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| PATENT ASSIGNMENT COVER SHEET |
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 Stylesheet Version v1.2

EPAS ID: PAT5858342

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| SEQUENCE: | 2 |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| SARASWATI BP LTD. | 03/04/2019 |

RECEIVING PARTY DATA

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|--------------------------|-----------------------|
| Name: | SONY EUROPE LIMITED |
| Street Address: | THE HEIGHTS |
| Internal Address: | BROOKLANDS, WEYBRIDGE |
| City: | SURREY |
| State/Country: | UNITED KINGDOM |
| Postal Code: | KT13 0XW |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|----------------------------|----------|
| Application Number: | 16476108 |

CORRESPONDENCE DATA**Fax Number:**

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| ATTORNEY DOCKET NUMBER: | 12974US01 |
| NAME OF SUBMITTER: | TIERNEY FARRELL |
| SIGNATURE: | /TIERNEY FARRELL/ |
| DATE SIGNED: | 12/10/2019 |

Total Attachments: 26

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**[REDACTED] FULL ASSIGNMENT FROM ASSIGNEE TO SONY
EUROPE LIMITED [REDACTED]**

WHEREAS, [REDACTED] the attached APPENDIX (hereinafter referred to as "APPENDIX"), have invented certain new and useful improvements in the invention(s) listed on the same, for which an application for Letters Patent was executed on the priority date included thereon;

[REDACTED]

AND WHEREAS, SONY EUROPE LIMITED, a corporation organized and existing under the laws of the United Kingdom, with offices at The Heights, Brooklands, Weybridge, Surrey, KT13 0XW, United Kingdom (hereinafter referenced as "ASSIGNEE SEU"), in accordance with a preexisting agreement or mutual understanding, is desirous of acquiring the entire right, title and interest in, to and under said invention(s), said application(s) disclosing the invention(s) and in, to and under any Letters Patent or similar legal protection which may be granted therefor in any and all countries worldwide (including in the territory of the United States of America) held by ASSIGNEE as the sole owner to the rights by this assignment;

[REDACTED]

[REDACTED]

Assignment

Assignee to SEU

CONCURRENTLY HEREWITH, after good and valuable consideration or in consideration of the recognized value of any past and/or potential collaborative projects in the future, the receipt and sufficiency of which are hereby acknowledged, ASSIGNEE has already assigned by other means to said ASSIGNEE SEU, or by these presents do hereby presently assign, sell and transfer unto said ASSIGNEE SEU, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention(s), said application(s), including any divisions, continuations, substitutions and renewals thereof, and in and to any and all Letters Patent which may be granted for said invention(s), in any country (including the territory of the United States of America), and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements, and to any other benefits accruing or to accrue to ASSIGNEE with respect to the filing of applications for patents or securing of patents or other industrial property protection throughout the world (including in the territory of the United States of America) in respect of the inventions which are subjects of the applications for Letters Patent described herein, and this conveyance of interest includes the right for the ASSIGNEE SEU, or its successors, assigns, and/or legal representatives, to bring, make, oppose, defend, appeal proceedings, claims or actions and obtain relief (and to retain any damages recovered) in respect of any infringement, or any other cause of action arising from ownership, of any of the Patents or any patents granted on any of the applications for patents or filed as aforesaid, whether occurring before, on or after the date of this agreement.

Assignment [REDACTED] Assignee to SEU [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Assignment [REDACTED] Assignee to SEU [REDACTED]

[REDACTED]

The undersigned [REDACTED] ASSIGNEE and ASSIGNEE SEU hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale;

And the undersigned [REDACTED] ASSIGNEE and ASSIGNEE SEU hereby authorize and request the attorney(s) of record in this application to insert on the APPENDIX any further identification, including the filing date and application number of the country in which an application for Letters Patent has been or will be subsequently filed, which may be necessary or desirable in order to comply with the rules of the patent office of that country for recordation of this document.

This Assignment Agreement shall be governed by and construed under the laws of the State of New York, United States of America, without regard to conflict of laws principles, all rights and remedies being governed by said laws.

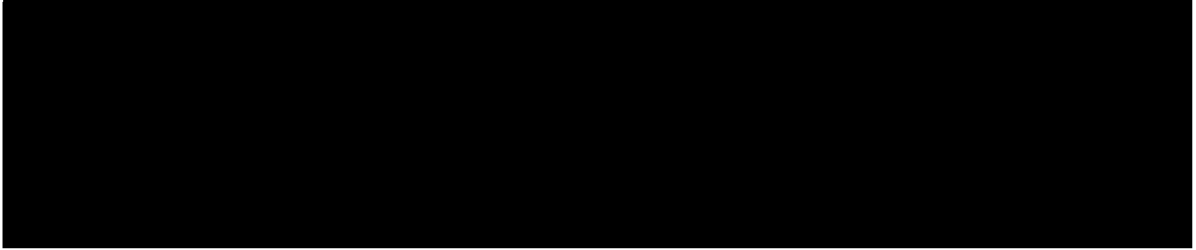
Assignment



Assignee to SEU



This assignment executed on the dates indicated below.



Saraswati BP Ltd.

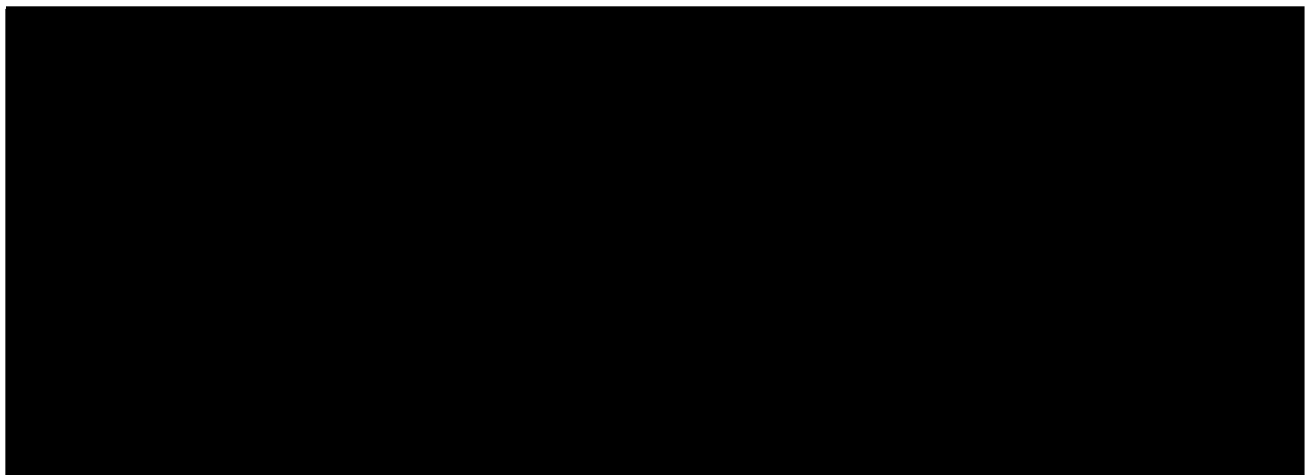
Date: 04/03/2019
[DD/MONTH/YYYY]

