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DE LA UIT

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SERIE G: SISTEMAS Y MEDIOS DE TRANSMISIÓN,
SISTEMAS Y REDES DIGITALES

Equipos terminales digitales – Características de
operación, administración y mantenimiento de los equipos
de transmisión

**Jerarquía digital síncrona – Configuración de la
estructura de cabida útil desde el punto de vista
de los elementos de red**

Recomendación UIT-T G.774.2

(Anteriormente Recomendación del CCITT)

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Recomendación UIT-T G.774.2

Jerarquía digital síncrona – Configuración de la estructura de cabida útil desde el punto de vista de los elementos de red

Resumen

La presente Recomendación proporciona un modelo de información para la gestión de la configuración de cabida útil de la jerarquía digital síncrona. Este modelo describe las clases de objetos gestionados y sus propiedades para la función de configuración de cabida útil de la jerarquía digital síncrona en relación con los elementos de red. Estos objetos son útiles para describir la información intercambiada a través de las interfaces definidas en UIT-T M.3010 sobre la arquitectura de la red de gestión de las telecomunicaciones para la gestión de la función de configuración de cabida útil.

Historia del documento	
Versión	Notas
2001	La primera revisión incorpora las modificaciones documentadas en el Corrigendum 1 a la Recomendación G.774.2 (1996).
11/1994	Versión inicial de la Recomendación.

Orígenes

La Recomendación UIT-T G.774.2, revisada por la Comisión de Estudio 15 (2001-2004) del UIT-T, fue aprobada por el procedimiento de la Resolución 1 de la AMNT el 9 de febrero de 2001.

PREFACIO

La UIT (Unión Internacional de Telecomunicaciones) es el organismo especializado de las Naciones Unidas en el campo de las telecomunicaciones. El UIT-T (Sector de Normalización de las Telecomunicaciones de la UIT) es un órgano permanente de la UIT. Este órgano estudia los aspectos técnicos, de explotación y tarifarios y publica Recomendaciones sobre los mismos, con miras a la normalización de las telecomunicaciones en el plano mundial.

La Asamblea Mundial de Normalización de las Telecomunicaciones (AMNT), que se celebra cada cuatro años, establece los temas que han de estudiar las Comisiones de Estudio del UIT-T, que a su vez producen Recomendaciones sobre dichos temas.

La aprobación de Recomendaciones por los Miembros del UIT-T es el objeto del procedimiento establecido en la Resolución 1 de la AMNT.

En ciertos sectores de la tecnología de la información que corresponden a la esfera de competencia del UIT-T, se preparan las normas necesarias en colaboración con la ISO y la CEI.

NOTA

En esta Recomendación, la expresión "Administración" se utiliza para designar, en forma abreviada, tanto una administración de telecomunicaciones como una empresa de explotación reconocida de telecomunicaciones.

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Recomendación UIT-T G.774.2

Jerarquía digital síncrona – Configuración de la estructura de cabida útil desde el punto de vista de los elementos de red

1 Alcance

Las funciones de la configuración de la cabida útil de la jerarquía digital síncrona se utilizan para configurar las diversas funciones de adaptación de la jerarquía digital síncrona.

La modificación de la estructura de la cabida útil de la jerarquía digital síncrona se efectúa aplicando una acción a los objetos gestionados pertinentes. Estas acciones se incluyen descomponiendo en subclases las actuales clases de objetos gestionados de UIT-T G.774.

Los nuevos objetos definidos en la presente Recomendación sustituyen a los definidos en UIT-T G.774.2 (1994).

Estructura de la Recomendación

La cláusula 5.1 presenta una sinopsis del modelo de información de la configuración de cabida, útil SDH. Las cláusulas 6 a 12 describen el modelo de información utilizando los mecanismo de notación definidos en UIT-T X.722, Directrices para la definición de objetos gestionados. Las cláusulas 13 y 14 describen las reglas de construcción de los punteros de conectividad y las reglas de subordinación aplicables al fragmento de punto de terminación. La cláusula 15 contiene las definiciones de sintaxis de la información transportada en el protocolo utilizando la notación de sintaxis abstracta uno (ASN.1, *abstract syntax notation one*) definida en UIT-T X.680-X.683. La denominación y la herencia se ilustran en el apéndice I.

2 Referencias

Las siguientes Recomendaciones del UIT-T y otras referencias contienen disposiciones que, mediante su referencia en este texto, constituyen disposiciones de la presente Recomendación. Al efectuar esta publicación, estaban en vigor las ediciones indicadas. Todas las Recomendaciones y otras referencias son objeto de revisiones por lo que se preconiza que los usuarios de esta Recomendación investiguen la posibilidad de aplicar las ediciones más recientes de las Recomendaciones y otras referencias citadas a continuación. Se publica periódicamente una lista de las Recomendaciones UIT-T actualmente vigentes.

- UIT-T G.707/Y.1322 (2000), *Interfaz de nodo de red para la jerarquía digital síncrona*.
- UIT-T G.773 (1993), *Series de protocolos de interfaces Q para la gestión de sistemas de transmisión*.
- UIT-T G.774 (2001), *Modelo de información de gestión de la jerarquía digital síncrona desde el punto de vista de los elementos de red*.
- UIT-T G.783 (2000), *Características de los bloques funcionales del equipo de la jerarquía digital síncrona*.
- UIT-T G.784 (1999), *Gestión de la jerarquía digital síncrona*.
- UIT-T G.803 (2000), *Arquitecturas de redes de transporte basadas en la jerarquía digital síncrona*.
- UIT-T G.831 (2000), *Capacidades de gestión de redes de transporte basadas en la jerarquía digital síncrona*.

- UIT-T G.958 (1994), *Sistemas de línea digitales basados en la jerarquía digital síncrona para utilización en cables de fibra óptica.*
- UIT-T M.60 (1993), *Terminología y definiciones relativas al mantenimiento.*
- UIT-T M.2120 (2000), *Procedimientos de detección y localización de averías en trayectos, secciones y sistemas de transmisión de la jerarquía digital plesiócrona y en trayectos y secciones de multiplexión de la jerarquía digital síncrona.*
- UIT-T M.3010 (2000), *Principios para una red de gestión de las telecomunicaciones.*
- UIT-T M.3013 (2000), *Consideraciones sobre una red de gestión de las telecomunicaciones.*
- UIT-T M.3100 (1995), *Modelo genérico de información de red.*
- UIT-T Q.811 (1997), *Perfiles de protocolos de capa inferior para las interfaces Q3 y X.*
- UIT-T Q.812 (1997), *Perfiles de protocolos de capa superior para las interfaces Q3 y X.*
- UIT-T Q.822 (1994), *Descripción de la etapa 1, de la etapa 2 y de la etapa 3 para el interfaz Q3 – Gestión de la calidad de funcionamiento.*
- UIT-T X.680 a X.683 (1997), *Tecnología de la información – Notación de sintaxis abstracta uno.*
- UIT-T X.701 (1997), *Tecnología de la información – Interconexión de sistemas abiertos – Visión general de la gestión de sistemas.*
- UIT-T X.710 (1997), *Tecnología de la información – Interconexión de sistemas abiertos – Servicio común de información de gestión.*
- UIT-T X.711 (1997), *Tecnología de la información – Interconexión de sistemas abiertos – Protocolo común de información de gestión: Especificación.*
- UIT-T X.720 (1992), *Tecnología de la información – Interconexión de sistemas abiertos – Estructura de la información de gestión: Modelo de información de gestión, plus Enm.1 (1995) y Corr.1 (1994).*
- UIT-T X.721 (1992), *Tecnología de la información – Interconexión de sistemas abiertos – Estructura de la información de gestión: Definición de información de gestión, plus Corr.1 (1994), Corr.2 (1996), Corr.3 (1998) y Corr.4 (2000).*
- UIT-T X.722 (1992), *Tecnología de la información – Interconexión de sistemas abiertos – Estructura de la información de gestión: Directrices para la definición de objetos gestionados, plus Enm.1 (1995), Enm.2 (1997) y Corr.1 (1996).*
- UIT-T X.730 (1992), *Tecnología de la información – Interconexión de sistemas abiertos – Gestión de sistemas: Función de gestión de objetos, plus Enm.1 (1995) y Enm.1/Corr.1 (1996).*
- UIT-T X.731 (1992), *Tecnología de la información – Interconexión de sistemas abiertos – Gestión de sistemas: Función de gestión de estados, plus Enm.1 (1995), Corr.1 (1995) y Enm.1/Corr.1 (1996).*
- UIT-T X.733 (1992), *Tecnología de la información – Interconexión de sistemas abiertos – Gestión de sistemas: Función señaladora de alarmas, plus Corr.1 (1994), Enm.1 (1995), Enm.1/Corr.1 (1996) y Corr.2 (1999).*
- UIT-T X.734 (1992), *Tecnología de la información – Interconexión de sistemas abiertos – Gestión de sistemas: Función de gestión de informes de eventos, plus Corr.1 (1994), Enm.1 (1995), Enm.1/Corr.1 (1996) y Corr.2 (1999).*

- UIT-T X.735 (1992), *Tecnología de la información – Interconexión de sistemas abiertos – Gestión de sistemas: Función control de ficheros registro cronológico, plus* Enm.1 (1995) y Enm.1/Corr.1 (1996).

3 Términos y definiciones

En la presente Recomendación se utilizan los términos y definiciones especificados en UIT-T G.774, G.784 y M.3100.

4 Abreviaturas

En esta Recomendación se utilizan las siguientes siglas.

AU	Unidad administrativa (<i>administrative unit</i>)
AUG	Grupo de unidades administrativas (<i>administrative unit group</i>)
Bid	Bidireccional
CTP	Punto de terminación de conexión (<i>connection termination point</i>)
GTP	Punto de terminación de grupo (<i>group termination point</i>)
Id	Identificador
MS	Sección múltiplex (<i>multiplex section</i>)
NE	Elemento de red (<i>network element</i>)
OS	Sistema de operaciones (<i>operations system</i>)
OSI	Interconexión de sistemas abiertos (<i>open systems interconnection</i>)
PDH	Jerarquía digital plesiócrona (<i>plesiochronous digital hierarchy</i>)
RGT	Red de gestión de las telecomunicaciones
RS	Sección de regeneración (<i>regenerator section</i>)
SDH	Jerarquía digital síncrona (<i>synchronous digital hierarchy</i>)
SPI	Interfaz física síncrona (<i>synchronous physical interface</i>)
TP	Punto de terminación (<i>termination point</i>)
TTP	Punto de terminación de camino (<i>trail termination point</i>)
TU	Unidad afluyente (<i>tributary unit</i>)
TUG	Grupo de unidad afluyente (<i>tributary unit group</i>)
VC-n	Contenedor virtual n (<i>virtual container n</i>)

5 Modelo de información de configuración de cabida útil

5.1 Visión general

La modificación de la estructura de trama SDH se efectúa aplicando una acción a los objetos gestionados pertinentes. Estas acciones se incluyen descomponiendo en subclases las clases de objetos gestionados de G.774. Se aplican acciones a las siguientes clases:

Nuevas clases de objetos gestionados

Acción aplicada

modificableAugSink	defineAUGStructure
modificableAugSource	defineAUGStructure
modificableAugBidirectional	defineAUGStructure
modificableTug3Sink	defineTug3Structure
modificableTug3Source	defineTug3Structure
modificableTug3Bidirectional	defineTug3Structure
modificableTug2Sink	defineTug2Structure
modificableTug2Source	defineTug2Structure
modificableTug2Bidirectional	defineTug2Structure
modificableVC4TTPSinkR1	defineVC4Structure
modificableVC4TTPSourceR1	defineVC4Structure
modificableVC4TTPBidirectionalR1	defineVC4Structure
modificableVC3TTPSinkR1	defineVC3Structure
modificableVC3TTPSourceR1	defineVC3Structure
modificableVC3TTPBidirectionalR1	defineVC3Structure
modificableVC2TTPSinkR1	defineClientType
modificableVC2TTPSource	defineClientType
modificableVC2TTPBidirectionalR1	defineClientType
modificableVC12TTPSinkR1	defineClientType
modificableVC12TTPSource	defineClientType
modificableVC12TTPBidirectionalR1	defineClientType
modificableVC11TTPSinkR1	defineClientType
modificableVC11TTPSource	defineClientType
modificableVC11TTPBidirectionalR1	defineClientType

Se definen diferentes acciones según la clase del objeto gestionado al que se aplica la acción.

El comportamiento correspondiente a la acción se especifica junto con la definición de la acción.

Para las clases de objeto definidas en la presente Recomendación, la especialización se efectúa desde las clases de objeto definidas en UIT-T G.774 de acuerdo con el siguiente esquema:

- sumidero desde sumidero;
- fuente desde fuente;
- bidireccional desde bidireccional.

El atributo **supportableClientList** se utiliza para que contenga una lista de clases de objeto gestionado. Sólo los ejemplares de clases presentes en la lista pueden ser contenidos por un ejemplar de la clase que contiene el atributo **supportableClientList**.

En el caso de que un TP o **indirectAdaptor** pudiera sólo contener un tipo de cliente, se deben utilizar las clases de objeto gestionados de UIT-T G.774.

5.2 Requisitos

La elección entre la creación de las clases de objeto adaptador indirecto modificables o no modificables se efectúa según la composición y modo de operación del elemento de red.

La elección entre ejemplificación de las clases de objeto punto de terminación de camino modificables o no modificables se efectúa según la composición y modo de operación del elemento de red o por operaciones OS directas.

Toda la estructura por debajo de cualquier punto de terminación de camino (es decir, **vc4TTP**, **vc3TTP**, ...) se configura completamente una vez que se crea según una configuración por defecto predefinida.

Se debe soportar la reconfiguración de la estructura de multiplexación (es decir, cambiar un **tug3** de una estructura no multiplexada a **7 tug2**).

La configuración o reconfiguración define los subárboles completos entre el punto de terminación de camino de la capa de servidor (por ejemplo, **vc4TTP**) y los puntos de terminación de conexión de sus clientes (por ejemplo, **tu3CTP**, **tu12CTP**, ...).

En el caso en que un punto de terminación de trayecto pueda ser transconectado, puede existir independientemente de cualquier trayecto existente que haya de ser terminado.

El sistema de gestión puede elegir si el punto de terminación de conexión creado (por ejemplo, **tu3CTP**) puede ser flexible o no flexiblemente asignado.

