Plenary Meeting #9, Oahu, Hawaii 20<sup>th</sup> – 22<sup>nd</sup> September 2000.

Source: TSG\_N WG 5

Title: CRs to R99 Work Item OSA - corrections to 29.198 cont.

Agenda item: 8.23.5

**Document for: APPROVAL** 

#### **Introduction:**

This document contains 11 CRs on R99 Work Item **OSA** that has been agreed by TSG\_N WG5, and is forwarded to TSG\_N Plenary meeting #9 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C	Ver_N
29.198	014	1	N5-000141	R99	Alignment of Framework with Parlay 2.1, missing service properties parameter in getServiceManager() operation of lpSvcFactory.	F	3.0.0	3.1.0
29.198	015	1	N5-000142	R99	Alignment of Framework with Parlay 2.1 undefined datatype in endaccess operation of IpAccess.		3.0.0	3.1.0
29.198	016	1	N5-000143	R99	Alignment of Framework with Parlay 2.1, service and interface naming correction.	F	3.0.0	3.1.0
29.198	017	1	N5-000144	R99	Alignment of Framework with Parlay 2.1, renaming of TpPropertyStruct to TpServiceTypeProperty		3.0.0	3.1.0
29.198	018	1	N5-000145	R99	Alignment of Framework with Parlay 2.1 addition of DES 128 bit authentication.	F	3.0.0	3.1.0
29.198	019	2	N5-000175	R99	Alignment of Framework with Parlay 2.1, improvement of load statistic data-types.	F	3.0.0	3.1.0
29.198	020	1	N5-000147	R99	Correction in descriptive text for Call STD regarding user interaction in 2 Parties in Call State.	F	3.0.0	3.1.0
29.198	021		N5-000151	R99	"Removal of double description of the type TpCallServiceCode".	F	3.0.0	3.1.0
29.198	022	1	N5-000177	R99	Removal of the unused type TpUIMessageCriteria	F	3.0.0	3.1.0
29.198	023		N5-000176	R99	Alignment of Framework with Parlay 2.1, addition of setCallbackWithSessionID operation to IpService.		3.0.0	3.1.0
29.198	024		N5-000174	R99	Clarification of life time of parameters in TpAuthDomain	F	3.0.0	3.1.0

# Document **N5-000141**

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

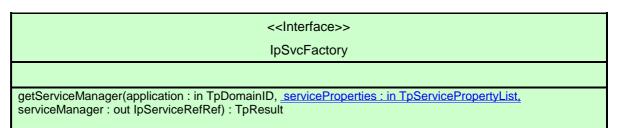
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# 6.2.5 Service Factory

<<Interface>>
IpSvcFactory

getServiceManager()

Figure 6-8: Service Factory Class Diagram



#### 9.2.4 Registration IDL

#include <fw.idl>

```
module org{
module threegpp{
module osa{
module fw{
module registration{
     Interface definitions
//
                 *************************
     /* The Service Registration Framework interface provides the methods used for the
     registration
     of network SCFs at the Framework. */
     interface IpServiceRegistration : IpOsa {
           /* This method is used to register a SCF in the Framework, for subsequent
           discovery by
           the applications. */
           void registerService (
           in TpServiceTypeName
                                               serviceTypeName,
           in TpServicePropertyList
                                      servicePropertyList,
           out TpServiceID
                                                      serviceID
           ) raises (TpGeneralException);
           /* This method informs the Framework of the availability of a service factory for
           previously registered SCF. */
           void announceServiceAvailability (
           in TpServiceID
                          serviceID,
           in IpOsa
                                        serviceFactory
           ) raises (TpGeneralException);
           /* This method is used to remove a registered SCF from the Framework. */
           void unregisterService (
                                 serviceID
           in TpServiceID
           ) raises (TpGeneralException);
           /* This method is used to ebtain the decription of a certain SCF as it was
           registered in
           the Framework. */
           void describeService (
           in TpServiceID
                                                      serviceID,
           out TpServiceDescription
                                        serviceDescription
           ) raises (TpGeneralException);
     /* The Service Factory Framework interface provides the Framework with access to a
     manager
     interface of a network SCF to be given to an application. */
     interface IpSvcFactory : IpOsa {
           /* This method returns an SCF manager interface reference for a specified
           application. */
           void getServiceManager (
           in TpClientAppID application,
           in TpServicePropertyList serviceProperties,
           out IpOsa
                                        serviceManager
           ) raises (TpGeneralException);
             };
};};};};
```