By: Vivek Sharma
Name: VIVEK SHARMA
Title: DIRECTOR
As duly authorized officer

SONY EUROPE LIMITED

Date: 12/03/2019
[DD/MONTH/YYYY]

By: Matthias Kabilitz
Name: Matthias Kabilitz
Title: Intellectual Property Senior Manager
As duly authorized officer



APPENDIX

| Title | Inventors | Sony IPE ref. | Application Number | Filing Date | Priority Date |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------|---------------|
| Handling of MCG resources for a SCG split bearer due to security procedure | Sharma, Vivek; Martin, Brian Alexander; Wei, Yuxin; Wakabayashi, Hideji; Tsuda, Shinichiro | I-16-150-EP- FFWF | 16191055.9 | 28 Sep 2016 | 28 Sep 2016 |
| Handling of MCG resources for a SCG split bearer due to security procedure | Sharma, Vivek; Martin, Brian Alexander; Wei, Yuxin; Wakabayashi, Hideji; Tsuda, Shinichiro | I-16-150- WO-PCT | PCT/EP2017/071772 | 30 Aug 2017 | 28 Sep 2016 |
| UE additional information reporting during connection establishment | Sharma, Vivek; Martin, Brian Alexander; Wei, Yuxin; Wakabayashi, Hideji; Tsuda, Shinichiro | I-16-161-EP- FFWF | 16191543.4 | 29 Sep 2016 | 29 Sep 2016 |
| UE additional information reporting during connection establishment | Sharma, Vivek; Martin, Brian Alexander; Wei, Yuxin; Wakabayashi, Hideji; Tsuda, Shinichiro | I-16-161- WO-PCT | PCT/EP2017/073196 | 14 Sep 2017 | 29 Sep 2016 |
| SC-MCCH Change Notification in femTC & eNB-IoT | Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Sharma, Vivek | I-16-166-TW- NP | 106126771 | 08 Aug 2017 | 30 Sep 2016 |
| SC-MCCH Change Notification in femTC & eNB-IoT | Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Sharma, Vivek | I-16-166- WO-PCT | PCT/EP2017/073483 | 18 Sep 2017 | 30 Sep 2016 |
| SC-MCCH Change Notification in femTC & eNB-IoT | Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Sharma, Vivek | I-16-166-EP- FFWF | 16191990.7 | 30 Sep 2016 | 30 Sep 2016 |
| System information area enhancement for NR | Wei, Yuxin; Martin, Brian Alexander; Sharma, Vivek; Wakabayashi, Hideji; Tsuda, Shinichiro | I-16-155- WO-PCT | PCT/EP2017/075371 | 05 Oct 2017 | 06 Oct 2016 |

Assignment Inventor to Assignee to SEU to Sony Corp.

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|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------|-------------------|-------------|-------------|
| System information area enhancement for NR | Wei, Yuxin;Martin, Brian Alexander;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-155-EP- FFWF | 161922705.8 | 06 Oct 2016 | 06 Oct 2016 |
| NR MDT enhancements to collect measurements related to interference at higher frequency | Sharma, Vivek;Martin, Brian Alexander;Wei, Yuxin;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-169-EP- FFWF | 161922788.4 | 07 Oct 2016 | 07 Oct 2016 |
| NR MDT enhancements to collect measurements related to interference at higher frequency | Sharma, Vivek;Martin, Brian Alexander;Wei, Yuxin;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-169- WO-PCT | PCT/EP2017/075431 | 05 Oct 2017 | 07 Oct 2016 |
| System information enhancement for NR | Wei, Yuxin;Martin, Brian Alexander;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-178-EP- FFWF | 16196249.3 | 28 Oct 2016 | 28 Oct 2016 |
| System information enhancement for NR | Wei, Yuxin;Martin, Brian Alexander;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-178- WO-PCT | PCT/EP2017/077531 | 26 Oct 2017 | 28 Oct 2016 |
| On-demand SI and network overload | Sharma, Vivek;Martin, Brian Alexander;Wei, Yuxin;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-181-EP- FFWF | 16197185.8 | 03 Nov 2016 | 03 Nov 2016 |
| On-demand SI and network overload | Sharma, Vivek;Martin, Brian Alexander;Wei, Yuxin;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-181- WO-PCT | PCT/EP2017/075068 | 03 Oct 2017 | 03 Nov 2016 |
| Remote UE paging via Relay | Martin, Brian Alexander;Wei, Na;Sharma, Vivek | I-16-183- WO-PCT | PCT/EP2017/075607 | 08 Oct 2017 | 03 Nov 2016 |
| Remote UE paging via Relay | Martin, Brian Alexander;Wei, Na;Sharma, Vivek | I-16-183-EP- FFWF | 16197181.7 | 03 Nov 2016 | 03 Nov 2016 |

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| Cell quality evaluation using multiple beam measurements | Martin, Brian Alexander;Beale, Martin Warwick;Wong, Shin Horng;Wei, Yuxin;Atung Siri, Samuel Asangbeng;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro;Kosta, Chrysovalantis | I-16-182-EP-FFWF | 16197339.1 | 04 Nov 2016 | 04 Nov 2016 |
| Cell quality evaluation using multiple beam measurements | Martin, Brian Alexander;Beale, Martin Warwick;Wong, Shin Horng;Wei, Yuxin;Atung Siri, Samuel Asangbeng;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro;Kosta, Chrysovalantis | I-16-182-WO-PCT | PCT/EP2017/076260 | 13 Okt 2017 | 04 Nov 2016 |
| Fallback Beam Operation in NR | Wong, Shin Horng;Beale, Martin Warwick;Martin, Brian Alexander;Sharma, Vivek | I-16-184-EP-FFWF | 16198547.8 | 11 Nov 2016 | 11 Nov 2016 |
| Fallback Beam Operation in NR | Wong, Shin Horng;Beale, Martin Warwick;Martin, Brian Alexander;Sharma, Vivek | I-16-184-WO-PCT | PCT/EP2017/077977 | 01 Nov 2017 | 11 Nov 2016 |
| Fixed RLC SN polling for NR | Martin, Brian Alexander;Sharma, Vivek | I-16-185-WO-PCT | PCT/EP2017/077922 | 31 Okt 2017 | 11 Nov 2016 |
| Fixed RLC SN polling for NR | Martin, Brian Alexander;Sharma, Vivek | I-16-185-EP-FFWF | 16198536.1 | 11 Nov 2016 | 11 Nov 2016 |
| Index based NR SI Table Update Procedure | Wei, Yuxin;Martin, Brian Alexander;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-200-EP-FFWF | 16206526.2 | 22 Dez 2016 | 22 Dez 2016 |
| Index based NR SI Table Update Procedure | Wei, Yuxin;Martin, Brian Alexander;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-200-WO-PCT | PCT/EP2017/084279 | 21 Dez 2017 | 22 Dez 2016 |