La concatenación de **Nxtu2CTP** o **Nxau4CTP** se efectúa por medio de objetos GTP y por medio de las acciones **addTpsToGTP** y **removeTpsFromGTP** en el objeto gestionado tejido (fabric).

El sistema de gestión puede seleccionar el tipo de correspondencia de la cabida útil PDH dentro del contenedor virtual.

El cambio de configuración de un CTP transconectado contenido directa o indirectamente por el objeto al que se aplica la acción no es realizable. Los puntos de terminación de conexión que intervienen deben desconectarse primero aplicando la acción desconexión al tejido (fabric).

6 Clases de objetos

Modificaciones que requieren nuevo registro

Esta cláusula sustituye las definiciones de clases de objetos gestionados de la actual UIT-T G.774.2 (1994). Toda clase de objeto gestionado sustituida por una clase de esta cláusula se considera desaprobada. Los motivos para sustituir una clase de objeto gestionado son las siguientes:

- 1) la clase de objeto gestionado sustituida está defectuosa y debe ser corregida;
- 2) la clase de objeto gestionado sustituida incluye un atributo, lote, notificación u acción que ha sido registrado de nuevo en la presente Recomendación;
- 3) la clase de objeto gestionado sustituida hereda de una clase de objeto gestionado que ha sido registrada nuevo en la presente Recomendación.

Cada vez que se sustituye una clase, la nueva clase será registrada en la presente Recomendación. La etiqueta textual para la clase será modificada para incluir el texto "R1". Por ejemplo, cuando se modifica la clase de objeto gestionado "modifiableVC4TTPBidirectional" G.774.2 (1994), la etiqueta modificada será "modifiableVC4TTPBidirectionalR1".

A continuación figura una tabla de clases desaprobadas de UIT-T G.774.2 (1994) y las nuevas clases G.774.2 que las sustituyen:

Clases G.774.2 1994 desaprobadas

modifiableVC4TTPBidirectional
modifiableVC4TTPSink
modifiableVC4TTPSource
modifiableVC3TTPBidirectional
modifiableVC3TTPSink
modifiableVC3TTPSource
modifiableVC2TTPBidirectional
modifiableVC2TTPSink
modifiableVC12TTPBidirectional
modifiableVC12TTPSink
modifiableVC11TTPBidirectional
modifiableVC11TTPSink

Clases G.774.2 sustitutivas

modifiableVC4TTPBidirectionalR1
modifiableVC4TTPSinkR1
modifiableVC4TTPSourceR1
modifiableVC3TTPBidirectionalR1
modifiableVC3TTPSinkR1
modifiableVC3TTPSourceR1
modifiableVC2TTPBidirectionalR1
modifiableVC2TTPSinkR1
modifiableVC12TTPBidirectionalR1
modifiableVC12TTPSinkR1
modifiableVC11TTPBidirectionalR1
modifiableVC11TTPSinkR1

6.1 Adaptors indirectos

```
modifiableAugBidirectional  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": augBidirectional;
    CHARACTERIZED BY
    modifiableAugBidPackage  PACKAGE
        BEHAVIOUR
    modifiableAugBidBehaviour BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineAUGStructure;;;
REGISTERED AS { g774-02MObjectClass 1 };

modifiableAugSink  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": augSink;
    CHARACTERIZED BY
    modifiableAugSinkPackage  PACKAGE
        BEHAVIOUR
    modifiableAugSinkBehaviour BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineAUGStructure;;;
REGISTERED AS { g774-02MObjectClass 2 };

modifiableAugSource  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": augSource;
    CHARACTERIZED BY
    modifiableAugSourcePackage  PACKAGE
        BEHAVIOUR
    modifiableAugSourceBehaviour BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineAUGStructure;;;
REGISTERED AS { g774-02MObjectClass 3 };

modifiableTug3Bidirectional  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": tug3Bidirectional;
    CHARACTERIZED BY
    modifiableTug3BidPackage  PACKAGE
        BEHAVIOUR
    modifiableTug3BidBehaviour BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineTug3Structure;;;
REGISTERED AS { g774-02MObjectClass 4 };

modifiableTug3Sink  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": tug3Sink;
    CHARACTERIZED BY
    modifiableTug3SinkPackage  PACKAGE
        BEHAVIOUR
    modifiableTug3SinkBehaviour BEHAVIOUR
```

```

DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineTug3Structure;;;
REGISTERED AS { g774-02MObjectClass 5 };

modifiableTug3Source  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": tug3Source;
    CHARACTERIZED BY
    modifiableTug3SourcePackage  PACKAGE
        BEHAVIOUR
    modifiableTug3SourceBehaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineTug3Structure;;;
REGISTERED AS { g774-02MObjectClass 6 };

modifiableTug2Bidirectional  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": tug2Bidirectional;
    CHARACTERIZED BY
    modifiableTug2BidPackage  PACKAGE
        BEHAVIOUR
    modifiableTug2BidBehaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineTug2Structure;;;
REGISTERED AS { g774-02MObjectClass 7 };

modifiableTug2Sink  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": tug2Sink;
    CHARACTERIZED BY
    modifiableTug2SinkPackage  PACKAGE
        BEHAVIOUR
    modifiableTug2SinkBehaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineTug2Structure;;;
REGISTERED AS { g774-02MObjectClass 8 };

modifiableTug2Source  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": tug2Source;
    CHARACTERIZED BY
    modifiableTug2SourcePackage  PACKAGE
        BEHAVIOUR
    modifiableTug2SourceBehaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineTug2Structure;;;
REGISTERED AS { g774-02MObjectClass 9 };

```

6.2 Capa de trayecto de orden superior

```
modifiableVC4TTPBidirectionalR1  MANAGED OBJECT CLASS
  DERIVED FROM "Recommendation G.774": vc4TTPBidirectionalR1;
  CHARACTERIZED BY
    "Recommendation M.3100": supportableClientListPackage,
    modifiableVC4TTPBidR1Package  PACKAGE
      BEHAVIOUR
        modifiableVC4TTPBidR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
  ACTIONS
    defineVC4Structure;;;
REGISTERED AS { g774-02MObjectClass 25 };

modifiableVC4TTPSinkR1  MANAGED OBJECT CLASS
  DERIVED FROM "Recommendation G.774": vc4TTPSinkR1;
  CHARACTERIZED BY
    "Recommendation M.3100": supportableClientListPackage,
    modifiableVC4TTPSinkR1Package  PACKAGE
      BEHAVIOUR
        modifiableVC4TTPSinkR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
  ACTIONS
    defineVC4Structure;;;
REGISTERED AS { g774-02MObjectClass 26 };

modifiableVC4TTPSourceR1  MANAGED OBJECT CLASS
  DERIVED FROM "Recommendation G.774": vc4TTPSourceR1;
  CHARACTERIZED BY
    "Recommendation M.3100": supportableClientListPackage,
    modifiableVC4TTPSourceR1Package  PACKAGE
      BEHAVIOUR
        modifiableVC4TTPSourceR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
  ACTIONS
    defineVC4Structure;;;
REGISTERED AS { g774-02MObjectClass 27 };

modifiableVC3TTPBidirectionalR1  MANAGED OBJECT CLASS
  DERIVED FROM "Recommendation G.774": vc3TTPBidirectionalR1;
  CHARACTERIZED BY
    "Recommendation M.3100": supportableClientListPackage,
    modifiableVC3TTPBidR1Package  PACKAGE
      BEHAVIOUR
        modifiableVC3TTPBidR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
  ACTIONS
    defineVC3Structure;;;
REGISTERED AS { g774-02MObjectClass 28 };
```

```

modifiableVC3TTPSinkR1  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc3TTPSinkR1;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC3TTPSinkR1Package  PACKAGE
        BEHAVIOUR
    modifiableVC3TTPSinkR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineVC3Structure;;;
REGISTERED AS { g774-02MObjectClass 29 };

```

```

modifiableVC3TTPSourceR1  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc3TTPSourceR1;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC3TTPSourceR1Package  PACKAGE
        BEHAVIOUR
    modifiableVC3TTPSourceR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineVC3Structure;;;
REGISTERED AS { g774-02MObjectClass 30 };

```

6.3 Capa de trayecto de orden inferior

```

modifiableVC2TTPBidirectionalR1  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc2TTPBidirectionalR1;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC2TTPBidR1Package  PACKAGE
        BEHAVIOUR
    modifiableVC2TTPBidR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineClientType;;;
REGISTERED AS { g774-02MObjectClass 31 };

```

```

modifiableVC2TTPSinkR1  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc2TTPSinkR1;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC2TTPSinkR1Package  PACKAGE
        BEHAVIOUR
    modifiableVC2TTPSinkR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineClientType;;;
REGISTERED AS { g774-02MObjectClass 32 };

```

```

modifiableVC2TTPSource  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc2TTPSource;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC2TTPSourcePackage  PACKAGE
        BEHAVIOUR
    modifiableVC2TTPSourceBehaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineClientType;;;
REGISTERED AS { g774-02MObjectClass 18 };

modifiableVC12TTPBidirectionalR1  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc12TTPBidirectionalR1;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC12TTPBidR1Package  PACKAGE
        BEHAVIOUR
    modifiableVC12TTPBidR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineClientType;;;
REGISTERED AS { g774-02MObjectClass 33 };

modifiableVC12TTPSinkR1  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc12TTPSinkR1;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC12TTPSinkR1Package  PACKAGE
        BEHAVIOUR
    modifiableVC12TTPSinkR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineClientType;;;
REGISTERED AS { g774-02MObjectClass 34 };

modifiableVC12TTPSource  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc12TTPSource;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC12TTPSourcePackage  PACKAGE
        BEHAVIOUR
    modifiableVC12TTPSourceBehaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineClientType;;;
REGISTERED AS { g774-02MObjectClass 21 };

```

```

modifiableVC11TTPBidirectionalR1  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc11TTPBidirectionalR1;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC11TTPBidR1Package  PACKAGE
        BEHAVIOUR
    modifiableVC11TTPBidR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineClientType;;;
REGISTERED AS { g774-02MObjectClass 35 };

modifiableVC11TTPSinkR1  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc11TTPSinkR1;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC11TTPSinkR1Package  PACKAGE
        BEHAVIOUR
    modifiableVC11TTPSinkR1Behaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineClientType;;;
REGISTERED AS { g774-02MObjectClass 36 };

modifiableVC11TTPSource  MANAGED OBJECT CLASS
    DERIVED FROM "Recommendation G.774": vc11TTPSource;
    CHARACTERIZED BY
        "Recommendation M.3100": supportableClientListPackage,
    modifiableVC11TTPSourcePackage  PACKAGE
        BEHAVIOUR
    modifiableVC11TTPSourceBehaviour  BEHAVIOUR
DEFINED AS
* This CLASS shall be instantiated when change of the SDH frame structure by
management operation is supported *
;;
    ACTIONS
        defineClientType;;;
REGISTERED AS { g774-02MObjectClass 24 };

```

7 Lotes

Ninguno.

8 Atributos

Ninguno.

9 Acciones

9.1 Definir estructura de AUG

```
defineAUGStructure ACTION
    BEHAVIOUR    defineAUGStructureBehaviour;
    MODE        CONFIRMED;
    PARAMETERS    defineSDHStructureError;
    WITH INFORMATION SYNTAX    SDHConfASN1.AUGStructureInfo;
REGISTERED AS { g774-02Action 1 };
defineAUGStructureBehaviour BEHAVIOUR
DEFINED AS
```

*This action is used to select between a one au4 structured aug and a three au3 structured aug.

If the object(s) contained by the aug already matche(s) the "**AUGStructureInfo**" parameter nothing is raised. In all other cases objects contained by the aug are deleted and corresponding to the "**AUGStructureInfo**" parameter one **au4CTP**, or three **au3CTP** are created.

The corresponding connection termination point(s) are created with the **crossConnectionPointerPackage** package according to the "**connectionInfo**" parameter. If the "unknown" choice of the "**connectionInfo**" parameter is selected the choice is left to the network element according to its make-up and mode.

When applied on a sink managed object, sink connection termination points are created.

When applied on a source managed object, source connection termination points are created.

When applied on a bidirectional managed object, bidirectional connection termination points are created.

The action fails if:

- change of configuration applies on an already existing cross-connected connection termination point contained directly or indirectly by the object on which the action is applied,
- the multiplexing structure is not supported by the network element,
- at least one created connection termination point is not cross-connectable and the **crossConnectable** choice of the "**connectionInfo**" parameter is selected.

NOTE – The definition of the connection termination point managed object classes which represent the adaptation function of the characteristic information of the client inside SDH virtual container are not already defined.*

;

9.2 Definir estructura de VC4

```
defineVC4Structure ACTION
    BEHAVIOUR    defineVC4StructureBehaviour,
                defineTug3StructureBehaviour,
                defineTug2StructureBehaviour;
    MODE        CONFIRMED;
    PARAMETERS    defineSDHStructureError;
    WITH INFORMATION SYNTAX    SDHConfASN1.VC4StructureInfo;
REGISTERED AS { g774-02Action 2 };
defineVC4StructureBehaviour BEHAVIOUR
DEFINED AS
```

*If the action parameter is "**notSubmultiplexed**" and contains "**noClient**" all contained objects are deleted. If the action parameter is "**notSubmultiplexed**" and contains a value different from "**noClient**" a CTP which corresponds to the client of the VC4 is created and the existing contained object(s) are deleted.

If the action parameter is "**threeTUG3**", three tug3 are created if they do not already exist, contained objects are deleted. Each TUG3 are structured according to the "**TUG3StructureInfo**" parameter ranked according to the time sequence of the tug3.

If the action has succeeded then the C2 signal label is updated according to the new frame structure:

- When applied on a sink VC4 the expected signal label is updated.
- When applied on a source VC4 the sent signal label is updated.
- When applied on a bidirectional VC4 both the expected and sent signal label are updated.

NOTE – The definition of the connection termination point managed object classes which represent the adaptation function of the characteristic information of the client inside SDH virtual container are not already defined.*

;

9.3 Definir estructura de VC3

```
defineVC3Structure ACTION
    BEHAVIOUR    defineVC3StructureBehaviour,
                defineTug2StructureBehaviour;
    MODE        CONFIRMED;
    PARAMETERS   defineSDHStructureError;
    WITH INFORMATION SYNTAX    SDHConfASN1.VC3StructureInfo;
REGISTERED AS { g774-02Action 3 };
defineVC3StructureBehaviour BEHAVIOUR
DEFINED AS
```

*If the action parameter is "**notSubmultiplexed**" and contains "**noClient**" all contained objects are deleted. If the action parameter is "**notSubmultiplexed**" and contains a value different from "**noClient**" a CTP which corresponds to the client of the VC3 is created and the existing contained objects are deleted.

