

【公報種別】特許法第17条の2の規定による補正の掲載
【部門区分】第7部門第3区分
【発行日】令和3年12月23日(2021.12.23)

【公開番号】特開2020-28131(P2020-28131A)
【公開日】令和2年2月20日(2020.2.20)
【年通号数】公開・登録公報2020-007
【出願番号】特願2019-147212(P2019-147212)
【国際特許分類】

H 0 4 W 72/14 (2009.01)

H 0 4 W 92/18 (2009.01)

H 0 4 W 72/04 (2009.01)

【F I】

H 0 4 W 72/14

H 0 4 W 92/18

H 0 4 W 72/04

【誤訳訂正書】

【提出日】令和3年11月4日(2021.11.4)

【誤訳訂正1】

【訂正対象書類名】明細書

【訂正対象項目名】0026

【訂正方法】変更

【訂正の内容】

【0026】

3 G P P T S 3 6 . 3 3 1 は、R R C (Radio Resource Control : 無線リソース制御)におけるD 2 D V 2 X手順を以下のように説明している：

[外 4]

5.6.10 UE Assistance Information

5.6.10.1 General

[図12として、“UE Assistance Information”と題する、3 G P P T S 3 6 . 3 3 1 V 1 5 . 2 . 0の図5.6.10.1-1を複製する。]

[外 5]

The purpose of this procedure is to inform E-UTRAN of the UE's power saving preference and SPS assistance information, maximum PDSCH/PUSCH bandwidth configuration preference, overheating assistance information, or the UE's delay budget report carrying desired increment/decrement in the Uu air interface delay or connected mode DRX cycle length and for BL UEs or UEs in CE of the RLM event ("early-out-of-sync" or "early-in-sync") and RLM information. Upon configuring the UE to provide power preference indications E-UTRAN may consider that the UE does not prefer a configuration primarily optimised for power saving until the UE explicitly indicates otherwise.

5.6.10.2 Initiation

A UE capable of providing power preference indications in RRC_CONNECTED may initiate the procedure in several cases including upon being configured to provide power preference indications and upon change of power preference. A UE capable of providing SPS assistance information in RRC_CONNECTED may initiate the procedure in several cases including upon being configured to provide SPS assistance information and upon change of SPS assistance information.

A UE capable of providing delay budget report in RRC_CONNECTED may initiate the procedure in several cases, including upon being configured to provide delay budget report and upon change of delay budget preference.

A UE capable of CE mode and providing maximum PDSCH/PUSCH bandwidth preference in RRC_CONNECTED may initiate the procedure upon being configured to provide maximum PDSCH/PUSCH bandwidth preference and/or upon change of maximum PDSCH/PUSCH bandwidth preference.

A UE capable of providing overheating assistance information in RRC_CONNECTED may initiate the procedure if it was configured to do so, upon detecting internal overheating, or upon detecting that it is no longer experiencing an overheating condition.

Upon initiating the procedure, the UE shall:

1> if configured to provide power preference indications:

2> if the UE did not transmit a *UEAssistanceInformation* message with *powerPrefIndication* since it was configured to provide power preference indications;
or

2> if the current power preference is different from the one indicated in the last transmission of the *UEAssistanceInformation* message and timer T340 is not running:

3> initiate transmission of the *UEAssistanceInformation* message in accordance with 5.6.10.3;

1> if configured to provide maximum PDSCH/PUSCH bandwidth preference:

2> if the UE did not transmit a *UEAssistanceInformation* message with *bw-Preference* since it was configured to provide maximum PDSCH/PUSCH bandwidth preference; or

2> if the current maximum PDSCH/PUSCH bandwidth preference is different from the one indicated in the last transmission of the *UEAssistanceInformation* message and timer T341 is not running;

3> initiate transmission of the *UEAssistanceInformation* message in accordance with 5.6.10.3;

1> if configured to provide SPS assistance information:

2> if the UE did not transmit a *UEAssistanceInformation* message with *sps-AssistanceInformation* since it was configured to provide SPS assistance information; or

2> if the current SPS assistance information is different from the one indicated in the last transmission of the *UEAssistanceInformation* message:

3> initiate transmission of the *UEAssistanceInformation* message in accordance with 5.6.10.3;

1> if configured to report RLM events:

- 2> if "early-out-of-sync" event has been detected and T343 is not running; or
- 2> if "early-in-sync" event has been detected and T344 is not running:
 - 3> initiate transmission of the *UEAssistanceInformation* message in accordance with 5.6.10.3;
- 1> if configured to provide delay budget report:
 - 2> if the UE did not transmit a *UEAssistanceInformation* message with *delayBudgetReport* since it was configured to provide delay budget report; or
 - 2> if the current delay budget is different from the one indicated in the last transmission of the *UEAssistanceInformation* message and timer T342 is not running:
 - 3> initiate transmission of the *UEAssistanceInformation* message in accordance with 5.6.10.3;
- 1> if configured to provide overheating assistance information:
 - 2> if the overheating condition has been detected and T345 is not running; or
 - 2> if the current overheating assistance information is different from the one indicated in the last transmission of the *UEAssistanceInformation* message and timer T345 is not running:
 - 3> initiate transmission of the *UEAssistanceInformation* message in accordance with 5.6.10.3;

5.6.10.3 Actions related to transmission of *UEAssistanceInformation* message

The UE shall set the contents of the *UEAssistanceInformation* message for power preference indications:

- 1> if configured to provide power preference indication and if the UE prefers a configuration primarily optimised for power saving:

- 2> set *powerPrefIndication* to *lowPowerConsumption*;
- 1> else if configured to provide power preference indication:
 - 2> start or restart timer T340 with the timer value set to the *powerPrefIndicationTimer*;
 - 2> set *powerPrefIndication* to *normal*;

The UE shall set the contents of the *UEAssistanceInformation* message for SPS assistance information:

- 1> if configured to provide SPS assistance information:
 - 2> if there is any traffic for V2X sidelink communication which needs to report SPS assistance information:
 - 3> include *trafficPatternInfoListSL* in the *UEAssistanceInformation* message;
 - 2> if there is any traffic for uplink communication which needs to report SPS assistance information:
 - 3> include *trafficPatternInfoListUL* in the *UEAssistanceInformation* message;

The UE shall set the contents of the *UEAssistanceInformation* message for bandwidth preference indications:

- 1> start timer T341 with the timer value set to the *bw-PreferenceIndicationTimer*;
- 1> set *bw-Preference* to its preferred configuration;

The UE shall set the contents of the *UEAssistanceInformation* message for delay budget report:

- 1> if configured to provide delay budget report:
 - 2> if the UE prefers an adjustment in the connected mode DRX cycle length:
 - 3> set *delayBudgetReport* to *type1* according to a desired value;
 - 2> else if the UE prefers coverage enhancement configuration change:

3> set *delayBudgetReport* to *type2* according to a desired value;

2> start or restart timer T342 with the timer value set to the
delayBudgetReportingProhibitTimer;

The UE shall set the contents of the *UEAssistanceInformation* message for the RLM report:

1> if T314 has expired:

2> set *rlm-event* to *earlyOutOfSync*;

2> start timer T343 with the timer value set to the *rlmReportTimer*:

1> if T315 has expired:

2> set *rlm-event* to *earlyInSync*;

2> start timer T344 with the timer value set to the *rlmReportTimer*:

2> if configured to report *rlmReportRep-MPDCCH*:

3> set *excessRep-MPDCCH* to the value indicated by lower layers;

The UE shall set the contents of the *UEAssistanceInformation* message for overheating assistance indication:

1> if the UE experiences internal overheating:

2> if the UE prefers to temporarily reduce its DL category and UL category:

3> include *reducedUE-Category* in the *OverheatingAssistance* IE;

3> set *reducedUE-CategoryDL* to the number to which the UE prefers to temporarily reduce its DL category;

3> set *reducedUE-CategoryUL* to the number to which the UE prefers to temporarily reduce its UL category;

2> if the UE prefers to temporarily reduce the number of maximum secondary

component carriers:

- 3> include *reducedMaxCCs* in the *OverheatingAssistance* IE;
- 3> set *reducedCCsDL* to the number of maximum SCells the UE prefers to be temporarily configured in downlink;
- 3> set *reducedCCsUL* to the number of maximum SCells the UE prefers to be temporarily configured in uplink;
- 2> start timer T345 with the timer value set to the *overheatingIndicationProhibitTimer*;
- 1> else (if the UE no longer experiences an overheating condition):
 - 2> do not include *reducedUE-Category* and *reducedMaxCCs* in *OverheatingAssistance* IE;
 - 2> start timer T345 with the timer value set to the *overheatingIndicationProhibitTimer*;

The UE shall submit the *UEAssistanceInformation* message to lower layers for transmission.

NOTE 1: It is up to UE implementation when and how to trigger SPS assistance information.

NOTE 2: It is up to UE implementation to set the content of *trafficPatternInfoListSL* and *trafficPatternInfoListUL*.

NOTE 3: Traffic patterns for different Destination Layer 2 IDs are provided in different entries in *trafficPatternInfoListSL*.

[...]