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| RLF Report enhancement | Sharma, Vivek;Martin, Brian Alexander;Wakabayashi, Hideji;Tsuda, Shinichiro;Wei, Yuxin | I-16-206- WO-PCT | PCT/EP2017/084280 | 21 Dez 2017 | 22 Dez 2016 |
| RLF Report enhancement | Sharma, Vivek;Martin, Brian Alexander;Wakabayashi, Hideji;Tsuda, Shinichiro;Wei, Yuxin | I-16-206-EP- FFWF | 16206101.4 | 22 Dez 2016 | 22 Dez 2016 |
| RRC Inactive State Paging for downlink transmission | Martin, Brian Alexander;Wong, Shin Horng;Beale, Martin Warwick;Wei, Yuxin;Sharma, Vivek;Tsuda, Shinichiro;Wakabayashi, Hideji;Berggren, Anders | I-16-207-EP- FFWF | 16206769.8 | 23 Dez 2016 | 23 Dez 2016 |
| RRC Inactive State Paging for downlink transmission | Martin, Brian Alexander;Wong, Shin Horng;Beale, Martin Warwick;Wei, Yuxin;Sharma, Vivek;Tsuda, Shinichiro;Wakabayashi, Hideji;Berggren, Anders | I-16-207- WO-PCT | PCT/EP2017/080828 | 29 Nov 2017 | 23 Dez 2016 |
| Mobility handling in Inter-RAT NR-LTE coexistence | Sharma, Vivek;Beale, Martin Warwick;Martin, Brian Alexander;Wong, Shin Horng;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-214- WO-PCT | PCT/EP2018/050031 | 02 Jan 2018 | 04 Jan 2017 |
| Mobility handling in Inter-RAT NR-LTE coexistence | Sharma, Vivek;Beale, Martin Warwick;Martin, Brian Alexander;Wong, Shin Horng;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-214-EP- FFWF | 17150280.0 | 04 Jan 2017 | 04 Jan 2017 |
| Early Handover optimizations based on uplink measurements | Martin, Brian Alexander;Wei, Yuxin; Berggren, Anders; Sharma, Vivek;Wakabayashi, Hideji; | I-16-213-EP- FFWF | 17150360.0 | 05 Jan 2017 | 05 Jan 2017 |

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| Triggering of mobility reference signals measurements using cell specific reference signals | Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick; Wei, Yuxin; Sharma, Vivek; Tsuda, Shinichiro; Wakabayashi, Hideji | I-16-208- WO-PCT | PCT/EP2017/083279 | 18 Dez 2017 | 05 Jan 2017 |
| Triggering of mobility reference signals measurements using cell specific reference signals | Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick; Wei, Yuxin; Sharma, Vivek; Tsuda, Shinichiro; Wakabayashi, Hideji | I-16-208-EP- FFWF | 17150481.4 | 05 Jan 2017 | 05 Jan 2017 |
| Inter-RAT Scheduling for NR-LTE Interworking | Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Sharma, Vivek; Wakabayashi, Hideji; Tsuda, Shinichiro | I-16-210-EP- FFWF | 17150482.2 | 05 Jan 2017 | 05 Jan 2017 |
| Inter-RAT Scheduling for NR-LTE Interworking | Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Sharma, Vivek; Wakabayashi, Hideji; Tsuda, Shinichiro | I-16-210- WO-PCT | PCT/EP2017/081501 | 05 Dez 2017 | 05 Jan 2017 |
| NR RACH enhancement | Wei, Yuxin; Martin, Brian Alexander; Berggren, Anders; Sharma, Vivek; Wakabayashi, Hideji | I-16-211-EP- FFWF | 17150480.6 | 05 Jan 2017 | 05 Jan 2017 |
| NR RACH enhancement | Wei, Yuxin; Martin, Brian Alexander; Berggren, Anders; Sharma, Vivek; Wakabayashi, Hideji | I-16-211- WO-PCT | PCT/EP2018/050096 | 03 Jan 2018 | 05 Jan 2017 |
| Flexible FDD operation using TDD band | Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Sharma, Vivek; Wakabayashi, Hideji; Tsuda, Shinichiro | I-16-201- WO-PCT | PCT/EP2017/083899 | 20 Dez 2017 | 06 Jan 2017 |

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| Flexible FDD operation using TDD band | Wong, Shin Horng;Beale, Martin Warwick;Martin, Brian Alexander;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro | I-16-201-EP-FFWF | 17150567.0 | 06 Jan 2017 | 06 Jan 2017 |
| 2-step RACH fallback to 4-step RACH preamble | Martin, Brian Alexander;Wei, Yuxin;Berggren, Anders;Sharma, Vivek;Wakabayashi, Hideji | I-16-212-EP-FFWF | 17150585.2 | 06 Jan 2017 | 06 Jan 2017 |
| 2-step RACH fallback to 4-step RACH preamble | Martin, Brian Alexander;Wei, Yuxin;Berggren, Anders;Sharma, Vivek;Wakabayashi, Hideji | I-16-212-EP-FFWF | 17151167.8 | 05 Jan 2018 | 06 Jan 2017 |
| RRC Inactive State Paging for uplink tracking signal reconfiguration | Martin, Brian Alexander;Wong, Shin Horng;Beale, Martin Warwick;Wei, Yuxin;Sharma, Vivek;Tsuda, Shinichiro;Wakabayashi, Hideji;Berggren, Anders | I-16-217-EP-FFWF | 17151167.8 | 12 Jan 2017 | 12 Jan 2017 |
| RRC Inactive State Paging for uplink tracking signal reconfiguration | Martin, Brian Alexander;Wong, Shin Horng;Beale, Martin Warwick;Wei, Yuxin;Sharma, Vivek;Tsuda, Shinichiro;Wakabayashi, Hideji;Berggren, Anders | I-16-217-EP-FFWF | 17151167.8 | 12 Jan 2017 | 12 Jan 2017 |
| New UE ID and blind detection method | Martin, Brian Alexander;Wong, Shin Horng;Beale, Martin Warwick;Wei, Yuxin;Sharma, Vivek;Tsuda, Shinichiro;Wakabayashi, Hideji;Atungsiri, Samuel | I-17-009-EP-FFWF | 17154636.9 | 03 Feb 2017 | 03 Feb 2017 |
| New UE ID and blind detection method | Martin, Brian Alexander;Wong, Shin Horng;Beale, Martin Warwick;Wei, Yuxin;Sharma, Vivek;Tsuda, Shinichiro;Wakabayashi, Hideji;Atungsiri, Samuel | I-17-009-EP-FFWF | 17154636.9 | 03 Feb 2017 | 03 Feb 2017 |

