INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Corrigendum 1
X.880
(11/95)

DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

OSI APPLICATIONS – REMOTE OPERATIONS

INFORMATION TECHNOLOGY – REMOTE OPERATIONS: CONCEPTS, MODEL AND NOTATION

TECHNICAL CORRIGENDUM 1

Corrigendum 1 to
ITU-T Recommendation X.880

(Previously "CCITT Recommendation")

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. Some 179 member countries, 84 telecom operating entities, 145 scientific and industrial organizations and 38 international organizations participate in ITU-T which is the body which sets world telecommunications standards (Recommendations).

The approval of Recommendations by the Members of ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, 1993). In addition, the World Telecommunication Standardization Conference (WTSC), which meets every four years, approves Recommendations submitted to it and establishes the study programme for the following period.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC. The text of ITU-T Recommendation X.880, Corrigendum 1, was approved on 21st of November 1995. The identical text is also published as ISO/IEC International Standard 13712-1.

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NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized private operating agency.

ITU-T X-SERIES RECOMMENDATIONS

DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

(February 1994)

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Summary

This technical corrigendum to Rec. X.880 | ISO/IEC 13712-1 provides the changes of minor editorial corrections to the ASN.1 description.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – REMOTE OPERATIONS: CONCEPTS, MODEL AND NOTATION

TECHNICAL CORRIGENDUM 1

1)   Subclause 9.4.1

Replace the ASN.1 box with the following:

```
ReturnResult {OPERATION:Operations} ::= SEQUENCE
{
        invokeId  InvokeId
                        (CONSTRAINED BY {-- must be that for an outstanding operation --}
                        ! RejectProblem : returnResult-unrecognisedInvocation)
                        (CONSTRAINED BY {-- which returns a result --}
                        ! RejectProblem:returnResult-resultResponseUnexpected),
        result    SEQUENCE
        {
        opcode    OPERATION.&operationCode
                        ({Operations})(CONSTRAINED BY {-- identified by invokeId --}
                        ! RejectProblem : returnResult-unrecognisedInvocation),
        result    OPERATION.&ResultType       ({Operations} {@.opcode}
                        ! RejectProblem : returnResult-mistypedResult)
        }
            OPTIONAL
}
(CONSTRAINED BY { -- must conform to the above definition -- }
! RejectProblem : general-mistypedPDU)
```

2)   Subclause 10.11

Replace the contents of the ASN.1 box with the following:

```
recode {OPERATION:operation, Code:code} OPERATION ::=
{
        ARGUMENT            operation.&ArgumentType
            OPTIONAL                operation.&argumentTypeOptional
        RESULT              operation.&ResultType
            OPTIONAL                operation.&resultTypeOptional
        RETURN RESULT       operation.&returnResult
        ERRORS              {operation.&Errors}
        LINKED              {operation.&Linked}
        SYNCHRONOUS         operation.&synchronous
        ALWAYS RESPONDS     operation.&alwaysReturns
        INVOKE PRIORITY     {operation.&InvokePriority}
        RESULT-PRIORITY     {operation.&ResultPriority}
        CODE                code
}
```

3)   Subclause 10.12

Replace the contents of the ASN.1 box with the following:

```
switch {OPERATION-PACKAGE:package, OBJECT IDENTIFIER:id} OPERATION-PACKAGE ::=
{
        OPERATIONS              {package.&Both}
        CONSUMER INVOKES    {package.&Consumer}
        SUPPLIER INVOKES    {package.&Supplier}
        ID                      id
}
```

4)   Subclause 10.13.1

Replace the contents of the ASN.1 box with the following:

```
combine {OPERATION-PACKAGE:ConsumerConsumes, OPERATION-PACKAGE:ConsumerSupplies,
OPERATION-PACKAGE:base} OPERATION-PACKAGE ::=
{
        OPERATIONS              {ConsumerConsumes.&Both | ConsumerSupplies.&Both}
        CONSUMER INVOKES    {ConsumerConsumes.&Consumer | ConsumerSupplies.&Supplier}
        SUPPLIER INVOKES    {ConsumerConsumes.&Supplier | ConsumerSupplies.&Consumer}
        ID                      base.&id
}
```

