

Source: CN2
Title: CRs on R99 Work Item CAMEL3, CR Pack 2
Agenda item: 7.1
Document for: APROVAL

Introduction:

This document contains a CR on R99 WI CAMEL3 (TS 29.078) and corresponding mirror CR. These CRs have been agreed by TSG CN WG2 and are forwarded to TSG CN Plenary meeting #19 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.078	299	1	N2-030100	R99	ASN.1 syntax basic corrections	F	3.14.0
29.078	300		N2-030035	Rel-4	ASN.1 syntax basic corrections	A	4.7.0

CHANGE REQUEST

⌘ **29.078 CR 300** ⌘ rev ⌘ Current version: **4.7.0** ⌘

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 Radio Access Network Core Network

Title:	⌘ ASN.1 syntax basic corrections	
Source:	⌘ Alcatel	
Work item code:	⌘ CAMEL3	Date: ⌘ 29/01/2003
Category:	⌘ A	Release: ⌘ Rel-4
Use <u>one</u> of the following categories:		
<input type="checkbox"/> F (correction) <input type="checkbox"/> A (corresponds to a correction in an earlier release) <input type="checkbox"/> B (addition of feature), <input type="checkbox"/> C (functional modification of feature) <input type="checkbox"/> D (editorial modification)		
Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		
Use <u>one</u> of the following releases:		
<input type="checkbox"/> 2 (GSM Phase 2) <input type="checkbox"/> R96 (Release 1996) <input type="checkbox"/> R97 (Release 1997) <input type="checkbox"/> R98 (Release 1998) <input type="checkbox"/> R99 (Release 1999) <input type="checkbox"/> Rel-4 (Release 4) <input type="checkbox"/> Rel-5 (Release 5) <input type="checkbox"/> Rel-6 (Release 6)		

Reason for change:	⌘ Some small syntactic corrections of the current Rel-4 29.078 ASN.1 modules; like spelling mistakes and superfluous comma are necessary to have correct ASN.1 modules.
Summary of change:	⌘ Small syntax corrections
Consequences if not approved:	⌘ Syntax errors and spelling errors in the ASN.1 which the implementers must fix manually.

Clauses affected:	⌘ ASN.1 modules of clauses 5.6, 6.2.2.1 and 7.1.								
Other specs affected:	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N								
<input type="checkbox"/>	<input checked="" type="checkbox"/>								
<input type="checkbox"/>	<input checked="" type="checkbox"/>								
<input type="checkbox"/>	<input checked="" type="checkbox"/>								
Other comments:	⌘ 3GPP TSG-CN#18 New Orleans, USA, Draft Meeting Report v1.0.0 is stating "ASN.1 CRs which correct errors preventing proper compilation are considered essential corrections and allowable.". So CN2 may reconsider this CR.								

— First modified module —

5.6 Object IDentifiers (IDs)

```
CAP-object-identifiers {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-object-identifiers(100) version3(2)}
```

```
DEFINITIONS ::= BEGIN
```

```
-- This module assigns object identifiers for Modules, Packages, Contracts and AC's
-- used by CAP
```

```
-- For Modules from TC, ROS,
tc-Messages OBJECT IDENTIFIER ::= {itu-teeite recommendation q 773 modules(2) messages(1) version3(3)}
tc-NotationExtensions OBJECT IDENTIFIER ::= {itu-teeite recommendation q 775 modules(2) notation-extension (4) version1(1)}
ros-InformationObjects OBJECT IDENTIFIER ::= {joint-iso-itu-teeite remote-operations(4) informationObjects(5) version1(0)}
```

```
...
```

```
END
```