If the action parameter is "**sevenTUG2**", seven tug2 are created if they do not already exist, contained CTP are deleted. Each TUG2 are structured according to the "**TUG2StructureInfo**" parameter ranked according to the time sequence of the tug2.

If the action has succeeded then the C2 signal label is updated according to the new frame structure:

- When applied on a sink VC3 the expected signal label is updated.
- When applied on a source VC3 the sent signal label is updated.
- When applied on a bidirectional VC3 both the expected and sent signal label are updated.

NOTE – The definition of the connection termination point managed object classes which represent the adaptation function of the characteristic information of the client inside SDH virtual container are not already defined.*

;

9.4 Definir estructura de Tug3

```
defineTug3Structure ACTION
    BEHAVIOUR    defineTug3StructureBehaviour,
                defineTug2StructureBehaviour;
    MODE        CONFIRMED;
    PARAMETERS   defineSDHStructureError;
    WITH INFORMATION SYNTAX    SDHConfASN1.TUG3StructureInfo;
REGISTERED AS { g774-02Action 4 };
defineTug3StructureBehaviour BEHAVIOUR
DEFINED AS
```

*If the **tug3StructureInfo** parameter is "**oneTU3**" a tu3CTP is created if it does not already exist and the existing contained object(s) are deleted.

If the **tug3StructureInfo** parameter is "sevenTUG2", seven tug2 are created if they do not already exist, contained CTP is deleted. Each TUG2 is structured according to the "TUG2StructureInfo" parameter ranked according to the time sequence of the tug2.

NOTE – The definition of the connection termination point managed object classes which represent the adaptation function of the characteristic information of the client inside SDH virtual container are not already defined.*

;

9.5 Definir estructura de Tug2

```
defineTug2Structure ACTION
    BEHAVIOUR    defineTug2StructureBehaviour;
    MODE        CONFIRMED;
    PARAMETERS    defineSDHStructureError;
    WITH INFORMATION SYNTAX    SDHConfASN1.TUG2StructureInfo;
REGISTERED AS { g774-02Action 5 };
defineTug2StructureBehaviour BEHAVIOUR
DEFINED AS
```

*If the object(s) contained by the tug2 already matche(s) the **tug2StructureInfo** parameter nothing is raised. In all other cases objects contained by the tug2 are deleted and corresponding to the "tug2StructureInfo" parameter one tu2CTP, three tu12CTP or four tu11CTP are created.

The corresponding connection termination point(s) are created with the **crossConnectionPointerPackage** package according to the "connectionInfo" parameter. If the "unknown" choice of the "connectionInfo" parameter is selected the choice is left to the network element according to its make-up and mode.

When applied on a sink managed object, sink connection termination points are created.

When applied on a source managed object, source connection termination points are created.

When applied on a bidirectional managed object, bidirectional connection termination points are created.

The action fails if:

- change of configuration applies on an already existing cross-connected connection termination point contained directly or indirectly by the object on which the action is applied,
- the multiplexing structure is not supported by the network element,
- at least one created connection termination point is not cross-connectable and the **crossConnectable** choice of the "connectionInfo" parameter is selected.*

;

9.6 Definición del tipo de cliente

```
defineClientType ACTION
    BEHAVIOUR    defineClientTypeBehaviour;
    MODE        CONFIRMED;
    PARAMETERS    defineSDHStructureError;
    WITH INFORMATION SYNTAX    SDHConfASN1.DefineClientTypeInfo;
REGISTERED AS { g774-02Action 6 };
defineClientTypeBehaviour BEHAVIOUR
DEFINED AS
```

*This action is used to choose the type of the adaptation function of payload inside the SDH low order Virtual Container.

If the action parameter is "noClient" the contained object is deleted. If the action parameter is different from "noClient" a CTP which corresponds to the client of the TTP is created and the existing contained object is deleted.

When applied on a sink TTP, a sink connection termination point is created.

When applied on a source TTP, a source connection termination point is created.

When applied on a bidirectional TTP, a bidirectional connection termination point is created.

The action fails if:

- the client type is not supported by the network element.

If the action has succeeded then the signal label V5 (bits 5-7) is updated according to the new frame structure:

- When applied on a sink VC the expected signal label is updated.
- When applied on a source VC the sent signal label is updated.
- When applied on a bidirectional VC both the expected and sent signal label are updated.

NOTE – The definition of the connection termination point managed object classes which represent the adaptation function of the characteristic information of the client inside SDH virtual container are not already defined.*

;

10 Notificaciones

Ninguna.

11 Parámetros

```
defineSDHStructureError PARAMETER
    CONTEXT    SPECIFIC-ERROR;
    WITH SYNTAX    SDHConfASN1.DefineSDHStructureError;
REGISTERED AS { g774-02Parameter 1 };
```

12 Vinculaciones de nombres

Modificaciones que requieren nuevo registro

Esta cláusula sustituye las definiciones de vinculaciones de nombres de la actual UIT-T G.774.2 (1994). Toda vinculación de nombres sustituida por una de esta cláusula se considera desaprobada. Los motivos para la sustitución de una vinculación de nombres son:

- 1) La vinculación de nombres sustituida está defectuosa y debe ser corregida.
- 2) La vinculación de nombres sustituida hace referencia a una clase de objeto gestionado superior que ha sido registrada de nuevo en ésta o en otra Recomendación.
- 3) La vinculación de nombres sustituida hace referencia a una clase de objeto gestionado subordinado que ha sido registrada de nuevo en ésta o en otra Recomendación.
- 4) La vinculación de nombres sustituida hace referencia a un atributo de denominación que ha sido registrado de nuevo en ésta o en otra Recomendación.

Cada vez que se sustituye una vinculación de nombres, la nueva será registrada en la presente Recomendación. La etiqueta textual de la denominación de nombres será modificada para incluir el texto "R1". Por ejemplo, cuando se modifica la vinculación de nombres "au3CTPSink-augSink" G.774.2 (1994), la etiqueta modificada será "au3CTPSink-augSinkR1". Obsérvese que "R1" se coloca inmediatamente después de la clase revisada que repercute en la vinculación de nombres.

A continuación figura una tabla de las vinculaciones de nombres desaprobadas de UIT-T G.774.2 (1994) y las vinculaciones de nombres G.774.2 que las sustituyen:

Vinculaciones de nombres G.774.2 1994 desaprobadas

au3CTPSink-augSink
au4CTPSink-augSink
tu11CTPSink-tug2Sink
tu12CTPSink-tug2Sink
tu2CTPSink-tug2Sink
tu3CTPSink-tug3Sink
tug2Source-vc3TTPSource
tug2Sink-vc3TTPSink
tug3Sink-vc4TTPSink
tug3Source-vc4TTPSource
vc11TTPSink-sdhNE
vc12TTPSink-sdhNE
vc2TTPSink-sdhNE
vc3TTPSink-sdhNE
vc3TTPSource-sdhNE
vc4TTPSink-sdhNE
vc4TTPSource-sdhNE
vcnUserChannelCTPSink-vc3TTPSink
vcnUserChannelCTPSource-vc3TTPSource
vcnUserChannelCTPSink-vc4TTPSink
vcnUserChannelCTPSource-vc4TTPSource

Vinculaciones de nombres G.774 sustitutivas

au3CTPSinkR1-augSink
au4CTPSinkR1-augSink
tu11CTPSinkR1-tug2Sink
tu12CTPSinkR1-tug2Sink
tu2CTPSinkR1-tug2Sink
tu3CTPSinkR1-tug3Sink
tug2Source-vc3TTPSourceR1
tug2Sink-vc3TTPSinkR1
tug3Sink-vc4TTPSinkR1
tug3Source-vc4TTPSourceR1
vc11TTPSinkR1-sdhNE
vc12TTPSinkR1-sdhNE
vc2TTPSinkR1-sdhNE
vc3TTPSinkR1-sdhNE
vc3TTPSourceR1-sdhNE
vc4TTPSinkR1-sdhNE
vc4TTPSourceR1-sdhNE
vcnUserChannelCTPSink-vc3TTPSinkR1
vcnUserChannelCTPSource-vc3TTPSourceR1
vcnUserChannelCTPSink-vc4TTPSinkR1
vcnUserChannelCTPSource-vc4TTPSourceR1

La presente Recomendación extiende las vinculaciones de nombres actualmente definidas en UIT-T G.774 añadiendo AND SUBCLASSES (Y SUBCLASES).

NOTA – En la presente Recomendación sólo se definen las vinculaciones de nombres sumidero-sumidero y fuente-fuente. Las vinculaciones de nombres también posibles sumidero-bidireccional y bidireccional-bidireccional se utilizan implícitamente por medio de herencias y las cláusulas AND SUBCLASSES. Para el caso bidireccional-bidireccional, se utilizará la vinculación de nombres sumidero-sumidero.

```

au3CTPSinkR1-augSink  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": au3CTPSinkR1  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": augSink  AND SUBCLASSES;
  WITH ATTRIBUTE          "Recommendation G.774": au3CTPId;
  BEHAVIOUR
    au3CTPSinkR1-augSinkBehaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 59 };

au3CTPSource-augSource  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": au3CTPSource  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": augSource  AND SUBCLASSES;
  WITH ATTRIBUTE          "Recommendation G.774": au3CTPId;
  BEHAVIOUR
    au3CTPSource-augSourceBehaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 2 };

au4CTPSinkR1-augSink  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": au4CTPSinkR1  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": augSink  AND SUBCLASSES;
  WITH ATTRIBUTE          "Recommendation G.774": au4CTPId;
  BEHAVIOUR
    au4CTPSinkR1-augSinkBehaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 60 };

au4CTPSource-augSource  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": au4CTPSource  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": augSource  AND SUBCLASSES;
  WITH ATTRIBUTE          "Recommendation G.774": au4CTPId;
  BEHAVIOUR
    au4CTPSource-augSourceBehaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 4 };

```

```

augSink-msTTPSink NAME BINDING
  SUBORDINATE OBJECT CLASS   "Recommendation G.774": augSink  AND SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS     "Recommendation G.774": msTTPSink  AND SUBCLASSES;
  WITH ATTRIBUTE            "Recommendation G.774": augId;
  BEHAVIOUR
    augSink-msTTPSinkBehaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 5 };

augSource-msTTPSource NAME BINDING
  SUBORDINATE OBJECT CLASS   "Recommendation G.774": augSource  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS     "Recommendation G.774": msTTPSource  AND SUBCLASSES;
  WITH ATTRIBUTE            "Recommendation G.774": augId;
  BEHAVIOUR
    augSource-msTTPSourceBehaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 6 };

electricalsPITTPSink-sdhNE NAME BINDING
  SUBORDINATE OBJECT CLASS   "Recommendation G.774": electricalsPITTPSink
  AND SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS     "Recommendation G.774": sdhNE  AND SUBCLASSES;
  WITH ATTRIBUTE            "Recommendation G.774": electricalsPITTPId;
  CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
  DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 7 };

electricalsPITTPSource-sdhNE NAME BINDING
  SUBORDINATE OBJECT CLASS   "Recommendation G.774": electricalsPITTPSource
  AND SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS     "Recommendation G.774": sdhNE  AND SUBCLASSES;
  WITH ATTRIBUTE            "Recommendation G.774": electricalsPITTPId;
  CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
  DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 8 };

msCTPSink-rsTTPSink NAME BINDING
  SUBORDINATE OBJECT CLASS   "Recommendation G.774": msCTPSink  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS     "Recommendation G.774": rsTTPSink  AND SUBCLASSES;
  WITH ATTRIBUTE            "Recommendation G.774": msCTPId;
  BEHAVIOUR
    msCTPSink-rsTTPSinkBehaviour  BEHAVIOUR

```

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 9 };

msCTPSource-rsTTPSource NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": msCTPSource AND SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": rsTTPSource AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": msCTPId;

BEHAVIOUR

msCTPSource-rsTTPSourceBehaviour BEHAVIOUR

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 10 };

msDatacomCTPSink-msTTPSink NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": msDatacomCTPSink AND SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": msTTPSink AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": msDatacomCTPId;

BEHAVIOUR

msDatacomCTPSink-msTTPSinkBehaviour BEHAVIOUR

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 11 };

msDatacomCTPSource-msTTPSource NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": msDatacomCTPSource AND SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": msTTPSource AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": msDatacomCTPId;

BEHAVIOUR

msDatacomCTPSource-msTTPSourceBehaviour BEHAVIOUR

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 12 };

msOrderwireCTPSink-msTTPSink NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": msOrderwireCTPSink AND SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": msTTPSink AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": msOrderwireCTPId;

BEHAVIOUR

msOrderwireCTPSink-msTTPSinkBehaviour BEHAVIOUR

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 13 };


```

msOrderwireCTPSource-msTTPSource  NAME BINDING
  SUBORDINATE OBJECT CLASS    "Recommendation G.774": msOrderwireCTPSource
  AND SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS      "Recommendation G.774": msTTPSource AND SUBCLASSES;
  WITH ATTRIBUTE             "Recommendation G.774": msOrderwireCTPId;
  BEHAVIOUR
    msOrderwireCTPSource-msTTPSourceBehaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 14 };

msTTPSink-sdhNE  NAME BINDING
  SUBORDINATE OBJECT CLASS    "Recommendation G.774": msTTPSink  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS      "Recommendation G.774": sdhNE  AND SUBCLASSES;
  WITH ATTRIBUTE             "Recommendation G.774": msTTPId;
  CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
  DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 15 };

msTTPSource-sdhNE  NAME BINDING
  SUBORDINATE OBJECT CLASS    "Recommendation G.774": msTTPSource  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS      "Recommendation G.774": sdhNE  AND SUBCLASSES;
  WITH ATTRIBUTE             "Recommendation G.774": msTTPId;
  CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
  DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 16 };

opticalSPITTPSink-sdhNE  NAME BINDING
  SUBORDINATE OBJECT CLASS    "Recommendation G.774": opticalSPITTPSink  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS      "Recommendation G.774": sdhNE  AND SUBCLASSES;
  WITH ATTRIBUTE             "Recommendation G.774": opticalSPITTPId;
  CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
  DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 17 };

opticalSPITTPSource-sdhNE  NAME BINDING
  SUBORDINATE OBJECT CLASS    "Recommendation G.774": opticalSPITTPSource  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS      "Recommendation G.774": sdhNE  AND SUBCLASSES;
  WITH ATTRIBUTE             "Recommendation G.774": opticalSPITTPId;