# Document **N5-000142**

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#### 6.2.3.4 IpAccess

<<Interface>>
IpAccess

obtainInterface( interfaceName: in TpInterfaceName, fwInterface: out IpOsaRefRef): TpResult

obtainInterfaceWithCallback( interfaceName: in TpInterfaceName, appInterface: in IpOsaRef, fwInterface: out IpOsaRefRef): TpResult

accessCheck(serviceToken: in TpServiceToken,securityContext:: in TpString, securityDomain: in TpString, group: in TpString, serviceAccessTypes: in TpString, serviceAccessControl: out TpServiceAccessControlRef): TpResult

selectService( serviceID: in TpServiceID, serviceProperties: in TpServicePropertyList, serviceToken: out TpServiceTokenRef): TpResult

signServiceAgreement( serviceToken: in TpServiceToken, agreementText: in TpString, signingAlgorithm: in TpSigningAlgorithm, signatureAndServiceMgr: out TpSignatureAndServiceMgrRef): TpResult

terminateServiceAgreement( serviceToken: in TpServiceToken, terminationText: in TpString, digitalSignature: in TpString): TpResult

 $endAccess (endAccess Properties: in \underline{TpEndAccess Properties} \underline{TpPropertyList}): TpResult$ 

# 8.2 Framework Data Definitions

#### 8.2.1.4 TpEntOpIDList

This data type defines a Numbered Set of Data Elements of type TpEntOpID.

#### **TpPropertyName**

This data type is identical to TpString. It is the name of a generic "property".

#### **TpPropertyValue**

This data type is identical to TpString. It is the value (or the list of values) associated with a generic "property".

#### **TpProperty**

This data type is a Sequence of Data Elements which describes a generic "property". It is a structured data type consisting of the following {name,value} pair:

Sequence Element Name	<u>Sequence Element</u> <u>Type</u>				
<u>PropertyName</u>	<u>TpPropertyName</u>				
<u>PropertyValue</u>	<u>TpPropertyValue</u>				

#### **TpPropertyList**

This data type defines a Numbered List of Data Elements of type TpProperty.

#### 8.2.2.4 TpAuthCapabilityList

This data type is identical to a TpString. It is a string of multiple TpAuthCapability concatenated using a comma (,)as the separation character.

#### **TpEndAccessProperties**

This data type is of type TpPropertyList. It identifies the actions that the framework should perform when an application or service capability feature entity ends its access session (e.g. existing service capability or application sessions may be stopped, or left running).

#### 9.2 Framework IDL

#### 9.2.1 Common Data Types for the Framework

```
#include <OSA.idl>
module org{
module threegpp{
module osa{
module fw{
       typedef TpString
                                                     // Identifies the client appl to the
                               TpClientAppID;
              framework.
        typedef sequence
                               <TpClientAppID> TpClientAppIDList;
       typedef TpString TpEntOpID;
        typedef sequence < TpEntOpID >
                                              TpEntOpIDList;
        typedef TpString TpPropertyName;
        typedef TpString TpPropertyValue;
        typedef sequence < TpProperty > TpPropertyList;
       struct TpProperty {
               TpPropertyName
                                             PropertyName;
               TpPropertyValue
                                            PropertyValue;
       };
                                             // A string of characters, generated automatically
       typedef TpString
                           TpServiceID;
                           by the
                                          // Framework and comprising a TpUniqueServiceNumber,
                                          // TpServiceNameString, and a number of relevant
                                          // TpServiceSpecString, concatenated using a forward
                                          // separator (/), that uniquely identifies an
                                       instance of a
                                          // SCF interface.
```

#### 9.2.3 Trust and Security Management IDL

. . .

#include <fw.idl>

```
//
                                    Data definitions
             ***********************
                                  TpAccessType;
       typedef TpString
                                                     // The type of access interface
requested by the client
                                      // application. For OSA release 99 the following
                                    values
                                      // have been defined: NULL (indicates the default
                                    access
                                      // type) and P_ACCESS.
      typedef TpString
                                  TpAuthType;
                                                             // The type of
authentication mechanism requested by the
                                      // client. For OSA release 99 the following values
                                   have
                                       // been defined: NULL (indicates OSA authentication),
                                       // P_AUTHENTICATION (indicates use of the OSA
                                       // authentication interfaces.
       typedef TpString
                           TpAuthCapability;
                                                       // The authentication capabilities
that could be supported
                                       // by the OSA. For OSA release 99 the following
                                    values
                                       // have been defined: NULL (indicates no client
                                       // capabilities, P_DES_56, P_RSA_512 and P_RSA_1024).
                                  TpAuthCapabilityList; // A string of multiple
      typedef TpString
TpAuthCapability
                                            // concatenated using a commas.
```

typedef TpPropertyList TpEndAccessProperties;

• •

# Document **N5-000143**

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# 8.2 Framework Data Definitions

#### 8.2.1.11 TpServiceNameString

This data type is identical to a TpString, and is defined as a string of characters that uniquely identifies the name of an SCF interface. Other Network operator specific capabilities may also be used, but should be preceded by

the string "SP\_". The following values are defined for OSA release 99.