U.S. serial number 16/476,108 filed July 5, 2019

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| Handover and Paging procedure for Pre-authorised QoS flows | Sharma, Vivek;Martin, Brian Alexander;Berggren, Anders;Nord, Lars | I-17-013-EP-FWF | 17155737.4 | | 10 Feb 2017 | 10 Feb 2017 | |
| Handover and Paging procedure for Pre-authorised QoS flows | Sharma, Vivek;Martin, Brian Alexander;Berggren, Anders;Nord, Lars | I-17-013-WO-PCT | PCT/EP2018/051330 | | 19 Jan 2018 | 10 Feb 2017 | |
| URLLC Self Pre-emption | Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Martin, Brian Alexander;Sharma, Vivek | I-17-026-EP-FWF | 17162407.5 | | 22 MZ 2017 | 22 MZ 2017 | |
| URLLC Self Pre-emption | Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Martin, Brian Alexander;Sharma, Vivek | I-17-026-WO-PCT | PCT/EP2018/057078 | | 20 MZ 2018 | 22 MZ 2017 | |
| Shared Uplink Grant Free Resource | Wong, Shin Horng;Beale, Martin Warwick;Sharma, Vivek;Martin, Brian Alexander | I-17-027-TW-NP | 107103238 | | 30 Jan 2018 | 22 MZ 2017 | |
| Shared Uplink Grant Free Resource | Wong, Shin Horng;Beale, Martin Warwick;Sharma, Vivek;Martin, Brian Alexander | I-17-027-WO-PCT | PCT/EP2018/057080 | | 20 MZ 2018 | 22 MZ 2017 | |
| Shared Uplink Grant Free Resource | Wong, Shin Horng;Beale, Martin Warwick;Sharma, Vivek;Martin, Brian Alexander | I-17-027-EP-FWF | 17162411.7 | | 22 MZ 2017 | 22 MZ 2017 | |
| Dual event based Early Handover optimizations | Martin, Brian Alexander;Berggren, Anders;Sharma, Vivek | I-17-038-WO-PCT | PCT/EP2018/057370 | | 22 MZ 2018 | 24 MZ 2017 | |
| Dual event based Early Handover optimizations | Martin, Brian Alexander;Berggren, Anders;Sharma, Vivek | I-17-038-EP-FWF | 17162884.5 | | 24 MZ 2017 | 24 MZ 2017 | |

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| Shared Uplink Grant Free Resource higher layer impacts - cipher keys during handover | Sharma, Vivek;Beale, Martin Warwick;Wong, Shin Horng;Martin, Brian Alexander | I-17-033-EP-FWFF | 17163832.3 | 30 Mrz 2017 | 30 Mrz 2017 |
| Shared Uplink Grant Free Resource higher layer impacts - cipher keys during handover | Sharma, Vivek;Beale, Martin Warwick;Wong, Shin Horng;Martin, Brian Alexander | I-17-033-WO-PCT | PCT/EP2018/057768 | 27 Mrz 2018 | 30 Mrz 2017 |
| Shared Uplink Grant Fee Resource higher layer impacts - Secondary eNB to Master eNB | Sharma, Vivek;Beale, Martin Warwick;Wong, Shin Horng;Martin, Brian Alexander | I-17-040-WO-PCT | PCT/EP2018/057784 | 27 Mrz 2018 | 30 Mrz 2017 |
| Shared Uplink Grant Fee Resource higher layer impacts - Secondary eNB to Master eNB | Sharma, Vivek;Beale, Martin Warwick;Wong, Shin Horng;Martin, Brian Alexander | I-17-040-EP-FWFF | 17163988.3 | 30 Mrz 2017 | 30 Mrz 2017 |
| Access barring for remote device via Relay | Martin, Brian Alexander;Sharma, Vivek;Wei, Yuxin;Berggren, Anders | I-17-034-EP-FWFF | 17164265.5 | 31 Mrz 2017 | 31 Mrz 2017 |
| Access barring for remote device via Relay | Martin, Brian Alexander;Sharma, Vivek;Wei, Yuxin;Berggren, Anders | I-17-034-TW-NP | 107106322 | 26 Feb 2018 | 31 Mrz 2017 |
| Access barring for remote device via Relay | Martin, Brian Alexander;Sharma, Vivek;Wei, Yuxin;Berggren, Anders | I-17-034-WO-PCT | PCT/EP2018/054885 | 28 Feb 2018 | 31 Mrz 2017 |
| Per CE level Access barring | Sharma, Vivek;Martin, Brian Alexander;Wong, Shin Horng;Beale, Martin Warwick | I-17-035-EP-FWFF | 17164062.6 | 31 Mrz 2017 | 31 Mrz 2017 |
| Per CE level Access barring | Sharma, Vivek;Martin, Brian Alexander;Wong, Shin Horng;Beale, Martin Warwick | I-17-035-WO-PCT | PCT/EP2018/058105 | 29 Mrz 2018 | 31 Mrz 2017 |
| Maintaining MCG/SCG MAC entity during bearer type switching in EN-DC | Sharma, Vivek;Martin, Brian Alexander;Tsuda, Shinichiro;Wakabayashi, Hideji | I-17-051-EP-FWFF | 17168565.4 | 27 Apr 2017 | 27 Apr 2017 |

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| Maintaining MCG/SCG MAC entity during bearer type switching in EN-DC | Sharma, Vivek;Martin, Brian Alexander;Tsuda, Shinichiro;Wakabayashi, Hideji | I-17-051- WO-PCT | PCT/EP2018/055800 | 08 Mar 2018 | 27 Apr 2017 |
| NB-IOT dual threshold for idle mode measurements | Martin, Brian Alexander;Wong, Shin Horng;Sharma, Vivek;Beale, Martin Warwick | I-17-053- WO-PCT | PCT/EP2018/055921 | 09 Mar 2018 | 27 Apr 2017 |
| NB-IOT dual threshold for idle mode measurements | Martin, Brian Alexander;Wong, Shin Horng;Sharma, Vivek;Beale, Martin Warwick | I-17-053-EP- FFWF | 17168564.7 | 27 Apr 2017 | 27 Apr 2017 |
| 5GC to/from EPC handover in LTE cell | Sharma, Vivek;Martin, Brian Alexander;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-056- WO-PCT | PCT/EP2018/060754 | 26 Apr 2018 | 05 Mai 2017 |
| 5GC to/from EPC handover in LTE cell | Sharma, Vivek;Martin, Brian Alexander;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-056-EP- FFWF | 17169832.7 | 05 Mai 2017 | 05 Mai 2017 |
| ANR enhancement for LTE cell connected to 5GC/EPC | Sharma, Vivek;Martin, Brian Alexander;Tsuda, Shinichiro;Wakabayashi, Hideji | I-17-058- WO-PCT | PCT/EP2018/060721 | 26 Apr 2018 | 05 Mai 2017 |
| ANR enhancement for LTE cell connected to 5GC/EPC | Sharma, Vivek;Martin, Brian Alexander;Tsuda, Shinichiro;Wakabayashi, Hideji | I-17-058-EP- FFWF | 17169819.4 | 05 Mai 2017 | 05 Mai 2017 |
| Non text based PWS | Sharma, Vivek;Martin, Brian Alexander;Tsuda, Shinichiro;Wakabayashi, Hideji;Wong, Shin Horng | I-17-076- WO-PCT | PCT/EP2018/065798 | 14 Jun 2018 | 23 Jun 2017 |
| Non text based PWS | Sharma, Vivek;Martin, Brian Alexander;Tsuda, Shinichiro;Wakabayashi, Hideji;Wong, Shin Horng | I-17-076-EP- FFWF | 17177683.4 | 23 Jun 2017 | 23 Jun 2017 |
| Configuration of NR-PDCP for MCG SRB1 | Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro;Wong, Shin Horng;Beale, Martin Warwick | I-17-106- WO-PCT | PCT/EP2018/070897 | 01 Aug 2018 | 01 Aug 2017 |

