**TSG-RAN Meeting #27** **RP-050110**
**Tokyo, Japan, 09-11 March 2005** **Agenda item 9.8**

Source: TSG-RAN WG2

Title: CR to 25.331 Rel-6 for WI ACBOP

| Spec | CR | Rev | Phase | Subject | Cat | Version-Current | Version-New | Doc-2nd-Level | Workitem |
|---|---|---|---|---|---|---|---|---|---|
| 25.331 | 2526 | 1 | Rel-6 | CN domain specific Access Class Barring | C | 6.4.0 | 6.5.0 | R2-050746 | ACBOP |

**3GPP TSG-RAN2 Meeting #46** *Tdoc R2-050746*
**Scottsdale, USA, 14th – 18th February 2005** **Revision of *Tdoc R2-050632***

*CR-Form-v7.1*

# CHANGE REQUEST

⌘ **25.331** **CR** **2526** ⌘ **rev** **1** ⌘ Current version: **6.4.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

***Proposed change affects:*** UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

| | | |
|---|---|---|
| ***Title:*** | ⌘ | CN domain specific Access Class Barring |
| ***Source:*** | ⌘ | RAN WG2 |
| ***Work item code:*** | ⌘ | ACBOP |
| ***Date:*** | ⌘ | 2005/02/16 |
| ***Category:*** | ⌘ | **C** |
| ***Release:*** | ⌘ | Rel-6 |

*Use one of the following categories:*
***F*** *(correction)*
***A*** *(corresponds to a correction in an earlier release)*
***B*** *(addition of feature),*
***C*** *(functional modification of feature)*
***D*** *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

*Use one of the following releases:*
*Ph2* *(GSM Phase 2)*
*R96* *(Release 1996)*
*R97* *(Release 1997)*
*R98* *(Release 1998)*
*R99* *(Release 1999)*
*Rel-4* *(Release 4)*
*Rel-5* *(Release 5)*
*Rel-6* *(Release 6)*
*Rel-7* *(Release 7)*

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | Currently access control is applied to both domains. Congension is often specific to a single domain and the access to the other domain should be provided. |
| ***Summary of change:*** | ⌘ | In order to provide domain specific access control in a network sharing configuration, SIB3 is extended and procedures related to the extension is added. |
| ***Consequences if not approved:*** | ⌘ | Domain specific access control will not be available. |

| | | |
|---|---|---|
| ***Clauses affected:*** | ⌘ | 8.1.1.6.3; 8.1.1.6.4;10.2.48.8.6 |

| | Y | N | | | |
|---|---|---|---|---|---|
| ***Other specs Affected:*** ⌘ | | | Other core specifications | ⌘ | |
| | | X | Test specifications | | |
| | | | O&M Specifications | | |

| | | |
|---|---|---|
| ***Other comments:*** | ⌘ | |

**How to create CRs using this form:**
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

### 8.1.1.6.3 System Information Block type 3

The UE should store all relevant IEs included in this system information block. The UE shall:

1> if in connected mode, and System Information Block 4 is indicated as used in the cell:

2> read and act on information sent in that block.

With respect to Domain Specific Access Control, the UE shall:

1> if the IE "Multiple PLMN List" is not included in the Master Information Block:

2> apply the domain specific access restrictions as indicated by the IE "Domain Specific Access Restriction Parameters For PLMN Of MIB".

1> else:

2> if the PLMN specified by the IE "PLMN Identity" of the Master Information Block is chosen by the UE:

3> apply the domain specific access restrictions as indicated by the IE "Domain Specific Access Restriction Parameters For PLMN Of MIB".

2> else, if N-th (N=1..5) PLMN in the IE "Multiple PLMNs" contained in the IE "Multiple PLMN List" is chosen by the UE:

3> if the IE "Domain Specific Access Restriction List" of the IE "Domain Specific Access Restriction For Shared Network" is indicated:

4> if the IE "Domain Specific Access Restriction Parameters For OperatorN" is indicated:

5> apply the domain specific access restrictions as indicated by the IE "Domain Specific Access Restriction Parameters For OperatorN".

3> else, if the IE "Domain Specific Access Restriction Parameters For All" of the IE "Domain Specific Access Restriction For Shared Network" is indicated

4> apply the domain specific access restrictions as indicated by the IE "Domain Specific Access Restriction Parameters For All".

The UE shall apply the following handling with respect to any Access Class Barring information:

1> if in idle mode and any Access Class Barring information is indicated:

2> if no Domain Specific Access Restriction Parameters are included in System Information Block Type 3, the UE shall:

3> act on the IE "Access Class Barred list" when initiating RRC Connection establishment as specified in [4].