Character String Value	Description
NULL	An empty (NULL) string indicates no SCF name
P_CALL_CONTROL	The name of the Call Control SCF
P_USER_INTERACTION	The name of the User Interaction SCFs
P_TERMINAL_CAPABILITIES	The name of the Terminal Capabilities SCF
P_USER_LOCATION <u>CAMEL</u>	The name of the Network User Location SCF
P_USER_STATUS	The name of the User Status SCF
P_DATA_SESSION_CONTROL	The name of the Data Session Control SCF

#### 8.2.2.5 TpInterfaceName

This data type is identical to a TpString, and is defined as a string of characters that identify the names of the framework SCFs that are be supported by the OSA API. Other Network operator specific SCFs may also be used, but should be preceded by the string "SP\_". The following values are defined for OSA release 99.

Character String Value	Description
NULL	An empty (NULL) string indicates no interface.
P_DISCOVERY	The name for the Discovery interface.
P_OAM	The name for the OA&M interface.
P_TRUST_AND_SECURITY_MANAGEMENT	The name for the Trust and Security Management interface
P_INTEGRITY_MANAGEMENT	The name for the Integrity Management interface.
P_LOAD_MANAGER	The name for the Load Manager interface.
P_FAULT_MANAGER	The name for the Fault Manager interface.
P_HEARTBEAT_MANAGEMENT	The name for the Heartbeat Management interface.
P_REGISTRATION	The name for the Service Registration interface.

#### 9.2 Framework IDL

#### 9.2.1 Common Data Types for the Framework

```
#include <OSA.idl>
module org{
module threegpp{
module osa{
module fw{
                                                                                                TpClientAppID; // Identifies the client appl to the
                        typedef TpString
                                            framework.
                        typedef sequence
                                                                                               <TpClientAppID> TpClientAppIDList;
                        typedef TpString TpEntOpID;
                        typedef sequence < TpEntOpID >
                                                                                                                                               TpEntOpIDList;
                         typedef TpString TpServiceID;
                                                                                                                                         // A string of characters, generated automatically
                                                                                    by the
                                                                                                                                   \label{lem:comprising} \mbox{$/$} \mbox{$/
                                                                                                                                   // {\tt TpServiceNameString}, and a number of relevant
                                                                                                                                   // TpServiceSpecString, concatenated using a forward
                                                                                                                                   // separator (/), that uniquely identifies an
                                                                                                                         instance of a
                                                                                                                                  // SCF interface.
                        typedef sequence <TpServiceID>
                                                                                                                                                                  TpServiceIDList;
                      typedef TpString
                                                                                                                   TpServiceNameString;
                                                                                                                                                                                                             // Uniquely identifies the
         name of an SCF
                                                                                                                                                               // interface. For OSA release 99 the
                                                                                                                                                     following
                                                                                                                                                              // values have been defined: NULL (no SCF
                                                                                                                                                     name),
                                                                                                                                                             // P_CALL_CONTROL, P_USER_INTERACTION,
                                                                                                                                                               // P_USER_LOCATION_CAMEL,
                                                                                                                                                     P TERMINAL CAPABILITIES and
                                                                                                                                                              // P_USER_STATUS.
```

