

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5820318

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
SAMUEL ASANGBENG ATUNGSIRI	03/15/2019
MARTIN WARWICK BEALE	03/14/2019
RECEIVING PARTY DATA	
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:	16610531
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SIGNATURE:	/Lyssa Tarasenko/
DATE SIGNED:	11/14/2019
Total Attachments: 48	
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FULL INVENTOR ASSIGNMENT

WHEREAS, I, as a named inventor listed on 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;

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 my employment agreement and/or with a preexisting agreement or mutual understanding between myself and ASSIGNEE SEU, is desirous of acquiring my 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);

NOW THEREFORE, 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, I, as an inventor as indicated above, by these presents do hereby assign, sell and transfer unto said ASSIGNEE SEU, the entire right, title and interest in and to 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 me 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 the 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

Assignment Inventor to SEU [REDACTED]

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.

I, as an inventor, further declare that I either have the obligation to assign or have already assigned the full and exclusive rights in and to any inventions made during my employment to said ASSIGNEE SEU based on my employment contract with said ASSIGNEE SEU, and/or that said ASSIGNEE SEU has obtained full and exclusive rights in and to any such inventions based on applicable national law or in accordance with a preexisting agreement or mutual understanding between myself and ASSIGNEE SEU, and that by this Assignment such transfer of right, title and interest in such inventions to said ASSIGNEE SEU is herewith confirmed or restated.

[REDACTED]

[REDACTED]

[REDACTED]

Assignment Inventor to SEU [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

The undersigned inventor 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 inventor 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 inventor to SEU [REDACTED]

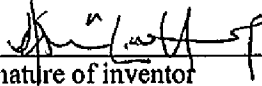
This assignment executed on the dates indicated below.

Samuel Asangbeng Atungsiri

Name of inventor

15/03/2019

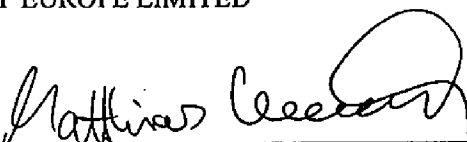
Execution date of this assignment [DD/MONTH/YYYY]


Signature of inventor

SONY EUROPE LIMITED

Date: 19/March/2019
[DD/MONTH/YYYY]

By:



Name: Matthias Kabelitz

Title: Intellectual Property Senior Manager
As duly authorized officer

APPENDIX

Title	Inventors	Sony IPE ref.	Application Number	Filing Date	Priority Date
Flexible frame structure for NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsir, Samuel Asangbeng	I-16-067-EP-EPT	17721102.6	27 Apr 2017	13 Mai 2016
Flexible frame structure for NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsir, Samuel Asangbeng	I-16-067-EP-FFWF	16169734.7	13 Mai 2016	13 Mai 2016
Flexible frame structure for NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsir, Samuel Asangbeng	I-16-067-WO-PCT	PCT/EP2017/060113	27 Apr 2017	13 Mai 2016
Flexible frame structure for NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsir, Samuel Asangbeng	I-16-067-US-PCT	16/098134	27 Apr 2017	13 Mai 2016
NUC Indicator for NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsir, Samuel Asangbeng	I-16-129-EP-FFWF	16185036.7	19 Aug 2016	19 Aug 2016
NUC Indicator for NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsir, Samuel Asangbeng	I-16-129-EP-EPT	17752150.7	18 Aug 2017	19 Aug 2016
NUC Indicator for NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsir, Samuel Asangbeng	I-16-129-US-PCT	16/323526	18 Aug 2017	19 Aug 2016
NUC Indicator for NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsir, Samuel Asangbeng	I-16-129-WO-PCT	PCT/EP2017/070978	18 Aug 2017	19 Aug 2016
Multi Control Channel in eMBB transmission	Wong, Shin Horng;Beale, Martin Warwick;Atungsir, Samuel Asangbeng	I-16-147-EP-EPT	17755548.9	29 Aug 2017	15 Sep 2016
Multi Control Channel in eMBB transmission	Wong, Shin Horng;Beale, Martin Warwick;Atungsir, Samuel Asangbeng	I-16-147-US-PCT	16/331139	29 Aug 2017	15 Sep 2016

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Multi Control Channel in eMBB transmission	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-16-147-WO-PCT	PCT/EP2017/071636	29 Aug 2017	15 Sep 2016
Multi Control Channel in eMBB transmission	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-16-147-EP-FFWF	16189083.5	15 Sep 2016	15 Sep 2016
Multi Control Channel in eMBB transmission	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-16-147-TW-NP	106125758	31 Jul 2017	15 Sep 2016
HARQ repair of punctured eMBB transmissions	Beale, Martin Warwick;Wong, Shin Horng;Atungsiri, Samuel Asangbeng	I-16-163-EP-FFWF	16191978.2	30 Sep 2016	30 Sep 2016
HARQ repair of punctured eMBB transmissions	Beale, Martin Warwick;Wong, Shin Horng;Atungsiri, Samuel Asangbeng	I-16-163-WO-PCT	PCT/EP2017/072025	01 Sep 2017	30 Sep 2016
HARQ repair of punctured eMBB transmissions	Beale, Martin Warwick;Wong, Shin Horng;Atungsiri, Samuel Asangbeng	I-16-163-EP-EPT	PCT/EP2017/072025	01 Sep 2017	30 Sep 2016
HARQ repair of punctured eMBB transmissions	Beale, Martin Warwick;Wong, Shin Horng;Atungsiri, Samuel Asangbeng	I-16-163-US-PCT	PCT/EP2017/072025	01 Sep 2017	30 Sep 2016
SSD transmission of eMBB	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-16-164-EP-FFWF	16191997.2	30 Sep 2016	30 Sep 2016
SSD transmission of eMBB	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-16-164-WO-PCT	PCT/EP2017/073508	18 Sep 2017	30 Sep 2016
SSD transmission of eMBB	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-16-164-EP-EPT	PCT/EP2017/073508	18 Sep 2017	30 Sep 2016
SSD transmission of eMBB	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-16-164-US-PCT	PCT/EP2017/073508	18 Sep 2017	30 Sep 2016

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Cell quality evaluation using multiple beam measurements	Martin, Brian Alexander;Beale, Martin Warwick;Wong, Shin Horng;Wei, Yuxin;Atungsiri, Samuel Asangbeng;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro;Kosta, Chrysovalantis	I-16-182-WO-PCT	PCT/EP2017/076260	13 Okt 2017	04 Nov 2016
Cell quality evaluation using multiple beam measurements	Martin, Brian Alexander;Beale, Martin Warwick;Wong, Shin Horng;Wei, Yuxin;Atungsiri, Samuel Asangbeng;Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro;Kosta, Chrysovalantis	I-16-182-EP-FFWF	16197339.1	04 Nov 2016	04 Nov 2016
Transmission that enables the detection of URLLC afflicted eMBB transmissions	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick	I-16-187-WO-PCT	PCT/EP2017/075546	06 Okt 2017	11 Nov 2016
Transmission that enables the detection of URLLC afflicted eMBB transmissions	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick	I-16-187-EP-FFWF	16198538.7	11 Nov 2016	11 Nov 2016
High speed tolerant PBCH for NR	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-16-202-EP-FFWF	16206517.1	22 Dez 2016	22 Dez 2016
High speed tolerant PBCH for NR	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-16-202-WO-PCT	PCT/EP2017/083955	20 Dez 2017	22 Dez 2016
Signal Space Diversity Interleaving	Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Wong, Shin Horng	I-16-149-WO-PCT	PCT/EP2017/081523	05 Dez 2017	23 Dez 2016

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Signal Space Diversity Interleaving	Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Wong, Shin Horng	I-16-149-EP-FFWF	16206874.6	23 Dez 2016	23 Dez 2016
Alternative Downlink Control Channel Resources in NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-16-197-WO-PCT	PCT/EP2017/081542	05 Dez 2017	06 Jan 2017
Alternative Downlink Control Channel Resources in NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-16-197-EP-FFWF	17150570.4	06 Jan 2017	06 Jan 2017
URLLC HARQ feedback operation	Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Wong, Shin Horng	I-16-205-WO-PCT	PCT/EP2017/083875	20 Dez 2017	09 Jan 2017
URLLC HARQ feedback operation	Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Wong, Shin Horng	I-16-205-EP-FFWF	17150730.4	09 Jan 2017	09 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 Asangbeng	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 Asangbeng	I-17-009-WO-PCT	PCT/EP2018/052489	01 Feb 2018	03 Feb 2017

URLLC back indication of PDSCH	Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Wong, Shin Horng	I-17-012-EP-FFWF	17154893.6	06 Feb 2017	06 Feb 2017
URLLC back indication of PDSCH	Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Wong, Shin Horng	I-17-012-WO-PCT	PCT/EP2018/052110	29 Jan 2018	06 Feb 2017
Dynamic rescheduling of HARQ feedback resources	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-015-EP-FFWF	17155750.7	10 Feb 2017	10 Feb 2017
Dynamic rescheduling of HARQ feedback resources	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-015-WO-PCT	PCT/EP2018/053231	08 Feb 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-FFWF	17162407.5	22 Mrz 2017	22 Mrz 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 Mrz 2018	22 Mrz 2017
Sub-PRB Transmission schemes for eMTC	Beale, Martin Warwick;Wong, Shin Horng;Atungsiri, Samuel Asangbeng;Priyanto, Basuki	I-17-032-EP-FFWF	17162920.7	24 Mrz 2017	24 Mrz 2017
Sub-PRB Transmission schemes for eMTC	Beale, Martin Warwick;Wong, Shin Horng;Atungsiri, Samuel Asangbeng;Priyanto, Basuki	I-17-032-WO-PCT	PCT/EP2018/057147	21 Mrz 2018	24 Mrz 2017
Pre-emption Indicator Resource Granularity for URLLC/eMTC Multiplexing	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-055-EP-FFWF	17169347.6	03 Mai 2017	03 Mai 2017
Pre-emption Indicator Resource Granularity for URLLC/eMTC Multiplexing	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-055-WO-PCT	PCT/EP2018/061197	02 Mai 2018	03 Mai 2017

