

**3GPP TSG-CN Meeting #24  
02 – 04 June 2004, Seoul, KOREA**

**NP-040259**

**Source:** CN5 (OSA)  
**Title:** 14 Rel-5 CRs 29.198-02 to -14: Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors (NP-040155 CN#23bis Approved & for CN#24 Information)  
**Agenda item:** 8.2 (OSA Enhancements [OSA2])  
**Document for:** INFORMATION

**3GPP TSG-CN Meeting #23bis** *virtual meeting for email approval of OSA Java CRs*  
**29 March - 19 April 2004**

**NP-040155**

**Source:** CN5  
**Title:** 14 Rel-5 CRs 29.198-02 to -14: Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors  
**Agenda item:** 8.2  
**Document for:** APPROVAL

Meeting-1st-Level	Doc-1st-Level	Spec	CR	R	Phase	Subject	Ca t	Vers Curr	Doc-2nd- Level	Worki tem
NP-23bis	NP-040155	29.198-02	043	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.5.0	N5-040228	OSA2
NP-23bis	NP-040155	29.198-03	101	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.5.0	N5-040229	OSA2
NP-23bis	NP-040155	29.198-04-1	009	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.4.0	N5-040230	OSA2
NP-23bis	NP-040155	29.198-04-2	011	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.5.0	N5-040231	OSA2
NP-23bis	NP-040155	29.198-04-3	020	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.5.0	N5-040232	OSA2
NP-23bis	NP-040155	29.198-04-4	015	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.5.0	N5-040233	OSA2
NP-23bis	NP-040155	29.198-05	045	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.5.0	N5-040234	OSA2
NP-23bis	NP-040155	29.198-06	025	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.3.0	N5-040235	OSA2
NP-23bis	NP-040155	29.198-07	016	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.4.0	N5-040236	OSA2
NP-23bis	NP-040155	29.198-08	028	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.4.0	N5-040237	OSA2
NP-23bis	NP-040155	29.198-11	023	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.3.0	N5-040238	OSA2
NP-23bis	NP-040155	29.198-12	026	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.4.0	N5-040239	OSA2
NP-23bis	NP-040155	29.198-13	008	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.3.0	N5-040240	OSA2
NP-23bis	NP-040155	29.198-14	019	-	Rel-5	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors	F	5.4.0	N5-040241	OSA2

## CHANGE REQUEST

⌘ **29.198-02 CR 043** ⌘ rev **-** ⌘ Current version: **5.5.0** ⌘

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>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p> </div> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p><b>2</b> (GSM Phase 2)</p> <p><b>R96</b> (Release 1996)</p> <p><b>R97</b> (Release 1997)</p> <p><b>R98</b> (Release 1998)</p> <p><b>R99</b> (Release 1999)</p> <p><b>Rel-4</b> (Release 4)</p> <p><b>Rel-5</b> (Release 5)</p> <p><b>Rel-6</b> (Release 6)</p> </div> </div>

<b>Reason for change:</b>	⌘	<p>Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.</p> <p>Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.</p> <p>Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.</p>
<b>Summary of change:</b>	⌘	<p>Provide an updated, corrected and validated J2SE Java code package to accompany the specification.</p> <p>This code package is an integral part of the specification.</p> <p>Note that there are no changes required to the specification document itself, other than the reference to the new code package.</p>
<b>Consequences if not approved:</b>	⌘	<p>The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.</p>

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> <p>Other core specifications</p> <p>Test specifications</p> <p>O&amp;M Specifications</p> </div>	Y	N	X			X		X
Y	N									
X										
	X									
	X									
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

**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.

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## Annex C (informative): Java API Description of the Common Data definitions

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 2919802[V560](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 2919802J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-03 CR 101** ⌘ rev **-** ⌘ Current version: **5.5.0** ⌘

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>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p> </div> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p><b>2</b> (GSM Phase 2)</p> <p><b>R96</b> (Release 1996)</p> <p><b>R97</b> (Release 1997)</p> <p><b>R98</b> (Release 1998)</p> <p><b>R99</b> (Release 1999)</p> <p><b>Rel-4</b> (Release 4)</p> <p><b>Rel-5</b> (Release 5)</p> <p><b>Rel-6</b> (Release 6)</p> </div> </div>

<b>Reason for change:</b>	⌘	<p>Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.</p> <p>Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.</p> <p>Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.</p>
<b>Summary of change:</b>	⌘	<p>Provide an updated, corrected and validated J2SE Java code package to accompany the specification.</p> <p>This code package is an integral part of the specification.</p> <p>Note that there are no changes required to the specification document itself, other than the reference to the new code package.</p>
<b>Consequences if not approved:</b>	⌘	<p>The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.</p>

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> <p>Other core specifications</p> <p>Test specifications</p> <p>O&amp;M Specifications</p> </div>	Y	N	X			X		X
Y	N									
X										
	X									
	X									
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

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- 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.