5.10.1 Introduction

The sidelink communication and associated synchronisation resource configuration applies for the frequency at which it was received/ acquired. Moreover, for a UE configured with one or more SCells, the sidelink communication and associated synchronisation resource configuration provided by dedicated signalling applies for the PCell/ the primary frequency. The sidelink discovery and associated synchronisation resource configuration applies for the frequency at which it was received/ acquired or the indicated frequency in the configuration. For a UE

configured with one or more SCells, the sidelink discovery and associated synchronisation resource configuration provided by dedicated signalling applies for the PCell/ the primary frequency / any other indicated frequency.

NOTE 1: Upper layers configure the UE to receive or transmit sidelink communication on a specific frequency, to monitor or transmit non-PS related sidelink discovery announcements on one or more frequencies or to monitor or transmit PS related sidelink discovery announcements on a specific frequency, but only if the UE is authorised to perform these particular ProSe related sidelink activities.

NOTE 2: It is up to UE implementation which actions to take (e.g. termination of unicast services, detach) when it is unable to perform the desired sidelink activities, e.g. due to UE capability limitations.

Sidelink communication consists of one-to-many and one-to-one sidelink communication. One-to-many sidelink communication consists of relay related and non-relay related one-to-many sidelink communication. One-to-one sidelink communication consists of relay related and non-relay related one-to-one sidelink communication. In relay related one-to-one sidelink communication the communicating parties consist of one sidelink relay UE and one sidelink remote UE.

Sidelink discovery consists of public safety related (PS related) and non-PS related sidelink discovery. PS related sidelink discovery consists of relay related and non-relay related PS related sidelink discovery. Upper layers indicate to RRC whether a particular sidelink announcement is PS related or non-PS related.

Upper layers indicate to RRC whether a particular sidelink procedure is V2X related or not.

The specification covers the use of UE to network sidelink relays by specifying the additional requirements that apply for a sidelink relay UE and a sidelink remote UE. I.e. for such UEs the regular sidelink UE requirements equally apply unless explicitly stated otherwise.

[...]

5.10.1d Conditions for V2X sidelink communication operation

When it is specified that the UE shall perform V2X sidelink communication operation only if the conditions defined in this section are met, the UE shall perform V2X sidelink communication operation only if:

- 1> if the UE's serving cell is suitable (RRC_IDLE or RRC_CONNECTED); and if either the selected cell on the frequency used for V2X sidelink communication operation belongs to the registered or equivalent PLMN as specified in TS 24.334 [69] or the UE is out of coverage on the frequency used for V2X sidelink communication operation as defined in TS 36.304 [4, 11.4]; or
- 1> if the UE's serving cell (for RRC_IDLE or RRC_CONNECTED) fulfils the conditions to support V2X sidelink communication in limited service state as specified in TS 23.285 [78, 4.4.8]; and if either the serving cell is on the frequency used for V2X sidelink communication operation or the UE is out of coverage on the frequency used for V2X sidelink communication operation as defined in TS 36.304 [4, 11.4]; or
- 1> if the UE has no serving cell (RRC_IDLE);

5.10.2 Sidelink UE information

5.10.2.1 General

[図 1 3 として、“Sidelink UE information”と題する、3 G P P T S 3 6 . 3 3 1 V 1 5 . 2 . 0 の図 5 . 1 0 . 2 - 1 を複製する。]
[外 6]

The purpose of this procedure is to inform E-UTRAN that the UE is interested or no longer interested to receive sidelink communication or discovery, to receive V2X sidelink communication, as well as to request assignment or release of transmission resources for sidelink communication or discovery announcements or V2X sidelink communication or sidelink discovery gaps, to report parameters related to sidelink discovery from system information of inter-frequency/PLMN cells and to report the synchronization reference used by the UE for V2X sidelink communication.

5.10.2.2 Initiation

A UE capable of sidelink communication or V2X sidelink communication or sidelink discovery that is in RRC_CONNECTED may initiate the procedure to indicate it is (interested in) receiving sidelink communication or V2X sidelink communication or sidelink discovery in several cases including upon successful connection establishment, upon change of interest, upon change to a PCell broadcasting *SystemInformationBlockType18* or *SystemInformationBlockType19* or *SystemInformationBlockType21* including *sl-V2X-ConfigCommon*. A UE capable of sidelink communication or V2X sidelink communication or sidelink discovery may initiate the procedure to request assignment of dedicated resources for the concerned sidelink communication transmission or discovery announcements or V2X sidelink communication transmission or to request sidelink discovery gaps for sidelink discovery transmission or sidelink discovery reception and a UE capable of inter-frequency/PLMN sidelink discovery parameter reporting may initiate the procedure to report parameters related to sidelink discovery from system information of inter-frequency/PLMN cells.

NOTE 1: A UE in RRC_IDLE that is configured to transmit sidelink communication / V2X sidelink communication / sidelink discovery announcements, while *SystemInformationBlockType18* / *SystemInformationBlockType19* / *SystemInformationBlockType21* including *sl-V2X-ConfigCommon* does not include the resources for transmission (in normal conditions), initiates connection establishment in accordance with 5.3.3.1a.

