapsulat$7 or enclos$6)) AND (attach$6 near3 request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:48 |
| S26 | 1 | S25 AND (MSC or SGSN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 17:50 |
| S27 | 21 | (MSC or SGSN) near6 (extract$7) near6 (alarm$4 or measur$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:01 |
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| S28 | 190 | (MSC or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:09 |
| S29 | 197 | (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:09 |
| S30 | 126 | S29 AND ("455".CLAS. or "370".CLAS.) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/06 18:10 |
| S31 | 241 | (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (retriev$4 ) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:09 |
| S32 | 196 | S31 AND ("455".CLAS. or "370".CLAS.) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:10 |
| S33 | 3 | S31 SAME PLMN SAME request$4 | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:11 |
| S34 | 15 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2013/06/07 11:14 |
| S35 | 1 | S34 AND (((MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2))) SAME PLMN SAME request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:16 |
| S36 | 1 | 08/633862.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:19 |
| S37 | 9 | S34 AND (MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) | US-PGPUB; USPAT; EPO; JPO; | OR | ON | 2013/06/07 11:19 |

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| | | | IBM_TDB | | | |
| S38 | 6 | S37 AND (PLMN AND request$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:21 |
| S39 | 1 | S34 AND ((MSC or (mobile ADJ switch$4 ADJ center$4) or SGSN) near6 (decod$6 or extract$6) near6 (data$2 or alarm$4 or measur$6 or (application$2 near3 data$2)) AND PLMN AND IMSI AND GPRS AND (attach$4 near4 request$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 11:28 |
| S40 | 1 | 13/126601.APP. AND (address$6 WITH process$5) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/07 19:01 |
| S41 | 15 | (US-20080181178-$ or US-20070091877-$ or US-20040017798-$ or US-20050215253-$ or US-20070232306-$ or US-20080096553-$ or US-20110026510-$ or US-20060262742-$).did. or (US-7257416-$ or US-6131024-$ or US-6108537-$ or US-6078804-$ or US-6546243-$ or US-6052591-$ or US-5966653-$).did. | US-PGPUB; USPAT | OR | ON | 2013/06/08 11:50 |
| S42 | 1 | S41 AND XML | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 11:50 |
| S43 | 0 | (XML ADJ messag$5) SAME (MSC or SGSN) SAME (PLMN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:00 |
| S44 | 12 | (XML ADJ messag$5) AND (MSC or SGSN) AND (PLMN) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:00 |
| S45 | 1 | (XML ADJ messag$5) AND 13/126601.APP. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:01 |
| S46 | 6 | S44 AND (attach$4 near3 messag$4) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 12:08 |
| S47 | 1 | 13/126601.APP. AND (monitor$4 WITH signal$6) | US-PGPUB; USPAT; | OR | ON | 2013/06/08 14:57 |

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| | | | EPO; JPO; IBM_TDB | | | |
| S48 | 2 | "20060262742" AND (monitor$5 WITH (signal$6 or messag$4)) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 15:06 |
| S49 | 1 | 13/126601.APP. AND (deriv$6) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2013/06/08 15:38 |

**6/9/2013 1:05:27 PM**
**C:\Users\ajain1\Documents\EAST\Workspaces\13126601.wsp**

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5319395 99
6249824 99
5784366 92
5909435 92
5877742 78
5303393 76
5365516 76
5526357 76
5764691 76
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PLUS Search Results for S/N 13126601, Searched Mon Nov 19 14:36:37 EST 2012

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5319395 99
6249824 99
5784366 92
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5831903 65

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

**( Not for submission under 37 CFR 1.99)**

| | |
|---|---|
| Application Number | 13126601 |
| Filing Date | 2011-06-03 |
| First Named Inventor | Bryan Jerrel Busropan |
| Art Unit | 2618 |
| Examiner Name | MAUNG, NAY AUNG |
| Attorney Docket Number | 11-575-WO-US |

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|---|---|---|---|---|---|---|---|---|
| | 1 | EP 2 129 095 | EP | A1 | 2009-12-02 | Koninklijke KPN NV et al. | | ☐ |

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|---|---|---|---|

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 13126601 |
| | Filing Date | 2011-06-03 |
| | First Named Inventor | Bryan Jerrel Busropan |
| | Art Unit | 2618 |
| | Examiner Name | MAUNG, NAY AUNG |
| | Attorney Docket Number | 11-575-WO-US |

| | | | |
|---|---|---|---|
| | 1 | "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile Radio Interface Layer 3 Specification; Core network protocols; Stage 3 (3GPP TS 24.008 version 8.3.0 Release 8) ETSI TS 124 008 V8.3.0 (2008-10), 557 pages. | ☐ |
| | 2 | "Digital cellular telecommunications system (Phase 2+); Mobile Switching Centre - Base Station system (MSC-BSS) Interface Layer 3 Specification (3GPP TS 48.008 version 4.10.0 Release 4), ETSI TS 148 008 V4.10.0 (2003-09), 140 pages. | ☐ |
| | 3 | "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN) Interface; GB Interface Layer 1 (3GPP TS 48.014 version 4.0.0 Release 4)," ETSI TS 148 014 V4.0.0 (2001-04), 10 pages. | ☐ |
| | 4 | "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN) Interface; Network Service (3GPP TS 48.016 version 6.4.0 Release 6)," ETSI TS 148 016 V6.4.0 (2005-07), 60 pages. | ☐ |
| | 5 | "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Base Station system (BSS) - Serving GPRS Support Node (SGSN); BSS GPRS protocol (BSSGP) (3GPP TS 48.018 version 7.13.0 Release 7)," ETSI TS 148 018 V7.13.0 (2010-02), 173 pages. | ☐ |
| | 6 | "Universal Mobile Telecommunications System (UMTS); UTRAN Iu interface: General aspects and principles (3GPP TS 25.410 version 6.4.0 Release 6)," ETSI TS 125 410 V6.4.0 (2005-09), 29 pages. | ☐ |
| | 7 | "Universal Mobile Telecommunications System (UMTS); UTRAN Iu interface layer 1 (3GPP TS 25.411 version 6.0.0 Release 6)," ETSI TS 125 411 V6.0.0 (2003-12), 11 pages. | ☐ |
| | 8 | "Universal Mobile Telecommunications System (UMTS); UTRAN Iu interface Signalling Transport (3GPP TS 25.412 version 3.5.0 Release 1999)," ETSI TS 125 412 V3.5.0 (2000-09), 11 pages. | ☐ |
| | 9 | "Universal Mobile Telecommunications System (UMTS); UTRAN Iu Interface RANAP Signalling (3GPP TS 25.413 version 3.4.0 Release 1999)," ETSI TS 125 413 V3.4.0 (2000-12), 182 pages. | ☐ |
| | 10 | "Universal Mobile Telecommunications System *UMTS); UTRAN Iu Interface Data transport and Transport Signalling (3G TS 25.414 version 3.2.0 Release 1999)," ETSI TS 125 414 V3.2.0 (2000-01), 11 pages. | ☐ |

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| | Application Number | 13126601 |
| | Filing Date | 2011-06-03 |
| | First Named Inventor | Bryan Jerrel Busropan |
| | Art Unit | 2618 |
| | Examiner Name | MAUNG, NAY AUNG |
| | Attorney Docket Number | 11-575-WO-US |

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| | Art Unit | 2618 |
| | Examiner Name | MAUNG, NAY AUNG |
| | Attorney Docket Number | 11-575-WO-US |

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| **Application Number:** | 13126601 |
| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
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# (12) EUROPEAN PATENT APPLICATION

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## (54) M2M communication using a plurality of SIM-less communication modules

(57) The invention relates to a method of transferring data from at least a first communication module (2A,2B) and a second communication module (2C,2D) to, respectively, a first data processing centre (3A) and a second data processing centre (3B). The data is transferred via a circuit switched telecommunications network (6). A first connection request containing a first pre-provisioned telephone number from the first communication module (2A,2B) and a second connection request containing a second pre-provisioned telephone number from the second communication module (2C,2D) is received in the network (6), e.g. in the mobile switching centre (7). The first and second telephone number are processed in the network (6) such that the network (6) refrains from authenticating the first and second communication module in order to connect to the telecommunications network (6). Subsequently a first and a second circuit switched data connection are established with the first and second communication modules for receiving the data in response to the first and second connection request, respectively. The data can be routed from the first communication module (2A,2B) to the first data processing centre (3A) and from the second communication module (2C, 2D) to the second data processing centre (3B) in accordance with the first and second telephone number respectively.

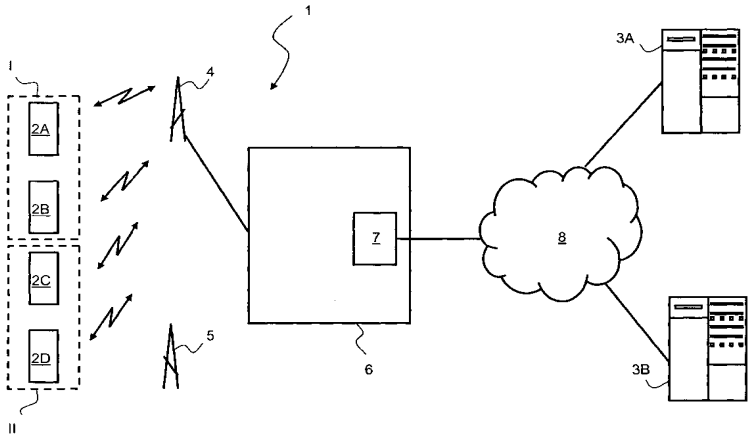



FIG. 1

EP 2 129 095 A1

## Description

### FIELD OF THE INVENTION

**[0001]** Generally, the invention relates to the field of data transfer over a wireless circuit switched telecommunications network. More specifically, the invention relates to a method for transferring data from a plurality of SIM-less communication modules to a data processing centre over a wireless circuit switched telecommunications network.

### BACKGROUND OF THE INVENTION

**[0002]** The past decades have shown an ever increasing demand for data capacity of telecommunications networks. Telecommunications providers have adapted their networks to provide extended services to meet the demands of their clients.

**[0003]** One example of such services relates to the field of machine-to-machine (M2M) communications. M2M applications typically involve hundreds or thousands of communication modules that only rarely require access to a telecommunications network. An example involves the electronic reading of e.g. electricity meters at the homes of a large customer base. Other examples include sensors, meters, coffee machines etc. that can be equipped with communication modules that allow for reporting status information to a data processing centre over the telecommunications network. The data processing centre may e.g. store the data and/or provide a schedule for maintenance people to repair a machine, meter, sensor etc.

**[0004]** Although M2M communications hold efficiency promises, the costs of the communication modules and the connection with the data processing centres should be decreased before large scale implementation will be economically viable.

**[0005]** One approach to decrease M2M communication costs is to avoid subscriber identity module (SIM) cards in the communication modules. The operator of the telecommunications network saves the costs of the SIM cards and, furthermore, does no longer need to assign telephone numbers to such communication modules or to reserve capacity in the home location register (HLR) of the telecommunications network.

**[0006]** US2004/023689 discloses a method for arranging a SIM facility to digital wireless terminal equipment without a physical SIM card. The SIM facility may be downloaded into the terminal equipment through a data communication network. When the user has connected the power to his terminal, a starting functionality arranged therein will detect that there is no SIM facility and will, subsequently activate a SIM downloading application. The downloading application asks the user for an identifier of the subscriber connection. The user provides the identifier from the terminal equipment's keyboard, and based on the identifier, the terminal equipment will form the user's identifier information using equipment information, besides the identifier given by the user. The identifier information is transmitted through the data communication network to a management functionality, which receives it and finds that the subscriber in question has the right to download the SIM facility in his terminal equipment. If the subscriber does not have the right to download the SIM facility in the network, the terminal equipment is blocked and its SIM downloading application makes a similar attempt in the following network found.

**[0007]** At the same time, the user interface of the terminal equipment is delayed by showing a "SIM loading" message. A data communication connection is formed between the terminal equipment and the management functionality and data transmission is carried out to download SIM data to the terminal equipment. The terminal equipment receives the SIM data and stores it in its memory devices. When all has been downloaded at terminal equipment, the SIM application is activated in the terminal equipment. When the terminal equipment's SIM downloading application has made sure that all the SIM data to be downloaded has been successfully downloaded and stored in the terminal equipment, the terminal equipment is updated. Then, the terminal equipment's user interface is freed and the user is permitted to perform the ordinary steps such as user and terminal equipment authentication steps in the data communication network.

**[0008]** Although the terminal equipment of the prior art initially does not have a SIM card installed, it is clear that the disadvantages for M2M applications are not resolved by the prior art method since telephone numbers should still be assigned to the different terminals and HLR capacity should be reserved to allow such terminals to obtain full mobile phone functionality.

### SUMMARY OF THE INVENTION

**[0009]** It is an object of the present invention to make the concept of SIM-less communication units available for cost effective M2M communications.

**[0010]** A method of transferring data from at least a first communication module and a second communication module to, respectively, a first data processing centre and a second data processing centre is proposed. The data is transferred via a circuit switched telecommunications network. A first connection request containing a first pre-provisioned telephone number from the first communication module and a second connection request containing a second pre-provisioned telephone number from the second communication module is received in the network, e.g. in the mobile switching centre (MSC). The first and second telephone number are processed in the network such that the network refrains from authenticating the first and second communication module in order to connect to the telecommunications network. Subsequently a first and a second circuit switched data connection are established with the first and second communication modules for receiving the data in response

to the first and second connection request, respectively. The data can be routed from the first communication module to the first data processing centre and from the second communication module to the second data processing centre in accordance with the first and second telephone number respectively.

**[0011]** The applicant also proposes a telecommunications network for performing such a method, a communication module for operating in such a method, and the use of such a communications module in such a method or telecommunications network.

**[0012]** The proposal of the applicant has been inspired by the emergency call functionality that has been standardized for mobile phones. Telecommunication network operators make available particular (often short) telephone numbers that may be called to alarm emergency services without requiring the mobile phone to contain or have access to a SIM card. The mobile phone chooses the telecommunications network for which the strongest signal is received. The mobile phone is allowed to access this telecommunications network without authentication. An example of this approach is provided in WO 2003/037026.

**[0013]** By not requiring SIM cards for the communication modules in M2M applications, no numbers need to be assigned for the communication modules and no HLR capacity needs to be reserved, resulting in a considerable cost decrease. A mandatory telecommunications network is assigned in the communication module for the transfer of data. The telephone number is also indicative of the routing of the data to a respective data processing centre. Also in contrast with the emergency call functionality, the assigned telephone number for the data processing centre may be a long number, e.g. selected from a range of MSISDN numbers, since the telephone number is not required to be easily remembered.

**[0014]** An alternative of the above method is defined in claim 10, wherein a single telephone number is used for routing the data to a data processing centre and the identifiers, such as the IMEI's of the communication modules indicate the required processing of the data. The alternative embodiment may e.g. be used in situations wherein it is not appropriate to assign a specific telephone number for a specfic set of communication modules

**[0015]** The embodiment of claim 2 provides the advantage of assigning internal network addresses and thus provides increased flexibility.

**[0016]** The embodiment of claim 3 provides the advantage that the communication module attaches to a predefined network that is configured to appropriately transfer the data to the data processing centre. The predefined network is indicated by means of the mobile network code (MNC).

**[0017]** The embodiment of claim 4 provides the advantage that the communication modules do not need to be connected to the network continuously, thereby saving network resources. For M2M applications, communication modules typically only rarely have data to be transmitted.

**[0018]** The embodiments of claims 5 and 6 allow for further distinguishing data from different communication modules. The IMEI of claim 5 may be used to distinguish on the basis of the communication module from which the data is obtained, an example being provided in claim 7. The application code of claim 6 enables to distinguish data on the type of application from which the data is obtained, the latter being suitable e.g. for communication modules reporting data from several different sensors.

**[0019]** The embodiment of claim 8 provides the advantage that the subscriber, typically the organization that requires the data processing, may be billed for the access to the telecommunications network, the data transfer and/or the data processing in the absence of SIM card data from the communication modules.

**[0020]** The embodiment of claim 9 provides the advantage that existing telecommunication networks can be employed for M2M communication applications.

**[0021]** Hereinafter, embodiments of the invention will be described in further detail. It should be appreciated, however, that these embodiments may not be construed as limiting the scope of protection for the present invention.

## BRIEF DESCRIPTION OF THE DRAWINGS

**[0022]** In the drawings:

FIG. 1 shows a schematic illustration of a system for transmitting data in a machine-to-machine communication system according to an embodiment of the invention;

FIG. 2 shows a schematic illustration of a communication module according to an embodiment of the invention; and

FIG. 3 shows a schematic illustration of a network server for use in the system of FIG. 1.

## DETAILED DESCRIPTION OF THE DRAWINGS

**[0023]** FIG. 1 shows a schematic illustration of a machine-to-machine (M2M) system 1 comprising a plurality of communication modules 2A-2D. Communication modules 2A, 2B are exploited by a first organization I and may be used, e.g. for communicating electricity usage data of electricity meters to a data processing centre 3A to generate a annual electricity bill. Communication modules 2C, 2D are exploited by a second organization II and may be used to monitor installations, such as coffee machines or printer, for operation and report the status to a second data processing centre 3B for servicing and maintenance purposes.

**[0024]** Base stations 4, 5 are installed in the area of communication 2A-2D and provide coverage for these modules. Base station 4 is part of a circuit switched telecommunications network 6. Base station 5 may be part of another telecommunications network (not further

shown). Telecommunications network 6 identifies itself by broadcasting its mobile network code (MNC) in combination with a mobile country code (MCC). Telecommunications network 6 may be a GSM, UMTS or other circuit switched wireless access network.

**[0025]** Telecommunications network 6 comprises a mobile switching centre (MSC) 7 in a manner known as such. In the embodiment of FIG. 1, MSC 7 provides access to a further network 8 or collection of networks, such as the internet, for transferring data from the communication modules 2A-2D via the telecommunications network 6 and the further network 8 to data processing centres 3A, 3B. It should be appreciated that telecommunications network 6 and further network 8 may be the same network.

**[0026]** FIGS. 2 and 3 provide schematic illustrations of a communication module 2 and a MSC 7, respectively.

**[0027]** Communication module 2 comprises or is communicatively connected to a sensor 10. A communication module 2 may comprise or communicatively connected to a plurality of, possibly functionally different, sensors. Sensor 10 monitors operation and/or receives data of a device or other instance, such as a room. Communication module 2 has a processing unit 11 comprising a timer module 12 and/or an incident detector 13. Furthermore, communication module 2 has a non-detachable memory unit 14 comprising a single mobile network code MNC6 of telecommunications network 6 and a number, e.g. 116, for connecting to the telecommunications network 6. Furthermore, the memory unit comprises the international mobile equipment identifier (IMEI), e.g. IMEI1 of the communication module 2A. An application identifier may also be present. Communication module 2 also comprises a transmitter 15 for wirelessly accessing the wireless part of telecommunications network 6.

**[0028]** Communication device 2 does not possess a telephone number (MSISDN) for receiving telephone calls or messages or an International Mobile Subscriber Identity (IMSI) to attach to the telecommunication network. The communication device 2 is configured such that it does not require a traditional subscriber identity module (SIM). The information stored in the non-detachable memory module 14 is sufficient for the communication module 2 to perform its function as an M2M communication module. Customers, such as organizations I, II may easily change the network operator by changing the stored MNC (and possibly the telephone number of the data processing centre/service) from e.g. the operator of telecommunications network 6 to the operator of the telecommunications network of base station 5.

**[0029]** The communication module 2 can be programmed with the required information in a plurality of ways. The communication module 2 may be pre-programmed with the information, such as the MNC and the telephone number. A data carrier, such a SIM card, may also be used to provide the mandatory MNC to the communication module 2. The SIM card may either be removed afterwards or not.

**[0030]** The MSC 7, shown schematically in FIG. 3, comprises means 20, 21 for communicating with the telecommunications network 6 and the further network 8. The MSC 7 comprises a processing unit 22 for performing the required operations. MSC 7 further contains a memory unit 23 and a billing module 24. MSC 7 comprises or has access to a database 25. The database 25 comprises information of the address of the appropriate data processing centre (DPC) 3A, 3B for each telephone number used in a connection request from the communication modules 2A-2D.

**[0031]** In an embodiment of the invention, the operation of the M2M system may be as follows.

**[0032]** Timer module 12 of communication module 2A of organization I instructs sensor 10 to read the values of the electricity meter of a particular household in order to establish the annual electricity bill. Timer module 12 of communication module 2B of organization I performs the same function for another electricity meter.

**[0033]** Incident detection module 13 of communication module 2C of organization II detects that sensor 10 registers malfunction of a printing apparatus of said organization. Incident detection module 13 of communication module 2D detects a malfunction of communication module 2D itself.

**[0034]** Consequently, communication modules 2A-2D have data to transmit to either data processing centre 3A of organization I or data processing centre 3B of organization II. It is assumed that both organizations I, II are customers of the operator of telecommunications network 6.

**[0035]** Despite the fact that other telecommunication networks may be available (e.g. for communication modules 2C and 2D the signal strength of the telecommunications network of base station 5 is larger than the signal strength of base station 4 of telecommunications network 6) all communication modules 2A-2D are forced to establish a connection with the telecommunications network 6 when they have data to report. This is achieved by programming a mandatory MNC of telecommunications network 6 in memory 14 of the communication modules 2A-2D.

**[0036]** Memory 14 of communication modules 2A-2D also contain a pre-provisioned phone number, e.g. "116" for module 2A, 2B and "117" for modules 2C, 2D for setting up a circuit switched connection to data application centre 3A, 3B respectively. A connection request containing these numbers is recognized in the telecommunications network 6 as a request for which authentication should be omitted. This information is e.g. known in MSC 7. The authentication steps that perform a security function and involve exchange of an authentication triplet (for GSM) or quintet (for UMTS) are omitted for the special pre-provisioned number for authentication purposes. The information may, however, still be used for data encryption. It should be noted that telecommunication network 6, as in the present embodiment, may offer multiple telephone numbers that may be used to access the tel-

ecommunications network without authentication.

**[0037]** Upon receipt of the connection request with the preprovisioned telephone numbers, the MSC 7 obtains the routing information for the data from database 25. For modules 2A, 2B connecting with "116", processor 22 of MSC 7 finds that the data should be routed to data processing centre 3A, whereas for modules 2C, 2D connecting with "117", it is found that data should be routed to data processing centre 3B. Using the addresses DPC3A, DPC3B, the data may subsequently be routed to the appropriate data processing centres 3A, 3B. Data processing centres 3A, 3B may now process the data obtained from the communication modules 2A, 2B and 2C, 2D, respectively, in order to establish the annual electricity bills, to service the printing apparatus and to repair the communication module 2D,

**[0038]** Each communication module 2A-2D also comprises an identifier, e.g. a hardware identifier such as the IMEI of the communication module, and/or an application identifier. The identifier may also transmitted to the telecommunications network 6 with the connection request. In other words, communication module 2A transmits IMEI1, communication module 2B transmits IMEI2, communication module 2C transmits IMEI3 and communication module 2D transmits IMEI4.

**[0039]** The identifiers IMEI1, IMEI2, IMEI3 and IMEI4 of communication modules 2A-2D, respectively, using transmitter 15 are received over the telecommunications network 6 at the receiving means 20 of MSC 7. MSC 7 is transparent for the IMEI identifiers.

**[0040]** The identifiers may however be used for distiguishing data of communication modules 2A-2D in the data processing centres 3A, 3B. The IMEI may also be used at the data processing centre for authentication.

**[0041]** Assume that organizations I and II decide to use the same telephone number "116" for accessing the telecommunications network 6. As routing of the data to the data processing centre is based on the telephone number, the data from communication modules 2A-2D now arrive at data processing centre 3A only. In order to distinguish data for communication modules 2A, 2B on the one hand and communication modules 2C, 2D on the other, the identifiers may be used in the data processing centre 3A to separate the data. It should be appreciated that distinguishing of the data may also be based on e.g. the application level identifier, a combination of the IMEI and the application level service identifier or another identifier of the communication module 2.

**[0042]** Of course, MSC 7 may also distinguish data on the basis of the identifier, if these identifiers are available to the MSC 7.

**[0043]** Organizations I, II may be billed using billing module 24 of network server 7. Billing may e.g. be performed on the basis of the number of established connections, the amount of transmitted data, the amount of communication devices etc, depending on the contract between the operator of telecommunications network 6 and the customer I, II.

**[0044]** Since the communication modules 2A-2D do not contain a SIM card, no data can be transmitted to the communication modules 2A-2D from the network 6. However, if communication modules 2A-2D connect to the network at known times (e.g. because the communication modules connect to network 6 in accordance with a time schedule) the connection can also be used to transfer data from the network 6 to the communication modules 2A-2D.

## Claims

1. A method of transferring data from at least a first communication module and a second communication module to, respectively, a first data processing centre and a second data processing centre, via a circuit switched telecommunications network, comprising the steps in the telecommunications network of:

   - receiving a first connection request containing a first pre-provisioned telephone number from said first communication module and a second connection request containing a second pre-provisioned telephone number from said second communication module, said first and second telephone number indicating that said circuit switched telecommunications network should refrain from authenticating said first and second communication module in order to connect to said telecommunications network;
   - establishing a first and a second circuit switched data connection with said first and second communication modules for receiving said data in response to said first and second connection request, respectively;
   - routing said data from said first communication module to said first data processing centre and said data of said second communication module to said second data processing centre on the basis of said first and second telephone number, respectively.

2. The method according to claim 1, wherein said telecommunications network comprises a switching module, the method comprising the steps of:

   - obtaining, by said switching module, an address of said first data processing centre and said second data processing centre on the basis of said first telephone number and said second telephone number, respectively;
   - routing said data from said first communication module to said first data processing centre and said data of said second communication module to said second data processing centre in accordance with said address of said first data process-

ing centre and said second data processing centre, respectively.

3. The method according to claim 1 or 2, wherein said first and second communication modules have been pre-programmed with a mandatory operator code of said telecommunications network and said first and second telephone number for use in said connection request, respectively.

4. The method according to one or more of the preceding claims, wherein said first and second connection requests are received at a pre-programmed time or due to a pre-programmed incident at said first and second communication modules.

5. The method according to one or more of the preceding claims, wherein at least one of said first and second connection requests comprises unique device identifier, such as an IMEI, of said communication module.

6. The method according to one or more of the preceding claims, wherein at least one of said first and second network requests comprises an application code.

7. The method according to claim 5 or 6, wherein a third communication module is provided for transfering data to said first data processing centre, said third communication module being configured for transmitting a third connection request using said first telephone number, the method comprising the step of distinguishing data from said first communication module and said third communication module on the basis of said unique identifier in said first data processing centre.

8. The method according to one or more of the claims 5-7, wherein said transfer of data is billed on the basis of at least one of said unique device identifier and an application code.

9. The method according to one or more of the preceding claims, wherein said telecommunications network has a GSM/UMTS infrastructure.

10. A method of transferring data from at least a first communication module and a second communication module to a first data processing centre via a circuit switched telecommunications network, comprising the steps of:

- receiving a first connection request from said first communication module containing a first unique identifier and a second connection request from said second communication module containing a second unique identifier, said first connection request and second connection request also containing a telephone number indicating that said circuit switched telecommunications network should refrain from authenticating said first and second communication module in order to connect to said telecommunications network;
- establishing a first and a second circuit switched data connection with said first and second communication modules for receiving said data in response to said first and second connection request, respectively;
- routing said data from said first communication module and said second communication module to said first data processing centre on the basis of said telephone number;
- processing said data from said first communication module in said first data processing centre in accordance with said first unique identifier;
- processing said data from said second communication module in said first data processing centre in accordance with said second unique identifier.

11. The method according to claim 10, comprising the steps of:

- obtaining an address of said first data processing centre on the basis of said telephone number;
- routing said data from said first communication module and said second communication module to said first data processing centre in accordance with said address of said first data processing centre.

12. The method according to claim 10 or 11, wherein said first unique identifier and said second unique identifier comprise at least one of a unique device identifier, such as an IMEI, and an application identifier.

13. The method according to one or more of the claims 10-12, further comprising the features of one or more of the claims 3-9.

14. A circuit switched telecommunications network being configured for performing the method according to one or more of the preceding claims 1, 2 and 5-13.

15. A communication module configured for operating in the telecommunications network of claim 9 or 14, said communication module being a SIM-less communication module programmed with a single mandatory operator code of said telecommunications network to transmit a connection request and being programmed to use only a single telephone number, said single telephone number indicating that said tel-

ecommunications network should refrain from authenticating said communication module in order to connect to said telecommunications network.

**16.** The communication module according to claim 15, wherein said module comprises at least one of a timer and an incident detector configured for triggering said communication module to transmit said connection request at a particular time indicated by said timer or in response to an incident detected by said incident detector.

**17.** Use of the communication module according to claim 15 or 16 in the telecommunications network of claim 9 or 14 and/or in the method according to claims 1-13.

**18.** A switching module configured for receiving a first and second telephone number from a first and a second communication module, respectively, and for retrieving an address of a first and second data processing centre on the basis of said first and second telephone number, respectively, for routing circuit switched data from said first and second communication module to, respectively, said first and second data processing centre.

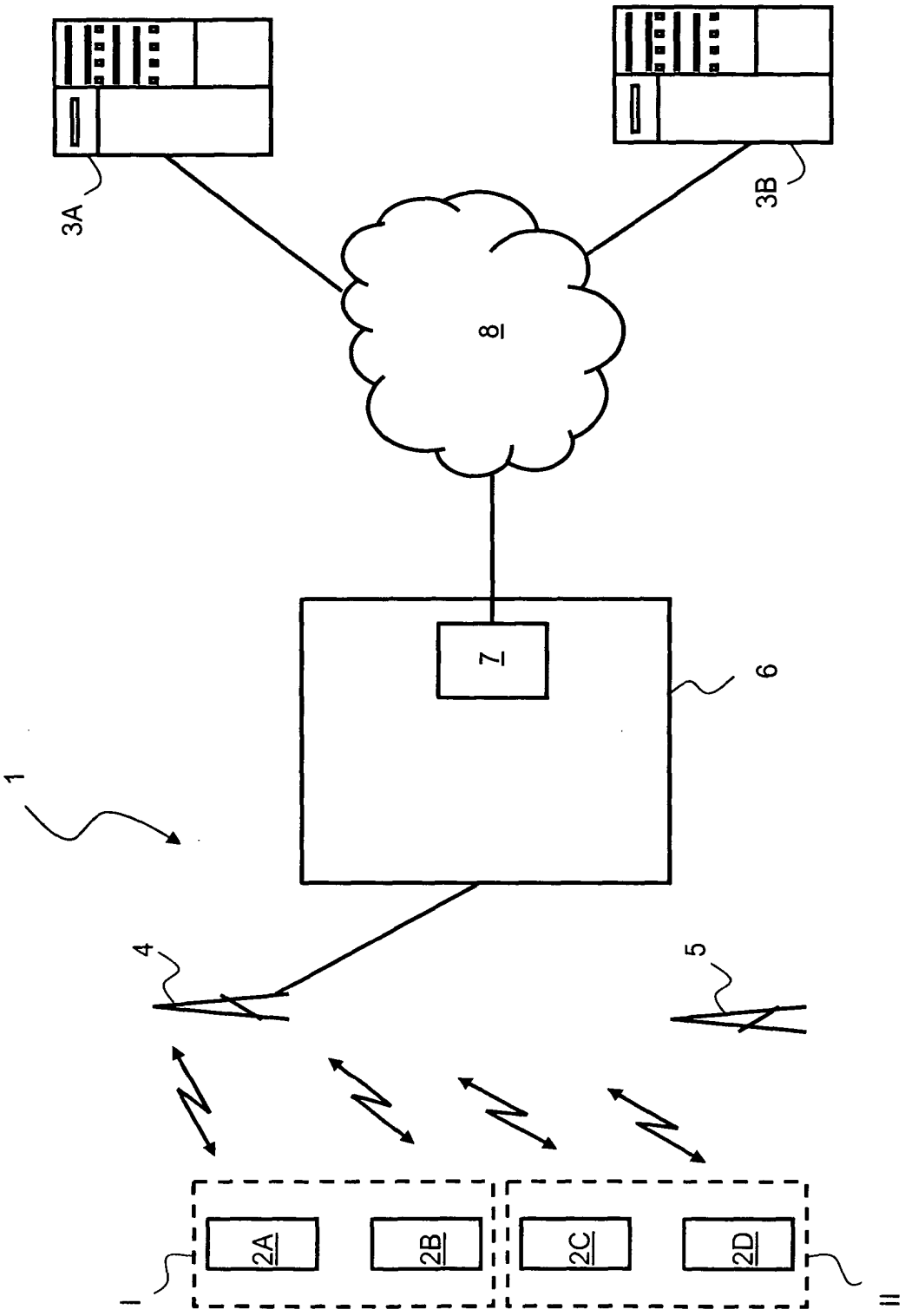



FIG. 1



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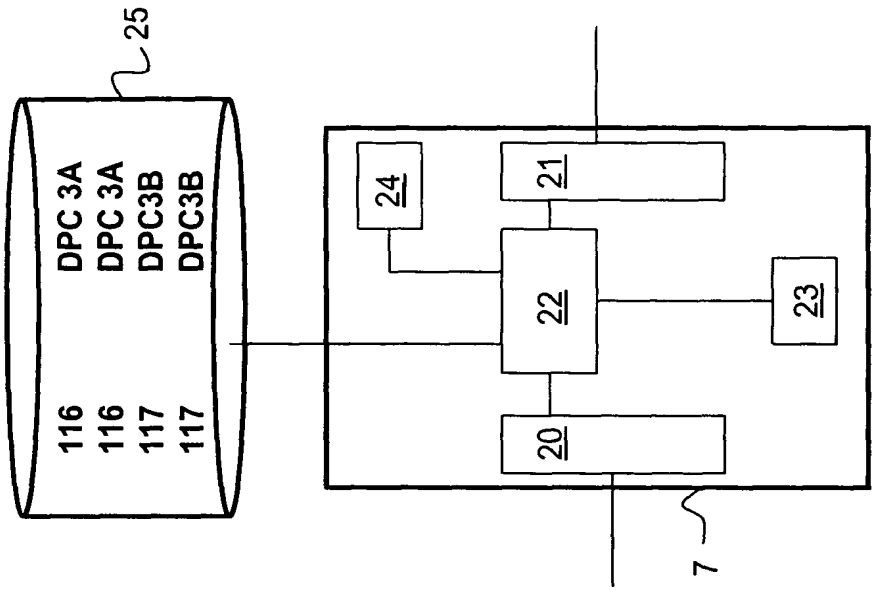



FIG. 3

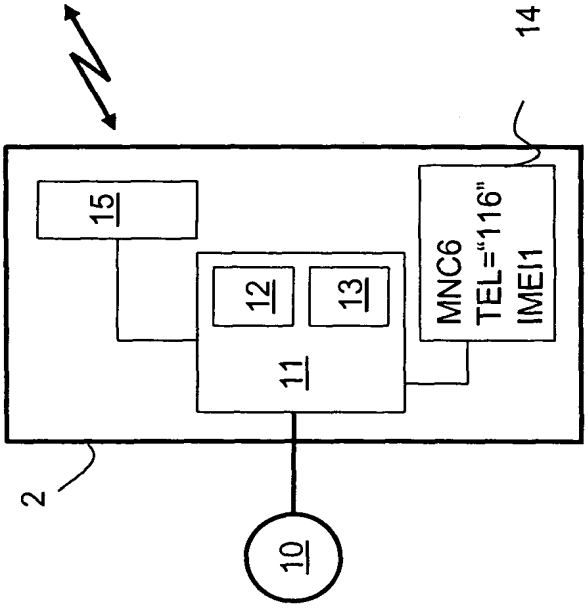



FIG. 2



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Europäisches Patentamt
European Patent Office
Office européen des brevets

# EUROPEAN SEARCH REPORT

Application Number
EP 08 00 9899

## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (IPC) |
|---|---|---|---|
| X | WO 2007/069974 A (TELIA-SONERA AB)<br>21 June 2007 (2007-06-21)<br>* page 1, lines 1-25 *<br>* page 2, line 22 - page 3, line 22 *<br>* page 4, line 19 - page 6, line 5 *<br>* page 7, lines 18-34 *<br>* page 8, line 17 - page 10, line 4 *<br>----- | 1-18 | INV.<br>H04M11/00<br>G08C17/02 |
| X | DE 199 22 667 A1 (DETEMOBIL DEUTSCHE TELEKOM MOBILNET GMBH)<br>30 November 2000 (2000-11-30)<br>* column 1, lines 30-40 *<br>* column 1, line 55 - column 3, line 4 *<br>* column 3, line 66 - column 4, line 28 *<br>----- | 1-18 | |
| E | WO 2008/088414 A (CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS)<br>24 July 2008 (2008-07-24)<br>* paragraph [0001] *<br>* paragraphs [0006] - [0010] *<br>* paragraph [0013] *<br>* paragraph [0061]; figure 2 *<br>* paragraphs [0066] - [0070] *<br>----- | 1-18 | TECHNICAL FIELDS SEARCHED (IPC)<br>G08C<br>H04M |

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| The Hague | 31 October 2008 | Vercauteren, Steven |

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
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P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)





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## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 08 00 9899

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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31-10-2008

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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| | | WO 0070892 A1 | 23-11-2000 |
| | | DK 1179269 T3 | 02-06-2008 |
| | | EP 1179269 A1 | 13-02-2002 |
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| WO 2008088414 A | 24-07-2008 | US 2008153521 A1 | 26-06-2008 |

EPO FORM P0459

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



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## REFERENCES CITED IN THE DESCRIPTION

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### Patent documents cited in the description


- US 2004023689 A **[0006]**
- WO 2003037026 A **[0012]**




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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)**
**(Case No. 11-575-WO-US)**

| | | |
|---|---|---|
| **In re Application of:** | ) | |
| | ) | |
| **Bryan Jerrel BUSROPAN *et al.*** | ) | |
| | ) | **Examiner: Maung, Nay Aung** |
| **Serial No.: 13/126,601** | ) | |
| | ) | **Art Unit: 2618** |
| **Int'l Appln. No.: PCT/EP2009/064185** | ) | |
| | ) | **Confirmation No.: 4470** |
| **Int'l. Filing Date: 28 October 2009** | ) | |
| | ) | |
| **For: Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre** | ) | |

## SECOND PRELIMINARY AMENDMENT

Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Please enter the following amendments and remarks prior to examination on the merits.