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## Annex C (informative): Java API Description of the Framework

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java, contained in archive 2919803[V560](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java, contained in archive 2919803J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-04-1 CR 009** ⌘ rev **-** ⌘ Current version: **5.4.0** ⌘

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  Radio Access Network  Core Network

<b>Title:</b>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		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:
		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)

<b>Reason for change:</b>	⌘	<p>Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.</p> <p>Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.</p> <p>Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.</p>
<b>Summary of change:</b>	⌘	<p>Provide an updated, corrected and validated J2SE Java code package to accompany the specification.</p> <p>This code package is an integral part of the specification.</p> <p>Note that there are no changes required to the specification document itself, other than the reference to the new code package.</p>
<b>Consequences if not approved:</b>	⌘	<p>The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.</p>

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> </table> <p>Other core specifications      ⌘ All parts of TS 29.198 Release 5</p> <p>Test specifications</p> <p>O&amp;M Specifications</p>	Y	N	X			X		X
Y	N									
X										
	X									
	X									
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

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## Annex C (informative): Java API Description of the Call Control SCFs

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 291980401[V550](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 291980401J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-04-2 CR 011** ⌘ rev **-** ⌘ Current version: **5.5.0** ⌘

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>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		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="http://www.3gpp.org/Specs/tr21/900">TR 21.900</a> .
		Use <u>one</u> of the following releases: <b>2</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>Reason for change:</b>	⌘	Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.  Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.  Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.
<b>Summary of change:</b>	⌘	Provide an updated, corrected and validated J2SE Java code package to accompany the specification.  This code package is an integral part of the specification.  Note that there are no changes required to the specification document itself, other than the reference to the new code package.
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<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> Other core specifications      ⌘ All parts of TS 29.198 Release 5 Test specifications O&M Specifications	Y	N	X			X		X
Y	N									
X										
	X									
	X									
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

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## Annex C (informative): Java API Description of the Call Control SCFs

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| The J2SE representation of this specification is provided as Java Code, contained in archive 291980402[V560](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 291980402J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-04-3 CR 020** ⌘ rev **-** ⌘ Current version: **5.5.0** ⌘

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>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		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> .
		<b>Release:</b> ⌘ <b>REL-5</b>
		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)

<b>Reason for change:</b>	⌘	<p>Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.</p> <p>Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.</p> <p>Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.</p>
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<b>Consequences if not approved:</b>	⌘	<p>The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.</p>

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> </table> <p>Other core specifications</p> <p>Test specifications</p> <p>O&amp;M Specifications</p>	Y	N	X			X		X
Y	N									
X										
	X									
	X									
		⌘ All parts of TS 29.198 Release 5								
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

**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.

---

## Annex C (informative): Java API Description of the Call Control SCFs

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 291980403[V560](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 291980403J2EE.ZIP that accompanies the present document.



## CHANGE REQUEST

⌘ **29.198-04-4 CR 015** ⌘ rev **-** ⌘ Current version: **5.5.0** ⌘

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>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		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> .
		<b>Release:</b> ⌘ <b>REL-5</b> 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)

<b>Reason for change:</b>	⌘	Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.  Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.  Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.
<b>Summary of change:</b>	⌘	Provide an updated, corrected and validated J2SE Java code package to accompany the specification.  This code package is an integral part of the specification.  Note that there are no changes required to the specification document itself, other than the reference to the new code package.
<b>Consequences if not approved:</b>	⌘	The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X			X		X
Y	N									
X										
	X									
	X									
	⌘	All parts of TS 29.198 Release 5								
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

**How to create CRs using this form:**

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

---

## Annex C (informative): Java API Description of the Call Control SCFs

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 291980404[V560](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 291980404J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-05 CR 045** ⌘ rev **-** ⌘ Current version: **5.5.0** ⌘

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>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		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> .
		<b>Release:</b> ⌘ <b>REL-5</b> 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)

<b>Reason for change:</b>	⌘	Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.  Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.  Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.
<b>Summary of change:</b>	⌘	Provide an updated, corrected and validated J2SE Java code package to accompany the specification.  This code package is an integral part of the specification.  Note that there are no changes required to the specification document itself, other than the reference to the new code package.
<b>Consequences if not approved:</b>	⌘	The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X			X		X
Y	N									
X										
	X									
	X									
		⌘ All parts of TS 29.198 Release 5								
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

**How to create CRs using this form:**

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

---

## Annex C (informative): Java API Description of the User Interaction SCF

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 2919805[V560](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 2919805J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-06 CR 025** ⌘ rev **-** ⌘ Current version: **5.3.0** ⌘

