INTERNATIONAL TELECOMMUNICATION UNION

ITU-T X.731

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Amendment 2
(01/2001)

SERIES X: DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

OSI management – Management functions and ODMA functions

Information Technology – Open Systems Interconnection – Systems Management: State management function

Amendment 2: Amendment to support lifecycle state

ITU-T Recommendation X.731 – Amendment 2

(Formerly CCITT Recommendation)

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INTERNATIONAL STANDARD ISO/IEC 10164-2

ITU-T RECOMMENDATION X.731

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – SYSTEMS MANAGEMENT: STATE MANAGEMENT FUNCTION

AMENDMENT 2

Amendment to support lifecycle state

Summary

This Recommendation | International Standard specifies a hypothetical generic object model and is used as the basis for the examination of additional states.

Source

Amendment 2 to ITU-T Recommendation X.731 was prepared by ITU-T Study Group 4 (2001-2004) and approved on 19 January 2001. An identical text is also published as ISO/IEC 10164-2, Amendment 2.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

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.

NOTE

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

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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Amendment to support lifecycle state

1) New subclause to clause 7

Add the following new subclause to clause 7 (Model):

7.x.x Lifecycle state

This state attribute tracks the plan for the managed object representing a resource. Inventoried resources may have a life cycle attribute so that their deployment can be planned, tracked, and managed. Logical resources, e.g. connection, are not inventoried; however, their deployment can be planned, tracked, and managed using a lifecycle state attribute.

The transitions of the Lifecycle State are shown below (see Figure x):

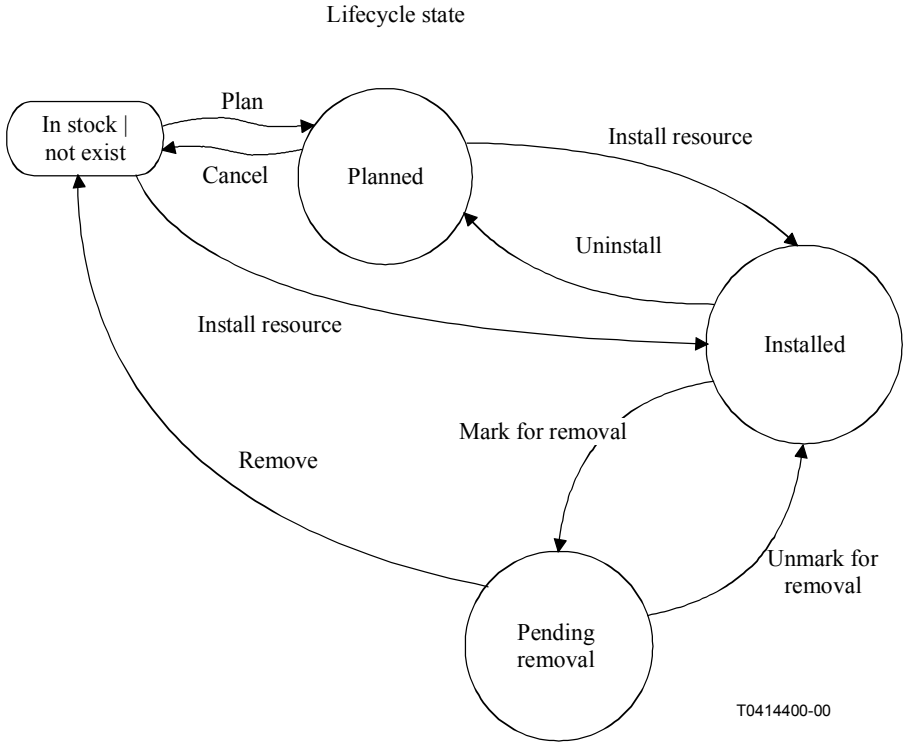

Figure x – Lifecycle state transition Diagram

2) New subclause to clause 8

Insert the following new subclause to clause 8:

8.1.2.x Lifecycle state attribute

The lifecycle state attribute is single-valued, read-write. It shall have one of the following values.

- planned: The resource is planned but is not installed in the network.
- installed: The resource is installed in the network.
- pending removal: The resource has been marked for removal.

3) Subclause 11.2.2

Insert the following into the list of attributes in 11.2.2:

a) lifecycleState;

4) Table A.4

Replace Table A.4 with the following:

Table A.4 – Agent role minimum conformance requirement

Index	Item	Status	Support	Table reference	Additional information
1	operationalState attribute	c5			
2	usageState attribute	c5			
3	administrativeState attribute	c5			
4	alarmStatus attribute	c5			
5	proceduralStatus attribute	c5			
6	availabilityStatus attribute	c5			
7	controlStatus attribute	c5			
8	standbyStatus attribute	c5			
9	unknownStatus attribute	c5			
10	state attribute group	c5			
11	State change notification	c6			
12	state change record managed object class	c7		–	
13	lifecycleState attribute	c5		–	

c5: if A.2/1b then o else (if A.1/2a then o.3 else –).

c6: if A.2/1b then m else (if A.1/2a then o.3 else –).

c7: if A.4/11a and A.5/1a then m else –.

NOTE – The Table reference column in this table is the notification, attributes, or attribute group table reference of the MOCS supplied by the supplier of the managed object which claims to import the notification or attribute from this Recommendation | International Standard.

5) Table B.1

Replace Table B.1 with the following:

Table B.1 – Generic state attributes support

				Set by create		Get		Replace	
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support
1	operationalState	{dmi-att 35}	–	–		o.4		–	
2	usageState	{dmi-att 39}	–	–		o.4		–	
3	administrativeState	{dmi-att 31}	–	o.4		o.4		o.4	
4	alarmStatus	{dmi-att 32}	–	o.4		o.4		o.4	
5	proceduralStatus	{dmi-att 36}	–	–		o.4		–	
6	availabilityStatus	{dmi-att 33}	–	–		o.4		–	
7	controlStatus	{dmi-att 34}	–	o.4		o.4		o.4	
8	standbyStatus	{dmi-att 37}	–	–		o.4		–	
9	unknownStatus	{dmi-att 38}	–	–		o.4		–	
10	lifecycleState	{dmi-att 105}	–	o.4		o.4		o.4	

Table B.1– Generic state attributes support (*concluded*)

	Add		Remove		Set to default		
Index	Status	Support	Status	Support	Status	Support	Additional information
1	–		–		–		
2	–		–		–		
3	–		–		–		
4	o.4		o.4		–		
5	–		–		–		
6	–		–		–		
7	o.4		o.4		–		
8	–		–		–		
9	–		–		–		
10	–		–		–		

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Geneva, 2001