### 9.2.3 Trust and Security Management IDL

```
#include <fw.idl>
module org{
module threegpp{
module osa{
module fw{
module trust_and_security{
   Data definitions
//
    typedef TpString
                     TpAccessType;
                                  // The type of access interface
requested by the client
                         // application. For OSA release 99 the following
                       values
```

```
// have been defined: NULL (indicates the default
                                         // type) and P_ACCESS.
                                                                  // The type of
       typedef TpString
                                     TpAuthType;
authentication mechanism requested by the
                                         // client. For OSA release 99 the following values
                                      have
                                          // been defined: NULL (indicates OSA authentication),
                                          // P_AUTHENTICATION (indicates use of the OSA
                                         // authentication interfaces.
       typedef TpString
                                                           // The authentication capabilities
                             TpAuthCapability;
that could be supported
                                         // by the OSA. For OSA release 99 the following
                                      values
                                          // have been defined: NULL (indicates no client
                                          // capabilities, P_DES_56, P_RSA_512 and P_RSA_1024).
       typedef TpString
                                     TpAuthCapabilityList; // A string of multiple
TpAuthCapability
                                               // concatenated using a commas.
       typedef TpString
                                     TpInterfaceName;
                                                          // Identifies the names of the
framework SCFs that are be
                                         // supported by the OSA API. For release 99 these are
                                      NULL,
                                         // P_DISCOVERY, P_OAM,
                                         // P_LOAD_MANAGER,
                                         // P_FAULT_MANAGER,
                                          // P HEARTBEAT MANAGEMENT,
                                         // P_REGISTRATION P_TRUST_AND_SECURITY_MANAGEMENT
                                         // P_INTEGRITY_MANAGEMENT.
```

# Document **N5-000144**

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## 8.2.1.14 Tp<u>ServiceType</u>Property<del>Struct</del>

This data type is a Sequence of Data Elements which describes an SCF property. It consists of: This data type is a Sequence of Data Elements which describes a service property associated with a service type. It defines the name and mode of the service property, and also the service property type: e.g. boolean, integer. It is similar to, but distinct from, TpServiceProperty. The latter is associated with an actual service: it defines the service property's name and mode, but also defines the list of values assigned to it.

Sequence Element Name	Sequence Element Type	Documentation
ServicePropertyName	TpService <u>Property</u> TypeName	
ServicePropertyMode	TpServicePropertyMode	
ServicePropertyTypeName	TpServicePropertyTypeName	

#### 8.2.1.15 TpServiceTypePropertyStructList

This data type defines a Numbered Set of Data Elements of type TpServiceTypePropertyStruct.

## 8.2.1.24 TpServiceTypeDescription

This type is left as a placeholder but is not used in release 99.

This data type is a Sequence\_of\_Data\_Elements which describes an SCF type. It is a structured data type. It consists of:

Sequence Element Name	Sequence Element Type	Documentation		
ServiceTypeProperty StructList	Tp <u>ServiceType</u> Property <del>Struct</del> List	a sequence of property name and property mode tuples associated with the SCF type		
ServiceTypeNameList	TpServiceTypeNameList	the names of the super types of the associated SCF type		
EnabledOrDisabled	TpBoolean	an indication whether the SCF type is enabled or disabled		

# 9.2 Framework IDL

#### 9.2.1 Common Data Types for the Framework

```
#include <OSA.idl>
module org{
module threegpp{
module osa{
module fw{
        struct TpServiceDescription {
                                                             // Describes the properties of a
registered SCF.
                 TpServiceTypeName
                                          ServiceTypeName;
                 TpServicePropertyList ServicePropertyList;
        };
         struct TpServiceTypePropertyPropertyStruct {
                                                                                                 // Describes
a SCF property.
                 {\tt TpService} \underline{{\tt Property}} \underline{{\tt Type}} {\tt Name}
                                                                               ServicePropertyName;
                 TpServicePropertyMode ServicePropertyMode;
TpServicePropertyTypeName ServicePropertyTypeName;
        };
         typedef sequence <TpServiceTypePropertyPropertyStruct>
        TpServiceTypePropertyPropertyStructList;
        struct TpServiceTypeDescription {
                                                                      // Describes a SCF type.
                 {\tt Tp} \underline{{\tt ServiceTypeProperty}} \underline{{\tt PropertyStruct}} L is t
        ServiceTypePropertyPropertyStructList;
                 TpServiceTypeNameList
                                                  ServiceTypeNameList;
                 TpBoolean
                                                                               EnabledOrDisabled;
        };
};};};;;
```

# Document **N5-000145**

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Subject:	Alignment	of Framework with	Parlay	2.1 add	dition of D	DES 128 bit aut	hentication.	
Work item:	OSA							
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Reason for change:	area of diff	TS 29.198 containerent parameter no 98 the DES 128 bi	ames ar	nd data-	types.		y 2.1, mainiy in	tne
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# 8.2.2.3 TpAuthCapability

This data type is identical to a TpString, and is defined as a string of characters that identify the authentication capabilities that could be supported by the OSA. Other Network operator specific capabilities may also be used, but should be preceded by the string "Sp\_". Capabilities may be concatenated, using commas (,) as the separation character. The following values are defined for OSA release 99.