```

```

CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 18 };

rsCTPSink-electricalsPITTPSink NAME BINDING
    SUBORDINATE OBJECT CLASS    "Recommendation G.774": rsCTPSink AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS      "Recommendation G.774": electricalsPITTPSink AND
    SUBCLASSES;
    WITH ATTRIBUTE            "Recommendation G.774": rsCTPId;
    BEHAVIOUR
        rsCTPSink-electricalsPITTPSinkBehaviour BEHAVIOUR
DEFINED AS
*   The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 19 };

rsCTPSource-electricalsPITTPSource NAME BINDING
    SUBORDINATE OBJECT CLASS    "Recommendation G.774": rsCTPSource AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS      "Recommendation G.774": electricalsPITTPSource AND
    SUBCLASSES;
    WITH ATTRIBUTE            "Recommendation G.774": rsCTPId;
    BEHAVIOUR
        rsCTPSource-electricalsPITTPSourceBehaviour BEHAVIOUR
DEFINED AS
*   The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 20 };

rsCTPSink-opticalsPITTPSink NAME BINDING
    SUBORDINATE OBJECT CLASS    "Recommendation G.774": rsCTPSink AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS      "Recommendation G.774": opticalsPITTPSink AND
    SUBCLASSES;
    WITH ATTRIBUTE            "Recommendation G.774": rsCTPId;
    BEHAVIOUR
        rsCTPSink-opticalsPITTPSinkBehaviour BEHAVIOUR
DEFINED AS
*   The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 21 };

rsCTPSource-opticalsPITTPSource NAME BINDING
    SUBORDINATE OBJECT CLASS    "Recommendation G.774": rsCTPSource AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS      "Recommendation G.774": opticalsPITTPSource AND
    SUBCLASSES;
    WITH ATTRIBUTE            "Recommendation G.774": rsCTPId;
    BEHAVIOUR
        rsCTPSource-opticalsPITTPSourceBehaviour BEHAVIOUR

```

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 22 };

rsDatacomCTPSink-rsTTPSink NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": rsDatacomCTPSink AND SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": rsTTPSink AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": rsDatacomCTPId;

BEHAVIOUR

rsDatacomCTPSink-rsTTPSinkBehaviour BEHAVIOUR

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 23 };

rsDatacomCTPSource-rsTTPSource NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": rsDatacomCTPSource AND SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": rsTTPSource AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": rsDatacomCTPId;

BEHAVIOUR

rsDatacomCTPSource-rsTTPSourceBehaviour BEHAVIOUR

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 24 };

rsOrderwireCTPSink-rsTTPSink NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": rsOrderwireCTPSink AND SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": rsTTPSink AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": rsOrderwireCTPId;

BEHAVIOUR

rsOrderwireCTPSink-rsTTPSinkBehaviour BEHAVIOUR

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 25 };

rsOrderwireCTPSource-rsTTPSource NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": rsOrderwireCTPSource AND SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": rsTTPSource AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": rsOrderwireCTPId;

BEHAVIOUR

rsOrderwireCTPSource-rsTTPSourceBehaviour BEHAVIOUR

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 26 };

rsTTPSink-sdhNE NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": rsTTPSink AND
SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": sdhNE AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": rsTTPId;

CREATE

WITH-REFERENCE-OBJECT,

WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE

DELETES-CONTAINED-OBJECTS;

REGISTERED AS { g774-02NameBinding 27 };

rsTTPSource-sdhNE NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": rsTTPSource AND
SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": sdhNE AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": rsTTPId;

CREATE

WITH-REFERENCE-OBJECT,

WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE

DELETES-CONTAINED-OBJECTS;

REGISTERED AS { g774-02NameBinding 28 };

rsUserChannelCTPSink-rsTTPSink NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": rsUserChannelCTPSink
AND SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": rsTTPSink AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": rsUserChannelCTPId;

BEHAVIOUR

rsUserChannelCTPSink-rsTTPSinkBehaviour BEHAVIOUR

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 29 };

rsUserChannelCTPSource-rsTTPSource NAME BINDING

SUBORDINATE OBJECT CLASS "Recommendation G.774": rsUserChannelCTPSource
AND SUBCLASSES;

NAMED BY

SUPERIOR OBJECT CLASS "Recommendation G.774": rsTTPSource AND SUBCLASSES;

WITH ATTRIBUTE "Recommendation G.774": rsUserChannelCTPId;

BEHAVIOUR

rsUserChannelCTPSource-rsTTPSourceBehaviour BEHAVIOUR

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 30 };

```

tull1CTPSinkR1-tug2Sink  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": tull1CTPSinkR1  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": tug2Sink  AND SUBCLASSES;
  WITH ATTRIBUTE           "Recommendation G.774": tull1CTPId;
  BEHAVIOUR
    tull1CTPSinkR1-tug2SinkBehaviour  BEHAVIOUR
DEFINED AS
*  The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE  *
;;
REGISTERED AS { g774-02NameBinding 61 };

tull1CTPSource-tug2Source  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": tull1CTPSource  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": tug2Source  AND SUBCLASSES;
  WITH ATTRIBUTE           "Recommendation G.774": tull1CTPId;
  BEHAVIOUR
    tull1CTPSource-tug2SourceBehaviour  BEHAVIOUR
DEFINED AS
*  The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE  *
;;
REGISTERED AS { g774-02NameBinding 32 };

tul2CTPSinkR1-tug2Sink  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": tul2CTPSinkR1  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": tug2Sink  AND SUBCLASSES;
  WITH ATTRIBUTE           "Recommendation G.774": tul2CTPId;
  BEHAVIOUR
    tul2CTPSinkR1-tug2SinkBehaviour  BEHAVIOUR
DEFINED AS
*  The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE  *
;;
REGISTERED AS { g774-02NameBinding 62 };

tul2CTPSource-tug2Source  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": tul2CTPSource  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": tug2Source  AND SUBCLASSES;
  WITH ATTRIBUTE           "Recommendation G.774": tul2CTPId;
  BEHAVIOUR
    tul2CTPSource-tug2SourceBehaviour  BEHAVIOUR
DEFINED AS
*  The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE  *
;;
REGISTERED AS { g774-02NameBinding 34 };

```

```
tu2CTPSinkR1-tug2Sink NAME BINDING
  SUBORDINATE OBJECT CLASS "Recommendation G.774": tu2CTPSinkR1 AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS "Recommendation G.774": tug2Sink AND SUBCLASSES;
  WITH ATTRIBUTE "Recommendation G.774": tu2CTPId;
  BEHAVIOUR
    tu2CTPSinkR1-tug2SinkBehaviour BEHAVIOUR
```

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 63 };

```
tu2CTPSource-tug2Source NAME BINDING
  SUBORDINATE OBJECT CLASS "Recommendation G.774": tu2CTPSource AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS "Recommendation G.774": tug2Source AND SUBCLASSES;
  WITH ATTRIBUTE "Recommendation G.774": tu2CTPId;
  BEHAVIOUR
    tu2CTPSource-tug2SourceBehaviour BEHAVIOUR
```

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 36 };

```
tu3CTPSinkR1-tug3Sink NAME BINDING
  SUBORDINATE OBJECT CLASS "Recommendation G.774": tu3CTPSinkR1 AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS "Recommendation G.774": tug3Sink AND SUBCLASSES;
  WITH ATTRIBUTE "Recommendation G.774": tu3CTPId;
  BEHAVIOUR
    tu3CTPSinkR1-tug3SinkBehaviour BEHAVIOUR
```

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 64 };

```
tu3CTPSource-tug3Source NAME BINDING
  SUBORDINATE OBJECT CLASS "Recommendation G.774": tu3CTPSource AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS "Recommendation G.774": tug3Source AND SUBCLASSES;
  WITH ATTRIBUTE "Recommendation G.774": tu3CTPId;
  BEHAVIOUR
    tu3CTPSource-tug3SourceBehaviour BEHAVIOUR
```

DEFINED AS

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

;;

REGISTERED AS { g774-02NameBinding 38 };

```

tug2Sink-tug3Sink  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": tug2Sink  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": tug3Sink  AND SUBCLASSES;
  WITH ATTRIBUTE          "Recommendation G.774": tug2Id;
  BEHAVIOUR
    tug2Sink-tug3SinkBehaviour  BEHAVIOUR
DEFINED AS
*  The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE  *
;;
REGISTERED AS { g774-02NameBinding 39 };

tug2Source-tug3Source  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": tug2Source  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": tug3Source  AND SUBCLASSES;
  WITH ATTRIBUTE          "Recommendation G.774": tug2Id;
  BEHAVIOUR
    tug2Source-tug3SourceBehaviour  BEHAVIOUR
DEFINED AS
*  The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE  *
;;
REGISTERED AS { g774-02NameBinding 40 };

tug2Sink-vc3TTPSinkR1  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": tug2Sink  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": vc3TTPSinkR1  AND
  SUBCLASSES;
  WITH ATTRIBUTE          "Recommendation G.774": tug2Id;
  BEHAVIOUR
    tug2Sink-vc3TTPSinkR1Behaviour  BEHAVIOUR
DEFINED AS
*  The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE  *
;;
REGISTERED AS { g774-02NameBinding 65 };

tug2Source-vc3TTPSourceR1  NAME BINDING
  SUBORDINATE OBJECT CLASS  "Recommendation G.774": tug2Source  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS    "Recommendation G.774": vc3TTPSourceR1  AND
  SUBCLASSES;
  WITH ATTRIBUTE          "Recommendation G.774": tug2Id;
  BEHAVIOUR
    tug2Source-vc3TTPSourceR1Behaviour  BEHAVIOUR
DEFINED AS
*  The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE  *
;;
REGISTERED AS { g774-02NameBinding 66 };

```

```

tug3Sink-vc4TTPSinkR1 NAME BINDING
  SUBORDINATE OBJECT CLASS   "Recommendation G.774": tug3Sink  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS     "Recommendation G.774": vc4TTPSinkR1  AND
  SUBCLASSES;
  WITH ATTRIBUTE            "Recommendation G.774": tug3Id;
  BEHAVIOUR
    tug3Sink-vc4TTPSinkR1Behaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 67 };

tug3Source-vc4TTPSourceR1 NAME BINDING
  SUBORDINATE OBJECT CLASS   "Recommendation G.774": tug3Source  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS     "Recommendation G.774": vc4TTPSourceR1  AND
  SUBCLASSES;
  WITH ATTRIBUTE            "Recommendation G.774": tug3Id;
  BEHAVIOUR
    tug3Source-vc4TTPSourceR1Behaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 68 };

vc11TTPSinkR1-sdhNE NAME BINDING
  SUBORDINATE OBJECT CLASS   "Recommendation G.774": vc11TTPSinkR1  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS     "Recommendation G.774": sdhNE  AND SUBCLASSES;
  WITH ATTRIBUTE            "Recommendation G.774": vc11TTPId;
  CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
  DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 69 };

vc11TTPSource-sdhNE NAME BINDING
  SUBORDINATE OBJECT CLASS   "Recommendation G.774": vc11TTPSource  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS     "Recommendation G.774": sdhNE  AND SUBCLASSES;
  WITH ATTRIBUTE            "Recommendation G.774": vc11TTPId;
  CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
  DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 46 };

vc12TTPSinkR1-sdhNE NAME BINDING
  SUBORDINATE OBJECT CLASS   "Recommendation G.774": vc12TTPSinkR1  AND
  SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS     "Recommendation G.774": sdhNE  AND SUBCLASSES;
  WITH ATTRIBUTE            "Recommendation G.774": vc12TTPId;

```



```

CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 70 };

vc12TTPSource-sdhNE NAME BINDING
    SUBORDINATE OBJECT CLASS    "Recommendation G.774": vc12TTPSource AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS    "Recommendation G.774": sdhNE AND SUBCLASSES;
    WITH ATTRIBUTE    "Recommendation G.774": vc12TTPId;
CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 48 };

vc2TTPSinkR1-sdhNE NAME BINDING
    SUBORDINATE OBJECT CLASS    "Recommendation G.774": vc2TTPSinkR1 AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS    "Recommendation G.774": sdhNE AND SUBCLASSES;
    WITH ATTRIBUTE    "Recommendation G.774": vc2TTPId;
CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 71 };

vc2TTPSource-sdhNE NAME BINDING
    SUBORDINATE OBJECT CLASS    "Recommendation G.774": vc2TTPSource AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS    "Recommendation G.774": sdhNE AND SUBCLASSES;
    WITH ATTRIBUTE    "Recommendation G.774": vc2TTPId;
CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 50 };

vc3TTPSinkR1-sdhNE NAME BINDING
    SUBORDINATE OBJECT CLASS    "Recommendation G.774": vc3TTPSinkR1 AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS    "Recommendation G.774": sdhNE AND SUBCLASSES;
    WITH ATTRIBUTE    "Recommendation G.774": vc3TTPId;
CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 72 };

vc3TTPSourceR1-sdhNE NAME BINDING
    SUBORDINATE OBJECT CLASS    "Recommendation G.774": vc3TTPSourceR1 AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS    "Recommendation G.774": sdhNE AND SUBCLASSES;

```

```

WITH ATTRIBUTE      "Recommendation G.774": vc3TTPId;
CREATE
    WITH-REFERENCE-OBJECT,
    WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE
    DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 73 };

```

```

vc4TTPSinkR1-sdhNE NAME BINDING
    SUBORDINATE OBJECT CLASS      "Recommendation G.774": vc4TTPSinkR1 AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS      "Recommendation G.774": sdhNE AND SUBCLASSES;
    WITH ATTRIBUTE      "Recommendation G.774": vc4TTPId;
    CREATE
        WITH-REFERENCE-OBJECT,
        WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE
        DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 74 };

```

```

vc4TTPSourceR1-sdhNE NAME BINDING
    SUBORDINATE OBJECT CLASS      "Recommendation G.774": vc4TTPSourceR1 AND
    SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS      "Recommendation G.774": sdhNE AND SUBCLASSES;
    WITH ATTRIBUTE      "Recommendation G.774": vc4TTPId;
    CREATE
        WITH-REFERENCE-OBJECT,
        WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE
        DELETES-CONTAINED-OBJECTS;
REGISTERED AS { g774-02NameBinding 75 };