| | | | | | |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------|-------------------|-------------|-------------|
| Use of slot format indication (SFI) for NR WUS | Beale, Martin Warwick;Wong, Shin Horng;Sharma, Vivek;Atungsiri, Samuel Asangbeng | I-17-117- WO-PCT | PCT/EP2018/070903 | 01 Aug 2018 | 11 Aug 2017 |
| LTE-NR co-existence with simultaneous UL transmissions based on UE triggered solution | Wei, Yuxin;Sharma, Vivek;Berggren, Anders;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-132-EP- FFWF | 17193901.0 | 28 Sep 2017 | 28 Sep 2017 |
| LTE-NR co-existence with simultaneous UL transmissions based on UE triggered solution | Wei, Yuxin;Sharma, Vivek;Berggren, Anders;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-132- WO-PCT | PCT/EP2018/076085 | 26 Sep 2018 | 28 Sep 2017 |
| NR Cell TDD pattern exchange and MDT enhancements | Sharma, Vivek;Wei, Yuxin;Berggren, Anders;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-133-EP- FFWF | 17193856.6 | 28 Sep 2017 | 28 Sep 2017 |
| NR Cell TDD pattern exchange and MDT enhancements | Sharma, Vivek;Wei, Yuxin;Berggren, Anders;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-133- WO-PCT | PCT/EP2018/076264 | 27 Sep 2018 | 28 Sep 2017 |
| Further optimizations for Msg1 based on demand SI request | Wei, Yuxin;Sharma, Vivek | I-17-131-EP- FFWF | 17195076.9 | 05 Okt 2017 | 05 Okt 2017 |
| Further optimizations for Msg1 based on demand SI request | Wei, Yuxin;Sharma, Vivek | I-17-131- WO-PCT | PCT/EP2018/076972 | 04 Okt 2018 | 05 Okt 2017 |
| Temporary UE capability band combination update | Sharma, Vivek;Wei, Yuxin;Berggren, Anders;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-134- WO-PCT | PCT/EP2018/077026 | 04 Okt 2018 | 05 Okt 2017 |
| Temporary UE capability band combination update | Sharma, Vivek;Wei, Yuxin;Berggren, Anders;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-134-EP- FFWF | 17195072.8 | 05 Okt 2017 | 05 Okt 2017 |

| | | | | | |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------|-------------------|-------------|-------------|
| On-demand system information for positioning assistance information | Wakabayashi, Hideji; Berggren, Anders; Wei, Yuxin; Sharma, Vivek; Tsuda, Shinichiro | I-17-137-EP-FFWF | 17199204.3 | 30 Okt 2017 | 30 Okt 2017 |
| On-demand system information for positioning assistance information | Wakabayashi, Hideji; Berggren, Anders; Wei, Yuxin; Sharma, Vivek; Tsuda, Shinichiro | I-17-137-WO-PCT | PCT/EP2018/079162 | 24 Okt 2018 | 30 Okt 2017 |
| A provision of assistance information for accurate positioning under cellular system | Tsuda, Shinichiro; Wakabayashi, Hideji; Sharma, Vivek; Wei, Yuxin; Berggren, Anders | I-17-154-EP-FFWF | 17201949.9 | 15 Nov 2017 | 15 Nov 2017 |
| A provision of assistance information for accurate positioning under cellular system | Tsuda, Shinichiro; Wakabayashi, Hideji; Sharma, Vivek; Wei, Yuxin; Berggren, Anders | I-17-154-WO-PCT | PCT/EP2018/080676 | 08 Nov 2018 | 15 Nov 2017 |
| Validity area and duration based positioning assistance information | Wei, Yuxin; Wakabayashi, Hideji; Berggren, Anders; Sharma, Vivek; Tsuda, Shinichiro | I-17-155-WO-PCT | PCT/EP2018/080794 | 09 Nov 2018 | 15 Nov 2017 |
| Validity area and duration based positioning assistance information | Wei, Yuxin; Wakabayashi, Hideji; Berggren, Anders; Sharma, Vivek; Tsuda, Shinichiro | I-17-155-EP-FFWF | 17201963.0 | 15 Nov 2017 | 15 Nov 2017 |
| Service based SI broadcast | Wei, Yuxin; Sharma, Vivek; Wakabayashi, Hideji | I-17-156-WO-PCT | PCT/EP2018/081460 | 15 Nov 2018 | 15 Nov 2017 |
| Service based SI broadcast | Wei, Yuxin; Sharma, Vivek; Wakabayashi, Hideji | I-17-156-EP-FFWF | 17201917.6 | 15 Nov 2017 | 15 Nov 2017 |
| UE specific WUS validity timer | Sharma, Vivek; Wong, Shin Hornng; Beale, Martin Warwick; Atungsihi, Samuel Asangbeng | I-17-164-EP-FFWF | 17201966.3 | 15 Nov 2017 | 15 Nov 2017 |

