Appendix 2 - U.S. Patent No. 8,412,197

Defendants’ Accused Products operate on a Long Term Evolution (LTE) network, and are compliant with all mandatory provisions of the LTE standard, including 3GPP TS 36.304 (including v8.5.0, and all subsequent releases and versions) (collectively, “the TS 36.304 standard”) and 3GPP TS 36.331 (including v8.5.0, and all subsequent releases and versions) (collectively, “the TS 36.331 standard”). By complying with the TS 36.304 and TS 36.331 standards, Defendants’ Accused Products infringe at least claims 1, 2, 5-9, and 13-15 of U.S. Patent No. 8,412,197, as explained more fully below.

<table>
<thead>
<tr>
<th>Claim 1</th>
<th>Text of Applicable Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A method for cell reselection, comprising: obtaining, by a terminal, a dedicated priority list and a valid time of the dedicated priority list from a Long Term Evolution (LTE) system; and</td>
<td>The Accused Products’ use of mandatory portions of the LTE standard infringes claim 1 of the ‘197 patent. The Accused Products’ performance of the LTE standard performs the step of “obtaining, by a terminal, a dedicated priority list and a valid time of the dedicated priority list from a Long Term Evolution (LTE) system.” For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that includes a terminal or mobile device obtaining from an LTE system a dedicated priority list, such as a freqPriorityListX that “provides a cell reselection priority for each frequency, by means of separate lists for each RAT [Radio Access Technology].” The cell reselection process also involves the terminal obtaining from the LTE system a valid time of the dedicated priority list, such as from timer T320. See, e.g., 3GPP TS 36.304 v8.5.0, Section 5.2.4; 3GPP TS 36.331 v8.5.0, Sections 6.2.2, 7.3.</td>
</tr>
</tbody>
</table>
Defendants’ Accused Products are configured to obtain a dedicated priority list and valid time of the valid priority list, for example, in compliance with the TS 36.304 and TS 36.331 standards. For example, Defendants’ Accused Products support or comply with subsection 5.2.4 of the TS 36.304 V8.5.0 standard, and subsections 6.2.2 and 7.3 of the TS 36.331 V8.5.0 standard, which provide in relevant part, for example:

3GPP TS 36.304 v8.5.0, Sec 5.2.4:

5.2.4 Cell Reselection evaluation process

5.2.4.1 Reselection priorities handling

Absolute priorities of different E-UTRAN frequencies or inter-RAT frequencies may be provided to the UE in the system information, in the `RRCConnectionRelease` message, or by inheriting from another RAT at inter-RAT cell (re)selection. In the case of system information, an E-UTRAN frequency or inter-RAT frequency may be listed without providing a priority (i.e. the field `cellReselectionPriority` is absent for that frequency). If priorities are provided in dedicated signalling, the UE shall ignore all the priorities provided in system information. If UE is in `camped on any cell` state, UE shall only apply the priorities provided by system information from current cell, and the UE preserves priorities provided by dedicated signalling unless specified otherwise. When the UE in `camped normally` state, has only dedicated priorities other than for the current frequency, the UE shall consider the current frequency to be the lowest priority frequency (i.e. lower than the eight network configured values). The UE shall delete priorities provided by dedicated signalling when:

- the UE enters RRC_CONNECTED state; or
- the optional validity time of dedicated priorities (T320) expires; or
- a PLMN selection is performed on request by NAS [5].

3GPP TS 36.331 v8.5.0, Sec 6.2.2:
– **RRCConnectionRelease**

The **RRCConnectionRelease** message is used to command the release of an RRC connection.

Signalling radio bearer: SRB1

RLC-SAP: AM

Logical channel: DCCH

Direction: E-UTRAN to UE

**RRCConnectionRelease message**

```asn1
RRCConnectionRelease ::= SEQUENCE {
  rrc-TransactionIdentifier   RRC-TransactionIdentifier,
  criticalExtensions     CHOICE {
    c1   CHOICE {
      rrcConnectionRelease-r8    RRCConnectionRelease-r8-IEs,
      spare3 NULL, spare2 NULL, spare1 NULL
    },
    criticalExtensionsFuture   SEQUENCE {}
  }
}
```

```asn1
RRCConnectionRelease-r8-IEs ::= SEQUENCE {
  releaseCause      ReleaseCause,
  redirectedCarrierInfo    RedirectedCarrierInfo    OPTIONAL, -- Need ON
  idleModeMobilityControlInfo   IdleModeMobilityControlInfo   OPTIONAL, -- Need OP
  nonCriticalExtension    SEQUENCE {}       OPTIONAL -- Need OP
}
```

```asn1
ReleaseCause ::= ENUMERATED {
  loadBalancingTAUrequired,
  other, spare2, spare1 }
```

```asn1
RedirectedCarrierInfo ::= CHOICE {
```
IdleModeMobilityControlInfo ::= SEQUENCE {
  freqPriorityListEUTRA    FreqPriorityListEUTRA   OPTIONAL,  -- Need ON
  freqPriorityListGERAN    FreqsPriorityListGERAN   OPTIONAL,  -- Need ON
  freqPriorityListUTRA-FDD   FreqPriorityListUTRA-FDD  OPTIONAL,  -- Need ON
  freqPriorityListUTRA-TDD   FreqPriorityListUTRA-TDD  OPTIONAL,  -- Need ON
  bandClassPriorityListHRPD   BandClassPriorityListHRPD  OPTIONAL,  -- Need ON
  bandClassPriorityList1XRTT   BandClassPriorityList1XRTT  OPTIONAL,  -- Need ON
  t320        ENUMERATED {
    min5, min10, min20, min30, min60, min120, min180,
    spare1}      OPTIONAL,  -- Need OR
  ...
  }

FreqPriorityListEUTRA ::=   SEQUENCE (SIZE (1..maxFreq)) OF FreqPriorityEUTRA

FreqPriorityEUTRA ::=    SEQUENCE {
  carrierFreq       ARFCN-ValueEUTRA,
  cellReselectionPriority    CellReselectionPriority
  }

FreqsPriorityListGERAN ::=   SEQUENCE (SIZE (1..maxGNFG)) OF FreqsPriorityGERAN

FreqsPriorityGERAN ::=    SEQUENCE {
  carrierFreqs      CarrierFreqsGERAN,
  cellReselectionPriority    CellReselectionPriority
  }

FreqPriorityListUTRA-FDD ::=  SEQUENCE (SIZE (1..maxUTRA-FDD-Carrier)) OF FreqPriorityUTRA-FDD

FreqPriorityUTRA-FDD ::=   SEQUENCE {
  carrierFreq       ARFCN-ValueUTRA,
  cellReselectionPriority    CellReselectionPriority
  }

FreqPriorityListUTRA-TDD ::=  SEQUENCE (SIZE (1..maxUTRA-TDD-Carrier)) OF FreqPriorityUTRA-TDD

FreqPriorityUTRA-TDD ::=   SEQUENCE {
  carrierFreq       ARFCN-ValueUTRA,
  cellReselectionPriority    CellReselectionPriority
  }
### RRCConnectionRelease field descriptions

**releaseCause**
The `releaseCause` is used to indicate the reason for releasing the RRC Connection.

**redirectedCarrierInfo**
The `redirectedCarrierInfo` indicates a carrier frequency (downlink for FDD) and is used to redirect the UE to another E-UTRA or an inter-RAT carrier frequency, by means of the cell selection upon leaving RRC_CONNECTED as specified in TS 36.304 [4].

**idleModeMobilityControlInfo**
Provides dedicated cell reselection priorities. Used for cell reselection as specified in TS 36.304 [4].

**freqPriorityListX**
Provides a cell reselection priority for each frequency, by means of separate lists for each RAT (including E-UTRA).

**carrierFreq or bandClass**
The carrier frequency (UTRA and E-UTRA) and band class (HRPD and 1xRTT) for which the associated cellReselectionPriority is applied.

**t320**
Timer T320 as described in section 7.3. Value minN corresponds to N minutes.

**carrierFreqs**
The list of GERAN carrier frequencies organised into one group of GERAN carrier frequencies.
### 3GPP TS 36.331 v8.5.0, Sec 7.3:

| T320 | Upon receiving $t_{320}$ or upon cell (re)selection to E-UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied). | Upon entering RRC_CONNECTED, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT). | Discard the cell reselection priority information provided by dedicated signalling. |

performing, by the terminal, cell reselection according to the dedicated priority list and the valid time of the dedicated priority list, when the terminal camps on a cell of a non-LTE system;

The Accused Products’ performance of the LTE standard performs the step of “performing, by the terminal, cell reselection according to the dedicated priority list and the valid time of the dedicated priority list, when the terminal camps on a cell of a non-LTE system.”

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that requires the mobile device to perform cell reselection according to the dedicated priority list and the valid time of the dedicated priority list when the terminal camps on a cell of a non-LTE system, such as “upon cell (re)selection to UTRA.” See, e.g., 3GPP TS 25.304 (including v8.5.0, and all subsequent releases and versions), v8.5.0, Section 5.2.6.1.4a; 3GPP TS 25.331 (including v8.6.0, and all subsequent releases and versions), v8.7.0, Section 13.1; see also, e.g., 3GPP TS 44.018 (including v8.8.0, and all subsequent releases and versions), v8.8.0, Sections 3.2.3.3, 9.1.7.9, 11.1.1; 3GPP TS 44.060 (including v8.6.0, and all subsequent releases and versions), v8.6.0, Section 5.5.1.1c.3.
Defendants’ Accused Products are configured to perform cell reselection according to the dedicated priority list and the valid time of the dedicated priority list, when camping on a cell of a non-LTE system, for example, in compliance with the TS 36.304 and TS 36.331 standards. For example, Defendants’ Accused Products support or comply with subsection 5.2.6.1.4a of the TS 25.304 V8.5.0 standard and subsection 13.1 of the TS 25.331 V8.7.0 standard as well as subsections 3.2.3.3, 9.1.7.9, 11.1.1 of the TS 44.018 v8.8.0 standard and subsection 5.5.1.1c.3 of the TS 44.060 v8.6.0 standard, as specified, for example, in 3GPP TS 36.304 V8.5.0, subsection 2 and TS 36.331 V8.5.0, subsection 2, and which provide in relevant part, for example:

3GPP TS 36.304 v8.5.0, Sec 2:
2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

[19] 3GPP TS 25.304: "User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode"

3GPP TS 36.331 v8.5.0, Sec 2:
2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

[40] 3GPP TS 25.304: "Universal Terrestrial Radio Access (UTRAN); User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode".

3GPP TS 25.304 v8.5.0, Sec 5.2.6.1.4a:

5.2.6.1.4a Absolute priority based criteria for inter-frequency and inter-RAT cell reselection
The UE shall inherit the priorities provided by dedicated signalling and the remaining validity time (i.e., T320 in E-UTRA, T322 in UTRA and [T3230, FFS] in GERAN), if configured, at inter-RAT cell (re)selection.

3GPP TS 25.331 V8.7.0, Sec 13.1:

13.1 Timers for UE

<table>
<thead>
<tr>
<th>Timer</th>
<th>Start</th>
<th>Stop</th>
<th>At expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
</tr>
</tbody>
</table>
Case No. 3:16-cv-02787-WHO (N.D. Cal.)

| T322 | When received in UTRAN MOBILITY INFORMATION message in the IE “Dedicated Priority Information” or upon cell (re)selection to UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied). | When dedicated priorities are cleared, when new dedicated priorities are received, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT). | See subclause 8.3.3.7 |

3GPP TS 36.331 v8.5.0, Sec 2:  
2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

......

[36] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

......

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".
3GPP TS 44.018 v8.8.0, Sec 3.2.3.3 :

3.2.3.3 Provision of individual priorities information

......

At inter-RAT cell reselection from UTRAN or E-UTRAN to GERAN, the MS shall inherit valid individual priority information from the source RAT. In this case the mobile station shall start timer T3230 with the timeout value set to the remaining validity time of the corresponding timer from the source RAT (i.e. T320 in E-UTRA, T322 in UTRA). If more than one valid individual priority applied for GERAN frequencies while in the source RAT then, following inter-RAT reselection to GERAN, the mobile station shall apply, as GERAN individual priority, only the one applicable to the BCCH carrier of the GERAN cell that was reselected, for as long as it is valid and the mobile station remains in GERAN. In this case the mobile station shall not apply the other GERAN individual priority(ies) until a further inter-RAT reselection from GERAN occurs (see 3GPP TS 25.331, 3GPP TS 36.331).

9.1.7.9 Individual priorities

This information element is sent to provide MS-specific priorities for priority-based cell reselection. The individual priorities shall override the priorities received through system information or individual priorities received previously. The timer T3230 is used to control the availability of the individual priorities.

3GPP TS 44.018 v8.8.0, Sec 11.1.1 :

11.1.1 Timers on the mobile station side
T3230: The timer is used to control the validity period of individual priorities. It is started on receipt of the individual priorities for cell reselection via dedicated signalling or on inter-RAT reselection to GERAN if the corresponding timer in the source RAT (i.e., T320 in E-UTRA, and T322 in UTRA) was running when reselection occurred.

When a PLMN selection is performed and results in a change of PLMN, the MS shall stop T3230 and delete the corresponding individual priorities.

At expiry the mobile station shall delete the corresponding individual priorities.

3GPP TS 44.060 v8.6.0, Sec 5.5.1.1c.3:

5.5.1.1c.3 Provision of individual priorities information

At inter-RAT cell reselection from UTRAN or E-UTRAN to GERAN, the MS shall inherit valid individual priority information from the source RAT. In this case the mobile station shall start timer T3230 with the timeout value set to the remaining validity time of the corresponding timer from the source RAT (i.e. T320 in E-UTRA, T322 in UTRA). If more than one valid individual priority applied for GERAN frequencies while in the source RAT then, following inter-RAT reselection to GERAN, the mobile station shall apply, as GERAN individual priority, only the one applicable to the BCCH carrier of the GERAN cell that was reselected, for as long as it is valid and the mobile station remains in GERAN. In this case the mobile station shall not apply the other GERAN individual priority(ies) until a further inter-RAT reselection from GERAN occurs (see 3GPP TS 25.331, 3GPP TS 36.331).

wherein, when the terminal camps on a cell of the non-LTE system, the performing cell reselection according to the dedicated priority list and the valid time comprises: performing, by the terminal camping on the cell of the non-LTE system, cell reselection according to The Accused Products’ performance of the LTE standard performs the step of “when the terminal camps on a cell of the non-LTE system, the performing cell reselection according to the dedicated priority list and the valid time comprises performing, by the terminal camping on the cell of the non-LTE system, cell reselection according to the dedicated priority list before the valid time
the dedicated priority list before the valid time expires.

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that requires that when the mobile device camps on a cell of the non-LTE system, such as UTRA, the mobile device performs cell reselection according to the dedicated priority list before the valid time expires, such as by “inheriting the priorities provided by dedicated signalling and the remaining validity time” during “inter-frequency and inter-RAT cell selection.” See, e.g., 3GPP TS 25.304 (including v8.5.0, and all subsequent releases and versions), v8.5.0, Section 5.2.6.1.4a; 3GPP TS 25.331 (including v8.6.0, and all subsequent releases and versions), v8.7.0, Section 13.1; see also, e.g., 3GPP TS 44.018 v8.8.0, Section 3.2.3.3; 3GPP TS 44.060 v8.6.0, Section 5.5.1.1c.3.

