**Prosecution Data Sheet**

Date this data sheet was prepared: January 18, 2017

APN: 14/782,783 Filing/371(c) Date: October 6, 2015

Title: Reduction of Buffer Overflow

Publication No: US 2016-0057044 A1

Attorney Docket: P61054US Designation Pair (AIA/Pre-AIA): AIA

Status: Non Final Action Mailed Date Mailed: December 15, 2016

Shortened Statutory Period for Reply: 3 Months From Mailing Date

Due Date: March 15, 2017

Extension Dates: Amount:

 1 Month Extension Period: March 16, 2017 to April 17, 2017 200.00

 2 Month Extension Period: April 18, 2017 to May 15, 2017 600.00

3 Month Extension Period: May 16, 2017 to June 15, 2017 1400.00

Abandonment Date: June 16, 2017

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Ancestors (Claim sets attached \_x\_ Yes or \_\_ No):

 Type: APN: Filing Date:

 PCT PCT/US2013/075474 December 16, 2013

 Provisional 61/821,635 May 09, 2013

Descendant (Claims sets attached \_x\_\_ Yes or \_\_ No):

Type: APN: Filing Date:

IDS Family Management:

Total # References Cited in This Application Only \_\_\_9\_\_\_

 Number of IDSs Not Considered By Examiner Yet \_\_\_0\_\_\_\_

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| --- | --- | --- | --- | --- | --- |
| **Law Applied:** | **AIA** |  |  |  |  |
|  |  |  |  |  |  |
| **Claims** | **Earliest Effective Prior Art Shield Date** |  |  |
| **Group:Numbers** | **102(a)/102(a)(1)** | **102(b)/None** | **102(e)/102(a)(2)** |  |  |
| **A: 1-23** | **May 9, 2013** | **None** | **May 9, 2013** |  |  |
| **B: None\*** |  |  |  |  |  |
|  |  |  |  |  |  |
|  | **Earliest Effective Reference Date** |  |  |
| **Reference** | **102(a)/102(a)(1)** | **102(b)/None** | **102(e)/102(a)(2)** |  |  |
| **Hsiao ‘309** | **August 29, 2013** | **None** | **February 23, 2012** |  |  |
| **Maeda ‘414** | **July 16, 2009** | **None** | **June 06, 2006** |  |  |
| **Donthi ‘007** | **June 12, 2014** | **None** | **December 10, 2012** |  |  |
|  | **Prior Art Status Verification** |  |  |
| **Claim Group** | **Reference** | **Common Assignee** | **Common Inventors** | **Prior Art** | **Statute or Exception** |
| **A: 1-23** | **Hsiao ‘309** | **None** | **None** | **Y** | **103(a), 102(a)(2)** |
| **A: 1-23** | **Maeda ‘414** | **None** | **None** | **Y** | **103(a), 102(a)(1)** |
| **A: 1-23** | **Donthi ‘007** | **None** | **None** | **Y** | **103(a), 102(a)(2)** |
| **Notes:** |  |  |  |  |  |
| **\*No additional priority claimed**  |
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**Proposed Response to Each Rejection/Objection**

1. **101 Rejection of claims 1, 12 and 18**

We propose preparing an Enfish argument to traverse the rejection. The argument will focus on explaining that the claims are related to an improvement in computer technology.

1. **103 Rejection of claims 1-23, Strategy:**

We propose preparing an argument discussing the differences between the cited references and our claims.

(a) In particular, we would argue the following clause of claim 1:

receive a buffer overflow message, from a serving gateway (S-GW), indicating a potential overflow at an S-GW buffer when downlink information that is stored at the S-GW buffer exceeds a predetermined threshold

The cited references Hsiao, Maeda and Donthi fail to teach or suggest receiving “a buffer overflow message, from a serving gateway (S-GW), indicating a potential overflow at an S-GW buffer when downlink information that is stored at the S-GW buffer exceeds a predetermined threshold,” as recited in claim 1.

