INTERNATIONAL TELECOMMUNICATION UNION

ITU-T E.191.1

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SERIES E: OVERALL NETWORK OPERATION, TELEPHONE SERVICE, SERVICE OPERATION AND HUMAN FACTORS

International operation – Numbering plan of the international telephone service

Criteria and procedures for the allocation of the ITU-T International Network Designator addresses

ITU-T Recommendation E.191.1

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ITU-T Recommendation E.191.1

Criteria and procedures for the allocation of the ITU-T International Network Designator addresses

Summary

This Recommendation details the criteria and procedures for the allocation of the ITU-T International Network Designator (IND) addresses to ATM Services Providers (ASPs) for ATM End System Addresses (AESAs).

Source

ITU-T Recommendation E.191.1 was prepared by ITU-T Study Group 2 (2001-2004) and approved under the WTSA Resolution 1 procedure on 2 February 2001.

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.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

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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ITU-T Recommendation E.191.1

Criteria and procedures for the allocation of the ITU-T International Network Designator addresses

1 Scope

This Recommendation details the criteria and procedures for the allocation of the ITU-T International Network Designator (IND) addresses to ATM Services Providers (ASPs) for ATM End System Addresses (AESAs).

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

– ITU-T Recommendation E.191 (2000), *B-ISDN addressing*.

– ITU-T Recommendation X.213 (1995) ISO/IEC 8348:1996, *Information technology – Open Systems Interconnection – Network Service Definition*. Annex A: *Network Layer Addressing*.

– ATM Forum AF-RA-0106.000 (1999), *ATM Forum Addressing: Reference Guide*.

3 Definitions

This Recommendation defines the following terms:

3.1 **AESA**: An ATM End System Address as described in ITU-T E.191.

3.2 **ITU IND AESA**: A type of AESA that has been defined by ITU.

3.3 **ATM service provider (ASP)**: Provides public correspondence services between end users, private networks or other ATM Service Providers, using an ATM network.

3.4 **an applicant**: Includes any company, corporation or governmental organization that operates a public correspondence service. Whilst the ITU IND is typically allocated to an ASP, it may also be allocated to other organizations who are able to demonstrate that the other AESA formats do not meet their addressing requirements and who affirm that the ITU IND will be used to facilitate interworking with the public network.

4 Abbreviations

This Recommendation uses the following abbreviations:

AESA ATM End System Address

AFI Authority and Format Identifier

ASP ATM Service Provider

ATM Asynchronous Transfer Mode

DSP Domain Specific Part

IDI Initial Domain Identifier

IND International Network Designator

ISO International Organization for Standardization

ITU-T International Telecommunication Union – Telecommunications Standardization Sector

TSB Telecommunication Standardization Bureau

5 ITU IND AESA principles and format

5.1 ITU IND AESA format

Figure 1 describes the format of an ITU IND AESA. The whole AESA is 20 octets or 40 hex (0-F) characters.

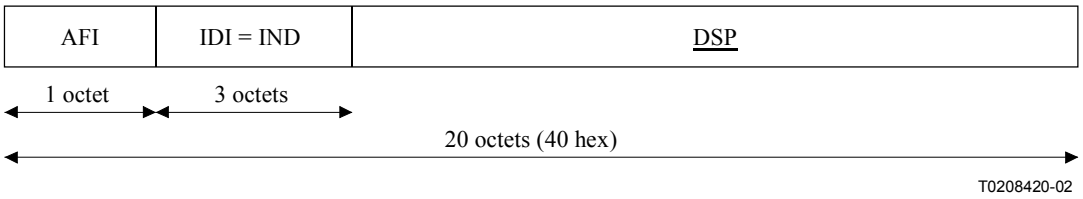

Figure 1/E.191.1 – An ITU IND AESA

Authority and Format Identifier (AFI) – is described in ITU-T E.191 and is a one octet (2-digits) field allocated jointly by ISO and ITU-T to denote an ITU IND AESA. The value of this field is 76 and 77 for individual addresses and E2 and E3 for group addresses (See ITU-T X.213, Table A.2), where 76 and E2 indicates decimal encoding of the DSP and 77 and E3 indicates binary encoding of the DSP.

Initial Domain Identifier (IDI) – is described in ITU-T E.191 and is the AESA International Network Designator (IND) field allocated by the ITU-T to the applicant. The length of this field is three octets (6 digits).

Domain Specific Part (DSP) – is described in ITU-T E.191 and is for allocation by the applicant. The length on this field is 16 octets.

