

# TCI /TRI Quick Reference Card

- PDF has links to TTCN-3 online Standards and browseable API -

For TTCN-3 edition 4.9.1 (2017).

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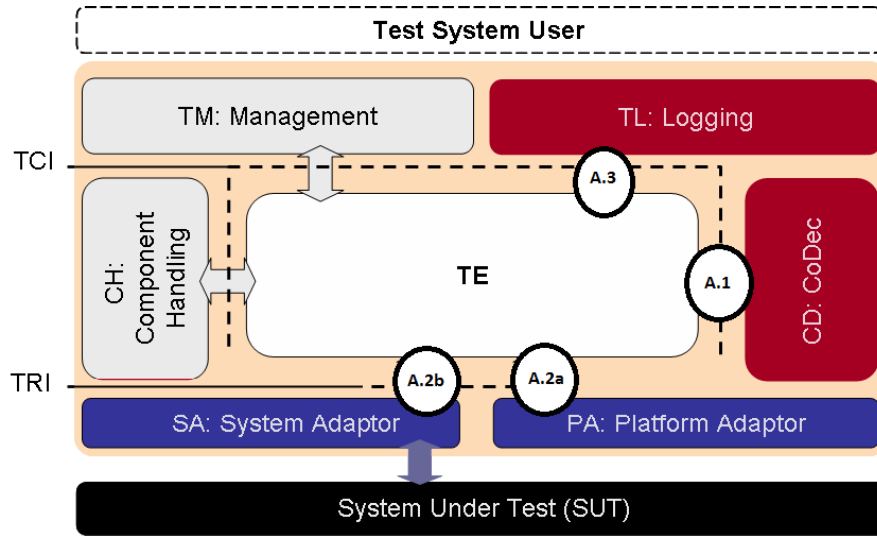
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- [7] [ES 201 873-7](#) (2017-05) TTCN-3 part 7 (edition 4.6.1): *Using ASN.1 with TTCN-3* [\[ITU-T Z.167\]](#)
- [8] [ES 201 873-8](#) (2015-06) TTCN-3 part 8 (edition 4.6.1): *The IDL to TTCN-3 Mapping* [\[ITU-T Z.168\]](#)
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- [11] [ES 201 873-11](#) (2017-06) TTCN-3 part 11 (edition 4.7.1): *Using JSON with TTCN-3* **NEW** [\[ITU-T Z.171\]](#)
  
- [12] [ES 202 781](#) (2017-05) TTCN-3 Language Extensions (version 1.5.1): *Configuration and Deployment Support* [\[ITU-T Z.161.2\]](#)
- [13] [ES 202 782](#) (2015-06) TTCN-3 Language Extensions (version 1.3.1): *TTCN-3 Performance and Real Time Testing* [\[ITU-T Z.161.5\]](#)
- [14] [ES 202 784](#) (2017-04) TTCN-3 Language Extensions (version 1.6.1): *Advanced Parameterization* [\[ITU-T Z.161.3\]](#)
- [15] [ES 202 785](#) (2017-08) TTCN-3 Language Extensions (version 1.5.1): *Behaviour Types* [\[ITU-T Z.161.4\]](#)
- [16] [ES 202 786](#) (2017-05) TTCN-3 Language Extensions (version 1.4.1): *Support of interfaces with continuous signals* [\[ITU-T Z.161.1\]](#)
- [17] [ES 202 789](#) (2015-06) TTCN-3 Language Extensions (version 1.4.1): *Extended TRI* [\[ITU-T Z.165.1\]](#)
- [18] [ES 203 022](#) (2017-07) TTCN-3 Language Extensions (version 1.1.1): *Advanced Matching* **NEW** [\[ITU-T Z.161.6\]](#)
- [19] [TS 102 995](#) (2010-11) *Proforma for TTCN-3 reference test suite* (version 1.1.1)

## TCI / TRI interface overview



### A.1 TCI-CD INTERFACE

RESULT	OPERATION	PARAMETERS	NOTES	§ [6]
Value	<i>decode</i>	(in TriMessageType <i>message</i> , in Type <i>decodingHypothesis</i> )	TCI-CD provided	<a href="#">7.3.2.2.1</a>
TriMessageType	<i>encode</i>	(in Value <i>value</i> )		<a href="#">7.3.2.2.2</a>
Tinteger	<i>decodeValue</i>	(in TriMessageType <i>message</i> , in Type <i>decodingHypothesis</i> in TString <i>encodingInfo</i> , out Value <i>decodedValue</i> )		<a href="#">7.3.2.2.3</a>
TriMessageType	<i>encodeValue</i>	(in Value <i>value</i> , in TString <i>encodingInfo</i> )		<a href="#">7.3.2.2.4</a>
Type	<i>getTypeForName</i>	(in TString <i>typeName</i> )	TCI-CD required	<a href="#">7.3.2.1.1</a>
Type	<i>getInteger</i>	()		<a href="#">7.3.2.1.2</a>
Type	<i>getFloat</i>	()		<a href="#">7.3.2.1.3</a>
Type	<i>getBoolean</i>	()		<a href="#">7.3.2.1.4</a>
Type	<i>getCharstring</i>	()		<a href="#">7.3.2.1.6</a>
Type	<i>getUniversalCharstring</i>	()		<a href="#">7.3.2.1.7</a>
Type	<i>getHexstring</i>	()		<a href="#">7.3.2.1.8</a>
Type	<i>getBitstring</i>	()		<a href="#">7.3.2.1.9</a>
Type	<i>getOctetstring</i>	()		<a href="#">7.3.2.1.10</a>
Type	<i>getVerdict</i>	()		<a href="#">7.3.2.1.11</a>
void	<i>tciErrorReq</i>	(in TString <i>message</i> )		<a href="#">7.3.2.1.12</a>