Upon initiating the procedure, the UE shall:

[...]

parameters and stop T370;

- 1> if *SystemInformationBlockType21* including *sl-V2X-ConfigCommon* is broadcast by the PCell:
 - 2> ensure having a valid version of *SystemInformationBlockType21* for the PCell;
 - 2> if configured by upper layers to receive V2X sidelink communication on a primary frequency or on one or more frequencies included in *v2x-InterFreqInfoList*, if included in *SystemInformationBlockType21* of the PCell:
 - 3> if the UE did not transmit a *SidelinkUEInformation* message since last entering RRC_CONNECTED state; or
 - 3> if since the last time the UE transmitted a *SidelinkUEInformation* message the UE connected to a PCell not broadcasting *SystemInformationBlockType21* including *sl-V2X-ConfigCommon*; or
 - 3> if the last transmission of the *SidelinkUEInformation* message did not include *v2x-CommRxInterestedFreqList*; or if the frequency(ies) configured by upper layers to receive V2X sidelink communication on has changed since the last transmission of the *SidelinkUEInformation* message:
 - 4> initiate transmission of the *SidelinkUEInformation* message to indicate the V2X sidelink communication reception frequency(ies) of interest in accordance with 5.10.2.3;
 - 2> else:
 - 3> if the last transmission of the *SidelinkUEInformation* message included *v2x-CommRxInterestedFreqList*:
 - 4> initiate transmission of the *SidelinkUEInformation* message to indicate it is no longer interested in V2X sidelink communication reception in accordance with

5.10.2.3;

- 2> if configured by upper layers to transmit V2X sidelink communication on a primary frequency or on one or more frequencies included in *v2x-InterFreqInfoList*, if included in *SystemInformationBlockType21* of the PCell:
 - 3> if the UE did not transmit a *SidelinkUEInformation* message since last entering RRC_CONNECTED state; or
 - 3> if since the last time the UE transmitted a *SidelinkUEInformation* message the UE connected to a PCell not broadcasting *SystemInformationBlockType21* including *sl-V2X-ConfigCommon*; or
 - 3> if the last transmission of the *SidelinkUEInformation* message did not include *v2x-CommTxResourceReq*; or if the information carried by the *v2x-CommTxResourceReq* has changed since the last transmission of the *SidelinkUEInformation* message:
 - 4> initiate transmission of the *SidelinkUEInformation* message to indicate the V2X sidelink communication transmission resources required by the UE in accordance with 5.10.2.3;
- 2> else:
 - 3> if the last transmission of the *SidelinkUEInformation* message included *v2x-CommTxResourceReq*:
 - 4> initiate transmission of the *SidelinkUEInformation* message to indicate it no longer requires V2X sidelink communication transmission resources in accordance with 5.10.2.3;

5.10.2.3 Actions related to transmission of *SidelinkUEInformation* message

The UE shall set the contents of the *SidelinkUEInformation* message as follows:

- 1> if the UE initiates the procedure to indicate it is (no more) interested to receive sidelink communication or discovery or receive V2X sidelink communication or to request

(configuration/ release) of sidelink communication or V2X sidelink communication or sidelink discovery transmission resources (i.e. UE includes all concerned information, irrespective of what triggered the procedure):

[...]

2> if *SystemInformationBlockType21* is broadcast by the PCell and *SystemInformationBlockType21* includes *sl-V2X-ConfigCommon*:

3> if configured by upper layers to receive V2X sidelink communication:

4> include *v2x-CommRxInterestedFreqList* and set it to the frequency(ies) for V2X sidelink communication reception;

3> if configured by upper layers to transmit V2X sidelink communication:

4> if configured by upper layers to transmit P2X related V2X sidelink communication:

5> include *p2x-CommTxType* set to *true*;

4> include *v2x-CommTxResourceReq* and set its fields as follows for each frequency on which the UE is configured for V2X sidelink communication transmission:

5> set *carrierFreqCommTx* to indicate the frequency for V2X sidelink communication transmission;

5> set *v2x-TypeTxSync* to the current synchronization reference type used on the associated *carrierFreqCommTx* for V2X sidelink communication transmission;

5> set *v2x-DestinationInfoList* to include the V2X sidelink communication transmission destination(s) for which it requests E-UTRAN to assign dedicated resources;

[...]

The UE shall submit the *SidelinkUEInformation* message to lower layers for transmission.

[...]