Demodulation reference symbols for NR-PBCH	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-17-057-WO-PCT	PCT/EP2018/061578	04 Mai 2018	05 Mai 2017
Demodulation reference symbols for NR-PBCH	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-17-057-EP-FFWF	17169834.3	05 Mai 2017	05 Mai 2017
Conveying the Synchronisation Block Index via NR-PBCH Demodulation reference symbols	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick	I-17-073-EP-FFWF	17176479.8	16 Jun 2017	16 Jun 2017
Conveying the Synchronisation Block Index via NR-PBCH Demodulation reference symbols	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick	I-17-073-WO-PCT	PCT/EP2018/063683	24 Mai 2018	16 Jun 2017
Pre-emption resource set for common pre-emption indicator	Wong, Shin Horng;Atungsiri, Samuel Asangbeng	I-17-074-EP-FFWF	17176495.4	16 Jun 2017	16 Jun 2017
Pre-emption resource set for common pre-emption indicator	Wong, Shin Horng;Atungsiri, Samuel Asangbeng	I-17-074-WO-PCT	PCT/EP2018/064763	05 Jun 2018	16 Jun 2017
Supplementary Uplink transmission for NR	Wong, Shin Horng;Sharma, Vivek;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-108-WO-PCT	PCT/EP2018/070888	01 Aug 2018	10 Aug 2017
Supplementary Uplink transmission for NR	Wong, Shin Horng;Sharma, Vivek;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-108-TW-NP	107127278	06 Aug 2018	10 Aug 2017
Supplementary Uplink transmission for NR	Wong, Shin Horng;Sharma, Vivek;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-108-EP-FFWF	17185819.4	10 Aug 2017	10 Aug 2017
Wake Up Signal Sequence for IoT	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick;Sharma, Vivek	I-17-116-EP-FFWF	17186065.3	11 Aug 2017	11 Aug 2017

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Wake Up Signal Sequence for IoT	Atungsiri, Samuel Asangbeng; Wong, Shin Horng; Beale, Martin Warwick; Sharma, Vivek	I-17-116-WO-PCT	PCT/EP2018/071659	Aug 18	11 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-EP-FFWF	17186062.0	Aug 17	11 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	Aug 18	11 Aug 2017
Power Saving Signal transmissions in eDRX	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-17-130-WO-PCT	PCT/EP2018/075788	24 Sep 2018	28 Sep 2017
Power Saving Signal transmissions in eDRX	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-17-130-EP-FFWF	17193861.6	28 Sep 2017	28 Sep 2017
Configurable Indicator in Synchronisation Signal	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-17-160-EP-FFWF	17201748.5	14 Nov 2017	14 Nov 2017
Configurable Indicator in Synchronisation Signal	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-17-160-WO-PCT	PCT/EP2018/081246	14 Nov 2018	14 Nov 2017
WUS Formats Selection	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-17-166-EP-FFWF	17201751.9	14 Nov 2017	14 Nov 2017
WUS Formats Selection	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-17-166-WO-PCT	PCT/EP2018/081254	14 Nov 2018	14 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

UE specific WUS validity timer	Sharma, Vivek;Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-164-EP-FFWF	17201966.3	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-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
Modulation symbol repetition & Precoding for eMTC	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Shimezawa, Kazuyuki	I-17-172-EP-FFWF	17202456.4	17 Nov 2017	17 Nov 2017
Modulation symbol repetition & Precoding for eMTC	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Shimezawa, Kazuyuki	I-17-172-WO-PCT	PCT/EP2018/081402	15 Nov 2018	17 Nov 2017
Frequency Hopping for Wake Up Signal	Beale, Martin Warwick;Wong, Shin Horng;Atungsiri, Samuel Asangbeng	I-17-173-EP-FFWF	17202451.5	17 Nov 2017	17 Nov 2017
Frequency Hopping for Wake Up Signal	Beale, Martin Warwick;Wong, Shin Horng;Atungsiri, Samuel Asangbeng	I-17-173-WO-PCT	PCT/EP2018/080807	09 Nov 2018	17 Nov 2017
Uplink scheduling in IAB	Wei, Yuxin;Sharma, Vivek;Shimezawa, Kazuyuki;Atungsiri, Samuel Asangbeng	I-18-031-EP-FFWF	18164439.4	27 Mar 2018	27 Mar 2018
Uplink scheduling in IAB	Wei, Yuxin;Sharma, Vivek;Shimezawa, Kazuyuki;Atungsiri, Samuel Asangbeng	I-18-031-WO-PCT			27 Mar 2018

Spectral Efficiency for the Integrated Access Backhaul Links in NR	Atungsiri, Samuel Asangbeng;Shimezawa, Kazuyuki	I-18-061-EP-FFWF	18167380.7	13 Apr 2018	13 Apr 2018
Handover optimization for NTN	Wei, Yuxin;Atungsiri, Samuel Asangbeng	I-18-059-EP-FFWF	18167616.4	16 Apr 2018	16 Apr 2018
Discussions on handover in NTN	Atungsiri, Samuel Asangbeng;Wei, Yuxin	I-18-077-EP-FFWF	18171954.3	11 Mai 2018	11 Mai 2018
Critical message handling in the same DRB	Sharma, Vivek;Atungsiri, Samuel Asangbeng;Wong, Shin Hiong;Shimezawa, Kazuyuki;Wakabayashi, Hideji	I-18-071-EP-FFWF	18172380.0	15 Mai 2018	15 Mai 2018
Efficient multiplexing of access and backhaul traffics for the Integrated Access Backhaul Links in NR	Shimezawa, Kazuyuki;Atungsiri, Samuel Asangbeng;Wei, Yuxin	I-18-076-EP-FFWF	18173340.3	18 Mai 2018	18 Mai 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
Ensuring synchronicity in 5G	Wei, Yuxin;Atungsiri, Samuel Asangbeng;Wakabayashi, Hideji	I-18-082-EP-FFWF	18178838.1	20 Jun 2018	20 Jun 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
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

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
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
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
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
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
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
2-step RACH follow through to 4-step RACH	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Awad, Yassin Aden;Wei, Yuxin;Shimezawa, Kazuyuki	I-19-038-EP-FFWF	19157594.3	15 Feb 2019	15 Feb 2019

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FULL INVENTOR ASSIGNMENT

WHEREAS, I, as a named inventor listed on 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;

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 my employment agreement and/or with a preexisting agreement or mutual understanding between myself and ASSIGNEE SEU, is desirous of acquiring my 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);

[REDACTED]

NOW THEREFORE, 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, I, as an inventor as indicated above, by these presents do hereby assign, sell and transfer unto said ASSIGNEE SEU, the entire right, title and interest in and to 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 me 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 the 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

Assignment Inventor to SEU [REDACTED]

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.

I, as an inventor, further declare that I either have the obligation to assign or have already assigned the full and exclusive rights in and to any inventions made during my employment to said ASSIGNEE SEU based on my employment contract with said ASSIGNEE SEU, and/or that said ASSIGNEE SEU has obtained full and exclusive rights in and to any such inventions based on applicable national law or in accordance with a preexisting agreement or mutual understanding between myself and ASSIGNEE SEU, and that by this Assignment such transfer of right, title and interest in such inventions to said ASSIGNEE SEU is herewith confirmed or restated.

[REDACTED]

[REDACTED]

[REDACTED]

Assignment Inventor to SEU [REDACTED]

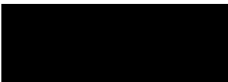
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The undersigned inventor and ASSIGNEE SEU hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale;

And the undersigned inventor 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 Inventor to SEU 

This assignment executed on the dates indicated below.

Martin Warwick Beale

14/03/2019

Name of inventor

Execution date of this assignment [DD/MONTH/YYYY]

MWB
Signature of inventor

SONY EUROPE LIMITED

Date:

19/03/2019

[DD/MONTH/YYYY]

By:

Matthias Kabelitz

Name: Matthias Kabelitz

Title: Intellectual Property Vendor Manager

As duly authorized officer

APPENDIX

Title	Inventors	Sony IPE ref.	Application Number	Filing Date	Priority Date
LTE-U Channel Occupancy measurement	Martin, Brian Alexander; Beale, Martin Warwick; Wakabayashi, Hideji	I-14-061-US-PCT	15/323586	24 Jul 2015	25 Jul 2014
LTE-U Channel Occupancy measurement	Martin, Brian Alexander; Beale, Martin Warwick; Wakabayashi, Hideji	I-14-061-EP-ETD	18205757.0	12 Nov 2018	25 Jul 2014
LTE-U Channel Occupancy measurement	Martin, Brian Alexander; Beale, Martin Warwick; Wakabayashi, Hideji	I-14-061-EP-FFWF	14178654.1	25 Jul 2014	25 Jul 2014
LTE-U Channel Occupancy measurement	Martin, Brian Alexander; Beale, Martin Warwick; Wakabayashi, Hideji	I-14-061-WO-PCT	PCT/EP2015/066962	24 Jul 2015	25 Jul 2014
LTE-U Channel Occupancy measurement	Martin, Brian Alexander; Beale, Martin Warwick; Wakabayashi, Hideji	I-14-061-EP-EPT	15738950.3	24 Jul 2015	25 Jul 2014
Use of pi/4 BPSK for carrying Preamble for ATSC3 - Signal Space Diversity 5G	Atungsiri, Samuel Asangbeng; Beale, Martin Warwick	I-14-116-WO-PCT	PCT/GB2015/053440	12 Nov 2015	12 Nov 2014
Use of pi/4 BPSK for carrying Preamble for ATSC3 - Signal Space Diversity 5G	Atungsiri, Samuel Asangbeng; Beale, Martin Warwick	I-14-116-EP-EPT	15797154.0	12 Nov 2015	12 Nov 2014
Use of pi/4 BPSK for carrying Preamble for ATSC3 - Signal Space Diversity 5G	Atungsiri, Samuel Asangbeng; Beale, Martin Warwick	I-14-116-US-PCT	15/523771	12 Nov 2015	12 Nov 2014
UE Measurement event for LAA	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-113-EP-FFWF	14193068.5	13 Nov 2014	13 Nov 2014