| | | | | | |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------|-------------------|-------------|-------------|
| UE specific WUS validity timer | Sharma, Vivek;Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng | I-17-164- WO-PCT | PCT/EP2018/080667 | 08 Nov 2018 | 15 Nov 2017 |
| Managing of multiple WUS Configurations per UE | Sharma, Vivek;Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng | I-17-167-EP- FFWF | 17201973.9 | 15 Nov 2017 | 15 Nov 2017 |
| Managing of multiple WUS Configurations per UE | Sharma, Vivek;Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng | I-17-167- WO-PCT | PCT/EP2018/081383 | 15 Nov 2018 | 15 Nov 2017 |
| Encryption of Positioning SI | Sharma, Vivek;Wakabayashi, Hideji;Wei, Yuxin;Tsuda, Shinichiro | I-17-158-EP- FFWF | 17202193.3 | 16 Nov 2017 | 16 Nov 2017 |
| Encryption of Positioning SI | Sharma, Vivek;Wakabayashi, Hideji;Wei, Yuxin;Tsuda, Shinichiro | I-17-158- WO-PCT | PCT/EP2018/081365 | 15 Nov 2018 | 16 Nov 2017 |
| Failure handling of encrypted Positioning assistance information | Sharma, Vivek;Wakabayashi, Hideji;Wei, Yuxin;Tsuda, Shinichiro | I-17-159- WO-PCT | PCT/EP2018/081463 | 15 Nov 2018 | 16 Nov 2017 |
| Failure handling of encrypted Positioning assistance information | Sharma, Vivek;Wakabayashi, Hideji;Wei, Yuxin;Tsuda, Shinichiro | I-17-159-EP- FFWF | 17202195.8 | 16 Nov 2017 | 16 Nov 2017 |
| Support of idle mode operation for cellular communication for Aerial Vehicles | Tsuda, Shinichiro;Wakabayashi, Hideji;Wei, Yuxin;Sharma, Vivek | I-17-161-EP- FFWF | 17203662.6 | 24 Nov 2017 | 24 Nov 2017 |
| Support of idle mode operation for cellular communication for Aerial Vehicles | Tsuda, Shinichiro;Wakabayashi, Hideji;Wei, Yuxin;Sharma, Vivek | I-17-161- WO-PCT | PCT/EP2018/082163 | 22 Nov 2018 | 24 Nov 2017 |
| Notification of system information change for unexpected change of positing assistance information | Wakabayashi, Hideji;Berggren, Anders;Wei, Yuxin;Sharma, Vivek;Tsuda, Shinichiro | I-17-165-EP- FFWF | 17204751.6 | 30 Nov 2017 | 30 Nov 2017 |

| | | | | | |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------|-------------------|-------------|-------------|
| Notification of system information change for unexpected change of positing assistance information | Wakabayashi, Hideji; Berggren, Anders; Wei, Yuxin; Sharma, Vivek; Tsuda, Shinichiro | I-17-165- WO-PCT | PCT/EP2018/082894 | 28 Nov 2018 | 30 Nov 2017 |
| Network push SI - Assistance information provision for handover UAVs | Wei, Yuxin; Sharma, Vivek; Wakabayashi, Hideji; Tsuda, Shinichiro | I-17-169- WO-PCT | PCT/EP2018/083740 | 06 Dez 2018 | 07 Dez 2017 |
| Network push SI - Assistance information provision for handover UAVs | Wei, Yuxin; Sharma, Vivek; Wakabayashi, Hideji; Tsuda, Shinichiro | I-17-169-EP- FFWF | 17205827.3 | 07 Dez 2017 | 07 Dez 2017 |
| Hybrid positioning and multi-level sensor activation | Wakabayashi, Hideji; Berggren, Anders; Wei, Yuxin; Sharma, Vivek; Tsuda, Shinichiro | I-17-185-EP- FFWF | 17208148.1 | 18 Dez 2017 | 18 Dez 2017 |
| Hybrid positioning and multi-level sensor activation | Wakabayashi, Hideji; Berggren, Anders; Wei, Yuxin; Sharma, Vivek; Tsuda, Shinichiro | I-17-185- WO-PCT | PCT/EP2018/085047 | 14 Dez 2018 | 18 Dez 2017 |
| Hybrid positioning and the trigger of preemptive communication for data cache | Wakabayashi, Hideji; Berggren, Anders; Wei, Yuxin; Sharma, Vivek; Tsuda, Shinichiro | I-17-186- WO-PCT | PCT/EP2018/085048 | 14 Dez 2018 | 18 Dez 2017 |
| Hybrid positioning and the trigger of preemptive communication for data cache | Wakabayashi, Hideji; Berggren, Anders; Wei, Yuxin; Sharma, Vivek; Tsuda, Shinichiro | I-17-186-EP- FFWF | 17208146.5 | 18 Dez 2017 | 18 Dez 2017 |
| UAV landing and change of mobility parameters | Sharma, Vivek; Wei, Yuxin; Wakabayashi, Hideji; Tsuda, Shinichiro | I-17-205- WO-PCT | PCT/EP2019/050466 | 09 Jan 2019 | 09 Jan 2018 |
| UAV landing and change of mobility parameters | Sharma, Vivek; Wei, Yuxin; Wakabayashi, Hideji; Tsuda, Shinichiro | I-17-205-EP- FFWF | 18150799.7 | 09 Jan 2018 | 09 Jan 2018 |
| RRC connection release for UAVs | Wei, Yuxin; Sharma, Vivek; Wakabayashi, Hideji; Tsuda, Shinichiro | I-17-203-EP- FFWF | 18151273.2 | 11 Jan 2018 | 11 Jan 2018 |

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|----------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------|-------------------|-------------|-------------|
| RRC connection release for UAVs | Wei, Yuxin;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-203- WO-PCT | PCT/EP2019/050426 | 09 Jan 2019 | 11 Jan 2018 |
| Enhancements for UAVs in inactive state with flight path plan. | Wei, Yuxin;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-208-EP- FFWF | 18151297.1 | 11 Jan 2018 | 11 Jan 2018 |
| Enhancements for UAVs in inactive state with flight path plan. | Wei, Yuxin;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro | I-17-208- WO-PCT | PCT/EP2019/050120 | 03 Jan 2019 | 11 Jan 2018 |
| Relay node system information handling for remote node in IAB | Sharma, Vivek;Wakabayashi, Hideji;Wei, Yuxin | I-18-001-EP- FFWF | 18151305.2 | 11 Jan 2018 | 11 Jan 2018 |
| Relay node system information handling for remote node in IAB | Sharma, Vivek;Wakabayashi, Hideji;Wei, Yuxin | I-18-001- WO-PCT | PCT/EP2019/050111 | 03 Jan 2019 | 11 Jan 2018 |
| Different mobility handling for bearers related to single AR/VR/MR service | Sharma, Vivek;Wakabayashi, Hideji;Berggren, Anders;Wei, Yuxin | I-18-002-EP- FFWF | 18152654.2 | 19 Jan 2018 | 19 Jan 2018 |
| Different mobility handling for bearers related to single AR/VR/MR service | Sharma, Vivek;Wakabayashi, Hideji;Berggren, Anders;Wei, Yuxin | I-18-002- WO-PCT | PCT/EP2019/050969 | 15 Jan 2019 | 19 Jan 2018 |
| Explicit UL HARQ-ACK Indicator for URLLC | Wong, Shin Horng;Beale, Martin Warwick;Shimezawa, Kazuyuki;Sharma, Vivek | I-18-010-EP- FFWF | 18152655.9 | 19 Jan 2018 | 19 Jan 2018 |
| Explicit UL HARQ-ACK Indicator for URLLC | Wong, Shin Horng;Beale, Martin Warwick;Shimezawa, Kazuyuki;Sharma, Vivek | I-18-010- WO-PCT | PCT/EP2019/050962 | 15 Jan 2019 | 19 Jan 2018 |
| Network push SI for RRC_INACTIVE UEs | Wei, Yuxin;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro | I-18-011-EP- FFWF | 18156916.1 | 15 Feb 2018 | 15 Feb 2018 |