Defendants’ Accused Products are configured to perform cell reselection according to the dedicated priority list and the valid time of the dedicated priority list before the valid time expires, when camping on a cell of a non-LTE system, for example, in compliance with the TS 36.304 and TS 36.331 standards. For example, Defendants’ Accused Products support or comply with subsection 5.2.6.1.4a of the TS 25.304 V8.5.0 standard and subsection 13.1 of the TS 25.331 V8.7.0 standard as well as subsection 3.2.3.3 of the TS 44.018 v8.8.0 standard and subsection 5.5.1.1c.3 of the TS 44.060 v8.6.0 standard, as specified, for example, in 3GPP TS 36.304 V8.5.0, subsection 2 and TS 36.331 V8.5.0, section 2, and which provide in relevant part, for example:

3GPP TS 36.304 v8.5.0, Sec 2:
2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

[19] 3GPP TS 25.304: "User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode"

3GPP TS 36.331 v8.5.0, Sec 2:
2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.


[40] 3GPP TS 25.304: "Universal Terrestrial Radio Access (UTRAN); User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode".

3GPP TS 25.304 v8.5.0, Sec 5.2.6.1.4a:
### 5.2.6.1.4a Absolute priority based criteria for inter-frequency and inter-RAT cell reselection

The UE shall inherit the priorities provided by dedicated signalling and the remaining validity time (i.e., T320 in E-UTRA, T322 in UTRA and [T3230, FFS] in GERAN), if configured, at inter-RAT cell (re)selection.

3GPP TS 25.331 v8.7.0, Sec 13.1:

**13.1 Timers for UE**

<table>
<thead>
<tr>
<th>Timer</th>
<th>Start</th>
<th>Stop</th>
<th>At expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
</tr>
<tr>
<td>T322</td>
<td>When received in UTRAN MOBILITY INFORMATION message in the IE “Dedicated Priority Information” or upon cell (re)selection to UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied).</td>
<td>When dedicated priorities are cleared, when new dedicated priorities are received, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT).</td>
<td>See subclause 8.3.3.7</td>
</tr>
</tbody>
</table>

3GPP TS 36.331 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

……

[36] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

……

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".
3GPP TS 44.018 v8.8.0, Sec 3.2.3.3:

3.2.3.3 Provision of individual priorities information

......

At inter-RAT cell reselection from UTRAN or E-UTRAN to GERAN, the MS shall inherit valid individual priority information from the source RAT. In this case the mobile station shall start timer T3230 with the timeout value set to the remaining validity time of the corresponding timer from the source RAT (i.e. T320 in E-UTRA, T322 in UTRA). If more than one valid individual priority applied for GERAN frequencies while in the source RAT then, following inter-RAT reselection to GERAN, the mobile station shall apply, as GERAN individual priority, only the one applicable to the BCCH carrier of the GERAN cell that was reselected, for as long as it is valid and the mobile station remains in GERAN. In this case the mobile station shall not apply the other GERAN individual priority(ies) until a further inter-RAT reselection from GERAN occurs (see 3GPP TS 25.331, 3GPP TS 36.331).

3GPP TS 44.060 v8.6.0, Sec 5.5.1.1c.3:

5.5.1.1c.3 Provision of individual priorities information

......

At inter-RAT cell reselection from UTRAN or E-UTRAN to GERAN, the MS shall inherit valid individual priority information from the source RAT. In this case the mobile station shall start timer T3230 with the timeout value set to the remaining validity time of the corresponding timer from the source RAT (i.e. T320 in E-UTRA, T322 in UTRA). If more than one valid individual priority applied for GERAN frequencies while in the source RAT then, following inter-RAT reselection to GERAN, the mobile station shall apply, as GERAN individual priority, only the one applicable to the BCCH carrier of the GERAN cell that was reselected, for as long as it is valid and the mobile station remains in GERAN. In this case the mobile station shall not apply the other GERAN individual priority(ies)
Case No. 3:16-cv-02787-WHO (N.D. Cal.)

<table>
<thead>
<tr>
<th>Table</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>until a further inter-RAT reselection from GERAN occurs (see 3GPP TS 25.331, 3GPP TS 36.331).</td>
<td>The Accused Products’ performance of the LTE standard performs the step of “when the terminal camps on the cell of the non-LTE system, the dedicated priority list is invalid after the valid time expires.”</td>
</tr>
</tbody>
</table>

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that requires that when the mobile device camps on the cell of the non-LTE system such as UTRA, the dedicated priority list is invalid after the valid time expires.  See, e.g., 3GPP TS 25.331 v8.7.0, Sections 13.1, 13.4.15c, and 8.3.3.7; see also, e.g., 3GPP TS 44.018 v8.8.0, Section 11.1.1.  

Defendants’ Accused Products are configured so that, when the terminal camps on the cell of the non-LTE system, the dedicated priority list is invalid after the valid time expires, for example, in compliance with the TS 36.331 standard.  For example, Defendants’ Accused Products support or comply with subsections 13.1, 13.4.15c, and 8.3.3.7 of the TS 25.331 V8.7.0 standard as well as subsection 11.1.1 of the TS 44.018 v8.8.0 standard, as specified, for example, in 3GPP TS 36.331 V8.5.0, subsection 2, and which provide in relevant part, for example:

**3GPP TS 36.331 v8.5.0, Sec 2:**

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

3GPP TS 25.331 v8.7.0, Sec 13.1:

13.1 Timers for UE

<table>
<thead>
<tr>
<th>Timer</th>
<th>Start</th>
<th>Stop</th>
<th>At expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>T322</td>
<td>When received in UTRAN MOBILITY INFORMATION message in the IE “Dedicated Priority Information” or upon cell (re)selection to UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied).</td>
<td>When dedicated priorities are cleared, when new dedicated priorities are received, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT).</td>
<td>See subclause 8.3.3.7</td>
</tr>
</tbody>
</table>

3GPP TS 25.331 v8.7.0, Sec 8.3.3.7:

8.3.3.7 T322 expiry

Upon expiry of timer T322 the UE shall:

1> clear the stored IE "Dedicated Priority Information";
clear the variable PRIORITY_INFO_LIST;
set the value of IE "Priority status" in the variable PRIORITY_INFO_LIST to
"sys_info_priority";
if the UE is not in CELL_DCH state:
   take the actions as described in subclause 8.1.1.6.19 using stored System information Block type 19.

3GPP TS 25.331 v8.7.0, Sec 13.4.15c:

13.4.15c PRIORITY_INFO_LIST

This variable contains cell information on UTRA and inter-RAT priorities to be applied to
neighbour cells stored in CELL_INFO_LIST and EUTRA_FREQUENCY_INFO_LIST, as received
in messages System Information Block Type 19 and UTRAN MOBILITY INFORMATION.

   The contents of this variable are inherited at inter-RAT cell (re)selection, including the remaining
   validity time (i.e., T320 in E-UTRAN, T322 in UTRAN, and T3230 in GERAN), if configured.

3GPP TS 36.331 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

......

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol", 3GPP TS 44.018 V8.8.0
<table>
<thead>
<tr>
<th>3GPP TS 44.018 v8.8.0, Sec 11.1.1 :</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.1.1 Timers on the mobile station side</strong></td>
</tr>
<tr>
<td>.....</td>
</tr>
<tr>
<td><strong>T3230:</strong> The timer is used to control the validity period of individual priorities. It is started on receipt of the individual priorities for cell reselection via dedicated signalling or on inter-RAT reselection to GERAN if the corresponding timer in the source RAT (i.e., T320 in E-UTRA, and T322 in UTRA) was running when reselection occurred.</td>
</tr>
<tr>
<td>When a PLMN selection is performed and results in a change of PLMN, the MS shall stop T3230 and delete the corresponding individual priorities.</td>
</tr>
<tr>
<td>At expiry the mobile station shall delete the corresponding individual priorities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Claim 2</th>
<th>Text of Applicable Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(3GPP TS 36.304 V8.5.0, 3GPP TS 36.331 V8.5.0)</td>
</tr>
</tbody>
</table>
2. The method according to claim 1, wherein when the terminal camps on the cell of the non-LTE system, the dedicated priority list is invalid after the valid time expires, the method further comprises:

- performing cell reselection according to a public priority list; or
- performing cell reselection according to a result measured in accordance with a cell signal quality criterion; or
- searching for a cell of the LTE system.

Defendants’ Accused Products meet the elements of independent claim 1, as described above.

The Accused Products’ performance of the LTE standard performs the step of “wherein when the terminal camps on the cell of the non-LTE system, the dedicated priority list is invalid after the valid time expires, the method further comprises: performing cell reselection according to a public priority list.”

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that requires that when the mobile device camps on the cell of a non-LTE system such as UTRA and the dedicated priority list is invalid after the valid time expires, then the mobile device reverts to using the priorities signalled in system information for cell reselection. See, e.g., 3GPP TS 25.331 v8.7.0, Sections 13.1, 8.1.1, 8.3.3.7, 13.4.15c, and 10.2.48.8.22; see also, e.g., 3GPP TS 44.018 v8.8.0, Sections 3.2.3.1, 11.1.1, 3.2.3.2; 3GPP TS 44.060 v8.6.0, Section 5.5.1.1c.1; 3GPP TS 45.008 (including v8.4.0, and all subsequent releases and versions), v8.4.0, Sections 6.6.2, 6.6.4.

Defendants’ Accused Products are configured so that, when the terminal camps on the cell of a non-LTE system and the dedicated priority list is invalid after the valid time expires, the Accused Products are configured to perform cell reselection according to a public priority list, for example, in compliance with the TS 36.331 standard. For example, Defendants’ Accused Products support or comply with subsections 13.1, 8.1.1, 8.3.3.7, 13.4.15c, and 10.2.48.8.22 of the TS 25.331 v8.7.0 standard as well as subsections 3.2.3.1, 11.1.1, 3.2.3.2 of the TS 44.018 v8.8.0 standard, subsection 5.5.1.1c.1 of the TS 44.060 v8.6.0 standard, and subsections 6.6.2 and 6.6.4 of the TS 45.008 v8.4.0.
standard, as specified, for example, in 3GPP TS 36.331 V8.5.0, subsection 2 and 3GPP TS 44.018 v8.8.0, subsection 2, and which provide in relevant part, for example:

3GPP TS 36.331 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.


[40] 3GPP TS 25.304: "Universal Terrestrial Radio Access (UTRAN); User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode".

3GPP TS 25.331 v8.7.0, Sec 13.1:

13.1 Timers for UE

<table>
<thead>
<tr>
<th>Timer</th>
<th>Start</th>
<th>Stop</th>
<th>At expiry</th>
</tr>
</thead>
</table>

Samsung Exhibit 1011, Page 22
| T322 | When received in UTRAN MOBILITY INFORMATION message in the IE “Dedicated Priority Information” or upon cell (re)selection to UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied). | When dedicated priorities are cleared, when new dedicated priorities are received, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT). | See subclause 8.3.3.7 |

3GPP TS 25.331 v8.7.0, Sec 8.3.3.7:

8.3.3.7 T322 expiry

Upon expiry of timer T322 the UE shall:

1> clear the stored IE "Dedicated Priority Information";

1> clear the variable PRIORITY_INFO_LIST;

1> set the value of IE "Priority status" in the variable PRIORITY_INFO_LIST to "sys_info_priority";

1> if the UE is not in CELL_DCH state:

2> take the actions as described in subclause 8.1.1.6.19 using stored System information Block type 19.

3GPP TS 25.331 v8.7.0, Sec 13.4.15c:
13.4.15c  PRIORITY_INFO_LIST

This variable contains cell information on UTRA and inter-RAT priorities to be applied to neighbour cells stored in CELL_INFO_LIST and EUTRA_FREQUENCY_INFO_LIST, as received in messages System Information Block Type 19 and UTRAN MOBILITY INFORMATION.

The contents of this variable are inherited at inter-RAT cell (re)selection, including the remaining validity time (i.e., T320 in E-UTRAN, T322 in UTRAN, and [T3230, FFS] in GERAN), if configured.

3GPP TS 25.331 v8.7.0
8.1.1  Broadcast of system information

8.1.1.1  General

The purpose of this procedure is to broadcast system information from the UTRAN to UEs in a cell.
3GPP TS 25.331 v8.7.0, Sec 10.2.48.22:

### 10.2.48.8.22 System Information Block type 19

The system information block type 19 contains Inter-RAT frequency and priority information to be used in the cell.

<table>
<thead>
<tr>
<th>Information Element/Group name</th>
<th>Need</th>
<th>Multi</th>
<th>Type and reference</th>
<th>Semantics description</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTRA priority info list</td>
<td>MP</td>
<td></td>
<td>UTRA priority info list</td>
<td></td>
<td>REL-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10.3.7.113</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSM priority info list</td>
<td>OP</td>
<td></td>
<td>GSM priority info list</td>
<td></td>
<td>REL-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10.3.7.114</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-UTRA frequency and priority info list</td>
<td>OP</td>
<td></td>
<td>E-UTRA frequency and priority info list</td>
<td></td>
<td>REL-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10.3.7.115</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Accused Products’ performance of the LTE standard also performs the step of “wherein when the terminal camps on the cell of the non-LTE system, the dedicated priority list is invalid after the valid time expires, the method further comprises: performing cell reselection according to a result measured in accordance with a cell signal quality criterion.”

For example, the TS 36.304 and 36.331 standards provide a cell reselection process that requires that
when the mobile device camps on the cell of a non-LTE system such as UTRA and the dedicated priority list is invalid after the valid time expires, then the mobile device shall perform cell reselection based on criteria including comparing \( S_x \) and \( S_{\text{intersearch}} \), comparing \( S_{\text{rxlev}} \) and \( S_{\text{searchHCS}} \), and assessment of MBMS PL.

See, e.g., 3GPP TS 25.304 v8.5.0, Section 5.2.6.1.1.

Defendants’ Accused Products are configured so that, when the terminal camps on the cell of a non-LTE system and the dedicated priority list is invalid after the valid time expires, the Accused Products are configured to perform cell reselection according to a result measured in accordance with a cell signal quality criterion, for example, in compliance with the TS 36.304 standard. For example, Defendants’ Accused Products support or comply with subsection 5.2.6.1.1 of the TS 25.304 v8.5.0 standard, as specified, for example, in 3GPP TS 36.304 V8.5.0, subsection 2, and which provide in relevant part, for example:

3GPP TS 25.304 v8.5.0, Sec 5.2.6.1.1:

5.2.6.1.1 Measurement rules for cell re-selection when HCS is not used

... If the system information broadcast in the serving cell indicates that HCS is not used and absolute priorities for inter-frequency layers are not provided, then for inter-frequency measurements the UE shall:

2. If \( S_x > S_{\text{intersearch}} \) and MBMS PL has not been indicated, and \( S_{\text{rxlev}} > S_{\text{searchHCS}} \) if \( S_{\text{searchHCS}} \) is signalled, UE may choose to not perform inter-frequency measurements.

If \( S_x > S_{\text{intersearch}} \) and MBMS PL has been indicated and the serving cell belongs to the MBMS
PL, and \( S_{\text{rxlev}} > S_{ \text{searchHCS} } \) if \( S_{ \text{searchHCS} } \) is signalled, UE may choose to not perform inter-frequency measurements.