UE Measurement event for LAA	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-113-WO-PCT	PCT/EP2015/076170	10 Nov 2015	13 Nov 2014
UE Measurement event for LAA	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-113-TW-NP	104136047	02 Nov 2015	13 Nov 2014
UE Measurement event for LAA	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-113-EP-EPT	15797894.1	10 Nov 2015	13 Nov 2014
UE Measurement event for LAA	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-113-US-PCT	15/523573	10 Nov 2015	13 Nov 2014
UE Measurement event for LAA	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-113-US-CNT	16/144955	27 Sep 2018	13 Nov 2014
UE Measurement event for LAA	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-113-EP-EPD	17187439.9	23 Aug 2017	13 Nov 2014
Group Paging for LAA measurements	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-114-WO-PCT	PCT/EP2015/076171	10 Nov 2015	13 Nov 2014
Group Paging for LAA measurements	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-114-EP-EPT	15791634.7	10 Nov 2015	13 Nov 2014
Group Paging for LAA measurements	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-114-US-PCT	15/523739	10 Nov 2015	13 Nov 2014
Group Paging for LAA measurements	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-114-US-PCD	16/120021	31 Aug 2018	13 Nov 2014
Group Paging for LAA measurements	Martin, Brian Alexander; Beale, Martin Warwick; Takano, Hiroaki; Berggren, Anders	I-14-114-EP-FFWF	14193067.7	13 Nov 2014	13 Nov 2014
Power Consumption Optimization through adjustment of Coverage Enhancement Capability	Morioka, Yuichi; Beale, Martin Warwick	I-14-125-EP-FFWF	15153313.0	30 Jan 2015	30 Jan 2015

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Power Consumption Optimization through adjustment of Coverage Enhancement Capability	Morioka, Yuichi;Beale, Martin Warwick	I-14-125-US-PCT	15/544383	06 Jan 2016	30 Jan 2015
Power Consumption Optimization through adjustment of Coverage Enhancement Capability	Morioka, Yuichi;Beale, Martin Warwick	I-14-125-EP-EPT	16700153.6	06 Jan 2016	30 Jan 2015
Power Consumption Optimization through adjustment of Coverage Enhancement Capability	Morioka, Yuichi;Beale, Martin Warwick	I-14-125-WO-PCT	PCT/EP2016/050111	06 Jan 2016	30 Jan 2015
Scheduling of SIBs for low complexity UE	Martin, Brian Alexander;Beale, Martin Warwick	I-14-133-US-CNT	15/615543	06 Jun 2017	30 Jan 2015
Scheduling of SIBs for low complexity UE	Martin, Brian Alexander;Beale, Martin Warwick	I-14-133-US-CNT[1]	15/964944	27 Apr 2018	30 Jan 2015
Scheduling of SIBs for low complexity UE	Martin, Brian Alexander;Beale, Martin Warwick	I-14-133-EP-ETD	18201590.9	19 Okt 2018	30 Jan 2015
Scheduling of SIBs for low complexity UE	Martin, Brian Alexander;Beale, Martin Warwick	I-14-133-WO-PCT	PCT/EP2016/050433	12 Jan 2016	30 Jan 2015
Scheduling of SIBs for low complexity UE	Martin, Brian Alexander;Beale, Martin Warwick	I-14-133-EP-FFWF	15153349.4	30 Jan 2015	30 Jan 2015
Scheduling of SIBs for low complexity UE	Martin, Brian Alexander;Beale, Martin Warwick	I-14-133-EP-EPT	16700694.9	12 Jan 2016	30 Jan 2015
Thresholds for selection of amount of coverage enhancement	Martin, Brian Alexander;Beale, Martin Warwick;Priyanto, Basuki	I-15-014-TW-NP	104144240	29 Dez 2015	12 Feb 2015
Thresholds for selection of amount of coverage enhancement	Martin, Brian Alexander;Beale, Martin Warwick;Priyanto, Basuki	I-15-014-EP-FFWF	15154857.5	12 Feb 2015	12 Feb 2015
Thresholds for selection of amount of coverage enhancement	Martin, Brian Alexander;Beale, Martin Warwick;Priyanto, Basuki	I-15-014-WO-PCT	PCT/EP2015/080811	21 Dez 2015	12 Feb 2015
Thresholds for selection of amount of coverage enhancement	Martin, Brian Alexander;Beale, Martin Warwick;Priyanto, Basuki	I-15-014-EP-EPT	15817319.5	21 Dez 2015	12 Feb 2015

Thresholds for selection of amount of coverage enhancement	Martin, Brian Alexander; Beale, Martin Warwick; Priyanto, Basuki	I-15-014-US-PCT	15/548429	21 Dez 2015	12 Feb 2015
RLC retransmission carrier awareness	Martin, Brian Alexander; Beale, Martin Warwick	I-15-025-EP-FFWF	15159522.0	17 Mrz 2015	17 Mrz 2015
RLC retransmission carrier awareness	Martin, Brian Alexander; Beale, Martin Warwick	I-15-025-US-PCT	15/552954	23 Feb 2016	17 Mrz 2015
RLC retransmission carrier awareness	Martin, Brian Alexander; Beale, Martin Warwick	I-15-025-EP-EPT	16706339.5	23 Feb 2016	17 Mrz 2015
RLC retransmission carrier awareness	Martin, Brian Alexander; Beale, Martin Warwick	I-15-025-WO-PCT	PCT/EP2016/053737	23 Feb 2016	17 Mrz 2015
Antenna port consistency of distributed ePDCCH transmissions	Beale, Martin Warwick; Martin, Brian Alexander	I-15-029-EP-EPT	16709351.7	08 Mrz 2016	10 Apr 2015
Antenna port consistency of distributed ePDCCH transmissions	Beale, Martin Warwick; Martin, Brian Alexander	I-15-029-US-PCT	15/553470	08 Mrz 2016	10 Apr 2015
Antenna port consistency of distributed ePDCCH transmissions	Beale, Martin Warwick; Martin, Brian Alexander	I-15-029-EP-FFWF	15163288.2	10 Apr 2015	10 Apr 2015
Antenna port consistency of distributed ePDCCH transmissions	Beale, Martin Warwick; Martin, Brian Alexander	I-15-029-WO-PCT	PCT/EP2016/054922	08 Mrz 2016	10 Apr 2015
ePDCCH rate matching in enhanced coverage mode in LTE-A	Beale, Martin Warwick	I-15-036-WO-PCT	PCT/EP2016/055082	10 Mrz 2016	10 Apr 2015
ePDCCH rate matching in enhanced coverage mode in LTE-A	Beale, Martin Warwick	I-15-036-US-PCT	15/554200	10 Mrz 2016	10 Apr 2015
ePDCCH rate matching in enhanced coverage mode in LTE-A	Beale, Martin Warwick	I-15-036-EP-EPT	16712248.0	10 Mrz 2016	10 Apr 2015
ePDCCH rate matching in enhanced coverage mode in LTE-A	Beale, Martin Warwick	I-15-036-EP-FFWF	15163291.6	10 Apr 2015	10 Apr 2015
Switched antenna transmit diversity.	Beale, Martin Warwick; Kosta, Chrysovalantis	I-15-044-US-PCT	15/554747	14 Mrz 2016	10 Apr 2015

Switched antenna transmit diversity.	Beale, Martin Warwick;Kosta, Chrysovalantis	I-15-044-EP-EPT	16713308.1	14 Mrz 2016	10 Apr 2015
Switched antenna transmit diversity.	Beale, Martin Warwick;Kosta, Chrysovalantis	I-15-044-US-CNT	16/195337	19 Nov 2018	10 Apr 2015
Switched antenna transmit diversity.	Beale, Martin Warwick;Kosta, Chrysovalantis	I-15-044-EP-FFWF	15163295.7	10 Apr 2015	10 Apr 2015
Switched antenna transmit diversity.	Beale, Martin Warwick;Kosta, Chrysovalantis	I-15-044-WO-PCT	PCT/EP2016/055452	14 Mrz 2016	10 Apr 2015
Virtual RAT	Martin, Brian Alexander;Beale, Martin Warwick	I-15-073-EP-EPT	16750702.9	01 Aug 2016	11 Aug 2015
Virtual RAT	Martin, Brian Alexander;Beale, Martin Warwick	I-15-073-WO-PCT	PCT/EP2016/068276	01 Aug 2016	11 Aug 2015
Virtual RAT	Martin, Brian Alexander;Beale, Martin Warwick	I-15-073-EP-FFWF	15180651.0	11 Aug 2015	11 Aug 2015
Virtual RAT	Martin, Brian Alexander;Beale, Martin Warwick	I-15-073-US-PCT	15/743431	01 Aug 2016	11 Aug 2015
Reduced Measurement for LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-097-WO-PCT	PCT/EP2016/067391	21 Jul 2016	14 Aug 2015
Reduced Measurement for LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-097-EP-EPT	16744349.8	21 Jul 2016	14 Aug 2015
Reduced Measurement for LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-097-US-PCT	15/746044	21 Jul 2016	14 Aug 2015
Reduced Measurement for LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-097-EP-FFWF	15181121.3	14 Aug 2015	14 Aug 2015
MPDCC Scrambling in Coverage Enhanced LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-098-EP-EPT	16751504.8	21 Jul 2016	14 Aug 2015
MPDCC Scrambling in Coverage Enhanced LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-098-US-PCT	15/743113	21 Jul 2016	14 Aug 2015
MPDCC Scrambling in Coverage Enhanced LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-098-WO-PCT	PCT/EP2016/067390	21 Jul 2016	14 Aug 2015
MPDCC Scrambling in Coverage Enhanced LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-098-EP-FFWF	15181174.2	14 Aug 2015	14 Aug 2015