```

```

vcnUserChannelCTPSink-vc3TTPSinkR1 NAME BINDING
    SUBORDINATE OBJECT CLASS      "Recommendation G.774": vcnUserChannelCTPSink
    AND SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS      "Recommendation G.774": vc3TTPSinkR1 AND
    SUBCLASSES;
    WITH ATTRIBUTE      "Recommendation G.774": vcnUserChannelCTPId;
    BEHAVIOUR
        vcnUserChannelCTPSink-vc3TTPSinkR1Behaviour BEHAVIOUR
DEFINED AS

```

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

```

;;
REGISTERED AS { g774-02NameBinding 76 };

```

```

vcnUserChannelCTPSource-vc3TTPSourceR1 NAME BINDING
    SUBORDINATE OBJECT CLASS      "Recommendation G.774": vcnUserChannelCTPSource
    AND SUBCLASSES;
    NAMED BY
    SUPERIOR OBJECT CLASS      "Recommendation G.774": vc3TTPSourceR1 AND
    SUBCLASSES;
    WITH ATTRIBUTE      "Recommendation G.774": vcnUserChannelCTPId;
    BEHAVIOUR
        vcnUserChannelCTPSource-vc3TTPSourceR1Behaviour BEHAVIOUR
DEFINED AS

```

** The subordinate managed objects are automatically instantiated when the superior managed object is instantiated, according to the make-up and mode of operation of the NE **

```

;;
REGISTERED AS { g774-02NameBinding 77 };

```

```

vcnUserChannelCTPSink-vc4TTPSinkR1 NAME BINDING
  SUBORDINATE OBJECT CLASS      "Recommendation G.774": vcnUserChannelCTPSink
  AND SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS      "Recommendation G.774": vc4TTPSinkR1  AND
  SUBCLASSES;
  WITH ATTRIBUTE      "Recommendation G.774": vcnUserChannelCTPId;
  BEHAVIOUR
    vcnUserChannelCTPSink-vc4TTPSinkR1Behaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 78 };

vcnUserChannelCTPSource-vc4TTPSourceR1 NAME BINDING
  SUBORDINATE OBJECT CLASS      "Recommendation G.774": vcnUserChannelCTPSource
  AND SUBCLASSES;
  NAMED BY
  SUPERIOR OBJECT CLASS      "Recommendation G.774": vc4TTPSourceR1  AND
  SUBCLASSES;
  WITH ATTRIBUTE      "Recommendation G.774": vcnUserChannelCTPId;
  BEHAVIOUR
    vcnUserChannelCTPSource-vc4TTPSourceR1Behaviour  BEHAVIOUR
DEFINED AS
* The subordinate managed objects are automatically instantiated when the
superior managed object is instantiated, according to the make-up and mode of
operation of the NE *
;;
REGISTERED AS { g774-02NameBinding 79 };

```

13 Reglas de constricción

13.1 Sintaxis ampliada de las reglas de constricción

Esta cláusula redefine la gramática de las reglas de constricción de puntero definidas previamente en UIT-T G.774. Esta nueva gramática sólo se debe aplicar a las reglas de constricción definidas en la presente Recomendación.

13.1.1 Gramática de reglas de constricción

```

<constraint-rule-label> CONSTRAINT RULE
  OBJECT CLASS <class-label> [AND SUBCLASSES] ;
  IS RELATED TO <class-list> ;
  USING ATTRIBUTE <attribute-label> ;
  <constraint-rule-set> ;
;
<constraint-rule-set> ::= <single-constraint-rule> | <named-type-constraint-
rule>
<single-constraint-rule> ::= ACCORDING TO RULE <constraint-rule>
<named-type-constraint-rule> ::= CASE { <named-type-constraint-rule-list> }
<named-type-constraint-rule-list> ::= <named-type-constraint-rule-item> |
  <named-type-constraint-rule-item> , <named-type-constraint-rule-list>
<named-type-constraint-rule-item> ::=
  <named-type> ACCORDING TO RULE <constraint-rule>
<class-label> ::= label string as defined in ISO/IEC IS 10165-4
<attribute-label> ::= label string as defined in ISO/IEC IS 10165-4
<class-list> ::= <class-spec> | <class-list> ,<class-spec>
<class-spec> ::= <class-label> | <class-label> AND SUBCLASSES

```

```

<constraint-rule> ::= SET { <constraint-members> }
| SEQUENCE { <constraint-members> }
| CHOICE { <constraint-members> }
| SET SIZE ( <ordinality> ) OF <constraint-term>
| SEQUENCE SIZE ( <ordinality> ) OF <constraint-term>
<constraint-members> ::= <constraint-term>
| <constraint-term> , <constraint-members>
<constraint-term> ::= <class-spec> | <constraint-rule>
<ordinality> ::= <valueRange> | <valueList>
<valueRange> ::= <lowerValue> .. <upperValue>
<valueList> ::= <itemValue> | <itemValue> , <valueList>
<itemValue> ::= INTEGER
<lowerValue> ::= INTEGER
<upperValue> ::= INTEGER | N

```

13.1.2 Plantillas de reglas de restricción

```

OBJECT CLASS <class-label> [AND SUBCLASSES];
    indicates the class and optionally the subclasses which are governed by this
    constraint-rule. A class may be governed by more than one constraint-rule
    with non-overlapping sets of related classes in the RELATES TO OBJECT
    CLASSES clause.
IS RELATED TO OBJECT CLASSES <class-list>;
    indicates the set of classes of related instances that are governed by this
    constraint-rule. Any classes that are not in this list are not governed by
    this constraint-rule.
USING ATTRIBUTE <attribute-label>;
    indicates the attribute that represents a relationship by means of a pointer
    (DN) to the related object instances.
<constraint-rule-set>;
    there can be either a single rule, or a set of rules one for each of a set
    of named choices. In the latter case the CASE { ... } structure is used.
CASE { ... };
    provides a distinct constraint-rule for each of the set of named choices in
    the attribute syntax.
ACCORDING TO RULE <constraint-rule>
    provides the rule
SET { <constraint-members> }
    indicates that *all* of the constraint-members must be present in any order.
SEQUENCE { <constraint-members> }
    indicates that *all* of the constraint-members must be present in sequence.
CHOICE { <constraint-members> }
    indicates that *any one* of the constraint-members must be present.
SET SIZE <ordinality> OF <constraint-term>
    indicates the number of <constraint-term> that must be present in any order.
SEQUENCE SIZE <ordinality> OF <constraint-term>
    indicates the number of <constraint-term> that must be present in sequence.

```

13.2 Constricciones de puntero de conectividad

Esta cláusula define los valores admisibles para los atributos downstreamConnectivityPointer y upstreamConnectivityPointer utilizando las clases de objeto definidas en la presente Recomendación. Las reglas de restricción de puntero definidas en la presente Recomendación sustituyen a las definidas en UIT-T G.774.

Modificaciones que requieren nuevo registro

Esta cláusula sustituye las definiciones de reglas de restricción de la actual UIT-T G.774.2 (1994). Toda regla de restricción sustituida por una de esta cláusula se considera desaprobadada. Los motivos para la sustitución de una regla de restricción son:

- 1) La regla de restricción sustituida está defectuosa y debe ser corregida.
- 2) La regla de restricción sustituida hace referencia a una clase de objeto gestionado que ha sido registrada de nuevo en ésta o en otra Recomendación.
- 3) La regla de restricción sustituida hace referencia a un atributo que ha sido registrado de nuevo.

Cada vez que se sustituye una regla de restricción, la nueva será registrada en la presente Recomendación. La etiqueta textual de la regla de restricción será modificada para incluir el texto "R1". Por ejemplo, cuando se modifica la restricción "downstreamConnectivityPointer-au3CTPSink" G.774.2 (1994), la etiqueta modificada será "downstreamConnectivityPointer-au3CTPSinkR1". Obsérvese que "R1" se coloca inmediatamente después de la clase revisada que repercute en la restricción. Cuando la clase en la etiqueta no ha cambiado, pero la restricción ha sido alterada porque hace referencia a una clase que ha cambiado, "R1" se coloca inmediatamente después del texto "downstreamConnectivityPointer" de la etiqueta de restricción modificada. Por ejemplo, en la modificación de la restricción "downstreamConnectivityPointer-au3CTPSource", la etiqueta revisada será "downstreamConnectivityPointerR1-au3CTPSource".

La sintaxis, gramática y plantillas utilizadas para estas reglas de restricción se definen en UIT-T G.774 (1992) y se amplían en UIT-T G.774.2 (1994).

A continuación figura una tabla de las reglas de restricción desaprobadadas de UIT-T G.774.2 (1994) y las reglas de restricción G.774.2 que las sustituyen.

Reglas de restricción G.774.2 1994 desaprobadadas

```
downstreamConnectivityPointer-au3CTPSink
upstreamConnectivityPointer-au3CTPSource
downstreamConnectivityPointer-au4CTPSink
upstreamConnectivityPointer-au4CTPSource
downstreamConnectivityPointer-tu11CTPSink
upstreamConnectivityPointer-tu11CTPSource
downstreamConnectivityPointer-tu12CTPSink
upstreamConnectivityPointer-tu12CTPSource
downstreamConnectivityPointer-tu2CTPSink
upstreamConnectivityPointer-tu2CTPSource
downstreamConnectivityPointer-tu3CTPSink
upstreamConnectivityPointer-tu3CTPSource
upstreamConnectivityPointer-vc11TTPSink
downstreamConnectivityPointer-vc11TTPSource
upstreamConnectivityPointer-vc12TTPSink
downstreamConnectivityPointer-vc12TTPSource
upstreamConnectivityPointer-vc2TTPSink
downstreamConnectivityPointer-vc2TTPSource
upstreamConnectivityPointer-vc3TTPSink
downstreamConnectivityPointer-vc3TTPSource
upstreamConnectivityPointer-vc4TTPSink
downstreamConnectivityPointer-vc4TTPSource
```

Reglas de constricción G.774.2 sustitutivas

downstreamConnectivityPointer-au3CTPSinkR1
upstreamConnectivityPointerR1-au3CTPSource
downstreamConnectivityPointer-au4CTPSinkR1
upstreamConnectivityPointerR1-au4CTPSource
downstreamConnectivityPointer-tu11CTPSinkR1
upstreamConnectivityPointerR1-tu11CTPSource
downstreamConnectivityPointer-tu12CTPSinkR1
upstreamConnectivityPointerR1-tu12CTPSource
downstreamConnectivityPointer-tu2CTPSinkR1
upstreamConnectivityPointerR1-tu2CTPSource
downstreamConnectivityPointer-tu3CTPSinkR1
upstreamConnectivityPointerR1-tu3CTPSource
upstreamConnectivityPointer-vc11TTPSinkR1
downstreamConnectivityPointerR1-vc11TTPSource
upstreamConnectivityPointer-vc12TTPSinkR1
downstreamConnectivityPointerR1-vc12TTPSource
upstreamConnectivityPointer-vc2TTPSinkR1
downstreamConnectivityPointerR1-vc2TTPSource
upstreamConnectivityPointer-vc3TTPSinkR1
downstreamConnectivityPointer-vc3TTPSourceR1
upstreamConnectivityPointer-vc4TTPSinkR1
downstreamConnectivityPointer-vc4TTPSourceR1

downstreamConnectivityPointer-au3CTPSinkR1 CONSTRAINT RULE

OBJECT CLASS

"Recommendation G.774":au3CTPSinkR1 AND SUBCLASSES;

IS RELATED TO

vc3TTPSinkR1 AND SUBCLASSES,

"Recommendation G.774":au3CTPSource AND SUBCLASSES,

"Recommendation G.774":tu3CTPSource AND SUBCLASSES,

"Recommendation G.774":vc4TTPSinkR1 AND SUBCLASSES;

USING ATTRIBUTE

"Recommendation M.3100":downstreamConnectivityPointer;

CASE {

single ACCORDING TO RULE

SET SIZE(1) OF CHOICE {

"Recommendation G.774":vc3TTPSinkR1 AND SUBCLASSES,

"Recommendation G.774":au3CTPSource AND SUBCLASSES,

"Recommendation G.774":tu3CTPSource AND SUBCLASSES,

"Recommendation G.774":vc4TTPSinkR1 AND SUBCLASSES},

broadcast ACCORDING TO RULE

SET SIZE(1) OF CHOICE {

SET SIZE(1..N) OF CHOICE {

"Recommendation G.774":vc3TTPSinkR1 AND SUBCLASSES,

"Recommendation G.774":tu3CTPSource AND SUBCLASSES,

"Recommendation G.774":au3CTPSource AND SUBCLASSES},

SET SIZE(1..N) OF CHOICE {

"Recommendation G.774":vc4TTPSinkR1 AND SUBCLASSES}

}

};

;

upstreamConnectivityPointerR1-au3CTPSource CONSTRAINT RULE

OBJECT CLASS

"Recommendation G.774":au3CTPSource AND SUBCLASSES;

IS RELATED TO

"Recommendation G.774":vc3TTPSourceR1 AND SUBCLASSES,

"Recommendation G.774":au3CTPSinkR1 AND SUBCLASSES,

"Recommendation G.774":tu3CTPSinkR1 AND SUBCLASSES,

"Recommendation G.774":vc4TTPSourceR1 AND SUBCLASSES;

USING ATTRIBUTE

"Recommendation M.3100":upstreamConnectivityPointer;

```

CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc3TTPSourceR1 AND SUBCLASSES,
            "Recommendation G.774":au3CTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tu3CTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":vc4TTPSourceR1 AND SUBCLASSES}
        };
;

downstreamConnectivityPointer-au4CTPSinkR1 CONSTRAINT RULE
OBJECT CLASS
    au4CTPSinkR1 AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":au4CTPSource AND SUBCLASSES,
    "Recommendation G.774":vc4TTPSinkR1 AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc4TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":au4CTPSource AND SUBCLASSES},
    broadcast ACCORDING TO RULE
        SET SIZE(1..N) OF CHOICE {
            "Recommendation G.774":vc4TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":au4CTPSource AND SUBCLASSES}
        };
;

upstreamConnectivityPointerR1-au4CTPSource CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":au4CTPSource AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":au4CTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":vc4TTPSourceR1 AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":upstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc4TTPSourceR1 AND SUBCLASSES,
            "Recommendation G.774":au4CTPSinkR1 AND SUBCLASSES}
        };
;

downstreamConnectivityPointer-msCTPSink CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":msCTPSink AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":msTTPSink AND SUBCLASSES,
    "Recommendation G.774":msCTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100": downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":msTTPSink AND SUBCLASSES,
            "Recommendation G.774":msCTPSource AND SUBCLASSES }
        };
;

