

**Source:** SA1

**Title:** CRs to 22.086 on AoC in SCUDIF (Rel-5, Rel-6)

**Document for:** Approval

**Agenda Item:** 7.1.3

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Meeti ng	SA Doc	TS No.	CR No	Re v	Rel	Cat	Subject	Vers Curren t	Vers New	SA1 Doc
SP-28	SP-050212	22.086	003	-	Rel-5	F	AoC in SCUDIF for 22.086	5.0.0	5.1.0	S1-050398
SP-28	SP-050212	22.086	004	-	Rel-6	A	AoC in SCUDIF for 22.086	6.0.0	6.1.0	S1-050399

CR-Form-v7.1

## CHANGE REQUEST

⌘ **22.086 CR 003** ⌘ rev **-** ⌘ Current version: **5.0.0** ⌘

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 ☐

<b>Title:</b>	⌘ AoC for SCUDIF		
<b>Source:</b>	⌘ SA1 (NEC)		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 30/03/2005
<b>Category:</b>	⌘ <b>F</b>		
	Use <u>one</u> of the following categories:		
	<b>F</b> (correction)		<b>Ph2</b> (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)		<b>R96</b> (Release 1996)
	<b>B</b> (addition of feature),		<b>R97</b> (Release 1997)
	<b>C</b> (functional modification of feature)		<b>R98</b> (Release 1998)
	<b>D</b> (editorial modification)		<b>R99</b> (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<b>Rel-4</b> (Release 4)
			<b>Rel-5</b> (Release 5)
			<b>Rel-6</b> (Release 6)
			<b>Rel-7</b> (Release 7)

<b>Reason for change:</b>	⌘ TS 23.172 specifies stage 2 SCUDIF, under N3 responsibility, does not specify anything related to interactions with the AoC supplementary service. A new clause of AoC for SCUDIF needs to be added to TS22.086. Should the treatment follow suit, this can cause a significant amount of difference between the cost being presented to the customer and the actual bill calculated in the network because the time when the ME (MS) starts using new AoC values gets behind the time when the network starts using them by amount of CDUR left for a timer interval approximately each time the bearer change occurs upon SCUDIF modification during a call.
<b>Summary of change:</b>	⌘ On receipt of new AoC values for SCUDIF following the Mode Modify procedure to change its bearer, for instance from Audio to Video and vice versa, ME (MS) shall reset CDUR consumed for a current charge meter so far and start over estimating the cost for a new bearer. In this estimation, the ME (MS) shall add initial units to CCM and measure units on a time basis using the new values.
<b>Consequences if not approved:</b>	⌘ The more SCUDIF is requested during a call the more the cost ME (MS) indicates would misalign with the actual bill calculated by the network. Although an exact one-to-one relation with the bill cannot be guaranteed due to a delay in signalling, the discrepancy due to Mode Modify procedure can affect an accuracy on CAI and this cannot be avoided.

<b>Clauses affected:</b>	⌘
	<input type="checkbox"/> Y <input type="checkbox"/> N

<b>Other specs</b>	⌘	<input checked="" type="checkbox"/>	Other core specifications	⌘	TS22.024, TS23.086, TS24.086, TS23.172
<b>affected:</b>		<input type="checkbox"/>	Test specifications		
		<input type="checkbox"/>	O&M Specifications		
<b>Other comments:</b>	⌘				

### 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.

**\*\*\*\* First set of changes \*\*\*\***

## 0.1 References

- [1] 3GPP TS 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 22.004: "General on supplementary services".
- [3] 3GPP TS 22.024: "Description of Charge Advice Information (CAI)".
- [4] 3GPP TS 22.135: "Multicall stage 1".
- [5] [3GPP TS 23.172: "Technical realization of Circuit Switched \(CS\) multimedia service; UDI/RDI fallback and service modification; Stage 2"](#)

**\*\*\*\* Second set of changes \*\*\*\***

## 1.6 Interactions with other supplementary services

### 1.6.1 SCUDIF

When the ~~ME-(MS)~~ requires a bearer change, e.g. from Audio to Video or vice versa, the SCUDIF Mode modify procedure is performed as described in TS 23.172 [35]. Depending on the operator's policy, ~~t~~the success of the procedure may trigger a Facility message to convey new values for the CAI parameters. On receipt of new CAI values triggered by a service change based on the SCUDIF supplementary service, the ~~ME-(MS)~~ shall reset CDUR and continue incrementing the CCM using the new CAI parameters. The ~~ME-(MS)~~ shall add initial units to the CCM and measure units on a time basis using the new values.