5.10.12 V2X sidelink communication monitoring

A UE capable of V2X sidelink communication that is configured by upper layers to receive V2X sidelink communication shall:

- 1> if the conditions for sidelink operation as defined in 5.10.1d are met:
 - 2> if in coverage on the frequency used for V2X sidelink communication, as defined in TS 36.304 [4, 11.4]:
 - 3> if the frequency used to receive V2X sidelink communication is included in *v2x-InterFreqInfoList* within *RRCCONNECTIONRECONFIGURATION* or in *v2x-InterFreqInfoList* within *SystemInformationBlockType21* of the serving cell/Pcell, and *v2x-CommRxPool* is included in *SL-V2X-InterFreqUE-Config* within *v2x-UE-ConfigList* in the entry of *v2x-InterFreqInfoList* for the concerned frequency:
 - 4> configure lower layers to monitor sidelink control information and the corresponding data using the pool of resources indicated in *v2x-CommRxPool*;
 - 3> else:
 - 4> if the cell chosen for V2X sidelink communication reception broadcasts *SystemInformationBlockType21* including *v2x-CommRxPool* in *sl-V2X-ConfigCommon* or,
 - 4> if the UE is configured with *v2x-CommRxPool* included in *mobilityControlInfoV2X* in *RRCCONNECTIONRECONFIGURATION*:
 - 5> configure lower layers to monitor sidelink control information and the corresponding data using the pool of resources indicated in *v2x-CommRxPool*;
 - 2> else (i.e. out of coverage on the frequency used for V2X sidelink communication, as defined in TS 36.304 [4, 11.4]):

3> if the frequency used to receive V2X sidelink communication is included in *v2x-InterFreqInfoList* within *RRCCONNECTIONRECONFIGURATION* or in *v2x-InterFreqInfoList* within *SystemInformationBlockType21* of the serving cell/PCell, and *v2x-CommRxPool* is included in *SL-V2X-InterFreqUE-Config* within *v2x-UE-ConfigList* in the entry of *v2x-InterFreqInfoList* for the concerned frequency:

4> configure lower layers to monitor sidelink control information and the corresponding data using the pool of resources indicated in *v2x-CommRxPool*;

3> else:

4> configure lower layers to monitor sidelink control information and the corresponding data using the pool of resources that were preconfigured (i.e. *v2x-CommRxPoolList* in *SL-V2X-Preconfiguration* defined in 9.3);

5.10.13 V2X sidelink communication transmission

5.10.13.1 Transmission of V2X sidelink communication

A UE capable of V2X sidelink communication that is configured by upper layers to transmit V2X sidelink communication and has related data to be transmitted shall:

1> if the conditions for sidelink operation as defined in 5.10.1d are met:

2> if in coverage on the frequency used for V2X sidelink communication as defined in TS 36.304 [4, 11.4]; or

2> if the frequency used to transmit V2X sidelink communication is included in *v2x-InterFreqInfoList* in *RRCCONNECTIONRECONFIGURATION* or in *v2x-InterFreqInfoList* within *SystemInformationBlockType21*:

3> if the UE is in *RRC_CONNECTED* and uses the PCell or the frequency included in *v2x-InterFreqInfoList* in *RRCCONNECTIONRECONFIGURATION* for V2X sidelink communication:

4> if the UE is configured, by the current PCell with *commTxResources* set to

scheduled:

5> if T310 or T311 is running; and if the PCell at which the UE detected physical layer problems or radio link failure broadcasts *SystemInformationBlockType21* including *v2x-CommTxPoolExceptional* in *sl-V2X-ConfigCommon*, or *v2x-CommTxPoolExceptional* is included in *v2x-InterFreqInfoList* for the concerned frequency in *SystemInformationBlockType21* or *RRCCConnectionReconfiguration*; or

5> if T301 is running and the cell on which the UE initiated connection re-establishment broadcasts *SystemInformationBlockType21* including *v2x-CommTxPoolExceptional* in *sl-V2X-ConfigCommon*, or *v2x-CommTxPoolExceptional* is included in *v2x-InterFreqInfoList* for the concerned frequency in *SystemInformationBlockType21*; or

5> if T304 is running and the UE is configured with *v2x-CommTxPoolExceptional* included in *mobilityControlInfoV2X* in *RRCCConnectionReconfiguration* or in *v2x-InterFreqInfoList* for the concerned frequency in *RRCCConnectionReconfiguration*:

6> configure lower layers to transmit the sidelink control information and the corresponding data based on random selection using the pool of resources indicated by *v2x-CommTxPoolExceptional* as defined in TS 36.321 [6];

5> else:

6> configure lower layers to request E-UTRAN to assign transmission resources for V2X sidelink communication;

4> else if the UE is configured with *v2x-CommTxPoolNormalDedicated* or *v2x-CommTxPoolNormal* or *p2x-CommTxPoolNormal* in the entry of *v2x-InterFreqInfoList* for the concerned frequency in *sl-V2X-ConfigDedicated* in *RRCCConnectionReconfiguration*:

- 5> if the UE is configured to transmit non-P2X related V2X sidelink communication and a result of sensing on the resources configured in *v2x-CommTxPoolNormalDedicated* or *v2x-CommTxPoolNormal* in the entry of *v2x-InterFreqInfoList* for the concerned frequency in *RRCConnectionReconfiguration* is not available in accordance with TS 36.213 [23]; or
- 5> if the UE is configured to transmit P2X related V2X sidelink communication and selects to use partial sensing according to 5.10.13.1a, and a result of partial sensing on the resources configured in *v2x-CommTxPoolNormalDedicated* or *p2x-CommTxPoolNormal* in the entry of *v2x-InterFreqInfoList* for the concerned frequency in *RRCConnectionReconfiguration* is not available in accordance with TS 36.213 [23]:
- 6> if *v2x-CommTxPoolExceptional* is included in *mobilityControlInfoV2X* in *RRCConnectionReconfiguration* (i.e., handover case); or
- 6> if *v2x-CommTxPoolExceptional* is included in the entry of *v2x-InterFreqInfoList* for the concerned frequency in *RRCConnectionReconfiguration*; or
- 6> if the PCell broadcasts *SystemInformationBlockType21* including *v2x-CommTxPoolExceptional* in *sl-V2X-ConfigCommon* or *v2x-CommTxPoolExceptional* in *v2x-InterFreqInfoList* for the concerned frequency:
- 7> configure lower layers to transmit the sidelink control information and the corresponding data based on random selection using the pool of resources indicated by *v2x-CommTxPoolExceptional* as defined in TS 36.321 [6];
- 5> else if the UE is configured to transmit P2X related V2X sidelink

communication:

6> select a resource pool according to 5.10.13.2;

6> perform P2X related V2X sidelink communication according to 5.10.13.1a;

5> else if the UE is configured to transmit non-P2X related V2X sidelink communication:

6> configure lower layers to transmit the sidelink control information and the corresponding data based on sensing (as defined in TS 36.321 [6] and TS 36.213 [23]) using one of the resource pools indicated by *v2x-commTxPoolNormalDedicated* or *v2x-CommTxPoolNormal* in the entry of *v2x-InterFreqInfoList* for the concerned frequency, which is selected according to 5.10.13.2;

3> else:

4> if the cell chosen for V2X sidelink communication transmission broadcasts *SystemInformationBlockType21*:

5> if the UE is configured to transmit non-P2X related V2X sidelink communication, and if *SystemInformationBlockType21* includes *v2x-CommTxPoolNormalCommon* or *v2x-CommTxPoolNormal* in *v2x-InterFreqInfoList* for the concerned frequency in *sl-V2X-ConfigCommon* and a result of sensing on the resources configured in *v2x-CommTxPoolNormalCommon* or *v2x-CommTxPoolNormal* in *v2x-InterFreqInfoList* for the concerned frequency is available in accordance with TS 36.213 [23]:

6> configure lower layers to transmit the sidelink control information and the corresponding data based on sensing (as defined in TS 36.321 [6] and TS 36.213 [23]) using one of the resource pools indicated by *v2x-CommTxPoolNormalCommon* or *v2x-CommTxPoolNormal* in *v2x-*

InterFreqInfoList for the concerned frequency, which is selected according to 5.10.13.2;

5> else if the UE is configured to transmit P2X related V2X sidelink communication, and if *SystemInformationBlockType21* includes *p2x-CommTxPoolNormalCommon* or *p2x-CommTxPoolNormal* in *v2x-InterFreqInfoList* for the concerned frequency in *sl-V2X-ConfigCommon*, and if the UE selects to use random selection according to 5.10.13.1a, or selects to use partial sensing according to 5.10.13.1a and a result of partial sensing on the resources configured in *p2x-CommTxPoolNormalCommon* or *p2x-CommTxPoolNormal* in *v2x-InterFreqInfoList* for the concerned frequency is available in accordance with TS 36.213 [23]:

6> select a resource pool from *p2x-CommTxPoolNormalCommon* or *p2x-CommTxPoolNormal* in *v2x-InterFreqInfoList* for the concerned frequency according to 5.10.13.2, but ignoring *zoneConfig* in *SystemInformationBlockType21*;

6> perform P2X related V2X sidelink communication according to 5.10.13.1a;

5> else if *SystemInformationBlockType21* includes *v2x-CommTxPoolExceptional* in *sl-V2X-ConfigCommon* or *v2x-CommTxPoolExceptional* in *v2x-InterFreqInfoList* for the concerned frequency:

6> from the moment the UE initiates connection establishment until receiving an *RRCCONNECTIONRECONFIGURATION* including *sl-V2X-ConfigDedicated*, or until receiving an *RRCCONNECTIONRELEASE* or an *RRCCONNECTIONREJECT*; or

6> if the UE is in RRC_IDLE and a result of sensing on the resources configured in *v2x-CommTxPoolNormalCommon* or *v2x-CommTxPoolNormal* in *v2x-InterFreqInfoList* for the concerned frequency in *SystemInformationBlockType21* is not available in accordance with TS 36.213 [23]; or

6> if the UE is in RRC_IDLE and UE selects to use partial sensing according to 5.10.13.1a and a result of partial sensing on the resources configured in *p2x-CommTxPoolNormalCommon* or *p2x-CommTxPoolNormal* in *v2x-InterFreqInfoList* for the concerned frequency in *SystemInformationBlockType21* is not available in accordance with TS 36.213 [23]:

7> configure lower layers to transmit the sidelink control information and the corresponding data based on random selection (as defined in TS 36.321 [6]) using the pool of resources indicated in *v2x-CommTxPoolExceptional*;

2> else:

3> configure lower layers to transmit the sidelink control information and the corresponding data based on sensing (as defined in TS 36.321 [6] and TS 36.213 [23]) using one of the resource pools indicated by *v2x-CommTxPoolList* in *SL-V2X-Preconfiguration* in case of non-P2X related V2X sidelink communication, which is selected according to 5.10.13.2, or using one of the resource pools indicated by *p2x-CommTxPoolList* in *SL-V2X-Preconfiguration* in case of P2X related V2X sidelink communication, which is selected according to 5.10.13.2, and in accordance with the timing of the selected reference as defined in 5.10.8;

The UE capable of non-P2X related V2X sidelink communication that is configured by upper layers to transmit V2X sidelink communication shall perform sensing on all pools of resources which may be used for transmission of the sidelink control information and the corresponding data. The pools of resources are indicated by *SL-V2X-Preconfiguration*, *v2x-CommTxPoolNormalCommon*, *v2x-CommTxPoolNormalDedicated* in *sl-V2X-ConfigDedicated*, or *v2x-CommTxPoolNormal* in *v2x-InterFreqInfoList* for the concerned frequency, as configured above.

NOTE 1: If there are multiple frequencies for which normal or exceptional pools are configured, it is up to UE implementation which frequency is selected for V2X sidelink communication transmission.

5 . 1 0 . 1 3 . 2 V 2 X サイドリンク通信送信プール選択

V 2 X サイドリンク通信のために使用される周波数について、5 . 1 0 . 1 3 . 1 に規定されているように *zoneConfig* が、無視されない場合、V 2 X サイドリンク通信

のための上位レイヤによって設定されたUEは、UEの地理的座標に対応するプールのみを使用するものとし、`zoneConfig`が、サービングセル(RRC_IDLE)/PCell(RRC_CONNECTED)のSystemInformationBlockType21または関係周波数のRRCConnectionReconfigurationに含まれる場合、UEが、関係周波数のRRCシグナリングによって提供される複数のリソースプールを使用するように設定され、あるいは`zoneConfig`が、関係周波数のSL-V2X-Preconfigurationに含まれる場合、UEが、5.10.13.1に従って周波数のSL-V2X-Preconfigurationにおける複数のリソースプールを使用するように設定される。UEは、5.10.8.2に従って選択された同期参照ソースに関連するプールのみを使用するものとする。

1 > UEが5.10.13.1に従ってSystemInformationBlockType21におけるv2x-InterFreqInfoListにおけるp2x-CommTxPoolNormalCommonまたはp2x-CommTxPoolNormal上で送信するように設定されている場合、

1 > UEが5.10.13.1に従ってSL-V2X-Preconfigurationにおけるp2x-CommTxPoolList-r14上で送信するようにUEが設定されている場合、

1 > `zoneConfig`がSystemInformationBlockType21に含まれておらず、UEがv2x-CommTxPoolNormalCommonまたはv2x-CommTxPoolNormalDedicated上で送信するように設定されている場合、

1 > `zoneConfig`が、SystemInformationBlockType21に含まれ、UEが、P2Xに関するV2Xサイドリンク通信のためにv2x-CommTxPoolNormalDedicated上で送信するように設定され、`zoneID`がv2x-CommTxPoolNormalDedicatedに含まれない場合、

1 > `zoneConfig`が、関係周波数のv2x-InterFreqInfoListのエントリーに含まれておらず、UEが、v2x-InterFreqInfoListにおけるv2x-CommTxPoolNormal、またはRRCConnectionReconfigurationにおけるv2x-InterFreqInfoListにおけるp2x-CommTxPoolNormal上で送信するように設定されている場合、