If \( S_x > S_{ \text{intersearch} } \) and MBMS PL has been indicated and the serving cell does not belong to the MBMS PL, and \( S_{\text{rxlev}} > S_{ \text{searchHCS} } \) if \( S_{ \text{searchHCS} } \) is signalled, UE shall at least perform inter-frequency measurements on the MBMS PL.

If \( S_x \leq S_{ \text{intersearch} } \) or \( S_{\text{rxlev}} \leq S_{ \text{searchHCS} } \) if \( S_{ \text{searchHCS} } \) is signalled, perform inter-frequency measurements.

If \( S_{ \text{intersearch} } \) is not sent for serving cell, perform inter-frequency measurements.

If Dedicated CSG frequencies have been indicated by system information the UE may choose not to perform inter-frequency measurements of these frequencies.

3GPP TS 36.331 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

……

[36] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

……

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".

3GPP TS 44.018 v8.8.0, Sec 3.2.3.1:

3.2.3.1 General
Two sets of priorities are defined for inter-RAT cell re-selection based on priority information: common priorities (see sub-clause 3.2.3.2) and individual priorities (see sub-clause 3.2.3.3). A mobile station shall consider the latest received common priorities as valid if the mobile does not have any valid individual priorities.

3GPP TS 44.018 v8.8.0, Sec 11.1.1:

11.1.1 Timers on the mobile station side

| T3230: | The timer is used to control the validity period of individual priorities. It is started on receipt of the individual priorities for cell reselection via dedicated signalling or on inter-RAT reselection to GERAN if the corresponding timer in the source RAT (i.e., T320 in E-UTRA, and T322 in UTRA) was running when reselection occurred.

When a PLMN selection is performed and results in a change of PLMN, the MS shall stop T3230 and delete the corresponding individual priorities.

At expiry the mobile station shall delete the corresponding individual priorities.

3GPP TS 44.018 v8.8.0, Sec 3.2.3.2:

3.2.3.2 Common priorities information

A mobile station may receive common priorities information in the Priority and E-UTRAN Parameters Description IE in the SYSTEM INFORMATION TYPE 2quarter message. The mobile station shall use the parameters provided in the GSM Priority Parameters IE and in the E-UTRAN Measurement Parameters Description IE and/or in the 3G Priority Parameters Description IE for inter-RAT cell reselection towards E-UTRAN and/or UTRAN.

3GPP TS 44.060 v8.6.0, Sec 5.5.1.1c.1:

5.5.1.1c.1 General
The network may provide priority information to enable priority-based cell reselection (see 3GPP TS 45.008). Inter-RAT cell reselection based on priority information applies only in case of autonomous cell reselection.

Two sets of priorities are defined for inter-RAT cell re-selection based on priority information: common priorities (see sub-clause 5.5.1.1c.2) and individual priorities (see sub-clause 5.5.1.1c.3). A mobile station shall consider the latest received common priorities as valid if the mobile does not have any valid individual priorities. The mobile station shall delete all priorities when switched off. The validity of individual priorities is specified in sub-clause

3GPP TS 44.018 v8.8.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

......

[34] 3GPP TS 45.008: "Radio subsystem link control".

3GPP TS 45.008 V8.4.0, Sec 6.6.2:

6.6.2 Path loss criteria and timings for cell reselection
6.6.4 Measurements on cells of other radio access technologies

<table>
<thead>
<tr>
<th>Claim 5</th>
<th>Text of Applicable Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(3GPP TS 36.304 V8.5.0, 3GPP TS 36.331 V8.5.0)</td>
</tr>
</tbody>
</table>
5. The method according to claim 1, wherein the dedicated priority list and the valid time of the dedicated priority list are carried in a dedicated signal.

Defendants’ Accused Products meet the elements of independent claim 1, as described above.

The Accused Products’ performance of the LTE standard performs the step of “wherein the dedicated priority list and the valid time of the dedicated priority list are carried in a dedicated signaling.”

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that includes a terminal or mobile device obtaining from an LTE system a dedicated priority list and valid time of the dedicated priority list in dedicated signaling, such as an RRCConnectionRelease message.  See, e.g., 3GPP TS 36.304 v8.5.0, Section 5.2.4; 3GPP TS 36.331 v8.5.0, Sections 6.2.2 and 7.3.

Defendants’ Accused Products are configured to carry the dedicated priority list and the valid time of the dedicated priority list in a dedicated signaling, for example, in compliance with the TS 36.304 and TS 36.331 standards.  For example, Defendants’ Accused Products support or comply with subsection 5.2.4 of the TS 36.304 V8.5.0 standard, and subsections 6.2.2 and 7.3 of the TS 36.331 V8.5.0 standard, which provide in relevant part, for example:

3GPP TS 36.304 v8.5.0, Sec 5.2.4:

5.2.4  Cell Reselection evaluation process

5.2.4.1 Reselection priorities handling

Absolute priorities of different E-UTRAN frequencies or inter-RAT frequencies may be provided to the UE in the system information, in the RRCConnectionRelease message, or by inheriting from another RAT at inter-RAT cell (re)selection. In the case of system information, an E-UTRAN
frequency or inter-RAT frequency may be listed without providing a priority (i.e. the field cellReselectionPriority is absent for that frequency). If priorities are provided in dedicated signalling, the UE shall ignore all the priorities provided in system information. If UE is in camped on any cell state, UE shall only apply the priorities provided by system information from current cell, and the UE preserves priorities provided by dedicated signalling unless specified otherwise. When the UE in camped normally state, has only dedicated priorities other than for the current frequency, the UE shall consider the current frequency to be the lowest priority frequency (i.e. lower than the eight network configured values). While the UE is camped on a suitable CSG cell, the UE shall always consider the current frequency to be the highest priority frequency (i.e. higher than the eight network configured values), irrespective of any other priority value allocated to this frequency. The UE shall delete priorities provided by dedicated signalling when:
- the UE enters RRC_CONNECTED state; or
- the optional validity time of dedicated priorities (T320) expires; or
- a PLMN selection is performed on request by NAS [5].

3GPP TS 36.331 v8.5.0, Sec 6.2.2:

- **RRCConnectionRelease**

  The **RRCConnectionRelease** message is used to command the release of an RRC connection.

  - Signalling radio bearer: SRB1
  - RLC-SAP: AM
  - Logical channel: DCCH
  - Direction: E-UTRAN to UE
**RRConnectionRelease message**

```
-- ASN1START

RRConnectionRelease ::=   SEQUENCE {
    rrc-TransactionIdentifier   RRC-TransactionIdentifier,
    criticalExtensions     CHOICE {
        c1              CHOICE {
            rrcConnectionRelease-r8    RRCConnectionRelease-r8-IEs,
            spare3 NULL, spare2 NULL, spare1 NULL
        },
        criticalExtensionsFuture   SEQUENCE {}
    }
}

RRCConnectionRelease-r8-IEs ::=  SEQUENCE {
    releaseCause ReleaseCause,
    redirectedCarrierInfo       RedirectedCarrierInfo    OPTIONAL,  -- Need ON
    idleModeMobilityControlInfo  IdleModeMobilityControlInfo   OPTIONAL,  -- Need OP
    nonCriticalExtension  SEQUENCE {}       OPTIONAL  -- Need OP
}

ReleaseCause ::=   ENUMERATED {loadBalancingTAUrequired, other,spare2, spare1 }

RedirectedCarrierInfo ::=   CHOICE {
    eutra        ARFCN-ValueEUTRA,
    geran        CarrierFreqGERAN,
   utra-FDD      ARFCN-ValueUTRA,
   utra-TDD      ARFCN-ValueUTRA,
   cdma2000-HRPD CarrierFreqCDMA2000,
   cdma2000-1xRTT CarrierFreqCDMA2000,
    ...
}

IdleModeMobilityControlInfo ::=  SEQUENCE {
    freqPriorityListEUTRA FreqPriorityListEUTRA   OPTIONAL,  -- Need ON
    freqPriorityListGERAN FreqPriorityListGERAN   OPTIONAL,  -- Need ON
    freqPriorityListUTRA-FDD FreqPriorityListUTRA-FDD OPTIONAL,  -- Need ON
    freqPriorityListUTRA-TDD FreqPriorityListUTRA-TDD OPTIONAL,  -- Need ON
    bandClassPriorityListHRPD BandClassPriorityListHRPD  OPTIONAL,  -- Need ON
    bandClassPriorityList1XRTT BandClassPriorityList1XRTT  OPTIONAL,  -- Need ON
    t320          ENUMERATED {min5, min10, min20, min30, min60, min120, min180,
                                 spare1}      OPTIONAL,  -- Need OR
    ...
}

FreqPriorityListEUTRA ::=   SEQUENCE (SIZE (1..maxFreq)) OF FreqPriorityEUTRA

-- ASN1END

```
Case No. 3:16-cv-02787-WHO (N.D. Cal.)

FreqPriorityEUTRA ::= SEQUENCE {
carrierFreq ARFCN-ValueEUTRA,
cellReselectionPriority CellReselectionPriority
}

FreqsPriorityListGERAN ::= SEQUENCE (SIZE (1..maxGNFG)) OF FreqsPriorityGERAN

FreqsPriorityGERAN ::= SEQUENCE {
carrierFreqs CarrierFreqsGERAN,
cellReselectionPriority CellReselectionPriority
}

FreqPriorityListUTRA-FDD ::= SEQUENCE (SIZE (1..maxUTRA-FDD-Carrier)) OF FreqPriorityUTRA-FDD

FreqPriorityUTRA-FDD ::= SEQUENCE {
carrierFreq ARFCN-ValueUTRA,
cellReselectionPriority CellReselectionPriority
}

FreqPriorityListUTRA-TDD ::= SEQUENCE (SIZE (1..maxUTRA-TDD-Carrier)) OF FreqPriorityUTRA-TDD

FreqPriorityUTRA-TDD ::= SEQUENCE {
carrierFreq ARFCN-ValueUTRA,
cellReselectionPriority CellReselectionPriority
}

BandClassPriorityListHRPD ::= SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandClassPriorityHRPD

BandClassPriorityHRPD ::= SEQUENCE {
bandClass BandclassCDMA2000,
cellReselectionPriority CellReselectionPriority
}

BandClassPriorityList1XRTT ::= SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandClassPriority1XRTT

BandClassPriority1XRTT ::= SEQUENCE {
bandClass BandclassCDMA2000,
cellReselectionPriority CellReselectionPriority
}

-- ASN1STOP

**RRCConnectionRelease field descriptions**

*releaseCause*
The *releaseCause* is used to indicate the reason for releasing the RRC Connection.
**redirectedCarrierInfo**  
The *redirectedCarrierInfo* indicates a carrier frequency (downlink for FDD) and is used to redirect the UE to another E-UTRA or an inter-RAT carrier frequency, by means of the cell selection upon leaving RRC_CONNECTED as specified in TS 36.304 [4].

**idleModeMobilityControlInfo**  
Provides dedicated cell reselection priorities. Used for cell reselection as specified in TS 36.304 [4].

**freqPriorityListX**  
Provides a cell reselection priority for each frequency, by means of separate lists for each RAT (including E-UTRA).

**carrierFreq or bandClass**  
The carrier frequency (UTRA and E-UTRA) and band class (HRPD and 1xRTT) for which the associated cellReselectionPriority is applied.

**t320**  
Timer T320 as described in section 7.3. Value minN corresponds to N minutes.

**carrierFreqs**  
The list of GERAN carrier frequencies organised into one group of GERAN carrier frequencies.

---

### 3GPP TS 36.331 v8.5.0, Sec 7.3:

<table>
<thead>
<tr>
<th>T320</th>
<th>Upon receiving <strong>t320</strong> or upon cell (re)selection to E-UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied).</th>
<th>Upon entering RRC_CONNECTED, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT).</th>
<th>Discard the cell reselection priority information provided by dedicated signalling.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim 6</td>
<td>Text of Applicable Standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3GPP TS 36.304 V8.5.0, 3GPP TS 36.331 V8.5.0)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. The method according to one of the claim
1, wherein the dedicated priority list
comprises one of the following:

- priority level of a frequency or a Radio Access
  Technology, RAT;
- priority levels of the frequency of the serving
cell, adjacent frequencies of the serving cell,
and frequencies of the neighboring systems;
and
- priority levels assigned for each frequency or
Frequency Band of a neighboring system.

<table>
<thead>
<tr>
<th>Defendants’ Accused Products meet the elements of independent claim 1, as described above.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Accused Products’ performance of the LTE standard performs the step of “wherein the dedicated priority list comprises: priority level information of different Radio Access Technologies, RATs.”</td>
</tr>
<tr>
<td>For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that includes a terminal or mobile device obtaining from an LTE system a dedicated priority list that includes “absolute priorities of different E-UTRAN frequencies or inter-RAT frequencies.” See, e.g., 3GPP TS 36.304 v8.5.0, Section 5.2.4; 3GPP TS 36.331 v8.5.0, Sections 6.2.2 and 7.3.</td>
</tr>
<tr>
<td>Defendants’ Accused Products are configured such that the dedicated priority list comprises priority level information of different Radio Access Technologies (RATs), for example, in compliance with the TS 36.304 and TS 36.331 standards. For example, Defendants’ Accused Products support or comply with subsection 5.2.4 of the TS 36.304 V8.5.0 standard, and subsections 6.2.2 and 7.3 of the TS 36.331 V8.5.0 standard, which provide in relevant part, for example:</td>
</tr>
</tbody>
</table>

3GPP TS 36.304 v8.5.0, Sec 5.2.4:

5.2.4 Cell Reselection evaluation process

5.2.4.1 Reselection priorities handling

Absolute priorities of different E-UTRAN frequencies or inter-RAT frequencies may be provided to the UE in the system information, in the RRConnectionRelease message, or by inheriting from another RAT at inter-RAT cell (re)selection. In the case of system information, an E-UTRAN
frequency or inter-RAT frequency may be listed without providing a priority (i.e. the field cellReselectionPriority is absent for that frequency). If priorities are provided in dedicated signalling, the UE shall ignore all the priorities provided in system information. If UE is in camped on any cell state, UE shall only apply the priorities provided by system information from current cell, and the UE preserves priorities provided by dedicated signalling unless specified otherwise. When the UE in camped normally state, has only dedicated priorities other than for the current frequency, the UE shall consider the current frequency to be the lowest priority frequency (i.e. lower than the eight network configured values). While the UE is camped on a suitable CSG cell, the UE shall always consider the current frequency to be the highest priority frequency (i.e. higher than the eight network configured values), irrespective of any other priority value allocated to this frequency. The UE shall delete priorities provided by dedicated signalling when:

- the UE enters RRC_CONNECTED state; or
- the optional validity time of dedicated priorities (T320) expires; or
- a PLMN selection is performed on request by NAS [5].

3GPP TS 36.331 v8.5.0, Sec 6.2.2:

**RRCConnectionRelease**

The **RRCConnectionRelease** message is used to command the release of an RRC connection.