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>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		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:
		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)

<b>Reason for change:</b>	⌘	<p>Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.</p> <p>Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.</p> <p>Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.</p>
<b>Summary of change:</b>	⌘	<p>Provide an updated, corrected and validated J2SE Java code package to accompany the specification.</p> <p>This code package is an integral part of the specification.</p> <p>Note that there are no changes required to the specification document itself, other than the reference to the new code package.</p>
<b>Consequences if not approved:</b>	⌘	<p>The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.</p>

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> Other core specifications      ⌘ All parts of TS 29.198 Release 5 Test specifications O&M Specifications	Y	N	X			X		X
Y	N									
X										
	X									
	X									
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

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- 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.



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## Annex C (informative): Java API Description of the Mobility SCFs

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 2919806[V540](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 2919806J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-07 CR 016** ⌘ rev **-** ⌘ Current version: **5.4.0** ⌘

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  Radio Access Network  Core Network

<b>Title:</b>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		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: 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)

<b>Reason for change:</b>	⌘	Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.  Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.  Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.
<b>Summary of change:</b>	⌘	Provide an updated, corrected and validated J2SE Java code package to accompany the specification.  This code package is an integral part of the specification.  Note that there are no changes required to the specification document itself, other than the reference to the new code package.
<b>Consequences if not approved:</b>	⌘	The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X			X		X
Y	N									
X										
	X									
	X									
		⌘ All parts of TS 29.198 Release 5								
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

**How to create CRs using this form:**

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- 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.

---

## Annex C (informative): Java API Description of the Terminal Capabilities SCF

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 2919807[V550](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 2919807J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-08 CR 028** ⌘ rev **-** ⌘ Current version: **5.4.0** ⌘

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  Radio Access Network  Core Network

<b>Title:</b>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p> </div> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p><b>2</b> (GSM Phase 2)</p> <p><b>R96</b> (Release 1996)</p> <p><b>R97</b> (Release 1997)</p> <p><b>R98</b> (Release 1998)</p> <p><b>R99</b> (Release 1999)</p> <p><b>Rel-4</b> (Release 4)</p> <p><b>Rel-5</b> (Release 5)</p> <p><b>Rel-6</b> (Release 6)</p> </div> </div>

<b>Reason for change:</b>	⌘	<p>Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.</p> <p>Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.</p> <p>Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.</p>
<b>Summary of change:</b>	⌘	<p>Provide an updated, corrected and validated J2SE Java code package to accompany the specification.</p> <p>This code package is an integral part of the specification.</p> <p>Note that there are no changes required to the specification document itself, other than the reference to the new code package.</p>
<b>Consequences if not approved:</b>	⌘	<p>The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.</p>

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> <p>Other core specifications</p> <p>Test specifications</p> <p>O&amp;M Specifications</p> </div>	Y	N	X			X		X
Y	N									
X										
	X									
	X									
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

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- 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.

---

## Annex C (informative): Java API Description of the Data Session Control SCF

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 2919808[V550](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 2919808J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-11 CR 023** ⌘ rev **-** ⌘ Current version: **5.3.0** ⌘

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>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p> </div> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p><b>2</b> (GSM Phase 2)</p> <p><b>R96</b> (Release 1996)</p> <p><b>R97</b> (Release 1997)</p> <p><b>R98</b> (Release 1998)</p> <p><b>R99</b> (Release 1999)</p> <p><b>Rel-4</b> (Release 4)</p> <p><b>Rel-5</b> (Release 5)</p> <p><b>Rel-6</b> (Release 6)</p> </div> </div>

<b>Reason for change:</b>	⌘	<p>Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.</p> <p>Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.</p> <p>Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.</p>
<b>Summary of change:</b>	⌘	<p>Provide an updated, corrected and validated J2SE Java code package to accompany the specification.</p> <p>This code package is an integral part of the specification.</p> <p>Note that there are no changes required to the specification document itself, other than the reference to the new code package.</p>
<b>Consequences if not approved:</b>	⌘	<p>The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.</p>

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> <p>Other core specifications</p> <p>Test specifications</p> <p>O&amp;M Specifications</p> </div>	Y	N	X			X		X
Y	N									
X										
	X									
	X									
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

**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.

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## Annex C (informative): Java API Description of the Account Management SCF

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 2919811[V540](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 2919811J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-12 CR 026** ⌘ rev **-** ⌘ Current version: **5.4.0** ⌘

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  Radio Access Network  Core Network

<b>Title:</b>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		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> .
		<b>Release:</b> ⌘ <b>REL-5</b>
		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)

<b>Reason for change:</b>	⌘	<p>Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.</p> <p>Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.</p> <p>Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.</p>
<b>Summary of change:</b>	⌘	<p>Provide an updated, corrected and validated J2SE Java code package to accompany the specification.</p> <p>This code package is an integral part of the specification.</p> <p>Note that there are no changes required to the specification document itself, other than the reference to the new code package.</p>
<b>Consequences if not approved:</b>	⌘	<p>The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.</p>

<b>Clauses affected:</b>	⌘	Annex C								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> <p>Other core specifications</p> <p>Test specifications</p> <p>O&amp;M Specifications</p>	Y	N	X			X		X
Y	N									
X										
	X									
	X									
		⌘ All parts of TS 29.198 Release 5								
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

**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.
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- 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.