— Next modified module —

6.2.2.1 gsmSRF/gsmSCF ASN.1 modules

```
CAP-gsmSCF-gsmSRF-pkgs-contracts-acs {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-gsmSCF-gsmSRF-pkgs-contracts-acs(104) version3(2)}
```

```
DEFINITIONS ::= BEGIN
```

```
-- This module specifies the Operation Packages, Contracts, Application Contexts
-- and Abstract Syntaxes used for the gsmSRF - gsmSCF interface, for the control of
-- circuit switched calls.
```

```
-- The table in section 2.1 lists the specifications that contain the modules
-- that are used by CAP.
```

```
IMPORTS
```

```
PARAMETERS-BOUND,
CAPSpecificBoundSet
FROM CAP-classes classes

CONTRACT,
OPERATION-PACKAGE,
OPERATION
FROM Remote-Operations-Information-Objects ros-InformationObjects

TCMessage {}
FROM TCAPMessages tc-Messages

APPLICATION-CONTEXT,
dialogue-abstract-syntax
FROM TC-Notation-Extensions tc-NotationExtensions

playAnnouncement {},
promptAndCollectUserInformation {},
specializedResourceReport
FROM CAP-gsmSCF-gsmSRF-ops-args gsmSCF-gsmSRF-Operations

activityTest,
cancel ,
assistRequestInstructions {}
FROM CAP-gsmSSF-gsmSCF-ops-args gsmSSF-gsmSCF-Operations

gsmSRF-scfActivationOfAssistPackage {}
FROM CAP-gsmSSF-gsmSCF-pkgs-contracts-acs gsmSSF-gsmSCF-Protocol

id-package-specializedResourceControl,
id-package-activityTest,
id-ac-gsmSRF-gsmSCF,
id-contract-gsmSRF-gsmSCF,
id-package-gsmSRF-scfCancel,
id-as-basic-gsmSRF-gsmSCF,
classes,
ros-InformationObjects,
tc-Messages,
```

```

tc-NotationExtensions,
gsmSCF-gsmSRF-Operations,
gsmSSF-gsmSCF-Operations,
gsmSSF-gsmSCF-Protocol
FROM CAP-object-identifiers {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-object-identifiers(100) version3(2)}
-- CR Editor's note: the deleted 'r' above is hidden text in the specification.

;

-- Application Contexts

gsmSRF-gsmSCF-ac APPLICATION-CONTEXT ::= {
    CONTRACT           gsmSRF-gsmSCF-contract
    DIALOGUE MODE      structured
    TERMINATION        basic
    ABSTRACT SYNTAXES {dialogue-abstract-syntax | 
                      gsmSRF-gsmSCF-abstract-syntax}
    APPLICATION CONTEXT NAME id-ac-gsmSRF-gsmSCF}

-- Contracts

gsmSRF-gsmSCF-contract CONTRACT ::= {
    INITIATOR CONSUMER OF
        {gsmSRF-scfActivationOfAssistPackage {cAPSSpecificBoundSet}}
    RESPONDER CONSUMER OF
        {specializedResourceControlPackage {cAPSSpecificBoundSet} |
         activityTestPackage |
         gsmSRF-scfCancelPackage}
    ID          id-contract-gsmSRF-gsmSCF}

-- Operation Packages

specializedResourceControlPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES   {playAnnouncement {bound} |
                        promptAndCollectUserInformation {bound}}
    SUPPLIER INVOKES  {specializedResourceReport}
    ID                id-package-specializedResourceControl}

gsmSRF-scfCancelPackage OPERATION-PACKAGE ::= {
    CONSUMER INVOKES {cancel}
    ID              id-package-gsmSRF-scfCancel}

| aActivityTestPackage OPERATION-PACKAGE ::= {
    CONSUMER INVOKES {activityTest}
    ID              id-package-activityTest}

-- Abstract Syntaxes

gsmSRF-gsmSCF-abstract-syntax ABSTRACT-SYNTAX ::= {
    BASIC-gsmSRF-gsmSCF-PDUs
    IDENTIFIED BY     id-as-basic-gsmSRF-gsmSCF}

BASIC-gsmSRF-gsmSCF-PDUs ::= TCMessages {{GsmSRFgsmSCFInvokable}, {GsmSRFgsmSCFReturnable}}

GsmSRFgsmSCFInvokable OPERATION ::= {
    activityTest |
    assistRequestInstructions {cAPSSpecificBoundSet} |
    cancel |
    playAnnouncement {cAPSSpecificBoundSet} |
    promptAndCollectUserInformation {cAPSSpecificBoundSet} |
    specializedResourceReport
}

GsmSRFgsmSCFReturnable OPERATION ::= {
    activityTest |
    assistRequestInstructions {cAPSSpecificBoundSet} |
    cancel |
    playAnnouncement {cAPSSpecificBoundSet} |
    promptAndCollectUserInformation {cAPSSpecificBoundSet}
}

END

```

— Next modified module —

7.1 SMS operations and arguments

```

CAP-SMS-ops-args {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0) umts-network(1)
modules(3) cap-SMS-ops-args(105) version3(2)}

DEFINITIONS IMPLICIT TAGS ::= BEGIN

-- This module contains the operations and operation arguments used for the
-- gsmSSF/gprsSSF - gsmSCF interface, for the control of MO-SMS.