String Value	Description
NULL	An empty (NULL) string indicates no client capabilities.
P_DES_56	A simple transfer of secret information that is shared between the client application and the framework with protection against interception on the link provided by the DES algorithm with a 56bit shared secret key
P_DES_128	A simple transfer of secret information that is shared between the client entity and the framework with protection against interception on the link provided by the DES algorithm with a 128bit shared secret key
P_RSA_512	A public-key cryptography system providing authentication without prior exchange of secrets using 512 bit keys
P_RSA_1024	A public-key cryptography system providing authentication without prior exchange of secrets using 1024bit keys

# 9.2.3 Trust and Security Management IDL

#include <fw.idl>

1

```
\verb|module| org| \{
module threegpp{
module osa{
\verb|module fw| \{
module trust_and_security{
     Data definitions
//
     TpAccessType;
                                                   // The type of access interface
      typedef TpString
requested by the client
                                    // application. For OSA release 99 the following
                                  values
                                    // have been defined: NULL (indicates the default
                                  access
                                    // type) and P_ACCESS.
      typedef TpString
                                TpAuthType;
                                                          // The type of
authentication mechanism requested by the
                                    // client. For OSA release 99 the following values
                                  have
                                    // been defined: NULL (indicates OSA authentication),
                                     // P_AUTHENTICATION (indicates use of the OSA
                                     // authentication interfaces.
                          TpAuthCapability;
                                                    // The authentication capabilities
      typedef TpString
that could be supported
                                     // by the OSA. For OSA release 99 the following
                                  values
                                    // have been defined: NULL (indicates no client
                                     // capabilities, P_DES_56, \underline{\text{P}} DES_128, \underline{\text{P}} P_RSA_512 and
                                  P_RSA_1024).
```

# **Document N5-000175**

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

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#### 8.2.3.12 TpLoadPolicy

Defines the load balancing policy.

Sequence Element Name	Sequence Element Type	
LoadPolicy	TpString	

#### 8.2.3.13 TpLoadStatistic

Defines the Sequence of Data Elements that specify the load statistic record at given timestamp.

Sequence Element Name	Sequence Element Type
<u>ServiceID</u>	<del>TpServiceID</del>
<del>LoadValue</del>	<del>TpFloat</del>
<del>LoadLevel</del>	<del>TpLoadLevel</del>
<u> TimeStamp</u>	<del>TpDateAndTime</del>

LoadValue is expressed in percentage.

#### 8.2.3.14 TpLoadStatList

Defines a Numbered Set of Data Elements of TpLoadStatistic.

#### 8.2.3.15 TpLoadStatusError

Defines the error code for getting the load status.

Name	<del>Value</del>	<b>Description</b>
LOAD_STATUS_ERROR_UNDEFINED	θ	<del>Undefined error</del>
LOAD_STATUS_ERROR_UNAVAILABLE	<del>1</del>	Unable to get the load status

#### 8.2.3.16 TpLoadStatisticError

Defines the Sequence of Data Elements that specify the error for getting the load status at given timestamp.

		8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
l	Sequence Element Name	Sequence Element Type
	<u>ServiceID</u>	<del>TpServiceID</del>
١	<del>LoadStatusError</del>	<del>TpFloat</del>
l	<u>TimeStamp</u>	<del>TpDateAndTime</del>

#### 8.2.3.17 TpLoadStatisticErrorList

Defines a Numbered Set of Data Elements of TpLoadStatisticsError.

#### <u>TpLoadStatistic</u>

<u>Defines the Sequence of Data Elements that represents a load statistic record for a specific entity (i.e. framework, service or application) at a specific date and time.</u>

Sequence Element Name	Sequence Element Type
<u>LoadStatisticEntityID</u>	<u>TpLoadStatisticEntityID</u>
<u>TimeStamp</u>	<u>TpDateAndTime</u>
<u>LoadStatisticInfo</u>	<u>TpLoadStatisticInfo</u>

#### **TpLoadStatisticList**

Defines a Numbered List of Data Elements of type TpLoadStatistic.

#### <u>TpLoadStatisticData</u>

Defines the Sequence of Data Elements that represents load statistic information

Sequence Element Name	Sequence Element Type
<u>LoadValue</u>	<u>TpFloat</u>
<u>LoadLevel</u>	<u>TpLoadLevel</u>

Note: LoadValue is expressed as a percentage.