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PDSCH & UL HARQ ACK/NACK Collision in Coverage Enhanced Operation for LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-111-EP- FFWF	15186972.4	25 Sep 2015	25 Sep 2015
PDSCH & UL HARQ ACK/NACK Collision in Coverage Enhanced Operation for LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-111-WO- PCT	PCT/EP2016/072743	23 Sep 2016	25 Sep 2015
PDSCH & UL HARQ ACK/NACK Collision in Coverage Enhanced Operation for LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-111-US- PCT	15/751645	23 Sep 2016	25 Sep 2015
PDSCH & UL HARQ ACK/NACK Collision in Coverage Enhanced Operation for LC-MTC	Wong, Shin Horng;Beale, Martin Warwick	I-15-111-EP-EPT	16770754.6	23 Sep 2016	25 Sep 2015
MPDCCH with reduced CRC	Beale, Martin Warwick;Wong, Shin Horng	I-15-114-US- PCT	15/751635	08 Sep 2016	25 Sep 2015
MPDCCH with reduced CRC	Beale, Martin Warwick;Wong, Shin Horng	I-15-114-EP-EPT	16763777.6	08 Sep 2016	25 Sep 2015
MPDCCH with reduced CRC	Beale, Martin Warwick;Wong, Shin Horng	I-15-114-WO- PCT	PCT/EP2016/071208	08 Sep 2016	25 Sep 2015
MPDCCH with reduced CRC	Beale, Martin Warwick;Wong, Shin Horng	I-15-114-EP- FFWF	15186986.4	25 Sep 2015	25 Sep 2015
MPDCCH with reduced CRC	Beale, Martin Warwick;Wong, Shin Horng	I-15-114-EP- FFWF[1]	15187000.3	25 Sep 2015	25 Sep 2015
HARQ search space for MTC	Beale, Martin Warwick;Wong, Shin Horng	I-15-116-WO- PCT	PCT/EP2016/069825	22 Aug 2016	25 Sep 2015
HARQ search space for MTC	Beale, Martin Warwick;Wong, Shin Horng	I-15-116-EP- FFWF	15186989.8	25 Sep 2015	25 Sep 2015
HARQ search space for MTC	Beale, Martin Warwick;Wong, Shin Horng	I-15-116-EP-EPT	16754501.1	22 Aug 2016	25 Sep 2015
HARQ search space for MTC	Beale, Martin Warwick;Wong, Shin Horng	I-15-116-US- PCT	15/751502	22 Aug 2016	25 Sep 2015

Determination of physical transmission format as a function of UE speed	Beale, Martin Warwick; Wong, Shin Horng; Wei, Yuxin	I-15-117-US-PCT	15/751510	22 Aug 2016	25 Sep 2015
Determination of physical transmission format as a function of UE speed	Beale, Martin Warwick; Wong, Shin Horng; Wei, Yuxin	I-15-117-EP-EPT	16756682.7	22 Aug 2016	25 Sep 2015
Determination of physical transmission format as a function of UE speed	Beale, Martin Warwick; Wong, Shin Horng; Wei, Yuxin	I-15-117-WO-PCT	PCT/EP2016/069826	22 Aug 2016	25 Sep 2015
Determination of physical transmission format as a function of UE speed	Beale, Martin Warwick; Wong, Shin Horng; Wei, Yuxin	I-15-117-EP-FFWF	15186993.0	25 Sep 2015	25 Sep 2015
Adapting the Total Number of HARQ Processes for LC-MTC	Wong, Shin Horng; Beale, Martin Warwick	I-15-141-US-CIP	15/342881	03 Nov 2016	04 Nov 2015
Adapting the Total Number of HARQ Processes for LC-MTC	Wong, Shin Horng; Beale, Martin Warwick	I-15-141-WO-PCT	PCT/EP2016/074605	13 Okt 2016	04 Nov 2015
Adapting the Total Number of HARQ Processes for LC-MTC	Wong, Shin Horng; Beale, Martin Warwick	I-15-141-EP-FFWF	15193082.3	04 Nov 2015	04 Nov 2015
Adapting the Total Number of HARQ Processes for LC-MTC	Wong, Shin Horng; Beale, Martin Warwick	I-15-141-EP-EPT	16781444.1	13 Okt 2016	04 Nov 2015
Adapting the Total Number of HARQ Processes for LC-MTC	Wong, Shin Horng; Beale, Martin Warwick	I-15-141-US-CNT	16/194395	19 Nov 2018	04 Nov 2015
Implicit DRX command using RLC	Martin, Brian Alexander; Beale, Martin Warwick; Wong, Shin Horng; Tsuda, Shinichiro	I-15-130-US-PCT	15/771526	14 Okt 2016	05 Nov 2015
Implicit DRX command using RLC	Martin, Brian Alexander; Beale, Martin Warwick; Wong, Shin Horng; Tsuda, Shinichiro	I-15-130-WO-PCT	PCT/EP2016/074766	14 Okt 2016	05 Nov 2015

Implicit DRX command using RLC	Martin, Brian Alexander; Beale, Martin Warwick; Wong, Shin Horng; Tsuda, Shinichiro	I-15-130-EP-EPT	16784454.7	14 Okt 2016	05 Nov 2015
Implicit DRX command using RLC	Martin, Brian Alexander; Beale, Martin Warwick; Wong, Shin Horng; Tsuda, Shinichiro	I-15-130-EP-FFWF	15193159.9	05 Nov 2015	05 Nov 2015
P-RNTI partitioning for paging of MTC devices	Martin, Brian Alexander; Beale, Martin Warwick; Wong, Shin Horng; Tsuda, Shinichiro	I-15-140-WO-PCT	PCT/EP2016/074897	17 Okt 2016	06 Nov 2015
P-RNTI partitioning for paging of MTC devices	Martin, Brian Alexander; Beale, Martin Warwick; Wong, Shin Horng; Tsuda, Shinichiro	I-15-140-EP-FFWF	15193556.6	06 Nov 2015	06 Nov 2015
P-RNTI partitioning for paging of MTC devices	Martin, Brian Alexander; Beale, Martin Warwick; Wong, Shin Horng; Tsuda, Shinichiro	I-15-140-EP-EPT	16784475.2	17 Okt 2016	06 Nov 2015
P-RNTI partitioning for paging of MTC devices	Martin, Brian Alexander; Beale, Martin Warwick; Wong, Shin Horng; Tsuda, Shinichiro	I-15-140-US-PCT	15/771509	17 Okt 2016	06 Nov 2015
High Priority Narrowband for NB-IoT operations	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Tsuda, Shinichiro	I-15-142-US-PCT	15/770843	13 Okt 2016	06 Nov 2015
High Priority Narrowband for NB-IoT operations	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Tsuda, Shinichiro	I-15-142-EP-EPT	16784433.1	13 Okt 2016	06 Nov 2015
High Priority Narrowband for NB-IoT operations	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Tsuda, Shinichiro	I-15-142-EP-FFWF	15193566.5	06 Nov 2015	06 Nov 2015
High Priority Narrowband for NB-IoT operations	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Tsuda, Shinichiro	I-15-142-WO-PCT	PCT/EP2016/074582	13 Okt 2016	06 Nov 2015
RV cycling for Frequency Hopped System	Beale, Martin Warwick; Wong, Shin Horng	I-15-147-WO-PCT	PCT/EP2016/076794	07 Nov 2016	19 Nov 2015
RV cycling for Frequency Hopped System	Beale, Martin Warwick; Wong, Shin Horng	I-15-147-US-PSP	62/257591	19 Nov 2015	19 Nov 2015
RV cycling for Frequency Hopped System	Beale, Martin Warwick; Wong, Shin Horng	I-15-147-EP-EPT	16791040.5	07 Nov 2016	19 Nov 2015

RV cycling for Frequency Hopped System	Beale, Martin Warwick; Wong, Shin Horng	I-15-147-US-PCT	15/775051	07 Nov 2016	19 Nov 2015
NB-IoT Uplink Subcarrier Spacing Type Indicator	Wong, Shin Horng; Beale, Martin Warwick	I-15-161-EP-EPT	16822207.3	28 Dez 2016	11 Jan 2016
NB-IoT Uplink Subcarrier Spacing Type Indicator	Wong, Shin Horng; Beale, Martin Warwick	I-15-161-US-CNT[1]	15/835499	08 Dez 2017	11 Jan 2016
NB-IoT Uplink Subcarrier Spacing Type Indicator	Wong, Shin Horng; Beale, Martin Warwick	I-15-161-US-CNT	15/615511	06 Jun 2017	11 Jan 2016
NB-IoT Uplink Subcarrier Spacing Type Indicator	Wong, Shin Horng; Beale, Martin Warwick	I-15-161-WO-PCT	PCT/EP2016/082762	28 Dez 2016	11 Jan 2016
NB-IoT Uplink Subcarrier Spacing Type Indicator	Wong, Shin Horng; Beale, Martin Warwick	I-15-161-EP-FFWF	16150823.9	11 Jan 2016	11 Jan 2016
NB-IoT Uplink Subcarrier Spacing Type Indicator	Wong, Shin Horng; Beale, Martin Warwick	I-15-161-US-CNT[2]	16/207215	03 Dez 2018	11 Jan 2016
Multiple NB-IoT Band Congestion Control and Cycling of barring bitmap for NB-IOT	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander	I-15-160-WO-PCT	PCT/EP2016/082758	28 Dez 2016	12 Jan 2016
Multiple NB-IoT Band Congestion Control and Cycling of barring bitmap for NB-IOT	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander	I-15-160-EP-EPT	16822206.5	28 Dez 2016	12 Jan 2016
Multiple NB-IoT Band Congestion Control and Cycling of barring bitmap for NB-IOT	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander	I-15-160-US-PCT	16/067462	28 Dez 2016	12 Jan 2016
Multiple NB-IoT Band Congestion Control and Cycling of barring bitmap for NB-IOT	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander	I-15-160-EP-FFWF	16150966.6	12 Jan 2016	12 Jan 2016
NB-IoT Standalone/Inband Cell (Re)selection and Indication of idle mode measured results for NB-IoT	Beale, Martin Warwick; Wong, Shin Horng; Martin, Brian Alexander	I-15-163-WO-PCT	PCT/EP2016/082757	28 Dez 2016	12 Jan 2016