### B.1 JAVA MAPPING (package [org.etsi.ttcn.tci](#))

IDL (java interface)	METHODS	NOTES	§ [6]
public interface <b>Type</b>	public TciModuleId getDefiningModule (); public String getName (); public int getTypeClass (); public Value newInstance (); public String getTypeEncoding (); public String getTypeEncodingVariant(); public String[] getEncodeAttributes(); public String[] getVariantAttributes (String <i>encoding</i> ); public String[] getTypeExtension(); public Value parseValue (String <i>val</i> ); public MatchingMechanism newTemplate (int <i>matchingType</i> ); public RangeBoundary getLowerTypeBoundary(); public RangeBoundary getUpperTypeBoundary(); public LengthRestriction getTypeLengthRestriction(); public MatchingMechanism getTypeMatchingMechanism();	NEW NEW NEW NEW NEW NEW NEW NEW NEW NEW NEW	<a href="#">8.3.3.1</a>
public interface <b>Value</b>	public Type getType(); public boolean notPresent(); public String getValueEncoding(); public String getValueEncodingVariant(); public String[] getEncodeAttributes(); public String[] getVariantAttributes (String <i>encoding</i> ); public boolean isMatchingSymbol(); public String valueToString (); public boolean isLazy(); public boolean isFuzzy(); public boolean isEvaluated(); public LengthRestriction getLengthRestriction (); public LengthRestriction newLengthRestriction (); public void setLengthRestriction (LengthRestriction <i>restriction</i> ); public boolean isIfPresentEnabled (); public void setIfPresentEnabled (boolean <i>enabled</i> ); public boolean isOptional();	NEW NEW NEW NEW NEW NEW NEW NEW NEW	<a href="#">8.3.4.1</a>

public interface <b>IntegerValue</b>	public <b>void</b> setInteger( <b>int</b> value); public <b>int</b> getInteger();		<a href="#">8.3.4.2</a>
public interface <b>FloatValue</b>	public <b>void</b> setFloat( <b>float</b> value); public <b>float</b> getFloat(); public <b>void</b> setDouble( <b>double</b> value); public <b>float</b> getDouble(); public <b>void</b> setBigDecimal( <b>BigDecimal</b> value); public <b>BigDecimal</b> getBigDecimal();		<a href="#">8.3.4.3</a>
public interface <b>BooleanValue</b>	public <b>void</b> setBoolean( <b>boolean</b> value); public <b>boolean</b> getBoolean();		<a href="#">8.3.4.4</a>
public interface <b>CharstringValue</b>	<b>String</b> getString (); <b>void</b> setString ( <b>String</b> value); <b>char</b> getChar ( <b>int</b> position); <b>void</b> setChar ( <b>int</b> position, <b>char</b> value); <b>int</b> getLength (); <b>void</b> setLength ( <b>int</b> len);		<a href="#">8.3.4.5</a>
public interface <b>BitstringValue</b>	<b>String</b> getString (); <b>void</b> setString ( <b>String</b> value); <b>int</b> getBit ( <b>int</b> position); <b>void</b> setBit ( <b>int</b> position, <b>int</b> value); <b>int</b> getLength (); <b>void</b> setLength ( <b>int</b> len); <b>boolean</b> isMatchingAt ( <b>int</b> position); MatchingMechanism getMatchingAt ( <b>int</b> position); <b>void</b> setMatchingAt ( <b>int</b> position, MatchingMechanism template);		<a href="#">8.3.4.6</a>
public interface <b>OctetstringValue</b>	<b>String</b> getString (); <b>void</b> setString ( <b>String</b> value); <b>int</b> getOctet ( <b>int</b> position); <b>void</b> setOctet ( <b>int</b> position, <b>int</b> value); <b>int</b> getLength (); <b>void</b> setLength ( <b>int</b> len); <b>boolean</b> isMatchingAt ( <b>int</b> position); MatchingMechanism getMatchingAt ( <b>int</b> position); <b>void</b> setMatchingAt ( <b>int</b> position, MatchingMechanism template);		<a href="#">8.3.4.7</a>
public interface <b>UniversalCharstringValue</b>	<b>String</b> getString (); <b>void</b> setString ( <b>String</b> value); <b>int</b> getChar ( <b>int</b> position); <b>void</b> setChar ( <b>int</b> position, <b>int</b> value); <b>int</b> getLength (); <b>void</b> setLength ( <b>int</b> len);		<a href="#">8.3.4.8</a>
public interface <b>HexstringValue</b>	<b>String</b> getString (); <b>void</b> setString ( <b>String</b> value); <b>int</b> getHex ( <b>int</b> position); <b>void</b> setHex ( <b>int</b> position, <b>int</b> value); <b>int</b> getLength (); <b>void</b> setLength ( <b>int</b> len); <b>boolean</b> isMatchingAt ( <b>int</b> position); MatchingMechanism getMatchingAt ( <b>int</b> position); <b>void</b> setMatchingAt ( <b>int</b> position, MatchingMechanism template);		<a href="#">8.3.4.9</a>
public interface <b>RecordValue</b>	public <b>Value</b> getField( <b>String</b> fieldName) ; public <b>void</b> setField( <b>String</b> fieldName, <b>Value</b> value) ; public <b>String[]</b> getFieldNames() ; public <b>void</b> setFieldOmitted( <b>String</b> fieldName);		<a href="#">8.3.4.10</a>
public interface <b>RecordOfValue</b>	public <b>Value</b> getField( <b>String</b> fieldName) ; public <b>void</b> setField ( <b>int</b> position, <b>Value</b> value) ; public <b>void</b> appendField ( <b>Value</b> value) ; public <b>Type</b> getElementType() ; public <b>int</b> getLength() ; public <b>void</b> setLength( <b>int</b> len) ; public <b>int</b> getOffset() ; public <b>int</b> getPermutationCount () ; public <b>Permutation</b> getPermutation ( <b>int</b> index); public <b>Permutation</b> newPermutation () ; public <b>void</b> definePermutation ( <b>Permutation</b> permutation); public <b>void</b> removePermutation ( <b>int</b> index); public <b>void</b> clearPermutations () ;		<a href="#">8.3.4.11</a>
public interface <b>UnionValue</b>	<b>Value</b> getVariant ( <b>String</b> variantName); <b>void</b> setVariant ( <b>String</b> variantName, <b>Value</b> value); <b>String</b> getPresentVariantName (); <b>String[]</b> getVariantNames ();		<a href="#">8.3.4.12</a>
public interface <b>EnumeratedValue</b>	<b>String</b> getEnum (); <b>void</b> setEnum ( <b>String</b> enumValue); <b>int</b> getInt(); <b>void</b> setInt(int intValue);		<a href="#">8.3.4.13</a>
public interface <b>VerdictValue</b>	public static final <b>int</b> <b>NONE</b> = 0; public static final <b>int</b> <b>PASS</b> = 1; public static final <b>int</b> <b>INCONC</b> = 2; public static final <b>int</b> <b>FAIL</b> = 3; public static final <b>int</b> <b>ERROR</b> = 4; public <b>int</b> getVerdict() ; public <b>void</b> setVerdict( <b>int</b> verdict) ;		<a href="#">8.3.4.14</a>
public interface <b>AddressValue</b>	public <b>int</b> getAddress() ; public <b>void</b> setAddress( <b>Value</b> value) ;		<a href="#">8.3.4.15</a>
<b>TBoolean</b> <b>TFloat</b> <b>TInteger</b> <b>TString</b> <b>TStringSeq</b>	<b>boolean</b> <b>float</b> <b>int</b> <b>java.lang.String</b> <b>java.lang.String[]</b>	Basic type mapping	<a href="#">8.3.1</a>