5)   Annex A

In the module:

    Remote-Operations-Generic-ROS-PDUs {joint-iso-itu-t remote-operations(4) generic-ROS-PDUs(6) version1(0)},

replace the definition of:

    ReturnResult{OPERATION:Operations}

with the following:

```
ReturnResult {OPERATION:Operations} ::= SEQUENCE
{
        invokeId  InvokeId
                        (CONSTRAINED BY {-- must be that for an outstanding operation --}
                        ! RejectProblem : returnResult-unrecognisedInvocation)
                        (CONSTRAINED BY {-- which returns a result --}
                        ! RejectProblem:returnResult-resultResponseUnexpected),
        result    SEQUENCE
        {
        opcode    OPERATION.&operationCode
                        ({Operations})(CONSTRAINED BY {-- identified by invokeId --}
                        ! RejectProblem : returnResult-unrecognisedInvocation),
        result    OPERATION.&ResultType          ({Operations} {@.opcode}
                        ! RejectProblem : returnResult-mistypedResult)
        }
                OPTIONAL
}
(CONSTRAINED BY {-- must conform to the above definition --}
! RejectProblem : general-mistypedPDU)
```

In the module:

 Remote-Operations-Useful-Definitions {joint-iso-itu-t remote-operations(4) useful-definitions(7) version1(0)}

replace the definitions of:

 recode{ OPERATION:operation, Code:code}

with the following:

```
recode {OPERATION:operation, Code:code} OPERATION ::=
{
        ARGUMENT              operation.&ArgumentType
             OPTIONAL              operation.&argumentTypeOptional
        RESULT               operation.&ResultType
             OPTIONAL              operation.&resultTypeOptional
        RETURN RESULT        operation.&returnResult
        ERRORS               {operation.&Errors}
        LINKED               {operation.&Linked}
        SYNCHRONOUS          operation.&synchronous
        ALWAYS RESPONDS      operation.&alwaysReturns
        INVOKE PRIORITY      {operation.&InvokePriority}
        RESULT-PRIORITY      {operation.&ResultPriority}
        CODE                 code
}
```

In the module:

 Remote-Operations-Useful-Definitions {joint-iso-itu-t remote-operations(4) useful-definitions(7) version1(0)}

replace the definition of:

 switch { OPERATION-PACKAGE:package, OBJECT IDENTIFIER:id}

with the following:

```
switch {OPERATION-PACKAGE:package, OBJECT IDENTIFIER:id} OPERATION-PACKAGE ::=
{
        OPERATIONS         {package.&Both}
        CONSUMER INVOKES   {package.&Consumer}
        SUPPLIER INVOKES   {package.&Supplier}
        ID                 id
}
```

In the module:

 Remote-Operations-Useful-Definitions {joint-iso-itu-t remote-operations(4) useful-definitions(7) version1(0)}

replace the definition of:

 combine { OPERATION-PACKAGE: ConsumerConsumes, OPERATION-PACKAGE:ConsumerSupplies, OPERATION-PACKAGE:base }

with the following:

```
combine {OPERATION-PACKAGE:ConsumerConsumes, OPERATION-PACKAGE:ConsumerSupplies,
OPERATION-PACKAGE:base} OPERATION-PACKAGE ::=
{
        OPERATIONS         {ConsumerConsumes.&Both | ConsumerSupplies.&Both}
        CONSUMER INVOKES   {ConsumerConsumes.&Consumer | ConsumerSupplies.&Supplier}
        SUPPLIER INVOKES   {ConsumerConsumes.&Supplier | ConsumerSupplies.&Consumer}
        ID                 base.&id
}
```