#### <u>TpLoadStatisticEntityID</u>

<u>Defines the Tagged Choice of Data Elements that specify the type of entity (i.e. service, application or framework) providing load statistics.</u>

of frame work) providing r	oud statistics.	
	Tag Element Type	
	<u>TpLoadStatisticEntityType</u>	

Tag Element Value	Choice Element Type	Choice Element Name
P LOAD STATISTICS FW TYPE	<u>TpFwID</u>	<u>FrameworkID</u>
P LOAD STATISTICS SVC TYPE	<u>TpServiceID</u>	<u>ServiceID</u>
P LOAD STATISTICS APP TYPE	<u>TpClientAppID</u>	<u>ClientAppID</u>

### <u>TpLoadStatisticEntityType</u>

Defines the type of entity (i.e. service, application or framework) supplying load statistics.

<u>Name</u>	<u>Value</u>	<b>Description</b>
P_LOAD_STATISTICS_FW_TYPE	<u>0</u>	Framework-type load statistics
P_LOAD_STATISTICS_SVC_TYPE	<u>1</u>	Service-type load statistics
P_LOAD_STATISTICS_APP_TYPE	<u>2</u>	Application-type load statistics

## <u>TpLoadStatisticInfo</u>

<u>Defines the Tagged Choice of Data Elements that specify the type of load statistic information (i.e. valid or invalid).</u>

Tag Element Type	
<u>TpLoadStatisticInfoType</u>	

Tag Element Value	Choice Element Type	Choice Element Name
P LOAD STATISTICS VALID	<u>TpLoadStatisticData</u>	<u>LoadStatisticData</u>
P_LOAD_STATISTICS_INVALID	<u>TpLoadStatisticError</u>	<u>LoadStatisticError</u>

## <u>TpLoadStatisticInfoType</u>

Defines the type of load statistic information (i.e. valid or invalid).

Name Name	<u>Value</u>	<b>Description</b>
P_LOAD_STATISTICS_VALID	<u>0</u>	Valid load statistics
P_LOAD_STATISTICS_INVALID	<u>1</u>	Invalid load statistics

#### **TpLoadStatisticError**

 $\frac{\text{Defines the error code associated with a failed attempt to retrieve any load}{\text{statistics information.}}$ 

<u>Name</u>	<u>Value</u>	<b>Description</b>
P_LOAD_INFO_ERROR_UNDEFINED	<u>0</u>	<u>Undefined error</u>
P_LOAD_INFO_UNAVAILABLE	<u>1</u>	Load statistics unavailable

#### 9.2.4 Integrity Management IDL

#include <fw.idl>

```
• •
```

```
struct TpLoadStatistic {
                                   // The load statistic record at given
timestamp.
              TpServiceID
                                 ServiceID;
             TpFloat LoadValue;
                                                      // Expressed in percentage.
              TpLoadLevel
                                  -LoadLevel;
              TpDateAndTime
                                  TimeStamp;
typedef sequence <TpLoadStatistic> TpLoadStatisticList;
      enum TpLoadStatusError {
                                                 // The error code for getting the load
status
             LOAD_STATUS_ERROR_UNDEFINED,
                                             // Undefined error.
             LOAD_STATUS_ERROR_UNAVAILABLE // Unable to get the load status.
     struct TpLoadStatisticError { // The error for getting the load status
at given timestamp.
             <del>TpServiceID</del>
                                  ServiceID;
            ToFloat
                        LoadStatusError;
             typedef sequence <TpLoadStatisticError>
                                                TpLoadStatisticErrorList;
      enum TpLoadStatisticEntityType {
              P LOAD STATISTICS FW TYPE
              P LOAD STATISTICS SVC TYPE,
              P LOAD STATISTICS APP TYPE
       union TpLoadStatisticEntityID switch(TpLoadStatisticEntityType)
       {
              case P LOAD STATITICS FW TYPE:
              TpFwID FrameworkID;
              case P_LOAD_STATITICS_SVC_TYPE:
              TpServiceID ServiceID;
case P LOAD STATITICS APP TYPE:
              TpClientAppID ClientAppID;
      struct TpLoadStatisticData {
                                   LoadValue;
                                                         // Expressed in percentage.
              TpFloat
                                  LoadLevel;
              <u>TpLoadLevel</u>
      enum TpLoadStatisticError {
             P_LOAD_INFO_ERROR_UNDEFINED,
              P LOAD INFO UNAVAILABLE
       enum TpLoadStatisticInfoType
              P_LOAD_STATISTICS_VALID
              P LOAD STATISTICS INVALID
       union TpLoadStatisticInfo switch(TpLoadStatisticInfoType)
              case P_LOAD_STATISTICS_VALID:
              TpLoadStatisticData LoadStatisticData;
case P LOAD STATISTICS INVALID:
              TpLoadStatisticError LoadStatisticError;
       struct TpLoadStatistic {
              TpLoadStatisticEntityID
                                                 LoadStatisticEntityID;
                                 TimeStamp;
              TpDateAndTime
              TpLoadStatisticInfo LoadStatisticInfo;
       };
      typedef sequence <TpLoadStatistic>    TpLoadStatisticList;
```