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks** begin on page 6 of this paper.



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## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of transferring user data from a communication module to a data processing centre over a telecommunications network, the method comprising the steps in the telecommunications network of:

wirelessly receiving a signalling message from said communication module, said user data comprising application data of a program run by the communication module being contained in said signalling message; and

transferring said user data comprising said application data of said program run by the communication module to said data processing centre.

2. (Previously Presented) The method according to claim 1, further comprising the steps of:

retrieving said user data from said received signalling message in said telecommunications network; and

transferring said retrieved user data to said data processing centre.

3. (Previously Presented) The method according to claim 2, wherein the signalling message is a network attach request message.

4. (Original) The method according to claim 3, wherein said network attach request message is a location updating request message with a location updating type information element indicating an IMSI attach.

5. (Original) The method according to claim 3, wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach.

6. (Currently Amended) The method according to claim 3, comprising the step of:



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transmitting a network attach accept message to the communication module;

transmitting further data to and/or receiving further data from the communications module; and

[[-]] receiving a network detach message from the communication module.

7. (Previously Presented) The method according to claim 3, comprising the step of transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module.

8. (Previously Presented) The method according to claim 3, wherein said communication module is not authenticated in said telecommunications network.

9. (Previously Presented) The method according to claim 3 wherein normal location updating procedure is not performed in said telecommunication module.

10. (Previously Presented) The method according to claim 3, wherein at least a part of said user data is encrypted.

11. (Previously Presented) The method according to claim 3, wherein said user data comprises application data of a program run by said communication module.

12. (Previously Presented) The method according to claim 3, wherein said user data comprises address information indicative of said data processing centre.

13. (Previously Presented) The method according to claim 3, wherein said user data is transferred to said data processing centre using one or more SMS messages.

14. (Previously Presented) The method according to claim 3, wherein said user data is transferred to said data processing centre using one or more XML messages.



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15. (Previously Presented) A computer program comprising a software code portion configured for, when run by a processor, performing the steps of the method according to claim 3.

16. (Previously Presented) A telecommunications network being configured for transferring user data from a communication module to a data processing centre, said telecommunications network configured for performing the steps of:

wirelessly receiving a signaling message from said communication module, said user data being contained in said signalling message; and

transferring said user data to said data processing centre.

17. (Previously Presented) A node in a telecommunications network, said telecommunications network being configured for transferring user data from a communication module to a data processing centre, said node being configured for performing the steps of:

wirelessly receiving a message from said communication module, said user data being contained in said signalling message; and

transferring said user data to said data processing centre.

18. (Currently Amended). A communication module comprising a processor for processing user data, an encapsulation module configured for encapsulating said user data comprising application data of a program run by the communication module in one or more signalling messages from said communication module to a telecommunications network and a transmitter for transmitting said signalling messages containing said user data comprising sais application data of said program run by the communication module to said telecommunications network.

19. (Previously Presented) A node according to claim 17, wherein the node is a Mobile Switching Centre.



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20. (Previously Presented) A node according to claim 17, wherein the node is a serving GPRS support node.

21. (Previously Presented) A node according to claim 17, wherein the node is a signaling monitor.

22. (New) The method according to claim 1, wherein the user data furthermore comprise alarming data, measurement data or derivates thereof.

23. (New) The method according to claim 1, wherein the user data furthermore contain address information indicating the data processing center to which the user data are transferred.

24. (New) A communication module according to claim 18, wherein the user data furthermore comprise alarming data, measurement data or derivates thereof.



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## REMARKS

No new matter has been introduced into the present application as a result of the above amendments.

Prompt consideration and entry of this second preliminary amendment prior to examination is respectfully requested. Applicants note that these claim amendments reflect amendments to the claims of the first preliminary amendment filed with the application on April 28, 2011. If there are any questions or comments regarding this Amendment or application, the Examiner is encouraged to contact the undersigned attorney indicated below.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayments to Deposit Account No. 13-2490.

Respectfully submitted,

Date: February 11, 2012

By: /Scott M. Miller/
Scott M. Miller
Reg. No. 62,967

**McDonnell Boehnen Hulbert & Berghoff LLP**
300 South Wacker Drive
Chicago, IL 60606

Telephone: 312-913-0001
Facsimile: 312-913-0002



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# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 13126601 |
| **Filing Date:** | 03-Jun-2011 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Filer:** | Scott Michael Miller |
| **Attorney Docket Number:** | 11-575-WO-US |

Filed as Large Entity

## U.S. National Stage under 35 USC 371 Filing Fees

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| Claims in excess of 20 | 1615 | 3 | 60 | 180 |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| **Extension-of-Time:** | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Miscellaneous:** | | | | |
| | | | **Total in USD ($)** | **180** |

# Electronic Acknowledgement Receipt

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|---|---|
| **EFS ID:** | 12055429 |
| **Application Number:** | 13126601 |
| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
| **Filer:** | Scott Michael Miller |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 11-575-WO-US |
| **Receipt Date:** | 11-FEB-2012 |
| **Filing Date:** | 03-JUN-2011 |
| **Time Stamp:** | 11:03:13 |
| **Application Type:** | U.S. National Stage under 35 USC 371 |

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| Payment Type | Deposit Account |
| Payment was successfully received in RAM | $180 |
| RAM confirmation Number | 6679 |
| Deposit Account | 132490 |
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|---|---|---|---|---|---|
| 1 | | 11-575-WO-US_second_preliminary_amendment.pdf | 86755<br>4aa3ebe80f887350a40c46ec67c0db01be0d5181 | yes | 6 |

| | Multipart Description/PDF files in .zip description | | |
|---|---|---|---|
| | **Document Description** | **Start** | **End** |
| | Preliminary Amendment | 1 | 1 |
| | Claims | 2 | 5 |
| | Applicant Arguments/Remarks Made in an Amendment | 6 | 6 |

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|---|---|---|---|---|---|
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|---|---|

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**New Applications Under 35 U.S.C. 111**

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

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

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

**New International Application Filed with the USPTO as a Receiving Office**

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

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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# PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

| Application or Docket Number | Filing Date | ☐ To be Mailed |
|---|---|---|
| 13/126,601 | 06/03/2011 | |

## APPLICATION AS FILED – PART I

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

## APPLICATION AS AMENDED – PART II

| AMENDMENT | 02/11/2012 | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | SMALL ENTITY RATE ($) | SMALL ENTITY ADDITIONAL FEE ($) | OR | OTHER THAN SMALL ENTITY RATE ($) | OTHER THAN SMALL ENTITY ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total (37 CFR 1.16(i)) | * 24 | Minus | ** 21 | = 3 | X $ = | | OR | X $60= | 180 |
| | Independent (37 CFR 1.16(h)) | * 4 | Minus | ***4 | = 0 | X $ = | | OR | X $250= | 0 |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | | OR | | |
| | | | | | | TOTAL ADD'L FEE | | OR | TOTAL ADD'L FEE | 180 |

| AMENDMENT | | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) | OR | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total (37 CFR 1.16(i)) | * | Minus | ** | = | X $ = | | OR | X $ = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | X $ = | | OR | X $ = | |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | | OR | | |
| | | | | | | TOTAL ADD'L FEE | | OR | TOTAL ADD'L FEE | |

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

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

Legal Instrument Examiner:
/SHARAIN MORELAND/

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

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www.uspto.gov

| APPLICATION NUMBER | FILING OR 371(C) DATE | FIRST NAMED APPLICANT | ATTY. DOCKET NO./TITLE |
|---|---|---|---|
| 13/126,601 | 06/03/2011 | Bryan Jerrel Busropan | 11-575-WO-US |

**CONFIRMATION NO. 4470**

20306
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

**PUBLICATION NOTICE**

*OC000000050105796*

**Title:**Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre

**Publication No.**US-2011-0237281-A1
**Publication Date:**09/29/2011

## NOTICE OF PUBLICATION OF APPLICATION

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

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

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

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

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

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| APPLICATION NUMBER | FILING or 371(c) DATE | GRP ART UNIT | FIL FEE REC'D | ATTY.DOCKET.NO | TOT CLAIMS | IND CLAIMS |
|---|---|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | 2618 | 1382 | 11-575-WO-US | 21 | 4 |

**CONFIRMATION NO. 4470**

**CORRECTED FILING RECEIPT**

20306
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

*OC00000048957229*

Date Mailed: 07/26/2011

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

**Applicant(s)**

Bryan Jerrel Busropan, Leidschendam, NETHERLANDS;
Johannes Maria van Loon, Zoetermeer, NETHERLANDS;

**Assignment For Published Patent Application**

KONINKLIJKE KPN N.V., The Hague, NL
NEDERLANDSE ORGANISATIE VOOR TOEGEPAST- NATUURWETENSCHAPPELIJK ONDERZOEK TNO, DELFT, NETHERLANDS

**Power of Attorney:** The patent practitioners associated with Customer Number 20306

**Domestic Priority data as claimed by applicant**

This application is a 371 of PCT/EP09/64185 10/28/2009

**Foreign Applications** (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
EUROPEAN PATENT OFFICE (EPO) 08018761.0 10/28/2008

**If Required, Foreign Filing License Granted:** 06/15/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/126,601**

**Projected Publication Date:** 09/29/2011

**Non-Publication Request:** No

**Early Publication Request:** No

**Title**

Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre

**Preliminary Class**

455

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

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

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

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

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

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## Title 37, Code of Federal Regulations, 5.11 & 5.15

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PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**(Case No. 11-575-WO-US)**

| | | |
|---|---|---|
| **In the Application of:** | ) | |
| | ) | |
| **Bryan Jerrel Busropan et al.** | ) | |
| | ) | **Examiner: TBD** |
| **Serial No.: 13/126,601** | ) | |
| | ) | **Group Art Unit: TBD** |
| **Filing Date: June 3, 2011** | ) | |
| | ) | **Confirmation No.: 4470** |
| **For: Telecommunications Network and Method Of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre** | ) | |

**REQUEST FOR CORRECTED FILING RECEIPT**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Application Processing Division
Customer Correction Branch

Dear Sir:

Attached is a copy of the official filing receipt received from the PTO in the above-referenced application which issuance of a corrected filing receipt is respectfully requested.

There is an error with respect to the following data, which is incorrectly entered. The Assignment for Published Patent Application is missing one of the Assignees. The Assignment information should read as follows:

**Assignment for Published Patent Application:**

KONINKLIJKE KPN N.V., The Hague, NL
**NEDERLANDSE ORGANISATIE VOOR TOEGEPAST-NATUURWETENSCHAPPELIJK ONDERZOEK TNO, Delft, NL**

The Application Data Sheet submitted on April 28, 2011 correctly reflects this information.

Respectfully submitted,

Date: July 25, 2011

By: /Bradley J. Hulbert/
Bradley J. Hulbert
Registration No. 30,130

**McDonnell Boehnen Hulbert & Berghoff LLP**
300 South Wacker Drive, 32nd Floor
Chicago, IL 60606
(312)913-0001

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UNITED STATES DEPARTMENT OF COMMERCE
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| APPLICATION NUMBER | FILING or 371(c) DATE | GRP ART UNIT | FIL FEE REC'D | ATTY.DOCKET.NO | TOT CLAIMS | IND CLAIMS |
|---|---|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | | 1382 | 11-575-WO-US | 21 | 4 |

**CONFIRMATION NO. 4470**

20306
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

**FILING RECEIPT**

*OC000000048235584*

Date Mailed: 06/17/2011

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

**Applicant(s)**

Bryan Jerrel Busropan, Leidschendam, NETHERLANDS;
Johannes Maria van Loon, Zoetermeer, NETHERLANDS;

**Assignment For Published Patent Application**

KONINKLIJKE KPN N.V., The Hague, NL /Nederlandse Organisatie Voor Toegepast-Natuurwetenschappelijk Onderzoek TNO,Delft NL

**Power of Attorney:** The patent practitioners associated with Customer Number 20306

**Domestic Priority data as claimed by applicant**

This application is a 371 of PCT/EP09/64185 10/28/2009

**Foreign Applications** (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
EUROPEAN PATENT OFFICE (EPO) 08018761.0 10/28/2008

**If Required, Foreign Filing License Granted:** 06/15/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/126,601**

**Projected Publication Date:** 09/29/2011

**Non-Publication Request:** No

**Early Publication Request:** No

**Title**

Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre

**Preliminary Class**

## PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 10583707 |
| **Application Number:** | 13126601 |
| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
| **Filer:** | Bradley Hulbert |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 11-575-WO-US |
| **Receipt Date:** | 25-JUL-2011 |
| **Filing Date:** | 03-JUN-2011 |
| **Time Stamp:** | 14:22:56 |
| **Application Type:** | U.S. National Stage under 35 USC 371 |

## Payment information:

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

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Request for Corrected Filing Receipt | 11_575_WO_US_Request_Correct_Filing_Receipt.pdf | 20720<br>934c185adc42f2b8788fcad76e855852d754750f | no | 1 |

| | |
|---|---|
| **Warnings:** | |
| **Information:** | |

| | | | | | |
|---|---|---|---|---|---|
| 2 | Request for Corrected Filing Receipt | 11_575_WO_US_Filing_Receipt.pdf | 157436<br>682437bac035f6d603f2a55cf69d98f350ca6f75 | no | 3 |

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|---|---|
| **Warnings:** | |
| **Information:** | |
| **Total Files Size (in bytes):** | 178156 |

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**New Applications Under 35 U.S.C. 111**

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

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**New International Application Filed with the USPTO as a Receiving Office**

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| U.S. APPLICATION NUMBER NO. | FIRST NAMED APPLICANT | ATTY. DOCKET NO. |
|---|---|---|
| 13/126,601 | Bryan Jerrel Busropan | 11-575-WO-US |

20306
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

| INTERNATIONAL APPLICATION NO. | |
|---|---|
| PCT/EP09/64185 | |
| I.A. FILING DATE | PRIORITY DATE |
| 10/28/2009 | 10/28/2008 |

**CONFIRMATION NO. 4470**

**371 ACCEPTANCE LETTER**

*OC000000048235585*

Date Mailed: 06/17/2011

## NOTICE OF ACCEPTANCE OF APPLICATION UNDER 35 U.S.C 371 AND 37 CFR 1.495

The applicant is hereby advised that the United States Patent and Trademark Office in its capacity as a Designated / Elected Office (37 CFR 1.495), has determined that the above identified international application has met the requirements of 35 U.S.C. 371, and is ACCEPTED for national patentability examination in the United States Patent and Trademark Office.

The United States Application Number assigned to the application is shown above and the relevant dates are:

| 06/03/2011 | 06/03/2011 |
|---|---|
| DATE OF RECEIPT OF 35 U.S.C. 371(c)(1), (c)(2) and (c)(4) REQUIREMENTS | DATE OF COMPLETION OF ALL 35 U.S.C. 371 REQUIREMENTS |

A Filing Receipt (PTO-103X) will be issued for the present application in due course. **THE DATE APPEARING ON THE FILING RECEIPT AS THE " FILING DATE" IS THE DATE ON WHICH THE LAST OF THE 35 U.S.C. 371 (c)(1), (c)(2) and (c)(4) REQUIREMENTS HAS BEEN RECEIVED IN THE OFFICE. THIS DATE IS SHOWN ABOVE.** *The filing date of the above identified application is the international filing date of the international application (Article 11(3) and 35 U.S.C. 363).* Once the Filing Receipt has been received, send all correspondence to the Group Art Unit designated thereon.

The following items have been received:

- Copy of the International Application filed on 04/28/2011
- Copy of the International Search Report filed on 04/28/2011
- Preliminary Amendments filed on 04/28/2011
- Oath or Declaration filed on 06/03/2011
- U.S. Basic National Fees filed on 04/28/2011
- Priority Documents filed on 04/28/2011
- Specification filed on 04/28/2011
- Claims filed on 04/28/2011
- Abstracts filed on 04/28/2011
- Drawings filed on 04/28/2011

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

DEBORAH D WILLIAMS

Telephone: (571) 272-0466

UNITED STATES PATENT AND TRADEMARK OFFICE

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

| APPLICATION NUMBER | FILING or 371(c) DATE | GRP ART UNIT | FIL FEE REC'D | ATTY.DOCKET.NO | TOT CLAIMS | IND CLAIMS |
|---|---|---|---|---|---|---|
| 13/126,601 | 06/03/2011 | | 1382 | 11-575-WO-US | 21 | 4 |

**CONFIRMATION NO. 4470**

20306
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

**FILING RECEIPT**

*OC000000048235584*

Date Mailed: 06/17/2011

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

**Applicant(s)**

Bryan Jerrel Busropan, Leidschendam, NETHERLANDS;
Johannes Maria van Loon, Zoetermeer, NETHERLANDS;

**Assignment For Published Patent Application**

KONINKLIJKE KPN N.V., The Hague, NL

**Power of Attorney:** The patent practitioners associated with Customer Number 20306

**Domestic Priority data as claimed by applicant**

This application is a 371 of PCT/EP09/64185 10/28/2009

**Foreign Applications** (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
EUROPEAN PATENT OFFICE (EPO) 08018761.0 10/28/2008

**If Required, Foreign Filing License Granted:** 06/15/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/126,601**

**Projected Publication Date:** 09/29/2011

**Non-Publication Request:** No

**Early Publication Request:** No

**Title**

Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre

**Preliminary Class**

## PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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

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

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

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

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

## LICENSE FOR FOREIGN FILING UNDER

## Title 35, United States Code, Section 184

## Title 37, Code of Federal Regulations, 5.11 & 5.15

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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

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

**NOT GRANTED**

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

## PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 13/126,601

### APPLICATION AS FILED - PART I

| FOR | (Column 1) NUMBER FILED | (Column 2) NUMBER EXTRA | SMALL ENTITY RATE($) | SMALL ENTITY FEE($) | OR | OTHER THAN SMALL ENTITY RATE($) | OTHER THAN SMALL ENTITY FEE($) |
|---|---|---|---|---|---|---|---|
| BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | | | N/A | 330 |
| SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | | | N/A | 430 |
| EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | | | N/A | 220 |
| TOTAL CLAIMS (37 CFR 1.16(i)) | 21 minus 20 = | * 1 | | | OR | x 52 = | 52 |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | 4 minus 3 = | * 1 | | | | x 220 = | 220 |
| APPLICATION SIZE FEE (37 CFR 1.16(s)) | If the specification and drawings exceed 100 sheets of paper, the application size fee due is $270 ($135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | | | | 0.00 |
| MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) | | | | | | | 0.00 |
| * If the difference in column 1 is less than zero, enter "0" in column 2. | | | TOTAL | | | TOTAL | 1252 |

### APPLICATION AS AMENDED - PART II

| | | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | SMALL ENTITY RATE($) | SMALL ENTITY ADDITIONAL FEE($) | OR | OTHER THAN SMALL ENTITY RATE($) | OTHER THAN SMALL ENTITY ADDITIONAL FEE($) |
|---|---|---|---|---|---|---|---|---|---|---|
| AMENDMENT A | Total (37 CFR 1.16(i)) | * | Minus | ** | = | x = | | OR | x = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | x = | | OR | x = | |
| | Application Size Fee (37 CFR 1.16(s)) | | | | | | | | | |
| | FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | | OR | | |
| | | | | | | TOTAL ADD'L FEE | | OR | TOTAL ADD'L FEE | |

| | | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | SMALL ENTITY RATE($) | SMALL ENTITY ADDITIONAL FEE($) | OR | OTHER THAN SMALL ENTITY RATE($) | OTHER THAN SMALL ENTITY ADDITIONAL FEE($) |
|---|---|---|---|---|---|---|---|---|---|---|
| AMENDMENT B | Total (37 CFR 1.16(i)) | * | Minus | ** | = | x = | | OR | x = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | x = | | OR | x = | |
| | Application Size Fee (37 CFR 1.16(s)) | | | | | | | | | |
| | FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | | OR | | |
| | | | | | | TOTAL ADD'L FEE | | OR | TOTAL ADD'L FEE | |

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

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

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)**
**(Case No. 11-575-WO-US)**

| | | |
|---|---|---|
| **In re Application of:** | ) | |
| | ) | |
| **Bryan Jerrel Busropan et al.** | ) | |
| | ) | **Examiner: TBA** |
| **Serial No.: 13/126,601** | ) | |
| **Int'l Appln. No.: PCT/EP2009/064185** | ) | **Art Unit: TBA** |
| | ) | |
| **Int'l. Filing Date: October 28, 2009** | ) | **Conf. No. 4470** |
| | ) | |
| **For: Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Center** | ) | |

**RESPONSE TO NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 MAILED ON MAY 16 , 2011**

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notification of Missing Requirements Under 35 U.S.C. 371 mailed May 16, 2011, Applicants submit herewith an executed Declaration and Power of Attorney in compliance with 37 CFR § 1.497(a) and (b). Please charge the surcharge of **$130.00** and any deficiency in the amount due, or credit any overpayment, to Deposit Account No. **13-2490**. Applicants believe that no further fees are due. If the Examiner believes otherwise, the Commissioner is authorized to deduct any fee from the Deposit Account No. 13-2490.

Applicants submit that the response to the Notice is complete. Prompt consideration and entry of this response and attachments are respectfully requested.

Respectfully submitted,

Date: June 3, 2011

/Bradley J. Hulbert/
Bradley J. Hulbert
Registration No. 30,130

**McDonnell Boehnen Hulbert & Berghoff LLP**
300 South Wacker Drive, 32nd Floor
Chicago, IL 60606
(312) 913-0001

**DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION**

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 an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**Telecommunications Network and Method of Transferring User Data in Signalling Messages form a Communication Unit to a Data Processing Center**

the specification of which is attached hereto unless the following space is checked:

x☒ was filed on 28 April 2011 as United States Application Serial Number 13/126,601

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.

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

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

Prior Foreign Application(s):

| | Number | Country | Day/Month/Year Filed |
|---|---|---|---|
| 1. | 08018761.0 | EP | 28/10/2008 |
| 2. | PCT/EP09/64185 | WO | 28/10/2009 |

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

| | Application Number | Filing Date |
|---|---|---|
| 1. | | |

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

I hereby appoint the practitioners associated with the Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and I direct that all correspondence be addressed to that Customer Number.

Customer Number: **020306**
Principal attorney or agent: Bradley Hulbert
Telephone number: 312-913-0001

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.

The undersigned hereby authorize and request the attorneys of record in said application to insert in this declaration and power of attorney the filing date and serial number of said application when officially known, if the specification is not attached hereto.

Full name of first inventor: Bryan Jerrel Busropan

Inventor's signature: _____ Date: May 25, 2011
Residence: Zalmforelvijver 3, 2268 BP Leidschendam, The Netherlands
Citizenship: The Netherlands
Post Office Address: Zalmforelvijver 3, 2268 BP Leidschendam, The Netherlands

Full name of second inventor: Johannes Maria van Loon

Inventor's signature: _____ Date: May 25, 2011
Residence: Makorehout 31, 2719 JE Zoetermeer, The Netherlands
Citizenship: The Netherlands
Post Office Address: Makorehout 31, 2719 JE Zoetermeer, The Netherlands



ERICSSON EXHIBIT 1002, Page 322

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 13126601 |
| **Filing Date:** | |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Filer:** | Bradley Hulbert/Holly Mueller |
| **Attorney Docket Number:** | 11-575-WO-US |

Filed as Large Entity

## U.S. National Stage under 35 USC 371 Filing Fees

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| Oath/decl > 30 months from priority date | 1617 | 1 | 130 | 130 |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| **Extension-of-Time:** | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Miscellaneous:** | | | | |
| | | | **Total in USD ($)** | **130** |

# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 10226525 |
| **Application Number:** | 13126601 |
| **International Application Number:** | |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
| **Filer:** | Bradley Hulbert |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 11-575-WO-US |
| **Receipt Date:** | 03-JUN-2011 |
| **Filing Date:** | |
| **Time Stamp:** | 13:44:23 |
| **Application Type:** | U.S. National Stage under 35 USC 371 |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | Deposit Account |
| Payment was successfully received in RAM | $130 |
| RAM confirmation Number | 10932 |
| Deposit Account | 132490 |
| Authorized User | |

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

Charge any Additional Fees required under 37 C.F.R. 1.492 (National application filing, search, and examination fees)

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

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

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

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

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Applicant Response to Pre-Exam Formalities Notice | 11_575_WO_US_Response.pdf | 17824<br>7e99f9efba8ac9d7bab99e914ba502ba671cbe8d | no | 1 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Oath or Declaration filed | 11_575_WO_US_Declaration.pdf | 78968<br>42f097b3f37acdce528e6e488979062e78fbd141 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 3 | Fee Worksheet (SB06) | fee-info.pdf | 30110<br>a43f1aad67ef4ac132aff8f3f098d7f89892a444 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 126902 | | |

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

**<u>New Applications Under 35 U.S.C. 111</u>**
**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

| U.S. APPLICATION NUMBER NO. | FIRST NAMED APPLICANT | ATTY. DOCKET NO. |
|---|---|---|
| 13/126,601 | Bryan Jerrel Busropan | 11-575-WO-US |

20306
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

| INTERNATIONAL APPLICATION NO. | |
|---|---|
| PCT/EP09/64185 | |
| I.A. FILING DATE | PRIORITY DATE |
| 10/28/2009 | 10/28/2008 |

**CONFIRMATION NO. 4470**
**371 FORMALITIES LETTER**




Date Mailed: 05/16/2011

## NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as an Elected Office (37 CFR 1.495):

- Priority Document
- Copy of the International Application filed on 04/28/2011
- Copy of the International Search Report filed on 04/28/2011
- Preliminary Amendments filed on 04/28/2011
- U.S. Basic National Fees filed on 04/28/2011
- Priority Documents filed on 04/28/2011
- Specification filed on 04/28/2011
- Claims filed on 04/28/2011
- Abstracts filed on 04/28/2011
- Drawings filed on 04/28/2011

The applicant needs to satisfy supplemental fees problems indicated below.

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.
- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.492(h) of $130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fees required for this application is $**130** for a Large Entity:

- $**130** Surcharge.

**ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.**

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

**If you are not using EFS-Web to submit your reply, you must include a copy of this notice.**

DEBORAH D WILLIAMS

Telephone: (571) 272-0466

## PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 13/126,601

### APPLICATION AS FILED - PART I

| FOR | (Column 1) NUMBER FILED | (Column 2) NUMBER EXTRA | SMALL ENTITY RATE($) | SMALL ENTITY FEE($) | OR | OTHER THAN SMALL ENTITY RATE($) | OTHER THAN SMALL ENTITY FEE($) |
|---|---|---|---|---|---|---|---|
| BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | | | N/A | 330 |
| SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | | | N/A | 430 |
| EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | | | N/A | 220 |
| TOTAL CLAIMS (37 CFR 1.16(i)) | 21 minus 20 = | * 1 | | | OR | x 52 = | 52 |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | 4 minus 3 = | * 1 | | | | x 220 = | 220 |
| APPLICATION SIZE FEE (37 CFR 1.16(s)) | If the specification and drawings exceed 100 sheets of paper, the application size fee due is $270 ($135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | | | | 0.00 |
| MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) | | | | | | | 0.00 |
| * If the difference in column 1 is less than zero, enter "0" in column 2. | | | TOTAL | | | TOTAL | 1252 |

### APPLICATION AS AMENDED - PART II

| | | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | SMALL ENTITY RATE($) | SMALL ENTITY ADDITIONAL FEE($) | OR | OTHER THAN SMALL ENTITY RATE($) | OTHER THAN SMALL ENTITY ADDITIONAL FEE($) |
|---|---|---|---|---|---|---|---|---|---|---|
| AMENDMENT A | Total (37 CFR 1.16(i)) | * | Minus | ** | = | x = | | OR | x = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | x = | | OR | x = | |
| | Application Size Fee (37 CFR 1.16(s)) | | | | | | | | | |
| | FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | | OR | | |
| | | | | | | TOTAL ADD'L FEE | | OR | TOTAL ADD'L FEE | |

| | | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE($) | ADDITIONAL FEE($) | | RATE($) | ADDITIONAL FEE($) |
|---|---|---|---|---|---|---|---|---|---|---|
| AMENDMENT B | Total (37 CFR 1.16(i)) | * | Minus | ** | = | x = | | OR | x = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | x = | | OR | x = | |
| | Application Size Fee (37 CFR 1.16(s)) | | | | | | | | | |
| | FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | | OR | | |
| | | | | | | TOTAL ADD'L FEE | | OR | TOTAL ADD'L FEE | |

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

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

# MULTIPLE DEPENDENT CLAIM FEE CALCULATION SHEET

Substitute for Form PTO-1360
(For use with Form PTO/SB/06)

| Application Number | Filing Date |
|---|---|
| 13126601 | |

Applicant(s) Bryan Busropan

* May be used for additional claims or amendments

| CLAIMS | AS FILED | | AFTER FIRST AMENDMENT | | AFTER SECOND AMENDMENT | | | * | | * | | * | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Indep | Depend | Indep | Depend | Indep | Depend | | Indep | Depend | Indep | Depend | Indep | Depend |
| 1 | 1 | | 1 | | | | 51 | | | | | | |
| 2 | | 1 | | 1 | | | 52 | | | | | | |
| 3 | | 1 | | 1 | | | 53 | | | | | | |
| 4 | | 1 | | 1 | | | 54 | | | | | | |
| 5 | | 1 | | 1 | | | 55 | | | | | | |
| 6 | | 6 | | 1 | | | 56 | | | | | | |
| 7 | | 1 | | 1 | | | 57 | | | | | | |
| 8 | | 1 | | 1 | | | 58 | | | | | | |
| 9 | | 1 | | 1 | | | 59 | | | | | | |
| 10 | | 1 | | 1 | | | 60 | | | | | | |
| 11 | | 1 | | 1 | | | 61 | | | | | | |
| 12 | | 1 | | 1 | | | 62 | | | | | | |
| 13 | | 1 | | 1 | | | 63 | | | | | | |
| 14 | | 1 | | 1 | | | 64 | | | | | | |
| 15 | | 1 | | 1 | | | 65 | | | | | | |
| 16 | 1 | | 1 | | | | 66 | | | | | | |
| 17 | 1 | | 1 | | | | 67 | | | | | | |
| 18 | 1 | | 1 | | | | 68 | | | | | | |
| 19 | | | | 1 | | | 69 | | | | | | |
| 20 | | | | 1 | | | 70 | | | | | | |
| 21 | | | | 1 | | | 71 | | | | | | |
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| 47 | | | | | | | 97 | | | | | | |
| 48 | | | | | | | 98 | | | | | | |
| 49 | | | | | | | 99 | | | | | | |
| 50 | | | | | | | 100 | | | | | | |
| Total Indep | 4 | | 4 | | 0 | | | | | | | | |
| Total Depend | 19 | ↵ | 17 | ↵ | 0 | ↵ | | | | | | | |
| Total Claims | 23 | | 21 | | 0 | | | | | | | | |

PTO-1390 (Rev. 09-08)
Approved for use through 2/28/2010. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER: **11-575-WO-US**

U.S. APPLICATION NO. (If known, see 37 CFR 1.5):

| INTERNATIONAL APPLICATION NO. | INTERNATIONAL FILING DATE | PRIORITY DATE CLAIMED |
|---|---|---|
| **PCT/EP2009/064185** | **October 28, 2009** | **October 28, 2008** |

TITLE OF INVENTION
**Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre**

APPLICANT(S) FOR DO/EO/US
**BUSROPAN, Bryan Jerrel; VAN LOON, Johannes Maria**

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a submission under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a submission under 35 U.S.C. 371.
3. ☐ This is an express request to begin national examination procedures (35 U.S.C. 371 (f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. ☒ The US has been elected (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c)(2))
   a. ☐ is attached hereto (required only if not communicated by the International Bureau).
   b. ☒ has been communicated by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
   a. ☐ is attached hereto.
   b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
   a. ☐ are attached hereto (required only if not communicated by the International Bureau).
   b. ☐ have been communicated by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☒ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

**Items 11 to 20 below concern documents) or information included:**

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A preliminary amendment.
14. ☒ An Application Data Sheet under 37 CFR 1.76.
15. ☐ A substitute specification.
16. ☐ A power of attorney and/or change of address letter.
17. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13*ter*.2and 37 CFR 1.821- 1.825.
18. ☒ second copy of the published International Application under 35 U.S.C. 154(d)(4).
19. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount
of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

| U.S. APPLICATION NO. (if known, see 37 CFR 1.5) | INTERNATIONAL APPLICATION NO. | ATTORNEY'S DOCKET NUMBER |
|---|---|---|
| | **PCT/EP2009/064185** | **11-575-WO-US** |

20. ☒ Other items or information:
Form PCT/IB/304 - Notification Concerning Submission or Transmittal of Priority Document
PCT/ISA/210 International Search Report
PCT/ISA/237 Written Opinion

| The following fees have been submitted | CALCULATIONS | PTO USE ONLY |
|---|---|---|
| 21. ☒ Basic national fee (37 CFR 1.492(a)) ..... **$330** | $ 330.00 | |
| 22. ☒ Examination fee (37 CFR 1.492(c))<br>If the written opinion prepared by ISA/Us or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) **$0**<br>All other situations **$220** | $ 220.00 | |
| 23. ☒ Search fee (37 CFR 1.492(b))<br>If the written opinion prepared by ISA/Us or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) ..... **$0**<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority ..... **$100**<br>International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the USA by the IB ..... **$430**<br>All other situations ..... **$540** | $ 430.00 | |
| **TOTAL OF 21, 22 and 23 =** | $ 980.00 | |
| ☐ Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) in an electronic medium or computer program listing in an electronic medium) (37 CFR 1.492(j)).<br>The fee is **$270** for each additional 50 sheets of paper or fraction thereof. | | |

| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof (round **up** to a whole number) | RATE | | |
|---|---|---|---|---|---|
| -100 = | 0 /50 = | 0 | x **$270** | $ 0.00 | |
| Surcharge of **$130.00** for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)). ☐ | | | | $ 0.00 | |

| CLAIMS | NUMBER FILED | NUMBER EXTRA | RATE | | |
|---|---|---|---|---|---|
| Total claims | 21 -20 = | 1 | x **$52** | $ 52.00 | |
| Independent claims | 4 -3 = | 1 | X **$220** | $ 220.00 | |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable) ☐ | | | + **$390** | $ 0.00 | |
| | | | **TOTAL OF ABOVE CALCULATIONS =** | $ 1,252.00 | |
| ☐ Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by ½. | | | | $ 0.00 | |
| | | | **SUBTOTAL =** | $ 1,252.00 | |
| Processing fee of **$130.00** for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)). | | | | $ | |
| | | | **TOTAL NATIONAL FEE =** | $ 1,252.00 | |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). **$40.00** per property | | | | $ | |
| | | | **TOTAL FEES ENCLOSED =** | $ 1,252.00 | |
| | | | **Amount to be refunded:** | $ | |
| | | | **Amount to be charged:** | $ 1,252.00 | |

a. ☐ A check in the amount of $_____ to cover the above fees is enclosed.

b. ☒ Please charge my Deposit Account No. 13-2490 in the amount of $1,252.00 to cover the above fees.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 13-2490.

d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038. The PTO-2038 should only be mailed or faxed to the USPTO. However, when paying the basic national fee, the PTO-2038 may NOT be faxed to the USPTO.

**ADVISORY:** If filing by EFS-Web, do **NOT** attach the PTO-2038 form as a PDF along with your EFS-Web submission. Please be advised that this is **not** recommended and by doing so **your credit card information may be displayed via PAIR.** To protect your information, it is recommended paying fees online by using the electronic payment method.

**NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.**

SEND ALL CORRESPONDENCE TO:
USPTO Customer No.:
20306
McDonnell Boehnen Hulbert & Berghoff LLP
300 South Wacker Drive
Chicago, Illinois 60606
TEL: 312-913-00001
FAX: 312-913-0002

April 28, 2011

/Bradley J. Hulbert/
SIGNATURE

Bradley J. Hulbert
NAME

30,130
REGISTRATION NUMBER

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | |
| **Filing Date:** | |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Filer:** | Bradley Hulbert/Holly Mueller |
| **Attorney Docket Number:** | 11-575-WO-US |

Filed as Large Entity

## U.S. National Stage under 35 USC 371 Filing Fees

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| National Stage Fee | 1631 | 1 | 330 | 330 |
| Natl Stage Search Fee - Report provided | 1642 | 1 | 430 | 430 |
| National Stage Exam - all other cases | 1633 | 1 | 220 | 220 |
| **Pages:** | | | | |
| **Claims:** | | | | |
| Claims in excess of 20 | 1615 | 1 | 52 | 52 |
| Independent claims in excess of 3 | 1614 | 1 | 220 | 220 |
| **Miscellaneous-Filing:** | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| **Extension-of-Time:** | | | | |
| **Miscellaneous:** | | | | |
| | | **Total in USD ($)** | | **1252** |

# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 9975564 |
| **Application Number:** | 13126601 |
| **International Application Number:** | PCT/EP09/64185 |
| **Confirmation Number:** | 4470 |
| **Title of Invention:** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre |
| **First Named Inventor/Applicant Name:** | Bryan Jerrel Busropan |
| **Customer Number:** | 20306 |
| **Filer:** | Bradley Hulbert |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 11-575-WO-US |
| **Receipt Date:** | 28-APR-2011 |
| **Filing Date:** | |
| **Time Stamp:** | 15:26:18 |
| **Application Type:** | U.S. National Stage under 35 USC 371 |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | Deposit Account |
| Payment was successfully received in RAM | $1252 |
| RAM confirmation Number | 1864 |
| Deposit Account | 132490 |
| Authorized User | |

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

Charge any Additional Fees required under 37 C.F.R. 1.492 (National application filing, search, and examination fees)

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

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

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

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

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Information Disclosure Statement (IDS) Filed (SB/08) | 11_575_WO_US_IDS.pdf | 612431<br>e21dba1708749ddd103fee03057917cff495fa20 | no | 4 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| A U.S. Patent Number Citation or a U.S. Publication Number Citation is required in the Information Disclosure Statement (IDS) form for autoloading of data into USPTO systems. You may remove the form to add the required data in order to correct the Informational Message if you are citing U.S. References. If you chose not to include U.S. References, the image of the form will be processed and be made available within the Image File Wrapper (IFW) system. However, no data will be extracted from this form. Any additional data such as Foreign Patent Documents or Non Patent Literature will be manually reviewed and keyed into USPTO systems. | | | | | |
| 2 | Foreign Reference | EP0805609.pdf | 1732422<br>857f027565b8ac945fc8ae4c30241e1c44bd8e08 | no | 32 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 3 | Foreign Reference | WO2008051716.pdf | 2241438<br>b55256064551bdbb3f21b0ba2fc6fd82a33c12b1 | no | 54 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 4 | Foreign Reference | WO2005091661.pdf | 745807<br>d229bae6a635df6876f78f91d6cb5a64e6a58a78 | no | 24 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 5 | NPL Documents | NPL_1.pdf | 498223<br>e883334447e23b1e59cf7ff7e253e4db8aa261a9 | no | 12 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 6 | NPL Documents | NPL_2.pdf | 194852<br>47be81989e58563a040182e7c1c33d31dcedd9a9 | no | 6 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 7 | Application Data Sheet | 11_575_WO_US_ADS.pdf | 1031884<br>39707336c971363fee1f1b7680dd73bc348d0c8f | no | 5 |
| **Warnings:** | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Information:** | | | | | |
| 8 | Documents submitted with 371 Applications | 11_575_WO_US_PCTEP2009064185.pdf | 1248137<br>be23a786203962fb8724d130c1d41da167824d7e | no | 29 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 9 | Documents submitted with 371 Applications | 11_575_WO_US_Search_Written_Opinion.pdf | 498222<br>bc588bcc2e546554d741f0865ab1433680f00e22 | no | 12 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 10 | Documents submitted with 371 Applications | 11_575_WO_US_IB304.pdf | 10882<br>3860e6f686f742bfee641621489cafb9f2d79d1b | no | 1 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 11 | | 11_575_WO_US_Pre_Amend.pdf | 32756<br>8694bea1400f38c6eb774e02bb815f5d158410fb | yes | 7 |

**Multipart Description/PDF files in .zip description**

| Document Description | Start | End |
|---|---|---|
| Preliminary Amendment | 1 | 1 |
| Specification | 2 | 2 |
| Claims | 3 | 6 |
| Applicant Arguments/Remarks Made in an Amendment | 7 | 7 |

| | | | | | |
|---|---|---|---|---|---|
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 12 | Transmittal of New Application | 11_575_WO_US_Transmittal_Letter.pdf | 59470<br>59449ecfca9a2a6aa0dbec1a1e2be51c3b2b872f | no | 3 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 13 | Fee Worksheet (PTO-875) | fee-info.pdf | 38042<br>858f2b49f7df6a07ea0cc1f5ebfaefdcc4d0de6a | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 8944566 | | |

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

**New Applications Under 35 U.S.C. 111**

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

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

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

**New International Application Filed with the USPTO as a Receiving Office**

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

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

**( Not for submission under 37 CFR 1.99)**

| | |
|---|---|
| Application Number | |
| Filing Date | 2011-04-28 |
| First Named Inventor | Bryan Jerrel Busropan |
| Art Unit | TBA |
| Examiner Name | TBA |
| Attorney Docket Number | 11-575-WO-US |

**U.S.PATENTS** Remove

| Examiner Initial* | Cite No | Patent Number | Kind Code[1] | Issue Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | | | | | |

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

**U.S.PATENT APPLICATION PUBLICATIONS** Remove

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|---|---|---|---|---|---|---|
| | 1 | | | | | |

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| Examiner Initial* | Cite No | Foreign Document Number[3] | Country Code[2] i | Kind Code[4] | Publication Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear | T[5] |
|---|---|---|---|---|---|---|---|---|
| | 1 | EP0805609 | EP | | 1997-11-05 | Hewlett-Packard Company | | ☐ |
| | 2 | WO2008/051716 | WO | | 2008-05-02 | Sonus Networks, Inc. | | ☐ |
| | 3 | WO2005/091661 | WO | | 2005-09-29 | Telefonaktiebolaget LM Ericsson | | ☐ |

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( **Not for submission under 37 CFR 1.99)** | | |
|---|---|---|
| | Application Number | |
| | Filing Date | 2011-04-28 |
| | First Named Inventor | Bryan Jerrel Busropan |
| | Art Unit | TBA |
| | Examiner Name | TBA |
| | Attorney Docket Number | 11-575-WO-US |

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

**NON-PATENT LITERATURE DOCUMENTS** Remove

| Examiner Initials* | Cite No | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published. | T[5] |
|---|---|---|---|
| | 1 | International Search Report and Written Opinion, PCT International Application No. PCT/EP2009/064185 dated November 23, 2009. | ☐ |
| | 2 | European Search Report, European Patent Application 08018761.0 dated April 16, 2009. | ☐ |

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

**EXAMINER SIGNATURE**

| Examiner Signature | | Date Considered | |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | |
| | Filing Date | 2011-04-28 |
| | First Named Inventor | Bryan Jerrel Busropan |
| | Art Unit | TBA |
| | Examiner Name | TBA |
| | Attorney Docket Number | 11-575-WO-US |

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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

**OR**

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

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

**SIGNATURE**

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

| Signature | /Bradley J. Hulbert/ | Date (YYYY-MM-DD) | 2011-04-28 |
|---|---|---|---|
| Name/Print | Bradley J. Hulbert | Registration Number | 30130 |

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

# Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Encapsulating Userdata

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
KONINKLIJKE KPN N.V.
Attn. Wuyts, Koenraad
P.O. Box 95321
NL-2509 CH The Hague
PAYS-BAS

# PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

| | |
|---|---|
| | Date of mailing *(day/month/year)* 23/11/2009 |
| Applicant's or agent's file reference 403334WO/ | **FOR FURTHER ACTION** See paragraphs 1 and 4 below |
| International application No. PCT/EP2009/064185 | International filing date *(day/month/year)* 28/10/2009 |
| Applicant KONINKLIJKE KPN N.V. | |

1. [x] The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   **Filing of amendments and statement under Article 19:**
   The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

   **When?** The time limit for filing such amendments is normally two months from the date of transmittal of the International Search Report.

   **Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Fascimile No.: (41-22) 338.82.70

   **For more detailed instructions,** see the notes on the accompanying sheet.

2. [ ] The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. [ ] **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   [ ] the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

   [ ] no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90*bis*.1 and 90*bis*.3, respectively, before the completion of the technical preparations for international publication.

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

| Name and mailing address of the International Searching Authority | Authorized officer |
|---|---|
| European Patent Office, P.B. 5818 Patentlaan 2<br>NL-2280 HV Rijswijk<br>Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,<br>Fax: (+31-70) 340-3016 | Rebecca Plonka |

## NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

## INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims,description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

**What parts of the international application may be amended?**

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

**When?**

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

**Where not to file the amendments?**

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

**How?**

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Section 205(b)).

**The amendments must be made in the language in which the international application is to be published.**

**What documents must/may accompany the amendments?**

**Letter (Section 205(b)):**

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

**The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.**

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped),whether

(i) the claim is unchanged;

(ii) the claim is cancelled;

(iii) the claim is new;

(iv) the claim replaces one or more claims as filed;

(v) the claim is the result of the division of a claim as filed.

**The following examples illustrate the manner in which amendments must be explained in the accompanying letter:**

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."

2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."

3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."

4. [Where various kinds of amendments are made]:
"Claims 1–10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

**"Statement under article 19(1)" (Rule 46.4)**

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

**It must be in the language in which the international application is to be published.**

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

**Consequence if a demand for international preliminary examination has already been filed**

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement ) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1*bis*(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion together, where appropriate, with amendments before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later (Rule 43*bis*.1(c)).

**Consequence with regard to translation of the international application for entry into the national phase**

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see the *PCT Applicant's Guide*, Volume II.

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| Applicant's or agent's file reference | **FOR FURTHER ACTION** | see Form PCT/ISA/220 as well as, where applicable, item 5 below. |
|---|---|---|
| 403334WO | | |
| International application No. | International filing date *(day/month/year)* | (Earliest) Priority Date *(day/month/year)* |
| PCT/EP2009/064185 | 28/10/2009 | 28/10/2008 |
| Applicant | | |
| KONINKLIJKE KPN N.V. | | |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**
   a. With regard to the **language,** the international search was carried out on the basis of:
      [X] the international application in the language in which it was filed
      [ ] a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
   b. [ ] This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).
   c. [ ] With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. [ ] **Certain claims were found unsearchable** (See Box No. II)

3. [ ] **Unity of invention is lacking** (see Box No III)

4. With regard to the **title,**
   [X] the text is approved as submitted by the applicant
   [ ] the text has been established by this Authority to read as follows:

5. With regard to the **abstract,**
   [X] the text is approved as submitted by the applicant
   [ ] the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings,**
   a. the figure of the **drawings** to be published with the abstract is Figure No. 1
      [X] as suggested by the applicant
      [ ] as selected by this Authority, because the applicant failed to suggest a figure
      [ ] as selected by this Authority, because this figure better characterizes the invention
   b. [ ] none of the figures is to be published with the abstract

# INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2009/064185

A. CLASSIFICATION OF SUBJECT MATTER
INV. G01D4/00 H04W60/00
ADD. H04W8/08 H04W74/00

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
G01D H04W

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

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X | WO 2005/091661 A (ERICSSON TELEFON AB L M [SE]; JOHANNESSON REGINA [SE]; HERRERO VERON C) 29 September 2005 (2005-09-29) page 2, lines 16-23 page 8, line 16 - page 9, line 4 | 1,2,4,6, 7,12, 15-18 |
| X | EP 0 805 609 A (HEWLETT PACKARD CO [US] AGILENT TECHNOLOGIES INC [US]) 5 November 1997 (1997-11-05) column 13, line 19 - column 15, line 4 | 1,2,4,6, 7,12, 15-18 |
| X | WO 2008/051716 A (SONUS NETWORKS INC [US]; SAKSENA VIKRAM [US]; NAGPAL ASHISH [IN]) 2 May 2008 (2008-05-02) paragraphs [0005], [0006]; figure 1 | 1,2, 15-18 |

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

| Date of the actual completion of the international search | Date of mailing of the international search report |
|---|---|
| 13 November 2009 | 23/11/2009 |

| Name and mailing address of the ISA/ | Authorized officer |
|---|---|
| European Patent Office, P.B. 5818 Patentlaan 2<br>NL - 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040,<br>Fax: (+31-70) 340-3016 | Weinmiller, Jost |

3

Form PCT/ISA/210 (second sheet) (April 2005)

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2009/064185

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| WO 2005091661 A | 29-09-2005 | BR PI0509061 A | 21-08-2007 |
| | | CA 2559794 A1 | 29-09-2005 |
| | | EP 1730983 A1 | 13-12-2006 |
| | | JP 2007531359 T | 01-11-2007 |
| | | KR 20060129093 A | 14-12-2006 |
| | | US 2005215253 A1 | 29-09-2005 |
| | | US 2007232306 A1 | 04-10-2007 |
| EP 0805609 A | 05-11-1997 | NONE | |
| WO 2008051716 A | 02-05-2008 | CA 2666923 A1 | 02-05-2008 |
| | | EP 2078433 A1 | 15-07-2009 |
| | | US 2008096553 A1 | 24-04-2008 |

# PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

# PCT

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing
*(day/month/year)* see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

**FOR FURTHER ACTION**
See paragraph 2 below

| International application No. | International filing date *(day/month/year)* | Priority date *(day/month/year)* |
|---|---|---|
| PCT/EP2009/064185 | 28.10.2009 | 28.10.2008 |

International Patent Classification (IPC) or both national classification and IPC
INV. G01D4/00 H04W60/00
ADD. H04W8/08 H04W74/00

Applicant
KONINKLIJKE KPN N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notifed the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:

European Patent Office
P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040
Fax: +31 70 340 - 3016

Date of completion of this opinion

see form PCT/ISA/210

Authorized Officer

Weinmiller, Jost

Telephone No. +31 70 340-3884

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed

   ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

   a. type of material:

      ☐ a sequence listing

      ☐ table(s) related to the sequence listing

   b. format of material:

      ☐ on paper

      ☐ in electronic form

   c. time of filing/furnishing:

      ☐ contained in the international application as filed.

      ☐ filed together with the international application in electronic form.

      ☐ furnished subsequently to this Authority for the purposes of search.

4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

| | | | |
|---|---|---|---|
| Novelty (N) | Yes: | Claims | 3,5,8-11,13,14 |
| | No: | Claims | 1,2,4,6,7,12,15-18 |
| Inventive step (IS) | Yes: | Claims | |
| | No: | Claims | 1-18 |
| Industrial applicability (IA) | Yes: | Claims | 1-18 |
| | No: | Claims | |

2. Citations and explanations

**see separate sheet**

**Re Item V.**

1. Reference is made to the following document:
   D1 : WO 2005/091661 A (ERICSSON TELEFON AB L M [SE]; JOHANNESSON REGINA [SE]; HERRERO VERON C) 29 September 2005 (2005-09-29)

2. INDEPENDENT CLAIM 1
   The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT. Document D1 discloses (the references in parentheses applying to this document):

   A method of transferring (see D1, page 8, line 27) user data (see D1, page 8, line 20; selection of a PLMN is done by a user, thus "user data") from'a communication module (see D1, page 8, line 16 "MS") to a data processing centre (see D1, page 9, line 1 "selected operator") over a telecommunications network (see D1, page 8, line 27 "to the mobile network"), the method comprising the steps in the telecommunications network of: wirelessly receiving a signalling message from said communication module (see D1, page 8, line 27), said user data being contained in said signalling message (see D1, page 8, line 28); transferring said user data to said data processing centre (see D1, page 9, line 1).

   It appears impossible to clearly define the characteristics of "user data" which would allow to clearly distinguish it from the user data found in the cited documents - any data originating from a user terminal can be considered user data. Similarly the "data processing center" reads onto a wide variety of devices commonly found in communication networks. Further the applicant should take not of the well known "in-band signalling" as used e.g. in IP-networks where all messages comprise both control information (in the header) and payload data (in the body). Also this architecture fits the wording of claim 1.

3. The subject matter of the remaining independent claims 15-18 corresponds to or is equivalent to that of claim 1 of the application. The above reasoning with respect to novelty and inventive step therefore also applies to these claims.

4. The dependent claims appear not to claim any additional features which render them either new or non obvious with respect to the available prior art for the reason that the subject-matter of said claims is either in principle directly derivable from the

disclosure of document D1 (for claims 2, 4, 6, 7, 12: see passages cited in the search report) or represents simple design details which are generally known to the person skilled in the field of communication (claims 3, 5, 8-11, 13, 14).

Possible steps after receipt of the international search report (ISR) and written opinion of the International Searching Authority (WO-ISA)

| | |
|---|---|
| General information | For all international applications filed on or after 01/01/2004 the competent ISA will establish an ISR. It is accompanied by the WO-ISA. Unlike the former written opinion of the IPEA (Rule 66.2 PCT), the WO-ISA is not meant to be responded to, but to be taken into consideration for further procedural steps. This document explains about the possibilities. |
| Amending claims under Art. 19 PCT | Within 2 months after the date of mailing of the ISR and the WO-ISA the applicant may file amended claims under Art. 19 PCT directly with the International Bureau of WIPO. The PCT reform of 2004 did not change this procedure. For further information please see Rule 46 PCT as well as form PCT/ISA/220 and the corresponding Notes to form PCT/ISA/220. |
| Filing a demand for international preliminary examination | In principle, the WO-ISA will be considered as the written opinion of the IPEA. This should, in many cases, make it unnecessary to file a demand for international preliminary examination. If the applicant nevertheless wishes to file a demand this must be done before expiry of 3 months after the date of mailing of the ISR/WO-ISA or 22 months after priority date, whichever expires later (Rule 54bis PCT). Amendments under Art. 34 PCT can be filed with the IPEA as before, normally at the same time as filing the demand (Rule 66.1 (b) PCT).<br><br>If a demand for international preliminary examination is filed and no comments/amendments have been received the WO-ISA will be transformed by the IPEA into an IPRP (International Preliminary Report on Patentability) which would merely reflect the content of the WO-ISA. The demand can still be withdrawn (Art. 37 PCT). |
| Filing informal comments | After receipt of the ISR/WO-ISA the applicant may file informal comments on the WO-ISA directly with the International Bureau of WIPO. These will be communicated to the designated Offices together with the IPRP (International Preliminary Report on Patentability) at 30 months from the priority date. Please also refer to the next box. |
| End of the international phase | At the end of the international phase the International Bureau of WIPO will transform the WO-ISA or, if a demand was filed, the written opinion of the IPEA into the IPRP, which will then be transmitted together with possible informal comments to the designated Offices. The IPRP replaces the former IPER (international preliminary examination report). |
| Relevant PCT Rules and more information | Rule 43 PCT, Rule 43bis PCT, Rule 44 PCT, Rule 44bis PCT, PCT Newsletter 12/2003, OJ 11/2003, OJ 12/2003 |



BNSDOCID: <XS. 200704010CK.I >

PTO/SB/14 (11-08)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| Application Data Sheet 37 CFR 1.76 | Attorney Docket Number | 11-575-WO-US |
|---|---|---|
| | Application Number | |
| Title of Invention | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre | |

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

## Secrecy Order 37 CFR 5.2

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

## Applicant Information:

**Applicant 1** Remove

**Applicant Authority** ◉ Inventor ○ Legal Representative under 35 U.S.C. 117 ○ Party of Interest under 35 U.S.C. 118

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**Applicant Authority** ◉ Inventor ○ Legal Representative under 35 U.S.C. 117 ○ Party of Interest under 35 U.S.C. 118

| Prefix | Given Name | Middle Name | Family Name | Suffix |
|---|---|---|---|---|
| | Johannes | Maria | Van Loon | |

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|---|---|---|---|
| Citizenship under 37 CFR 1.41(b)[i] | NL | | |

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| City | Zoetermeer | State/Province | |
| Postal Code | 2719 JE | Country[i] | NL |

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

## Correspondence Information:

**Enter either Customer Number or complete the Correspondence Information section below.**
**For further information see 37 CFR 1.33(a).**

☐ **An Address is being provided for the correspondence Information of this application.**

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| Application Data Sheet 37 CFR 1.76 | Attorney Docket Number | 11-575-WO-US |
|---|---|---|
| | Application Number | |
| Title of Invention | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre | |

| | | | |
|---|---|---|---|
| **Customer Number** | 20306 | | |
| **Email Address** | docketing@mbhb.com | Add Email | Remove Email |

## Application Information:

| | | | |
|---|---|---|---|
| **Title of the Invention** | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre | | |
| **Attorney Docket Number** | 11-575-WO-US | **Small Entity Status Claimed** | ☐ |
| **Application Type** | Nonprovisional | | |
| **Subject Matter** | Utility | | |
| **Suggested Class (if any)** | | **Sub Class (if any)** | |
| **Suggested Technology Center (if any)** | | | |
| **Total Number of Drawing Sheets (if any)** | 6 | **Suggested Figure for Publication (if any)** | |

## Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S. C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

## Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

| | | | |
|---|---|---|---|
| Please Select One: | ◉ Customer Number | ○ US Patent Practitioner | ○ Limited Recognition (37 CFR 11.9) |
| Customer Number | 20306 | | |

## Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

| Prior Application Status | Pending | | Remove |
|---|---|---|---|
| Application Number | Continuity Type | Prior Application Number | Filing Date (YYYY-MM-DD) |
| | a 371 of international | PCT/EP2009/064185 | 2009-10-28 |

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

## Foreign Priority Information:

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| **Application Data Sheet 37 CFR 1.76** | Attorney Docket Number | 11-575-WO-US |
|---|---|---|
| | Application Number | |
| Title of Invention | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre | |

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Remove

| Application Number | Country [i] | Parent Filing Date (YYYY-MM-DD) | Priority Claimed |
|---|---|---|---|
| 08018761.0 | EP | 2008-10-28 | (•) Yes ( ) No |

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

## Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Remove

**Assignee 1**

If the Assignee is an Organization check here. [X]

| | | | |
|---|---|---|---|
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| Address 2 | | | |
| **City** | The Hague | **State/Province** | |
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| Phone Number | | Fax Number | |
| Email Address | | | |

Remove

**Assignee 2**

If the Assignee is an Organization check here. [X]

| | | | |
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| Phone Number | | Fax Number | |
| Email Address | | | |

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

## Signature:

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

| **Signature** | /Bradley J. Hulbert/ | Date (YYYY-MM-DD) | 2011-04-28 |
|---|---|---|---|

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

| **Application Data Sheet 37 CFR 1.76** | Attorney Docket Number | 11-575-WO-US |
|---|---|---|
| | Application Number | |
| Title of Invention | Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre | |

| First Name | Bradley J. | Last Name | Hulbert | Registration Number | 30130 |
|---|---|---|---|---|---|

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

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

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6 May 2010 (06.05.2010)

PCT

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WO 2010/049437 A1

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*H04W 60/00* (2009.01) *H04W 74/00* (2009.01)

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(26) Publication Language: English

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08018761.0 28 October 2008 (28.10.2008) EP

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(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **BUSROPAN, Bryan Jerrel** [NL/NL]; Zalmforelvijver 3, NL-Leidschendam 2268 BP (NL). **VAN LOON, Johannes Maria** [NL/NL]; Makorehout 31, NL-2719 JE Zoetermeer (NL).

(74) Agent: **WUYTS, Koenraad**; P.O. Box 95321, NL-2509 CH The Hague (NL).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17**:

— *of inventorship (Rule 4.17(iv))*

*[Continued on next page]*

(54) Title: TELECOMMUNICATIONS NETWORK AND METHOD OF TRANSFERRING USER DATA IN SIGNALLING MESSAGES FROM A COMMUNICATION UNIT TO A DATA PROCESSING CENTRE

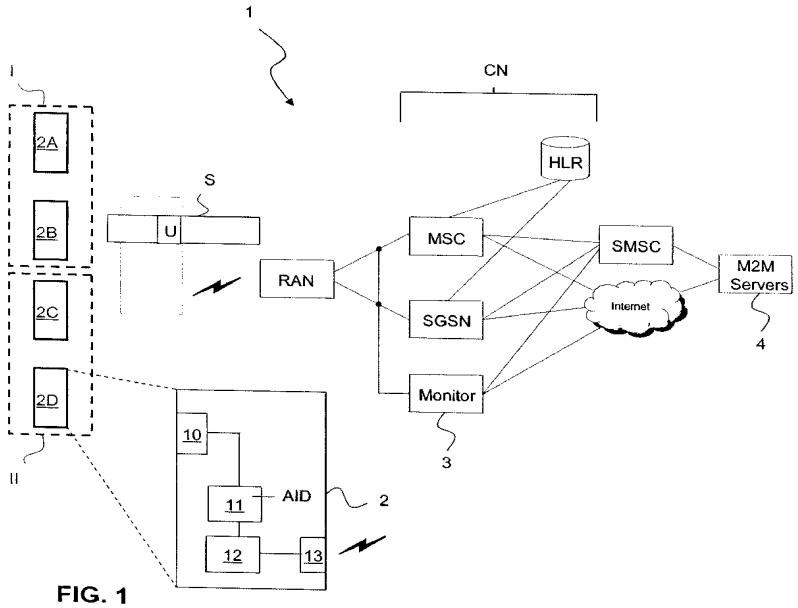



FIG. 1

(57) Abstract: The invention relates to a system and method of transferring user data from a communication module to a data processing centre over a telecommunications network. A signalling message is wirelessly received from the communication module in the telecommunications network. The signalling message contains the user data that is subsequently transferred to the data processing centre. By inserting the user data in the signalling message (s), it is possible to rapidly transmit data to the telecommunications network, while resources can be saved since it not required to establish a complete circuit-switched or packet-switched connection between the communication module and the telecommunications network. The user data may comprise application data of a program run by the communication module, e.g. alarming data, measurement data or derivatives thereof.

WO 2010/049437 A1

**Published**:

— *with international search report (Art. 21(3))*

# Telecommunications network and method of transferring user data in signalling messages from a communication unit to a data processing centre

## FIELD OF THE INVENTION

Generally, the invention relates to the field of data transfer over a telecommunications network. More specifically, the invention relates to a telecommunications network and a method of transferring user data from a communication module to a data processing centre in a machine-to-machine communications setting.

## BACKGROUND OF THE INVENTION

The past decades have shown an ever increasing demand for data capacity of telecommunications networks. Telecommunications providers have adapted their networks to provide extended services to meet the demands of their clients.

One example of such services relates to the field of machine-to-machine (M2M) communications. M2M applications typically involve hundreds or thousands of communication modules that only rarely require access to a telecommunications network. An example involves the electronic reading of e.g. electricity meters at the homes of a large customer base. Other examples include sensors, meters, coffee machines etc that can be equipped with communication modules that allow for reporting status information to a data processing centre over the telecommunications network. The data processing centre may e.g. store the data and/or provide a schedule for maintenance people to repair a machine, meter, sensor etc.

M2M communication systems are typically characterized by the fact that, most of the time, the communication modules have nothing or only a limited amount of data to report. However, for some applications or in some situations, such as alarming, it is required that data can rapidly be sent from a communication module to a data processing centre, e.g. within seconds.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a method and telecommunications network that allow for efficient and fast communications of limited amounts of data in a machine-to-machine environment.

An aspect of the invention involves a method of transferring user data from a communication module to a data processing centre over a telecommunications network. A signalling message is wirelessly received from the communication module in the telecommunications network. The signalling message contains the user data that is subsequently transferred to the data processing centre.

Other aspects of the invention relate to a computer program, a telecommunications network and a node of such a network configured for performing the steps of the method as defined in the claims.

Another aspect of the invention involves a communication module comprising a processor for processing user data, an encapsulation module configured for encapsulating the user data in one or more signalling messages from the communication module to the telecommunications network and a transmitter for transmitting the signalling messages containing the user data to said telecommunications network.

By inserting the user data in the signalling message(s), it is possible to rapidly transmit data to the telecommunications network, while resources can be saved since it is not required to establish a complete circuit-switched or packet-switched connection between the communication module and the telecommunications network. The user data may comprise application data of a program run by the communication module, e.g. alarming data, measurement data or derivatives thereof.

Although, in principle, it is possible to transmit a copy of the signalling message(s) to the data processing centre, in an embodiment of the invention, the user data is retrieved from the signalling message(s) in the telecommunications network and is then transferred to the data processing centre. This is efficiently performed in the core network of the

telecommunications network, e.g. in the mobile switching centre (MSC) or a serving GPRS support node (SGSN), since the signalling messages terminate at such nodes. It is also possible that a monitoring module is provided between the radio access network and the core network that is configured for sniffing signalling messages to recognize signalling messages carrying user data.

