

Procedures for

**The operation of the UK
scheme for the allocation of
ISO DCC format OSI Network
Layer addresses (including the
operation of the associated UK
Registration Authority)**

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- British Telecommunications plc
- CCTA (the Government Centre for Information Systems)
- Digital Equipment Company Ltd.
- IBM United Kingdom Ltd.
- Institution of Electrical Engineers
- International Computers Limited
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- Logica UK Ltd.
- Nine Tiles Computer Systems Ltd.
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Foreword

This British Standard has been prepared by Technical Committee IST/6. It supersedes BS 7306 : 1990 which is withdrawn.

This standard describes the procedures for the operation of the UK national scheme for the allocation of Network Layer addresses conforming to the ISO DCC format.

The ISO DCC format is one of a number of formats defined in annex A of BS ISO/IEC 8348 : 1993. It uses a three-digit code, defined in BS EN 23166 : 1994, to identify the country to which address space has been allocated. The UK has actively participated, through BSI Technical Committee IST/6, in the development of annex A of ISO/IEC 8348 : 1993.

This British Standard is being published to facilitate the allocation of Network Layer addresses from the address space assigned to the UK.

Under the authority of the Board of BSI, the Federation of the Electronics Industry (FEI) has been appointed under the provisions of clause 6 of this standard to act as the first UK Registration Authority for the address space assigned to the UK under the ISO DCC scheme, thus enabling immediate allocation of addresses within the UK.

Further information on the background to this scheme is contained in the introduction.

Attention is also drawn to annex E concerning the relationship of the scheme to CCITT X.400 | BS ISO/IEC 10021 addresses.

The provisions of the Data Protection Act, 1984 [1] may apply to the administration of the scheme and, if so, applicants will be informed of their rights of access to data stored on a computer system. (See 4.5.)

This new edition of the standard makes a number of changes. The technical change is the increase in UKDSP length when using the preferred binary abstract syntax; for further details see 5.4, where the compatibility of this edition with the previous edition is described, and table 1. The register of initial allocations, given in appendix B of the previous edition, has been deleted, but an opportunity has been taken in this new edition to give more guidance, in the form of worked examples of encoding of ISO DCC format network addresses. The composition of the Advisory Committee (see 6.1) now reflects the revised constitutional position of the BSI Technical Committee responsible for this standard. Other changes have been made to this edition of the standard to ensure compatibility with BS ISO/IEC 8348 : 1993, including removal of references to preferred decimal coding.

Throughout this standard use of the pronouns he, him and his is intended to be non-gender specific.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Procedures

0 Introduction

0.1 Development of the UK DCC scheme

This British Standard covers the allocation of OSI Network Layer addresses of the ISO DCC format within the UK. It has been drafted by IST/6, the BSI Technical Committee responsible for the standardization of the Network Layer of OSI. There is a significant demand for such Network Layer addresses to be available in the UK, and there is therefore a need for a national address allocation scheme so that UK ISO DCC Network Layer addresses are unambiguously allocated and details of the allocation are registered. Such a scheme, termed the UK DCC scheme, has been established and is defined in this British Standard.

Registration forms and details of contact points are given in annexes to this standard. A nominal charge will be made to cover the administrative costs of allocation and registration; details are available from the UKRA.

0.2 Allocation policy

The details of the scheme are subject to change in the long term as experience is gained in its operation and the pattern of demand for UK ISO DCC Network Layer addresses develops. For this reason, an extremely cautious policy of address allocation has been established; in fact, most of the available address space has been reserved. Hence, if in the future a different method of structuring the address space is thought to be more appropriate to the developing needs, it will be possible to retain the existing allocations without significant loss of flexibility.

0.3 Sub-allocation of addresses

It is expected that many of the organizations to which the UKRA allocates one or more domain identifiers will themselves act as registration authorities for the further allocation of their address space within their communities of interest. The establishment in this way of a hierarchy of registration authorities is encouraged, since it will allow different sub-allocation methods and formats to be devised to suit the particular needs of the different communities.