- Signalling radio bearer: SRB1
- RLC-SAP: AM
- Logical channel: DCCH
- Direction: E-UTRAN to UE
**RRConnectionRelease message**

```asn1
-- ASN1START

RRConnectionRelease ::= SEQUENCE {
    rrc-TransactionIdentifier   RRC-TransactionIdentifier,
    criticalExtensions   CHOICE {
        c1   CHOICE {
            rrcConnectionRelease-r8    RRCConnectionRelease-r8-IEs,
            spare3 NULL, spare2 NULL, spare1 NULL
        },
        criticalExtensionsFuture   SEQUENCE {}
    }
}

RRCConnectionRelease-r8-IEs ::= SEQUENCE {
    releaseCause   ReleaseCause,
    redirectedCarrierInfo   RedirectedCarrierInfo OPTIONAL, -- Need ON
    idleModeMobilityControlInfo   IdleModeMobilityControlInfo OPTIONAL, -- Need OP
    nonCriticalExtension   SEQUENCE {} OPTIONAL -- Need OP
}

ReleaseCause ::= ENUMERATED {
    loadBalancingTAUrequired,
    other, spare2, spare1
}

RedirectedCarrierInfo ::= CHOICE {
    eutra        ARFCN-ValueEUTRA,
    geran        CarrierFreqGERAN,
    utra-FDD     ARFCN-ValueUTRA,
    utra-TDD     ARFCN-ValueUTRA,
    cdma2000-HRPD CarrierFreqCDMA2000,
    cdma2000-1xRTT CarrierFreqCDMA2000,
    ...
}

IdleModeMobilityControlInfo ::= SEQUENCE {
    freqPriorityListEUTRA   FreqPriorityListEUTRA OPTIONAL, -- Need ON
    freqPriorityListGERAN   FreqPriorityListGERAN OPTIONAL, -- Need ON
    freqPriorityListUTRA-FDD FreqPriorityListUTRA-FDD OPTIONAL, -- Need ON
    freqPriorityListUTRA-TDD FreqPriorityListUTRA-TDD OPTIONAL, -- Need ON
    bandClassPriorityListHRPD BandClassPriorityListHRPD OPTIONAL, -- Need ON
    bandClassPriorityList1XRTT BandClassPriorityList1XRTT OPTIONAL, -- Need ON
    t320        ENUMERATED {
        min5, min10, min20, min30, min60, min120, min180, spare1
    }
    ...
}

FreqPriorityListEUTRA ::= SEQUENCE (SIZE (1..maxFreq)) OF FreqPriorityEUTRA

-- ASN1END
```
**FreqPriorityEUTRA ::=**

```
SEQUENCE {
  carrierFreq     ARFCN-ValueEUTRA,
  cellReselectionPriority    CellReselectionPriority
}
```

**FreqsPriorityListGERAN ::=**

```
SEQUENCE (SIZE (1..maxGNFG)) OF FreqsPriorityGERAN
```

**FreqsPriorityGERAN ::=**

```
SEQUENCE {
  carrierFreqs      CarrierFreqsGERAN,
  cellReselectionPriority    CellReselectionPriority
}
```

**FreqPriorityListUTRA-FDD ::=**

```
SEQUENCE (SIZE (1..maxUTRA-FDD-Carrier)) OF FreqPriorityUTRA-FDD
```

**FreqPriorityUTRA-FDD ::=**

```
SEQUENCE {
  carrierFreq       ARFCN-ValueUTRA,
  cellReselectionPriority    CellReselectionPriority
}
```

**FreqPriorityListUTRA-TDD ::=**

```
SEQUENCE (SIZE (1..maxUTRA-TDD-Carrier)) OF FreqPriorityUTRA-TDD
```

**FreqPriorityUTRA-TDD ::=**

```
SEQUENCE {
  carrierFreq       ARFCN-ValueUTRA,
  cellReselectionPriority    CellReselectionPriority
}
```

**BandClassPriorityListHRPD ::=**

```
SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandClassPriorityHRPD
```

**BandClassPriorityHRPD ::=**

```
SEQUENCE {
  bandClass       BandclassCDMA2000,
  cellReselectionPriority    CellReselectionPriority
}
```

**BandClassPriorityList1XRTT ::=**

```
SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandClassPriority1XRTT
```

**BandClassPriority1XRTT ::=**

```
SEQUENCE {
  bandClass       BandclassCDMA2000,
  cellReselectionPriority    CellReselectionPriority
}
```

— ASN1STOP

### RRCConnectionRelease field descriptions

**releaseCause**

The `releaseCause` is used to indicate the reason for releasing the RRC Connection.
<table>
<thead>
<tr>
<th><strong>redirectedCarrierInfo</strong></th>
<th>The <code>redirectedCarrierInfo</code> indicates a carrier frequency (downlink for FDD) and is used to redirect the UE to another E-UTRA or an inter-RAT carrier frequency, by means of the cell selection upon leaving RRC_CONNECTED as specified in TS 36.304 [4].</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>idleModeMobilityControlInfo</strong></td>
<td>Provides dedicated cell reselection priorities. Used for cell reselection as specified in TS 36.304 [4].</td>
</tr>
<tr>
<td><strong>freqPriorityListX</strong></td>
<td>Provides a cell reselection priority for each frequency, by means of separate lists for each RAT (including E-UTRA).</td>
</tr>
<tr>
<td><strong>carrierFreq or bandClass</strong></td>
<td>The carrier frequency (UTRA and E-UTRA) and band class (HRPD and 1xRTT) for which the associated cellReselectionPriority is applied.</td>
</tr>
<tr>
<td><strong>t320</strong></td>
<td>Timer T320 as described in section 7.3. Value minN corresponds to N minutes.</td>
</tr>
<tr>
<td><strong>carrierFreqs</strong></td>
<td>The list of GERAN carrier frequencies organised into one group of GERAN carrier frequencies.</td>
</tr>
</tbody>
</table>

3GPP TS 36.331 v8.5.0, Sec 7.3,: 

| ...... | ...... | ...... |
| T320 | Upon receiving \( t_{320} \) or upon cell (re)selection to E-UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied). | Upon entering RRC_CONNECTED, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT). | Discard the cell reselection priority information provided by dedicated signalling. |

---

| Claim 7 | Text of Applicable Standard<br>(3GPP TS 36.304 V8.5.0, 3GPP TS 36.331 V8.5.0) |  |

---

41
7. A terminal, comprising:

- a first obtaining unit, configured to obtain a dedicated priority list and a valid time of the dedicated priority list from a Long Term Evolution (LTE) system;
- a storage unit, configured to store the dedicated priority list and the valid time of the dedicated priority list; and

<table>
<thead>
<tr>
<th>The Accused Products’ use of mandatory portions of the LTE standard infringes claim 7 of the ‘197 patent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>As part of their use of mandatory portions of the LTE standard, the Accused Products contain “a first obtaining unit, configured to obtain a dedicated priority list and a valid time of the dedicated priority list from a Long Term Evolution (LTE) system” and “a storage, configured to store the dedicated priority list and the valid time of the dedicated priority list.” The Accused Products identified on Exhibit A contain the claimed first obtaining unit and storage unit, including the Accused Products’ application and baseband processors, RF front end, antennas, internal and external RAM, software, and firmware.</td>
</tr>
<tr>
<td>For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that includes a terminal or mobile device obtaining from an LTE system a dedicated priority list, such as a freqPriorityListX that “provides a cell reselection priority for each frequency, by means of separate lists for each RAT [Radio Access Technology].” The cell reselection process also involves the terminal obtaining from the LTE system a valid time of the dedicated priority list, such as from timer T320. See, e.g., 3GPP TS 36.304 v8.5.0, Section 5.2.4; 3GPP TS 36.331 v8.5.0, Sections 6.2.2, 7.3, and 5.3.8.3.</td>
</tr>
<tr>
<td>Defendants’ Accused Products are configured to obtain a dedicated priority list and valid time of the valid priority list, for example, in compliance with the TS 36.304 and TS 36.331 standards. For</td>
</tr>
</tbody>
</table>
example, Defendants’ Accused Products support or comply with subsection 5.2.4 of the TS 36.304 V8.5.0 standard, and subsections 6.2.2, 7.3, and 5.3.8.3 of the TS 36.331 V8.5.0 standard, which provide in relevant part, for example:

3GPP TS 36.304 v8.5.0, Sec 5.2.4:

5.2.4 Cell Reselection evaluation process

5.2.4.1 Reselection priorities handling

Absolute priorities of different E-UTRAN frequencies or inter-RAT frequencies may be provided to the UE in the system information, in the RRCConnectionRelease message, or by inheriting from another RAT at inter-RAT cell (re)selection. In the case of system information, an E-UTRAN frequency or inter-RAT frequency may be listed without providing a priority (i.e. the field cellReselectionPriority is absent for that frequency). If priorities are provided in dedicated signalling, the UE shall ignore all the priorities provided in system information. If UE is in camped on any cell state, UE shall only apply the priorities provided by system information from current cell, and the UE preserves priorities provided by dedicated signalling unless specified otherwise. When the UE in camped normally state, has only dedicated priorities other than for the current frequency, the UE shall consider the current frequency to be the lowest priority frequency (i.e. lower than the eight network configured values). The UE shall delete priorities provided by dedicated signalling when:

- the UE enters RRC_CONNECTED state; or
- the optional validity time of dedicated priorities (T320) expires; or
- a PLMN selection is performed on request by NAS [5].
3GPP TS 36.331 v8.5.0, Section 6.2.2, P92:

-- RRCConnectionRelease

The RRCConnectionRelease message is used to command the release of an RRC connection.

Signalling radio bearer: SRB1
RLC-SAP: AM
Logical channel: DCCH
Direction: E-UTRAN to UE

RRCConnectionRelease message

-- ASN1START

RRCConnectionRelease ::= SEQUENCE {
  rrc-TransactionIdentifier   RRC-TransactionIdentifier,
  criticalExtensions     CHOICE {
    c1         CHOICE {
      rrcConnectionRelease-r8    RRCConnectionRelease-r8-IEs,
      spare3 NULL, spare2 NULL, spare1 NULL
    },
    criticalExtensionsFuture   SEQUENCE {}       OPTIONAL -- Need OP
  }
}

RRCConnectionRelease-r8-IEs ::= SEQUENCE {
  releaseCause      ReleaseCause,
  redirectedCarrierInfo    RedirectedCarrierInfo    OPTIONAL, -- Need ON
  idleModeMobilityControlInfo   IdleModeMobilityControlInfo   OPTIONAL, -- Need OP
  nonCriticalExtension    SEQUENCE {}       OPTIONAL -- Need OP
}

ReleaseCause ::= ENUMERATED {
  loadBalancingTAUrequired,
  other, spare2, spare1
}

RedirectedCarrierInfo ::= CHOICE {
  eutra    ARFCN-ValueEUTRA,
  geran    CarrierFreqGERAN,
  ultra-FDD    ARFCN-ValueUTRA,
  ultra-TDD    ARFCN-ValueUTRA,
}

-- ASN1END
Case No. 3:16-cv-02787-WHO (N.D. Cal.)

| cdma2000-HRPD | CarrierFreqCDMA2000, |
| cdma2000-1xRTT | CarrierFreqCDMA2000, |
| ... |

IdleModeMobilityControlInfo ::= SEQUENCE {
  freqPriorityListEUTRA FreqPriorityListEUTRA OPTIONAL, -- Need ON
  freqPriorityListGERAN FreqsPriorityListGERAN OPTIONAL, -- Need ON
  freqPriorityListUTRA-FDD FreqPriorityListUTRA-FDD OPTIONAL, -- Need ON
  freqPriorityListUTRA-TDD FreqPriorityListUTRA-TDD OPTIONAL, -- Need ON
  bandClassPriorityListHRPD BandClassPriorityListHRPD OPTIONAL, -- Need ON
  bandClassPriorityList1XRTT BandClassPriorityList1XRTT OPTIONAL, -- Need ON
  t320 T320 ENUMERATED {
    min5, min10, min20, min30, min60, min120, min180, spare1} OPTIONAL, -- Need OR
  ... |

FreqPriorityListEUTRA ::= SEQUENCE (SIZE (1..maxFreq)) OF FreqPriorityEUTRA

FreqPriorityEUTRA ::= SEQUENCE {
  carrierFreq ARFCN-ValueEUTRA, 
  cellReselectionPriority CellReselectionPriority 
}

FreqsPriorityListGERAN ::= SEQUENCE (SIZE (1..maxGNFG)) OF FreqsPriorityGERAN

FreqsPriorityGERAN ::= SEQUENCE {
  carrierFreqs CarrierFREQsGERAN, 
  cellReselectionPriority CellReselectionPriority 
}

FreqPriorityListUTRA-FDD ::= SEQUENCE (SIZE (1..maxUTRA-FDD-Carrier)) OF FreqPriorityUTRA-FDD

FreqPriorityUTRA-FDD ::= SEQUENCE {
  carrierFreq ARFCN-ValueUTRA, 
  cellReselectionPriority CellReselectionPriority 
}

FreqPriorityListUTRA-TDD ::= SEQUENCE (SIZE (1..maxUTRA-TDD-Carrier)) OF FreqPriorityUTRA-TDD

FreqPriorityUTRA-TDD ::= SEQUENCE {
  carrierFreq ARFCN-ValueUTRA, 
  cellReselectionPriority CellReselectionPriority 
}

BandClassPriorityListHRPD ::= SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandClassPriorityHRPD

BandClassPriorityHRPD ::= SEQUENCE { |
### bandClass

<table>
<thead>
<tr>
<th>bandClass</th>
<th>BandclassCDMA2000,</th>
</tr>
</thead>
<tbody>
<tr>
<td>cellReselectionPriority</td>
<td>CellReselectionPriority</td>
</tr>
</tbody>
</table>

### BandClassPriorityList1XRTT

```asn1
BandClassPriorityList1XRTT ::= SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandClassPriority1XRTT
```

```asn1
BandClassPriority1XRTT ::=  SEQUENCE {
  bandClass       BandclassCDMA2000,
  cellReselectionPriority    CellReselectionPriority
}
```

---

### RRCConnectionRelease field descriptions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>releaseCause</td>
<td>The <code>releaseCause</code> is used to indicate the reason for releasing the RRC Connection.</td>
</tr>
<tr>
<td>redirectedCarrierInfo</td>
<td>The <code>redirectedCarrierInfo</code> indicates a carrier frequency (downlink for FDD) and is used to redirect the UE to another E-UTRA or an inter-RAT carrier frequency, by means of the cell selection upon leaving RRC_CONNECTED as specified in TS 36.304 [4].</td>
</tr>
<tr>
<td>idleModeMobilityControlInfo</td>
<td>Provides dedicated cell reselection priorities. Used for cell reselection as specified in TS 36.304 [4].</td>
</tr>
<tr>
<td>freqPriorityListX</td>
<td>Provides a cell reselection priority for each frequency, by means of separate lists for each RAT (including E-UTRA).</td>
</tr>
<tr>
<td>carrierFreq or bandClass</td>
<td>The carrier frequency (UTRA and E-UTRA) and band class (HRPD and 1xRTT) for which the associated cellReselectionPriority is applied.</td>
</tr>
<tr>
<td>t320</td>
<td>Timer T320 as described in section 7.3. Value minN corresponds to N minutes.</td>
</tr>
<tr>
<td>carrierFreqs</td>
<td>The list of GERAN carrier frequencies organised into one group of GERAN carrier frequencies.</td>
</tr>
</tbody>
</table>
3GPP TS 36.331 v8.5.0, Sec 7.3:

<table>
<thead>
<tr>
<th>T320</th>
<th>Upon receiving t320 or upon cell (re)selection to E-UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Upon entering RRC_CONNECTED, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT).</td>
</tr>
<tr>
<td></td>
<td>Discard the cell reselection priority information provided by dedicated signalling.</td>
</tr>
</tbody>
</table>

3GPP TS 36.331 v8.5.0, Sec 5.3.8.3:

5.3.8.3 Reception of the RRCConnectionRelease by the UE

The UE shall:

1> delay the following actions defined in this sub-clause 60 ms from the moment the RRCConnectionRelease message was received or optionally when lower layers indicate that the receipt of the RRCConnectionRelease message has been successfully acknowledged, whichever is
earlier;

1> if the RRCConnectionRelease message includes the idleModeMobilityControlInfo:

2> store the cell reselection priority information provided by the idleModeMobilityControlInfo;
a processing unit, configured to perform cell reselection according to the dedicated priority list and the valid time of the dedicated priority list stored in the first storage unit, when the terminal camps on a cell of a non-LTE system;

As part of their use of mandatory portions of the LTE standard, the Accused Products contain “a processing unit, configured to perform cell reselection according to the dedicated priority list and the valid time of the dedicated priority list stored in the first storage, when the terminal camps on a cell of a non-LTE system.” The Accused Products identified on Exhibit A contain the claimed processing unit and storage unit, including the Accused Products’ application and baseband processors, RF front end, antennas, internal and external RAM, software, and firmware.