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## Annex C (informative): Java API Description of the Charging SCF

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 2919812[V550](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 2919812J2EE.ZIP that accompanies the present document.

## CHANGE REQUEST

⌘ **29.198-13 CR 008** ⌘ rev **-** ⌘ Current version: **5.3.0** ⌘

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>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		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:
		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)

<b>Reason for change:</b>	⌘	<p>Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.</p> <p>Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.</p> <p>Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.</p>
<b>Summary of change:</b>	⌘	<p>Provide an updated, corrected and validated J2SE Java code package to accompany the specification.</p> <p>This code package is an integral part of the specification.</p> <p>Note that there are no changes required to the specification document itself, other than the reference to the new code package.</p>
<b>Consequences if not approved:</b>	⌘	<p>The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.</p>

<b>Clauses affected:</b>	⌘	Annex B								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> Other core specifications      ⌘ All parts of TS 29.198 Release 5 Test specifications O&M Specifications	Y	N	X			X		X
Y	N									
X										
	X									
	X									
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

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- 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.

---

## Annex B (informative): Java API Description of the Policy Management SCF

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 2919813[V540](#)J2SE.ZIP that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 2919813J2EE.ZIP that accompanies the present document.



## CHANGE REQUEST

⌘ **29.198-14 CR 019** ⌘ rev **-** ⌘ Current version: **5.4.0** ⌘

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  Radio Access Network  Core Network

<b>Title:</b>	⌘	Correct Java Code to conform with Java Rulebook in TS 29.198-01 and to remove errors
<b>Source:</b>	⌘	CN5 (AePONA – Eamonn Murray)
<b>Work item code:</b>	⌘	OSA2
		<b>Date:</b> ⌘ 22/03/2004
<b>Category:</b>	⌘	<b>F</b>
		<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p> </div> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p><b>2</b> (GSM Phase 2)</p> <p><b>R96</b> (Release 1996)</p> <p><b>R97</b> (Release 1997)</p> <p><b>R98</b> (Release 1998)</p> <p><b>R99</b> (Release 1999)</p> <p><b>Rel-4</b> (Release 4)</p> <p><b>Rel-5</b> (Release 5)</p> <p><b>Rel-6</b> (Release 6)</p> </div> </div>

<b>Reason for change:</b>	⌘	<p>Java code, and a rulebook for developing it, were introduced into the OSA specifications in September 2003.</p> <p>Recently, errors in code production and misalignment with the published rules were identified in the December 2003 issue of the OSA specifications.</p> <p>Corrections to the code to align with the rulebook and to enable implementation of the December 2003 version of Release 5 are urgently required.</p>
<b>Summary of change:</b>	⌘	<p>Provide an updated, corrected and validated J2SE Java code package to accompany the specification.</p> <p>This code package is an integral part of the specification.</p> <p>Note that there are no changes required to the specification document itself, other than the reference to the new code package.</p>
<b>Consequences if not approved:</b>	⌘	<p>The existing J2SE code package will be inconsistent with the published Java rulebook. It will be difficult to implement the existing Java code, and will therefore discourage companies from developing implementations which use the Java code part of the OSA specifications.</p>

<b>Clauses affected:</b>	⌘	Annex B								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> <p>Other core specifications</p> <p>Test specifications</p> <p>O&amp;M Specifications</p> </div>	Y	N	X			X		X
Y	N									
X										
	X									
	X									
<b>Other comments:</b>	⌘	This CR forms part of a package introducing corrected J2SE code in all parts of TS 29.198 Rel-5.								

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- 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.

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## Annex B (informative): Java API Description of the Presence and Availability Management SCFs

The Java API realisation of this specification is produced in accordance with the Java Realisation rules defined in Part 1 of this specification series. These rules aim to deliver for Java, a developer API, provided as a realisation, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

| The J2SE representation of this specification is provided as Java Code, contained in archive 2919814[V550J2SE.ZIP](#) that accompanies the present document.

The J2EE representation of this specification is provided as Java Code, contained in archive 2919814J2EE.ZIP that accompanies the present document.