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|---------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|-------------------|-------------|-------------|
| Network push SI for RRC_INACTIVE UES | Wei, Yuxin; Sharma, Vivek; Wakabayashi, Hideji; Tsuda, Shinichiro | I-18-011- WO-PCT | PCT/EP2019/052408 | 31 Jan 2019 | 15 Feb 2018 |
| GUJI related information in MSG5 while moving from 5GC to EPC | Sharma, Vivek; Alnäs, Svante; Nord, Lars; Wakabayashi, Hideji; Berggren, Anders; Wei, Yuxin | I-18-024- WO-PCT | PCT/EP2019/053333 | 11 Feb 2019 | 15 Feb 2018 |
| GUJI related information in MSG5 while moving from 5GC to EPC | Sharma, Vivek; Alnäs, Svante; Nord, Lars; Wakabayashi, Hideji; Berggren, Anders; Wei, Yuxin | I-18-024-EP- FFWF | 18157035.9 | 15 Feb 2018 | 15 Feb 2018 |
| Uplink scheduling in IAB | Wei, Yuxin; Sharma, Vivek; Shimezawa, Kazuyuki; Atungisri, Samuel Asangbeng | I-18-031-EP- FFWF | 18164439.4 | 27 Mrz 2018 | 27 Mrz 2018 |
| Uplink scheduling in IAB | Wei, Yuxin; Sharma, Vivek; Shimezawa, Kazuyuki; Atungisri, Samuel Asangbeng | I-18-031- WO-PCT | | | 27 Mrz 2018 |
| Candidate route management in IAB | Wei, Yuxin; Sharma, Vivek; Wakabayashi, Hideji | I-18-041-EP- FFWF | 18164770.2 | 28 Mrz 2018 | 28 Mrz 2018 |
| Candidate route management in IAB | Wei, Yuxin; Sharma, Vivek; Wakabayashi, Hideji | I-18-041- WO-PCT | | | 28 Mrz 2018 |
| Active route selection in IAB | Wei, Yuxin; Sharma, Vivek; Wakabayashi, Hideji | I-18-042-EP- FFWF | 18164792.6 | 28 Mrz 2018 | 28 Mrz 2018 |
| Active route selection in IAB | Wei, Yuxin; Sharma, Vivek; Wakabayashi, Hideji | I-18-042- WO-PCT | | | 28 Mrz 2018 |

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|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------|------------|-------------|-------------|
| ACB for IAB node | Sharma, Vivek;Wakabayashi, Hideji;Wei, Yuxin | I-18-043-EP- FFWF | 18164804.9 | 28 Mar 2018 | 28 Mar 2018 |
| ACB for IAB node | Sharma, Vivek;Wakabayashi, Hideji;Wei, Yuxin | I-18-043- WO-PCT | | | 28 Mar 2018 |
| Increased 5G-S-TMSI size handling in msg3 size constrained network | Sharma, Vivek;Alna's, Svante;Nord, Lars;Wakabayashi, Hideji;Berggren, Anders;Wei, Yuxin | I-18-050-EP- FFWF | 18165795.8 | 04 Apr 2018 | 04 Apr 2018 |
| Critical message handling in the same DRB | Sharma, Vivek;Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Shimezawa, Kazuyuki;Wakabayashi, Hideji | I-18-071-EP- FFWF | 18172380.0 | 15 Mai 2018 | 15 Mai 2018 |
| Route change procedure in IAB | Wei, Yuxin;Sharma, Vivek;Wakabayashi, Hideji | I-18-080-EP- FFWF | 18178593.2 | 19 Jun 2018 | 19 Jun 2018 |
| 2-step RACH enhancement for NTN | Wei, Yuxin;Atungsiri, Samuel Asangbeng;Wakabayashi, Hideji;Sharma, Vivek | I-18-081-EP- FFWF | 18178844.9 | 20 Jun 2018 | 20 Jun 2018 |
| Power saving techniques for multiple active bandwidth part (BWP) in NR | Awad, Yassin Aden;Wong, Shin Horng;Shimezawa, Kazuyuki;Sharma, Vivek;Beale, Martin Warwick | I-18-092-EP- FFWF | 18185912.5 | 26 Jul 2018 | 26 Jul 2018 |
| Activation and deactivation methods for multiple bandwidth parts (BWP) in NR | Awad, Yassin Aden;Wong, Shin Horng;Shimezawa, Kazuyuki;Sharma, Vivek;Beale, Martin Warwick | I-18-094-EP- FFWF | 18185911.7 | 26 Jul 2018 | 26 Jul 2018 |
| UL mobility and conditional handover optimization for NTN | Wei, Yuxin;Atungsiri, Samuel Asangbeng;Wakabayashi, Hideji;Sharma, Vivek | I-18-108-EP- FFWF | 18188060.0 | 08 Aug 2018 | 08 Aug 2018 |
| NTN to terrestrial network measurement trigger | Wei, Yuxin;Atungsiri, Samuel Asangbeng;Wakabayashi, Hideji;Sharma, Vivek | I-18-109-EP- FFWF | 18188073.3 | 08 Aug 2018 | 08 Aug 2018 |

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|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------|------------|----------------|-------------|
| SI enhancement for NTN | Wei, Yuxin;Atungsiri, Samuel Asangbeng;Wakabayashi, Hideji;Sharma, Vivek | I-18-110-EP- FFWF | 18188079.0 | 08 Aug 2018 | 08 Aug 2018 |
| Early Data Transmission via Paging for MTC | Wong, Shin Horng;Beale, Martin Warwick;Sharma, Vivek;Awad, Yassin Aden | I-18-111-EP- FFWF | 18188364.6 | 09 Aug 2018 | 09 Aug 2018 |
| Feedback for Downlink Early Data Transmission in MTC | Wong, Shin Horng;Beale, Martin Warwick;Sharma, Vivek;Awad, Yassin Aden | I-18-115-EP- FFWF | 18188365.3 | 09 Aug 2018 | 09 Aug 2018 |
| Early Data Transmission via Message 2 for MTC | Wong, Shin Horng;Beale, Martin Warwick;Sharma, Vivek;Awad, Yassin Aden | I-18-116-EP- FFWF | 18188366.1 | 09 Aug 2018 | 09 Aug 2018 |
| NTN handover signaling reduction and mobility without handover signalling | Sharma, Vivek;Wei, Yuxin;Wakabayashi, Hideji;Atungsiri, Samuel Asangbeng | I-18-118-EP- FFWF | 18189822.2 | 20 Aug 2018 | 20 Aug 2018 |
| Beam failure reporting and Radio Link Monitoring for multiple active bandwidth parts (BWP) in NR | Awad, Yassin Aden;Wong, Shin Horng;Shimezawa, Kazuyuki;Sharma, Vivek;Beale, Martin Warwick | I-18-123-EP- FFWF | 18195509.2 | 18 Sep 2018 | 18 Sep 2018 |
| Efficient UE location reporting for NTN | Atungsiri, Samuel Asangbeng;Wei, Yuxin;Sharma, Vivek | I-18-132-EP- FFWF | 18196379.4 | 24 Sep 2018 | 24 Sep 2018 |
| BSR enhancement in IAB | Wei, Yuxin;Sharma, Vivek;Wakabayashi, Hideji;Awad, Yassin Aden | I-18-129-EP- FFWF | 18197358.7 | 27 Sep 2018 | 27 Sep 2018 |
| Fast route change signaling in IAB | Wei, Yuxin;Sharma, Vivek;Wakabayashi, Hideji;Awad, Yassin Aden | I-18-130-EP- FFWF | 18197370.2 | 27 Sep 2018 | 27 Sep 2018 |
| NTN predictive uplink scheduling grant and initial parameter provision with RRC signaling or alternative method. | Sharma, Vivek;Wei, Yuxin;Wakabayashi, Hideji;Atungsiri, Samuel Asangbeng | I-18-131-EP- FFWF | 18197363.7 | 27 Sep 2018 | 27 Sep 2018 |