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that requires the mobile device to perform cell reselection according to the dedicated priority list and the valid time of the dedicated priority list when the terminal camps on a cell of a non-LTE system, such as “upon cell (re)selection to UTRA.” See, e.g., 3GPP TS 25.304 (including v8.5.0, and all subsequent releases and versions), v8.5.0, Section 5.2.6.1.4a; 3GPP TS 25.331 (including v8.6.0, and all subsequent releases and versions), v8.7.0, Section 13.1; see also, e.g., 3GPP TS 44.018 v8.8.0, Sections 3.2.3.3, 9.1.7.9, 11.1.1; 3GPP TS 44.060 v8.6.0, Section 5.5.1.1c.3.

Defendants’ Accused Products are configured to perform cell reselection according to the dedicated priority list and the valid time of the dedicated priority list, when camping on a cell of a non-LTE system, for example, in compliance with the TS 36.304 and TS 36.331 standards. For example, Defendants’ Accused Products support or comply with subsection 5.2.6.1.4a of the TS 25.304 V8.5.0 standard and subsection 13.1 of the TS 25.331 V8.7.0 standard as well as subsections 3.2.3.3, 9.1.7.9, 11.1.1 of the TS 44.018 v8.8.0 standard and subsection 5.5.1.1c.3 of the TS 44.060 v8.6.0 standard, as specified, for example, in 3GPP TS 36.304 V8.5.0, subsection 2 and TS 36.331.
V8.5.0, subsection 2, and which provide in relevant part, for example:

3GPP TS 36.304 v8.5.0, Sec 2:

2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

[19] 3GPP TS 25.304: "User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode"

3GPP TS 36.331 v8.5.0, Sec 2:

2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.


......

[40] 3GPP TS 25.304: "Universal Terrestrial Radio Access (UTRAN); User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode".
3GPP TS 25.304 v8.5.0, Sec 5.2.6.1.4a:

5.2.6.1.4a Absolute priority based criteria for inter-frequency and inter-RAT cell reselection

The UE shall inherit the priorities provided by dedicated signalling and the remaining validity time (i.e., T320 in E-UTRA, T322 in UTRA and [T3230, FFS] in GERAN), if configured, at inter-RAT cell (re)selection.

3GPP TS 25.331 v8.7.0, Sec 13.1:

13.1 Timers for UE

<table>
<thead>
<tr>
<th>Timer</th>
<th>Start</th>
<th>Stop</th>
<th>At expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
</tr>
</tbody>
</table>
When received in UTRAN MOBILITY INFORMATION message in the IE “Dedicated Priority Information” or upon cell (re)selection to UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied).

When dedicated priorities are cleared, when new dedicated priorities are received, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT).

3GPP TS 36.331 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

......

[36] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

......

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".
3GPP TS 44.018 v8.8.0, Sec 3.2.3.3:

3.2.3.3 Provision of individual priorities information

......

At inter-RAT cell reselection from UTRAN or E-UTRAN to GERAN, the MS shall inherit valid individual priority information from the source RAT. In this case the mobile station shall start timer T3230 with the timeout value set to the remaining validity time of the corresponding timer from the source RAT (i.e. T320 in E-UTRA, T322 in UTRA). If more than one valid individual priority applied for GERAN frequencies while in the source RAT then, following inter-RAT reselection to GERAN, the mobile station shall apply, as GERAN individual priority, only the one applicable to the BCCH carrier of the GERAN cell that was reselected, for as long as it is valid and the mobile station remains in GERAN. In this case the mobile station shall not apply the other GERAN individual priority(ies) until a further inter-RAT reselection from GERAN occurs (see 3GPP TS 25.331, 3GPP TS 36.331).

9.1.7.9 Individual priorities

This information element is sent to provide MS-specific priorities for priority-based cell reselection. The individual priorities shall override the priorities received through system information or individual priorities received previously. The timer T3230 is used to control the availability of the individual priorities.

3GPP TS 44.018 v8.8.0, Sec 11.1.1 :
### 11.1.1 Timers on the mobile station side

| **T3230:** | The timer is used to control the validity period of individual priorities. It is started on receipt of the individual priorities for cell reselection via dedicated signalling or on inter-RAT reselection to GERAN if the corresponding timer in the source RAT (i.e., T320 in E-UTRA, and T322 in UTRA) was running when reselection occurred. When a PLMN selection is performed and results in a change of PLMN, the MS shall stop T3230 and delete the corresponding individual priorities. At expiry the mobile station shall delete the corresponding individual priorities. |

---

**3GPP TS 44.060 v8.6.0, Sec 5.5.1.1c.3:**

#### 5.5.1.1c.3 Provision of individual priorities information

At inter-RAT cell reselection from UTRAN or E-UTRAN to GERAN, the MS shall inherit valid individual priority information from the source RAT. In this case the mobile station shall start timer T3230 with the timeout value set to the remaining validity time of the corresponding timer from the source RAT (i.e. T320 in E-UTRA, T322 in UTRA). If more than one valid individual priority applied for GERAN frequencies while in the source RAT then, following inter-RAT reselection to GERAN, the mobile station shall apply, as GERAN individual priority, only the one applicable to the BCCH carrier of the GERAN cell that was reselected, for as long as it is valid and the mobile station remains in GERAN. In this case the mobile station shall not apply the other GERAN individual priority(ies) until a further inter-RAT reselection from GERAN occurs (see 3GPP TS 25.331, 3GPP TS 36.331).
wherein, when the terminal camps on a cell of the non-LTE system, the performing cell reselection according to the dedicated priority list and the valid time comprises: performing, by the terminal camping on the cell of the non-LTE system, cell reselection according to the dedicated priority list before the valid time expires,

As part of their use of mandatory portions of the LTE standard, in the Accused Products, “when the terminal camps on a cell of the non-LTE system, the performing cell reselection according to the dedicated priority list and the valid time comprises performing, by the terminal camping on the cell of the non-LTE system, cell reselection according to the dedicated priority list before the valid time expires.”

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that requires that when the mobile device camps on a cell of the non-LTE system, such as UTRA, the mobile device performs cell reselection according to the dedicated priority list before the valid time expires, such as by inheriting the priorities provided by dedicated signaling and the remaining validity time during inter-frequency and inter-RAT cell selection. See, e.g., 3GPP TS 25.304 (including v8.5.0, and all subsequent releases and versions), v8.5.0, Section 5.2.6.1.4a; 3GPP TS 25.331 (including v8.6.0, and all subsequent releases and versions), v8.7.0, Section 13.1; see also, e.g., 3GPP TS 44.018 v8.8.0, Sections 3.2.3.3, 11.1.1; 3GPP TS 44.060 v8.6.0, Section 5.5.1.1c.3.

Defendants’ Accused Products are configured to perform cell reselection according to the dedicated priority list and the valid time of the dedicated priority list before the valid time expires, when camping on a cell of a non-LTE system, for example, in compliance with the TS 36.304 and TS 36.331 standards. For example, Defendants’ Accused Products support or comply with subsection 5.2.6.1.4a of the TS 25.304 V8.5.0 standard and subsection 13.1 of the TS 25.331 V8.7.0 standard as well as subsections 3.2.3.3 and 11.1.1 of the TS 44.018 v8.8.0 standard and subsection 5.5.1.1c.3 of the TS 44.060 v8.6.0 standard, as specified, for example, in 3GPP TS 36.304 V8.5.0, subsection 2 and
TS 36.331 V8.5.0, subsection 2, and which provide in relevant part, for example:

3GPP TS 36.304 v8.5.0, Sec 2:

2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

[19] 3GPP TS 25.304: "User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode"

3GPP TS 36.331 v8.5.0, Sec 2:

2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

[19] 3GPP TS 25.331:"Universal Terrestrial Radio Access (UTRA); "Radio Resource Control (RRC); Protocol specification".

[40] 3GPP TS 25.304: "Universal Terrestrial Radio Access (UTRAN); User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode".
3GPP TS 25.304 v8.5.0, Sec 5.2.6.1.4a:

5.2.6.1.4a Absolute priority based criteria for inter-frequency and inter-RAT cell reselection

The UE shall inherit the priorities provided by dedicated signalling and the remaining validity time (i.e., T320 in E-UTRA, T322 in UTRA and [T3230, FFS] in GERAN), if configured, at inter-RAT cell (re)selection.

3GPP TS 25.331 v8.7.0, Sec 13.1:

13.1 Timers for UE

<table>
<thead>
<tr>
<th>Timer</th>
<th>Start</th>
<th>Stop</th>
<th>At expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
</tr>
</tbody>
</table>

Samsung Exhibit 1011, Page 57
When received in UTRAN MOBILITY INFORMATION message in the IE “Dedicated Priority Information” or upon cell (re)selection to UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied).

When dedicated priorities are cleared, when new dedicated priorities are received, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT).

See subclause 8.3.3.7

3GPP TS 36.331 8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

......

[36] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

......

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".
3GPP TS 44.018 v8.8.0, Sec 3.2.3.3 :

3.2.3.3 Provision of individual priorities information

......

At inter-RAT cell reselection from UTRAN or E-UTRAN to GERAN, the MS shall inherit valid individual priority information from the source RAT. In this case the mobile station shall start timer T3230 with the timeout value set to the remaining validity time of the corresponding timer from the source RAT (i.e. T320 in E-UTRA, T322 in UTRA). If more than one valid individual priority applied for GERAN frequencies while in the source RAT then, following inter-RAT reselection to GERAN, the mobile station shall apply, as GERAN individual priority, only the one applicable to the BCCH carrier of the GERAN cell that was reselected, for as long as it is valid and the mobile station remains in GERAN. In this case the mobile station shall not apply the other GERAN individual priority(ies) until a further inter-RAT reselection from GERAN occurs (see 3GPP TS 25.331, 3GPP TS 36.331).

3GPP TS 44.018 v8.8.0, Sec 11.1.1 :

11.1.1 Timers on the mobile station side

......

T3230: The timer is used to control the validity period of individual priorities. It is started on receipt of the individual priorities for cell reselection via dedicated signalling or on inter-RAT reselection to GERAN if the corresponding timer in the source RAT (i.e., T320 in E-UTRA, and T322 in UTRA) was running when reselection occurred.

When a PLMN selection is performed and results in a change of PLMN, the MS shall stop T3230 and delete the corresponding individual priorities.
At expiry the mobile station shall delete the corresponding individual priorities.

3GPP TS 44.060 V8.6.0

### 5.5.1.1c.3 Provision of individual priorities information

At inter-RAT cell reselection from UTRAN or E-UTRAN to GERAN, the MS shall inherit valid individual priority information from the source RAT. In this case the mobile station shall start timer T3230 with the timeout value set to the remaining validity time of the corresponding timer from the source RAT (i.e. T320 in E-UTRA, T322 in UTRA). If more than one valid individual priority applied for GERAN frequencies while in the source RAT then, following inter-RAT reselection to GERAN, the mobile station shall apply, as GERAN individual priority, only the one applicable to the BCCH carrier of the GERAN cell that was reselected, for as long as it is valid and the mobile station remains in GERAN. In this case the mobile station shall not apply the other GERAN individual priority(ies) until a further inter-RAT reselection from GERAN occurs (see 3GPP TS 25.331, 3GPP TS 36.331).
wherein when the terminal camps on the cell of the non-LTE system, the dedicated priority list is invalid after the valid time expires.

As part of their use of mandatory portions of the LTE standard, in the Accused Products, “when the terminal camps on the cell of the non-LTE system, the dedicated priority list is invalid after the valid time expires.”

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that requires that when the mobile device camps on the cell of the non-LTE system such as UTRA, the dedicated priority list is invalid after the valid time expires. See, e.g., 3GPP TS 25.331 v8.7.0, Sections 13.1, 8.3.3.7, and 13.4.15c; 3GPP TS 44.018 v8.8.0, Section 11.1.1.

Defendants’ Accused Products are configured so that, when the terminal camps on the cell of the non-LTE system, the dedicated priority list is invalid after the valid time expires, for example, in compliance with the TS 36.331 standard. For example, Defendants’ Accused Products support or comply with subsections 13.1, 13.4.15c, and 8.3.3.7 of the TS 25.331 V8.7.0 standard as well as subsection 11.1.1 of the TS 44.018 v8.8.0 standard, as specified, for example, in 3GPP TS 36.331 V8.5.0, subsection 2, and which provide in relevant part, for example:

3GPP TS 36.331 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

3GPP TS 25.331 v8.7.0, Sec 13.1:

13.1 Timers for UE

<table>
<thead>
<tr>
<th>Timer</th>
<th>Start</th>
<th>Stop</th>
<th>At expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>When received in UTRAN MOBILITY INFORMATION message in the IE “Dedicated Priority Information” or upon cell (re)selection to UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied).</td>
<td>When dedicated priorities are cleared, when new dedicated priorities are received, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT).</td>
</tr>
<tr>
<td>T322</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3GPP TS 25.331 v8.7.0, Sec 8.3.3.7:

8.3.3.7 T322 expiry

Upon expiry of timer T322 the UE shall:

1> clear the stored IE "Dedicated Priority Information";
clear the variable PRIORITY_INFO_LIST;
set the value of IE "Priority status" in the variable PRIORITY_INFO_LIST to "sys_info_priority";
if the UE is not in CELL_DCH state:
    take the actions as described in subclause 8.1.1.6.19 using stored System information Block type 19.

3GPP TS 25.331 v8.7.0, Sec 13.4.15c:
13.4.15c PRIORITY_INFO_LIST

This variable contains cell information on UTRA and inter-RAT priorities to be applied to neighbour cells stored in CELL_INFO_LIST and EUTRA_FREQUENCY_INFO_LIST, as received in messages System Information Block Type 19 and UTRAN MOBILITY INFORMATION.