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NB-IoT Standalone/Inband Cell (Re)selection and Indication of idle mode measured results for NB- IoT	Beale, Martin Warwick; Wong, Shin Horng; Martin, Brian Alexander	I-15-163-EP-EPT	16826071.9	28 Dez 2016	12 Jan 2016
NB-IoT Standalone/Inband Cell (Re)selection and Indication of idle mode measured results for NB- IoT	Beale, Martin Warwick; Wong, Shin Horng; Martin, Brian Alexander	I-15-163-US- PCT	16/066123	28 Dez 2016	12 Jan 2016
NB-IoT Standalone/Inband Cell (Re)selection and Indication of idle mode measured results for NB- IoT	Beale, Martin Warwick; Wong, Shin Horng; Martin, Brian Alexander	I-15-163-EP- FFWF	16150979.9	12 Jan 2016	12 Jan 2016
Inter-RAT device group capabilities	Martin, Brian Alexander; Wei, Yuxin; Beale, Martin Warwick; Tsuda, Shinichiro; Wakabayashi, Hideji	I-15-123-EP-EPT	17700412.4	13 Jan 2017	04 Feb 2016
Inter-RAT device group capabilities	Martin, Brian Alexander; Wei, Yuxin; Beale, Martin Warwick; Tsuda, Shinichiro; Wakabayashi, Hideji	I-15-123-US- PCT	16/075264	13 Jan 2017	04 Feb 2016
Inter-RAT device group capabilities	Martin, Brian Alexander; Wei, Yuxin; Beale, Martin Warwick; Tsuda, Shinichiro; Wakabayashi, Hideji	I-15-123-EP- FFWF	16154318.6	04 Feb 2016	04 Feb 2016
Inter-RAT device group capabilities	Martin, Brian Alexander; Wei, Yuxin; Beale, Martin Warwick; Tsuda, Shinichiro; Wakabayashi, Hideji	I-15-123-WO- PCT	PCT/EP2017/050649	13 Jan 2017	04 Feb 2016
NB-PBCH Antenna Port Determination in NB-IoT	Wong, Shin Horng; Beale, Martin Warwick	I-16-012-EP- FFWF	16154577.7	05 Feb 2016	05 Feb 2016

dycNB-PBCH Antenna Port Determination in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick	I-16-012-US-PCT	16/075538	03 Feb 2017	05 Feb 2016
dycNB-PBCH Antenna Port Determination in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick	I-16-012-EP-EPT	17702414.8	03 Feb 2017	05 Feb 2016
dycNB-PBCH Antenna Port Determination in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick	I-16-012-WO-PCT	PCT/EP2017/052462	03 Feb 2017	05 Feb 2016
Repetition for Long TTI in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick	I-16-013-EP-FFWF	16154582.7	05 Feb 2016	05 Feb 2016
Repetition for Long TTI in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick	I-16-013-US-CNT	15/615087	06 Jun 2017	05 Feb 2016
Repetition for Long TTI in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick	I-16-013-US-CNT[1]	15/834552	07 Dez 2017	05 Feb 2016
Repetition for Long TTI in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick	I-16-013-EP-EPT	17702411.4	03 Feb 2017	05 Feb 2016
Repetition for Long TTI in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick	I-16-013-WO-PCT	PCT/EP2017/052454	03 Feb 2017	05 Feb 2016
Reduced complexity decoding of NB-PDCCH	Beale, Martin Warwick; Wong, Shin Horn	I-16-023-WO-PCT	PCT/EP2017/052561	06 Feb 2017	25 Feb 2016
Reduced complexity decoding of NB-PDCCH	Beale, Martin Warwick; Wong, Shin Horn	I-16-023-EP-EPT	17702655.6	06 Feb 2017	25 Feb 2016
Reduced complexity decoding of NB-PDCCH	Beale, Martin Warwick; Wong, Shin Horn	I-16-023-US-PCT	16/078016	06 Feb 2017	25 Feb 2016
Reduced complexity decoding of NB-PDCCH	Beale, Martin Warwick; Wong, Shin Horn	I-16-023-EP-FFWF	16157489.2	25 Feb 2016	25 Feb 2016
Collision Handling in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick; Priyanto, Basuki	I-16-030-US-PCT	16/079238	07 Mrz 2017	11 Mrz 2016
Collision Handling in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick; Priyanto, Basuki	I-16-030-EP-FFWF[1]	16164756.5	11 Apr 2016	11 Mrz 2016
Collision Handling in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick; Priyanto, Basuki	I-16-030-EP-FFWF	16160019.2	11 Mrz 2016	11 Mrz 2016
Collision Handling in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick; Priyanto, Basuki	I-16-030-EP-EPT	17708298.9	07 Mrz 2017	11 Mrz 2016
Collision Handling in NB-IoT	Wong, Shin Horn; Beale, Martin Warwick; Priyanto, Basuki	I-16-030-WO-PCT	PCT/EP2017/055341	07 Mrz 2017	11 Mrz 2016

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NB-PDCCH Repetitions in CSS for Paging in NB-IoT	Wong, Shin Horng;Beale, Martin Warwick	I-16-033-US-PCT	16/078645	09 Feb 2017	11 Mrz 2016
NB-PDCCH Repetitions in CSS for Paging in NB-IoT	Wong, Shin Horng;Beale, Martin Warwick	I-16-033-EP-EPT	17703188.7	09 Feb 2017	11 Mrz 2016
NB-PDCCH Repetitions in CSS for Paging in NB-IoT	Wong, Shin Horng;Beale, Martin Warwick	I-16-033-WO-PCT	PCT/EP2017/052874	09 Feb 2017	11 Mrz 2016
NB-PDCCH Repetitions in CSS for Paging in NB-IoT	Wong, Shin Horng;Beale, Martin Warwick	I-16-033-EP-FFWF	16160026.7	11 Mrz 2016	11 Mrz 2016
Frequency offset indication	Beale, Martin Warwick;Wong, Shin Horng;Priyanto, Basuki	I-16-031-EP-FFWF	16160533.2	15 Mrz 2016	15 Mrz 2016
Frequency offset indication	Beale, Martin Warwick;Wong, Shin Horng;Priyanto, Basuki	I-16-031-EP-FFWF[1]	16163943.0	05 Apr 2016	15 Mrz 2016
Frequency offset indication	Beale, Martin Warwick;Wong, Shin Horng;Priyanto, Basuki	I-16-031-EP-FFWF[2]	16171552.9	26 Mai 2016	15 Mrz 2016
Frequency offset indication	Beale, Martin Warwick;Wong, Shin Horng;Priyanto, Basuki	I-16-031-WO-PCT	PCT/EP2017/055581	09 Mrz 2017	15 Mrz 2016
Frequency offset indication	Beale, Martin Warwick;Wong, Shin Horng;Priyanto, Basuki	I-16-031-EP-EPT	17709447.1	09 Mrz 2017	15 Mrz 2016
Frequency offset indication	Beale, Martin Warwick;Wong, Shin Horng;Priyanto, Basuki	I-16-031-US-CNT	15/654611	19 Jul 2017	15 Mrz 2016
Indication identifying eNB in case of RRC Connection Resume after cell reselection	Martin, Brian Alexander;Berggren, Anders;Beale, Martin Warwick	I-16-028-WO-PCT	PCT/EP2017/053752	20 Feb 2017	23 Mrz 2016
Indication identifying eNB in case of RRC Connection Resume after cell reselection	Martin, Brian Alexander;Berggren, Anders;Beale, Martin Warwick	I-16-028-EP-EPT	17705151.3	20 Feb 2017	23 Mrz 2016
Indication identifying eNB in case of RRC Connection Resume after cell reselection	Martin, Brian Alexander;Berggren, Anders;Beale, Martin Warwick	I-16-028-US-PCT	16/079115	20 Feb 2017	23 Mrz 2016
Indication identifying eNB in case of RRC Connection Resume after cell reselection	Martin, Brian Alexander;Berggren, Anders;Beale, Martin Warwick	I-16-028-EP-FFWF	16162035.6	23 Mrz 2016	23 Mrz 2016

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Distinguishing Paging Occasions in NB-IoT	Wong, Shin Horng; Beale, Martin Warwick	I-16-041-US-PCT	16/091273	31 Mrz 2017	05 Apr 2016
Distinguishing Paging Occasions in NB-IoT	Wong, Shin Horng; Beale, Martin Warwick	I-16-041-WO-PCT	PCT/EP2017/057758	31 Mrz 2017	05 Apr 2016
Distinguishing Paging Occasions in NB-IoT	Wong, Shin Horng; Beale, Martin Warwick	I-16-041-TW-NP	106107628	08 Mrz 2017	05 Apr 2016
Distinguishing Paging Occasions in NB-IoT	Wong, Shin Horng; Beale, Martin Warwick	I-16-041-EP-FFWF	16163933.1	05 Apr 2016	05 Apr 2016
Distinguishing Paging Occasions in NB-IoT	Wong, Shin Horng; Beale, Martin Warwick	I-16-041-EP-EPT	17713703.1	31 Mrz 2017	05 Apr 2016
Variable Msg3 size transmission	Beale, Martin Warwick; Wong, Shin Horng	I-16-043-EP-FFWF	16163808.5	05 Apr 2016	05 Apr 2016
Variable Msg3 size transmission	Beale, Martin Warwick; Wong, Shin Horng	I-16-043-WO-PCT	PCT/EP2017/057990	04 Apr 2017	05 Apr 2016
Variable Msg3 size transmission	Beale, Martin Warwick; Wong, Shin Horng	I-16-043-EP-EPT	17715162.8	04 Apr 2017	05 Apr 2016
Variable Msg3 size transmission	Beale, Martin Warwick; Wong, Shin Horng	I-16-043-US-PCT	16/091182	04 Apr 2017	05 Apr 2016
Flexible frame structure for NR	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-067-US-PCT	16/098134	27 Apr 2017	13 Mai 2016
Flexible frame structure for NR	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-067-EP-FFWF	16169734.7	13 Mai 2016	13 Mai 2016
Flexible frame structure for NR	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-067-WO-PCT	PCT/EP2017/060113	27 Apr 2017	13 Mai 2016
Flexible frame structure for NR	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-067-EP-EPT	17721102.6	27 Apr 2017	13 Mai 2016
Energy Efficient Transmit & Receive Points for High Speed Train	Wong, Shin Horng; Beale, Martin Warwick	I-16-079-EP-FFWF	16182891.8	04 Aug 2016	04 Aug 2016
Energy Efficient Transmit & Receive Points for High Speed Train	Wong, Shin Horng; Beale, Martin Warwick	I-16-079-WO-PCT	PCT/EP2017/069755	03 Aug 2017	04 Aug 2016