```

```

-- The table in section 2.1 lists the specifications that contain the modules
-- that are used by CAP.

IMPORTS

    errortypes,
    datatypes,
    operationcodes,
    classes,
    ros-InformationObjects,
    tc-Messages
FROM CAP-object-identifiers {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-object-identifiers(100) version3(2)}

OPERATION
FROM Remote-Operations-Information-Objects ros-InformationObjects

    ServiceKey
FROM CS1-DataTypes {ccitt(0) identified-organization(4) etsi(0) inDomain(1) in-network(1)
modules(0) cs1-datatYPES(2) version1(0)}

    MiscCallInfo
FROM CS2-datatypes {ccitt(0) identified-organization(4) etsi(0) inDomain(1) in-network(1)
cs2(20) modules(0) in-CS2-datatypes(0) version1(0)}

    IMSI,
    ISDN-AddressString
FROM MAP-CommonDataTypes {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-CommonDataTypes(18) version6(6)}

    LocationInformation
FROM MAP-MS-DataTypes {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-MS-DataTypes(11) version6(6)}

PARAMETERS-BOUND
FROM CAP-classes classes

    opcode-connectSMS,
    opcode-continueSMS,
    opcode-eventReportSMS,
    opcode-furnishChargingInformationSMS,
    opcode-initialDPSMS,
    opcode-releaseSMS,
    opcode-requestReportSMSEvent,
    opcode-resetTimerSMS
FROM CAP-operationcodes operationcodes

    CalledPartyBCDNumber {},
    EventSpecificInformationSMS,
    EventTypeSMS,
    Extensions {},
    FCISMSBillingChargingCharacteristics,
    LocationInformationGPRS,
    RPCause,
    SMSEvent,
    TimeAndTimezone {},
    TimerID,
    TimerValue,
    TPDataCodingScheme,
    TPProtocolIdentifier,
    TPShortMessageSubmissionInfo,
    TPValidityPeriod
FROM CAP-datatypes datatypes

    missingCustomerRecord,
    missingParameter,
    parameterOutOfRange,
    systemFailure,
    taskRefused,
    unexpectedComponentSequence,
    unexpectedDataValue,
    unexpectedParameter
FROM CAP-errortypes errortypes

|     CallReferenceNumber7
| FROM MAP-CH-DataTypes {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
| gsm-Network(1) modules(3) map-CH-DataTypes(13) version6(6)}
|
| ;
|
| ...
|
END

```

— End of CR —

CHANGE REQUEST

⌘ 29.078 CR 299 ⌘ rev 1 ⌘ Current version: 3.14.0 ⌘

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 Radio Access Network Core Network

Title:	⌘ ASN.1 syntax basic corrections	
Source:	⌘ Alcatel	
Work item code:	⌘ CAMEL3	Date: ⌘ 10/02/2003
Category:	⌘ F (essential correction) Use <u>one</u> 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 .	Release: ⌘ R99 Use <u>one</u> of the following releases: 2 (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)

Reason for change:	⌘ Some small syntactic corrections of the current Rel-99 29.078 ASN.1 modules; like spelling mistakes and superfluous comma are necessary to have correct ASN.1 modules.
Summary of change:	⌘ Small syntax corrections
Consequences if not approved:	⌘ Syntax errors and spelling errors in the ASN.1 which the implementers must fix manually.

Clauses affected:	⌘ ASN.1 modules of clauses 5.6, 6.2.2.1 and 7.1.								
Other specs affected:	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N								
<input checked="" type="checkbox"/>	<input type="checkbox"/>								
<input type="checkbox"/>	<input checked="" type="checkbox"/>								
<input type="checkbox"/>	<input checked="" type="checkbox"/>								
Other comments:	<ul style="list-style-type: none"> ⌘ - 3GPP TSG-CN#18 New Orleans, USA, Draft Meeting Report v1.0.0 is stating "ASN.1 CRs which correct errors preventing proper compilation are considered essential corrections and allowable.". So CN2 may reconsider this CR. - Please note that also 29.278 v5.1.0 is using the 29.078 v3.14.0 ASN.1 modules as well. 								