The contents of this variable are inherited at inter-RAT cell (re)selection, including the remaining validity time (i.e., T320 in E-UTRAN, T322 in UTRAN, and T3230 in GERAN), if configured.

3GPP TS 36.331 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol", 3GPP TS 44.018 V8.8.0
3GPP TS 44.018 v8.8.0, Sec 11.1.1:

11.1.1 Timers on the mobile station side

......

**T3230:** The timer is used to control the validity period of individual priorities. It is started on receipt of the individual priorities for cell reselection via dedicated signalling or on inter-RAT reselection to GERAN if the corresponding timer in the source RAT (i.e., T320 in E-UTRA, and T322 in UTRA) was running when reselection occurred.

When a PLMN selection is performed and results in a change of PLMN, the MS shall stop T3230 and delete the corresponding individual priorities.

At expiry the mobile station shall delete the corresponding individual priorities.

<table>
<thead>
<tr>
<th>Claim 8</th>
<th>Text of Applicable Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(3GPP TS 36.304 V8.5.0, 3GPP TS 36.331 V8.5.0)</td>
</tr>
</tbody>
</table>
8. The terminal according to claim 7, wherein the dedicated priority list and the valid time of the dedicated priority list are carried in a dedicated signal.

Defendants’ Accused Products meet the elements of independent claim 7, as described above. As part of their use of mandatory portions of the LTE standard, in the Accused Products, “the dedicated priority list and the valid time of the dedicated priority list are carried in a dedicated signaling.”

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that includes a terminal or mobile device obtaining from an LTE system a dedicated priority list and valid time of the dedicated priority list in dedicated signaling, such as an RRCConnectionRelease message. See, e.g., 3GPP TS 36.304 v8.5.0, Section 5.2.4; 3GPP TS 36.331 v8.5.0, Sections 6.2.2 and 7.3.

Defendants’ Accused Products are configured to carry the dedicated priority list and the valid time of the dedicated priority list in a dedicated signaling, for example, in compliance with the TS 36.304 and TS 36.331 standards. For example, Defendants’ Accused Products support or comply with subsection 5.2.4 of the TS 36.304 V8.5.0 standard, and subsections 6.2.2 and 7.3 of the TS 36.331 V8.5.0 standard, which provide in relevant part, for example:

3GPP TS 36.304 v8.5.0, See 5.2.4:

5.2.4 Cell Reselection evaluation process
5.2.4.1 Reselection priorities handling
Absolute priorities of different E-UTRAN frequencies or inter-RAT frequencies may be provided to the UE in the system information, in the RRCConnectionRelease message, or by inheriting from
another RAT at inter-RAT cell (re)selection. In the case of system information, an E-UTRAN frequency or inter-RAT frequency may be listed without providing a priority (i.e. the field cellReselectionPriority is absent for that frequency). If priorities are provided in dedicated signalling, the UE shall ignore all the priorities provided in system information. If UE is in camped on any cell state, UE shall only apply the priorities provided by system information from current cell, and the UE preserves priorities provided by dedicated signalling unless specified otherwise. When the UE in camped normally state, has only dedicated priorities other than for the current frequency, the UE shall consider the current frequency to be the lowest priority frequency (i.e. lower than the eight network configured values). While the UE is camped on a suitable CSG cell, the UE shall always consider the current frequency to be the highest priority frequency (i.e. higher than the eight network configured values), irrespective of any other priority value allocated to this frequency. The UE shall delete priorities provided by dedicated signalling when:
- the UE enters RRC_CONNECTED state; or
- the optional validity time of dedicated priorities (T320) expires; or
- a PLMN selection is performed on request by NAS [5].

3GPP TS 36.331 v8.5.0, Sec 6.2.2:

– **RRCConnectionRelease**

The **RRCConnectionRelease** message is used to command the release of an RRC connection.

- Signalling radio bearer: SRB1
- RLC-SAP: AM
- Logical channel: DCCH
Direction: E-UTRAN to UE

**RRConnectionRelease message**

```plaintext
-- ASN1START

RRConnectionRelease ::= SEQUENCE {
    rrc-TransactionIdentifier RRC-TransactionIdentifier,
    criticalExtensions CHOICE {
        cl CHOICE {
            rrcConnectionRelease-r8 RRConnectionRelease-r8-IEs,
        spare3 NULL, spare2 NULL, spare1 NULL
        },
        criticalExtensionsFuture SEQUENCE {}
    }
}

RRConnectionRelease-r8-IEs ::= SEQUENCE {
    releaseCause ReleaseCause,
    redirectedCarrierInfo RedirectedCarrierInfo OPTIONAL, -- Need ON
    idleModeMobilityControlInfo IdleModeMobilityControlInfo OPTIONAL, -- Need OP
    nonCriticalExtension SEQUENCE {} OPTIONAL -- Need OP
}

ReleaseCause ::= ENUMERATED {loadBalancingTAUrequired, other, spare2, spare1 }

RedirectedCarrierInfo ::= CHOICE {
    eutra ARFCN-ValueEUTRA,
    geran CarrierFreqGERAN,
    utra-FDD ARFCN-ValueUTRA,
    utra-LTE ARFCN-ValueUTRA,
    cdma2000-HRPD CarrierFreqCDMA2000,
    cdma2000-1xRTT CarrierFreqCDMA2000,
    ...
}

IdleModeMobilityControlInfo ::= SEQUENCE {
    freqPriorityListEUTRA FreqPriorityListEUTRA OPTIONAL, -- Need ON
    freqPriorityListGERAN FreqPriorityListGERAN OPTIONAL, -- Need ON
    freqPriorityListUTRA-FDD FreqPriorityListUTRA-FDD OPTIONAL, -- Need ON
    freqPriorityListUTRA-TDD FreqPriorityListUTRA-TDD OPTIONAL, -- Need ON
    bandClassPriorityListHRPD BandClassPriorityListHRPD OPTIONAL, -- Need ON
    bandClassPriorityList1XRTT BandClassPriorityList1XRTT OPTIONAL, -- Need ON
    t320 ENUMERATED {min5, min10, min20, min30, min60, min120, min180, spare1} OPTIONAL, -- Need OR
    ...
}

-- ASN1END
```
FreqPriorityListEUTRA ::= SEQUENCE (SIZE (1..maxFreq)) OF FreqPriorityEUTRA
FreqPriorityEUTRA ::= SEQUENCE {
  carrierFreq       ARFCN-ValueEUTRA,
  cellReselectionPriority    CellReselectionPriority
}

FreqsPriorityListGERAN ::= SEQUENCE (SIZE (1..maxGNFG)) OF FreqsPriorityGERAN
FreqsPriorityGERAN ::= SEQUENCE {
  carrierFreqs      CarrierFreqsGERAN,
  cellReselectionPriority    CellReselectionPriority
}

FreqPriorityListUTRA-FDD ::= SEQUENCE (SIZE (1..maxUTRA-FDD-Carrier)) OF FreqPriorityUTRA-FDD
FreqPriorityUTRA-FDD ::= SEQUENCE {
  carrierFreq       ARFCN-ValueUTRA,
  cellReselectionPriority    CellReselectionPriority
}

FreqPriorityListUTRA-TDD ::= SEQUENCE (SIZE (1..maxUTRA-TDD-Carrier)) OF FreqPriorityUTRA-TDD
FreqPriorityUTRA-TDD ::= SEQUENCE {
  carrierFreq       ARFCN-ValueUTRA,
  cellReselectionPriority    CellReselectionPriority
}

BandClassPriorityListHRPD ::= SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandClassPriorityHRPD
BandClassPriorityHRPD ::= SEQUENCE {
  bandClass       BandclassCDMA2000,
  cellReselectionPriority    CellReselectionPriority
}

BandClassPriorityList1XRTT ::= SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandClassPriority1XRTT
BandClassPriority1XRTT ::= SEQUENCE {
  bandClass       BandclassCDMA2000,
  cellReselectionPriority    CellReselectionPriority
}

-- ASN1STOP

**RRConnectionRelease field descriptions**
releaseCause
The releaseCause is used to indicate the reason for releasing the RRC Connection.

redirectedCarrierInfo
The redirectedCarrierInfo indicates a carrier frequency (downlink for FDD) and is used to redirect the UE to another E-UTRA or an inter-RAT carrier frequency, by means of the cell selection upon leaving RRC_CONNECTED as specified in TS 36.304 [4].

disableMobilityControlInfo
Provides dedicated cell reselection priorities. Used for cell reselection as specified in TS 36.304 [4].

cellReselectionPriorityListX
Provides a cell reselection priority for each frequency, by means of separate lists for each RAT (including E-UTRA).

carrierFreq or bandClass
The carrier frequency (UTRA and E-UTRA) and band class (HRPD and 1xRTT) for which the associated cellReselectionPriority is applied.

t320
Timer T320 as described in section 7.3. Value minN corresponds to N minutes.

carrierFreqs
The list of GERAN carrier frequencies organised into one group of GERAN carrier frequencies.

3GPP TS 36.331 v8.5.0, Sec 7.3:

<table>
<thead>
<tr>
<th>Timer</th>
<th>Start</th>
<th>Stop</th>
<th>At expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>......</td>
<td>......</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>T320</td>
<td>Upon receiving $t_{320}$ or upon cell (re)selection to E-UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upon entering RRC_CONNECTED, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT).</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discard the cell reselection priority information provided by dedicated signalling.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Claim 9

Text of Applicable Standard

(3GPP TS 36.304 V8.5.0, 3GPP TS 36.331 V8.5.0)
9. The terminal according to claim 7, wherein the dedicated priority list comprises one of the following:

- priority level of a frequency or a Radio Access Technology, RAT; or
- priority levels of the frequency of the service cell, adjacent frequencies of the serving cell, and frequencies of the neighboring systems; or
- priority levels assigned for each frequency or Frequency Band of a neighboring system.

Defendants’ Accused Products meet the elements of independent claim 7, as described above.

In the Accused Products, “the dedicated priority list comprises: priority level information of different Radio Access Technologies, RATs.”

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that includes a terminal or mobile device obtaining from an LTE system a dedicated priority list that includes “absolute priorities of different E-UTRAN frequencies or inter-RAT frequencies.” See, e.g., 3GPP TS 36.304 v8.5.0, Section 5.2.4; 3GPP TS 36.331 v8.5.0, Section 6.2.2.

Defendants’ Accused Products are configured such that the dedicated priority list comprises priority level information of different Radio Access Technologies (RATs), for example, in compliance with the TS 36.304 and TS 36.331 standards. For example, Defendants’ Accused Products support or comply with subsection 5.2.4 of the TS 36.304 V8.5.0 standard, and subsection 6.2.2 of the TS 36.331 V8.5.0 standard, which provide in relevant part, for example:

3GPP TS 36.304 v8.5.0, See 5.2.4:

5.2.4 Cell Reselection evaluation process
5.2.4.1 Reselection priorities handling
Absolute priorities of different E-UTRAN frequencies or inter-RAT frequencies may be provided to
the UE in the system information, in the *RRCConnectionRelease* message, or by inheriting from another RAT at inter-RAT cell (re)selection. In the case of system information, an E-UTRAN frequency or inter-RAT frequency may be listed without providing a priority (i.e. the field *cellReselectionPriority* is absent for that frequency). If priorities are provided in dedicated signalling, the UE shall ignore all the priorities provided in system information. If UE is in *camped on any cell* state, UE shall only apply the priorities provided by system information from current cell, and the UE preserves priorities provided by dedicated signalling unless specified otherwise. When the UE in *camped normally* state, has only dedicated priorities other than for the current frequency, the UE shall consider the current frequency to be the lowest priority frequency (i.e. lower than the eight network configured values). While the UE is camped on a suitable CSG cell, the UE shall always consider the current frequency to be the highest priority frequency (i.e. higher than the eight network configured values), irrespective of any other priority value allocated to this frequency. The UE shall delete priorities provided by dedicated signalling when:

- the UE enters RRC_CONNECTED state; or
- the optional validity time of dedicated priorities (T320) expires; or
- a PLMN selection is performed on request by NAS [5].

3GPP TS 36.331 v8.5.0, Sec 6.2.2:

---

**RRCConnectionRelease**

The *RRCConnectionRelease* message is used to command the release of an RRC connection.

Signalling radio bearer: SRB1
RLC-SAP: AM
Logical channel: DCCH
Direction: E-UTRAN to UE

**RRCConnectionRelease message**

```asn1
RRCConnectionRelease ::= SEQUENCE {
    rrc-TransactionIdentifier RRC-TransactionIdentifier,
    criticalExtensions   CHOICE {
        cl CHOICE {
            rrcConnectionRelease-r8 RRCConnectionRelease-r8-IEs,
            spare3 NULL, spare2 NULL, spare1 NULL
        },
        criticalExtensionsFuture SEQUENCE {}
    }
    }

RRCConnectionRelease-r8-IEs ::= SEQUENCE {
    releaseCause ReleaseCause,
    redirectedCarrierInfo RedirectedCarrierInfo OPTIONAL, -- Need ON
    idleModeMobilityControlInfo IdleModeMobilityControlInfo OPTIONAL, -- Need ON
    nonCriticalExtension SEQUENCE {} OPTIONAL -- Need ON
}

ReleaseCause ::= ENUMERATED {loadBalancingTAUrequired, other, spare2, spare1 }

RedirectedCarrierInfo ::= CHOICE {
    eutra ARFCN-ValueEUTRA,
    geran CarrierFreqGERAN,
    utra-FDD ARFCN-ValueUTRA,
    utra-TDD ARFCN-ValueUTRA,
    cdma2000-HRPD CarrierFreqCDMA2000,
    cdma2000-1xRTT CarrierFreqCDMA2000,
    ...
}

IdleModeMobilityControlInfo ::= SEQUENCE {
    freqPriorityListEUTRA FreqPriorityListEUTRA OPTIONAL, -- Need ON
    freqPriorityListGERAN FreqPriorityListGERAN OPTIONAL, -- Need ON
    freqPriorityListUTRA-FDD FreqPriorityListUTRA-FDD OPTIONAL, -- Need ON
    freqPriorityListUTRA-TDD FreqPriorityListUTRA-TDD OPTIONAL, -- Need ON
    bandClassPriorityListHRPD BandClassPriorityListHRPD OPTIONAL, -- Need ON
    bandClassPriorityList1XRTT BandClassPriorityList1XRTT OPTIONAL, -- Need ON
}
```
Case No. 3:16-cv-02787-WHO (N.D. Cal.)

```
t320 ENUMERATED {
  min5, min10, min20, min30, min60, min120, min180,
  spare1} OPTIONAL, -- Need OR
}
...

FreqPriorityListEUTRA ::= SEQUENCE (SIZE (1..maxFreq)) OF FreqPriorityEUTRA

FreqPriorityEUTRA ::= SEQUENCE {
carrierFreq ARFCN-ValueEUTRA,
cellReselectionPriority CellReselectionPriority
}

FreqsPriorityListGERAN ::= SEQUENCE (SIZE (1..maxGNFG)) OF FreqsPriorityGERAN

FreqsPriorityGERAN ::= SEQUENCE {
carrierFreqs CarrierFREQsGERAN,
cellReselectionPriority CellReselectionPriority
}

FreqPriorityListUTRA-FDD ::= SEQUENCE (SIZE (1..maxUTRA-FDD-Carrier)) OF FreqPriorityUTRA-FDD

FreqPriorityUTRA-FDD ::= SEQUENCE {
carrierFreq ARFCN-ValueUTRA,
cellReselectionPriority CellReselectionPriority
}

FreqPriorityListUTRA-TDD ::= SEQUENCE (SIZE (1..maxUTRA-TDD-Carrier)) OF FreqPriorityUTRA-TDD

FreqPriorityUTRA-TDD ::= SEQUENCE {
carrierFreq ARFCN-ValueUTRA,
cellReselectionPriority CellReselectionPriority
}

BandClassPriorityListHRPD ::= SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandClassPriorityHRPD

BandClassPriorityHRPD ::= SEQUENCE {
bandClass BandclassCDMA2000,
cellReselectionPriority CellReselectionPriority
}

BandClassPriorityList1XRTT ::= SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandClassPriority1XRTT

BandClassPriority1XRTT ::= SEQUENCE {
bandClass BandclassCDMA2000,
cellReselectionPriority CellReselectionPriority
}

-- ASN1STOP
```
## RRCConnectionRelease field descriptions