1 > `zoneConfig`が、関係周波数のSL-V2X-Preconfigurationに含まれておらず、UEが、関係周波数のSL-V2X-Preconfigurationにおけるv2x-CommTxPoolList上で送信するように設定されている場合：

2 > 5.10.8.2に従って選択された同期参照ソースに関連する第1のプールを選択し、

1 > `zoneConfig`が、SystemInformationBlockType21に含まれ、UEが、v2x-CommTxPoolNormalCommonまたはP2Xに関しないV2Xサイドリンク通信のためにv2x-CommTxPoolNormalDedicated上で送信するように設定されている場合、

1 > `zoneConfig`が、SystemInformationBlockType21に含まれ、UEが、P2Xに関するV2Xサイドリンク通信のためにv2x-CommTxPoolNormalDedicated上で送信するように設定され、`zoneID`が、v2x-CommTxPoolNormalDedicatedに含まれる場合、

1 > `zoneConfig`が、関係周波数のv2x-InterFreqInfoListのエントリーに含まれ、UEが、v2x-InterFreqInfoListにおけるv2x-CommTxPoolNormal、またはRRCConnectionR

e c o n f i g u r a t i o nにおけるv 2 x - I n t e r F r e q I n f o L i s tにおけるp 2 x - C o m m T x P o o l N o r m a l上で送信するように設定されている場合、

1 > z o n e C o n f i gが、関係周波数のS L - V 2 X - P r e c o n f i g u r a t i o nに含まれ、UEが、関係周波数のS L - V 2 X - P r e c o n f i g u r a t i o nにおけるv 2 x - C o m m T x P o o l L i s t上で送信するように設定されている場合

2 > 以下で決定されるゾーンアイデンティティに等しいz o n e I Dで設定され、5 . 1 0 . 8 . 2に従って選択された同期参照ソースに関連付けられたプールを選択し、UEは、z o n e C o n f i gがS y s t e m I n f o r m a t i o n B l o c k T y p e 2 1またはS L - V 2 X - P r e c o n f i g u r a t i o nに含まれている場合、以下の式を使用して、位置するゾーンのアイデンティティ（すなわち、Z o n e _ _ i d）を決定するものとする。

$$x_1 = \text{Floor}(x/L) \text{ Mod } N_x$$

$$y_1 = \text{Floor}(y/W) \text{ Mod } N_y$$

$$Z o n e _ _ i d = y_1 * N_x + x_1$$

式中のパラメータは、以下のように定義される：

Lは、S y s t e m I n f o r m a t i o n B l o c k T y p e 2 1またはS L - V 2 X - P r e c o n f i g u r a t i o nにおけるz o n e C o n f i gに含まれるz o n e L e n g t hの値であり、

Wは、S y s t e m I n f o r m a t i o n B l o c k T y p e 2 1またはS L - V 2 X - P r e c o n f i g u r a t i o nのz o n e C o n f i gに含まれるz o n e W i d t hの値であり、

N_xは、S y s t e m I n f o r m a t i o n B l o c k T y p e 2 1またはS L - V 2 X - P r e c o n f i g u r a t i o nのz o n e C o n f i gに含まれるz o n e I d L o n g i M o dの値であり、

N_yは、S y s t e m I n f o r m a t i o n B l o c k T y p e 2 1またはS L - V 2 X - P r e c o n f i g u r a t i o nのz o n e C o n f i gに含まれるz o n e I d L a t i M o dの値であり、

xは、W G S 8 4モデル[80]に従い、UEの現在位置と地理的座標(0、0)との間の経度における測地線距離であり、メートルで表され、

yは、W G S 8 4モデル[80]による、UEの現在位置と地理的座標(0、0)との間の緯度における測地線距離であり、メートルで表される。

UEは、上述の式に従って計算され、5 . 1 0 . 1 3 . 1に従ってv 2 x - C o m m T x P o o l N o r m a l D e d i c a t e d、v 2 x - C o m m T x P o o l N o r m a l C o m m o n、v 2 x - I n t e r F r e q I n f o L i s tにおけるv 2 x - C o m m T x P o o l N o r m a l、またはR R C C o n n e c t i o n R e c o n f i g u r a t i o nにおけるv 2 x - I n t e r F r e q I n f o L i s tにおけるp 2 x - C o m m T x P o o l N o r m a l、またはv 2 x - C o m m T x P o o l L i s tによって示されるZ o n e _ _ i dと等しいz o n e I Dを含むリソースのプールを選択するものとする。

注記1：UEは、その最新の地理的座標を使用してリソースプールの選択を行う。

注記2：地理的座標が利用可能ではなく、ゾーン固有の複数のTXリソースプールが関連周波数のために設定されている場合、どのリソースプールがV2Xサイドリンク通信のために選択されるかはUE実装による。