```

```

upstreamConnectivityPointer-msCTPSource CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":msCTPSource AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":msTTPSource AND SUBCLASSES,
    "Recommendation G.774":msCTPSink AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100": upstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":msTTPSource AND SUBCLASSES,
            "Recommendation G.774":msCTPSink AND SUBCLASSES }
};
;

```

```

upstreamConnectivityPointer-msTTPSink CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":msTTPSink AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":msCTPSink AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100": upstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":msCTPSink AND SUBCLASSES }
};
;

```

```

downstreamConnectivityPointer-msTTPSource CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":msTTPSource AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":msCTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100": downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":msCTPSource AND SUBCLASSES }
};
;

```

```

downstreamConnectivityPointer-rsCTPSink CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":rsCTPSink AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":rsTTPSink AND SUBCLASSES,
    "Recommendation G.774":rsCTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100": downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":rsTTPSink AND SUBCLASSES,
            "Recommendation G.774":rsCTPSource AND SUBCLASSES }
};
;

```



```

upstreamConnectivityPointer-rsCTPSource CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":rsCTPSource AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":rsTTPSource AND SUBCLASSES,
    "Recommendation G.774":rsCTPSink AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100": upstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":rsTTPSource AND SUBCLASSES,
            "Recommendation G.774":rsCTPSink AND SUBCLASSES }
};
;

upstreamConnectivityPointer-rsTTPSink CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":rsTTPSink AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":rsCTPSink AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100": upstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":rsCTPSink AND SUBCLASSES }
};
;

downstreamConnectivityPointer-rsTTPSource CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":rsTTPSource AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":rsCTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100": downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":rsCTPSource AND SUBCLASSES }
};
;

downstreamConnectivityPointer-tullCTPSinkR1 CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":tullCTPSinkR1 AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc11TTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":tullCTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc11TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tullCTPSource AND SUBCLASSES},
    broadcast ACCORDING TO RULE
        SET SIZE(1..N) OF CHOICE {
            "Recommendation G.774":vc11TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tullCTPSource AND SUBCLASSES }
};
;

```

```

upstreamConnectivityPointerR1-tu11CTPSource CONSTRAINT RULE
  OBJECT CLASS
    "Recommendation G.774":tu11CTPSource AND SUBCLASSES;
  IS RELATED TO
    "Recommendation G.774":vc11TTPSource AND SUBCLASSES,
    "Recommendation G.774":tu11CTPSinkR1 AND SUBCLASSES;
  USING ATTRIBUTE
    "Recommendation M.3100":upstreamConnectivityPointer;
  CASE {
    single ACCORDING TO RULE
      SET SIZE(1) OF CHOICE {
        "Recommendation G.774":vc11TTPSource AND SUBCLASSES,
        "Recommendation G.774":tu11CTPSinkR1 AND SUBCLASSES}
  };
;

```

```

downstreamConnectivityPointer-tu12CTPSinkR1 CONSTRAINT RULE
  OBJECT CLASS
    "Recommendation G.774":tu12CTPSinkR1 AND SUBCLASSES;
  IS RELATED TO
    "Recommendation G.774":vc12TTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":tu12CTPSource AND SUBCLASSES;
  USING ATTRIBUTE
    "Recommendation M.3100":downstreamConnectivityPointer;
  CASE {
    single ACCORDING TO RULE
      SET SIZE(1) OF CHOICE {
        "Recommendation G.774":vc12TTPSinkR1 AND SUBCLASSES,
        "Recommendation G.774":tu12CTPSource AND SUBCLASSES},
    broadcast ACCORDING TO RULE
      SET SIZE(1..N) OF CHOICE {
        "Recommendation G.774":vc12TTPSinkR1 AND SUBCLASSES,
        "Recommendation G.774":tu12CTPSource AND SUBCLASSES }
  };
;

```

```

upstreamConnectivityPointerR1-tu12CTPSource CONSTRAINT RULE
  OBJECT CLASS
    "Recommendation G.774":tu12CTPSource AND SUBCLASSES;
  IS RELATED TO
    "Recommendation G.774":vc12TTPSource AND SUBCLASSES,
    "Recommendation G.774":tu12CTPSinkR1 AND SUBCLASSES;
  USING ATTRIBUTE
    "Recommendation M.3100":upstreamConnectivityPointer;
  CASE {
    single ACCORDING TO RULE
      SET SIZE(1) OF CHOICE {
        "Recommendation G.774":vc12TTPSource AND SUBCLASSES,
        "Recommendation G.774":tu12CTPSinkR1 AND SUBCLASSES}
  };
;

```

```

downstreamConnectivityPointer-tu2CTPSinkR1 CONSTRAINT RULE
  OBJECT CLASS
    "Recommendation G.774":tu2CTPSinkR1 AND SUBCLASSES;
  IS RELATED TO
    "Recommendation G.774":vc2TTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":tu2CTPSource AND SUBCLASSES;
  USING ATTRIBUTE
    "Recommendation M.3100":downstreamConnectivityPointer;

```

```

CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc2TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tu2CTPSource AND SUBCLASSES},
    broadcast ACCORDING TO RULE
        SET SIZE(1..N) OF CHOICE {
            "Recommendation G.774":vc2TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tu2CTPSource AND SUBCLASSES }
};
;

upstreamConnectivityPointerR1-tu2CTPSource CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":tu2CTPSource AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc2TTPSource AND SUBCLASSES,
    "Recommendation G.774":tu2CTPSinkR1 AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":upstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc2TTPSource AND SUBCLASSES,
            "Recommendation G.774":tu2CTPSinkR1 AND SUBCLASSES }
};
;

downstreamConnectivityPointer-tu3CTPSinkR1 CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":tu3CTPSinkR1 AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc3TTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":au3CTPSource AND SUBCLASSES,
    "Recommendation G.774":tu3CTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc3TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":au3CTPSource AND SUBCLASSES,
            "Recommendation G.774":tu3CTPSource AND SUBCLASSES},
    broadcast ACCORDING TO RULE
        SET SIZE(1..N) OF CHOICE {
            "Recommendation G.774":vc3TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":au3CTPSource AND SUBCLASSES,
            "Recommendation G.774":tu3CTPSource AND SUBCLASSES }
};
;

upstreamConnectivityPointerR1-tu3CTPSource CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":tu3CTPSource AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc3TTPSourceR1 AND SUBCLASSES,
    "Recommendation G.774":au3CTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":tu3CTPSinkR1 AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":upstreamConnectivityPointer;

```

```

CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc3TTPSourceR1 AND SUBCLASSES,
            "Recommendation G.774":au3CTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tu3CTPSinkR1 AND SUBCLASSES }
};
;

upstreamConnectivityPointer-vc11TTPSinkR1 CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":vc11TTPSinkR1 AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc11TTPSource AND SUBCLASSES,
    "Recommendation G.774":tu11CTPSinkR1 AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":upstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc11TTPSource AND SUBCLASSES,
            "Recommendation G.774":tu11CTPSinkR1 AND SUBCLASSES}
};
;

downstreamConnectivityPointerR1-vc11TTPSource CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":vc11TTPSource AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc11TTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":tu11CTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc11TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tu11CTPSource AND SUBCLASSES},
    broadcast ACCORDING TO RULE
        SET SIZE(1..N) OF CHOICE {
            "Recommendation G.774":vc11TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tu11CTPSource AND SUBCLASSES}
};
;

upstreamConnectivityPointer-vc12TTPSinkR1 CONSTRAINT RULE
OBJECT CLASS
    vc12TTPSinkR1 AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc12TTPSource AND SUBCLASSES,
    "Recommendation G.774":tu12CTPSinkR1 AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":upstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc12TTPSource AND SUBCLASSES,
            "Recommendation G.774":tu12CTPSinkR1 AND SUBCLASSES }
};
;

```

```

downstreamConnectivityPointerR1-vc12TTPSource CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":vc12TTPSource AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc12TTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":tu12CTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc12TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tu12CTPSource AND SUBCLASSES},
    broadcast ACCORDING TO RULE
        SET SIZE(1..N) OF CHOICE {
            vc12TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tu12CTPSource AND SUBCLASSES}
};
;

upstreamConnectivityPointer-vc2TTPSinkR1 CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":vc2TTPSinkR1 AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc2TTPSource AND SUBCLASSES,
    "Recommendation G.774":tu2CTPSinkR1 AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":upstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc2TTPSource AND SUBCLASSES,
            "Recommendation G.774":tu2CTPSinkR1 AND SUBCLASSES }
};
;

downstreamConnectivityPointerR1-vc2TTPSource CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":vc2TTPSource AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc2TTPSinkR1 AND SUBCLASSES
    "Recommendation G.774":tu2CTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc2TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tu2CTPSource AND SUBCLASSES},
    broadcast ACCORDING TO RULE
        SET SIZE(1..N) OF CHOICE {
            "Recommendation G.774":vc2TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":tu2CTPSource AND SUBCLASSES }
};
;

upstreamConnectivityPointer-vc3TTPSinkR1 CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":vc3TTPSinkR1 AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc3TTPSourceR1 AND SUBCLASSES,
    "Recommendation G.774":au3CTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":tu3CTPSinkR1 AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":upstreamConnectivityPointer;

```

```

CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc3TTPSourceR1,
            "Recommendation G.774":au3CTPSinkR1,
            "Recommendation G.774":tu3CTPSinkR1 }
};
;

downstreamConnectivityPointer-vc3TTPSourceR1 CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":vc3TTPSourceR1 AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc3TTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":au3CTPSource AND SUBCLASSES,
    "Recommendation G.774":tu3CTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":downstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc3TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":au3CTPSource AND SUBCLASSES,
            "Recommendation G.774":tu3CTPSource AND SUBCLASSES},
    broadcast ACCORDING TO RULE
        SET SIZE(1..N) OF CHOICE {
            vc3TTPSinkR1 AND SUBCLASSES,
            "Recommendation G.774":au3CTPSource AND SUBCLASSES,
            "Recommendation G.774":tu3CTPSource AND SUBCLASSES }
};
;

upstreamConnectivityPointer-vc4TTPSinkR1 CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":vc4TTPSinkR1 AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc4TTPSourceR1 AND SUBCLASSES,
    "Recommendation G.774":au4CTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":au3CTPSinkR1 AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":upstreamConnectivityPointer;
CASE {
    single ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            "Recommendation G.774":vc4TTPSourceR1 AND SUBCLASSES,
            "Recommendation G.774":au4CTPSinkR1 AND SUBCLASSES },
    concatenated ACCORDING TO RULE
        SET SIZE(1) OF CHOICE {
            SEQUENCE SIZE(3) OF
                "Recommendation G.774":au3CTPSinkR1 AND SUBCLASSES}
};
;

downstreamConnectivityPointer-vc4TTPSourceR1 CONSTRAINT RULE
OBJECT CLASS
    "Recommendation G.774":vc4TTPSourceR1 AND SUBCLASSES;
IS RELATED TO
    "Recommendation G.774":vc4TTPSinkR1 AND SUBCLASSES,
    "Recommendation G.774":au4CTPSource AND SUBCLASSES,
    "Recommendation G.774":au3CTPSource AND SUBCLASSES;
USING ATTRIBUTE
    "Recommendation M.3100":downstreamConnectivityPointer;

```

```

CASE {
  single ACCORDING TO RULE
    SET SIZE(1) OF CHOICE {
      "Recommendation G.774":vc4TTPSinkR1 AND SUBCLASSES,
      "Recommendation G.774":au4CTPSource AND SUBCLASSES },
  broadcast ACCORDING TO RULE
    SET SIZE(1..N) OF CHOICE {
      "Recommendation G.774":vc4TTPSinkR1 AND SUBCLASSES,
      "Recommendation G.774":au4CTPSource AND SUBCLASSES},
  concatenated ACCORDING TO RULE
    SET SIZE(1) OF CHOICE {
      SEQUENCE SIZE(3) OF
        "Recommendation G.774":au3CTPSource AND SUBCLASSES},
  broadcastConcatenated ACCORDING TO RULE
    SET SIZE(1..N) OF CHOICE {
      SEQUENCE SIZE(3) OF
        "Recommendation G.774":au3CTPSource AND SUBCLASSES}
};
;

```

14 Reglas de subordinación

Esta cláusula define las combinaciones admisibles de clases de objetos subordinados que pueden ser denominadas por una clase de objeto superior, utilizando las clases de objeto contenidas en la presente Recomendación.

Modificaciones que requieren nuevo registro

Esta cláusula proporciona las definiciones de reglas de subordinación sustitutivas para la actual UIT-T G.774.2 (1994). Todas las reglas de subordinación sustituidas en esta cláusula se consideran desaprobadas. Los motivos para la sustitución de una regla de subordinación son los siguientes:

- 1) La regla de subordinación sustituida está defectuosa y se debe corregir.
- 2) La regla de subordinación sustituida se refiere a una clase de objeto gestionado que ha sido registrada de nuevo.

Cuando una regla de subordinación es sustituida, la nueva regla de subordinación se registrará en la presente Recomendación. La etiqueta textual para la reglas de subordinación se modificará para incluir el texto "R1". Por ejemplo, en la modificación de la regla de subordinación "vc3TTPSinkSubordination" G.774.2 (1994), la etiqueta modificada será "vc3TTPSinkR1Subordination". Obsérvese que "R1" se coloca inmediatamente después de la clase modificada que afecta a la regla de subordinación. Cuando la clase en la etiqueta no ha cambiado, pero la regla de subordinación ha sido alterada porque hace referencia a una clase que ha cambiado, "R1" se coloca al final de la etiqueta de la regla de subordinación modificada. Por ejemplo, en la modificación de la regla de subordinación "modifiableAugSinkSubordination", la etiqueta revisada será "modifiableAugSinkSubordinationR1".