## A.2a triPlatform INTERFACE

RESULT	OPERATION	PARAMETERS	NOTES	§ [5]
TriStatusType	<i>triPReset</i>	()	Reset	<a href="#">5.6.1</a>
TriStatusType	<i>triStartTimer</i>	(in TriTimerIdType <i>timerId</i> , in TriTimerDurationType <i>timerDuration</i> );	Timer handling	<a href="#">5.6.2.1</a>
TriStatusType	<i>triStopTimer</i>	(in TriTimerIdType <i>timerId</i> );		<a href="#">5.6.2.2</a>
TriStatusType	<i>triReadTimer</i>	(in TriTimerIdType <i>timerId</i> , out TriTimerDurationType <i>elapsedTime</i> );		<a href="#">5.6.2.3</a>
TriStatusType	<i>triTimerRunning</i>	(in TriTimerIdType <i>timerId</i> , out boolean <i>running</i> );		<a href="#">5.6.2.4</a>
void	<i>triTimeout</i>	(in TriTimerIdType <i>timerId</i> );		<a href="#">5.6.2.5</a>
TriStatusType	<i>triExternalFunction</i>	(in TriFunctionIdType <i>functionId</i> , inout TriParameterListType <i>parameterList</i> , out TriParameterType <i>returnValue</i> );	Miscellaneous	<a href="#">5.6.3.1</a>
TriComponentId	<i>triSelf</i>	()		<a href="#">5.6.3.2</a>
TriMessage	<i>triRnd</i>	(in TriComponentIdType <i>componentId</i> , in TriMessage <i>seed</i> )		<a href="#">5.6.3.3</a>
void	<i>triPErrorReq</i>	(in string <i>message</i> );	Error Handling	<a href="#">5.2.2</a>