<table>
<thead>
<tr>
<th>Field Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>releaseCause</td>
<td>The releaseCause is used to indicate the reason for releasing the RRC Connection.</td>
</tr>
<tr>
<td>redirectedCarrierInfo</td>
<td>The redirectedCarrierInfo indicates a carrier frequency (downlink for FDD) and is used to redirect the UE to another E-UTRA or an inter-RAT carrier frequency, by means of the cell selection upon leaving RRC_CONNECTED as specified in TS 36.304 [4].</td>
</tr>
<tr>
<td>idleModeMobilityControlInfo</td>
<td>Provides dedicated cell reselection priorities. Used for cell reselection as specified in TS 36.304 [4].</td>
</tr>
<tr>
<td>freqPriorityListX</td>
<td>Provides a cell reselection priority for each frequency, by means of separate lists for each RAT (including E-UTRA).</td>
</tr>
<tr>
<td>carrierFreq or bandClass</td>
<td>The carrier frequency (UTRA and E-UTRA) and band class (HRPD and 1xRTT) for which the associated cellReselectionPriority is applied.</td>
</tr>
<tr>
<td>t320</td>
<td>Timer T320 as described in section 7.3. Value minN corresponds to N minutes.</td>
</tr>
<tr>
<td>carrierFreqs</td>
<td>The list of GERAN carrier frequencies organised into one group of GERAN carrier frequencies.</td>
</tr>
</tbody>
</table>

### Claim 13

Text of Applicable Standard

(3GPP TS 36.304 V8.5.0, 3GPP TS 36.331 V8.5.0)
13. The method according to claim 2, wherein the public priority list is obtained by the terminal from the LTE system or the non-LTE system.

Defendants’ Accused Products meet the elements of independent claim 1, as described above.

The Accused Products’ performance of the LTE standard performs the step of “wherein the public priority list is obtained by the terminal from the … non-LTE system.”

For example, the TS 36.331 standards provide that the public priority list is obtained by the mobile device from a non-LTE system such as UTRA, GSM, or E-UTRA. See, e.g., 3GPP TS 25.331 v8.7.0, Sections 10.2.48.8.22 and 8.1.1; 3GPP TS 36.331 v8.5.0, Section 5.2.2.1; 3GPP TS 44.018 v8.8.0, Section 3.2.3.2.

Defendants’ Accused Products are configured so that the public priority list is obtained by the terminal from a non-LTE standard, in compliance with the TS 36.331 standard. For example, Defendants’ Accused Products support or comply with subsections 8.1.1.1 and 10.2.48.8.22 of the TS 25.331 v8.7.0 standard and subsection 5.2.2.1 of the TS 36.331 v8.5.0 standard as well as subsection 3.2.3.2 of the TS 44.018 v8.8.0 standard, as specified, for example, in 3GPP TS 36.331 V8.5.0, subsection 2, and which provide in relevant part, for example:

3GPP TS 36.331 v8.5.0, Sec 2:

2 References
The following documents contain provisions which, through reference in this text, constitute
provisions of the present document.


3GPP TS 25.331 v8.7.0, Sec 10.2.48.8.22:

10.2.48.8.22 System Information Block type 19

The system information block type 19 contains Inter-RAT frequency and priority information to be used in the cell.

<table>
<thead>
<tr>
<th>Information Element/Group name</th>
<th>Need</th>
<th>Multi</th>
<th>Type and reference</th>
<th>Semantics description</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTRA priority info list</td>
<td>MP</td>
<td></td>
<td>UTRA priority info list 10.3.7.113</td>
<td>REL-8</td>
<td></td>
</tr>
<tr>
<td>GSM priority info list</td>
<td>OP</td>
<td></td>
<td>GSM priority info list 10.3.7.114</td>
<td>REL-8</td>
<td></td>
</tr>
<tr>
<td>E-UTRA frequency and priority info list</td>
<td>OP</td>
<td></td>
<td>E-UTRA frequency and priority info list 10.3.7.115</td>
<td>REL-8</td>
<td></td>
</tr>
</tbody>
</table>
8.1.1 Broadcast of system information

8.1.1.1 General

The purpose of this procedure is to broadcast system information from the UTRAN to UEs in a cell.

3GPP TS 36.331 v8.5.0, Sec 5.2.2

5.2.2 System information acquisition

5.2.2.1 General
The UE applies the system information acquisition procedure to acquire the AS- and NAS- system information that is broadcasted by the E-UTRAN. The procedure applies to UEs in RRC_IDLE and UEs in RRC_CONNECTED.

3GPP TS 36.331 v8.5.0, Sec 2:

2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

……

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".

3GPP TS 44.018 v8.8.0, Sec 3.2.3.2:
3.2.3.2 Common priorities information
A mobile station may receive common priorities information in the Priority and E-UTRAN Parameters Description IE in the SYSTEM INFORMATION TYPE 2quarter message. The mobile station shall use the parameters provided in the GSM Priority Parameters IE and in the E-UTRAN Measurement Parameters Description IE and/or in the 3G Priority Parameters Description IE for inter-RAT cell reselection towards E-UTRAN and/or UTRAN.

Claim 14

Text of Applicable Standard

(3GPP TS 36.304 V8.5.0, 3GPP TS 36.331 V8.5.0)
14. The terminal according to claim 7, wherein when the terminal camps on the cell of the non-LTE system, the processing unit is further configured to perform cell reselection according to the dedicated priority list before the valid time expires.

Defendants’ Accused Products meet the elements of independent claim 7, as described above.

In the Accused Products, “when the terminal camps on the cell of the non-LTE system, the processing unit is further configured to perform cell reselection according to the dedicated priority list before the valid time expires.” The Accused Products identified on Exhibit A contain the claimed processing unit, including the Accused Products’ application and baseband processors, RF front end, antennas, internal and external RAM, software, and firmware.

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that requires that when the mobile device camps on a cell of the non-LTE system, such as UTRA, the mobile device performs cell reselection according to the dedicated priority list before the valid time expires, such as by inheriting the priorities provided by dedicated signaling and the remaining validity time during inter-frequency and inter-RAT cell selection. See, e.g., 3GPP TS 25.304 (including v8.5.0, and all subsequent releases and versions), v8.5.0, Section 5.2.6.1.4a; 3GPP TS 25.331 (including v8.6.0, and all subsequent releases and versions), v8.7.0, Sections 13.1, 8.3.3.7, and 13.4.15c; see also, e.g., 3GPP TS 44.018 v8.8.0, Section 3.2.3.3; 3GPP TS 44.060 v8.6.0, Sections 5.5.1.1c.3, 11.1.1.

Defendants’ Accused Products are configured to perform cell reselection according to the dedicated priority list and the valid time of the dedicated priority list before the valid time expires, when camping on a cell of a non-LTE system, for example, in compliance with the TS 36.304 and TS 36.331 standards. For example, Defendants’ Accused Products support or comply with subsection
5.2.6.1.4a of the TS 25.304 V8.5.0 standard and subsections 13.1.13.4.15c, and 8.3.3.7 of the TS
25.331 V8.7.0 standard as well as subsection 3.2.3.3 of the TS 44.018 V8.8.0 standard and subsections
5.5.1.1c.3 and 11.1.1 of the TS 44.060 V8.6.0 standard, as specified, for example, in 3GPP TS 36.304
V8.5.0, subsection 2 and TS 36.331 V8.5.0, subsection 2, and which provide in relevant part, for
example:

3GPP TS 36.304 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute
provisions of the present document.

[19] 3GPP TS 25.304: "User Equipment (UE) procedures in idle mode and procedures for
cell reselection in connected mode"

3GPP TS 36.331 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute
provisions of the present document.

Control (RRC); Protocol specification".
[40] 3GPP TS 25.304: "Universal Terrestrial Radio Access (UTRAN); User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode".

3GPP TS 25.304 v8.5.0, Sec 5.2.6.1.4a:

5.2.6.1.4a Absolute priority based criteria for inter-frequency and inter-RAT cell reselection

The UE shall inherit the priorities provided by dedicated signalling and the remaining validity time (i.e., T320 in E-UTRA, T322 in UTRA and [T3230, FFS] in GERAN), if configured, at inter-RAT cell (re)selection.

3GPP TS 25.331 v8.7.0, Sec 13.1:

13.1 Timers for UE

<table>
<thead>
<tr>
<th>Timer</th>
<th>Start</th>
<th>Stop</th>
<th>At expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>T322</td>
<td>When received in UTRAN MOBILITY INFORMATION message in the IE “Dedicated Priority Information” or upon cell (re)selection to UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied).</td>
<td>When dedicated priorities are cleared, when new dedicated priorities are received, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT).</td>
<td>See subclause 8.3.3.7</td>
</tr>
</tbody>
</table>

3GPP TS 25.331 v8.7.0, Sec 8.3.3.7:

### 8.3.3.7 T322 expiry

Upon expiry of timer T322 the UE shall:

1> clear the stored IE "Dedicated Priority Information";

1> clear the variable PRIORITY_INFO_LIST;

1> set the value of IE "Priority status" in the variable PRIORITY_INFO_LIST to "sys_info_priority";

1> if the UE is not in CELL_DCH state:

  2> take the actions as described in subclause 8.1.1.6.19 using stored System information Block type 19.
3GPP TS 25.331 v8.7.0, Sec 13.4.15c:

13.4.15c PRIORITY_INFO_LIST

This variable contains cell information on UTRA and inter-RAT priorities to be applied to neighbour cells stored in CELL_INFO_LIST and EUTRA_FREQUENCY_INFO_LIST, as received in messages System Information Block Type 19 and UTRAN MOBILITY INFORMATION.

The contents of this variable are inherited at inter-RAT cell (re)selection, including the remaining validity time (i.e., T320 in E-UTRAN, T322 in UTRAN, and [T3230, FFS] in GERAN), if configured.

3GPP TS 36.331 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

......

[36] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

......

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".

3GPP TS 44.018 v8.8.0, Sec 3.2.3.3:
3.2.3.3 Provision of individual priorities information

......

At inter-RAT cell reselection from UTRAN or E-UTRAN to GERAN, the MS shall inherit valid individual priority information from the source RAT. In this case the mobile station shall start timer T3230 with the timeout value set to the remaining validity time of the corresponding timer from the source RAT (i.e. T320 in E-UTRA, T322 in UTRA). If more than one valid individual priority applied for GERAN frequencies while in the source RAT then, following inter-RAT reselection to GERAN, the mobile station shall apply, as GERAN individual priority, only the one applicable to the BCCH carrier of the GERAN cell that was reselected, for as long as it is valid and the mobile station remains in GERAN. In this case the mobile station shall not apply the other GERAN individual priority(ies) until a further inter-RAT reselection from GERAN occurs (see 3GPP TS 25.331, 3GPP TS 36.331).

3GPP TS 44.060 v8.6.0, Sec 5.5.1.1c.3:

5.5.1.1c.3 Provision of individual priorities information

......

At inter-RAT cell reselection from UTRAN or E-UTRAN to GERAN, the MS shall inherit valid individual priority information from the source RAT. In this case the mobile station shall start timer T3230 with the timeout value set to the remaining validity time of the corresponding timer from the source RAT (i.e. T320 in E-UTRA, T322 in UTRA). If more than one valid individual priority applied for GERAN frequencies while in the source RAT then, following inter-RAT reselection to GERAN, the mobile station shall apply, as GERAN individual priority, only the one applicable to the BCCH carrier of the GERAN cell that was reselected, for as long as it is valid and the mobile station remains in GERAN. In this case the mobile station shall not apply the other GERAN individual priority(ies) until a further inter-RAT reselection from GERAN occurs (see 3GPP TS 25.331, 3GPP TS 36.331).

3GPP TS 44.018 v8.8.0, Sec 11.1.1:
11.1.1 Timers on the mobile station side

| T3230: | The timer is used to control the validity period of individual priorities. It is started on receipt of the individual priorities for cell reselection via dedicated signalling or on inter-RAT reselection to GERAN if the corresponding timer in the source RAT (i.e., T320 in E-UTRA, and T322 in UTRA) was running when reselection occurred. When a PLMN selection is performed and results in a change of PLMN, the MS shall stop T3230 and delete the corresponding individual priorities. At expiry the mobile station shall delete the corresponding individual priorities. |

<table>
<thead>
<tr>
<th>Claim 15</th>
<th>Text of Applicable Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(3GPP TS 36.304 V8.5.0, 3GPP TS 36.331 V8.5.0)</td>
</tr>
</tbody>
</table>
15. The terminal according to claim 14, further comprising: a second obtaining unit, configured to obtain a public priority list from one of the LTE system and the non-LTE system;

a second storage unit, configured to store the public priority list; and

a second processing unit, configured to perform cell reselection according to a public priority list, when the terminal camps on the cell of the non-LTE system and the dedicated priority list is invalid after the valid time expires.

Defendants’ Accused Products meet the elements of independent claim 7 and dependent claim 14, as described above.

As part of their use of mandatory portions of the LTE standard, the Accused Products further contain "a second obtaining unit, configured to obtain a public priority list from one of the LTE system and the non-LTE system," "a second storage unit, configured to store the public priority list," and "a second processing unit, configured to perform cell reselection according to a public priority list, when the terminal camps on the cell of the non-LTE system and the dedicated priority list is invalid after the valid time expires." The Accused Products identified on Exhibit A contain the claimed second obtaining unit, second storage unit, and second processing unit, including the Accused Products’ application and baseband processors, RF front end, antennas, internal and external RAM, software, and firmware.

For example, the TS 36.331 standards provide that the public priority list is obtained by the mobile device from a non-LTE system such as UTRA, GSM, or E-UTRA and stored. See, e.g., 3GPP TS 25.331 v8.7.0, Sections 8.1.1, 10.2.48.8.22, 8.1.1.6.19, 8.6.7.3a-3c; 3GPP TS 36.331 v8.5.0, Sections 5.2.2.1, 5.2.2.2, 6.3.1; see also, e.g., 3GPP TS 44.018 v8.8.0, Sections 3.2.3.2, 3.2.3.1, 11.1.1; 3GPP TS 44.060 v8.6.0, Section 5.5.1.1c.1.