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Energy Efficient Transmit & Receive Points for High Speed Train	Wong, Shin Horng;Beale, Martin Warwick	I-16-079-EP-EPT	17748759.2	03 Aug 2017	04 Aug 2016
Energy Efficient Transmit & Receive Points for High Speed Train	Wong, Shin Horng;Beale, Martin Warwick	I-16-079-US-PCT	16/321036	03 Aug 2017	04 Aug 2016
UE Speed Dependent Uplink Reference Signal Transmission for Mobility in NR	Wong, Shin Horng;Martin, Brian Alexander;Beale, Martin Warwick;Wei, Yuxin;Wakabayashi, Hideji;Kosta, Chrysovalantis	I-16-088-EP-EPT	17734373.8	05 Jul 2017	10 Aug 2016
UE Speed Dependent Uplink Reference Signal Transmission for Mobility in NR	Wong, Shin Horng;Martin, Brian Alexander;Beale, Martin Warwick;Wei, Yuxin;Wakabayashi, Hideji;Kosta, Chrysovalantis	I-16-088-WO-PCT	PCT/EP2017/066834	05 Jul 2017	10 Aug 2016
UE Speed Dependent Uplink Reference Signal Transmission for Mobility in NR	Wong, Shin Horng;Martin, Brian Alexander;Beale, Martin Warwick;Wei, Yuxin;Wakabayashi, Hideji;Kosta, Chrysovalantis	I-16-088-EP-FFWF	16183540.0	10 Aug 2016	10 Aug 2016
UE Speed Dependent Uplink Reference Signal Transmission for Mobility in NR	Wong, Shin Horng;Martin, Brian Alexander;Beale, Martin Warwick;Wei, Yuxin;Wakabayashi, Hideji;Kosta, Chrysovalantis	I-16-088-US-PCT	16/322970	05 Jul 2017	10 Aug 2016
Power Saving OTDOA in MTC	Wong, Shin Horng;Beale, Martin Warwick;Martin, Brian Alexander	I-16-107-EP-FFWF	16183546.7	10 Aug 2016	10 Aug 2016
Power Saving OTDOA in MTC	Wong, Shin Horng;Beale, Martin Warwick;Martin, Brian Alexander	I-16-107-WO-PCT	PCT/EP2017/067746	13 Jul 2017	10 Aug 2016
Power Saving OTDOA in MTC	Wong, Shin Horng;Beale, Martin Warwick;Martin, Brian Alexander	I-16-107-US-PCT	16/324126	13 Jul 2017	10 Aug 2016
Power Saving OTDOA in MTC	Wong, Shin Horng;Beale, Martin Warwick;Martin, Brian Alexander	I-16-107-EP-EPT	17736976.6	13 Jul 2017	10 Aug 2016

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Inactive RRC State Uplink Feedback for New Radio	Wong, Shin Horng; Martin, Brian Alexander; Beale, Martin Warwick; Wei, Yuxin; Berggren, Anders; Nord, Lars	I-16-082-EP- FFWF	16183726.5	11 Aug 2016	11 Aug 2016
Inactive RRC State Uplink Feedback for New Radio	Wong, Shin Horng; Martin, Brian Alexander; Beale, Martin Warwick; Wei, Yuxin; Berggren, Anders; Nord, Lars	I-16-082-EP-EPT	17749670.0	27 Jul 2017	11 Aug 2016
Inactive RRC State Uplink Feedback for New Radio	Wong, Shin Horng; Martin, Brian Alexander; Beale, Martin Warwick; Wei, Yuxin; Berggren, Anders; Nord, Lars	I-16-082-WO- PCT	PCT/EP2017/069003	27 Jul 2017	11 Aug 2016
Inactive RRC State Uplink Feedback for New Radio	Wong, Shin Horng; Martin, Brian Alexander; Beale, Martin Warwick; Wei, Yuxin; Berggren, Anders; Nord, Lars	I-16-082-US- PCT	16/324574	27 Jul 2017	11 Aug 2016
Uplink based handover location based trigger	Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick; Wei, Yuxin; Wakabayashi, Hideji; Kosta, Chrysovalantis	I-16-093-EP- FFWF	16183702.6	11 Aug 2016	11 Aug 2016
Uplink based handover location based trigger	Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick; Wei, Yuxin; Wakabayashi, Hideji; Kosta, Chrysovalantis	I-16-093-WO- PCT	PCT/EP2017/067875	14 Jul 2017	11 Aug 2016
Uplink based handover location based trigger	Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick; Wei, Yuxin; Wakabayashi, Hideji; Kosta, Chrysovalantis	I-16-093-EP-EPT	17742712.7	14 Jul 2017	11 Aug 2016
Uplink based handover location based trigger	Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick; Wei, Yuxin; Wakabayashi, Hideji; Kosta, Chrysovalantis	I-16-093-US- PCT	16/323534	14 Jul 2017	11 Aug 2016

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UE specific Supplementary PRS for MTC	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander	I-16-103-WO- PCT	PCT/EP2017/067987	17 Jul 2017	12 Aug 2016
UE specific Supplementary PRS for MTC	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander	I-16-103-EP- FFWF	16184042.6	12 Aug 2016	12 Aug 2016
UE specific Supplementary PRS for MTC	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander	I-16-103-US- PCT	16/324917	17 Jul 2017	12 Aug 2016
UE specific Supplementary PRS for MTC	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander	I-16-103-EP-EPT	17743298.6	17 Jul 2017	12 Aug 2016
Positioning using beam sweeping	Beale, Martin Warwick; Wong, Shin Horng	I-16-113-EP-EPT	17748677.6	19 Jul 2017	12 Aug 2016
Positioning using beam sweeping	Beale, Martin Warwick; Wong, Shin Horng	I-16-113-WO- PCT	PCT/EP2017/068260	19 Jul 2017	12 Aug 2016
Positioning using beam sweeping	Beale, Martin Warwick; Wong, Shin Horng	I-16-113-EP- FFWF	16184120.0	12 Aug 2016	12 Aug 2016
Positioning using beam sweeping	Beale, Martin Warwick; Wong, Shin Horng	I-16-113-US- PCT	16/324646	19 Jul 2017	12 Aug 2016
Beam Sweeping Rhythm in NR	Wong, Shin Horng; Beale, Martin Warwick	I-16-118-EP- FFWF	16184118.4	12 Aug 2016	12 Aug 2016
Beam Sweeping Rhythm in NR	Wong, Shin Horng; Beale, Martin Warwick	I-16-118-WO- PCT	PCT/EP2017/068256	19 Jul 2017	12 Aug 2016
Beam Sweeping Rhythm in NR	Wong, Shin Horng; Beale, Martin Warwick	I-16-118-EP-EPT	17742421.5	19 Jul 2017	12 Aug 2016
Beam Sweeping Rhythm in NR	Wong, Shin Horng; Beale, Martin Warwick	I-16-118-US- PCT	16/323779	19 Jul 2017	12 Aug 2016
Positioning using dithered base station transmissions	Beale, Martin Warwick; Wong, Shin Horng	I-16-125-WO- PCT	PCT/EP2017/070231	09 Aug 2017	12 Aug 2016
Positioning using dithered base station transmissions	Beale, Martin Warwick; Wong, Shin Horng	I-16-125-EP-EPT	17754311.3	09 Aug 2017	12 Aug 2016
Positioning using dithered base station transmissions	Beale, Martin Warwick; Wong, Shin Horng	I-16-125-US- PCT	16/323265	09 Aug 2017	12 Aug 2016

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Positioning using dithered base station transmissions	Beale, Martin Warwick; Wong, Shin Horng	I-16-125-EP-FFWF	16183980.8	12 Aug 2016	12 Aug 2016
NUC Indicator for NR	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-129-EP-EPT	17752150.7	18 Aug 2017	19 Aug 2016
NUC Indicator for NR	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-129-WO-PCT	PCT/EP2017/070978	18 Aug 2017	19 Aug 2016
NUC Indicator for NR	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-129-EP-FFWF	16185036.7	19 Aug 2016	19 Aug 2016
NUC Indicator for NR	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-129-US-PCT	16/323526	18 Aug 2017	19 Aug 2016
Multi Control Channel in eMBB transmission	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-147-US-PCT	16/331139	29 Aug 2017	15 Sep 2016
Multi Control Channel in eMBB transmission	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-147-EP-EPT	17755548.9	29 Aug 2017	15 Sep 2016
Multi Control Channel in eMBB transmission	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-147-TW-NP	106125758	31 Jul 2017	15 Sep 2016
Multi Control Channel in eMBB transmission	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-147-WO-PCT	PCT/EP2017/071636	29 Aug 2017	15 Sep 2016
Multi Control Channel in eMBB transmission	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-147-EP-FFWF	16189083.5	15 Sep 2016	15 Sep 2016
Resource Indication for Wide Bandwidth feMTC	Wong, Shin Horng; Beale, Martin Warwick	I-16-159-WO-PCT	PCT/EP2017/073172	14 Sep 2017	29 Sep 2016
Resource Indication for Wide Bandwidth feMTC	Wong, Shin Horng; Beale, Martin Warwick	I-16-159-EP-EPT	PCT/EP2017/073172	14 Sep 2017	29 Sep 2016
Resource Indication for Wide Bandwidth feMTC	Wong, Shin Horng; Beale, Martin Warwick	I-16-159-US-PCT	PCT/EP2017/073172	14 Sep 2017	29 Sep 2016