### 1.6.2 Other supplementary services

No interaction.

Invocation of this supplementary service does not prevent use of any other Supplementary Service.

**\*\*\*\* Third set of changes \*\*\*\***

## 2.6 Interactions with other supplementary services

### 2.6.1 SCUDIF

When the ~~ME-(MS)~~MS requires a bearer change, e.g. from Audio to Video or vice versa, the SCUDIF Mode modify procedure is performed as described in TS 23.172 [35]. Depending on the operator's policy, ~~t~~The success of the procedure may trigger a Facility message to convey new values for the CAI parameters. On receipt of new CAI values triggered by a service change based on the SCUDIF supplementary service, the ~~MSME-(MS)~~ shall reset CDUR and continue incrementing the CCM using the new CAI parameters. The ~~MSME-(MS)~~ shall add initial units to the CCM and measure units on a time basis using the new values.

## 2.6.2 Other supplementary services

No interaction.

Invocation of this supplementary service does not prevent use of any other Supplementary Service, but in certain cases no charging information will be indicated. In this case, the subscriber should not subscribe to those Supplementary Services which need to be charged for, thereby inhibiting their use by another user.

\*\*\*\* End of changes \*\*\*\*

CR-Form-v7.1

## CHANGE REQUEST

⌘ **22.086 CR 004** ⌘ rev **-** ⌘ Current version: **6.0.0** ⌘

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 ☐

<b>Title:</b>	⌘ AoC for SCUDIF		
<b>Source:</b>	⌘ SA1 (NEC)		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 30/03/2005
<b>Category:</b>	⌘ <b>A</b>		<b>Release:</b> ⌘ Rel-6
Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: <b>Ph2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6) <b>Rel-7</b> (Release 7)	

<b>Reason for change:</b>	⌘ TS 23.172 specifies stage 2 SCUDIF, under N3 responsibility, does not specify anything related to interactions with the AoC supplementary service. A new clause of AoC for SCUDIF needs to be added to TS22.086. Should the treatment follow suit, this can cause a significant amount of difference between the cost being presented to the customer and the actual bill calculated in the network because the time when the ME (MS) starts using new AoC values gets behind the time when the network starts using them by amount of CDUR left for a timer interval approximately each time the bearer change occurs upon SCUDIF modification during a call.
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<b>Clauses affected:</b>	⌘
	<input type="checkbox"/> Y <input type="checkbox"/> N

<b>Other specs</b>	⌘	<input checked="" type="checkbox"/>	Other core specifications	⌘	TS22.024, TS23.086, TS24.086, TS23.172
<b>affected:</b>		<input type="checkbox"/>	Test specifications		
		<input type="checkbox"/>	O&M Specifications		
<b>Other comments:</b>	⌘				

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## 1.6 Interactions with other supplementary services

### 1.6.1 SCUDIF

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### 1.6.2 Other supplementary services

No interaction.

Invocation of this supplementary service does not prevent use of any other Supplementary Service.

**\*\*\*\* Third set of changes \*\*\*\***

## 2.6 Interactions with other supplementary services

### 2.6.1 SCUDIF

When the ~~ME-(MS)~~MS requires a bearer change, e.g. from Audio to Video or vice versa, the SCUDIF Mode modify procedure is performed as described in TS 23.172 [35]. Depending on the operator's policy, ~~t~~The success of the procedure may trigger a Facility message to convey new values for the CAI parameters. On receipt of new CAI values triggered by a service change based on the SCUDIF supplementary service, the ~~MSME-(MS)~~ shall reset CDUR and continue incrementing the CCM using the new CAI parameters. The ~~MSME-(MS)~~ shall add initial units to the CCM and measure units on a time basis using the new values.

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