— First modified module —

5.6 Object IDentifiers (IDs)

```
CAP-object-identifiers {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-object-identifiers(100) version3(2)}
```

```
DEFINITIONS ::= BEGIN
```

```
-- This module assigns object identifiers for Modules, Packages, Contracts and AC's
-- used by CAP
```

```
-- For Modules from TC, ROS,
tc-Messages OBJECT IDENTIFIER ::= {itu-teeite recommendation q 773 modules(2) messages(1) version3(3)}
tc-NotationExtensions OBJECT IDENTIFIER ::= {itu-teeite recommendation q 775 modules(2) notation-extension (4) version1(1)}
ros-InformationObjects OBJECT IDENTIFIER ::= {joint-iso-itu-teeite remote-operations(4) informationObjects(5) version1(0)}
```

```
...
```

```
END
```

— Next modified module —

6.2.2.1 gsmSRF/gsmSCF ASN.1 modules

```
CAP-gsmSCF-gsmSRF-pkgs-contracts-acs {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-gsmSCF-gsmSRF-pkgs-contracts-acs(104) version3(2)}
```

```
DEFINITIONS ::= BEGIN
```

```
-- This module specifies the Operation Packages, Contracts, Application Contexts
-- and Abstract Syntaxes used for the gsmSRF - gsmSCF interface, for the control of
-- circuit switched calls.
```

```
-- The table in section 2.1 lists the specifications that contain the modules
-- that are used by CAP.
```

```
IMPORTS
```

```
PARAMETERS-BOUND,
CAPSpecificBoundSet
FROM CAP-classes classes

CONTRACT,
OPERATION-PACKAGE,
OPERATION
FROM Remote-Operations-Information-Objects ros-InformationObjects

TCMessage {}
FROM TCAPMessages tc-Messages

APPLICATION-CONTEXT,
dialogue-abstract-syntax
FROM TC-Notation-Extensions tc-NotationExtensions

playAnnouncement {},
promptAndCollectUserInformation {},
specializedResourceReport
FROM CAP-gsmSCF-gsmSRF-ops-args gsmSCF-gsmSRF-Operations

activityTest,
cancel ,
assistRequestInstructions {}
FROM CAP-gsmSSF-gsmSCF-ops-args gsmSSF-gsmSCF-Operations

gsmSRF-scfActivationOfAssistPackage {}
FROM CAP-gsmSSF-gsmSCF-pkgs-contracts-acs gsmSSF-gsmSCF-Protocol

id-package-specializedResourceControl,
id-package-activityTest,
id-ac-gsmSRF-gsmSCF,
id-contract-gsmSRF-gsmSCF,
id-package-gsmSRF-scfCancel,
id-as-basic-gsmSRF-gsmSCF,
classes,
ros-InformationObjects,
tc-Messages,
```

```

tc-NotationExtensions,
gsmSCF-gsmSRF-Operations,
gsmSSF-gsmSCF-Operations,
gsmSSF-gsmSCF-Protocol
FROM CAP-object-identifiers {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-object-identifiers(100) version3(2)}
-- CR Editor's note: the deleted 'r' above is hidden text in the specification.

;

-- Application Contexts

gsmSRF-gsmSCF-ac APPLICATION-CONTEXT ::= {
    CONTRACT           gsmSRF-gsmSCF-contract
    DIALOGUE MODE      structured
    TERMINATION        basic
    ABSTRACT SYNTAXES {dialogue-abstract-syntax | 
                      gsmSRF-gsmSCF-abstract-syntax}
    APPLICATION CONTEXT NAME id-ac-gsmSRF-gsmSCF}

-- Contracts

gsmSRF-gsmSCF-contract CONTRACT ::= {
    INITIATOR CONSUMER OF
        {gsmSRF-scfActivationOfAssistPackage {cAPSSpecificBoundSet}}
    RESPONDER CONSUMER OF
        {specializedResourceControlPackage {cAPSSpecificBoundSet} |
         activityTestPackage |
         gsmSRF-scfCancelPackage}
    ID          id-contract-gsmSRF-gsmSCF}

-- Operation Packages

specializedResourceControlPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES   {playAnnouncement {bound} |
                        promptAndCollectUserInformation {bound}}
    SUPPLIER INVOKES  {specializedResourceReport}
    ID                id-package-specializedResourceControl}

gsmSRF-scfCancelPackage OPERATION-PACKAGE ::= {
    CONSUMER INVOKES {cancel}
    ID              id-package-gsmSRF-scfCancel}

| aActivityTestPackage     OPERATION-PACKAGE ::= {
    CONSUMER INVOKES {activityTest}
    ID              id-package-activityTest}

-- Abstract Syntaxes

gsmSRF-gsmSCF-abstract-syntax ABSTRACT-SYNTAX ::= {
    BASIC-gsmSRF-gsmSCF-PDUs
    IDENTIFIED BY id-as-basic-gsmSRF-gsmSCF}

BASIC-gsmSRF-gsmSCF-PDUs ::= TCMessages {{GsmSRFgsmSCFInvokable}, {GsmSRFgsmSCFReturnable}}

GsmSRFgsmSCFInvokable OPERATION ::= {
    activityTest |
    assistRequestInstructions {cAPSSpecificBoundSet} |
    cancel |
    playAnnouncement {cAPSSpecificBoundSet} |
    promptAndCollectUserInformation {cAPSSpecificBoundSet} |
    specializedResourceReport
}

GsmSRFgsmSCFReturnable OPERATION ::= {
    activityTest |
    assistRequestInstructions {cAPSSpecificBoundSet} |
    cancel |
    playAnnouncement {cAPSSpecificBoundSet} |
    promptAndCollectUserInformation {cAPSSpecificBoundSet}
}

END