In an embodiment of the invention, the signalling message carrying the user data is a network attach request message. The attach message than has an information element for the user data. This information element may be a new information element or an existing information element that is not used in a particular situation. As an example, if the IMEI information element is not required, this information element may be used for the user data.

The attach message is typically one of the first messages received from the communication module in the telecommunications network and, therefore, provides an appropriate instance for rapidly receiving the user data. For circuit switched applications, the network attach request message may be a location updating request message with a location updating type information element indicating an IMSI attach. For packet-switched applications, the network attach request message may be an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach. These specific instances of network attach request messages typically occur when a communication device is powered on and allow for efficient implementation within the standard 3GPP TS 24.008, Version 8.3.0. Furthermore, the use of attach messages for transferring the user data allows to use communication modules not possessing a smart identity module (SIM).

In an embodiment of the invention, the telecommunications network may accept the network attach request message after which a connection can be established. This allows for further data to be sent to or from the communication module. As an example, a confirmation may be received that the user data

has been delivered to the data processing centre, thereby e.g. allowing the communication module to return to a sleep mode, to refrain from attempting to transmit the same user data again or to delete the user data. The further data may also include additional information for the data processing centre. If no further data are to be transmitted, the communication module informs the telecommunications network that it desires to detach from the network. Of course, after being detached, the further data may also be transmitted from the communication module in further attach requests.

In an embodiment of the invention, the attach request message from the communication module is rejected by the network, thereby excluding that a circuit switched or a packet switched connection can be established. The attach reject message may still contain a limited amount of information for the communication module, e.g. a confirmation that the user data has been delivered to the data processing centre, thereby allowing the communication module to delete the user data and/or to avoid that the communication module makes further attempts to transmit the user data. The rejection of the attach request is advantageous for saving power in the communication module and saving resources in the telecommunications network.

In the specific context of M2M communications networks, it is not required to execute all procedures generally required for commercial mobile communications, thereby saving network resources. In particular, authentication procedures of the communication module in the telecommunications network may be omitted and left to the data processing centre recognizing and authenticating the communication module, e.g. on the basis of an application identifier or a device identifier. Also, the normal and period location updating procedures may be omitted provided that the communication module remains at a substantially stationary location (e.g. within the area served by a particular MSC or SGSN).

At least a part of the user data may be contained in the signalling message in encrypted form. Since the user data are to be transmitted to the telecommunications network as soon

as possible, thereby not allowing time to establish a secure connection, it is advantageous to scramble or encrypt the user data in the communication module before insertion in the signalling message.

In an embodiment of the invention, the user data contained in the signalling message comprises addressing information indicative of the data processing centre to which the user data should be transferred. The addressing information may be shortened (e.g. using an application identifier instead of the address of the data processing centre) in order to save space in the signalling message for user data. The telecommunications network may be provided with functionality to derive the full address information of the data processing centre from the shortened address information.

The user data may be transferred to the data processing centre from the (node of the) telecommunications network by any available means. Advantageous embodiments include SMS or XML.

Hereinafter, embodiments of the invention will be described in further detail. It should be appreciated, however, that these embodiments may not be construed as limiting the scope of protection for the present invention.

## BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 shows a schematic illustration of a system for transmitting data in a machine-to-machine communication system according to an embodiment of the invention;

FIGS. 2A and 2B provide flow charts indicative of circuit-switched methods according to embodiments of the invention;

FIGS. 3A and 3B provide flow charts indicative of packet-switched methods according to further embodiments of the invention; and

FIG. 4 provides a flow chart indicative of a method according to a still further embodiment of the invention.

## DETAILED DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a schematic illustration of a machine-to-machine (M2M) system 1 comprising a plurality of communication modules 2A-2D. Mobile communication modules 2A, 2B are exploited by a first organization I and may be used to monitor vehicles of a logistic fleet of vehicles to provide alarm in case of emergency. Substantially stationary communication modules 2C, 2D are exploited by a second organization II and may, for example, be used for communicating alarming user data of facilities to a data processing centre 4 for security purposes.

M2M system 1 comprises a telecommunications network with a Radio Access Network RAN and a Core Network CN, the core network CN containing a mobile switching centre MSC and a serving GPRS support node SGSN connected to a Home Location Register HLR as known to the person skilled in the art. A monitoring module 3 may be provided configured for sniffing signalling messages exchanged between the RAN and the CN as will be described in further detail with reference to FIG. 4.

The MSC, SGSN and monitoring module 3 of the telecommunications network are configured for transferring the user data to data processing centres 4, also referred to as M2M servers, of organizations I and II, respectively. As illustrated in FIG. 1, the user data may be provided to the M2M servers 4 using a Short Message Service Centre (SMSC) for sending the user data received from communication modules 2A-2D by SMS or by using the internet for transferring the user data in, e.g., XML messages.

As illustrated in FIG. 1, a communication module 2 comprises or is communicatively connected to a sensor 10. Sensor 10 monitors operation and/or receives data of a device or other instance, such as a room, and provides data to a processor 11. Processor 11 is configured for running one or more computer programs (e.g. an application identified by an application identifier AID) receiving the data from sensor 10. The data obtained from the sensor 10 may be processed in the communication module 2 before it is ready to be transmitted to the appropriate M2M server 4. An example of such processing includes encrypting the data, but other forms of processing the

(raw) data are possible as well. Communication module 2 comprises an encapsulation module 12 (possibly software running on processor 11) for inserting the, possibly processed, user data U from the sensor 10 in signalling messages S. A transmitter 13 is provided for wirelessly transmitting the signalling messages S containing the user data U to the telecommunications network as schematically illustrated in FIG. 1. Such signalling messages S typically occur upon powering on the transmitter 13.

The user data U, apart from the data derived from the sensor 10, also contains address information indicating the data processing centre 4 to which the user data U should be transferred. Of course, the user data U may comprise a complete address of the appropriate data processing centre 4 that can be used in the telecommunications network for deciding where to transfer the user data U. The address information is stored in the communication module 2. In this manner user data U from communication modules 2A, 2B can be transferred to a data processing centre 4 of organization I, whereas user data U from communication modules 2C, 2D can be transferred to data processing centre 4 of organization II.

However, more advanced methods of addressing may be used, including, but not limited to, the use of identifiers (such as the application identifiers AID), for signalling the destination address of the user data U. The use of such (shorter) identifiers provides enhanced space in the signalling message S for the actual data. The telecommunications network should then comprise functionality for deriving the actual destination address of the appropriate data processing centre 4 from the received identifier. As an example, the identifier may be retrieved from the signalling message S in the telecommunications network and matched against a database or a query may be sent to a server (e.g. a DNS-type of server) having available the actual address of the data processing centre 4. The result of this process is then used for transferring the user data U to the data processing centre 4 via the SMSC or the internet.

Several embodiments of operating the M2M system 1 of FIG. 1 will be described below with reference to FIGS. 2A-2B (for circuit switched (CS) data transmission), FIGS. 3A-3B (for packet switched (PS) data transmission) and FIG. 4 (illustrating an embodiment using monitoring module 3). It should be appreciated, however, that many alternative embodiments can be envisaged within the scope of the present invention.

The general operation of the system of FIG. 1 involves the telecommunications network to wirelessly receive a signalling message S from the communication module 2. The signalling message S comprises user data U. The user data U is transferred to data processing centre 4. The user data U is retrieved from the received signalling message S within the telecommunications network and transferred further to data processing centre 4. The signalling message S can be a network attach request message in order to provide rapid transfer of the user data.

In case of a GSM/GPRS/UMTS telecommunications network the following types of Attach Request messages can be used. An IMSI or CS Attach Request message can be sent to the MSC in order to obtain CS services. Alternatively, a GPRS or PS attach request message can be sent to the SGSN in order to obtain PS services. Also a combined PS/CS Attach Request message can be sent to the SGSN in order to obtain both PS and CS services.

Depending on the type of Attach Request message used by the communication module 2, the user data is sent to the MSC or the SGSN. In case of IMSI attach the user data is received by the MSC and in case of GPRS attach or Combined attach the user data is received by the SGSN. The MSC or SGSN extracts the user data from the received Attach Request message and sends the user data to the data processing centre 4. To do so, the MSC/SGSN can use different means (SMS, internet) to send the user data to the data processing centre 4.

The attach request of the communication unit 2 to the telecommunications network may or may not be accepted.

FIG. 2A provides an embodiment for circuit switched (CS) data wherein the attach request is accepted. After

accepting the attach request, the encapsulated user data U is transferred by the MSC to data processing centre 4 by SMS followed by a detach procedure initiated by the communication module 2.

In the first step, the communication module 2 initiates the attach procedure to inform the telecommunications network it wants to access CS services and uses the capability to insert user data by the transmission of an Attach Request [IMSI, User data] message. The communication module 2 sends an IMSI Attach Request [IMSI, User data] message to RAN. The RAN conveys this message transparently to the MSC.

In particular, the communication module 2 may send a location updating request to request IMSI attach as specified in subclause 9.2.15 of 3GPP TS 24.008 V8.3.0, indicating that the communication module 2 has become active for the telecommunications network. IMSI attach can be requested by having the location updating type information element to code for IMSI attach as specified in subclause 10.5.3.5 of the same document. Use of the IMSI attach avoids the need to store or have stored communication module specific information in the MSC (or the visitor location register VLR, not shown in FIG. 1), thereby saving resources.

In the second step, the authentication procedure is executed in order to indentify the communication module 2.

In the third step, the MSC informs the HLR about the number (address) of the MSC where the communication module 2 is located. The MSC sends an Update Location containing the MSC address to the HLR. The HLR sends Insert Subscriber Data containing subscriber information to the MSC. The MSC then validates the presence of the communication module 2. If all checks are successful, the MSC provides a mobility management (MM) context for the communication and returns an Insert Subscriber Data Acknowledgement message to the HLR. The HLR acknowledges the Update Location message by sending an Update Location acknowledgement message to the MSC after the MM context is finalized.

In the fourth step, the MSC sends an Attach Accept message to the communication module 2 as response to the IMSI Attach Request in step 1 to complete the attach procedure. The MSC sends an Attach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

Then, in the fifth step, the MSC extracts the user data U received in the IMSI Attach Request message and constructs a SMS using the address information for the appropriate data processing centre 4 requiring the user data U. As mentioned previously, the actual address information may also be derived in the telecommunications network using an identifier in the signalling message S. The MSC sends the SMS containing IMSI (for identifying the communication module) and application data to the SMSC. If the communication module does not have a SIM (and thus no IMSI), another identifier, such as the IMEI number, may be used. The SMSC sends the SMS to the data processing centre 4. The SMSC, after having sent the SMS to the data processing centre 4, sends a delivery report to the MSC. The delivery report is sent by the MSC to the communication module 2 via the RAN using e.g. SMS.

Subsequently, in a sixth step, the communication module 2 starts a detach procedure to inform the network it no longer wants to access the CS services. The communication module 2 sends an IMSI Detach Request message to RAN and the RAN conveys this message transparently to the MSC.

Finally, in a seventh step, the MSC responds with an IMSI Detach Accept message to the communication module 2.The MSC sends an IMSI Detach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

It should be noted that, specifically in the context of an M2M system 1, several steps in the network can be omitted. As an example, the identification and authentication procedure of the communication module 2 in the telecommunications network may be omitted and left to the data processing centre 4 recognizing and authenticating the communication module, e.g. on the basis of the application identifier AID or a device identifier, such as the IMEI. Also, the normal and period location updating

procedures may be omitted provided that the communication module remains at a substantially stationary location (e.g. within the area served by a particular MSC), as may be the case for the stationary communication modules 2C, 2D of organization II.

Authentication may also be omitted by using pre-provisioned access numbers as explained in the non-published patent application EP08009899.9 of the present applicant. A connection request containing these numbers is recognized in the telecommunications network 6 as a request for which authentication should be omitted. Such a number may also be used for determining the destination address of the data processing centre 4 in a manner explained in the same application.

FIG. 2B provides an embodiment for circuit switched data (now denying the attach request) wherein the location updating process is omitted and the attach procedure is aborted, thereby saving power for communication module 2 and saving resources in the network. The user data U is encapsulated in the Attach Request message and transferred by the MSC to data processing centre 4 by SMS followed by an Attach Reject message from the telecommunications network to the communication module 2.

In the first step, the communication module 2 initiates the attach procedure to inform the network it wants to access CS services and uses the capability to insert user data U by the transmission of an Attach Request [IMSI (or IMEI), User data] message. The communication module 2 sends an IMSI Attach Request [IMSI, User data] message to the RAN. The RAN conveys this message transparently to the MSC.

In the second step authentication is performed.

In the third step, the MSC extracts the user data U received in the IMSI Attach Request message and constructs an SMS message using the address information of the data processing centre 4 and the application data contained in the user data U and sends the SMS. The MSC sends the SMS containing IMSI (or IMEI) and application data to the SMSC. The SMSC sends the SMS to the M2M Server. The SMSC after having sent the SMS to the M2M Server sends a delivery report to the MSC.

Then, in a final step, the MSC sends an IMSI Attach Reject message to the communication module 2 in response to the IMSI Attach Request in step 1. This message is specified in subclause 9.2.14 of 3GGP TS 24.008, V.8.3.0 as Location updating reject, which message is sent by the network to the communication module to indicate that IMSE attach has failed. The MSC sends an IMSI Attach Reject message to RAN. The RAN conveys this message transparently to the communication module 2.

FIG. 3A provides an embodiment for packet switched (PS) data wherein the attach request is accepted. After accepting the attach request, the encapsulated user data U is transferred by the MSC to data processing centre 4 by SMS followed by a detach procedure initiated by the communication module 2.

In a first step, the communication module 2 initiates the attach procedure to inform the network it wants to access PS services and uses the capability to insert user data U by the transmission of an Attach Request [IMSI (or IMEI), User data] message. The communication module 2 sends a GPRS Attach Request [IMSI, User data] message to RAN. The RAN conveys this message transparently to the SGSN.

In particular, the communication module 2 may send an Attach Request as specified in subclause 9.4.1 of 3GPP TS 24.008 V8.3.0, indicating that the communication module 2 has become active for the telecommunications network, in order to perform a GPRS attach or a Combined GPRS attach. The GPRS attach or the Combined GPRS attach can be requested by having the Attach type information element to code for GPRS or Combined GPRS attach as specified in subclause 10.5.5.2 of the same document.

In the second step, the authentication procedure is executed in order to indentify the communication module 2.

In the third step, the SGSN informs the HLR about the number (address) of the SGSN where the communication module 2 is located. The SGSN sends an Update Location containing the SGSN address to the HLR. The HLR sends Insert Subscriber Data containing subscriber information to the SGSN. The SGSN then validates the presence of the communication module 2. If all

checks are successful, the MSC provides a mobility management (GMM) context for the communication and returns an Insert Subscriber Data Acknowledgement message to the HLR. The HLR acknowledges the Update Location message by sending an Update Location acknowledgement message to the SGSN after the GMM context is finalized.

In a fourth step, the SGSN sends an Attach Accept message to the communication module 2 in response to the GPRS Attach Request in step 1. The SGSN sends an Attach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

Then, in a fifth step, the SGSN extracts the user data U received in the GPRS Attach Request message and constructs a SMS using the address information of the data processing centre 4 and the application data contained in the user data and sends the SMS to the data processing centre 4. As mentioned previously, the actual address information may also be derived in the telecommunications network using an identifier in the signalling message S. The SGSN sends the SMS containing IMSI (or IMEI) and application data to the SMSC. The SMSC sends the SMS to the data processing centre 4. The SMSC, after having sent the SMS to the data processing centre 4, sends a delivery report to the SGSN. The delivery report is sent by the SGSN to the communication module 2 via the RAN using e.g. SMS.

Subsequently, in a sixth step, the communication module 2 starts a detach procedure to inform the network it no longer wants to access the PS services. The communication module 2 sends an IMSI Detach Request message to RAN and the RAN conveys this message transparently to the SGSN.

Finally, in a seventh step, the SGSN responds with an IMSI Detach Accept message to the communication module 2. The SGSN sends an IMSI Detach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

Again, as for the CS embodiment of FIGS. 2A and 2B, in the specific M2M context, several steps in the embodiment of FIG. 3A may be omitted, as illustrated in FIG. 3B.

FIG. 3B provides an embodiment for packet switched data (now denying the attach request) wherein the location updating process is omitted and the attach procedure is aborted, thereby saving power for communication module 2 and saving resources in the network. The user data U is encapsulated in the Attach Request message and transferred by the MSC to data processing centre 4 by SMS followed by an Attach Reject message from the telecommunications network to the communication module 2.

Again, in a first step, the communication module 2 initiates the attach procedure to inform the network it wants to access PS services and uses the capability to insert user data by the transmission of an Attach Request [IMSI, User data] message. The communication module 2 sends a GPRS Attach Request [IMSI, User data] message to the RAN. The RAN conveys this message transparently to the MSC.

In the second step, the authentication procedure is executed in order to indentify the communication module 2.

In the third step, the SGSN extracts the user data U received in the GPRS Attach Request message and constructs an SMS using the address information of the data processing centre 4 and the application data contained in the user data and sends the SMS to the data processing centre 4. The SGSN sends the SMS containing IMSI and application data to the SMSC. The SMSC sends the SMS to the data processing centre 4. The SMSC after having sent the SMS to the data processing centre 4 sends a delivery report to the SGSN.

Finally, in the fourth step, the SGSN sends a GPRS Attach Reject message to the communication module 2 in response to the GPRS Attach Request in step 1. The SGSN includes the delivery report as a parameter in the GPRS Attach Reject message. The cause of the rejection may be specified or an existing cause may be used that is interpreted by the communication unit as an acknowledgement. The SGSN sends a GPRS Attach Reject message to RAN. The RAN conveys this message transparently to the MS.

The embodiment of the invention as depicted in FIG. 4 provides the option of intercepting and extracting the user data

U from signalling messages S exchanged between the RAN and the CN, in particular between the RAN and the MSC/SGSN, to avoid modification of the MSC/SGSN. These signalling messages are described in detail in 3GGP TS 48.008 (for GSM), 3GGP 48.014, 48. 016 and 48.018 (for GPRS), 3GPP TS 25.41x (for UMTS circuit switched and packet switched. The embodiment can use either IMSI attach, GPRS attach or Combined GPRS/IMSI attach and is therefore referred to simply as attach in FIG. 4.

In a first step, the communication module 2 initiates the attach procedure to inform the network it wants to access CS, PS or both services and uses the capability to insert user data by the transmission of an Attach Request [IMSI, User data] message. The communication module 2 sends an Attach Request [IMSI, User data] message to RAN. The RAN conveys this message transparently to the MSC. This message containing the user data is also received by the monitoring module 3.

In a next step, the authentication functions are performed as there exists no Mobility Management (MM) context for the communication module 2. The monitoring module 3 is or becomes aware of the outcome of the authentication procedure.

Then, the MSC/SGSN sends an Attach Accept message to the communication module 2 in response to the Attach Request in step 1. The MSC/SGSN sends an Attach Accept message to RAN. This message is also received by the monitoring module 3 and is an indication for the monitoring module to proceed with step 4.The RAN conveys this message transparently to the communication module 2. The same effect can be obtained using an Attach Reject message. Also, the cause of the Attach reject message may be interpreted by the communication unit 2 as an acknowledgement message.

In the fourth step, the monitoring module 3 extracts the user data U received in the monitored Attach Request message and constructs an SMS using the address information of the data processing centre 4 and the application data contained in the user data and sends the SMS to the data processing centre 4. The monitoring module sends the SMS containing IMSI (or IMEI) and application data to the SMSC. The SMSC sends the SMS to the data

processing centre 4. The SMSC, after having sent the SMS to the data processing centre 4, sends a delivery report to the monitoring module 3. The delivery report is sent by the monitoring module 3 to the communication module 2 via the RAN.

Subsequently, the communication module 2 starts a detach procedure to inform the network it no longer wants to access the services. The communication module 2 sends a Detach Request message to RAN. The RAN conveys this message transparently to the MSC. This message is also received by the monitoring module 3.

Finally, the MSC/SGSN responds with a Detach Accept message to the communication module 2. The MSC/SGSN sends a Detach Accept message to RAN. This message is also received by the monitoring module 3 and is an indication for the monitoring module 3 to stop the process. The RAN conveys this message transparently to the MS.

**CLAIMS**

1. A method of transferring user data from a communication module to a data processing centre over a telecommunications network, the method comprising the steps in the telecommunications network of:

- wirelessly receiving a signalling message from said communication module, said user data being contained in said signalling message;
- transferring said user data to said data processing centre.

2. The method according to claim 1, further comprising the steps of:

- retrieving said user data from said received signalling message in said telecommunications network;
- transferring said retrieved user data to said data processing centre.

3. The method according to claim 1 or 2, wherein the signalling message is a network attach request message.

4. The method according to claim 3, wherein said network attach request message is a location updating request message with a location updating type information element indicating an IMSI attach.

5. The method according to claim 3, wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach.

6. The method according to one or more of the preceding claims 3-5, comprising the steps of:

- transmitting a network attach accept message to the communication module;
- transmitting further data to and/or receiving further data from the communication module;

- receiving a network detach message from the communication module.

7. The method according to one or more of the preceding claims 3-5, comprising the step of transmitting an attach reject message to communication module, said attach reject message comprising data for said communication module.

8. The method according to one or more of the preceding claims, comprising the step of omitting authentication of said communication module in said telecommunications network.

9. The method according to one or more of the preceding claims comprising the step of omitting normal location updating procedure in said telecommunication module.

10. The method according to one or more of the preceding claims, wherein at least a part of said user data is encrypted.

11. The method according to one or more of the preceding claims, wherein said user data comprises application data of a program run by said communication module.

12. The method according to one or more of the preceding claims, wherein said user data comprises address information indicative of said data processing centre.

13. The method according to one or more of the preceding claims, wherein said user data is transferred to said data processing centre using one or more SMS messages.

14. The method according to one or more of the preceding claims, wherein said user data is transferred to said data processing centre using one or more XML messages.

15. A computer program comprising software code portion configured for, when run by a processor, performing the steps of the method according to one or more of the preceding claims.

16. A telecommunications network being configured for performing the method according to one or more of the preceding claims 1-14.

17. A node, such as a mobile switching centre (MSC), a serving GPRS support node or a signalling monitor, in the telecommunications network according to claim 15 configured for performing the method according to one or more of the preceding claims 1-14.

18. A communication module comprising a processor for processing user data, an encapsulation module configured for encapsulating said user data in one or more signalling messages from said communication module to a telecommunications network and a transmitter for transmitting said signalling messages containing said user data to said telecommunications network.

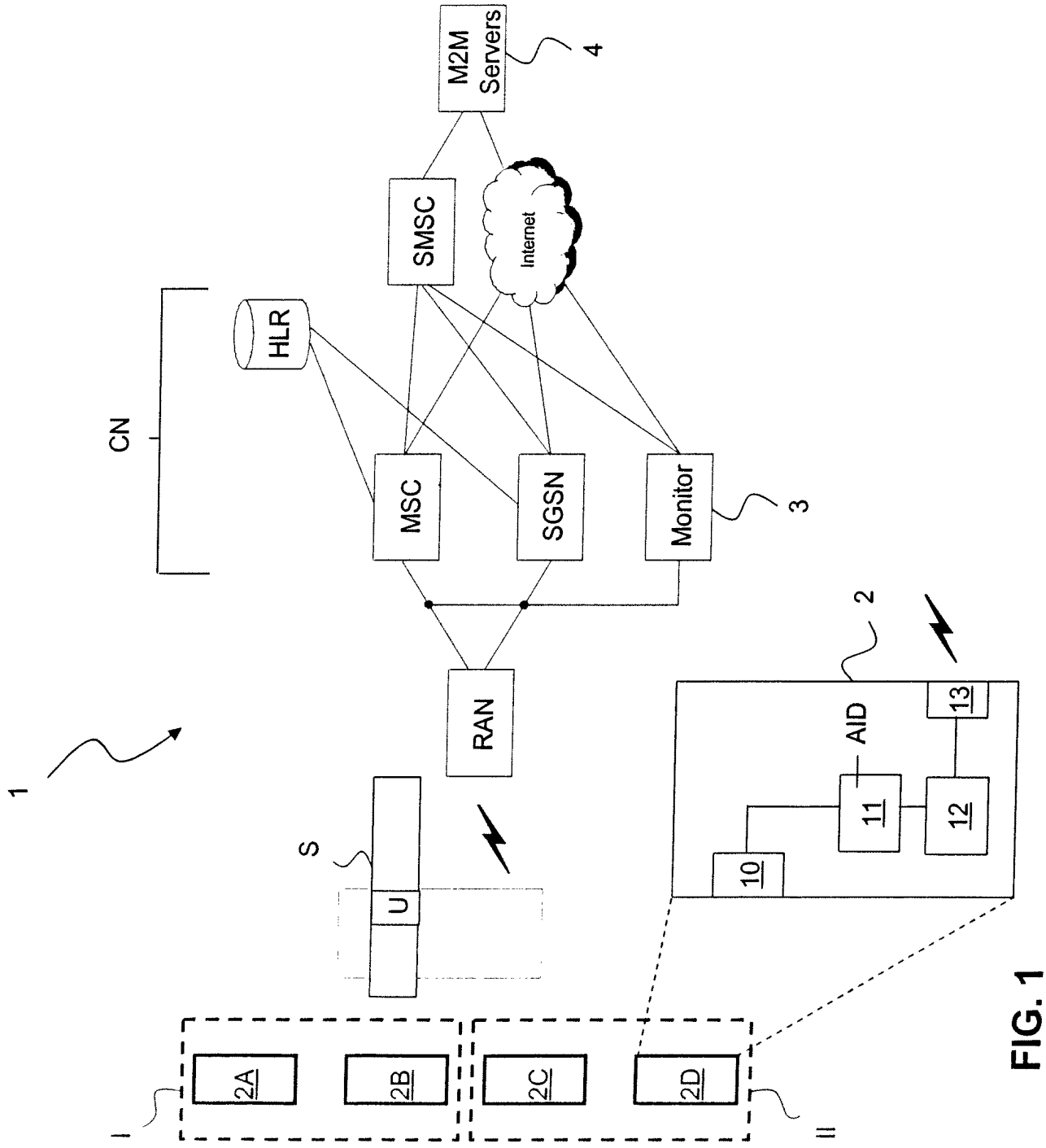

M2M Servers
4
SMSC
Internet
HLR
CN
MSC
SGSN
Monitor
3
RAN
1
S
U
2
AID
13
11
12
10
2A
2B
2C
2D
I
II

FIG. 1

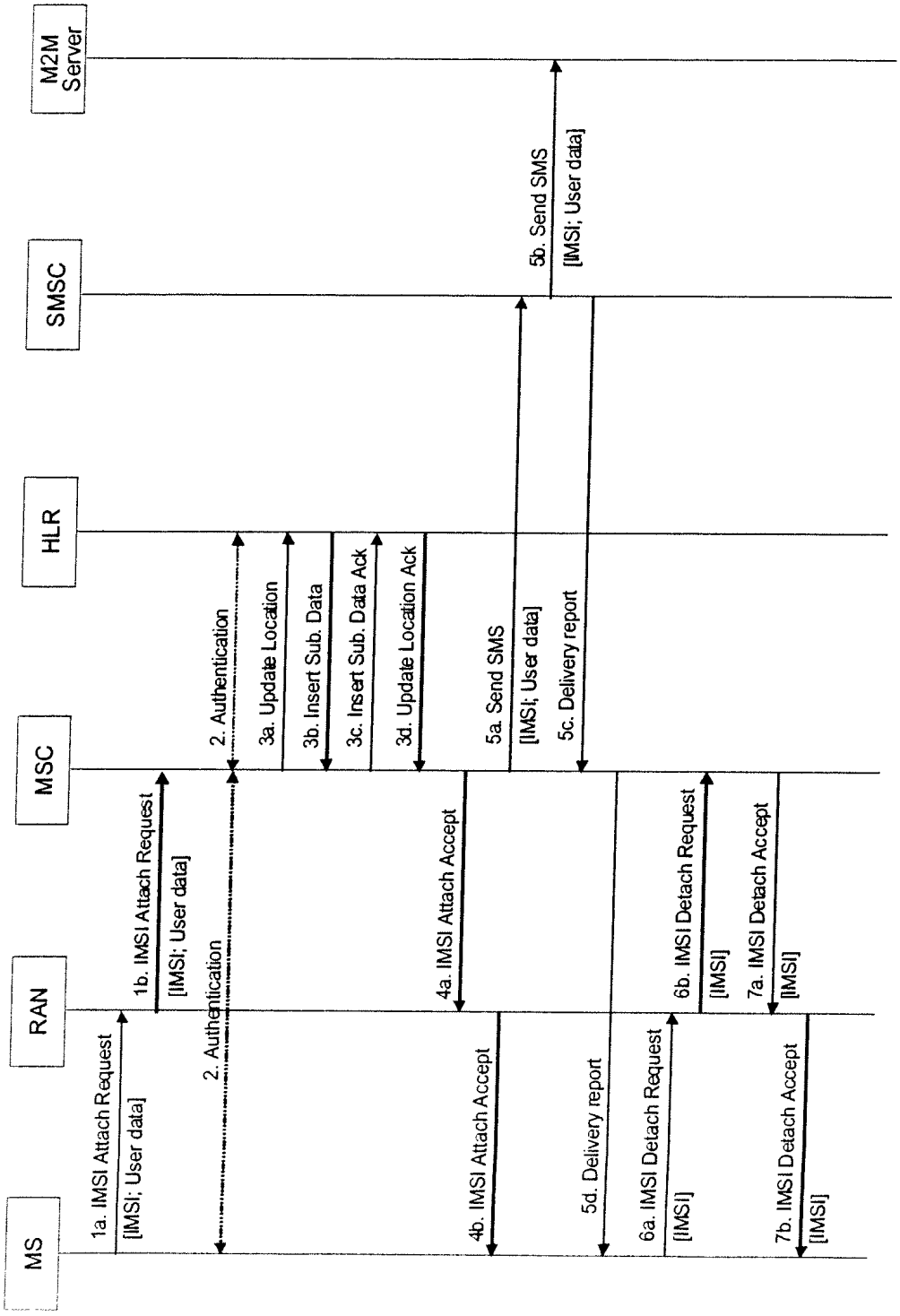

MS
RAN
MSC
HLR
SMSC
M2M Server
1a. IMSI Attach Request
[IMSI; User data]
1b. IMSI Attach Request
[IMSI; User data]
2. Authentication
2. Authentication
3a. Update Location
3b. Insert Sub. Data
3c. Insert Sub. Data Ack
3d. Update Location Ack
4a. IMSI Attach Accept
4b. IMSI Attach Accept
5a. Send SMS
[IMSI; User data]
5b. Send SMS
[IMSI; User data]
5c. Delivery report
5d. Delivery report
6a. IMSI Detach Request
[IMSI]
6b. IMSI Detach Request
[IMSI]
7a. IMSI Detach Accept
[IMSI]
7b. IMSI Detach Accept
[IMSI]

FIG. 2A

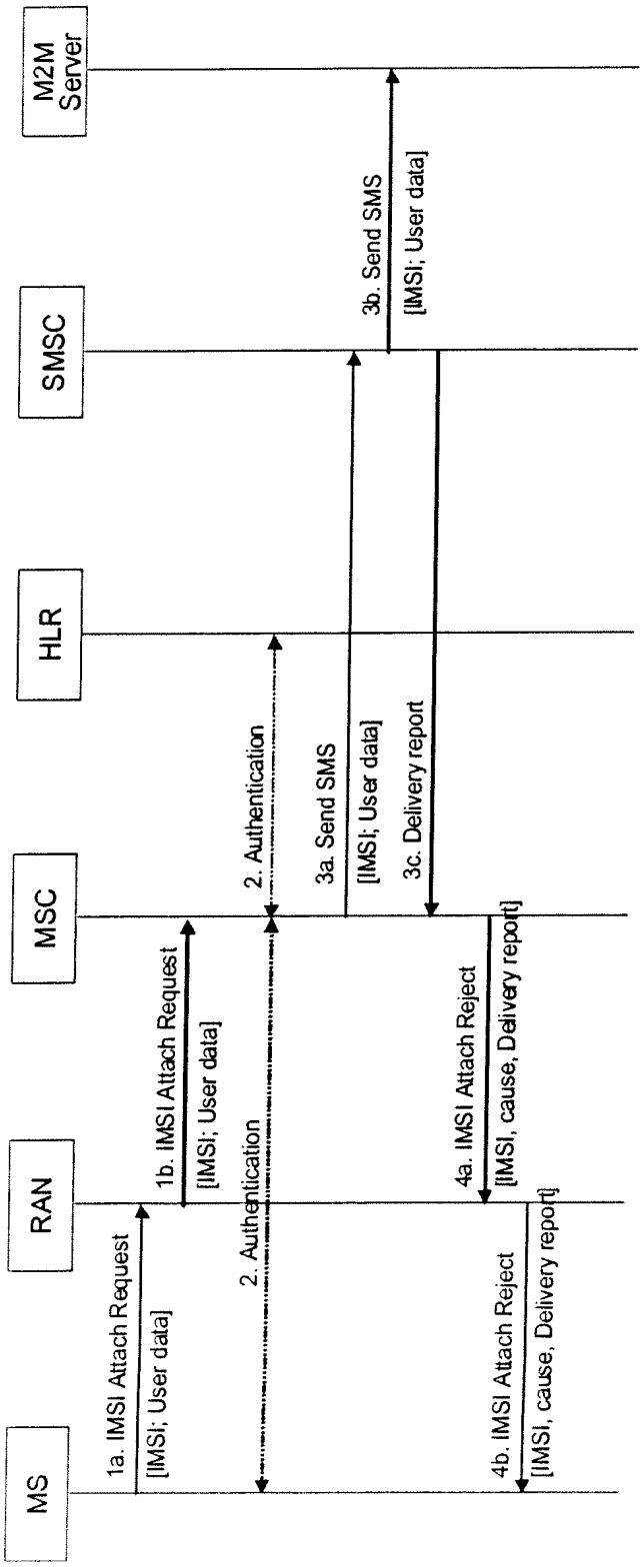

MS
RAN
MSC
HLR
SMSC
M2M Server
1a. IMSI Attach Request
[IMSI; User data]
1b. IMSI Attach Request
[IMSI; User data]
2. Authentication
2. Authentication
3a. Send SMS
[IMSI; User data]
3b. Send SMS
[IMSI; User data]
3c. Delivery report
4a. IMSI Attach Reject
[IMSI, cause, Delivery report]
4b. IMSI Attach Reject
[IMSI, cause, Delivery report]