2> if the Domain Specific Access Restriction Parameters to be applied are included in System Information Block Type 3 the UE shall:

3> act on the IE "Domain Specific Access Class Barred List" if indicated in the IE "CS Domain Specific Access Restriction" when initiating RRC Connection establishment to send an INITIAL DIRECT TRANSFER message to the CS domain, as specified in [4];

3> act on the IE "Domain Specific Access Class Barred List" if indicated in the IE "PS Domain Specific Access Restriction" when initiating RRC Connection establishment to send an INITIAL DIRECT TRANSFER message to the PS domain, as specified in [4];

3> upon transition to UTRA RRC connected, the UE shall:

4> store that Domain Specific Access Restriction Parameters to the variable "DSAC_PARAM" and maintain the variable until it is cleared, the PLMN chosen by the UE is changed or the RRC connection is released;

4> act on the stored IE "Domain Specific Access Class Barred List" if indicated in the IE "CS Domain Specific Access Restriction" when initiating an INITIAL DIRECT TRANSFER message to the CS domain, as specified in [4];

4> act on the stored IE "Domain Specific Access Class Barred List" if indicated in the IE "PS Domain Specific Access Restriction" when initiating an INITIAL DIRECT TRANSFER message to the PS domain, as specified in [4].~~;~~

1> if in connected mode:

2> if any Access Class Barring information is not indicated:

3> if the variable "DSAC_PARAM" is set, the UE shall

4> clear the variable "DSAC_PARAM";

4> act as no Access Class is barred.

2> else if the ~~IE "~~Domain Specific Access Restriction Parameters~~"~~ to be applied is not included in System Information Block Type 3:~~;~~

3> if the variable "DSAC_PARAM" is set, the UE shall:

4> clear the variable "DSAC_PARAM";

4> act as no Access Class is barred.

2> else if the Domain Specific Access Restriction Parameters to be applied are included in the System Information Block Type 3:

3> if the variable "DSAC_PARAM is not set, the UE shall:

4> store that Domain Specific Access Restriction Parameters to the variable "DSAC_PARAM" and maintain the variable until it is cleared, the PLMN chosen by the UE is changed or the RRC connection is released;

4> act on the stored IE "Domain Specific Access Class Barred ~~l~~List ~~1st~~" if indicated in the IE "CS Domain Specific Access Restriction" when initiating an INITIAL DIRECT TRANSFER message to the CS, as specified in [4];

4> act on the stored IE "Domain Specific Access Class Barred List" if indicated in the IE "PS Domain Specific Access Restriction" when initiating an INITIAL DIRECT TRANSFER message to the PS domain, as specified in [4].

3> else (the access class barring information is stored) UE shall:

4> update the variable "DSAC_PARAM" with that Domain Specific Access Restriction Parameters;

4> act on the updated IE "Domain Specific Access Class Barred List" if indicated in the IE "CS Domain Specific Access Restriction" when initiating an INITIAL DIRECT TRANSFER message to the CS domain, as specified in [4];

4> ~~-~~act on the updated IE "Domain Specific Access Class Barred List" if indicated in the IE "PS Domain Specific Access Restriction" when initiating an INITIAL DIRECT TRANSFER message to the PS domain, as specified in [4].

### 8.1.1.6.4 System Information Block type 4

If in connected mode, the UE should store all relevant IEs included in this system information block. The UE shall:

1> if in connected mode:

2> read and act on information sent in this block;~~-~~

2> read the System Information B~~l~~lock Type 3 for any Access Class Barring information and act on that information as described in 8.1.1.6.3.

If in idle mode, the UE shall not use the values of the IEs included in this system information block.

10.2.48.8.6 System Information Block type 3

The system information block type 3 contains parameters for cell selection and re-selection.