A continuación figura una tabla de reglas de subordinación desaprobadas de UIT-T G.774.2 (1994) y las regla de subordinación G.774.2 que las sustituyen:

Reglas de subordinación G.774.2 1994 desaprobadas

```

modifiableAugSinkSubordination
modifiableAugBidirectionalSubordination
modifiableTug2SinkSubordination
modifiableTug2BidirectionalSubordination
modifiableTug3SinkSubordination
tug3BidirectionalSubordination
modifiableVC3TTPSinkSubordination
vc3TTPSinkSubordination

```

modifiableVC3TTPSourceSubordination
vc3TTPSourceSubordination
modifiableVC3TTPBidirectionalSubordination
vc3TTPBidirectionalSubordination
modifiableVC4TTPSinkSubordination
vc4TTPSinkSubordination
modifiableVC4TTPSourceSubordination
vc4TTPSourceSubordination
modifiableVC4TTPBidirectionalSubordination
vc4TTPBidirectionalSubordination

Reglas de subordinación G.774.2 sustitutivas

modifiableAugSinkSubordinationR1
modifiableAugBidirectionalSubordinationR1
modifiableTug2SinkSubordinationR1
modifiableTug2BidirectionalSubordinationR1
modifiableTug3SinkSubordinationR1
tug3BidirectionalSubordinationR1
modifiableVC3TTPSinkR1Subordination
vc3TTPSinkR1Subordination
modifiableVC3TTPSourceR1Subordination
vc3TTPSourceR1Subordination
modifiableVC3TTPBidirectionalR1Subordination
vc3TTPBidirectionalR1Subordination
modifiableVC4TTPSinkR1Subordination
vc4TTPSinkR1Subordination
modifiableVC4TTPSourceR1Subordination
vc4TTPSourceR1Subordination
modifiableVC4TTPBidirectionalR1Subordination
vc4TTPBidirectionalR1Subordination

```
modifiableAugSinkSubordinationR1 SUBORDINATION RULE
SUPERIOR OBJECT CLASS
    modifiableAugSink;
NAMES SUBORDINATES
    "Recommendation G.774":au4CTPSinkR1,
    "Recommendation G.774":au3CTPSinkR1;
ACCORDING TO RULE
    CHOICE {
        SET SIZE(1) OF "Recommendation G.774":au4CTPSinkR1,
        SET SIZE(3) OF "Recommendation G.774":au3CTPSinkR1
    };
;
```

```
modifiableAugSourceSubordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
    modifiableAugSource;
NAMES SUBORDINATES
    "Recommendation G.774":au4CTPSource,
    "Recommendation G.774":au3CTPSource;
ACCORDING TO RULE
    CHOICE {
        SET SIZE(1) OF "Recommendation G.774":au4CTPSource,
        SET SIZE(3) OF "Recommendation G.774":au3CTPSource
    };
;
```



```

modifiableAugBidirectionalSubordinationR1 SUBORDINATION RULE
  SUPERIOR OBJECT CLASS
    modifiableAugBidirectional;
  NAMES SUBORDINATES
    "Recommendation G.774":au4CTPSinkR1,
    "Recommendation G.774":au4CTPSource,
    "Recommendation G.774":au4CTPBidirectionalR1,
    "Recommendation G.774":au3CTPSinkR1,
    "Recommendation G.774":au3CTPSource,
    "Recommendation G.774":au3CTPBidirectionalR1;
  ACCORDING TO RULE
    CHOICE {
      SET SIZE(1) OF CHOICE {
        "Recommendation G.774":au4CTPSinkR1,
        "Recommendation G.774":au4CTPSource,
        "Recommendation G.774":au4CTPBidirectionalR1 },
      SET SIZE(3) OF CHOICE {
        "Recommendation G.774":au3CTPSinkR1,
        "Recommendation G.774":au3CTPSource,
        "Recommendation G.774":au3CTPBidirectionalR1 }
    };
;

msTTPSinkSubordination SUBORDINATION RULE
  SUPERIOR OBJECT CLASS
    "Recommendation G.774":msTTPSink;
  NAMES SUBORDINATES
    "Recommendation G.774":augSink,
    modifiableAugSink,
    "Recommendation G.774":msDatacomCTPSink,
    "Recommendation G.774":msOrderwireCTPSink;
  ACCORDING TO RULE
    SET {
      SET SIZE(1,4,16) OF CHOICE {
        "Recommendation G.774":augSink,
        modifiableAugSink },
      SET SIZE(0..1) OF "Recommendation G.774":msDatacomCTPSink,
      SET SIZE(0..1) OF "Recommendation G.774":msOrderwireCTPSink
    };
;

msTTPSourceSubordination SUBORDINATION RULE
  SUPERIOR OBJECT CLASS
    "Recommendation G.774":msTTPSource;
  NAMES SUBORDINATES
    "Recommendation G.774":augSource,
    modifiableAugSource,
    "Recommendation G.774":msDatacomCTPSource,
    "Recommendation G.774":msOrderwireCTPSource;
  ACCORDING TO RULE
    SET {
      SET SIZE(1,4,16) OF CHOICE {
        "Recommendation G.774":augSource,
        modifiableAugSource },
      SET SIZE(0..1) OF "Recommendation G.774":msDatacomCTPSource,
      SET SIZE(0..1) OF "Recommendation G.774":msOrderwireCTPSource
    };
;

```

```

msTTPBidirectionalSubordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":msTTPBidirectional;
NAMES SUBORDINATES
  "Recommendation G.774":augBidirectional,
  modifiableAugBidirectional,
  "Recommendation G.774":msDatacomCTPSink,
  "Recommendation G.774":msDatacomCTPSource,
  "Recommendation G.774":msDatacomCTPBidirectional,
  "Recommendation G.774":msOrderwireCTPSink,
  "Recommendation G.774":msOrderwireCTPSource,
  "Recommendation G.774":msOrderwireCTPBidirectional;
ACCORDING TO RULE
SET {
  SET SIZE(1,4,16) OF CHOICE {
    "Recommendation G.774":augBidirectional,
    modifiableAugBidirectional },
  SET SIZE(0..1) OF CHOICE {
    "Recommendation G.774":msDatacomCTPSink,
    "Recommendation G.774":msDatacomCTPSource,
    "Recommendation G.774":msDatacomCTPBidirectional },
  SET SIZE(0..1) OF CHOICE {
    "Recommendation G.774":msOrderwireCTPSink,
    "Recommendation G.774":msOrderwireCTPSource,
    "Recommendation G.774":msOrderwireCTPBidirectional }
};
;

```

```

modifiableTug2SinkSubordinationR1 SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  modifiableTug2Sink;
NAMES SUBORDINATES
  "Recommendation G.774":tu11CTPSinkR1,
  "Recommendation G.774":tu12CTPSinkR1,
  "Recommendation G.774":tu2CTPSinkR1;
ACCORDING TO RULE
CHOICE {
  SET SIZE(1) OF "Recommendation G.774":tu2CTPSinkR1,
  SET SIZE(3) OF "Recommendation G.774":tu12CTPSinkR1,
  SET SIZE(4) OF "Recommendation G.774":tu11CTPSinkR1
};
;

```

```

modifiableTug2SourceSubordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  modifiableTug2Source;
NAMES SUBORDINATES
  "Recommendation G.774":tu11CTPSource,
  "Recommendation G.774":tu12CTPSource,
  "Recommendation G.774":tu2CTPSource;
ACCORDING TO RULE
CHOICE {
  SET SIZE(1) OF "Recommendation G.774":tu2CTPSource,
  SET SIZE(3) OF "Recommendation G.774":tu12CTPSource,
  SET SIZE(4) OF "Recommendation G.774":tu11CTPSource
};
;

```

```

modifiableTug2BidirectionalSubordinationR1 SUBORDINATION RULE
  SUPERIOR OBJECT CLASS
    modifiableTug2Bidirectional;
  NAMES SUBORDINATES
    "Recommendation G.774":tu11CTPSinkR1,
    "Recommendation G.774":tu11CTPSource,
    "Recommendation G.774":tu11CTPBidirectionalR1,
    "Recommendation G.774":tu12CTPSinkR1,
    "Recommendation G.774":tu12CTPSource,
    "Recommendation G.774":tu12CTPBidirectionalR1,
    "Recommendation G.774":tu2CTPSinkR1,
    "Recommendation G.774":tu2CTPSource,
    "Recommendation G.774":tu2CTPBidirectionalR1;
  ACCORDING TO RULE
    CHOICE {
      SET SIZE(1) OF CHOICE {
        "Recommendation G.774":tu2CTPSinkR1,
        "Recommendation G.774":tu2CTPSource,
        "Recommendation G.774":tu2CTPBidirectionalR1 },
      SET SIZE(3) OF CHOICE {
        "Recommendation G.774":tu12CTPSinkR1,
        "Recommendation G.774":tu12CTPSource,
        "Recommendation G.774":tu12CTPBidirectionalR1 },
      SET SIZE(4) OF CHOICE {
        "Recommendation G.774":tu11CTPSinkR1,
        "Recommendation G.774":tu11CTPSource,
        "Recommendation G.774":tu11CTPBidirectionalR1 }
    };
;

```

```

modifiableTug3SinkSubordinationR1 SUBORDINATION RULE
  SUPERIOR OBJECT CLASS
    modifiableTug3Sink;
  NAMES SUBORDINATES
    "Recommendation G.774":tug2Sink,
    modifiableTug2Sink,
    "Recommendation G.774":tu3CTPSinkR1;
  ACCORDING TO RULE
    CHOICE {
      SET SIZE(1) OF "Recommendation G.774":tu3CTPSinkR1,
      SET SIZE(7) OF CHOICE {
        "Recommendation G.774":tug2Sink,
        modifiableTug2Sink }
    };
;

```

```

tug3SourceSubordination SUBORDINATION RULE
  SUPERIOR OBJECT CLASS
    "Recommendation G.774":tug3Source;
  NAMES SUBORDINATES
    "Recommendation G.774":tug2Source,
    modifiableTug2Source,
    "Recommendation G.774":tu3CTPSource;
  ACCORDING TO RULE
    CHOICE {
      SET SIZE(1) OF "Recommendation G.774":tu3CTPSource,
      SET SIZE(7) OF CHOICE {
        "Recommendation G.774":tug2Source,
        modifiableTug2Source }
    };
;

```

```

tug3BidirectionalSubordinationR1 SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":tug3Bidirectional;
NAMES SUBORDINATES
  "Recommendation G.774":tug2Sink,
  "Recommendation G.774":tug2Source,
  "Recommendation G.774":tug2Bidirectional,
  modifiableTug2Sink,
  modifiableTug2Source,
  modifiableTug2Bidirectional,
  "Recommendation G.774":tu3CTPSinkR1,
  "Recommendation G.774":tu3CTPSource,
  "Recommendation G.774":tu3CTPBidirectionalR1;
ACCORDING TO RULE
CHOICE {
  SET SIZE(1) OF CHOICE {
    "Recommendation G.774":tu3CTPSinkR1,
    "Recommendation G.774":tu3CTPSource,
    "Recommendation G.774":tu3CTPBidirectionalR1 },
  SET SIZE(7) OF CHOICE {
    "Recommendation G.774":tug2Sink,
    "Recommendation G.774":tug2Source,
    "Recommendation G.774":tug2Bidirectional,
    modifiableTug2Sink,
    modifiableTug2Source,
    modifiableTug2Bidirectional
  }
};
;

```

```

modifiableVC3TTPSinkR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":modifiableVC3TTPSinkR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug2Sink,
  modifiableTug2Sink,
  "Recommendation G.774":vcnUserChannelCTPSink;
ACCORDING TO RULE
SET {
  SET SIZE(7) OF CHOICE {
    "Recommendation G.774":tug2Sink,
    modifiableTug2Sink },
  SET SIZE(1) OF
    "Recommendation G.774":vcnUserChannelCTPSink
};
;

```

```

vc3TTPSinkR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":vc3TTPSinkR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug2Sink,
  modifiableTug2Sink,
  "Recommendation G.774":vcnUserChannelCTPSink;
ACCORDING TO RULE
SET {
  SET SIZE(7) OF CHOICE {
    "Recommendation G.774":tug2Sink,
    modifiableTug2Sink },
  SET SIZE(1) OF
    "Recommendation G.774":vcnUserChannelCTPSink
};
;

```

```

modifiableVC3TTPSourceR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":modifiableVC3TTPSourceR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug2Source,
  modifiableTug2source,
  "Recommendation G.774":vcnUserChannelCTPSource;
ACCORDING TO RULE
SET {
  SET SIZE(7) OF CHOICE {
    "Recommendation G.774":tug2Source,
    modifiableTug2Source },
  SET SIZE(1) OF
    "Recommendation G.774":vcnUserChannelCTPSource
};
;

vc3TTPSourceR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":vc3TTPSourceR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug2Source,
  modifiableTug2source,
  "Recommendation G.774":vcnUserChannelCTPSource;
ACCORDING TO RULE
SET {
  SET SIZE(7) OF CHOICE {
    "Recommendation G.774":tug2Source,
    modifiableTug2Source },
  SET SIZE(1) OF
    "Recommendation G.774":vcnUserChannelCTPSource
};
;

modifiableVC3TTPBidirectionalR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":modifiableVC3TTPBidirectionalR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug2Bidirectional,
  modifiableTug2Bidirectional,
  "Recommendation G.774":vcnUserChannelCTPSink,
  "Recommendation G.774":vcnUserChannelCTPSource,
  "Recommendation G.774":vcnUserChannelCTPBidirectional;
ACCORDING TO RULE
SET {
  SET SIZE(7) OF CHOICE {
    "Recommendation G.774":tug2Bidirectional,
    modifiableTug2Bidirectional },
  SET SIZE(1) OF CHOICE {
    "Recommendation G.774":vcnUserChannelCTPSink,
    "Recommendation G.774":vcnUserChannelCTPSource,
    "Recommendation G.774":vcnUserChannelCTPBidirectional }
};
;

vc3TTPBidirectionalR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":vc3TTPBidirectionalR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug2Bidirectional,
  modifiableTug2Bidirectional,
  "Recommendation G.774":vcnUserChannelCTPSink,
  "Recommendation G.774":vcnUserChannelCTPSource,
  "Recommendation G.774":vcnUserChannelCTPBidirectional;