FIG. 2B

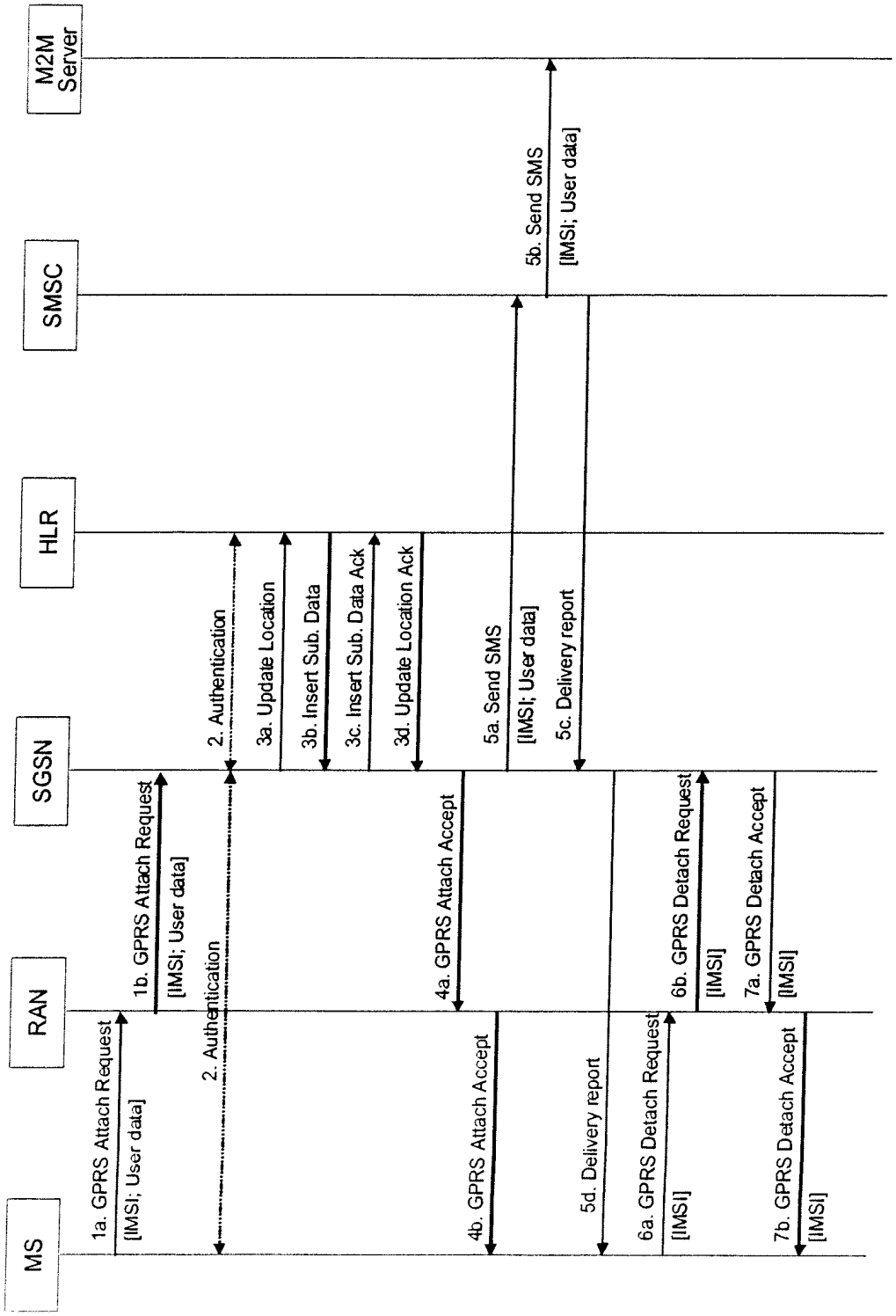

MS
RAN
SGSN
HLR
SMSC
M2M Server
1a. GPRS Attach Request
[IMSI; User data]
1b. GPRS Attach Request
[IMSI; User data]
2. Authentication
2. Authentication
3a. Update Location
3b. Insert Sub. Data
3c. Insert Sub. Data Ack
3d. Update Location Ack
4a. GPRS Attach Accept
4b. GPRS Attach Accept
5a. Send SMS
[IMSI; User data]
5b. Send SMS
[IMSI; User data]
5c. Delivery report
5d. Delivery report
6a. GPRS Detach Request
[IMSI]
6b. GPRS Detach Request
[IMSI]
7a. GPRS Detach Accept
[IMSI]
7b. GPRS Detach Accept
[IMSI]

FIG. 3A

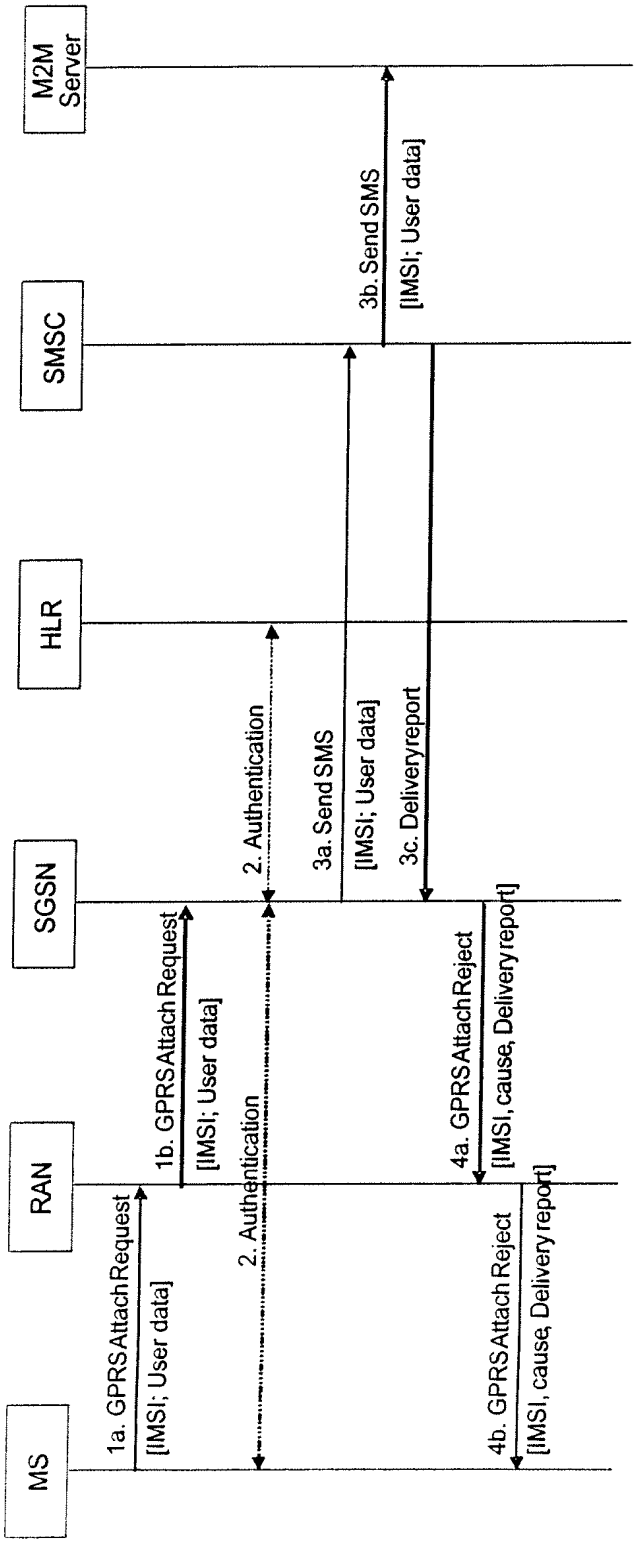

M2M Server
SMSC
HLR
SGSN
RAN
MS
3b. Send SMS
[IMSI; User data]
2. Authentication
3a. Send SMS
[IMSI; User data]
3c. Deliveryreport
1b. GPRS Attach Request
[IMSI; User data]
2. Authentication
4a. GPRS Attach Reject
[IMSI, cause, Delivery report]
1a. GPRS Attach Request
[IMSI; User data]
4b. GPRS Attach Reject
[IMSI, cause, Delivery report]

FIG. 3B

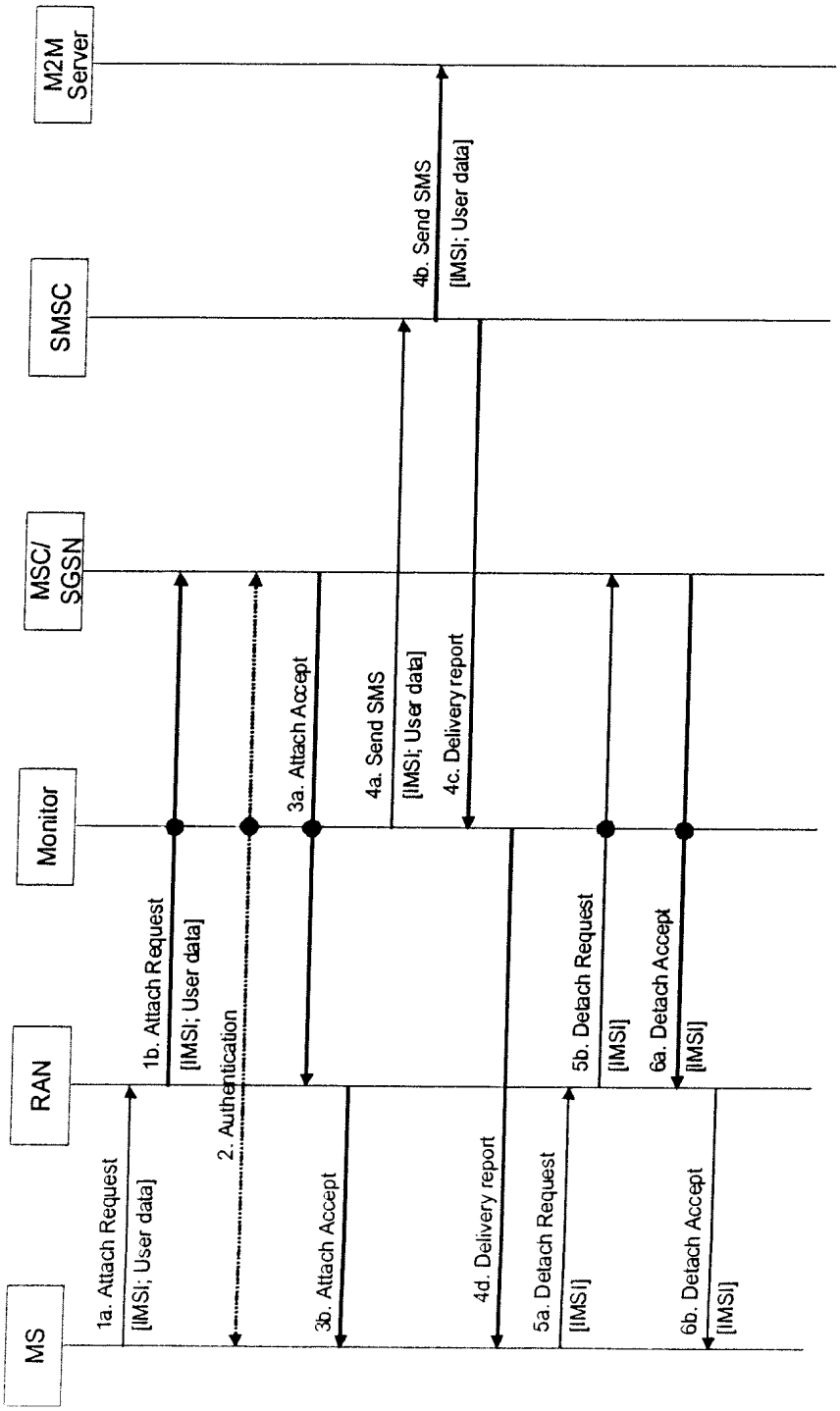

MS
RAN
Monitor
MSC/ SGSN
SMSC
M2M Server
1a. Attach Request
[IMSI; User data]
1b. Attach Request
[IMSI; User data]
2. Authentication
3a. Attach Accept
3b. Attach Accept
4a. Send SMS
[IMSI; User data]
4b. Send SMS
[IMSI; User data]
4c. Delivery report
4d. Delivery report
5a. Detach Request
[IMSI]
5b. Detach Request
[IMSI]
6a. Detach Accept
[IMSI]
6b. Detach Accept
[IMSI]

FIG. 4

# INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2009/064185

A. CLASSIFICATION OF SUBJECT MATTER
INV. G01D4/00 H04W60/00
ADD. H04W8/08 H04W74/00

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
G01D H04W

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

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X | WO 2005/091661 A (ERICSSON TELEFON AB L M [SE]; JOHANNESSON REGINA [SE]; HERRERO VERON C) 29 September 2005 (2005-09-29) page 2, lines 16-23 page 8, line 16 - page 9, line 4 | 1,2,4,6, 7,12, 15-18 |
| X | EP 0 805 609 A (HEWLETT PACKARD CO [US] AGILENT TECHNOLOGIES INC [US]) 5 November 1997 (1997-11-05) column 13, line 19 - column 15, line 4 | 1,2,4,6, 7,12, 15-18 |
| X | WO 2008/051716 A (SONUS NETWORKS INC [US]; SAKSENA VIKRAM [US]; NAGPAL ASHISH [IN]) 2 May 2008 (2008-05-02) paragraphs [0005], [0006]; figure 1 | 1,2, 15-18 |

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

| Date of the actual completion of the international search | Date of mailing of the international search report |
|---|---|
| 13 November 2009 | 23/11/2009 |

| Name and mailing address of the ISA/ | Authorized officer |
|---|---|
| European Patent Office, P.B. 5818 Patentlaan 2<br>NL - 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040,<br>Fax: (+31-70) 340-3016 | Weinmiller, Jost |

3

Form PCT/ISA/210 (second sheet) (April 2005)

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2009/064185

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| WO 2005091661 A | 29-09-2005 | BR PI0509061 A | 21-08-2007 |
| | | CA 2559794 A1 | 29-09-2005 |
| | | EP 1730983 A1 | 13-12-2006 |
| | | JP 2007531359 T | 01-11-2007 |
| | | KR 20060129093 A | 14-12-2006 |
| | | US 2005215253 A1 | 29-09-2005 |
| | | US 2007232306 A1 | 04-10-2007 |
| EP 0805609 A | 05-11-1997 | NONE | |
| WO 2008051716 A | 02-05-2008 | CA 2666923 A1 | 02-05-2008 |
| | | EP 2078433 A1 | 15-07-2009 |
| | | US 2008096553 A1 | 24-04-2008 |

Encapsulating Userdata

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
KONINKLIJKE KPN N.V.
Attn. Wuyts, Koenraad
P.O. Box 95321
NL-2509 CH The Hague
PAYS-BAS

# PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

| | |
|---|---|
| | Date of mailing *(day/month/year)* 23/11/2009 |
| Applicant's or agent's file reference 403334WO/ | **FOR FURTHER ACTION** See paragraphs 1 and 4 below |
| International application No. PCT/EP2009/064185 | International filing date *(day/month/year)* 28/10/2009 |
| Applicant KONINKLIJKE KPN N.V. | |

1. [x] The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   **Filing of amendments and statement under Article 19:**
   The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

   **When?** The time limit for filing such amendments is normally two months from the date of transmittal of the International Search Report.

   **Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Fascimile No.: (41-22) 338.82.70

   **For more detailed instructions,** see the notes on the accompanying sheet.

2. [ ] The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. [ ] **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   [ ] the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

   [ ] no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90*bis*.1 and 90*bis*.3, respectively, before the completion of the technical preparations for international publication.

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

| | |
|---|---|
| Name and mailing address of the International Searching Authority<br>European Patent Office, P.B. 5818 Patentlaan 2<br>NL-2280 HV Rijswijk<br>Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,<br>Fax: (+31-70) 340-3016 | Authorized officer<br>Rebecca Plonka |

## NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

## INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims,description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

**What parts of the international application may be amended?**

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

**When?**

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

**Where not to file the amendments?**

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

**How?**

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Section 205(b)).

**The amendments must be made in the language in which the international application is to be published.**

**What documents must/may accompany the amendments?**

**Letter (Section 205(b)):**

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

**The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.**

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped),whether

(i) the claim is unchanged;

(ii) the claim is cancelled;

(iii) the claim is new;

(iv) the claim replaces one or more claims as filed;

(v) the claim is the result of the division of a claim as filed.

**The following examples illustrate the manner in which amendments must be explained in the accompanying letter:**

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."

2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."

3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."

4. [Where various kinds of amendments are made]:
"Claims 1–10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

**"Statement under article 19(1)" (Rule 46.4)**

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

**It must be in the language in which the international application is to be published.**

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

**Consequence if a demand for international preliminary examination has already been filed**

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement ) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1*bis*(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion together, where appropriate, with amendments before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later (Rule 43*bis*.1(c)).

**Consequence with regard to translation of the international application for entry into the national phase**

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see the *PCT Applicant's Guide*, Volume II.

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| Applicant's or agent's file reference | **FOR FURTHER ACTION** | see Form PCT/ISA/220 as well as, where applicable, item 5 below. |
|---|---|---|
| 403334WO | | |
| International application No. | International filing date *(day/month/year)* | (Earliest) Priority Date *(day/month/year)* |
| PCT/EP2009/064185 | 28/10/2009 | 28/10/2008 |
| Applicant | | |
| KONINKLIJKE KPN N.V. | | |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**
   a. With regard to the **language,** the international search was carried out on the basis of:
      [X] the international application in the language in which it was filed
      [ ] a translation of the international application into _____ , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
   b. [ ] This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).
   c. [ ] With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. [ ] **Certain claims were found unsearchable** (See Box No. II)

3. [ ] **Unity of invention is lacking** (see Box No III)

4. With regard to the **title,**
   [X] the text is approved as submitted by the applicant
   [ ] the text has been established by this Authority to read as follows:

5. With regard to the **abstract,**
   [X] the text is approved as submitted by the applicant
   [ ] the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings,**
   a. the figure of the **drawings** to be published with the abstract is Figure No. 1
      [X] as suggested by the applicant
      [ ] as selected by this Authority, because the applicant failed to suggest a figure
      [ ] as selected by this Authority, because this figure better characterizes the invention
   b. [ ] none of the figures is to be published with the abstract

# INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2009/064185

A. CLASSIFICATION OF SUBJECT MATTER
INV. G01D4/00 H04W60/00
ADD. H04W8/08 H04W74/00

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
G01D H04W

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

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X | WO 2005/091661 A (ERICSSON TELEFON AB L M [SE]; JOHANNESSON REGINA [SE]; HERRERO VERON C) 29 September 2005 (2005-09-29) page 2, lines 16-23 page 8, line 16 - page 9, line 4 | 1,2,4,6, 7,12, 15-18 |
| X | EP 0 805 609 A (HEWLETT PACKARD CO [US] AGILENT TECHNOLOGIES INC [US]) 5 November 1997 (1997-11-05) column 13, line 19 - column 15, line 4 | 1,2,4,6, 7,12, 15-18 |
| X | WO 2008/051716 A (SONUS NETWORKS INC [US]; SAKSENA VIKRAM [US]; NAGPAL ASHISH [IN]) 2 May 2008 (2008-05-02) paragraphs [0005], [0006]; figure 1 | 1,2, 15-18 |

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

| Date of the actual completion of the international search | Date of mailing of the international search report |
|---|---|
| 13 November 2009 | 23/11/2009 |

| Name and mailing address of the ISA/ | Authorized officer |
|---|---|
| European Patent Office, P.B. 5818 Patentlaan 2<br>NL - 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040,<br>Fax: (+31-70) 340-3016 | Weinmiller, Jost |

3

Form PCT/ISA/210 (second sheet) (April 2005)

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2009/064185

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| WO 2005091661 A | 29-09-2005 | BR PI0509061 A | 21-08-2007 |
| | | CA 2559794 A1 | 29-09-2005 |
| | | EP 1730983 A1 | 13-12-2006 |
| | | JP 2007531359 T | 01-11-2007 |
| | | KR 20060129093 A | 14-12-2006 |
| | | US 2005215253 A1 | 29-09-2005 |
| | | US 2007232306 A1 | 04-10-2007 |
| EP 0805609 A | 05-11-1997 | NONE | |
| WO 2008051716 A | 02-05-2008 | CA 2666923 A1 | 02-05-2008 |
| | | EP 2078433 A1 | 15-07-2009 |
| | | US 2008096553 A1 | 24-04-2008 |

# PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

# PCT

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing
*(day/month/year)* see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

**FOR FURTHER ACTION**
See paragraph 2 below

| International application No. | International filing date *(day/month/year)* | Priority date *(day/month/year)* |
|---|---|---|
| PCT/EP2009/064185 | 28.10.2009 | 28.10.2008 |

International Patent Classification (IPC) or both national classification and IPC
INV. G01D4/00 H04W60/00
ADD. H04W8/08 H04W74/00

Applicant
KONINKLIJKE KPN N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notifed the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:

European Patent Office
P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040
Fax: +31 70 340 - 3016

Date of completion of this opinion

see form PCT/ISA/210

Authorized Officer

Weinmiller, Jost

Telephone No. +31 70 340-3884

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed

   ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

   a. type of material:

      ☐ a sequence listing

      ☐ table(s) related to the sequence listing

   b. format of material:

      ☐ on paper

      ☐ in electronic form

   c. time of filing/furnishing:

      ☐ contained in the international application as filed.

      ☐ filed together with the international application in electronic form.

      ☐ furnished subsequently to this Authority for the purposes of search.

4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

| | | | |
|---|---|---|---|
| Novelty (N) | Yes: | Claims | 3,5,8-11,13,14 |
| | No: | Claims | 1,2,4,6,7,12,15-18 |
| Inventive step (IS) | Yes: | Claims | |
| | No: | Claims | 1-18 |
| Industrial applicability (IA) | Yes: | Claims | 1-18 |
| | No: | Claims | |

2. Citations and explanations

**see separate sheet**

**Re Item V.**

1. Reference is made to the following document:
   D1 : WO 2005/091661 A (ERICSSON TELEFON AB L M [SE]; JOHANNESSON REGINA [SE]; HERRERO VERON C) 29 September 2005 (2005-09-29)

2. INDEPENDENT CLAIM 1
   The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT. Document D1 discloses (the references in parentheses applying to this document):

   A method of transferring (see D1, page 8, line 27) user data (see D1, page 8, line 20; selection of a PLMN is done by a user, thus "user data") from'a communication module (see D1, page 8, line 16 "MS") to a data processing centre (see D1, page 9, line 1 "selected operator") over a telecommunications network (see D1, page 8, line 27 "to the mobile network"), the method comprising the steps in the telecommunications network of: wirelessly receiving a signalling message from said communication module (see D1, page 8, line 27), said user data being contained in said signalling message (see D1, page 8, line 28); transferring said user data to said data processing centre (see D1, page 9, line 1).

   It appears impossible to clearly define the characteristics of "user data" which would allow to clearly distinguish it from the user data found in the cited documents - any data originating from a user terminal can be considered user data. Similarly the "data processing center" reads onto a wide variety of devices commonly found in communication networks. Further the applicant should take not of the well known "in-band signalling" as used e.g. in IP-networks where all messages comprise both control information (in the header) and payload data (in the body). Also this architecture fits the wording of claim 1.

3. The subject matter of the remaining independent claims 15-18 corresponds to or is equivalent to that of claim 1 of the application. The above reasoning with respect to novelty and inventive step therefore also applies to these claims.

4. The dependent claims appear not to claim any additional features which render them either new or non obvious with respect to the available prior art for the reason that the subject-matter of said claims is either in principle directly derivable from the

disclosure of document D1 (for claims 2, 4, 6, 7, 12: see passages cited in the search report) or represents simple design details which are generally known to the person skilled in the field of communication (claims 3, 5, 8-11, 13, 14).

Possible steps after receipt of the international search report (ISR) and written opinion of the International Searching Authority (WO-ISA)

| | |
|---|---|
| General information | For all international applications filed on or after 01/01/2004 the competent ISA will establish an ISR. It is accompanied by the WO-ISA. Unlike the former written opinion of the IPEA (Rule 66.2 PCT), the WO-ISA is not meant to be responded to, but to be taken into consideration for further procedural steps. This document explains about the possibilities. |
| Amending claims under Art. 19 PCT | Within 2 months after the date of mailing of the ISR and the WO-ISA the applicant may file amended claims under Art. 19 PCT directly with the International Bureau of WIPO. The PCT reform of 2004 did not change this procedure. For further information please see Rule 46 PCT as well as form PCT/ISA/220 and the corresponding Notes to form PCT/ISA/220. |
| Filing a demand for international preliminary examination | In principle, the WO-ISA will be considered as the written opinion of the IPEA. This should, in many cases, make it unnecessary to file a demand for international preliminary examination. If the applicant nevertheless wishes to file a demand this must be done before expiry of 3 months after the date of mailing of the ISR/WO-ISA or 22 months after priority date, whichever expires later (Rule 54bis PCT). Amendments under Art. 34 PCT can be filed with the IPEA as before, normally at the same time as filing the demand (Rule 66.1 (b) PCT).<br><br>If a demand for international preliminary examination is filed and no comments/amendments have been received the WO-ISA will be transformed by the IPEA into an IPRP (International Preliminary Report on Patentability) which would merely reflect the content of the WO-ISA. The demand can still be withdrawn (Art. 37 PCT). |
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| End of the international phase | At the end of the international phase the International Bureau of WIPO will transform the WO-ISA or, if a demand was filed, the written opinion of the IPEA into the IPRP, which will then be transmitted together with possible informal comments to the designated Offices. The IPRP replaces the former IPER (international preliminary examination report). |
| Relevant PCT Rules and more information | Rule 43 PCT, Rule 43bis PCT, Rule 44 PCT, Rule 44bis PCT, PCT Newsletter 12/2003, OJ 11/2003, OJ 12/2003 |



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| | |
|---|---|
| Date of mailing *(day/month/year)*<br>26 November 2009 (26.11.2009) | |
| Applicant's or agent's file reference<br>403334WO | **IMPORTANT NOTIFICATION** |
| International application No.<br>PCT/EP2009/064185 | International filing date *(day/month/year)*<br>28 October 2009 (28.10.2009) |
| International publication date *(day/month/year)*<br>**Not yet published** | Priority date *(day/month/year)*<br>28 October 2008 (28.10.2008) |
| Applicant<br>KONINKLIJKE KPN N.V. et al | |

1. By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).

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| Priority date | Priority application No. | Country or regional Office or PCT receiving Office | Date of receipt of priority document |
|---|---|---|---|
| 28 October 2008 (28.10.2008) | 08018761.0 | EP | 23 November 2009 (23.11.2009) |

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)**
**(Case No. 11-575-WO-US)**

| | | |
|---|---|---|
| **In re Application of:** | ) | |
| | ) | |
| **Bryan Jerrel BUSROPAN et al.** | ) | |
| | ) | **Examiner: TBA** |
| **Serial No.: Not yet assigned** | ) | |
| | ) | |
| **Int'l Appln. No.: PCT/EP2009/064185** | ) | |
| | ) | **Art Unit: TBA** |
| **Int'l. Filing Date: 28 October 2009** | ) | |
| | ) | |
| **For: Telecommunications Network and Method of Transferring User Data in Signalling Messages from a Communication Unit to a Data Processing Centre** | ) | |

## PRELIMINARY AMENDMENT

Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Please enter the following amendments and remarks prior to examination on the merits.

**Amendment to the Specification** begin on page 2 of this paper.

**Amendments to the Claims** begin on page 3 of this paper.

**Remarks** begin on page 7 of this paper.



ERICSSON EXHIBIT 1002, Page 403

## AMENDMENT TO THE SPECIFICATION

Please insert the following heading and paragraph immediately after the title on page 1 of the specification:

--**Cross-Reference to Related Applications**

The present application is a national stage application of International Patent Application No. PCT/EP2009/064185 filed October 28, 2009, which claims priority to European Patent Application No. 08018761.0 filed October 28, 2008.--



ERICSSON EXHIBIT 1002, Page 404

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of transferring user data from a communication module to a data processing centre over a telecommunications network, the method comprising the steps in the telecommunications network of:

[[-]] wirelessly receiving a signalling message from said communication module, said user data being contained in said signalling message; and

[[-]] transferring said user data to said data processing centre.

2. (Currently Amended) The method according to claim 1, further comprising the steps of:

[[-]] retrieving said user data from said received signalling message in said telecommunications network; and

[[-]] transferring said retrieved user data to said data processing centre.

3. (Currently Amended) The method according to claim [[1 or]] 2, wherein the signalling message is a network attach request message.

4. (Original) The method according to claim 3, wherein said network attach request message is a location updating request message with a location updating type information element indicating an IMSI attach.

5. (Original) The method according to claim 3, wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach.

6. (Currently Amended) The method according to ~~one or more of the preceding~~ claim[[s]] 3[[-5]], comprising the step of:

[[-]] transmitting a network attach accept message to the communication module;



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[[-]] transmitting further data to and/or receiving further data from the communications module; and

- receiving a network detach message from the communication module.

7. (Currently Amended) The method according to ~~one or more of the preceding~~ claim[[s]] 3[[-5]], comprising the step of transmitting an attach reject message to said communication module, said attach reject message comprising data for said communication module.

8. (Currently Amended) The method according to ~~one or more of the preceding claims, comprising the step of omitting authentication of~~ claim 3, wherein said communication module is not authenticated in said telecommunications network.

9. (Currently Amended) The method according to ~~one or more of the preceding claims comprising the step of omitting~~ claim 3 wherein normal location updating procedure is not performed in said telecommunication module.

10. (Currently Amended) The method according to ~~one or more of the preceding~~ claim[[s]] 3, wherein at least a part of said user data is encrypted.

11. (Currently Amended) The method according to ~~one or more of the preceding~~ claim[[s]] 3, wherein said user data comprises application data of a program run by said communication module.

12. (Currently Amended) The method according to ~~one or more of the preceding~~ claim[[s]] 3, wherein said user data comprises address information indicative of said data processing centre.



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13. (Currently Amended) The method according to ~~one or more of the preceding~~ claim[[s]] 3, wherein said user data is transferred to said data processing centre using one or more SMS messages.

14. (Currently Amended) The method according to ~~one or more of the preceding~~ claim[[s]] 3, wherein said user data is transferred to said data processing centre using one or more XML messages.

15. (Currently Amended) A computer program comprising a software code portion configured for, when run by a processor, performing the steps of the method according to ~~one or more of the preceding~~ claim[[s]] 3.

16. (Currently Amended) A telecommunications network being configured for transferring user data from a communication module to a data processing centre, said telecommunications network configured for performing ~~the method according to one or more of the preceding claims 1-14~~ the steps of:

wirelessly receiving a signaling message from said communication module, said user data being contained in said signalling message; and

transferring said user data to said data processing centre.

17. (Currently Amended) A node~~, such as a mobile switching centre (MSC), a serving GPRS support node or a signalling monitor,~~ in ~~the~~ a telecommunications network, said telecommunications network being configured for transferring user data from a communication module to a data processing centre, said node being ~~according to claim 15~~ configured for performing ~~the method according to one or more of the preceding claims 1-14~~ the steps of:

wirelessly receiving a message from said communication module, said user data being contained in said signalling message; and

transferring said user data to said data processing centre.



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18. (Original). A communication module comprising a processor for processing user data, an encapsulation module configured for encapsulating said user data in one or more signalling messages from said communication module to a telecommunications network and a transmitter for transmitting said signalling messages containing said user data to said telecommunications network.

19. (New) A node according to claim 17, wherein the node is a Mobile Switching Centre.

20. (New) A node according to claim 17, wherein the node is a serving GPRS support node.

21. (New) A node according to claim 17, wherein the node is a signaling monitor.



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## REMARKS

No new matter has been introduced into the present application as a result of the above amendments.

Prompt consideration and entry of this amendment prior to examination is respectfully requested. If there are any questions or comments regarding this Amendment or application, the Examiner is encouraged to contact the undersigned attorney indicated below.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayments to Deposit Account No. 13-2490.

Respectfully submitted,

Date: April 28, 2011

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**Declarations under Rule 4.17**:

— *of inventorship (Rule 4.17(iv))*

*[Continued on next page]*

(54) Title: TELECOMMUNICATIONS NETWORK AND METHOD OF TRANSFERRING USER DATA IN SIGNALLING MESSAGES FROM A COMMUNICATION UNIT TO A DATA PROCESSING CENTRE

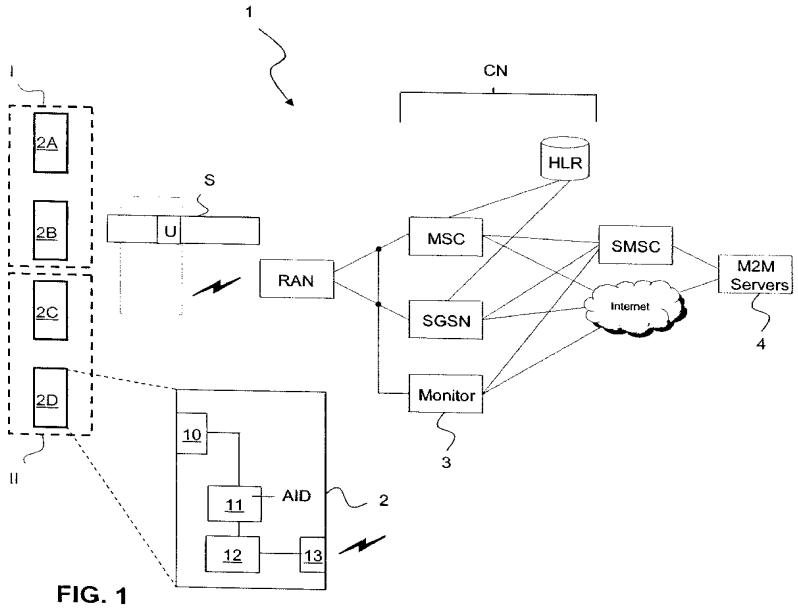



FIG. 1

(57) Abstract: The invention relates to a system and method of transferring user data from a communication module to a data processing centre over a telecommunications network. A signalling message is wirelessly received from the communication module in the telecommunications network. The signalling message contains the user data that is subsequently transferred to the data processing centre. By inserting the user data in the signalling message (s), it is possible to rapidly transmit data to the telecommunications network, while resources can be saved since it not required to establish a complete circuit-switched or packet-switched connection between the communication module and the telecommunications network. The user data may comprise application data of a program run by the communication module, e.g. alarming data, measurement data or derivatives thereof.