(b) Further, the cited references also do not teach or suggest, “the buffer overflow message” instructing “the eNB to modify DRX configurations,” as recited in claim 12.

(c) The existing claim set has 23 claims, which is over the 20 claim limit. The claim set already has 3 independent claims. The claim set does not have a CRM claim. If the additional fee is fine, we would add a CRM claim to the claim set.

Please let us know, in case you would like to recommend another 103 strategy.

3. Dependent claim preamble mismatch:

The preamble of Claim 1 recites, in the preamble, “A node…” whereas dependent claim 2, in the preamble, recites “The computer circuitry…”

Claim 12 and its dependents also have a similar use of the preamble. The Examiner did not object to such use. Please let us know your style preference regarding the preamble.

4. Before filing the response we can request an Interview with the Examiner and modify the response based on the Examiner’s inputs.

**Other strategies:**

1. We can also **add a claim** which discusses selecting a group of UE’s and modifying their DRX configurations:

A node operable to control discontinuous reception (DRX) configurations for a plurality of user equipments (UEs), the node having computer circuitry configured to:

receive a buffer overflow message, from a serving gateway (S-GW), indicating a potential overflow at an S-GW buffer when downlink information that is stored at the S-GW buffer exceeds a predetermined threshold;

select a group of UEs from the plurality of UEs according to predefined criteria; and

modify the DRX configurations of the group of UEs in order to reduce the

downlink information that is stored at the S-GW buffer, thereby reducing the potential for overflow at the S-GW buffer.

We identified in which other cases the references cited by the Examiner were cited and studied their responses. We found that in one of the case US9432932B2, there is an argument against Maeda discussing:

“It is respectfully submitted that the DTX operation disclosed in Maeda **relates to a specific terminal, not all the terminals in a cell**. Thus, Maeda does not disclose a method of controlling signal transmission comprising stopping transmission of a downlink control signal, a pilot signal, and data traffic except for a preamble signal and a system information message for the discontinuous signal transmission interval to the terminals, wherein the terminals in the cell do not perform any receiving operations except for the preamble signal and the system information message during the discontinuous signal transmission interval.” The above claim can be added based on this argument.

2. The application as filed supports a CRM claim at for example, ¶ 49. Hence **a CRM claim can also be added**.

3. If the Examiner issues a Final Rejection, we can immediately request for an Interview and discuss our case by amending the independent claims by adding features of, for example, the dependent claims 9 and 10. We can also amend the Independent claim and request for consideration under AFCP 2.0

Additional subject matter that may be claimed:

[0040] … The S-GW may communicate the multiple buffer overload messages to the eNB when the DRX modifications performed by the eNB have not significantly reduced the potential for buffer overflow at the S-GW. *In addition, the multiple buffer overload messages with the instructions to modify the DRX configurations of the UEs may be communicated to the eNB* ***within a defined time period*** *(e.g., the S-GW may send three consecutive messages in a span of two minutes).*

**Recommendations:**

{x} Interview with Examiner recommended

{\_} Interview with the Examiner optional

Issuance percentage in cases with interview – 65%

Prosecution Roadmap

{\_} Appeal is an option if Examiner entrenched (i.e., high historical success rate)

{x} Do not appeal (i.e., low historical success rate)

Issuance percentage in cases with Appeal – 46%

{\_} Reduce intake of additional invention disclosures in this technical area (i.e., low allowance rates, slow prosecution, and/or crowded landscape)

{x} Increase intake of additional invention disclosures in this technical area (i.e., high allowance rate, fast prosecution, and/or lower number of applications issued/pending)

**Companies with patent applications in this technical area:**

**Standards applicable in the future/currently for US20160057044A1**

LTE-MTC or inshort LTE-M, Other possible standards include EC-GSM-IoT, NB-IoT, eMTC, which are currently being standardized by 3gpp.