## A.2b triCommunication INTERFACE

RESULT	OPERATION	PARAMETERS	NOTES	§ [5]
TriStatusType	<i>triSAReset</i>	()	TE -> SA (SAprovided)	<a href="#">5.5.1</a>
TriStatusType	<i>triExecuteTestCase</i>	(in TriTestCaselIdType <i>testCaselId</i> , in TriPortIdListType <i>tsiPortList</i> );		<a href="#">5.5.2.1</a>
TriStatusType	<i>triMap</i>	(in TriPortIdType <i>compPortId</i> , in TriPortIdType <i>tsiPortId</i> )		<a href="#">5.5.2.2</a>
TriStatusType	<i>triMapParam</i>	(in TriPortIdType <i>compPortId</i> , in TriPortIdType <i>tsiPortId</i> , in TriParameterListType <i>paramList</i> );		<a href="#">5.5.2.3</a>
TriStatusType	<i>triUnmap</i>	(in TriPortIdType <i>compPortId</i> , in TriPortIdType <i>tsiPortId</i> );		<a href="#">5.5.2.4</a>
TriStatusType	<i>triUnmapParam</i>	(in TriPortIdType <i>compPortId</i> , in TriPortIdType <i>tsiPortId</i> , in TriParameterListType <i>paramList</i> );		<a href="#">5.5.2.5</a>
TriStatusType	<i>triEndTestCase</i>	()		<a href="#">5.5.2.6</a>
TriStatusType	<i>triSend</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriAddressType <i>SUAddress</i> , in TriMessageType <i>sendMessage</i> );		<a href="#">5.5.3.1</a>
TriStatusType	<i>triSendBC</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriMessageType <i>sendMessage</i> );		<a href="#">5.5.3.2</a>
TriStatusType	<i>triSendMC</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriAddressListType <i>SUAddresses</i> , in TriMessageType <i>sendMessage</i> );		<a href="#">5.5.3.3</a>
TriStatusType	<i>triCall</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriAddressType <i>SUAddress</i> , in TriSignatureIdType <i>signatureId</i> , in TriParameterListType <i>parameterList</i> );		<a href="#">5.5.4.1</a>
TriStatusType	<i>triCallBC</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriSignatureIdType <i>signatureId</i> , in TriParameterListType <i>parameterList</i> );		<a href="#">5.5.4.2</a>
TriStatusType	<i>triCallMC</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriAddressListType <i>SUAddresses</i> , in TriSignatureIdType <i>signatureId</i> , in TriParameterListType <i>parameterList</i> );		<a href="#">5.5.4.3</a>
TriStatusType	<i>triReply</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriAddressType <i>SUAddress</i> , in TriSignatureIdType <i>signatureId</i> , in TriParameterListType <i>parameterList</i> , in TriParameterType <i>returnValue</i> );		<a href="#">5.5.4.4</a>
TriStatusType	<i>triReplyBC</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriSignatureIdType <i>signatureId</i> , in TriParameterListType <i>parameterList</i> , in TriParameterType <i>returnValue</i> );		<a href="#">5.5.4.5</a>
TriStatusType	<i>triReplyMC</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriAddressListType <i>SUAddresses</i> , in TriSignatureIdType <i>signatureId</i> , in TriParameterListType <i>parameterList</i> , in TriParameterType <i>returnValue</i> );		<a href="#">5.5.4.6</a>
TriStatusType	<i>triRaise</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriAddressType <i>SUAddress</i> , in TriSignatureIdType <i>signatureId</i> , in TriExceptionType <i>exc</i> );		<a href="#">5.5.4.7</a>
TriStatusType	<i>triRaiseBC</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriSignatureIdType <i>signatureId</i> , in TriExceptionType <i>exc</i> );		<a href="#">5.5.4.8</a>
TriStatusType	<i>triRaiseMC</i>	(in TriComponentIdType <i>componentId</i> , in TriPortIdType <i>tsiPortId</i> , in TriAddressListType <i>SUAddresses</i> , in TriSignatureIdType <i>signatureId</i> , in TriExceptionType <i>exc</i> );		<a href="#">5.5.4.9</a>
TriStatusType	<i>triSUTactionInformal</i>	(in string <i>description</i> );		<a href="#">5.5.5.1</a>
void	<i>triEnqueueMsg</i>	(in TriPortIdType <i>tsiPortId</i> , in TriAddressType <i>SUAddress</i> , in TriComponentIdType <i>componentId</i> , in TriMessageType <i>receivedMessage</i> );	SA -> TE (SArequired)	<a href="#">5.5.3.4</a>
void	<i>triEnqueueCall</i>	(in TriPortIdType <i>tsiPortId</i> , in TriAddressType <i>SUAddress</i> , in TriComponentIdType <i>componentId</i> , in TriSignatureIdType <i>signatureId</i> , in TriParameterListType <i>parameterList</i> );		<a href="#">5.5.4.10</a>
void	<i>triEnqueueReply</i>	(in TriPortIdType <i>tsiPortId</i> , in TriAddressType <i>SUAddress</i> , in TriComponentIdType <i>componentId</i> , in TriSignatureIdType <i>signatureId</i> , in TriParameterListType <i>parameterList</i> , in TriParameterType <i>returnValue</i> );		<a href="#">5.5.4.11</a>
void	<i>triEnqueueException</i>	(in TriPortIdType <i>tsiPortId</i> , in TriAddressType <i>SUAddress</i> , in TriComponentIdType <i>componentId</i> , in TriSignatureIdType <i>signatureId</i> , in TriExceptionType <i>exc</i> );		<a href="#">5.5.4.12</a>
void	<i>triSAErrorReq</i>	(in string <i>message</i> );		<a href="#">5.2.1</a>