5.2 ITU IND AESA principles

The following principles were used in the development of the ITU IND AESA format and assignment procedures, and should be considered with the use of ITU IND AESAs. For the remainder of this Recommendation, the term ITU-T IND will be referred to as IND:

a) an IND is allocated to an ASP;

b) a single IND is allocated to an ASP for their networks. One IND code should be used for all networks owned by that ASP. In unusual circumstances another code may be allocated to the ASP but it is up to the applicant to prove the requirement for more than one code. Due to the nature of the resource, no reservation period is required. Consequently, once the application is approved, the IND resource will be assigned;

c) once an IND is allocated it should not be transferred to another ASP;

d) an ASP need not be providing an ATM interface service directly to their customers in order to qualify for an ASP code.

6 AESA identifier code assignment principles

a) All assigned INDs must be used in conformance with this Recommendation.

b) Applications for an IND will only be considered when a valid and complete IND Request Form (see Annex A) has been received from an Applicant by the Registrar.

c) INDs will be allocated in a sequential fashion, i.e. the applicant may not request a certain code.

d) INDs may not be sold, licensed, or traded. Nor may they be transferred, except in the case of a merger, acquisition, or joint venture. Any such transfer shall be notified to the Registrar.

e) The assignment of an IND by the Registrar does not create an ownership interest, right or claim to the IND on the part of the ASP. Its use shall be subject to the terms set forth herein.

f) The IND shall be unique to an ASP.

g) Any violation of these principles by the ASP of an IND will result in the Registrar reclaiming the assigned number.

7 Applicant procedures

In most cases, the applicant would be the ASP. However, there may be circumstances when the applicant would apply on behalf of an ASP due to national requirements.

a) Submit valid requests for an IND in accordance with this Recommendation, using the particular ITU-T AESA format as described in 5.1. Invalid requests will be returned by the Registrar.

b) Send an IND Request Form, Part A (see Annex A), on behalf of the ASP, by facsimile or E-mail to the Registrar. The IND Request Form should be accompanied by evidence of payment of the registration application fee for the assignment of the IND by the Registrar. The ITU will notify Administrations of the amount of the registration application fee in the current Operational Bulletin of the ITU. Payment can be made either by accompanying each IND Request Form with payment of the registration application fee.

c) Accept IND Request Form, Part B, as the IND assignment confirmation from the Registrar, and notify the applicant.

d) Notify the Registrar of changes in information associated with the IND, e.g. change of name, address, using the IND Request Form, Part A.

e) The assignee will notify the Registrar via the IND Request Form, Part A, of the discontinued use of an IND.

8 Registrar procedures

The function of the Registrar will be performed under the auspices of ITU. The Registrar has the responsibility for the processing, and associated administrative functions, of registration requests from applicants. The processing of registration requests will be performed in close cooperation and consultation with national Administrations, as required by national administrations. This Recommendation does not include the legal responsibilities of the Registrar. The Registrar will:

a) assign all INDs in a fair and unbiased manner;

b) allocate INDs in a sequential fashion;

c) validate the request for an IND in accordance with this Recommendation. Return request to the applicant if the application is not valid;

d) administer a single pool of INDs in a single database. The database requirements include:
   - an entry for each assigned IND;
   - the assignee's name;
   - the applicant's contact name;
   - date of assignment;
   - historical information;
   - allow for administering change information;
   - allow an online view only capability to applicants.

e) receive all application requests by the applicant by facsimile with an IND Request Form, Part A or via E-mail. Inclusive payment of the registration application fee;

f) assign INDs on a "first come first served" basis. This means that the IND Application Forms received via facsimile or E-mail by the registrar, will be processed in order of receipt;

g) accept no verbal requests or inquiries, for available INDs;

h) allocate only one IND per ASP;

i) respond with an assignment to the applicant, within two working days of receipt of request with an IND request form, Part B, to acknowledge the assignment confirmation. Where a request for an IND is refused or delayed, the applicant should be informed of the reason;

j) update the IND database;

k) provide information to applicants on the application process;

l) recognizing a non-conforming use, the registrar will inform the applicant of the alleged misuse. The applicant will be afforded 30 days to either bring the IND into conformance or explain why the current use is conforming. If conformance is not achieved within 30 days, the IND will be reclaimed by the Registrar. The IND will immediately be disconnected and enter the ageing period;

m) accept notice of return of an IND via the IND Request Form, Part A. The IND will be placed in the ageing period on the date the Registrar receives the notification of disconnect;

n) when an existing IND is completely returned, the IND can be assigned to another ASP normally after a six-month ageing period;

o) the Registrar will send confirmation of the return of the IND to the applicant, via the IND Status Notification Form, Part B;

p) accept changes of information associated with INDs (e.g. change of name, address), via the IND Request Form, Part A;

q) monitor and audit the status of the IND resource and produce reports to the appropriate Study Group, including actual quantity of INDs assigned and growth statistics associated with those assignments;

r) publish a list of assigned INDs using an agreed method.