# Document N5-000147 e.g. for 3GPP use the format TP-99xxx or for SMG. use the format P-99-xxx

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Work item:	OSA							
(only one category shall be marked	F Correction A Corresponds to a correction in an earlier release  A Corresponds to a correction in an earlier release  B Addition of feature C Functional modification of feature  ith an X)  B Release: Release 96 Release 97 Release 98 Release 98 Release 99 Release 00  In case the calling party answers a call and the application is monitoring in interrupt						)	
	- This m	the calling party. eans a both-way-tl er user-interaction	_				n CAMELv3.	
Clauses affecte	d: 7.2.2.1	.2						
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<----- double-click here for help and instructions on how to create a CR.

#### 7.2.2.1.2 2 Parties in Call state

A connection between two parties has been established.

In case the calling party disconnects, the gateway informs the application by invoking callEnded(). When the called party disconnects different situations apply:

- 1. the application is monitoring for this event in interrupt mode: a transition is made to the 1 Party in Call state, the application is informed with routeRes with indication that the called party has disconnected and all requested reports are sent to the application. The application now again has control of the call.
- 2. the application is monitoring for this event but not in interrupt mode. In this case a transition is made to the Network Released state and the gateway informs the application by invoking the operation routeRes() and callEnded().
- 3. the application is not monitoring for this event. In this case the application is informed by the gateway invoking the callEnded() operation and a transition is made to the Network Released state.

In this state user interaction is possible, but only when the application requested to be notified of the transition to this state in interrupt mode. After the user interaction is finished the gateway will automatically continue processing of the call.

# 3GPP CN WG5 Meeting #5 Bristol, UK, 5-7 September 2000

# **Document N5-000151**e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

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Work item:	OSA							
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<----- double-click here for help and instructions on how to create a CR.

# 8.3.3.31 TpCallServiceCode

Defines the service code received during a call. For example, this may be a digit sequence, user user information, recall, flash-hook or ISDN Facility Information Element.

This data type is identical to a TpString. The coding of this data type is operator specific. However, the values defined in ISUP ITU Recommendation Q.763 are suggested for this data type.

# 3GPP CN WG5 Meeting #5 Bristol, UK, 5-7 September 2000

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

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	TpUIMessageCrite s <u>it</u> they should be re					rom
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Other comments:						
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<----- double-click here for help and instructions on how to create a CR.

### 8.2.1.3 TpEntOpID

This data type is identical to TpString and is defined as a string of characters that identifies an enterprise operator. In conjunction with the application it uniquely identifies the enterprise operator which uses a particular OSA Service Capability Feature.

# 8.2.1.4 TpEntOpIDList

This data type defines a Numbered Set of Data Elements of type TpEntOpID.

## 8.4.2.13 TpUIMessageCriteria

Defines the Sequence of Data Elements that specify the additional properties for the recording of a message

Structure Element Name	Structure Element Type		
<u>EndSequence</u>	<del>TpString</del>		
<u>MaxMessageTime</u>	<del>TpDuration</del>		
MaxMessageSize	<del>TpInt32</del>		

The structure elements specify the following criteria:

EndSequence:

Defines the character or characters which terminate an input of variable length, e.g. phonenumbers.

MaxMessageTime:

specifies the maximum duration in seconds of the message that is to be recorded.

MaxMessageSize:

If this parameter is non zero, it specifies the maximum size in bytes of the message that is

to be recorded.

# Document **N5-000176**

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

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,	Form: CR cover sheet,	version 2 for 3GPP and SMG	The lates	t version of t	his form is availa	ble from: ftp://ft	tp.3gpp.oi	rg/Information/CR-Form	-v2.doc
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Source:	N5					<u>D</u>	Date:	4 Sept, 2000	)
Subject:		of Framework with to IpService.	Parlay	2.1, add	dition of se	etCallback	kWith	SessionID	
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help.doc	ل	ıble-click here for h	olo ca -l	in atm	liono on h	ou to 27-	oto o	C.B.	

# 6.1 Class diagrams common across OSA

All application and framework interfaces inherit from IpOsa interface. Network Service Capability Features on the other hand inherit from the common IpService interface. The corresponding interfaces that must be implemented by the application (e.g. for API callbacks) are denoted as 'Application Interface'.