## B.2 JAVA MAPPING (package [org.etsi.ttcn.tri](http://org.etsi.ttcn.tri))

IDL (java interface)	METHODS	NOTES	§ [5]
public interface <b>TriBoolean</b>	public <b>void</b> setBooleanValue ( <b>boolean</b> value); public <b>boolean</b> getBooleanValue ();		<a href="#">6.3.1.1</a>
<b>string</b>	<b>java.lang.String</b>	no range checking / bounds for characters in string	<a href="#">6.3.1.2</a>
public interface <b>TriPortId</b>	public <b>String</b> getPortName (); public <b>String</b> getPortTypeName (); public <b>TriComponentId</b> getComponent (); public <b>boolean</b> isArray (); public <b>int</b> getPortIndex ();		<a href="#">6.3.2.1</a>
public interface <b>TriPortIdList</b>	public <b>int</b> size (); public <b>boolean</b> isEmpty (); public <b>java.util.Enumeration</b> getPortIds (); public <b>TriPortId</b> get ( <b>int</b> index);		<a href="#">6.3.2.2</a>
public interface <b>TriComponentId</b>	public <b>String</b> getComponentId (); public <b>String</b> getComponentName (); public <b>String</b> getComponentTypeName (); public <b>TriPortIdList</b> getPortList (); public <b>boolean</b> equals ( <b>TriComponentId</b> component);		<a href="#">6.3.2.3</a>
public interface <b>TriComponentIdListType</b>	public <b>int</b> size (); public <b>boolean</b> isEmpty (); public <b>java.util.Enumeration</b> getComponents (); public <b>TriComponentId</b> get ( <b>int</b> index); public <b>void</b> clear (); public <b>void</b> add ( <b>TriComponentId</b> comp);		<a href="#">6.3.2.4</a>
public interface <b>TriMessage</b>	public <b>byte[]</b> getEncodedMessage (); public <b>void</b> setEncodedMessage ( <b>byte[]</b> message); public <b>int</b> getNumberOfBits (); public <b>void</b> setNumberOfBits ( <b>int</b> amount); public <b>boolean</b> equals ( <b>TriMessage</b> message);		<a href="#">6.3.2.5</a>
public interface <b>TriAddress</b>	public <b>byte[]</b> getEncodedAddress (); public <b>void</b> setEncodedAddress ( <b>byte[]</b> address); public <b>int</b> getNumberOfBits (); public <b>void</b> setNumberOfBits ( <b>int</b> amount); public <b>boolean</b> equals ( <b>TriAddress</b> address);		<a href="#">6.3.2.6</a>
public interface <b>TriAddressListType</b>	public <b>int</b> size(); public <b>boolean</b> isEmpty (); public <b>java.util.Enumeration</b> getAddresses (); public <b>TriAddress</b> get ( <b>int</b> index); public <b>void</b> clear (); public <b>void</b> add ( <b>TriAddress</b> addr);		<a href="#">6.3.2.7</a>
public interface <b>TriSignatureId</b>	public <b>String</b> getSignatureName (); public <b>void</b> setSignatureName ( <b>String</b> sigName); public <b>boolean</b> equals ( <b>TriSignatureId</b> sig);		<a href="#">6.3.2.8</a>
public interface <b>TriParameter</b>	public <b>String</b> getParameterName (); public <b>void</b> setParameterName ( <b>String</b> name); public <b>int</b> getNumberOfBits (); public <b>void</b> setNumberOfBits ( <b>int</b> amount); public <b>int</b> getParameterPassingMode (); public <b>void</b> setParameterPassingMode ( <b>TriParameterPassingMode</b> mode); public <b>byte[]</b> getEncodedParameter (); public <b>void</b> setEncodedParameter ( <b>byte[]</b> parameter);		<a href="#">6.3.2.9</a>
public interface <b>TriParameterPassingMode</b>	public final static <b>int</b> <b>TRI_IN</b> = 0; public final static <b>int</b> <b>TRI_INOUT</b> = 1; public final static <b>int</b> <b>TRI_OUT</b> = 2;		<a href="#">6.3.2.10</a>
public interface <b>TriParameterList</b>	public <b>int</b> size (); public <b>boolean</b> isEmpty (); public <b>java.util.Enumeration</b> getParameters (); public <b>TriParameter</b> get ( <b>int</b> index); public <b>void</b> clear (); public <b>void</b> add ( <b>TriParameter</b> parameter);		<a href="#">6.3.2.11</a>
public interface <b>TriException</b>	public <b>byte[]</b> getEncodedException (); public <b>void</b> setEncodedException ( <b>byte[]</b> message); public <b>int</b> getNumberOfBits (); public <b>void</b> setNumberOfBits ( <b>int</b> amount); public <b>boolean</b> equals ( <b>TriException</b> exc);		<a href="#">6.3.2.12</a>
public interface <b>TriTimerId</b>	public <b>String</b> getTimerName (); public <b>boolean</b> equals ( <b>TriTimerId</b> timer);		<a href="#">6.3.2.13</a>
public interface <b>TriTimerDuration</b>	public <b>double</b> getDuration(); public <b>void</b> setDuration( <b>double</b> duration); public <b>boolean</b> equals( <b>TriTimerDuration</b> duration);		<a href="#">6.3.2.14</a>
public interface <b>TriFunctionId</b>	public <b>String</b> toString(); public <b>String</b> getFunctionName(); public <b>boolean</b> equals( <b>TriFunctionId</b> fun);		<a href="#">6.3.2.15</a>
public interface <b>TriTestCaseld</b>	public <b>String</b> toString (); public <b>String</b> getTestCaseName (); public <b>boolean</b> equals ( <b>TriTestCaseld</b> tc);		<a href="#">6.3.2.16</a>
public interface <b>TriStatus</b>	public final static <b>int</b> <b>TRI_OK</b> = 0; public final static <b>int</b> <b>TRI_ERROR</b> = -1; public <b>String</b> toString (); public <b>int</b> getStatus(); public <b>void</b> setStatus ( <b>int</b> status); public <b>boolean</b> equals ( <b>TriStatus</b> status);		<a href="#">6.3.2.18</a>