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Resource Indication for Wide Bandwidth femTC	Wong, Shin Horng; Beale, Martin Warwick	I-16-159-EP-FFWF	16191540.0	29 Sep 2016	29 Sep 2016
Bundle Status Indicator for HD-FDD HARQ Feedback Bundling	Wong, Shin Horng; Beale, Martin Warwick	I-16-148-WO-PCT	PCT/EP2017/073461	18 Sep 2017	30 Sep 2016
Bundle Status Indicator for HD-FDD HARQ Feedback Bundling	Wong, Shin Horng; Beale, Martin Warwick	I-16-148-EP-EPT	PCT/EP2017/073461	18 Sep 2017	30 Sep 2016
Bundle Status Indicator for HD-FDD HARQ Feedback Bundling	Wong, Shin Horng; Beale, Martin Warwick	I-16-148-US-PCT	PCT/EP2017/073461	18 Sep 2017	30 Sep 2016
Bundle Status Indicator for HD-FDD HARQ Feedback Bundling	Wong, Shin Horng; Beale, Martin Warwick	I-16-148-EP-FFWF	16191974.1	30 Sep 2016	30 Sep 2016
HARQ repair of punctured eMBB transmissions	Beale, Martin Warwick; Wong, Shin Horng; Atungsiri, Samuel Asangbeng	I-16-163-EP-FFWF	16191978.2	30 Sep 2016	30 Sep 2016
HARQ repair of punctured eMBB transmissions	Beale, Martin Warwick; Wong, Shin Horng; Atungsiri, Samuel Asangbeng	I-16-163-WO-PCT	PCT/EP2017/072025	01 Sep 2017	30 Sep 2016
HARQ repair of punctured eMBB transmissions	Beale, Martin Warwick; Wong, Shin Horng; Atungsiri, Samuel Asangbeng	I-16-163-EP-EPT	PCT/EP2017/072025	01 Sep 2017	30 Sep 2016
HARQ repair of punctured eMBB transmissions	Beale, Martin Warwick; Wong, Shin Horng; Atungsiri, Samuel Asangbeng	I-16-163-US-PCT	PCT/EP2017/072025	01 Sep 2017	30 Sep 2016
SSD transmission of eMBB	Atungsiri, Samuel Asangbeng; Beale, Martin Warwick; Wong, Shin Horng	I-16-164-WO-PCT	PCT/EP2017/073508	18 Sep 2017	30 Sep 2016
SSD transmission of eMBB	Atungsiri, Samuel Asangbeng; Beale, Martin Warwick; Wong, Shin Horng	I-16-164-EP-EPT	PCT/EP2017/073508	18 Sep 2017	30 Sep 2016
SSD transmission of eMBB	Atungsiri, Samuel Asangbeng; Beale, Martin Warwick; Wong, Shin Horng	I-16-164-US-PCT	PCT/EP2017/073508	18 Sep 2017	30 Sep 2016

SSD transmission of eMBB	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-16-164-EP- FFWF	16191997.2	30 Sep 2016	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
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-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-US- 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-EPT	PCT/EP2017/073483	18 Sep 2017	30 Sep 2016
HARQ Process Exchange in HARQ-ACK Bundling Retransmissions	Wong, Shin Horng;Beale, Martin Warwick	I-16-180-WO- PCT	PCT/EP2017/075076	03 Okt 2017	03 Nov 2016
HARQ Process Exchange in HARQ-ACK Bundling Retransmissions	Wong, Shin Horng;Beale, Martin Warwick	I-16-180-EP- FFWF	16197188.2	03 Nov 2016	03 Nov 2016
Cell quality evaluation using multiple beam measurements	Martin, Brian Alexander;Beale, Martin Warwick;Wong, Shin Horng;Wei, Yuxin;Atungsiri, 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;Atungsiri, 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-WO-PCT	PCT/EP2017/077977	01 Nov 2017	11 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
Transmission that enables the detection of URLLC afflicted eMBB transmissions	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick	I-16-187-WO-PCT	PCT/EP2017/075546	06 Okt 2017	11 Nov 2016
Transmission that enables the detection of URLLC afflicted eMBB transmissions	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick	I-16-187-EP-FFWF	16198538.7	11 Nov 2016	11 Nov 2016
High speed tolerant PBCH for NR	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-16-202-EP-FFWF	16206517.1	22 Dez 2016	22 Dez 2016
High speed tolerant PBCH for NR	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-16-202-WO-PCT	PCT/EP2017/083955	20 Dez 2017	22 Dez 2016
Signal Space Diversity Interleaving	Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Wong, Shin Horng	I-16-149-EP-FFWF	16206874.6	23 Dez 2016	23 Dez 2016
Signal Space Diversity Interleaving	Beale, Martin Warwick;Atungsiri, Samuel Asangbeng;Wong, Shin Horng	I-16-149-WO-PCT	PCT/EP2017/081523	05 Dez 2017	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-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

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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
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
PRACH Beam Ramping in NR	Wong, Shin Horng;Beale, Martin Warwick	I-16-196-EP-FFWF	17150485.5	05 Jan 2017	05 Jan 2017
PRACH Beam Ramping in NR	Wong, Shin Horng;Beale, Martin Warwick	I-16-196-WO-PCT	PCT/EP2017/081502	05 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-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-WO-PCT	PCT/EP2017/081501	05 Dez 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
Alternative Downlink Control Channel Resources in NR	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-16-197-WO-PCT	PCT/EP2017/081542	05 Dez 2017	06 Jan 2017

Alternative Downlink Control Channel Resources in NR	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-16-197-EP- FFWF	17150570.4	06 Jan 2017	06 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-EP- FFWF	17150567.0	06 Jan 2017	06 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
URLLC HARQ feedback operation	Beale, Martin Warwick; Atungsiri, Samuel Asangbeng; Wong, Shin Horng	I-16-205-EP- FFWF	17150730.4	09 Jan 2017	09 Jan 2017
URLLC HARQ feedback operation	Beale, Martin Warwick; Atungsiri, Samuel Asangbeng; Wong, Shin Horng	I-16-205-WO- PCT	PCT/EP2017/083875	20 Dez 2017	09 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-WO- PCT	PCT/EP2017/082858	14 Dez 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 Asangbeng	I-17-009-WO- PCT	PCT/EP2018/052489	01 Feb 2018	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 Asangbeng	I-17-009-EP-FFWF	17154636.9	03 Feb 2017	03 Feb 2017
URLLC back indication of PDSCH	Beale, Martin Warwick; Atungsiri, Samuel Asangbeng; Wong, Shin Horng	I-17-012-WO-PCT	PCT/EP2018/052110	29 Jan 2018	06 Feb 2017
URLLC back indication of PDSCH	Beale, Martin Warwick; Atungsiri, Samuel Asangbeng; Wong, Shin Horng	I-17-012-EP-FFWF	17154893.6	06 Feb 2017	06 Feb 2017
Dynamic rescheduling of HARQ feedback resources	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-17-015-WO-PCT	PCT/EP2018/053231	08 Feb 2018	10 Feb 2017
Dynamic rescheduling of HARQ feedback resources	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-17-015-EP-FFWF	17155750.7	10 Feb 2017	10 Feb 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 Mrz 2018	22 Mrz 2017
URLLC Self Pre-emption	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng; Martin, Brian Alexander; Sharma, Vivek	I-17-026-EP-FFWF	17162407.5	22 Mrz 2017	22 Mrz 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 Mrz 2018	22 Mrz 2017
Shared Uplink Grant Free Resource	Wong, Shin Horng; Beale, Martin Warwick; Sharma, Vivek; Martin, Brian Alexander	I-17-027-EP-FFWF	17162411.7	22 Mrz 2017	22 Mrz 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 Mrz 2017

Transmission of early termination of repetition indicator	Wong, Shin Horng; Beale, Martin Warwick	I-17-028-WO-PCT	PCT/EP2018/057368	22 Mrz 2018	23 Mrz 2017
Transmission of early termination of repetition indicator	Wong, Shin Horng; Beale, Martin Warwick	I-17-028-EP-FFWF	17162668.2	23 Mrz 2017	23 Mrz 2017
SLSS anchor narrowband for relay	Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick; Uchiyama, Hiromasa; Wakabayashi, Hideji; Tsuda, Shinichiro	I-17-029-EP-FFWF	17162886.0	24 Mrz 2017	24 Mrz 2017
SLSS anchor narrowband for relay	Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick; Uchiyama, Hiromasa; Wakabayashi, Hideji; Tsuda, Shinichiro	I-17-029-WO-PCT	PCT/EP2018/057366	22 Mrz 2018	24 Mrz 2017
Sub-PRB Transmission schemes for eMTC	Beale, Martin Warwick; Wong, Shin Horng; Atungsiri, Samuel Asangbeng; Priyanto, Basuki	I-17-032-WO-PCT	PCT/EP2018/057147	21 Mrz 2018	24 Mrz 2017
Sub-PRB Transmission schemes for eMTC	Beale, Martin Warwick; Wong, Shin Horng; Atungsiri, Samuel Asangbeng; Priyanto, Basuki	I-17-032-EP-FFWF	17162920.7	24 Mrz 2017	24 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-EP-FFWF	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 Free 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 Free Resource higher layer impacts - Secondary eNB to Master eNB	Sharma, Vivek; Beale, Martin Warwick; Wong, Shin Horng; Martin, Brian Alexander	I-17-040-EP-FFWF	17163988.3	30 Mrz 2017	30 Mrz 2017

Per CE level Access barring	Sharma, Vivek; Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick	I-17-035-EP-FFWF	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
Open Loop Power control for remote device	Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick; Uchiyama, Hiromasa; Wakabayashi, Hideji; Tsuda, Shinichiro	I-17-036-WO-PCT	PCT/EP2018/055089	01 Mrz 2018	31 Mrz 2017
Open Loop Power control for remote device	Martin, Brian Alexander; Wong, Shin Horng; Beale, Martin Warwick; Uchiyama, Hiromasa; Wakabayashi, Hideji; Tsuda, Shinichiro	I-17-036-EP-FFWF	17164263.0	31 Mrz 2017	31 Mrz 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 Mrz 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
Pre-emption Indicator Resource Granularity for URLLC/eMBB Multiplexing	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-17-055-EP-FFWF	17169347.6	03 Mai 2017	03 Mai 2017
Pre-emption Indicator Resource Granularity for URLLC/eMBB Multiplexing	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng	I-17-055-WO-PCT	PCT/EP2018/061197	02 Mai 2018	03 Mai 2017
DRX based Wake Up Signal for MTC	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Priyanto, Basuki; Mazloun, Nafiseh	I-17-052-WO-PCT	PCT/EP2018/061301	03 Mai 2018	04 Mai 2017
DRX based Wake Up Signal for MTC	Wong, Shin Horng; Beale, Martin Warwick; Martin, Brian Alexander; Priyanto, Basuki; Mazloun, Nafiseh	I-17-052-EP-FFWF	17169577.8	04 Mai 2017	04 Mai 2017