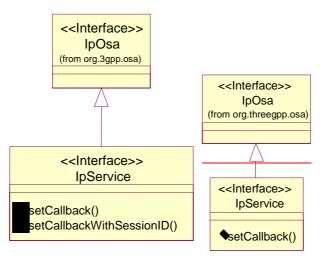
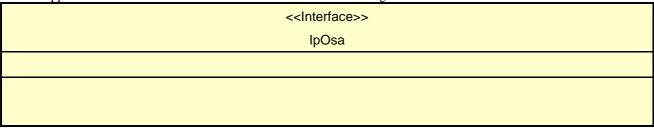


Figure 6-1: OSA base interfaces

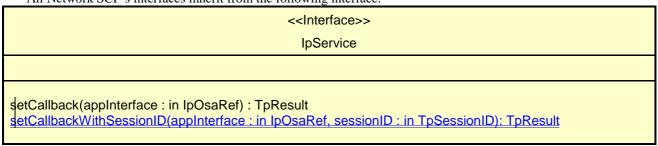
#### 6.1.1 Base OSA interface

All application and framework interfaces inherit from the following interface.



#### 6.1.2 Generic Service Capability Feature interface

All Network SCF's interfaces inherit from the following interface.



#### 9 IDL Interface Definitions

The OSA API definitions have been divided into several CORBA modules. The common data definitions are placed in the root module while each of the specific service capability feature API definitions are being assigned their own module directly under that root. Each specific SCF functions, like User Status, have their data and interface definitions collocated. This structure has the advantage that explicit scoping is kept to a minimum. The IDLs defined for the specific SCFs assumes that the OSA common definitions (interfaces and data) are

provided in the org.threegpp.osa module within a file name called OSA.idl

Module Name	Description	IDL file name
org.threegpp.osa	Common data/interface definitions	OSA.idl
org.threegpp.osa.mm	Common mobility data definitions (root)	MM.idl
org.threegpp.osa.mm.ul	Network User Location (UL)	MMul.idl
org.threegpp.osa.mm.us	User Status (US)	MMus.idl
org.threegpp.osa.cc	Call Control	CC.idl
org.threegpp.osa.ui	User Interaction	UI.idl
org.threegpp.osa.termcap	Terminal Capabilities	TERMCAP.idl

# 9.1 Generic IDL

```
_OSA_DEFINED
#ifndef
#define __OSA_DEFINED
                      //
                                                   base OSA interface
                      // All application, framework and service capability features interfaces
inherit
                      // from the following interface. This API Base Interface does not
provide any
                       // additional methods.
                      interface IpOsa
                      // All service capability feature interfaces inherit from the following
interface.
                      interface IpService : IpOsa
                              // This method specifies the reference address of the callback
interface
                              // that a SCF uses to invoke methods on the application.
                              void setCallback(in IpOsa appInterface)
raises(TpGeneralException);
                              void setCallbackWithSessionID(in IpOsa appInterface, in
TpSessionID sessionID)
                       raises(TpGeneralException);
       };
};
#endif
```

# Document **N5-000174**

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

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Form: CR cover sheet, version 2 for 3GPP and SMG  The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc  Proposed change affects: (at least one should be marked with an X)  The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc  U)SIM  ME  UTRAN / Radio  Core Network  X							
Source:	N5					<u>Date:</u>	27 August 2000
Subject:	Clarification	of life time of par	ameters	in TpA	<mark>uthDomai</mark>	n	
Work item:	OSA						
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Other comments:							
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<----- double-click here for help and instructions on how to create a CR.

# N5-000174

# 8.2 Framework Data Definitions

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# 8.2.2.4 TpAuthCapabilityList

This data type is identical to a TpString. It is a string of multiple TpAuthCapability concatenated using a comma (,)as the separation character.

# TpAuthDomain

This is Sequence of Data Elements containing <u>all the data necessary to identify a domain: jthe</u>the domain identifier, and a reference to the authentication interface of the domain

Sequence Element Name	Sequence Element Type	<u>Description</u>
DomainID	<u> TpDomainID</u>	Identifies the entitydomain for authentication. This data identifier is assigned to the domain during the initial contractual agreements, and is valid during the lifetime of the contract.
AuthInterface	IpOSARef	Identifies the authentication interface of the specific entity. This data element has the same lifetime as the domain authenti-cation process, i.e. in principle a new interface reference can beis provided each time a domain intentds to access another. interact with