**A.3 TCI-TL INTERFACE**

OPERATION	NOTES	§ [6]
tliTExecute	testcases	<a href="#">7.3.4.1.1</a>
tliTStart		<a href="#">7.3.4.1.2</a>
tliTStop		<a href="#">7.3.4.1.3</a>
tliTStarted		<a href="#">7.3.4.1.4</a>
tliTTerminated		<a href="#">7.3.4.1.5</a>
tliCtrlStart	control	<a href="#">7.3.4.1.6</a>
tliCtrlStop		<a href="#">7.3.4.1.7</a>
tliCtrlTerminated		<a href="#">7.3.4.1.8</a>
tliMSend_m	asynchronous communication	<a href="#">7.3.4.1.9</a>
tliMSend_m_BC		<a href="#">7.3.4.1.10</a>
tliMSend_m_MC		<a href="#">7.3.4.1.11</a>
tliMSend_c		<a href="#">7.3.4.1.12</a>
tliMSend_c_BC		<a href="#">7.3.4.1.13</a>
tliMSend_c_MC		<a href="#">7.3.4.1.14</a>
tliMDetected_m		<a href="#">7.3.4.1.15</a>
tliMDetected_c		<a href="#">7.3.4.1.16</a>
tliMMismatch_m		<a href="#">7.3.4.1.17</a>
tliMMismatch_c		<a href="#">7.3.4.1.18</a>
tliMReceive_m		<a href="#">7.3.4.1.19</a>
tliMReceive_c		<a href="#">7.3.4.1.20</a>
tliPrCall_m	synchronous communication	<a href="#">7.3.4.1.21</a>
tliPrCall_m_BC		<a href="#">7.3.4.1.22</a>
tliPrCall_m_MC		<a href="#">7.3.4.1.23</a>
tliPrCall_c		<a href="#">7.3.4.1.24</a>
tliPrCall_c_BC		<a href="#">7.3.4.1.25</a>
tliPrCall_c_MC		<a href="#">7.3.4.1.26</a>
tliPrGetCallDetected_m		<a href="#">7.3.4.1.27</a>
tliPrGetCallDetected_c		<a href="#">7.3.4.1.28</a>
tliPrGetCallMismatch_m		<a href="#">7.3.4.1.29</a>
tliPrGetCallMismatch_c		<a href="#">7.3.4.1.30</a>
tliPrGetCall_m		<a href="#">7.3.4.1.31</a>
tliPrGetCall_c		<a href="#">7.3.4.1.32</a>
tliPrReply_m		<a href="#">7.3.4.1.33</a>
tliPrReply_m_BC		<a href="#">7.3.4.1.34</a>
tliPrReply_m_MC		<a href="#">7.3.4.1.35</a>
tliPrReply_c		<a href="#">7.3.4.1.36</a>
tliPrReply_c_BC		<a href="#">7.3.4.1.37</a>
tliPrReply_c_MC		<a href="#">7.3.4.1.38</a>
tliPrGetReplyDetected_m		<a href="#">7.3.4.1.39</a>
tliPrGetReplyDetected_c		<a href="#">7.3.4.1.40</a>
tliPrGetReplyMismatch_m		<a href="#">7.3.4.1.41</a>
tliPrGetReplyMismatch_c		<a href="#">7.3.4.1.42</a>
tliPrGetReply_m		<a href="#">7.3.4.1.43</a>
tliPrGetReply_c		<a href="#">7.3.4.1.44</a>
tliPrRaise_m		<a href="#">7.3.4.1.45</a>
tliPrRaise_m_BC		<a href="#">7.3.4.1.46</a>
tliPrRaise_m_MC		<a href="#">7.3.4.1.47</a>
tliPrRaise_c		<a href="#">7.3.4.1.48</a>
tliPrRaise_c_BC	<a href="#">7.3.4.1.49</a>	
tliPrRaise_c_MC	<a href="#">7.3.4.1.50</a>	
tliPrCatchDetected_m	<a href="#">7.3.4.1.51</a>	
tliPrCatchDetected_c	<a href="#">7.3.4.1.52</a>	
tliPrCatchMismatch_m	<a href="#">7.3.4.1.53</a>	
tliPrCatchMismatch_c	<a href="#">7.3.4.1.54</a>	
tliPrCatch_m	<a href="#">7.3.4.1.55</a>	
tliPrCatch_c	<a href="#">7.3.4.1.56</a>	
tliPrCatchTimeoutDetected	<a href="#">7.3.4.1.57</a>	
tliPrCatchTimeout	<a href="#">7.3.4.1.58</a>	