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Enhanced Synchronisation Channels for MTC	Wong, Shin Horng;Beale, Martin Warwick;Martin, Brian Alexander;Priyanto, Basuki;Mazloun, Nafiseh	I-17-054-EP-FFWF	17169821.0	05 Mai 2017	05 Mai 2017
Enhanced Synchronisation Channels for MTC	Wong, Shin Horng;Beale, Martin Warwick;Martin, Brian Alexander;Priyanto, Basuki;Mazloun, Nafiseh	I-17-054-WO-PCT	PCT/EP2018/061213	02 Mai 2018	05 Mai 2017
Demodulation reference symbols for NR-PBCH	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-17-057-WO-PCT	PCT/EP2018/061578	04 Mai 2018	05 Mai 2017
Demodulation reference symbols for NR-PBCH	Atungsiri, Samuel Asangbeng;Beale, Martin Warwick;Wong, Shin Horng	I-17-057-EP-FFWF	17169834.3	05 Mai 2017	05 Mai 2017
DRX cycles for WUS and WUS reliability monitoring	Beale, Martin Warwick;Wong, Shin Horng;Martin, Brian Alexander;Priyanto, Basuki;Mazloun, Nafiseh	I-17-059-WO-PCT	PCT/EP2018/061179	02 Mai 2018	05 Mai 2017
DRX cycles for WUS and WUS reliability monitoring	Beale, Martin Warwick;Wong, Shin Horng;Martin, Brian Alexander;Priyanto, Basuki;Mazloun, Nafiseh	I-17-059-EP-FFWF	17169835.0	05 Mai 2017	05 Mai 2017
Conveying the Synchronisation Block Index via NR-PBCH Demodulation reference symbols	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick	I-17-073-EP-FFWF	17176479.8	16 Jun 2017	16 Jun 2017
Conveying the Synchronisation Block Index via NR-PBCH Demodulation reference symbols	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick	I-17-073-WO-PCT	PCT/EP2018/063683	24 Mai 2018	16 Jun 2017
Configuration of NR-PDCP for MCG SRB1	Sharma, Vivek;Wakabayashi, Hideji;Tsuda, Shinichiro;Wong, Shin Horng;Beale, Martin Warwick	I-17-106-EP-FFWF	17184361.8	01 Aug 2017	01 Aug 2017

U.S. Serial No.
16/610,531
filed on 11/04/19

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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
Supplementary Uplink transmission for NR	Wong, Shin Horng;Sharma, Vivek;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-108-TW-NP	107127278	06 Aug 2018	10 Aug 2017
Supplementary Uplink transmission for NR	Wong, Shin Horng;Sharma, Vivek;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-108-WO-PCT	PCT/EP2018/070888	01 Aug 2018	10 Aug 2017
Supplementary Uplink transmission for NR	Wong, Shin Horng;Sharma, Vivek;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-108-EP-FFWF	17185819.4	10 Aug 2017	10 Aug 2017
Dynamic Frequency Hopping Pattern for MTC	Wong, Shin Horng;Beale, Martin Warwick;Bitran, Yigal;Semel, Lavi;Elzas, Hovav	I-17-112-EP-FFWF	17185809.5	10 Aug 2017	10 Aug 2017
Dynamic Frequency Hopping Pattern for MTC	Wong, Shin Horng;Beale, Martin Warwick;Bitran, Yigal;Semel, Lavi;Elzas, Hovav	I-17-112-WO-PCT	PCT/EP2018/071382	07 Aug 2018	10 Aug 2017
Wake Up Signal Sequence for IoT	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick;Sharma, Vivek	I-17-116-WO-PCT	PCT/EP2018/071659	09 Aug 2018	11 Aug 2017
Wake Up Signal Sequence for IoT	Atungsiri, Samuel Asangbeng;Wong, Shin Horng;Beale, Martin Warwick;Sharma, Vivek	I-17-116-EP-FFWF	17186065.3	11 Aug 2017	11 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-EP-FFWF	17186062.0	11 Aug 2017	11 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

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Power Saving Signal transmissions in eDRX	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-130-WO- PCT	PCT/EP2018/075788	24 Sep 2018	28 Sep 2017
Power Saving Signal transmissions in eDRX	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-130-EP- FFWF	17193861.6	28 Sep 2017	28 Sep 2017
Configurable Indicator in Synchronisation Signal	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-160-WO- PCT	PCT/EP2018/081246	14 Nov 2018	14 Nov 2017
Configurable Indicator in Synchronisation Signal	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-160-EP- FFWF	17201748.5	14 Nov 2017	14 Nov 2017
WUS Formats Selection	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-166-EP- FFWF	17201751.9	14 Nov 2017	14 Nov 2017
WUS Formats Selection	Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-166-WO- PCT	PCT/EP2018/081254	14 Nov 2018	14 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
UE specific WUS validity timer	Sharma, Vivek;Wong, Shin Horng;Beale, Martin Warwick;Atungsiri, Samuel Asangbeng	I-17-164-EP- FFWF	17201966.3	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
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
CQI table incorporating 64QAM and repetition	Beale, Martin Warwick;Wong, Shin Horng	I-17-168-EP- FFWF	17202196.6	16 Nov 2017	16 Nov 2017

CQI table incorporating 64QAM and repetition	Beale, Martin Warwick; Wong, Shin Horng	I-17-168-WO-PCT	PCT/EP2018/081464	15 Nov 2018	16 Nov 2017
Modulation symbol repetition & Precoding for eMTC	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng; Shimezawa, Kazuyuki	I-17-172-EP-FFWF	17202456.4	17 Nov 2017	17 Nov 2017
Modulation symbol repetition & Precoding for eMTC	Wong, Shin Horng; Beale, Martin Warwick; Atungsiri, Samuel Asangbeng; Shimezawa, Kazuyuki	I-17-172-WO-PCT	PCT/EP2018/081402	15 Nov 2018	17 Nov 2017
Frequency Hopping for Wake Up Signal	Beale, Martin Warwick; Wong, Shin Horng; Atungsiri, Samuel Asangbeng	I-17-173-WO-PCT	PCT/EP2018/080807	09 Nov 2018	17 Nov 2017
Frequency Hopping for Wake Up Signal	Beale, Martin Warwick; Wong, Shin Horng; Atungsiri, Samuel Asangbeng	I-17-173-EP-FFWF	17202451.5	17 Nov 2017	17 Nov 2017
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
Early Uplink Data Transmission CSS for MTC	Wong, Shin Horng; Beale, Martin Warwick	I-18-004-WO-PCT	PCT/EP2019/052514	01 Feb 2019	02 Feb 2018
Early Uplink Data Transmission CSS for MTC	Wong, Shin Horng; Beale, Martin Warwick	I-18-004-EP-FFWF	18154993.2	02 Feb 2018	02 Feb 2018
Uplink Grant for Early Data Transmission	Wong, Shin Horng; Beale, Martin Warwick	I-18-005-EP-FFWF	18154998.1	02 Feb 2018	02 Feb 2018
Uplink Grant for Early Data Transmission	Wong, Shin Horng; Beale, Martin Warwick	I-18-005-WO-PCT	PCT/EP2019/052517	01 Feb 2019	02 Feb 2018
WUS Candidate Indicator	Wong, Shin Horng; Beale, Martin Warwick	I-17-200-WO-PCT	PCT/EP2019/053180	08 Feb 2019	15 Feb 2018
WUS Candidate Indicator	Wong, Shin Horng; Beale, Martin Warwick	I-17-200-EP-FFWF	18157017.7	15 Feb 2018	15 Feb 2018

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Use of NB-IoT WUS for eMTC	Beale, Martin Warwick; Wong, Shin Horng	I-17-201-EP-FFWF	18157018.5	15 Feb 2018	15 Feb 2018
Use of NB-IoT WUS for eMTC	Beale, Martin Warwick; Wong, Shin Horng	I-17-201-WO-PCT	PCT/EP2019/053590	13 Feb 2019	15 Feb 2018
WUS Candidate Indicator Transmission	Wong, Shin Horng; Beale, Martin Warwick	I-18-022-EP-FFWF	18157021.9	15 Feb 2018	15 Feb 2018
WUS Candidate Indicator Transmission	Wong, Shin Horng; Beale, Martin Warwick	I-18-022-WO-PCT	PCT/EP2019/053583	13 Feb 2019	15 Feb 2018
Early PUSCH Repetition Termination Search Space	Wong, Shin Horng; Beale, Martin Warwick	I-18-003-WO-PCT	PCT/EP2019/053188	08 Feb 2019	16 Feb 2018
Early PUSCH Repetition Termination Search Space	Wong, Shin Horng; Beale, Martin Warwick	I-18-003-EP-FFWF	18157260.3	16 Feb 2018	16 Feb 2018
Narrowband Offset Indicator	Wong, Shin Horng; Beale, Martin Warwick; Priyanto, Basuki	I-18-025-WO-PCT	PCT/EP2019/053688	14 Feb 2019	16 Feb 2018
Narrowband Offset Indicator	Wong, Shin Horng; Beale, Martin Warwick; Priyanto, Basuki	I-18-025-EP-FFWF	18157251.2	16 Feb 2018	16 Feb 2018
Reception of eMTC transmission in soft buffer parts	Beale, Martin Warwick; Wong, Shin Horng; Priyanto, Basuki	I-18-027-EP-FFWF	18157261.1	16 Feb 2018	16 Feb 2018
Reception of eMTC transmission in soft buffer parts	Beale, Martin Warwick; Wong, Shin Horng; Priyanto, Basuki	I-18-027-WO-PCT	PCT/EP2019/053334	11 Feb 2019	16 Feb 2018