| Information Element/Group name | Need | Multi | Type and reference | Semantics description | Version |
|---|---|---|---|---|---|
| SIB4 Indicator | MP | | Boolean | TRUE indicates that SIB4 is broadcast in the cell. | |
| **UTRAN mobility information elements** | | | | | |
| Cell identity | MP | | Cell identity 10.3.2.2 | | |
| Cell selection and re-selection info | MP | | Cell selection and re-selection info for SIB3/4 10.3.2.3 | | |
| Cell Access Restriction | MP | | Cell Access Restriction 10.3.2.1 | | |
| Domain Specific Access Restriction Parameters For PLMN Of MIB | OP | | Domain Specific Access Restriction Parameters 10.3.1.X | This IE specifies the Domain Specific Access Restriction Parameters for UEs which has chosen the PLMN in the IE "PLMN identity" of the Master Information Block. | REL-6 |
| ~~>CN domain identity 1st Domain~~ | ~~MP~~ | | ~~CN domain identity 10.3.1.1~~ | | ~~REL-6~~ |
| ~~>Access Class Barred list-1st Domain~~ | ~~MD~~ | ~~MaxAC~~ | | ~~Default is Access Class Barred list contained in Cell Access Restiction. The first instance of the parameter corresponds to Access Class 0, the second to Access Class 1 and so on up to Access Class 15. UE reads this IE of its access class stored in SIM.~~ | ~~REL-6~~ |
| ~~>>Access Class Barred~~ | ~~MP~~ | | ~~Enumerated( not barred, barred)~~ | | ~~REL-6~~ |
| ~~>CN domain identity 2nd Domain~~ | ~~MP~~ | | ~~CN domain identity 10.3.1.1~~ | | ~~REL-6~~ |
| ~~>Access Class Barred list-2nd Domain~~ | ~~MD~~ | ~~MaxAC~~ | | ~~Default is Access Class Barred list contained in Cell Access Restiction. The first instance of the parameter corresponds to Access Class 0, the second to Access Class 1 and so on up to Access Class 15. UE reads this IE of its access class stored in SIM.~~ | ~~REL-6~~ |
| ~~>>Access Class Barred~~ | ~~MP~~ | | ~~Enumerated( not barred, barred)~~ | | ~~REL-6~~ |
| Domain Specific Access Restriction For Shared Network | OP | | | | REL-6 |
| >CHOICE *barring representation* | | | | | REL-6 |
| >> Domain Specific Access Restriction List | | | | | REL-6 |

| | | | | | |
|---|---|---|---|---|---|
| >>>Domain Specific Access Restriction Parameters For Operator1 | OP | | Domain Specific Access Restriction Parameters 10.3.1.X | This IE specifies the Domain Specific Access Restriction Parameters for UEs which has chosen the first PLMN in the IE "multiplePLMNs" in the IE "Multiple PLMN List" of the Master Information Block. | REL-6 |
| >>>Domain Specific Access Restriction Parameters For Operator2 | OP | | Domain Specific Access Restriction Parameters 10.3.1.X | This IE specifies the Domain Specific Access Restriction Parameters for UEs which has chosen the second PLMN in the IE "multiplePLMNs" in the IE "Multiple PLMN List" of the Master Information Block. | REL-6 |
| >>>Domain Specific Access Restriction Parameters For Operator3 | OP | | Domain Specific Access Restriction Parameters 10.3.1.X | This IE specifies the Domain Specific Access Restriction Parameters for UEs which has chosen the third PLMN in the IE "multiplePLMNs" in the IE "Multiple PLMN List" of the Master Information Block. | REL-6 |
| >>>Domain Specific Access Restriction Parameters For Operator4 | OP | | Domain Specific Access Restriction Parameters 10.3.1.X | This IE specifies the Domain Specific Access Restriction Parameters for UEs which has chosen the fourth PLMN in the IE "multiplePLMNs" in the IE "Multiple PLMN List" of the Master Information Block. | REL-6 |
| >>>Domain Specific Access Restriction Parameters For Operator5 | OP | | Domain Specific Access Restriction Parameters 10.3.1.X | This IE specifies the Domain Specific Access Restriction Parameters for UEs which has chosen the fifth PLMN in the IE "multiplePLMNs" in the IE "Multiple PLMN List" of the Master Information Block. | REL-6 |
| >>Domain Specific Access Restriction Parameters For All | | | Domain Specific Access Restriction Parameters 10.3.1.X | This IE specifies the common Domain Specific Access Restriction Parameters applied to all PLMNs in the IE "multiplePLMNs" in the IE "Multiple PLMN List" of the Master Information Block. | REL-6 |

## 10.3.1.X Domain Specific Access Restriction Parameters

This IE specifies domain specific access class restriction parameters for CS and PS domain.

| Information Element/Group name | Need | Multi | Type and reference | Semantics description | Version |
|---|---|---|---|---|---|
| CS Domain Specific Access Restriction | MP | | Domain Specific Access Restriction 10.3.1.Y | This IE contains Domain Specific Access Restriction Parameters for CS domain. | REL-6 |
| PS Domain Specific Access Restriction | MP | | Domain Specific Access Restriction 10.3.1.Y | This IE contains Domain Specific Access Restriction Parameters for PS domain. | REL-6 |