OPERATION	NOTES	§ [6]	
tliCreate	components	<a href="#">7.3.4.1.59</a>	
tliCStart		<a href="#">7.3.4.1.60</a>	
tliCRunning		<a href="#">7.3.4.1.61</a>	
tliCAlive		<a href="#">7.3.4.1.62</a>	
tliCStop		<a href="#">7.3.4.1.63</a>	
tliCKill		<a href="#">7.3.4.1.64</a>	
tliCDoneMismatch		<a href="#">7.3.4.1.65</a>	
tliCDone		<a href="#">7.3.4.1.66</a>	
tliCKilledMismatch		<a href="#">7.3.4.1.67</a>	
tliCKilled		<a href="#">7.3.4.1.68</a>	
tliCTerminated		<a href="#">7.3.4.1.69</a>	
tliPConnect		ports	<a href="#">7.3.4.1.70</a>
tliPDisconnect			<a href="#">7.3.4.1.71</a>
tliPMap			<a href="#">7.3.4.1.72</a>
tliPMapParam			<a href="#">7.3.4.1.73</a>
tliPUnmap			<a href="#">7.3.4.1.74</a>
tliPUnmapParam			<a href="#">7.3.4.1.75</a>
tliPClear			<a href="#">7.3.4.1.76</a>
tliPStart			<a href="#">7.3.4.1.77</a>
tliPStop	<a href="#">7.3.4.1.78</a>		
tliPHalt	<a href="#">7.3.4.1.79</a>		
tliEncode	codec	<a href="#">7.3.4.1.80</a>	
tliDecode		<a href="#">7.3.4.1.81</a>	
tliTimeoutDetected	timers	<a href="#">7.3.4.1.82</a>	
tliTimeoutMismatch		<a href="#">7.3.4.1.83</a>	
tliTimeout		<a href="#">7.3.4.1.84</a>	
tliTStart		<a href="#">7.3.4.1.85</a>	
tliTStop		<a href="#">7.3.4.1.86</a>	
tliTRead		<a href="#">7.3.4.1.87</a>	
tliTRunning	<a href="#">7.3.4.1.88</a>		
tliSEnter	scope	<a href="#">7.3.4.1.89</a>	
tliSLeave		<a href="#">7.3.4.1.90</a>	
tliVar	variables	<a href="#">7.3.4.1.91</a>	
tliModulePar	module par	<a href="#">7.3.4.1.92</a>	
tliGetVerdict	verdicts	<a href="#">7.3.4.1.93</a>	
tliSetVerdict		<a href="#">7.3.4.1.94</a>	
tliLog	log	<a href="#">7.3.4.1.95</a>	
tliAEnter	alt	<a href="#">7.3.4.1.96</a>	
tliALeave		<a href="#">7.3.4.1.97</a>	
tliANomatch		<a href="#">7.3.4.1.98</a>	
tliARepeat		<a href="#">7.3.4.1.99</a>	
tliADefaults		<a href="#">7.3.4.1.100</a>	
tliAActivate	<a href="#">7.3.4.1.101</a>		
tliADeactivate	<a href="#">7.3.4.1.102</a>		
tliAwait	<a href="#">7.3.4.1.103</a>		
tliAction	action	<a href="#">7.3.4.1.104</a>	
tliMatch	match	<a href="#">7.3.4.1.105</a>	
tliMatchMismatch	operation	<a href="#">7.3.4.1.106</a>	
tliInfo	tool dependent	<a href="#">7.3.4.1.107</a>	
tliMChecked_m	check operation	<a href="#">7.3.4.1.108</a>	
tliMChecked_c		<a href="#">7.3.4.1.109</a>	
tliPrGetCallChecked_m		<a href="#">7.3.4.1.110</a>	
tliPrGetCallChecked_c		<a href="#">7.3.4.1.111</a>	
tliPrGetReplyChecked_m		<a href="#">7.3.4.1.112</a>	
tliPrGetReplyChecked_c		<a href="#">7.3.4.1.113</a>	
tliPrCatchChecked_m		<a href="#">7.3.4.1.114</a>	
tliPrCatchChecked_c		<a href="#">7.3.4.1.115</a>	
tliCheckedAny_m		<a href="#">7.3.4.1.116</a>	
tliCheckedAny_c		<a href="#">7.3.4.1.117</a>	
tliCheckAnyMismatch_m	<a href="#">7.3.4.1.118</a>		
tliCheckAnyMismatch_c	<a href="#">7.3.4.1.119</a>		
tliRnd		<a href="#">7.3.4.1.120</a>	
tliEvaluate		<a href="#">7.3.4.1.121</a>	

W3C XML mapping of the operations on the logging interface is provided in § [11.4 \[6\]](#).