WO 2010/049437 A1

**Published**:

— *with international search report (Art. 21(3))*

# Telecommunications network and method of transferring user data in signalling messages from a communication unit to a data processing centre

## FIELD OF THE INVENTION

Generally, the invention relates to the field of data transfer over a telecommunications network. More specifically, the invention relates to a telecommunications network and a method of transferring user data from a communication module to a data processing centre in a machine-to-machine communications setting.

## BACKGROUND OF THE INVENTION

The past decades have shown an ever increasing demand for data capacity of telecommunications networks. Telecommunications providers have adapted their networks to provide extended services to meet the demands of their clients.

One example of such services relates to the field of machine-to-machine (M2M) communications. M2M applications typically involve hundreds or thousands of communication modules that only rarely require access to a telecommunications network. An example involves the electronic reading of e.g. electricity meters at the homes of a large customer base. Other examples include sensors, meters, coffee machines etc that can be equipped with communication modules that allow for reporting status information to a data processing centre over the telecommunications network. The data processing centre may e.g. store the data and/or provide a schedule for maintenance people to repair a machine, meter, sensor etc.

M2M communication systems are typically characterized by the fact that, most of the time, the communication modules have nothing or only a limited amount of data to report. However, for some applications or in some situations, such as alarming, it is required that data can rapidly be sent from a communication module to a data processing centre, e.g. within seconds.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a method and telecommunications network that allow for efficient and fast communications of limited amounts of data in a machine-to-machine environment.

An aspect of the invention involves a method of transferring user data from a communication module to a data processing centre over a telecommunications network. A signalling message is wirelessly received from the communication module in the telecommunications network. The signalling message contains the user data that is subsequently transferred to the data processing centre.

Other aspects of the invention relate to a computer program, a telecommunications network and a node of such a network configured for performing the steps of the method as defined in the claims.

Another aspect of the invention involves a communication module comprising a processor for processing user data, an encapsulation module configured for encapsulating the user data in one or more signalling messages from the communication module to the telecommunications network and a transmitter for transmitting the signalling messages containing the user data to said telecommunications network.

By inserting the user data in the signalling message(s), it is possible to rapidly transmit data to the telecommunications network, while resources can be saved since it is not required to establish a complete circuit-switched or packet-switched connection between the communication module and the telecommunications network. The user data may comprise application data of a program run by the communication module, e.g. alarming data, measurement data or derivatives thereof.

Although, in principle, it is possible to transmit a copy of the signalling message(s) to the data processing centre, in an embodiment of the invention, the user data is retrieved from the signalling message(s) in the telecommunications network and is then transferred to the data processing centre. This is efficiently performed in the core network of the

telecommunications network, e.g. in the mobile switching centre (MSC) or a serving GPRS support node (SGSN), since the signalling messages terminate at such nodes. It is also possible that a monitoring module is provided between the radio access network and the core network that is configured for sniffing signalling messages to recognize signalling messages carrying user data.

In an embodiment of the invention, the signalling message carrying the user data is a network attach request message. The attach message than has an information element for the user data. This information element may be a new information element or an existing information element that is not used in a particular situation. As an example, if the IMEI information element is not required, this information element may be used for the user data.

The attach message is typically one of the first messages received from the communication module in the telecommunications network and, therefore, provides an appropriate instance for rapidly receiving the user data. For circuit switched applications, the network attach request message may be a location updating request message with a location updating type information element indicating an IMSI attach. For packet-switched applications, the network attach request message may be an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach. These specific instances of network attach request messages typically occur when a communication device is powered on and allow for efficient implementation within the standard 3GPP TS 24.008, Version 8.3.0. Furthermore, the use of attach messages for transferring the user data allows to use communication modules not possessing a smart identity module (SIM).

In an embodiment of the invention, the telecommunications network may accept the network attach request message after which a connection can be established. This allows for further data to be sent to or from the communication module. As an example, a confirmation may be received that the user data

has been delivered to the data processing centre, thereby e.g. allowing the communication module to return to a sleep mode, to refrain from attempting to transmit the same user data again or to delete the user data. The further data may also include additional information for the data processing centre. If no further data are to be transmitted, the communication module informs the telecommunications network that it desires to detach from the network. Of course, after being detached, the further data may also be transmitted from the communication module in further attach requests.

In an embodiment of the invention, the attach request message from the communication module is rejected by the network, thereby excluding that a circuit switched or a packet switched connection can be established. The attach reject message may still contain a limited amount of information for the communication module, e.g. a confirmation that the user data has been delivered to the data processing centre, thereby allowing the communication module to delete the user data and/or to avoid that the communication module makes further attempts to transmit the user data. The rejection of the attach request is advantageous for saving power in the communication module and saving resources in the telecommunications network.

In the specific context of M2M communications networks, it is not required to execute all procedures generally required for commercial mobile communications, thereby saving network resources. In particular, authentication procedures of the communication module in the telecommunications network may be omitted and left to the data processing centre recognizing and authenticating the communication module, e.g. on the basis of an application identifier or a device identifier. Also, the normal and period location updating procedures may be omitted provided that the communication module remains at a substantially stationary location (e.g. within the area served by a particular MSC or SGSN).

At least a part of the user data may be contained in the signalling message in encrypted form. Since the user data are to be transmitted to the telecommunications network as soon

as possible, thereby not allowing time to establish a secure connection, it is advantageous to scramble or encrypt the user data in the communication module before insertion in the signalling message.

In an embodiment of the invention, the user data contained in the signalling message comprises addressing information indicative of the data processing centre to which the user data should be transferred. The addressing information may be shortened (e.g. using an application identifier instead of the address of the data processing centre) in order to save space in the signalling message for user data. The telecommunications network may be provided with functionality to derive the full address information of the data processing centre from the shortened address information.

The user data may be transferred to the data processing centre from the (node of the) telecommunications network by any available means. Advantageous embodiments include SMS or XML.

Hereinafter, embodiments of the invention will be described in further detail. It should be appreciated, however, that these embodiments may not be construed as limiting the scope of protection for the present invention.

## BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 shows a schematic illustration of a system for transmitting data in a machine-to-machine communication system according to an embodiment of the invention;

FIGS. 2A and 2B provide flow charts indicative of circuit-switched methods according to embodiments of the invention;

FIGS. 3A and 3B provide flow charts indicative of packet-switched methods according to further embodiments of the invention; and

FIG. 4 provides a flow chart indicative of a method according to a still further embodiment of the invention.

## DETAILED DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a schematic illustration of a machine-to-machine (M2M) system 1 comprising a plurality of communication modules 2A-2D. Mobile communication modules 2A, 2B are exploited by a first organization I and may be used to monitor vehicles of a logistic fleet of vehicles to provide alarm in case of emergency. Substantially stationary communication modules 2C, 2D are exploited by a second organization II and may, for example, be used for communicating alarming user data of facilities to a data processing centre 4 for security purposes.

M2M system 1 comprises a telecommunications network with a Radio Access Network RAN and a Core Network CN, the core network CN containing a mobile switching centre MSC and a serving GPRS support node SGSN connected to a Home Location Register HLR as known to the person skilled in the art. A monitoring module 3 may be provided configured for sniffing signalling messages exchanged between the RAN and the CN as will be described in further detail with reference to FIG. 4.

The MSC, SGSN and monitoring module 3 of the telecommunications network are configured for transferring the user data to data processing centres 4, also referred to as M2M servers, of organizations I and II, respectively. As illustrated in FIG. 1, the user data may be provided to the M2M servers 4 using a Short Message Service Centre (SMSC) for sending the user data received from communication modules 2A-2D by SMS or by using the internet for transferring the user data in, e.g., XML messages.

As illustrated in FIG. 1, a communication module 2 comprises or is communicatively connected to a sensor 10. Sensor 10 monitors operation and/or receives data of a device or other instance, such as a room, and provides data to a processor 11. Processor 11 is configured for running one or more computer programs (e.g. an application identified by an application identifier AID) receiving the data from sensor 10. The data obtained from the sensor 10 may be processed in the communication module 2 before it is ready to be transmitted to the appropriate M2M server 4. An example of such processing includes encrypting the data, but other forms of processing the

(raw) data are possible as well. Communication module 2 comprises an encapsulation module 12 (possibly software running on processor 11) for inserting the, possibly processed, user data U from the sensor 10 in signalling messages S. A transmitter 13 is provided for wirelessly transmitting the signalling messages S containing the user data U to the telecommunications network as schematically illustrated in FIG. 1. Such signalling messages S typically occur upon powering on the transmitter 13.

The user data U, apart from the data derived from the sensor 10, also contains address information indicating the data processing centre 4 to which the user data U should be transferred. Of course, the user data U may comprise a complete address of the appropriate data processing centre 4 that can be used in the telecommunications network for deciding where to transfer the user data U. The address information is stored in the communication module 2. In this manner user data U from communication modules 2A, 2B can be transferred to a data processing centre 4 of organization I, whereas user data U from communication modules 2C, 2D can be transferred to data processing centre 4 of organization II.

However, more advanced methods of addressing may be used, including, but not limited to, the use of identifiers (such as the application identifiers AID), for signalling the destination address of the user data U. The use of such (shorter) identifiers provides enhanced space in the signalling message S for the actual data. The telecommunications network should then comprise functionality for deriving the actual destination address of the appropriate data processing centre 4 from the received identifier. As an example, the identifier may be retrieved from the signalling message S in the telecommunications network and matched against a database or a query may be sent to a server (e.g. a DNS-type of server) having available the actual address of the data processing centre 4. The result of this process is then used for transferring the user data U to the data processing centre 4 via the SMSC or the internet.

Several embodiments of operating the M2M system 1 of FIG. 1 will be described below with reference to FIGS. 2A-2B (for circuit switched (CS) data transmission), FIGS. 3A-3B (for packet switched (PS) data transmission) and FIG. 4 (illustrating an embodiment using monitoring module 3). It should be appreciated, however, that many alternative embodiments can be envisaged within the scope of the present invention.

The general operation of the system of FIG. 1 involves the telecommunications network to wirelessly receive a signalling message S from the communication module 2. The signalling message S comprises user data U. The user data U is transferred to data processing centre 4. The user data U is retrieved from the received signalling message S within the telecommunications network and transferred further to data processing centre 4. The signalling message S can be a network attach request message in order to provide rapid transfer of the user data.

In case of a GSM/GPRS/UMTS telecommunications network the following types of Attach Request messages can be used. An IMSI or CS Attach Request message can be sent to the MSC in order to obtain CS services. Alternatively, a GPRS or PS attach request message can be sent to the SGSN in order to obtain PS services. Also a combined PS/CS Attach Request message can be sent to the SGSN in order to obtain both PS and CS services.

Depending on the type of Attach Request message used by the communication module 2, the user data is sent to the MSC or the SGSN. In case of IMSI attach the user data is received by the MSC and in case of GPRS attach or Combined attach the user data is received by the SGSN. The MSC or SGSN extracts the user data from the received Attach Request message and sends the user data to the data processing centre 4. To do so, the MSC/SGSN can use different means (SMS, internet) to send the user data to the data processing centre 4.

The attach request of the communication unit 2 to the telecommunications network may or may not be accepted.

FIG. 2A provides an embodiment for circuit switched (CS) data wherein the attach request is accepted. After

accepting the attach request, the encapsulated user data U is transferred by the MSC to data processing centre 4 by SMS followed by a detach procedure initiated by the communication module 2.

In the first step, the communication module 2 initiates the attach procedure to inform the telecommunications network it wants to access CS services and uses the capability to insert user data by the transmission of an Attach Request [IMSI, User data] message. The communication module 2 sends an IMSI Attach Request [IMSI, User data] message to RAN. The RAN conveys this message transparently to the MSC.

In particular, the communication module 2 may send a location updating request to request IMSI attach as specified in subclause 9.2.15 of 3GPP TS 24.008 V8.3.0, indicating that the communication module 2 has become active for the telecommunications network. IMSI attach can be requested by having the location updating type information element to code for IMSI attach as specified in subclause 10.5.3.5 of the same document. Use of the IMSI attach avoids the need to store or have stored communication module specific information in the MSC (or the visitor location register VLR, not shown in FIG. 1), thereby saving resources.

In the second step, the authentication procedure is executed in order to indentify the communication module 2.

In the third step, the MSC informs the HLR about the number (address) of the MSC where the communication module 2 is located. The MSC sends an Update Location containing the MSC address to the HLR. The HLR sends Insert Subscriber Data containing subscriber information to the MSC. The MSC then validates the presence of the communication module 2. If all checks are successful, the MSC provides a mobility management (MM) context for the communication and returns an Insert Subscriber Data Acknowledgement message to the HLR. The HLR acknowledges the Update Location message by sending an Update Location acknowledgement message to the MSC after the MM context is finalized.

In the fourth step, the MSC sends an Attach Accept message to the communication module 2 as response to the IMSI Attach Request in step 1 to complete the attach procedure. The MSC sends an Attach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

Then, in the fifth step, the MSC extracts the user data U received in the IMSI Attach Request message and constructs a SMS using the address information for the appropriate data processing centre 4 requiring the user data U. As mentioned previously, the actual address information may also be derived in the telecommunications network using an identifier in the signalling message S. The MSC sends the SMS containing IMSI (for identifying the communication module) and application data to the SMSC. If the communication module does not have a SIM (and thus no IMSI), another identifier, such as the IMEI number, may be used. The SMSC sends the SMS to the data processing centre 4. The SMSC, after having sent the SMS to the data processing centre 4, sends a delivery report to the MSC. The delivery report is sent by the MSC to the communication module 2 via the RAN using e.g. SMS.

Subsequently, in a sixth step, the communication module 2 starts a detach procedure to inform the network it no longer wants to access the CS services. The communication module 2 sends an IMSI Detach Request message to RAN and the RAN conveys this message transparently to the MSC.

Finally, in a seventh step, the MSC responds with an IMSI Detach Accept message to the communication module 2.The MSC sends an IMSI Detach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

It should be noted that, specifically in the context of an M2M system 1, several steps in the network can be omitted. As an example, the identification and authentication procedure of the communication module 2 in the telecommunications network may be omitted and left to the data processing centre 4 recognizing and authenticating the communication module, e.g. on the basis of the application identifier AID or a device identifier, such as the IMEI. Also, the normal and period location updating

procedures may be omitted provided that the communication module remains at a substantially stationary location (e.g. within the area served by a particular MSC), as may be the case for the stationary communication modules 2C, 2D of organization II.

Authentication may also be omitted by using pre-provisioned access numbers as explained in the non-published patent application EP08009899.9 of the present applicant. A connection request containing these numbers is recognized in the telecommunications network 6 as a request for which authentication should be omitted. Such a number may also be used for determining the destination address of the data processing centre 4 in a manner explained in the same application.

FIG. 2B provides an embodiment for circuit switched data (now denying the attach request) wherein the location updating process is omitted and the attach procedure is aborted, thereby saving power for communication module 2 and saving resources in the network. The user data U is encapsulated in the Attach Request message and transferred by the MSC to data processing centre 4 by SMS followed by an Attach Reject message from the telecommunications network to the communication module 2.

In the first step, the communication module 2 initiates the attach procedure to inform the network it wants to access CS services and uses the capability to insert user data U by the transmission of an Attach Request [IMSI (or IMEI), User data] message. The communication module 2 sends an IMSI Attach Request [IMSI, User data] message to the RAN. The RAN conveys this message transparently to the MSC.

In the second step authentication is performed.

In the third step, the MSC extracts the user data U received in the IMSI Attach Request message and constructs an SMS message using the address information of the data processing centre 4 and the application data contained in the user data U and sends the SMS. The MSC sends the SMS containing IMSI (or IMEI) and application data to the SMSC. The SMSC sends the SMS to the M2M Server. The SMSC after having sent the SMS to the M2M Server sends a delivery report to the MSC.

Then, in a final step, the MSC sends an IMSI Attach Reject message to the communication module 2 in response to the IMSI Attach Request in step 1. This message is specified in subclause 9.2.14 of 3GGP TS 24.008, V.8.3.0 as Location updating reject, which message is sent by the network to the communication module to indicate that IMSE attach has failed. The MSC sends an IMSI Attach Reject message to RAN. The RAN conveys this message transparently to the communication module 2.

FIG. 3A provides an embodiment for packet switched (PS) data wherein the attach request is accepted. After accepting the attach request, the encapsulated user data U is transferred by the MSC to data processing centre 4 by SMS followed by a detach procedure initiated by the communication module 2.

In a first step, the communication module 2 initiates the attach procedure to inform the network it wants to access PS services and uses the capability to insert user data U by the transmission of an Attach Request [IMSI (or IMEI), User data] message. The communication module 2 sends a GPRS Attach Request [IMSI, User data] message to RAN. The RAN conveys this message transparently to the SGSN.

In particular, the communication module 2 may send an Attach Request as specified in subclause 9.4.1 of 3GPP TS 24.008 V8.3.0, indicating that the communication module 2 has become active for the telecommunications network, in order to perform a GPRS attach or a Combined GPRS attach. The GPRS attach or the Combined GPRS attach can be requested by having the Attach type information element to code for GPRS or Combined GPRS attach as specified in subclause 10.5.5.2 of the same document.

In the second step, the authentication procedure is executed in order to indentify the communication module 2.

In the third step, the SGSN informs the HLR about the number (address) of the SGSN where the communication module 2 is located. The SGSN sends an Update Location containing the SGSN address to the HLR. The HLR sends Insert Subscriber Data containing subscriber information to the SGSN. The SGSN then validates the presence of the communication module 2. If all

checks are successful, the MSC provides a mobility management (GMM) context for the communication and returns an Insert Subscriber Data Acknowledgement message to the HLR. The HLR acknowledges the Update Location message by sending an Update Location acknowledgement message to the SGSN after the GMM context is finalized.

In a fourth step, the SGSN sends an Attach Accept message to the communication module 2 in response to the GPRS Attach Request in step 1. The SGSN sends an Attach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

Then, in a fifth step, the SGSN extracts the user data U received in the GPRS Attach Request message and constructs a SMS using the address information of the data processing centre 4 and the application data contained in the user data and sends the SMS to the data processing centre 4. As mentioned previously, the actual address information may also be derived in the telecommunications network using an identifier in the signalling message S. The SGSN sends the SMS containing IMSI (or IMEI) and application data to the SMSC. The SMSC sends the SMS to the data processing centre 4. The SMSC, after having sent the SMS to the data processing centre 4, sends a delivery report to the SGSN. The delivery report is sent by the SGSN to the communication module 2 via the RAN using e.g. SMS.

Subsequently, in a sixth step, the communication module 2 starts a detach procedure to inform the network it no longer wants to access the PS services. The communication module 2 sends an IMSI Detach Request message to RAN and the RAN conveys this message transparently to the SGSN.

Finally, in a seventh step, the SGSN responds with an IMSI Detach Accept message to the communication module 2. The SGSN sends an IMSI Detach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

Again, as for the CS embodiment of FIGS. 2A and 2B, in the specific M2M context, several steps in the embodiment of FIG. 3A may be omitted, as illustrated in FIG. 3B.

FIG. 3B provides an embodiment for packet switched data (now denying the attach request) wherein the location updating process is omitted and the attach procedure is aborted, thereby saving power for communication module 2 and saving resources in the network. The user data U is encapsulated in the Attach Request message and transferred by the MSC to data processing centre 4 by SMS followed by an Attach Reject message from the telecommunications network to the communication module 2.

Again, in a first step, the communication module 2 initiates the attach procedure to inform the network it wants to access PS services and uses the capability to insert user data by the transmission of an Attach Request [IMSI, User data] message. The communication module 2 sends a GPRS Attach Request [IMSI, User data] message to the RAN. The RAN conveys this message transparently to the MSC.

In the second step, the authentication procedure is executed in order to indentify the communication module 2.

In the third step, the SGSN extracts the user data U received in the GPRS Attach Request message and constructs an SMS using the address information of the data processing centre 4 and the application data contained in the user data and sends the SMS to the data processing centre 4. The SGSN sends the SMS containing IMSI and application data to the SMSC. The SMSC sends the SMS to the data processing centre 4. The SMSC after having sent the SMS to the data processing centre 4 sends a delivery report to the SGSN.

Finally, in the fourth step, the SGSN sends a GPRS Attach Reject message to the communication module 2 in response to the GPRS Attach Request in step 1. The SGSN includes the delivery report as a parameter in the GPRS Attach Reject message. The cause of the rejection may be specified or an existing cause may be used that is interpreted by the communication unit as an acknowledgement. The SGSN sends a GPRS Attach Reject message to RAN. The RAN conveys this message transparently to the MS.

The embodiment of the invention as depicted in FIG. 4 provides the option of intercepting and extracting the user data

U from signalling messages S exchanged between the RAN and the CN, in particular between the RAN and the MSC/SGSN, to avoid modification of the MSC/SGSN. These signalling messages are described in detail in 3GGP TS 48.008 (for GSM), 3GGP 48.014, 48. 016 and 48.018 (for GPRS), 3GPP TS 25.41x (for UMTS circuit switched and packet switched. The embodiment can use either IMSI attach, GPRS attach or Combined GPRS/IMSI attach and is therefore referred to simply as attach in FIG. 4.

In a first step, the communication module 2 initiates the attach procedure to inform the network it wants to access CS, PS or both services and uses the capability to insert user data by the transmission of an Attach Request [IMSI, User data] message. The communication module 2 sends an Attach Request [IMSI, User data] message to RAN. The RAN conveys this message transparently to the MSC. This message containing the user data is also received by the monitoring module 3.

In a next step, the authentication functions are performed as there exists no Mobility Management (MM) context for the communication module 2. The monitoring module 3 is or becomes aware of the outcome of the authentication procedure.

Then, the MSC/SGSN sends an Attach Accept message to the communication module 2 in response to the Attach Request in step 1. The MSC/SGSN sends an Attach Accept message to RAN. This message is also received by the monitoring module 3 and is an indication for the monitoring module to proceed with step 4.The RAN conveys this message transparently to the communication module 2. The same effect can be obtained using an Attach Reject message. Also, the cause of the Attach reject message may be interpreted by the communication unit 2 as an acknowledgement message.

In the fourth step, the monitoring module 3 extracts the user data U received in the monitored Attach Request message and constructs an SMS using the address information of the data processing centre 4 and the application data contained in the user data and sends the SMS to the data processing centre 4. The monitoring module sends the SMS containing IMSI (or IMEI) and application data to the SMSC. The SMSC sends the SMS to the data

processing centre 4. The SMSC, after having sent the SMS to the data processing centre 4, sends a delivery report to the monitoring module 3. The delivery report is sent by the monitoring module 3 to the communication module 2 via the RAN.

Subsequently, the communication module 2 starts a detach procedure to inform the network it no longer wants to access the services. The communication module 2 sends a Detach Request message to RAN. The RAN conveys this message transparently to the MSC. This message is also received by the monitoring module 3.

Finally, the MSC/SGSN responds with a Detach Accept message to the communication module 2. The MSC/SGSN sends a Detach Accept message to RAN. This message is also received by the monitoring module 3 and is an indication for the monitoring module 3 to stop the process. The RAN conveys this message transparently to the MS.

**CLAIMS**

1. A method of transferring user data from a communication module to a data processing centre over a telecommunications network, the method comprising the steps in the telecommunications network of:

- wirelessly receiving a signalling message from said communication module, said user data being contained in said signalling message;
- transferring said user data to said data processing centre.

2. The method according to claim 1, further comprising the steps of:

- retrieving said user data from said received signalling message in said telecommunications network;
- transferring said retrieved user data to said data processing centre.

3. The method according to claim 1 or 2, wherein the signalling message is a network attach request message.

4. The method according to claim 3, wherein said network attach request message is a location updating request message with a location updating type information element indicating an IMSI attach.

5. The method according to claim 3, wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach.

6. The method according to one or more of the preceding claims 3-5, comprising the steps of:

- transmitting a network attach accept message to the communication module;
- transmitting further data to and/or receiving further data from the communication module;

- receiving a network detach message from the communication module.

7. The method according to one or more of the preceding claims 3-5, comprising the step of transmitting an attach reject message to communication module, said attach reject message comprising data for said communication module.

8. The method according to one or more of the preceding claims, comprising the step of omitting authentication of said communication module in said telecommunications network.

9. The method according to one or more of the preceding claims comprising the step of omitting normal location updating procedure in said telecommunication module.

10. The method according to one or more of the preceding claims, wherein at least a part of said user data is encrypted.

11. The method according to one or more of the preceding claims, wherein said user data comprises application data of a program run by said communication module.

12. The method according to one or more of the preceding claims, wherein said user data comprises address information indicative of said data processing centre.

13. The method according to one or more of the preceding claims, wherein said user data is transferred to said data processing centre using one or more SMS messages.

14. The method according to one or more of the preceding claims, wherein said user data is transferred to said data processing centre using one or more XML messages.

15. A computer program comprising software code portion configured for, when run by a processor, performing the steps of the method according to one or more of the preceding claims.

16. A telecommunications network being configured for performing the method according to one or more of the preceding claims 1-14.

17. A node, such as a mobile switching centre (MSC), a serving GPRS support node or a signalling monitor, in the telecommunications network according to claim 15 configured for performing the method according to one or more of the preceding claims 1-14.

18. A communication module comprising a processor for processing user data, an encapsulation module configured for encapsulating said user data in one or more signalling messages from said communication module to a telecommunications network and a transmitter for transmitting said signalling messages containing said user data to said telecommunications network.

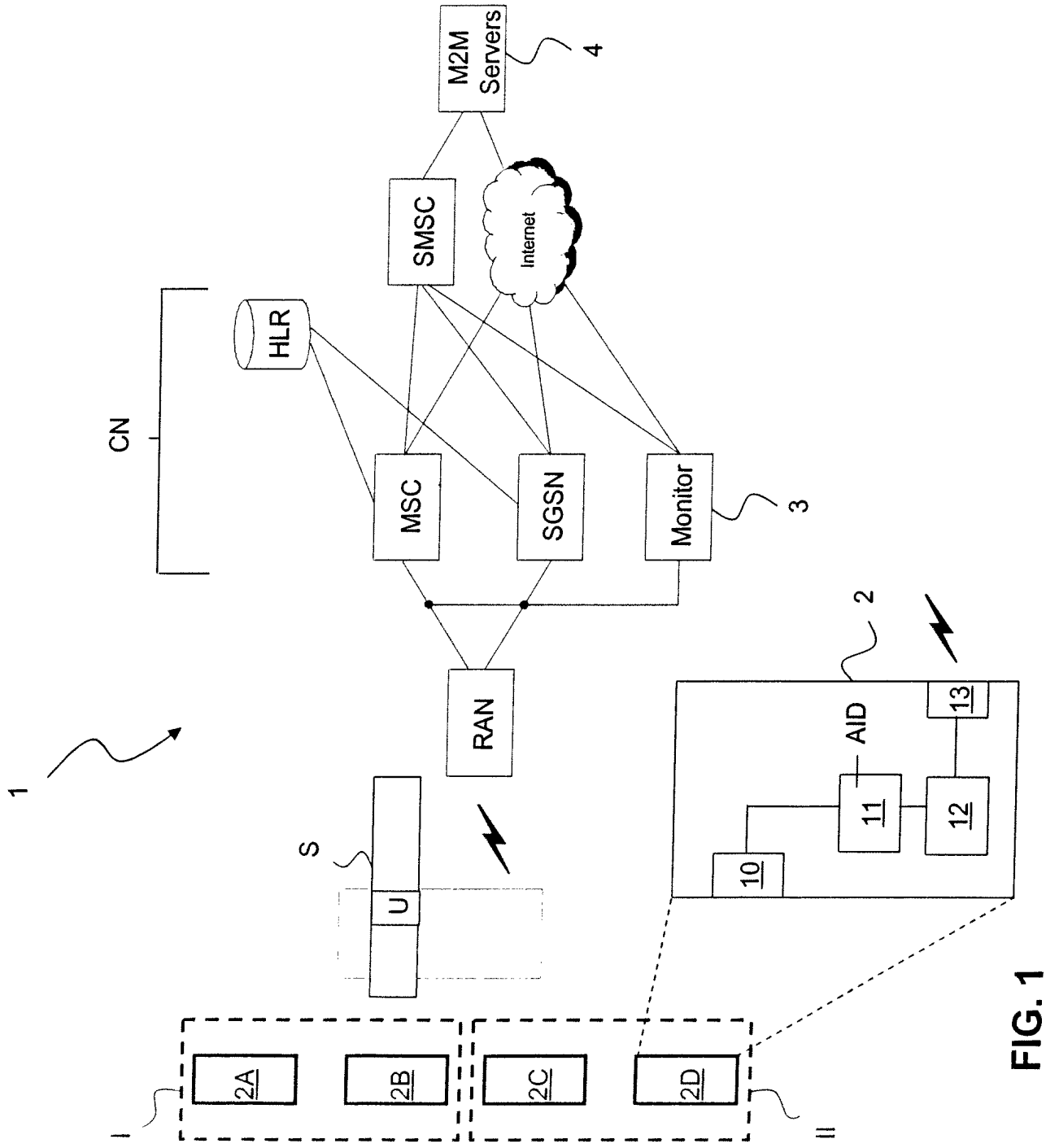

M2M Servers
4
SMSC
Internet
HLR
CN
MSC
SGSN
Monitor
3
RAN
1
S
U
2
AID
13
11
12
10
2A
2B
2C
2D
I
II

FIG. 1

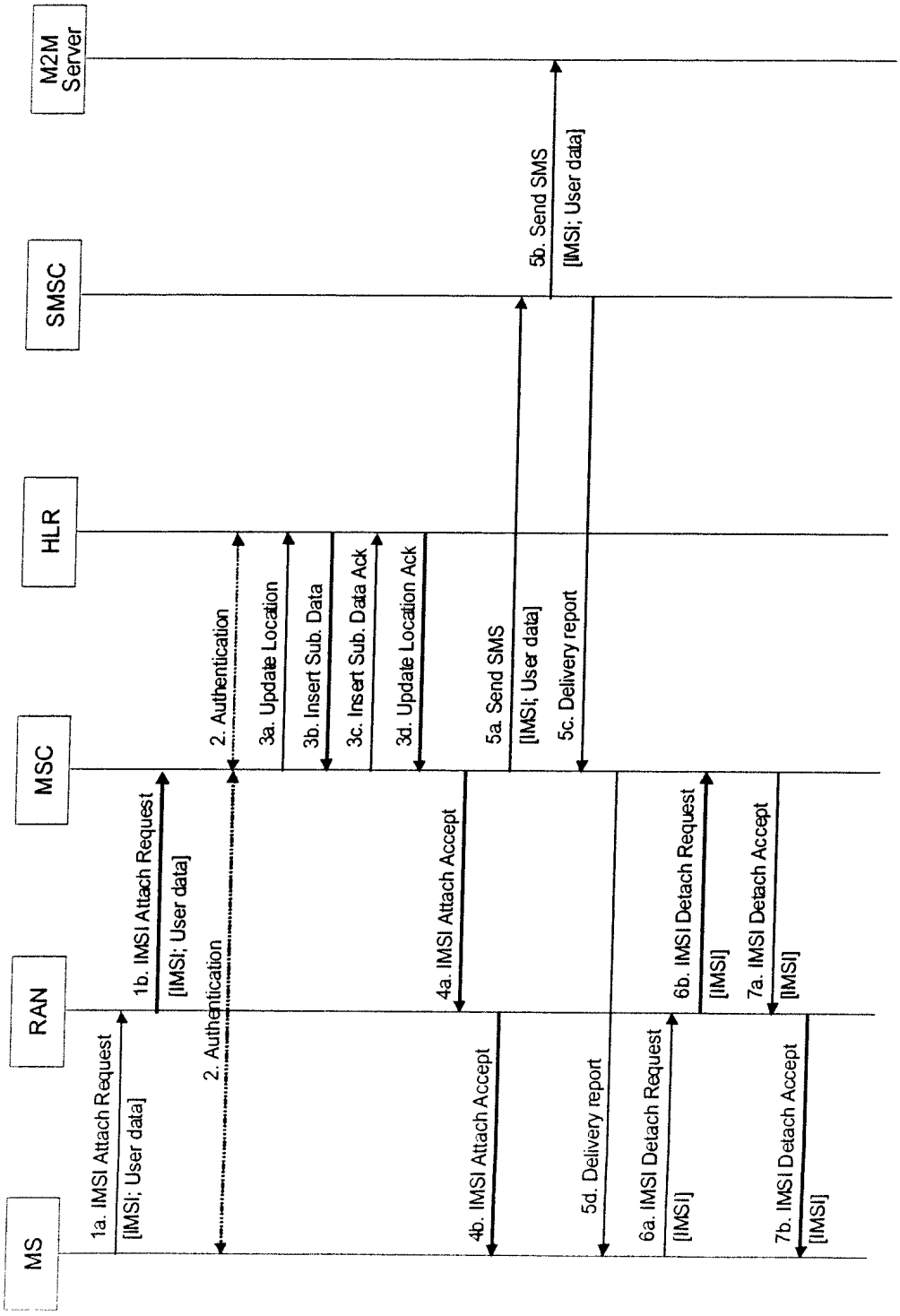

MS
RAN
MSC
HLR
SMSC
M2M Server
1a. IMSI Attach Request
[IMSI; User data]
1b. IMSI Attach Request
[IMSI; User data]
2. Authentication
2. Authentication
3a. Update Location
3b. Insert Sub. Data
3c. Insert Sub. Data Ack
3d. Update Location Ack
4a. IMSI Attach Accept
4b. IMSI Attach Accept
5a. Send SMS
[IMSI; User data]
5b. Send SMS
[IMSI; User data]
5c. Delivery report
5d. Delivery report
6a. IMSI Detach Request
[IMSI]
6b. IMSI Detach Request
[IMSI]
7a. IMSI Detach Accept
[IMSI]
7b. IMSI Detach Accept
[IMSI]