## 10.3.1.Y Domain Specific Access Restriction

| Information Element/Group name | Need | Multi | Type and reference | Semantics description | Version |
|---|---|---|---|---|---|
| CHOICE *restriction status* | | | | | REL-6 |
| >no restriction | | | | (no data) | REL-6 |
| >restriction | | | | | REL-6 |
| >>Domain Specific Access Class Barred List | MD | MaxAC | | The first instance of the parameter corresponds to Access Class 0, the second to Access Class 1 and so on up to Access Class 15. UE reads this IE of its access class stored in SIM. This IE is mandatory and its default value is the Access Control Barred List contained in the IE "Cell Access Restriction" of the System Information Block Type 3. | REL-6 |
| >>>Access Class Barred | MP | | Enumerated( barred, not barred) | | REL-6 |

[...]

## 13.4.x DSAC_PARAM

This variable contains Domain Specific Access Restriction Parameters during the connected mode.

| Information Element/Group name | Need | Multi | Type and reference | Semantics description | Version |
|---|---|---|---|---|---|
| CS Domain Specific Access Restriction | MP | | Domain Access Restrction 10.3.1.X | This IE containes CS Domain Specific Access Restriction Paramters | REL-6 |
| PS Domain Specific Access Restriction | MP | | Domain Access Restriction 10.3.1.X | This IE containes PS Domain Specific Access Restriction Paramters | REL-6 |

```
-- **************************************************
--
-- OTHER INFORMATION ELEMENTS (10.3.8)
--
-- **************************************************

SysInfoType3 ::=                    SEQUENCE {
        sib4indicator                   BOOLEAN,
    -- UTRAN mobility IEs
        cellIdentity                    CellIdentity,
        cellSelectReselectInfo          CellSelectReselectInfoSIB-3-4,
        cellAccessRestriction           CellAccessRestriction,
    -- Extension mechanism for non- release99 information
        v4b0NonCriticalExtensions       SEQUENCE {
            sysInfoType3-v4b0ext            SysInfoType3-v4b0ext-IEs,
            v590xyNonCriticalExtension        SEQUENCE {
                sysInfoType3-v590xyext            SysInfoType3-v590xyext,
                v6xyNonCriticalExtension            SEQUENCE {
                    sysInfoType3-v6xyext                SysInfoType3-v6xyext,
                    nonCriticalExtensions           SEQUENCE {} OPTIONAL
                }                               OPTIONAL
            }                               OPTIONAL
        }                               OPTIONAL
}

SysInfoType3-v6xyext ::= SEQUENCE {
        domainSpecificAccessRestrictionParametersForPLMNOfMIB
    DomainSpecificAccessRestrictionParam-v6xyext OPTIONAL,
        domainSpecificAccessRestictionForSharedNetwork
    DomainSpecificAccessRestrictionForSharedNetwork-6xyext  OPTIONAL
}



DomainSpecificAccessRestrictionForSharedNetwork-v6xyext ::= CHOICE {
        domainSpecificAccessRestictionList                  DomainSpecificAccessRestrictionList-
6xyext,
        domainSpecificAccessRestictionParametersForAll      DomainSpecificAccessRestrictionParam-
6xyext
}

DomainSpecificAccessRestrictionList-6xyext ::= SEQUENCE {
        domainSpecificAccessRestrictionParametersForOperator1
                                    DomainSpecificAccessRestrictionParam-v6xyext    OPTIONAL,
        domainSpecificAccessRestrictionParametersForOperator2
                                    DomainSpecificAccessRestrictionParam-v6xyext    OPTIONAL,
        domainSpecificAccessRestrictionParametersForOperator3
                                    DomainSpecificAccessRestrictionParam-v6xyext    OPTIONAL,
        domainSpecificAccessRestrictionParametersForOperator4
                                    DomainSpecificAccessRestrictionParam-v6xyext    OPTIONAL,
        domainSpecificAccessRestrictionParametersForOperator5
                                    DomainSpecificAccessRestrictionParam-v6xyext    OPTIONAL
}

DomainSpecificAccessRestrictionParam-v6xyext ::= SEQUENCE {
        cSDomainSpecificAccessRestriction       DomainSpecificAccessRestriction-v6xyext
        pSDomainSpecificAccessRestriction       DomainSpecificAccessRestriction-v6xyext
}

DomainSpecificAccessRestriction-v6xyext ::= CHOICE {
        no_restriction      NULL,
        restriction         SEQUENCE {
            domainSpecficAccessClassBarredList      AccessClassBarredList   OPTIONAL
        }
}
```