### B.3 TCI-TL TYPES (W3C XML mapping)

IDL simple types	XSD	XSD string enumeration values	NOTES	§ [6]
TBoolean	boolean			<a href="#">11.3.1.1</a>
TString	string			<a href="#">11.3.1.2</a>
TInteger	integer			<a href="#">11.3.1.3</a>
TriTimerDuration	float			<a href="#">11.3.1.4</a>
TciParameterPassingModeType	string	"in", "out", "inout"		<a href="#">11.3.1.5</a>
TriStatusType	string	"TRI_OK", "TRI_Error"		<a href="#">11.3.1.6</a>
TciStatusType	string	"TCI_OK", "TCI_Error"		<a href="#">11.3.1.7</a>
ComponentStatusType	string	"inactiveC", "running", "stoppedC", "killedC", "nullC"		<a href="#">11.3.1.8</a>
TimerStatusType	string	"runningT", "inactiveT", "expiredT", "nullT"		<a href="#">11.3.1.9</a>
PortStatusType	string	"startedP", "haltedP", "stopped"		<a href="#">11.3.1.10</a>
IDL complex types	XSD sequence elements	XSD attributes	NOTES	§ [6]
TriPortIdType	comp, port			<a href="#">11.3.2.1</a>
TriComponentIdType	id, null			<a href="#">11.3.2.2</a>
TriComponentIdListType	comp			<a href="#">11.3.2.3</a>
Port	id, index			<a href="#">11.3.2.4</a>
Id	name, id, type			<a href="#">11.3.2.5</a>
TriMessageType		val, paddingBits		<a href="#">11.3.2.6</a>
TriParameterType		val, paddingBits, name, mode		<a href="#">11.3.2.7</a>
TriParameterListType	par			<a href="#">11.3.2.8</a>
TriAddressType		val, paddingBits		<a href="#">11.3.2.9</a>
TriAddressListType	addr			<a href="#">11.3.2.10</a>
TriExceptionType		val, paddingBits		<a href="#">11.3.2.11</a>
TriSignatureIdType		val		<a href="#">11.3.2.12</a>
TriTimerIdType	id			<a href="#">11.3.2.13</a>
TriTimerDurationType			restriction float	<a href="#">11.3.2.14</a>
QualifiedName		moduleName, baseName		<a href="#">11.3.2.15</a>
TciBehaviourType	name			<a href="#">11.3.2.16</a>
TciTestCaseldType	name			<a href="#">11.3.2.17</a>
TciParameterType	val	name, mode		<a href="#">11.3.2.18</a>
TciParameterListType	par			<a href="#">11.3.2.19</a>
TriPortIdListType	port			<a href="#">11.3.2.20</a>
IDL abstract values	XSD choice elements	XSD attributes	NOTES	§ [6]
Value	integer, float, boolean, verdicttype, bitstring, hexstring, octetstring, charstring, universal_charstring, record, record_of, array, set, set_of, enumerated, union, anytype, address, component, port, default, timer			<a href="#">11.3.3.1</a>
IntegerValue				<a href="#">11.3.3.2</a>
FloatValue				<a href="#">11.3.3.3</a>
BooleanValue				<a href="#">11.3.3.4</a>
VerdictValue				<a href="#">11.3.3.6</a>
BitstringValue				<a href="#">11.3.3.7</a>
HexstringValue				<a href="#">11.3.3.8</a>
OctetstringValue				<a href="#">11.3.3.9</a>
CharstringValue				<a href="#">11.3.3.10</a>
UniversalCharstringValue				<a href="#">11.3.3.11</a>
RecordValue	integer, float, boolean, verdicttype, bitstring, hexstring, octetstring, charstring, universal_charstring, record, record_of, array, set, set_of, enumerated, union, anytype, address, component, default, null, omit, matching_symbol, not_evaluated	name, type, module, modifier, annotation		<a href="#">11.3.3.12</a>
RecordOfValue				<a href="#">11.3.3.13</a>
SetValue				<a href="#">11.3.3.15</a>
SetOfValue				<a href="#">11.3.3.16</a>
UnionValue				<a href="#">11.3.3.18</a>
ArrayValue	integer, float, boolean, verdicttype, bitstring, hexstring, octetstring, charstring, universal_charstring, record, record_of, array, set, set_of, enumerated, union, anytype, address, component, port, default, timer, null, omit, matching_symbol, not_evaluated			<a href="#">11.3.3.14</a>
EnumeratedValue	value, intValue, null, omit, matching_symbol, not_evaluated			<a href="#">11.3.3.17</a>
AnytypeValue	integer, float, boolean, verdicttype, bitstring, hexstring, octetstring, charstring, universal_charstring, record, record_of, array, set, set_of, enumerated, union, address, null, omit, matching_symbol, not_evaluated			<a href="#">11.3.3.19</a>
AddressValue	integer, float, boolean, verdicttype, bitstring, hexstring, octetstring, charstring, universal_charstring, record, record_of, array, set, set_of, enumerated, union, anytype, null, omit, matching_symbol, not_evaluated			<a href="#">11.3.3.20</a>
ComponentValue	value, null, omit, matching_symbol, not_evaluated			<a href="#">11.3.3.21</a>
PortValue				<a href="#">11.3.3.22</a>
TimerValue	value, null, omit			<a href="#">11.3.3.24</a>
DefaultValue	value, null, omit, not_evaluated			<a href="#">11.3.3.23</a>
IDL abstract logging type	XSD elements	XSD attributes	NOTES	§ [6]
TciValueTemplate	choice: integer, float, boolean, verdicttype, bitstring, hexstring, octetstring, charstring, universal_string, record, record_of, array, set, set_of, enumerated, union, anytype, address, omit, any, anyomit, templateDef			<a href="#">11.3.4.1</a>
TciNonValueTemplate	choice: any, all, templateDef, null			<a href="#">11.3.4.2</a>
TciValueList	sequence: val			<a href="#">11.3.4.3</a>
TciValueDifference	sequence: val, tmpl	name, type, module, annotation, desc		<a href="#">11.3.4.4</a>
TciValueDifferenceList	sequence: diff			<a href="#">11.3.4.5</a>

## Related EVENTS



16-18 October 2018 (UCAAT)

### NOTES:

This Reference Card summarizes interfaces, operations and language mappings to support developers of TTCN-3 Codec and adaptations. The document is not part of a standard, not warranted error-free, and a 'work in progress'. For comments or suggestions, please contact the editors via [ttn3-qrc@blukaktus.com](mailto:ttn3-qrc@blukaktus.com).

Numbers in the right-hand column of the tables refer to sections or annex in ETSI standards ES 201873-5 and -6.

**NEW** Interface operations/types introduced/modified in edition 4.9.1 have been marked.