FIG. 2A

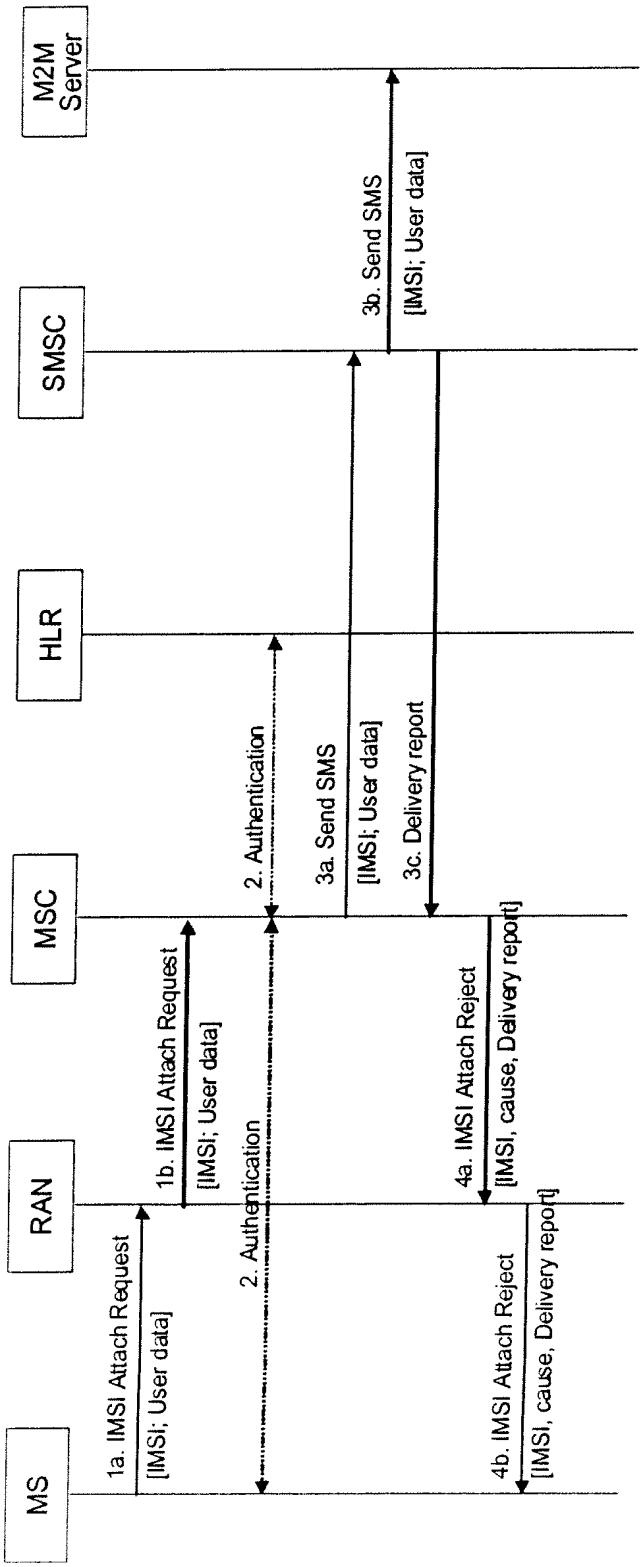

MS
RAN
MSC
HLR
SMSC
M2M Server
1a. IMSI Attach Request
[IMSI; User data]
1b. IMSI Attach Request
[IMSI; User data]
2. Authentication
2. Authentication
3a. Send SMS
[IMSI; User data]
3b. Send SMS
[IMSI; User data]
3c. Delivery report
4a. IMSI Attach Reject
[IMSI, cause, Delivery report]
4b. IMSI Attach Reject
[IMSI, cause, Delivery report]

FIG. 2B

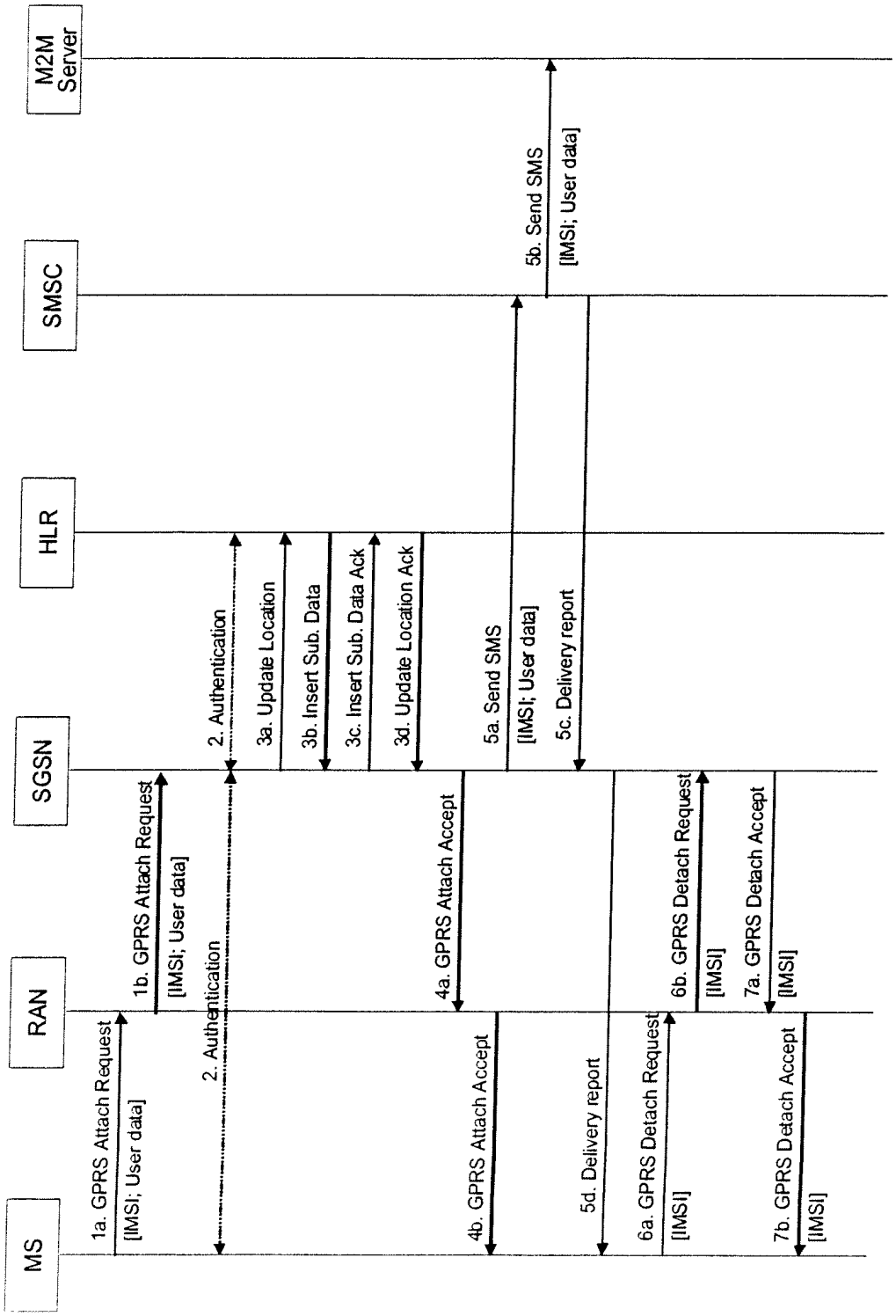

MS
RAN
SGSN
HLR
SMSC
M2M Server
1a. GPRS Attach Request
[IMSI; User data]
1b. GPRS Attach Request
[IMSI; User data]
2. Authentication
2. Authentication
3a. Update Location
3b. Insert Sub. Data
3c. Insert Sub. Data Ack
3d. Update Location Ack
4a. GPRS Attach Accept
4b. GPRS Attach Accept
5a. Send SMS
[IMSI; User data]
5b. Send SMS
[IMSI; User data]
5c. Delivery report
5d. Delivery report
6a. GPRS Detach Request
[IMSI]
6b. GPRS Detach Request
[IMSI]
7a. GPRS Detach Accept
[IMSI]
7b. GPRS Detach Accept
[IMSI]

FIG. 3A

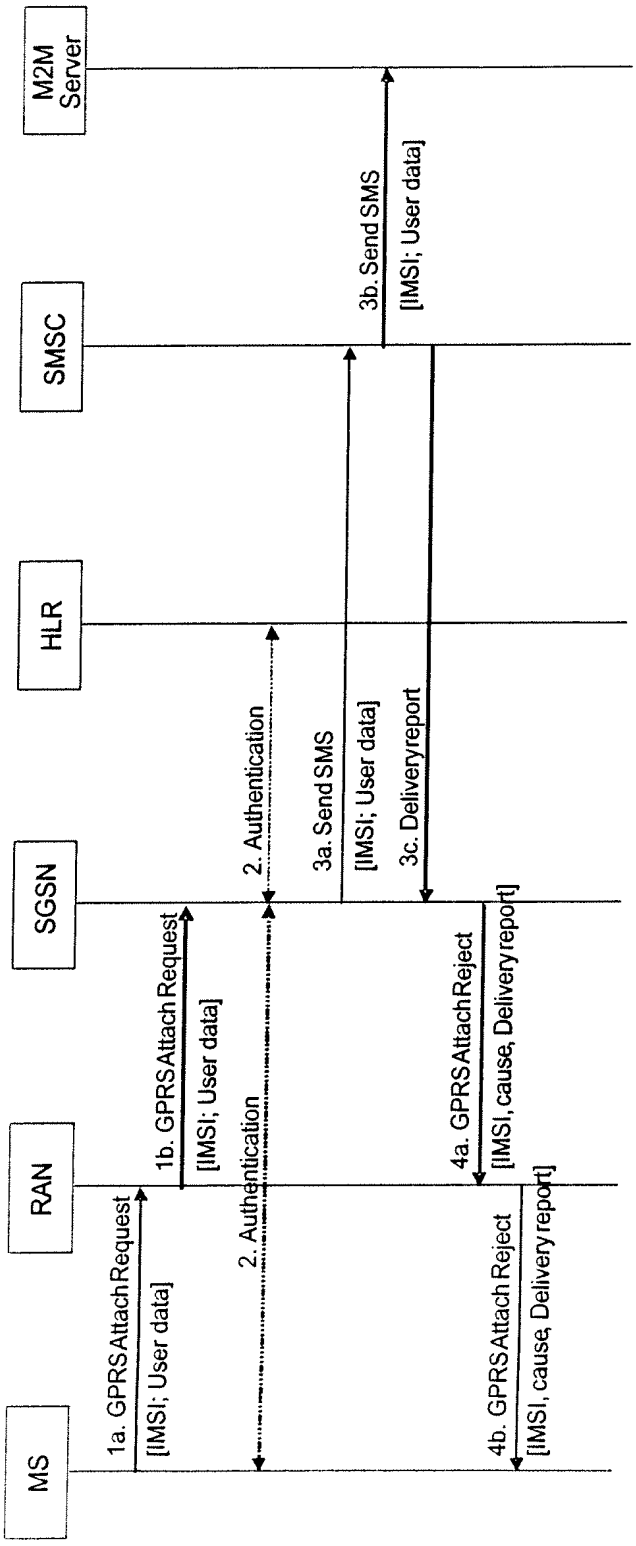

M2M Server
SMSC
HLR
SGSN
RAN
MS
3b. Send SMS
[IMSI; User data]
2. Authentication
3a. Send SMS
[IMSI; User data]
3c. Deliveryreport
1b. GPRS Attach Request
[IMSI; User data]
2. Authentication
4a. GPRS Attach Reject
[IMSI, cause, Delivery report]
1a. GPRS Attach Request
[IMSI; User data]
4b. GPRS Attach Reject
[IMSI, cause, Delivery report]

FIG. 3B

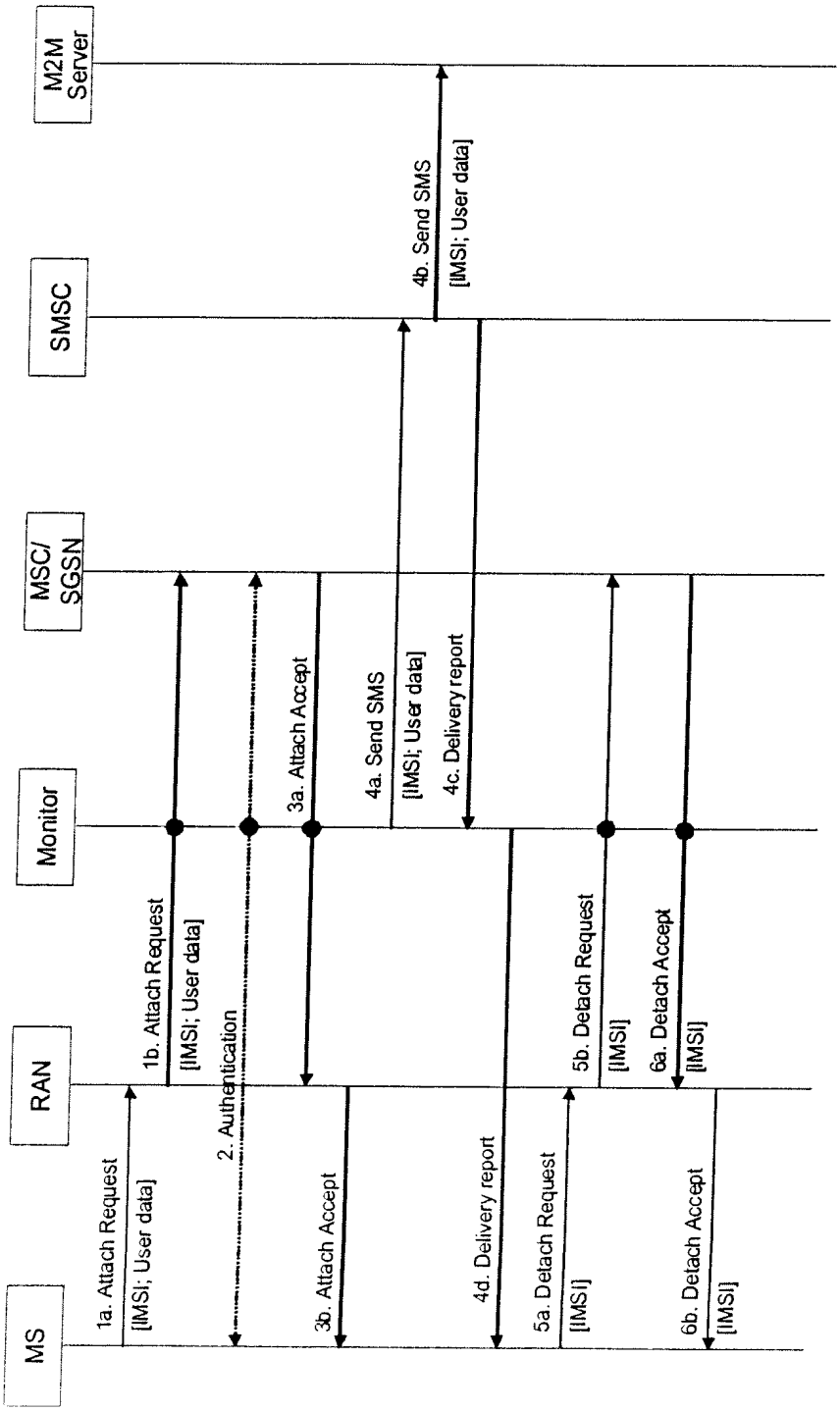

MS
RAN
Monitor
MSC/ SGSN
SMSC
M2M Server
1a. Attach Request
[IMSI; User data]
1b. Attach Request
[IMSI; User data]
2. Authentication
3a. Attach Accept
3b. Attach Accept
4a. Send SMS
[IMSI; User data]
4b. Send SMS
[IMSI; User data]
4c. Delivery report
4d. Delivery report
5a. Detach Request
[IMSI]
5b. Detach Request
[IMSI]
6a. Detach Accept
[IMSI]
6b. Detach Accept
[IMSI]

FIG. 4

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| **Patentanmeldung Nr.** | **Patent application No.** | **Demande de brevet n°** |
|---|---|---|
| | 08018761.0 / EP08018761 | |

The organization code and number of your priority application, to be used for filing abroad under the Paris Convention, is EP08018761.

Der Präsident des Europäischen Patentamts;
Im Auftrag

For the President of the European Patent Office

Le President de l'Office européen des brevets
p.o.

R.C. van Dijk



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Bezeichnung der Erfindung / Title of the invention / Titre de l'invention:
(Falls die Bezeichnung der Erfindung nicht angegeben ist, siehe Beschreibung.
If no title is shown please refer to the description.
Si aucun titre n'est indiqué se référer à la description.)

Telecommunications network and method of transferring user data in signalling messages from a communication unit to a data processing centre

In Anspruch genommene Priorität(en) / Priority(Priorities) claimed / Priorité(s) revendiquée(s)
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AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

# Telecommunications network and method of transferring user data in signalling messages from a communication unit to a data processing centre

## FIELD OF THE INVENTION

Generally, the invention relates to the field of data transfer over a telecommunications network. More specifically, the invention relates to a telecommunications network and a method of transferring user data from a communication module to a data processing centre in a machine-to-machine communications setting.

## BACKGROUND OF THE INVENTION

The past decades have shown an ever increasing demand for data capacity of telecommunications networks. Telecommunications providers have adapted their networks to provide extended services to meet the demands of their clients.

One example of such services relates to the field of machine-to-machine (M2M) communications. M2M applications typically involve hundreds or thousands of communication modules that only rarely require access to a telecommunications network. An example involves the electronic reading of e.g. electricity meters at the homes of a large customer base. Other examples include sensors, meters, coffee machines etc that can be equipped with communication modules that allow for reporting status information to a data processing centre over the telecommunications network. The data processing centre may e.g. store the data and/or provide a schedule for maintenance people to repair a machine, meter, sensor etc.

M2M communication systems are typically characterized by the fact that, most of the time, the communication modules have nothing or only a limited amount of data to report. However, for some applications or in some situations, such as alarming, it is required that data can rapidly be sent from a communication module to a data processing centre, e.g. within seconds.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a method and telecommunications network that allow for efficient and fast communications of limited amounts of data in a machine-to-machine environment.

An aspect of the invention involves a method of transferring user data from a communication module to a data processing centre over a telecommunications network. A signalling message is wirelessly received from the communication module in the telecommunications network. The signalling message contains the user data that is subsequently transferred to the data processing centre.

Other aspects of the invention relate to a computer program, a telecommunications network and a node of such a network configured for performing the steps of the method as defined in the claims.

Another aspect of the invention involves a communication module comprising a processor for processing user data, an encapsulation module configured for encapsulating the user data in one or more signalling messages from the communication module to the telecommunications network and a transmitter for transmitting the signalling messages containing the user data to said telecommunications network.

By inserting the user data in the signalling message(s), it is possible to rapidly transmit data to the telecommunications network, while resources can be saved since it is not required to establish a complete circuit-switched or packet-switched connection between the communication module and the telecommunications network. The user data may comprise application data of a program run by the communication module, e.g. alarming data, measurement data or derivatives thereof.

Although, in principle, it is possible to transmit a copy of the signalling message(s) to the data processing centre, in an embodiment of the invention, the user data is retrieved from the signalling message(s) in the telecommunications network and is then transferred to the data processing centre. This is efficiently performed in the core network of the

telecommunications network, e.g. in the mobile switching centre (MSC) or a serving GPRS support node (SGSN), since the signalling messages terminate at such nodes. It is also possible that a monitoring module is provided between the radio access network and the core network that is configured for sniffing signalling messages to recognize signalling messages carrying user data.

In an embodiment of the invention, the signalling message carrying the user data is a network attach request message. The attach message than has an information element for the user data. This information element may be a new information element or an existing information element that is not used in a particular situation. As an example, if the IMEI information element is not required, this information element may be used for the user data.

The attach message is typically one of the first messages received from the communication module in the telecommunications network and, therefore, provides an appropriate instance for rapidly receiving the user data. For circuit switched applications, the network attach request message may be a location updating request message with a location updating type information element indicating an IMSI attach. For packet-switched applications, the network attach request message may be an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach. These specific instances of network attach request messages typically occur when a communication device is powered on and allow for efficient implementation within the standard 3GPP TS 24.008, Version 8.3.0. Furthermore, the use of attach messages for transferring the user data allows to use communication modules not possessing a smart identity module (SIM).

In an embodiment of the invention, the telecommunications network may accept the network attach request message after which a connection can be established. This allows for further data to be sent to or from the communication module. As an example, a confirmation may be received that the user data

has been delivered to the data processing centre, thereby e.g. allowing the communication module to return to a sleep mode, to refrain from attempting to transmit the same user data again or to delete the user data. The further data may also include additional information for the data processing centre. If no further data are to be transmitted, the communication module informs the telecommunications network that it desires to detach from the network. Of course, after being detached, the further data may also be transmitted from the communication module in further attach requests.

In an embodiment of the invention, the attach request message from the communication module is rejected by the network, thereby excluding that a circuit switched or a packet switched connection can be established. The attach reject message may still contain a limited amount of information for the communication module, e.g. a confirmation that the user data has been delivered to the data processing centre, thereby allowing the communication module to delete the user data and/or to avoid that the communication module makes further attempts to transmit the user data. The rejection of the attach request is advantageous for saving power in the communication module and saving resources in the telecommunications network.

In the specific context of M2M communications networks, it is not required to execute all procedures generally required for commercial mobile communications, thereby saving network resources. In particular, authentication procedures of the communication module in the telecommunications network may be omitted and left to the data processing centre recognizing and authenticating the communication module, e.g. on the basis of an application identifier or a device identifier. Also, the normal and period location updating procedures may be omitted provided that the communication module remains at a substantially stationary location (e.g. within the area served by a particular MSC or SGSN).

At least a part of the user data may be contained in the signalling message in encrypted form. Since the user data are to be transmitted to the telecommunications network as soon

as possible, thereby not allowing time to establish a secure connection, it is advantageous to scramble or encrypt the user data in the communication module before insertion in the signalling message.

In an embodiment of the invention, the user data contained in the signalling message comprises addressing information indicative of the data processing centre to which the user data should be transferred. The addressing information may be shortened (e.g. using an application identifier instead of the address of the data processing centre) in order to save space in the signalling message for user data. The telecommunications network may be provided with functionality to derive the full address information of the data processing centre from the shortened address information.

The user data may be transferred to the data processing centre from the (node of the) telecommunications network by any available means. Advantageous embodiments include SMS or XML.

Hereinafter, embodiments of the invention will be described in further detail. It should be appreciated, however, that these embodiments may not be construed as limiting the scope of protection for the present invention.

## BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 shows a schematic illustration of a system for transmitting data in a machine-to-machine communication system according to an embodiment of the invention;

FIGS. 2A and 2B provide flow charts indicative of circuit-switched methods according to embodiments of the invention;

FIGS. 3A and 3B provide flow charts indicative of packet-switched methods according to further embodiments of the invention; and

FIG. 4 provides a flow chart indicative of a method according to a still further embodiment of the invention.

## DETAILED DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a schematic illustration of a machine-to-machine (M2M) system 1 comprising a plurality of communication modules 2A-2D. Mobile communication modules 2A, 2B are exploited by a first organization I and may be used to monitor vehicles of a logistic fleet of vehicles to provide alarm in case of emergency. Substantially stationary communication modules 2C, 2D are exploited by a second organization II and may, for example, be used for communicating alarming user data of facilities to a data processing centre 4 for security purposes.

M2M system 1 comprises a telecommunications network with a Radio Access Network RAN and a Core Network CN, the core network CN containing a mobile switching centre MSC and a serving GPRS support node SGSN connected to a Home Location Register HLR as known to the person skilled in the art. A monitoring module 3 may be provided configured for sniffing signalling messages exchanged between the RAN and the CN as will be described in further detail with reference to FIG. 4.

The MSC, SGSN and monitoring module 3 of the telecommunications network are configured for transferring the user data to data processing centres 4, also referred to as M2M servers, of organizations I and II, respectively. As illustrated in FIG. 1, the user data may be provided to the M2M servers 4 using a Short Message Service Centre (SMSC) for sending the user data received from communication modules 2A-2D by SMS or by using the internet for transferring the user data in, e.g., XML messages.

As illustrated in FIG. 1, a communication module 2 comprises or is communicatively connected to a sensor 10. Sensor 10 monitors operation and/or receives data of a device or other instance, such as a room, and provides data to a processor 11. Processor 11 is configured for running one or more computer programs (e.g. an application identified by an application identifier AID) receiving the data from sensor 10. The data obtained from the sensor 10 may be processed in the communication module 2 before it is ready to be transmitted to the appropriate M2M server 4. An example of such processing includes encrypting the data, but other forms of processing the

(raw) data are possible as well. Communication module 2 comprises an encapsulation module 12 (possibly software running on processor 11) for inserting the, possibly processed, user data U from the sensor 10 in signalling messages S. A transmitter 13 is provided for wirelessly transmitting the signalling messages S containing the user data U to the telecommunications network as schematically illustrated in FIG. 1. Such signalling messages S typically occur upon powering on the transmitter 13.

The user data U, apart from the data derived from the sensor 10, also contains address information indicating the data processing centre 4 to which the user data U should be transferred. Of course, the user data U may comprise a complete address of the appropriate data processing centre 4 that can be used in the telecommunications network for deciding where to transfer the user data U. The address information is stored in the communication module 2. In this manner user data U from communication modules 2A, 2B can be transferred to a data processing centre 4 of organization I, whereas user data U from communication modules 2C, 2D can be transferred to data processing centre 4 of organization II.

However, more advanced methods of addressing may be used, including, but not limited to, the use of identifiers (such as the application identifiers AID), for signalling the destination address of the user data U. The use of such (shorter) identifiers provides enhanced space in the signalling message S for the actual data. The telecommunications network should then comprise functionality for deriving the actual destination address of the appropriate data processing centre 4 from the received identifier. As an example, the identifier may be retrieved from the signalling message S in the telecommunications network and matched against a database or a query may be sent to a server (e.g. a DNS-type of server) having available the actual address of the data processing centre 4. The result of this process is then used for transferring the user data U to the data processing centre 4 via the SMSC or the internet.

Several embodiments of operating the M2M system 1 of FIG. 1 will be described below with reference to FIGS. 2A-2B (for circuit switched (CS) data transmission), FIGS. 3A-3B (for packet switched (PS) data transmission) and FIG. 4 (illustrating an embodiment using monitoring module 3). It should be appreciated, however, that many alternative embodiments can be envisaged within the scope of the present invention.

The general operation of the system of FIG. 1 involves the telecommunications network to wirelessly receive a signalling message S from the communication module 2. The signalling message S comprises user data U. The user data U is transferred to data processing centre 4. The user data U is retrieved from the received signalling message S within the telecommunications network and transferred further to data processing centre 4. The signalling message S can be a network attach request message in order to provide rapid transfer of the user data.

In case of a GSM/GPRS/UMTS telecommunications network the following types of Attach Request messages can be used. An IMSI or CS Attach Request message can be sent to the MSC in order to obtain CS services. Alternatively, a GPRS or PS attach request message can be sent to the SGSN in order to obtain PS services. Also a combined PS/CS Attach Request message can be sent to the SGSN in order to obtain both PS and CS services.

Depending on the type of Attach Request message used by the communication module 2, the user data is sent to the MSC or the SGSN. In case of IMSI attach the user data is received by the MSC and in case of GPRS attach or Combined attach the user data is received by the SGSN. The MSC or SGSN extracts the user data from the received Attach Request message and sends the user data to the data processing centre 4. To do so, the MSC/SGSN can use different means (SMS, internet) to send the user data to the data processing centre 4.

The attach request of the communication unit 2 to the telecommunications network may or may not be accepted.

FIG. 2A provides an embodiment for circuit switched (CS) data wherein the attach request is accepted. After

accepting the attach request, the encapsulated user data U is transferred by the MSC to data processing centre 4 by SMS followed by a detach procedure initiated by the communication module 2.

In the first step, the communication module 2 initiates the attach procedure to inform the telecommunications network it wants to access CS services and uses the capability to insert user data by the transmission of an Attach Request [IMSI, User data] message. The communication module 2 sends an IMSI Attach Request [IMSI, User data] message to RAN. The RAN conveys this message transparently to the MSC.

In particular, the communication module 2 may send a location updating request to request IMSI attach as specified in subclause 9.2.15 of 3GPP TS 24.008 V8.3.0, indicating that the communication module 2 has become active for the telecommunications network. IMSI attach can be requested by having the location updating type information element to code for IMSI attach as specified in subclause 10.5.3.5 of the same document. Use of the IMSI attach avoids the need to store or have stored communication module specific information in the MSC (or the visitor location register VLR, not shown in FIG. 1), thereby saving resources.

In the second step, the authentication procedure is executed in order to indentify the communication module 2.

In the third step, the MSC informs the HLR about the number (address) of the MSC where the communication module 2 is located. The MSC sends an Update Location containing the MSC address to the HLR. The HLR sends Insert Subscriber Data containing subscriber information to the MSC. The MSC then validates the presence of the communication module 2. If all checks are successful, the MSC provides a mobility management (MM) context for the communication and returns an Insert Subscriber Data Acknowledgement message to the HLR. The HLR acknowledges the Update Location message by sending an Update Location acknowledgement message to the MSC after the MM context is finalized.

In the fourth step, the MSC sends an Attach Accept message to the communication module 2 as response to the IMSI Attach Request in step 1 to complete the attach procedure. The MSC sends an Attach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

Then, in the fifth step, the MSC extracts the user data U received in the IMSI Attach Request message and constructs a SMS using the address information for the appropriate data processing centre 4 requiring the user data U. As mentioned previously, the actual address information may also be derived in the telecommunications network using an identifier in the signalling message S. The MSC sends the SMS containing IMSI (for identifying the communication module) and application data to the SMSC. If the communication module does not have a SIM (and thus no IMSI), another identifier, such as the IMEI number, may be used. The SMSC sends the SMS to the data processing centre 4. The SMSC, after having sent the SMS to the data processing centre 4, sends a delivery report to the MSC. The delivery report is sent by the MSC to the communication module 2 via the RAN using e.g. SMS.

Subsequently, in a sixth step, the communication module 2 starts a detach procedure to inform the network it no longer wants to access the CS services. The communication module 2 sends an IMSI Detach Request message to RAN and the RAN conveys this message transparently to the MSC.

Finally, in a seventh step, the MSC responds with an IMSI Detach Accept message to the communication module 2.The MSC sends an IMSI Detach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

It should be noted that, specifically in the context of an M2M system 1, several steps in the network can be omitted. As an example, the identification and authentication procedure of the communication module 2 in the telecommunications network may be omitted and left to the data processing centre 4 recognizing and authenticating the communication module, e.g. on the basis of the application identifier AID or a device identifier, such as the IMEI. Also, the normal and period location updating

procedures may be omitted provided that the communication module remains at a substantially stationary location (e.g. within the area served by a particular MSC), as may be the case for the stationary communication modules 2C, 2D of organization II.

Authentication may also be omitted by using pre-provisioned access numbers as explained in the non-published patent application QQQQQQQQQQQQQQQQQQ **[LIA, PLEASE INSERT THE APPLICATION NUMBER OF SIMless M2M]** of the present applicant. A connection request containing these numbers is recognized in the telecommunications network 6 as a request for which authentication should be omitted. Such a number may also be used for determining the destination address of the data processing centre 4 in a manner explained in the same application.

FIG. 2B provides an embodiment for circuit switched data (now denying the attach request) wherein the location updating process is omitted and the attach procedure is aborted, thereby saving power for communication module 2 and saving resources in the network. The user data U is encapsulated in the Attach Request message and transferred by the MSC to data processing centre 4 by SMS followed by an Attach Reject message from the telecommunications network to the communication module 2.

In the first step, the communication module 2 initiates the attach procedure to inform the network it wants to access CS services and uses the capability to insert user data U by the transmission of an Attach Request [IMSI (or IMEI), User data] message. The communication module 2 sends an IMSI Attach Request [IMSI, User data] message to the RAN. The RAN conveys this message transparently to the MSC.

In the second step authentication is performed.

In the third step, the MSC extracts the user data U received in the IMSI Attach Request message and constructs an SMS message using the address information of the data processing centre 4 and the application data contained in the user data U and sends the SMS. The MSC sends the SMS containing IMSI (or IMEI) and application data to the SMSC. The SMSC sends the SMS

to the M2M Server. The SMSC after having sent the SMS to the M2M Server sends a delivery report to the MSC.

Then, in a final step, the MSC sends an IMSI Attach Reject message to the communication module 2 in response to the IMSI Attach Request in step 1. This message is specified in subclause 9.2.14 of 3GGP TS 24.008, V.8.3.0 as Location updating reject, which message is sent by the network to the communication module to indicate that IMSE attach has failed. The MSC sends an IMSI Attach Reject message to RAN. The RAN conveys this message transparently to the communication module 2.

FIG. 3A provides an embodiment for packet switched (PS) data wherein the attach request is accepted. After accepting the attach request, the encapsulated user data U is transferred by the MSC to data processing centre 4 by SMS followed by a detach procedure initiated by the communication module 2.

In a first step, the communication module 2 initiates the attach procedure to inform the network it wants to access PS services and uses the capability to insert user data U by the transmission of an Attach Request [IMSI (or IMEI), User data] message. The communication module 2 sends a GPRS Attach Request [IMSI, User data] message to RAN. The RAN conveys this message transparently to the SGSN.

In particular, the communication module 2 may send an Attach Request as specified in subclause 9.4.1 of 3GPP TS 24.008 V8.3.0, indicating that the communication module 2 has become active for the telecommunications network, in order to perform a GPRS attach or a Combined GPRS attach. The GPRS attach or the Combined GPRS attach can be requested by having the Attach type information element to code for GPRS or Combined GPRS attach as specified in subclause 10.5.5.2 of the same document.

In the second step, the authentication procedure is executed in order to indentify the communication module 2.

In the third step, the SGSN informs the HLR about the number (address) of the SGSN where the communication module 2 is located. The SGSN sends an Update Location containing the SGSN address to the HLR. The HLR sends Insert Subscriber Data

containing subscriber information to the SGSN. The SGSN then validates the presence of the communication module 2. If all checks are successful, the MSC provides a mobility management (GMM) context for the communication and returns an Insert Subscriber Data Acknowledgement message to the HLR. The HLR acknowledges the Update Location message by sending an Update Location acknowledgement message to the SGSN after the GMM context is finalized.