Annex A

IND Request Form

(One IND request per form)

Part A filled out by the Applicant

(Applicant) _____ Transmittal date: (a) _____
Company name (b) _____ Send to:
Contact name (c) _____ IND Registrar
Address _____ International Telecommunication Union
Telephone number (d) _____ Telecommunication Standardization Bureau
Fax number _____ CH-1211 GENEVA 20, Switzerland
E-mail address _____ Fax: +41 22 730 6200

Request type (mark with an X): (e) New ☐ Change ☐ Cancel ☐

Reason for change: (f) _____

Proposed use of IND (Applicant must indicate that the IND is to be used or plans to be used in the provision of public correspondence services) _____
_____

Payment of the registration application fee: (o) _____ Swiss francs

Specify the method of payment used:

☐ by bank transfer to ITU account No. [ ]

☐ major credit card

_____

Part B filled out by the Registrar to be returned to Applicant

This IND is assigned: (b) _____ Transmittal date (a) _____
The IND assignment was denied for the following reason: (c)

_____
_____
_____

Remarks: _____
_____
_____

Signature (Applicant/Registrar)

Annex B

Eligibility criteria and procedures for the allocation of INDs to organizations other than ASP

B.1 General guidelines

This annex defines eligibility criteria and procedures for the allocation of International Network Designator (IND) codes to organizations other than ATM service providers, in order that the ITU may efficiently and objectively handle applications for the assignment of such INDs in a timely manner. The IND codes are a common asset and not the property of any individual network operator, ITU Member state or other organization. Accordingly the INDs cannot be resold, traded or transferred and shall only be used for the purpose of network addressing.

The ITU is responsible for the allocation of INDs. The ITU determines the eligibility criteria for the allocation of such INDs. The eligibility criteria may be modified, withdrawn, added to or further modified at any time, as needed, in accordance with the changing telecommunications environment.

B.2 Eligibility criteria

Organizations other than ASPs requiring an IND code are required to demonstrate that they meet the eligibility criteria. No precedent should be attributed to any particular assignment for the purpose of supporting new assignments. As the number of available INDs is finite (1 000 000), it is important that the technical alternatives to the assignment of an IND code be ascertained. The technical alternatives to the assignment of an IND are given in ITU-T E.191. Organizations, which meet the following criteria, are eligible for consideration for the allocation of an IND code.

a) *The status of the organization*

The allocation may only be made to an organization (e.g. a registered business or public company). It may not be made to an individual.

b) *Ability to interwork with public networks*

The applicant should provide evidence that the allocated IND will be used to identify an existing or planned network. The organization's network must interwork or be connected with public networks. The application should be supported by the ATM Service Providers to whom the network is connected or interworks. However, it should be carefully noted that the allocation of a code to a non-ASP organization does not mandate that such codes will be used by other ASPs as the basis for routing of traffic across public networks.

c) *Compliance with national regulations*

The organization requesting an assignment must confirm that the use of the IND code would be in accordance with national laws and regulations where applicable.

d) *Technical and operational considerations*

There is a technical and operational benefit in using an IND code and, in particular, its use would facilitate interworking with the public network. The applicant must demonstrate the manner in which the network interworks (or plans to interwork) with ATM service provider's networks. It should be demonstrated that the use of an IND code is the most efficient and effective manner for providing addressing within the network and that the use of the other addressing schemes (e.g. ICD, DCC, IOTA) are seen as imposing limitations on the future technical development or commercial relationships that the network may wish to have with ASPs. In particular, issues such as the long-term stability of the network's addressing structure should be considered.

B.3 Procedures for the allocation of INDs to other organizations

The assignment of an IND to an organization other than an ASP is administered by ITU.

The process for the allocation of an IND is initiated by a written request to the Director of TSB from the organization and must be supported by the ATM Service Providers to whom the organization's network interwork or plans to interwork.

The application procedures are detailed in clause 7 and the applicant must also submit the IND Request Form (Annex A).

The allocation of an IND to a non-ASP may not be a straightforward matter. It may raise a number of technical issues. Accordingly, when the ITU-T TSB receives an application from a non-ASP, the TSB will ensure that appropriate discussion takes place between the TSB, the organization requesting the allocation, the relevant ASPs and Study Group experts, to ensure that any technical and operational requirements have been taken into consideration before the final assignment of the code is made. It is important that technical alternatives to the assignment of an IND code be ascertained. The onus is placed on the organization applying for an IND code to demonstrate that there is a technical and operational benefit to identify the network with an IND.

If the TSB and the expert group (as detailed above) it has assembled, determine that the request for the assignment of an IND code meets the eligibility criteria in B.2, the relevant Study Group will advise the Director of TSB to approve the assignment.

B.4 Reclamation of INDs assigned to non-ASPs

The IND codes will be recovered if not used, or no longer required by the assignee, or not used in accordance with these guidelines.

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