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|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------|------------|-------------|-------------|
| Rules for URLLC traffic scheduling on uplink | Sharma, Vivek;Wong, Shin Horng;Awad, Yassin Aden | I-18-133-EP- FFWF | 18197373.6 | 27 Sep 2018 | 27 Sep 2018 |
| Initial access procedures for NR-U | Awad, Yassin Aden;Sharma, Vivek;Berggren, Anders;Wei, Yuxin;Wakabayashi, Hideji | I-18-144-EP- FFWF | 18197359.5 | 27 Sep 2018 | 27 Sep 2018 |
| Route change in IAB & with connection to a new parent node | Wei, Yuxin;Sharma, Vivek;Wakabayashi, Hideji;Awad, Yassin Aden | I-18-158-EP- FFWF | 18204001.4 | 01 Nov 2018 | 01 Nov 2018 |
| CIOT HO without security and Rogue gNB | Sharma, Vivek;Nord, Lars | I-18-162-EP- FFWF | 18211788.7 | 11 Dez 2018 | 11 Dez 2018 |
| Intra-UE prioritization and Multiplexing solutions for handling a mixture of different traffic for IIoT in 5G system | Awad, Yassin Aden;Sharma, Vivek;Wong, Shin Horng;Wei, Yuxin;Shimezawa, Kazuyuki | I-18-180-EP- FFWF | 18214944.3 | 20 Dez 2018 | 20 Dez 2018 |
| BFR enhancement in NTN | Wei, Yuxin;Sharma, Vivek;Atungsiri, Samuel Asangbeng;Awad, Yassin Aden | I-18-181-EP- FFWF | 18214932.8 | 20 Dez 2018 | 20 Dez 2018 |
| Supporting the configuration of more than one configured grant in a cell | Sharma, Vivek;Awad, Yassin Aden;Wei, Yuxin;Wakabayashi, Hideji | I-18-182-EP- FFWF | 18214782.7 | 20 Dez 2018 | 20 Dez 2018 |
| URLLC Path redundancy in dual connectivity and need for counter check procedure via SN redundant path | Sharma, Vivek;Awad, Yassin Aden;Wei, Yuxin;Wakabayashi, Hideji | I-18-184-EP- FFWF | 18214784.3 | 20 Dez 2018 | 20 Dez 2018 |
| Priority handling between URLLC services and other service and also involving sharing operators | Sharma, Vivek;Shimezawa, Kazuyuki | I-18-179-EP- FFWF | 19151959.4 | 15 Jan 2019 | 15 Jan 2019 |
| Enhancements on Inactive state in NTN | Wei, Yuxin;Sharma, Vivek;Wakabayashi, Hideji;Atungsiri, Samuel Asangbeng;Awad, Yassin Aden | I-18-196-EP- FFWF | 19152668.0 | 18 Jan 2019 | 18 Jan 2019 |

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|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------|------------|-------------|-------------|
| URLLC Path redundancy in dual connectivity and need for reestablishment and resume procedure via SN redundant path | Sharma, Vivek;Awad, Yassin Aden;Wei, Yuxin;Wakabayashi, Hideji | I-18-197-EP-FFWF | 19152906.4 | 21 Jan 2019 | 21 Jan 2019 |
| Beam management for NTN | Wei, Yuxin;Awad, Yassin Aden;Sharma, Vivek;Atungsiri, Samuel Asangbeng;Wakabayashi, Hideji | I-19-014-EP-FFWF | 19156988.8 | 13 Feb 2019 | 13 Feb 2019 |
| Optimization of UL data transmission message A in 2-step RACH for 5G system | Awad, Yassin Aden;Sharma, Vivek;Berggren, Anders;Wei, Yuxin;Wakabayashi, Hideji | I-19-017-EP-FFWF | 19157268.4 | 14 Feb 2019 | 14 Feb 2019 |
| State transition and URLLC traffic | Sharma, Vivek;Wei, Yuxin;Berggren, Anders;Awad, Yassin Aden;Wakabayashi, Hideji | I-19-018-EP-FFWF | 19157276.7 | 14 Feb 2019 | 14 Feb 2019 |
| Location based 2-step RACH | Wei, Yuxin;Berggren, Anders;Sharma, Vivek;Awad, Yassin Aden;Wakabayashi, Hideji | I-19-019-EP-FFWF | 19157264.3 | 14 Feb 2019 | 14 Feb 2019 |
| Introduce new compression profiles and configuration of different profiles with single PDCP entity | Sharma, Vivek;Awad, Yassin Aden;Wei, Yuxin;Wakabayashi, Hideji | I-19-025-EP-FFWF | 19157311.2 | 14 Feb 2019 | 14 Feb 2019 |
| Indication of switching MCS table for uplink Intra-UE prioritization and Multiplexing for different URLLC traffic in 5G system | Awad, Yassin Aden;Sharma, Vivek;Wei, Yuxin;Wong, Shin Horng;Wakabayashi, Hideji | I-19-035-EP-FFWF | 19157326.0 | 14 Feb 2019 | 14 Feb 2019 |
| Relaxed measurements in CONNECTED/IDLE/INACTIVE mode in multi beam scenario | Sharma, Vivek;Beale, Martin Warwick;Wei, Yuxin;Wong, Shin Horng;Awad, Yassin Aden | I-19-036-EP-FFWF | 19157287.4 | 14 Feb 2019 | 14 Feb 2019 |
| Conditional RRM Measurement for Power Saving | Wong, Shin Horng;Beale, Martin Warwick;Sharma, Vivek | I-19-037-EP-FFWF | 19157314.6 | 14 Feb 2019 | 14 Feb 2019 |

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| Fast transition to Connected mode for a group of UEs | Sharma, Vivek;Awad, Yassin Aden;Wei, Yuxin;Wakabayashi, Hideji | I-19-026-EP- FPWF | 19158952.2 | 22 Feb 2019 | 22 Feb 2019 |
|------------------------------------------------------|----------------------------------------------------------------|----------------------|------------|----------------|-------------|