In a fourth step, the SGSN sends an Attach Accept message to the communication module 2 in response to the GPRS Attach Request in step 1. The SGSN sends an Attach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

Then, in a fifth step, the SGSN extracts the user data U received in the GPRS Attach Request message and constructs a SMS using the address information of the data processing centre 4 and the application data contained in the user data and sends the SMS to the data processing centre 4. As mentioned previously, the actual address information may also be derived in the telecommunications network using an identifier in the signalling message S. The SGSN sends the SMS containing IMSI (or IMEI) and application data to the SMSC. The SMSC sends the SMS to the data processing centre 4. The SMSC, after having sent the SMS to the data processing centre 4, sends a delivery report to the SGSN. The delivery report is sent by the SGSN to the communication module 2 via the RAN using e.g. SMS.

Subsequently, in a sixth step, the communication module 2 starts a detach procedure to inform the network it no longer wants to access the PS services. The communication module 2 sends an IMSI Detach Request message to RAN and the RAN conveys this message transparently to the SGSN.

Finally, in a seventh step, the SGSN responds with an IMSI Detach Accept message to the communication module 2. The SGSN sends an IMSI Detach Accept message to RAN. The RAN conveys this message transparently to the communication module 2.

Again, as for the CS embodiment of FIGS. 2A and 2B, in the specific M2M context, several steps in the embodiment of FIG. 3A may be omitted, as illustrated in FIG. 3B.

FIG. 3B provides an embodiment for packet switched data (now denying the attach request) wherein the location updating process is omitted and the attach procedure is aborted, thereby saving power for communication module 2 and saving resources in the network. The user data U is encapsulated in the Attach Request message and transferred by the MSC to data processing centre 4 by SMS followed by an Attach Reject message from the telecommunications network to the communication module 2.

Again, in a first step, the communication module 2 initiates the attach procedure to inform the network it wants to access PS services and uses the capability to insert user data by the transmission of an Attach Request [IMSI, User data] message. The communication module 2 sends a GPRS Attach Request [IMSI, User data] message to the RAN. The RAN conveys this message transparently to the MSC.

In the second step, the authentication procedure is executed in order to indentify the communication module 2.

In the third step, the SGSN extracts the user data U received in the GPRS Attach Request message and constructs an SMS using the address information of the data processing centre 4 and the application data contained in the user data and sends the SMS to the data processing centre 4. The SGSN sends the SMS containing IMSI and application data to the SMSC. The SMSC sends the SMS to the data processing centre 4. The SMSC after having sent the SMS to the data processing centre 4 sends a delivery report to the SGSN.

Finally, in the fourth step, the SGSN sends a GPRS Attach Reject message to the communication module 2 in response to the GPRS Attach Request in step 1. The SGSN includes the delivery report as a parameter in the GPRS Attach Reject message. The cause of the rejection may be specified or an existing cause may be used that is interpreted by the communication unit as an acknowledgement. The SGSN sends a GPRS

Attach Reject message to RAN. The RAN conveys this message transparently to the MS.

The embodiment of the invention as depicted in FIG. 4 provides the option of intercepting and extracting the user data U from signalling messages S exchanged between the RAN and the CN, in particular between the RAN and the MSC/SGSN, to avoid modification of the MSC/SGSN. These signalling messages are described in detail in 3GGP TS 48.008 (for GSM), 3GGP 48.014, 48. 016 and 48.018 (for GPRS), 3GPP TS 25.41x (for UMTS circuit switched and packet switched. The embodiment can use either IMSI attach, GPRS attach or Combined GPRS/IMSI attach and is therefore referred to simply as attach in FIG. 4.

In a first step, the communication module 2 initiates the attach procedure to inform the network it wants to access CS, PS or both services and uses the capability to insert user data by the transmission of an Attach Request [IMSI, User data] message. The communication module 2 sends an Attach Request [IMSI, User data] message to RAN. The RAN conveys this message transparently to the MSC. This message containing the user data is also received by the monitoring module 3.

In a next step, the authentication functions are performed as there exists no Mobility Management (MM) context for the communication module 2. The monitoring module 3 is or becomes aware of the outcome of the authentication procedure.

Then, the MSC/SGSN sends an Attach Accept message to the communication module 2 in response to the Attach Request in step 1. The MSC/SGSN sends an Attach Accept message to RAN. This message is also received by the monitoring module 3 and is an indication for the monitoring module to proceed with step 4.The RAN conveys this message transparently to the communication module 2. The same effect can be obtained using an Attach Reject message. Also, the cause of the Attach reject message may be interpreted by the communication unit 2 as an acknowledgement message.

In the fourth step, the monitoring module 3 extracts the user data U received in the monitored Attach Request message and constructs an SMS using the address information of the data

processing centre 4 and the application data contained in the user data and sends the SMS to the data processing centre 4. The monitoring module sends the SMS containing IMSI (or IMEI) and application data to the SMSC. The SMSC sends the SMS to the data processing centre 4. The SMSC, after having sent the SMS to the data processing centre 4, sends a delivery report to the monitoring module 3. The delivery report is sent by the monitoring module 3 to the communication module 2 via the RAN.

Subsequently, the communication module 2 starts a detach procedure to inform the network it no longer wants to access the services. The communication module 2 sends a Detach Request message to RAN. The RAN conveys this message transparently to the MSC. This message is also received by the monitoring module 3.

Finally, the MSC/SGSN responds with a Detach Accept message to the communication module 2. The MSC/SGSN sends a Detach Accept message to RAN. This message is also received by the monitoring module 3 and is an indication for the monitoring module 3 to stop the process. The RAN conveys this message transparently to the MS.

**CLAIMS**

1. A method of transferring user data from a communication module to a data processing centre over a telecommunications network, the method comprising the steps in the telecommunications network of:

- wirelessly receiving a signalling message from said communication module, said user data being contained in said signalling message;
- transferring said user data to said data processing centre.

2. The method according to claim 1, further comprising the steps of:

- retrieving said user data from said received signalling message in said telecommunications network;
- transferring said retrieved user data to said data processing centre.

3. The method according to claim 1 or 2, wherein the signalling message is a network attach request message.

4. The method according to claim 3, wherein said network attach request message is a location updating request message with a location updating type information element indicating an IMSI attach.

5. The method according to claim 3, wherein said network attach request message is an attach request with an attach type information element indicating a GPRS request or a combined GPRS/IMSI attach.

6. The method according to one or more of the preceding claims 3-5, comprising the steps of:

- transmitting a network attach accept message to the communication module;
- transmitting further data to and/or receiving further data from the communication module;

- receiving a network detach message from the communication module.

7. The method according to one or more of the preceding claims 3-5, comprising the step of transmitting an attach reject message to communication module, said attach reject message comprising data for said communication module.

8. The method according to one or more of the preceding claims, comprising the step of omitting authentication of said communication module in said telecommunications network.

9. The method according to one or more of the preceding claims comprising the step of omitting normal location updating procedure in said telecommunication module.

10. The method according to one or more of the preceding claims, wherein at least a part of said user data is encrypted.

11. The method according to one or more of the preceding claims, wherein said user data comprises application data of a program run by said communication module.

12. The method according to one or more of the preceding claims, wherein said user data comprises address information indicative of said data processing centre.

13. The method according to one or more of the preceding claims, wherein said user data is transferred to said data processing centre using one or more SMS messages.

14. The method according to one or more of the preceding claims, wherein said user data is transferred to said data processing centre using one or more XML messages.

15. A computer program comprising software code portion configured for, when run by a processor, performing the steps of the method according to one or more of the preceding claims.

16. A telecommunications network being configured for performing the method according to one or more of the preceding claims 1-14.

17. A node, such as a mobile switching centre (MSC), a serving GPRS support node or a signalling monitor, in the telecommunications network according to claim 15 configured for performing the method according to one or more of the preceding claims 1-14.

18. A communication module comprising a processor for processing user data, an encapsulation module configured for encapsulating said user data in one or more signalling messages from said communication module to a telecommunications network and a transmitter for transmitting said signalling messages containing said user data to said telecommunications network.

**ABSTRACT**

The invention relates to a system and method of transferring user data from a communication module to a data processing centre over a telecommunications network. A signalling message is wirelessly received from the communication module in the telecommunications network. The signalling message contains the user data that is subsequently transferred to the data processing centre. By inserting the user data in the signalling message(s), it is possible to rapidly transmit data to the telecommunications network, while resources can be saved since it not required to establish a complete circuit-switched or packet-switched connection between the communication module and the telecommunications network. The user data may comprise application data of a program run by the communication module, e.g. alarming data, measurement data or derivatives thereof.

+ FIG. 1

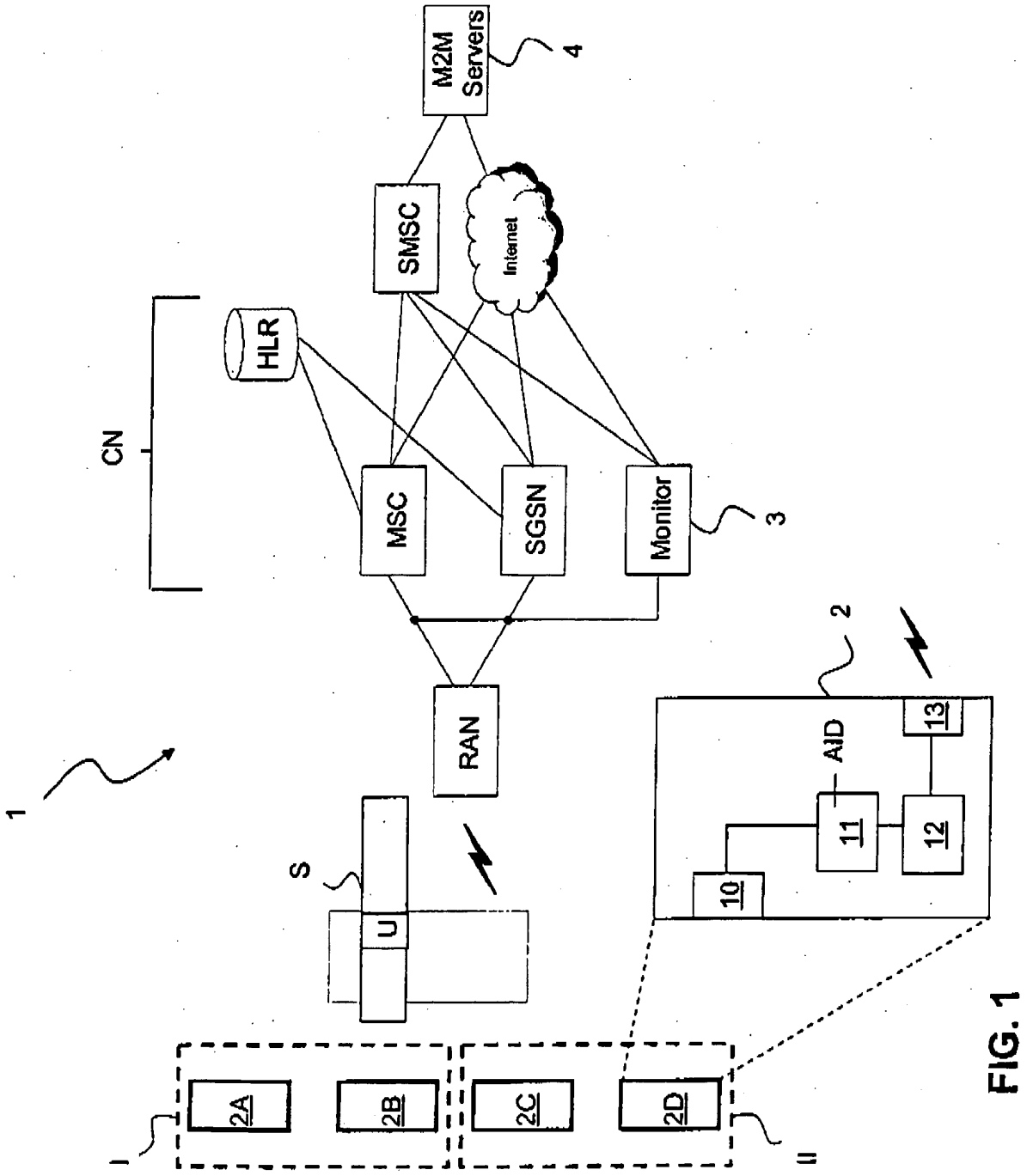

M2M Servers
4
SMSC
Internet
HLR
CN
MSC
SGSN
Monitor
3
RAN
1
S
U
2
AID
13
11
12
10
2A
2B
2C
2D
II

FIG. 1

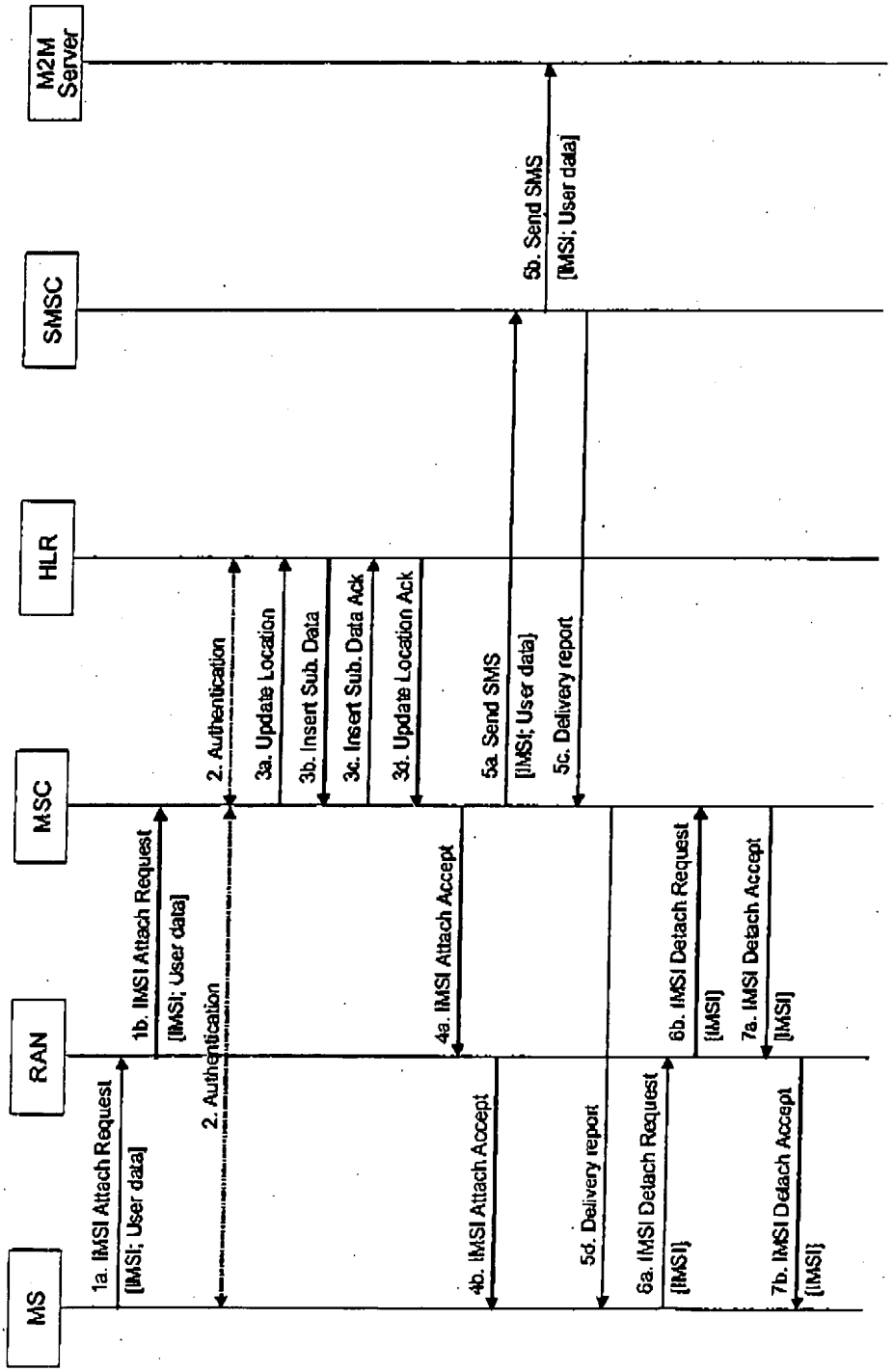

M2M Server
SMSC
HLR
MSC
RAN
MS
5b. Send SMS
[IMSI; User data]
2. Authentication
3a. Update Location
3b. Insert Sub. Data
3c. Insert Sub. Data Ack
3d. Update Location Ack
5a. Send SMS
[IMSI; User data]
5c. Delivery report
1b. IMSI Attach Request
[IMSI; User data]
2. Authentication
4a. IMSI Attach Accept
6b. IMSI Detach Request
[IMSI]
7a. IMSI Detach Accept
[IMSI]
1a. IMSI Attach Request
[IMSI; User data]
4b. IMSI Attach Accept
5d. Delivery report
6a. IMSI Detach Request
[IMSI]
7b. IMSI Detach Accept
[IMSI]

FIG. 2A

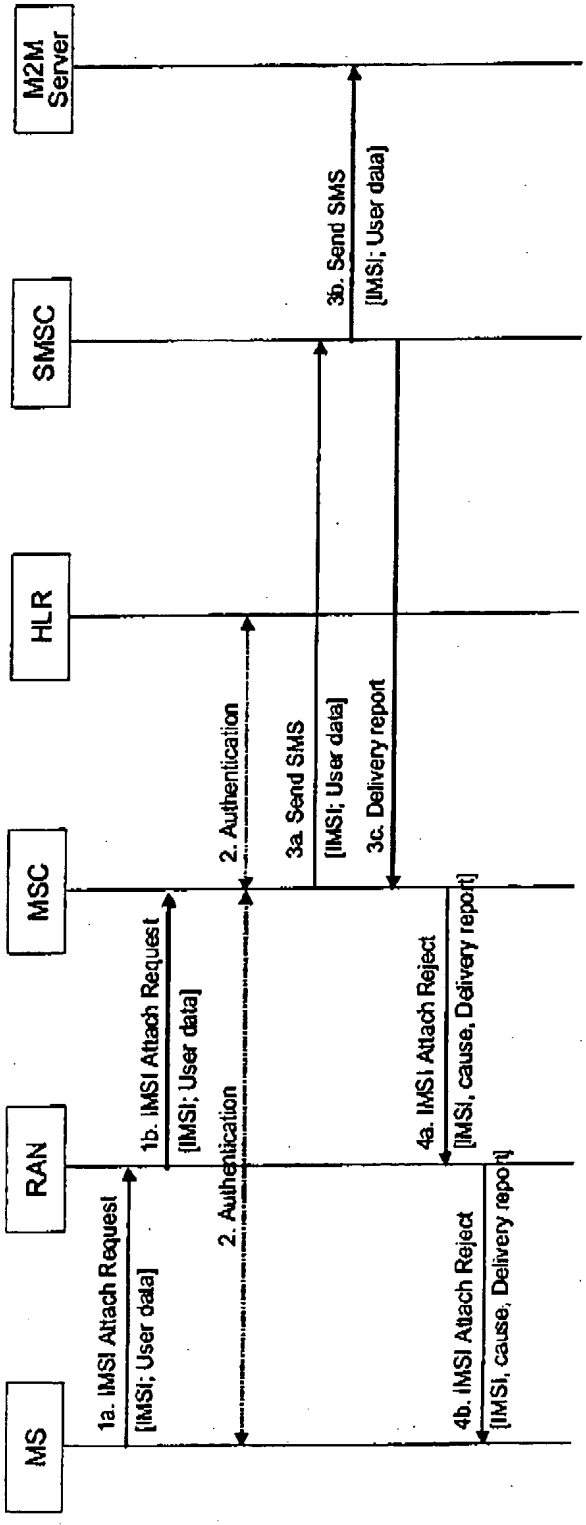

M2M Server
SMSC
HLR
MSC
RAN
MS
3b. Send SMS
[IMSI; User data]
2. Authentication
3a. Send SMS
[IMSI; User data]
3c. Delivery report
1b. IMSI Attach Request
[IMSI; User data]
2. Authentication
4a. IMSI Attach Reject
[IMSI, cause, Delivery report]
1a. IMSI Attach Request
[IMSI; User data]
4b. IMSI Attach Reject
[IMSI, cause, Delivery report]

FIG. 2B

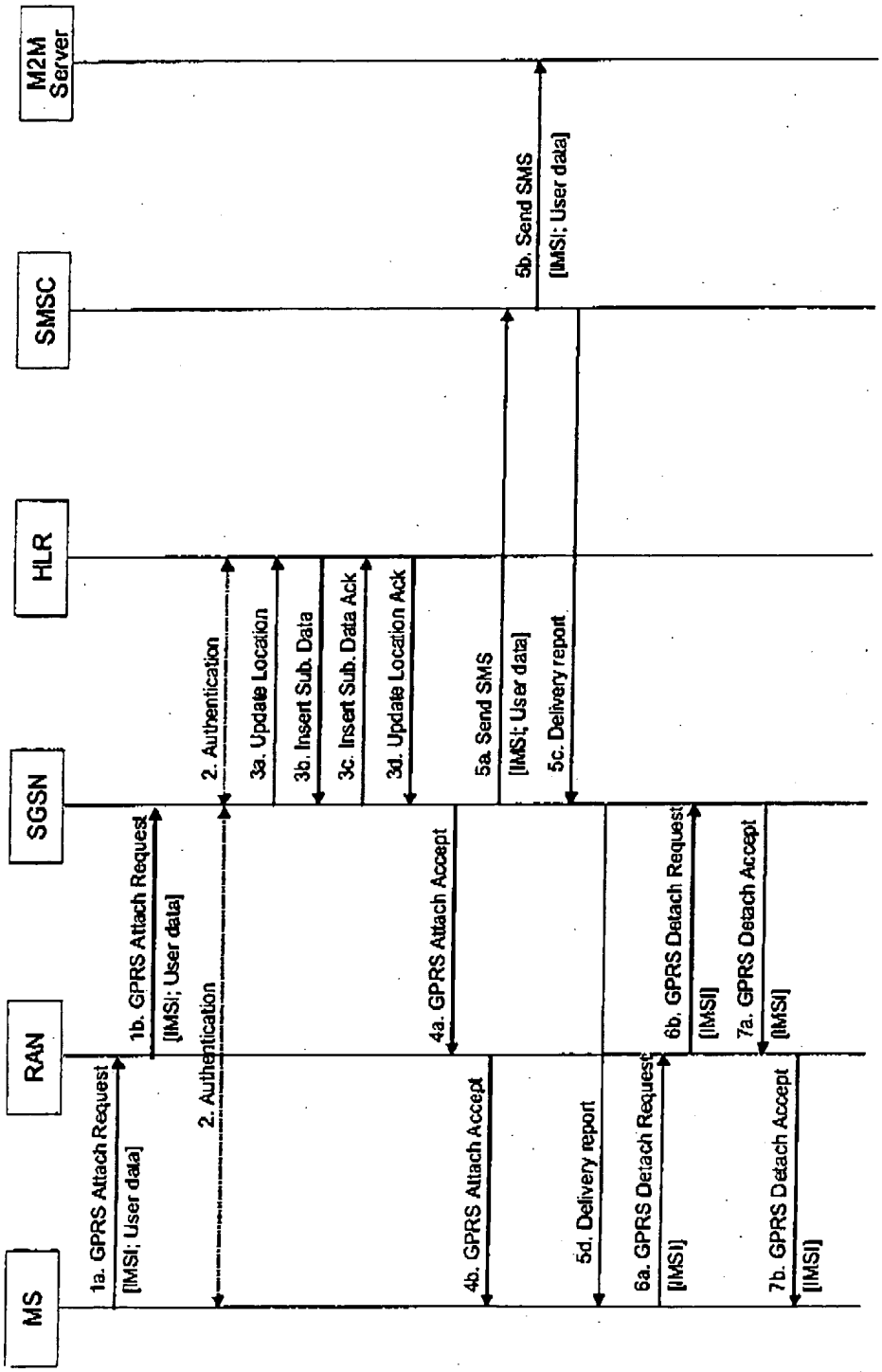

M2M Server
SMSC
HLR
SGSN
RAN
MS
5b. Send SMS
[IMSI; User data]
2. Authentication
3a. Update Location
3b. Insert Sub. Data
3c. Insert Sub. Data Ack
3d. Update Location Ack
5a. Send SMS
[IMSI; User data]
5c. Delivery report
1b. GPRS Attach Request
[IMSI; User data]
2. Authentication
4a. GPRS Attach Accept
6b. GPRS Detach Request
[IMSI]
7a. GPRS Detach Accept
[IMSI]
1a. GPRS Attach Request
[IMSI; User data]
4b. GPRS Attach Accept
5d. Delivery report
6a. GPRS Detach Request
[IMSI]
7b. GPRS Detach Accept
[IMSI]

FIG. 3A

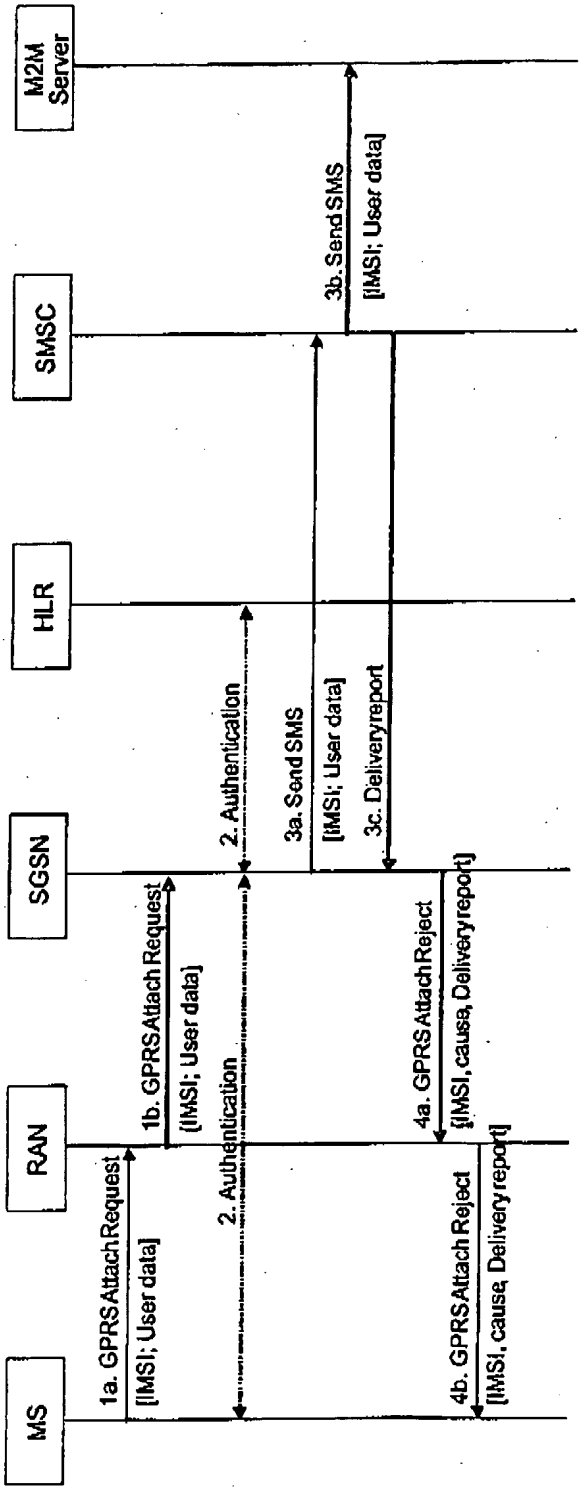

M2M Server
SMSC
HLR
SGSN
RAN
MS
3b. Send SMS
[IMSI; User data]
2. Authentication
3a. Send SMS
[IMSI; User data]
3c. Deliveryreport
1b. GPRS Attach Request
[IMSI; User data]
2. Authentication
4a. GPRS Attach Reject
[IMSI, causa, Deliveryreport]
1a. GPRS Attach Request
[IMSI; User data]
4b. GPRS Attach Reject
[IMSI, cause, Deliveryreport]

FIG. 3B

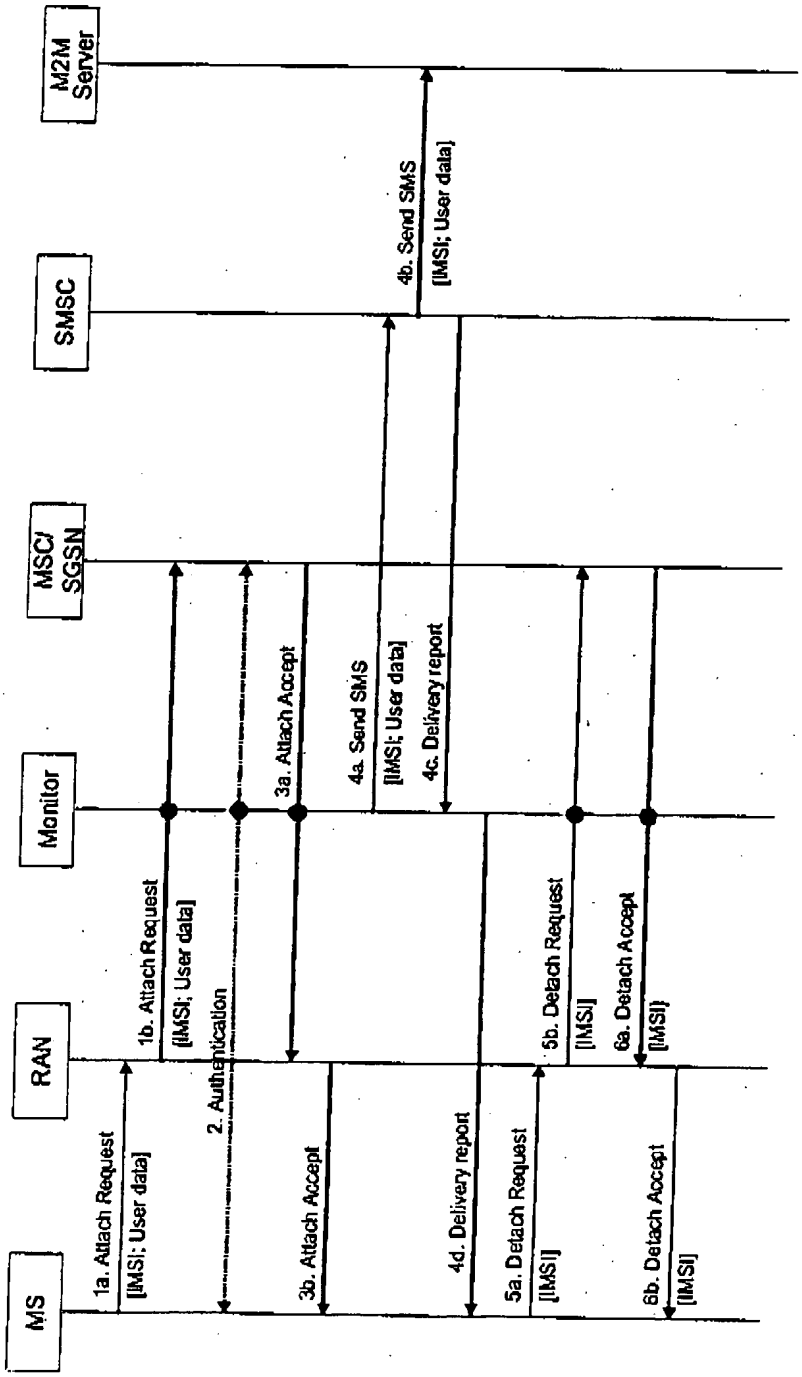

M2M Server
SMSC
MSC/ SGSN
Monitor
RAN
MS
4b. Send SMS
[IMSI; User data]
4a. Send SMS
[IMSI; User data]
4c. Delivery report
3a. Attach Accept
1b. Attach Request
[IMSI; User data]
2. Authentication
5b. Detach Request
[IMSI]
6a. Detach Accept
[IMSI]
1a. Attach Request
[IMSI; User data]
3b. Attach Accept
4d. Delivery report
5a. Detach Request
[IMSI]
6b. Detach Accept
[IMSI]

FIG. 4

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| | | |
|---|---|---|
| VIII-4-1 | **Declaration: Inventorship (only for the purposes of the designation of the United States of America)** Declaration of Inventorship (Rules 4.17(iv) and 51bis.1(a)(iv)) for the purposes of the designation of the United States of America: | I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a patent is sought.<br>This declaration is directed to the international application of which it forms a part (if filing declaration with application).<br>This declaration is directed to international application No. PCT/ . . . . . (if furnishing declaration pursuant to Rule 26ter).<br>I hereby declare that my residence, mailing address, and citizenship are as stated next to my name.<br>I hereby state that I have reviewed and understand the contents of the above-identified international application, including the claims of said application. I have identified in the request of said application, in compliance with PCT Rule 4.10, any claim to foreign priority, and I have identified below, under the heading "Prior Applications", by application number, country or Member of the World Trade Organization, day, month, and year of filing, any application for a patent or inventor's certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed. |
| VIII-4-1-1 | Prior applications: | 08018761.0, EP, 28 October 2008 (28.10.2008) |

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| | | |
|---|---|---|
| | | I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application.<br>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. |
| VIII-4-1-1-1 | Name (LAST, First) | BUSROPAN, Bryan Jerrel |
| VIII-4-1-1-2 | Residence:<br>(city and either US State, if applicable, or country) | 2268 BP, Netherlands |
| VIII-4-1-1-3 | Mailing address: | Zalmforelvijver 3 Leidschendam 2268 BP Netherlands |
| VIII-4-1-1-4 | Citizenship: | NL |
| VIII-4-1-1-5 | Inventor's Signature:<br>(The signature must be that of the inventor, not that of the agent) | /Bryan Busropan/ |
| VIII-4-1-1-6 | Date: | 26 October 2009 (26.10.2009) |

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| | | |
|---|---|---|
| VIII-4-1-2-1 | Name (LAST, First) | VAN LOON, Johannes Maria |
| VIII-4-1-2-2 | Residence: (city and either US State, if applicable, or country) | Zoetermeer, Netherlands |
| VIII-4-1-2-3 | Mailing address: | Makorehout 31 2719 JE Zoetermeer Netherlands |
| VIII-4-1-2-4 | Citizenship: | NL |
| VIII-4-1-2-5 | Inventor's Signature: (The signature must be that of the inventor, not that of the agent) | /Johannes van Loon/ |
| VIII-4-1-2-6 | Date | 26 October 2009 (26.10.2009) |