```

```

ACCORDING TO RULE
  SET {
    SET SIZE(7) OF CHOICE {
      "Recommendation G.774":tug2Bidirectional,
      modifiableTug2Bidirectional },
    SET SIZE(1) OF CHOICE {
      "Recommendation G.774":vcnUserChannelCTPSink,
      "Recommendation G.774":vcnUserChannelCTPSource,
      "Recommendation G.774":vcnUserChannelCTPBidirectional }
  };
;

modifiableVC4TTPSinkR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":modifiableVC4TTPSinkR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug3Sink,
  modifiableTug3Sink,
  "Recommendation G.774":vcnUserChannelCTPSink;
ACCORDING TO RULE
  SET {
    SET SIZE(3) OF CHOICE {
      "Recommendation G.774":tug3Sink,
      modifiableTug3Sink },
    SET SIZE(1) OF
      "Recommendation G.774":vcnUserChannelCTPSink
  };
;

vc4TTPSinkR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":vc4TTPSinkR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug3Sink,
  modifiableTug3Sink,
  "Recommendation G.774":vcnUserChannelCTPSink;
ACCORDING TO RULE
  SET {
    SET SIZE(3) OF CHOICE {
      "Recommendation G.774":tug3Sink,
      modifiableTug3Sink },
    SET SIZE(1) OF
      "Recommendation G.774":vcnUserChannelCTPSink
  };
;

modifiableVC4TTPSourceR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":modifiableVC4TTPSourceR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug3Source,
  modifiableTug3source,
  "Recommendation G.774":vcnUserChannelCTPSource;
ACCORDING TO RULE
  SET {
    SET SIZE(3) OF CHOICE {
      "Recommendation G.774":tug3Source,
      modifiableTug3Source },
    SET SIZE(1) OF
      "Recommendation G.774":vcnUserChannelCTPSource
  };
;

```

```

vc4TTPSourceR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":vc4TTPSourceR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug3Source,
  modifiableTug3source,
  "Recommendation G.774":vcnUserChannelCTPSource;
ACCORDING TO RULE
SET {
  SET SIZE(3) OF CHOICE {
    "Recommendation G.774":tug3Source,
    modifiableTug3Source },
  SET SIZE(1) OF
    "Recommendation G.774":vcnUserChannelCTPSource
};
;

modifiableVC4TTPBidirectionalR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":modifiableVC4TTPBidirectionalR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug3Bidirectional,
  modifiableTug3Bidirectional,
  "Recommendation G.774":vcnUserChannelCTPSink,
  "Recommendation G.774":vcnUserChannelCTPSource,
  "Recommendation G.774":vcnUserChannelCTPBidirectional;
ACCORDING TO RULE
SET {
  SET SIZE(3) OF CHOICE {
    "Recommendation G.774":tug3Bidirectional,
    modifiableTug3Bidirectional },
  SET SIZE(1) OF CHOICE {
    "Recommendation G.774":vcnUserChannelCTPSink,
    "Recommendation G.774":vcnUserChannelCTPSource,
    "Recommendation G.774":vcnUserChannelCTPBidirectional }
};
;

vc4TTPBidirectionalR1Subordination SUBORDINATION RULE
SUPERIOR OBJECT CLASS
  "Recommendation G.774":vc4TTPBidirectionalR1;
NAMES SUBORDINATES
  "Recommendation G.774":tug3Bidirectional,
  modifiableTug3Bidirectional,
  "Recommendation G.774":vcnUserChannelCTPSink,
  "Recommendation G.774":vcnUserChannelCTPSource,
  "Recommendation G.774":vcnUserChannelCTPBidirectional;
ACCORDING TO RULE
SET {
  SET SIZE(3) OF CHOICE {
    "Recommendation G.774":tug3Bidirectional,
    modifiableTug3Bidirectional },
  SET SIZE(1) OF CHOICE {
    "Recommendation G.774":vcnUserChannelCTPSink,
    "Recommendation G.774":vcnUserChannelCTPSource,
    "Recommendation G.774":vcnUserChannelCTPBidirectional }
};
;

```

15 Producciones ASN.1 de soporte

```
SDHConfASN1 {itu-t(0) recommendation(0) g(7) g774(774) hyphen(127) conf(02)
informationModel(0)
asn1Module(2) sdhconf (0)}
DEFINITIONS IMPLICIT TAGS ::=
BEGIN
-- EXPORTS everything --
sdhConf OBJECT IDENTIFIER ::= { itu-t(0) recommendation(0) g(7) g774(774)
hyphen(127) conf(02)
informationModel(0) }
g774-02ObjectClass OBJECT IDENTIFIER ::= { sdhConf managedObjectClass(3) }
g774-02Action OBJECT IDENTIFIER ::= { sdhConf action(9) }
g774-02NameBinding OBJECT IDENTIFIER ::= { sdhConf nameBinding(6) }
g774-02Parameter OBJECT IDENTIFIER ::= { sdhConf parameter(5) }
ClientType ::= ENUMERATED {
-- For more information refer to ITU-T G.803 and G.707. --
noClient (0),
c139264AsynchronousMappingClientType (1),
c44736AsynchronousMappingClientType (2),
c34AsynchronousMappingClientType (3),
c6312AsynchronousMappingClientType (4),
c6312BitSynchronousMappingClientType (5),
c6312ByteSynchronousMappingClientType (6),
c2048AsynchronousMappingClientType (7),
c2048BitSynchronousMappingClientType (8),
c2048ByteSynchronousMappingClientType (9),
c1544AsynchronousMappingClientType (10),
c1544BitSynchronousMappingClientType (11),
c1544ByteSynchronousMappingClientType (12),
atMClientType (13),
fDDIClientType (14),
mANClientType (15)
}
-- NOTE - The identification of the different type of adaptation functions
-- for a single type of characteristic information is for further study.
ConnectionInfo ::= ENUMERATED {
crossConnectable (1),
notCrossConnectable (2),
unknown (3)
}
AUGStructureInfo ::= CHOICE {
oneAU4 [0] ConnectionInfo,
threeAU3 [1] SEQUENCE SIZE (1..3) OF ConnectionInfo
}
DefineClientTypeInfo ::= ClientType
DefineSDHStructureError ::= ENUMERATED {
structureNotSupported (0),
tpNotCrossConnectable (1),
tpAlreadyCrossConnected (2),
unknown (3)
}
TUG3StructureInfo ::= CHOICE {
oneTU3 [0] ConnectionInfo,
sevenTUG2 [1] SEQUENCE SIZE (1..7) OF TUG2StructureInfo
} -- ordered according to the time sequence --
TUG2StructureInfo ::= CHOICE {
oneTU2 [0] ConnectionInfo,
threeTU12 [1] SEQUENCE SIZE (1..3) OF ConnectionInfo,
fourTU11 [2] SEQUENCE SIZE (1..4) OF ConnectionInfo
} -- ordered according to the time sequence --
```



```

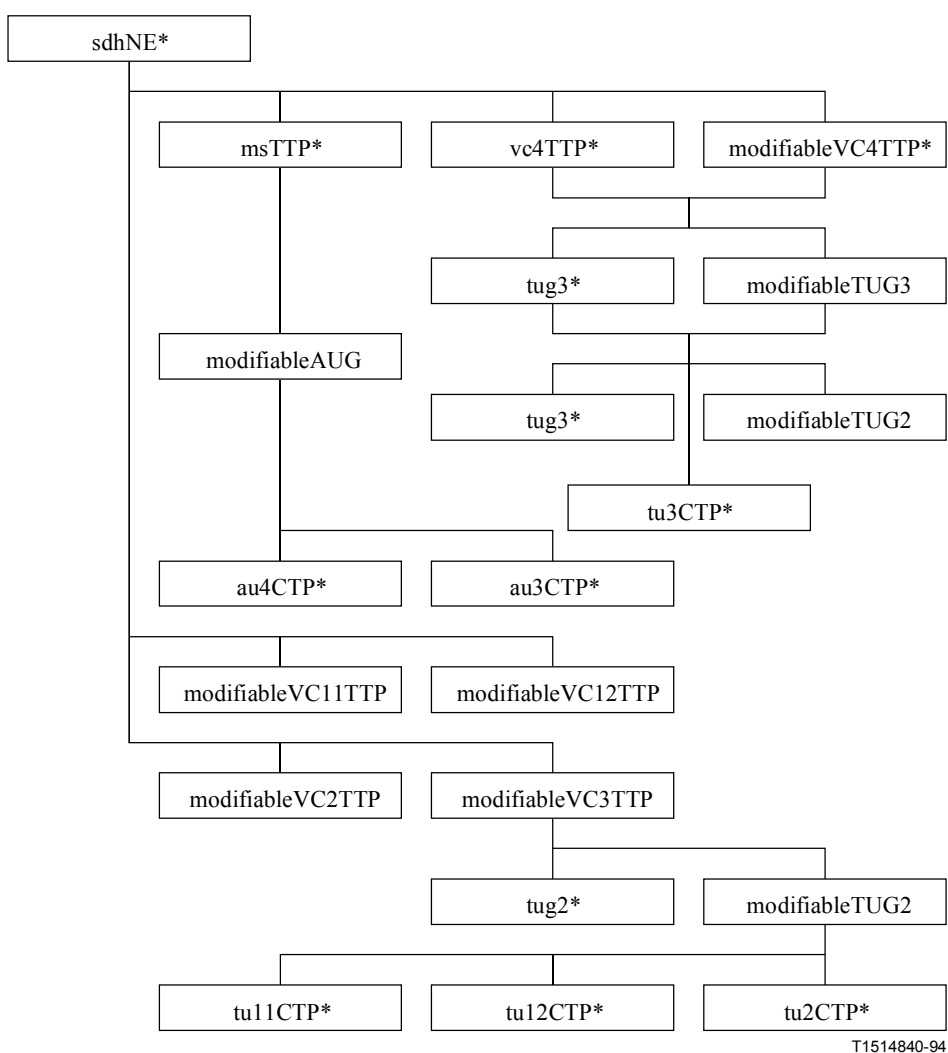
VC4StructureInfo ::= CHOICE {
    notSubmultiplexed [0] ClientType,
    threeTUG3         [1] SEQUENCE SIZE (1..3) OF TUG3StructureInfo
} -- ordered according to the time sequence --
VC3StructureInfo ::= CHOICE {
    notSubmultiplexed [0] ClientType,
    sevenTUG2         [1] SEQUENCE SIZE (1..7) OF TUG2StructureInfo
} -- In case of mapping the VC3 into a VC4 only the notSubmultiplexed
   choice is permitted. --
END -- end of supporting asn.1 productions --

```

APENDICE I

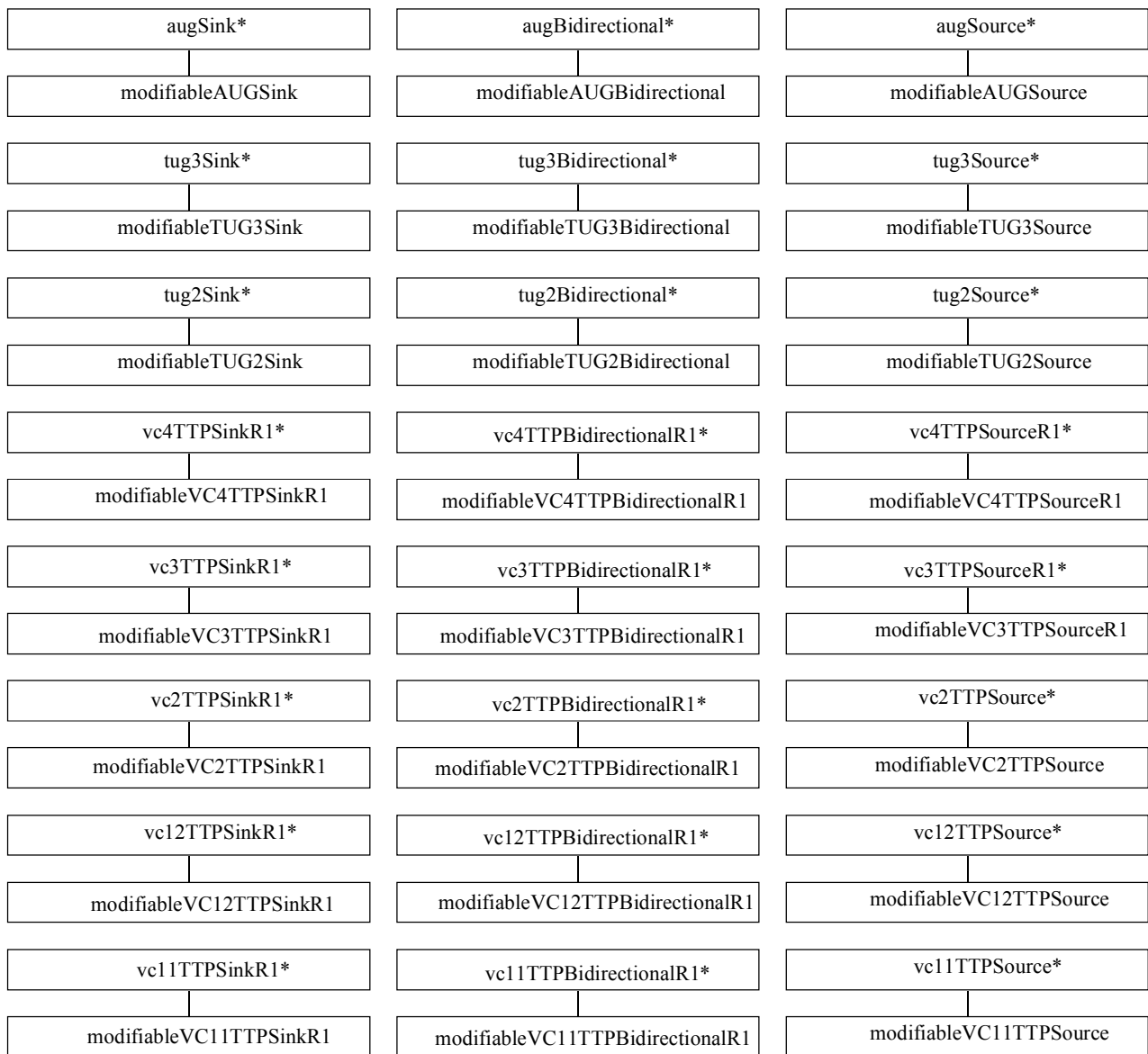
Diagramas de herencia y de denominación

Véanse las figuras I.1 y I.2.



Los TP e IA son sumideros, fuentes o bidireccionales.
* Sin definir en esta Recomendación.

Figura I.1/G.774.2 – Árbol de denominación para las clases de objeto gestionado (definidas en esta Recomendación)



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* Sin definir en esta Recomendación.

Figura I.2/G.774.2 – Árbol de herencia para las clases de objeto gestionado (definidas en esta Recomendación)

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