Defendants’ Accused Products are configured so that the public priority list is obtained by the terminal from a non-LTE standard, in compliance with the TS 36.331 standard. For example, Defendants’ Accused Products support or comply with subsections 8.1.1, 10.2.48.8.22, 8.1.1.6.19, 8.6.7.3a-3c of
the TS 25.331 v8.7.0 standard and subsections 5.2.2.1, 5.2.2.2, 6.3.1 of the TS 36.331 v8.5.0 standard as well as subsections 3.2.3.2, 3.2.3.1, and 11.1.1 of the TS 44.018 v8.8.0 standard and subsection 5.5.1.1c.1 of the TS 44.060 v8.6.0 standard, as specified, for example, in 3GPP TS 36.331 V8.5.0, subsection 2, and which provide in relevant part, for example as follows:

3GPP TS 36.331 v8.5.0, Sec 2:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.


3GPP TS 25.331 v8.7.0, Sec 10.2.48.8.22:

10.2.48.8.22 System Information Block type 19

The system information block type 19 contains Inter-RAT frequency and priority information to be used in the cell.

<table>
<thead>
<tr>
<th>Information Element/Group name</th>
<th>Need</th>
<th>Multi</th>
<th>Type and reference</th>
<th>Semantics description</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTRA priority info list</td>
<td>MP</td>
<td></td>
<td>UTRA priority info list</td>
<td></td>
<td>REL-8</td>
</tr>
<tr>
<td>10.3.7.113</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSM priority info list</td>
<td>OP</td>
<td>GSM priority info list 10.3.7.114</td>
<td>REL-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-UTRA frequency and priority info list</td>
<td>OP</td>
<td>E-UTRA frequency and priority info list 10.3.7.115</td>
<td>REL-8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3GPP TS 25.331 v8.7.0, Sec 8.1.1:

8.1.1 Broadcast of system information

![Figure 8.1.1-1: Broadcast of system information](image)

8.1.1.1 General

The purpose of this procedure is to broadcast system information from the UTRAN to UEs in a cell.
3GPP TS 25.331 v8.7.0, Sec 8.1.1.6.19:

8.1.1.6.19 System Information Block type 19

If the cell is not operating in MBSFN mode according to subclause 8.1.1.6.3 the UE should store all relevant IEs included in this system information block. If the cell is not operating in MBSFN mode according to subclause 8.1.1.6.3 the UE shall:

1> if the value of the IE "Priority status" in the variable PRIORITY_INFO_LIST equals "dedicated_priority":

   2> clear every stored value of "Threshx_high" and "Threshx_low" in every occurrence of the IE "Priority Info List" in the variable PRIORITY_INFO_LIST.

1> otherwise:

   2> clear the variable PRIORITY_INFO_LIST.

1> clear the variable EUTRA_FREQUENCY_INFO_LIST;

1> act upon the received IE "UTRA priority info list" as described in subclause 8.6.7.3a;

1> if the IE "GSM priority info list" is present:

   2> act upon the received IE as described in subclause 8.6.7.3b.

1> if the IE "E-UTRA frequency and priority info list" is present:

   2> act upon the received IE as described in subclause 8.6.7.3c.
3GPP TS 25.331 v8.7.0, Sec 8.6.7.3a:

8.6.7.3a UTRA priority info list

If the IE "UTRA priority info list" is received in System Information Block Type 19, the UE shall:

……

1> otherwise:

2> update the PRIORITY_INFO_LIST IE "Priority status" to cause "sys_info_priority".

2> store information in the IE "UTRA Serving Cell" in the IE "UTRA Serving Cell" within the variable PRIORITY_INFO_LIST;…….

3GPP TS 25.331 v8.7.0, Sec 8.6.7.3b:

8.6.7.3b GSM priority info list

If the IE "GSM priority info list" is received in System Information Block Type 19, the UE shall:

1> if the value of the IE "Priority status" in the variable PRIORITY_INFO_LIST equals "dedicated_priority":

2> for each occurrence of the IE "GSM Priority Info":

3> store the IEs "QrxlevminGSM", "Thresh_x, high" and "Thresh_x, low" in every entry of PRIORITY_INFO_LIST with CHOICE "Radio Access Technology" set to "GSM", which contains an IE "BCCH ARFCN" matching a BCCH ARFCN indicated in the IE "GSM cell group".
1> otherwise:

2> for each occurrence of the IE "GSM Priority Info":

3> create a new entry in the IE "Priority Info List" in the variable PRIORITY_INFO_LIST, and in this new entry:

4> store the value of IE "priority" from the IE "GSM Priority Info", and set the CHOICE "Radio Access Technology" to "GSM";

4> for each of the BCCH ARFCNs indicated by the IE "GSM cell group":

5> create a new entry in the IE "Frequency List" and store the IEs "Band Indicator", "QrxlevminGSM", "Threshx, high" and "Threshx, low" and store the indicated BCCH ARFCN in the IE "BCCH ARFCN".

3GPP TS 25.331 v8.7.0, Sec 8.6.7.3c:

8.6.7.3c E-UTRA frequency and priority info list

If the IE "E-UTRA frequency and priority info list" is received in System Information Block Type 19, the UE shall:

1> for each occurrence of the IE "E-UTRA frequency and priority":

2> create a new entry in the IE "Frequency Info List" in the variable EUTRA_FREQUENCY_INFO_LIST, and in that new entry:
if the value of the IE "Priority status" in the variable PRIORITY_INFO_LIST equals "dedicated_priority":

for each occurrence of the IE "E-UTRA frequency and priority":

if the value of IE "EARFCN" exists in the list of E-UTRA priorities in the variable PRIORITY_INFO_LIST, then in that occurrence of the IE "Priority Info List":

store the IEs "Threshx, high", "Threshx, low" and "QrxlevminEUTRA" from the IE "E-UTRA frequency and priority" occurrence.

otherwise:

for each occurrence of the IE "E-UTRA frequency and priority":

if an entry already exists in the IE "Priority Info List" in the variable PRIORITY_INFO_LIST with the same priority value as indicated in the IE "priority" and has the CHOICE "Radio Access Technology" set to "E-UTRA":

create a new entry in the IE "Frequency List" in that occurrence of IE "Priority Info List";
List", and store the value of "EARFCN" in the IE "EARFCN" in this occurrence of the IE "Frequency List" within the variable PRIORITY_INFO_LIST, and:

5> store the IEs "Thresh_x_high", "Thresh_x_low" and "QrxlevminEUTRA" in that occurrence of the IE "Frequency List".

3> otherwise:

4> create a new entry in the IE "Priority Info List" and store the value of "priority" in the IE "priority" in this occurrence of the IE "Priority Info List" within the variable PRIORITY_INFO_LIST, and in that new entry:

5> set the CHOICE "Radio Access Technology" to "E-UTRA" and store the value of "EARFCN" in the IE "EARFCN" in the first occurrence of the IE "Frequency List";

5> store the IEs "Thresh_x_high", "Thresh_x_low" and "QrxlevminEUTRA" in that occurrence of the IE "Frequency List".

2> store the IE "E-UTRA detection".

---

3GPP TS 36.331 v8.5.0, Sec 5.5.2:

| 5.2.2       | System information acquisition |
| 5.2.2.1     | General                       |

---

Samsung Exhibit 1011, Page 95
The UE applies the system information acquisition procedure to acquire the AS- and NAS- system information that is broadcasted by the E-UTRAN. The procedure applies to UEs in RRC_IDLE and UEs in RRC_CONNECTED.

3GPP TS 36.331 v8.5.0, Sec 5.2.2.2:

5.2.2.2 Initiation

The UE shall apply the system information acquisition procedure upon selecting (e.g. upon power on) and upon re-selecting a cell, after handover completion, after entering E-UTRA from another RAT, upon return from out of coverage, upon receiving a notification that the system information has changed, upon receiving an indication about the presence of an ETWS notification and upon exceeding the maximum validity duration. Unless explicitly stated otherwise in the procedural specification, the system information acquisition procedure overwrites any stored system information, i.e. delta configuration is not applicable for system information and the UE discontinues using a field if it is absent in system information unless explicitly specified otherwise.
6.3.1 System information blocks

SystemInformationBlockType5
The IE SystemInformationBlockType5 contains information relevant only for inter-frequency cell re-selection i.e. information about other E-UTRA frequencies and inter-frequency neighbouring cells relevant for cell re-selection. The IE includes cell re-selection parameters common for a frequency as well as cell specific re-selection parameters.

SystemInformationBlockType6
The IE SystemInformationBlockType6 contains information relevant only for inter-RAT cell re-selection i.e. information about UTRA frequencies and UTRA neighbouring cells relevant for cell re-selection. The IE includes cell re-selection parameters common for a frequency.

SystemInformationBlockType7
The IE SystemInformationBlockType7 contains information relevant only for inter-RAT cell re-selection i.e. information about GERAN frequencies relevant for cell re-selection. The IE includes cell re-selection parameters for each frequency.

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that includes a terminal or mobile device obtaining from an LTE system a dedicated priority list, such as a freqPriorityListX that “provides a cell reselection priority for each frequency, by means of separate
lists for each RAT [Radio Access Technology].” See, e.g., 3GPP TS 36.304 v8.5.0, Section 5.2.4; 3GPP TS 36.331 v8.5.0, Sections 6.2.2 and 7.3.

Defendants’ Accused Products are configured to obtain a dedicated priority list, for example, in compliance with the TS 36.304 and TS 36.331 standards. For example, Defendants’ Accused Products support or comply with subsection 5.2.4 of the TS 36.304 V8.5.0 standard, and subsections 6.2.2 and 7.3 of the TS 36.331 V8.5.0 standard.

For example, the TS 36.304 and TS 36.331 standards provide a cell reselection process that requires that when the mobile device camps on the cell of the non-LTE system such as UTRA, the dedicated priority list is invalid after the valid time expires. See, e.g., 3GPP TS 25.331 v8.7.0, Sections 13.1, 8.3.3.7, 13.4.15c, and 10.2.48.8.22.

Defendants’ Accused Products are configured so that, when the terminal camps on the cell of the non-LTE system, the dedicated priority list is invalid after the valid time expires and then the terminal uses the public priorities for cell reselection, for example, in compliance with the TS 36.331 standard. For example, Defendants’ Accused Products support or comply with subsections 13.1, 8.3.3.7, 13.4.15c, and 10.2.48.8.22 of the TS 25.331 V8.7.0 standard, as specified, for example, in 3GPP TS 36.331 V8.5.0, subsection 2, and which provide in relevant part, for example:
3GPP TS 25.331 v8.7.0, Sec 13.1:

13.1 Timers for UE

<table>
<thead>
<tr>
<th>Timer</th>
<th>Start</th>
<th>Stop</th>
<th>At expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>T322</td>
<td>When received in UTRAN MOBILITY INFORMATION message in the IE “Dedicated Priority Information” or upon cell (re)selection to UTRA from another RAT with validity time configured for dedicated priorities (in which case the remaining validity time is applied).</td>
<td>When dedicated priorities are cleared, when new dedicated priorities are received, when PLMN selection is performed on request by NAS, or upon cell (re)selection to another RAT (in which case the timer is carried on to the other RAT).</td>
<td>See subclause 8.3.3.7</td>
</tr>
</tbody>
</table>

3GPP TS 25.331 v8.7.0, Sec 8.3.3.7:

8.3.3.7 T322 expiry

Upon expiry of timer T322 the UE shall:
1> clear the stored IE "Dedicated Priority Information";
1> clear the variable PRIORITY_INFO_LIST;
1> set the value of IE "Priority status" in the variable PRIORITY_INFO_LIST to "sys_info_priority";
if the UE is not in CELL_DCH state:

1> take the actions as described in subclause 8.1.6.19 using stored System information Block type 19.

3GPP TS 25.331 v8.7.0, Sec 13.4.15c:

13.4.15c PRIORITY_INFO_LIST
This variable contains cell information on UTRA and inter-RAT priorities to be applied to neighbour cells stored in CELL_INFO_LIST and EUTRA_FREQUENCY_INFO_LIST, as received in messages System Information Block Type 19 and UTRAN MOBILITY INFORMATION.

The contents of this variable are inherited at inter-RAT cell (re)selection, including the remaining validity time (i.e., T320 in E-UTRAN, T322 in UTRAN, and [T3230, FFS] in GERAN), if configured.

3GPP TS 36.331 v8.5.0, Sec 2:

2 References
The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

......

[36] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

......
[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".

3GPP TS 44.018 v8.8.0, Sec 3.2.3.2:
3.2.3.2 Common priorities information
A mobile station may receive common priorities information in the Priority and E-UTRAN Parameters Description IE in the SYSTEM INFORMATION TYPE 2quater message. The mobile station shall use the parameters provided in the GSM Priority Parameters IE and in the E-UTRAN Measurement Parameters Description IE and/or in the 3G Priority Parameters Description IE for inter-RAT cell reselection towards E-UTRAN and/or UTRAN.

3GPP TS 44.018 v8.8.0, Sec 3.2.3.1:
3.2.3.1 General

……

Two sets of priorities are defined for inter-RAT cell re-selection based on priority information: common priorities (see sub-clause 3.2.3.2) and individual priorities (see sub-clause 3.2.3.3). A mobile station shall consider the latest received common priorities as valid if the mobile does not have any valid individual priorities.

3GPP TS 44.018 v8.8.0, Sec 11.1.1:
11.1.1 Timers on the mobile station side

……

T3230:
The timer is used to control the validity period of individual priorities. It is started on receipt of the individual priorities for cell reselection via dedicated signalling or on inter-RAT reselection to GERAN if the corresponding timer in the source RAT (i.e., T320 in E-UTRA, and T322 in UTRA) was running when reselection occurred.
When a PLMN selection is performed and results in a change of PLMN, the MS shall stop T3230 and delete the corresponding individual priorities.

At expiry the mobile station shall delete the corresponding individual priorities.

**3GPP TS 44.060 V8.6.0**

5.5.1.1c.1 General
The network may provide priority information to enable priority-based cell reselection (see 3GPP TS 45.008). Inter-RAT cell reselection based on priority information applies only in case of autonomous cell reselection.

Two sets of priorities are defined for inter-RAT cell re-selection based on priority information: common priorities (see sub-clause 5.5.1.1c.2) and individual priorities (see sub-clause 5.5.1.1c.3). A mobile station shall consider the latest received common priorities as valid if the mobile does not have any valid individual priorities. The mobile station shall delete all priorities when switched off. The validity of individual priorities is specified in sub-clause

**3GPP TS 25.331 v8.7.0, Sec 10.2.48.8.22 :**

10.2.48.8.22 System Information Block type 19
The system information block type 19 contains Inter-RAT frequency and priority information to be used in the cell.

<table>
<thead>
<tr>
<th>Information Element/Group name</th>
<th>Need</th>
<th>Multi</th>
<th>Type and Reference</th>
<th>Semantics Description</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTRA priority info list</td>
<td>MP</td>
<td></td>
<td>UTRA priority info list 10.3.7.113</td>
<td>REL-8</td>
<td></td>
</tr>
<tr>
<td>GSM priority info list</td>
<td>OP</td>
<td></td>
<td>GSM priority</td>
<td>REL-8</td>
<td></td>
</tr>
<tr>
<td>E-UTRA frequency and priority info list</td>
<td>OP</td>
<td>E-UTRA frequency and priority info list 10.3.7.115</td>
<td>REL-8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>