```

— Next modified module —

7.1 SMS operations and arguments

```

CAP-SMS-ops-args {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0) umts-network(1)
modules(3) cap-SMS-ops-args(105) version3(2)}

DEFINITIONS IMPLICIT TAGS ::= BEGIN

-- This module contains the operations and operation arguments used for the
-- gsmSSF/gprsSSF - gsmSCF interface, for the control of MO-SMS.

```

```

-- The table in section 2.1 lists the specifications that contain the modules
-- that are used by CAP.

IMPORTS

    errortypes,
    datatypes,
    operationcodes,
    classes,
    ros-InformationObjects,
    tc-Messages
FROM CAP-object-identifiers {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-object-identifiers(100) version3(2)}

OPERATION
FROM Remote-Operations-Information-Objects ros-InformationObjects

    ServiceKey
FROM CS1-DataTypes {ccitt(0) identified-organization(4) etsi(0) inDomain(1) in-network(1)
modules(0) cs1-datatYPES(2) version1(0)}

    MiscCallInfo
FROM CS2-datatypes {ccitt(0) identified-organization(4) etsi(0) inDomain(1) in-network(1)
cs2(20) modules(0) in-CS2-datatypes(0) version1(0)}

    IMSI,
    ISDN-AddressString
FROM MAP-CommonDataTypes {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-CommonDataTypes(18) version6(6)}

    LocationInformation
FROM MAP-MS-DataTypes {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-MS-DataTypes(11) version6(6)}

PARAMETERS-BOUND
FROM CAP-classes classes

    opcode-connectSMS,
    opcode-continueSMS,
    opcode-eventReportSMS,
    opcode-furnishChargingInformationSMS,
    opcode-initialDPSMS,
    opcode-releaseSMS,
    opcode-requestReportSMSEvent,
    opcode-resetTimerSMS
FROM CAP-operationcodes operationcodes

    CalledPartyBCDNumber {},
    EventSpecificInformationSMS,
    EventTypeSMS,
    Extensions {},
    FCISMSBillingChargingCharacteristics,
    LocationInformationGPRS,
    RPCause,
    SMSEvent,
    TimeAndTimezone {},
    TimerID,
    TimerValue,
    TPDataCodingScheme,
    TPProtocolIdentifier,
    TPShortMessageSubmissionInfo,
    TPValidityPeriod
FROM CAP-datatypes datatypes

    missingCustomerRecord,
    missingParameter,
    parameterOutOfRange,
    systemFailure,
    taskRefused,
    unexpectedComponentSequence,
    unexpectedDataValue,
    unexpectedParameter
FROM CAP-errortypes errortypes

|     CallReferenceNumber7
| FROM MAP-CH-DataTypes {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0)
| gsm-Network(1) modules(3) map-CH-DataTypes(13) version6(6)}
|
| ;
|
| ...
|
END

```

— End of CR —