It will be possible for some organizations to gain UK DCC addresses of more than one sub-structure by using different paths through the hierarchy. This possibility is regarded on balance as advantageous.

1 Scope

This British Standard sets out the procedures for the allocation of OSI Network Layer addresses of the ISO DCC format within the UK. Addresses in this format may be used as OSI network-addresses, OSI NSAP-addresses, network-entity-titles or for other purposes as defined in Network Layer standards. In the remainder of this British Standard, references to formats for OSI network-addresses are to be understood as applying equally to all such uses.

NOTE. The same formats are applicable to all the types of Network Layer address described above. For details of the differences of usage of addresses of these kinds, initial reference should be made to the part of the OSI Basic Reference Model that deals with naming and addressing, BS ISO 7498-3, to the Tutorial on Naming and Addressing, BS ISO/IEC TR 10730, to the OSI Network Service Definition, BS ISO/IEC 8348, and to the Intra-Domain Routing Protocol, BS ISO/IEC 10589.

Briefly, except where generic addressing is used:

- an OSI network-address identifies a transport-entity by identifying the set of NSAPs that provide access to a transport-entity;
- an OSI NSAP-address identifies a single NSAP;
- a network-entity-title identifies a network-entity (and is used in Network Layer routing).

Owing to differences in dates of issue, not all published Network Layer standards may make these distinctions; in particular 'network-address' is not always distinguished from 'NSAP address'.

The standard for OSI Network Layer Addressing (BS ISO/IEC 8348 : 1993) specifies a number of formats of OSI Network Layer address and establishes ISO as the top-level Registration Authority for all OSI Network Layer addresses. One of the address formats is the ISO DCC format; and, for that format specifically, annex A of BS ISO/IEC 8348 : 1993 allocates a portion of the global address space to the UK and assigns responsibility for the sub-allocation of that portion, within the UK, to BSI as the UK P-member of ISO. A UK Registration Authority (UKRA) has been appointed under the authority of the Board of BSI to administer this allocation.

The standard defines the three component elements of the scheme, namely:

- a) the specification of the formats of the addresses allocated: the *address structure*;
- b) the principles of operation of the scheme and the role of the UK Registration Authority (UKRA) and other bodies to which responsibility for its operation has been assigned: the *administration of the scheme*;
- c) the set of administrative procedures by which allocations are requested and subsequently controlled: the *procedures*.

The standard does not specify how the addresses are to be encoded in protocol.

The standard applies to the allocation and use of all OSI Network Layer addresses of the ISO DCC variety allocated to the UK by ISO in its capacity as Registration Authority for OSI Network Layer addresses as a whole. It applies to such addresses wherever and whenever they are used, irrespective of the purpose or manner of their use. Therefore all such addresses are allocated according to the procedures set out in this standard.

2 References

2.1 Normative references

This British Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

2.2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions and abbreviations

3.1 Definitions and explanations

3.1.1 This standard makes use of the following terms defined in BS 6568 : Part 1 (ISO 7498):

- network protocol
- Network Service
- Network Service Access Point
- subnetwork

3.1.2 It makes use of the following terms defined in BS ISO/IEC 8348:

- abstract syntax
- DTE address

3.1.3 It makes use of the following terms defined in CCITT Recommendation X.400 | BS ISO/IEC 10021:

- Message Handling System
- Message Transfer Agent
- Message Transfer layer
- Originator/Recipient address
- Submission and Delivery Entity
- User Agent

3.1.4 The following term is defined for the purposes of this standard:

UK Registration Authority: the organization that allocates UKDIs and manages the UKDI Register, in accordance with this standard.

3.1.5 For brevity, ISO DCC Network Layer addresses are equivalently termed *ISO DCC addresses*. Similarly, UK ISO DCC Network Layer addresses are equivalently termed *UK DCC addresses*. The complete set of procedures and their establishment and operation are collectively termed the *UK ISO DCC Network Layer address allocation scheme* or equivalently the *UK DCC scheme*.

3.2 Abbreviations

The following abbreviations are used in this standard:

AFI	Authority and Format Identifier
BCD	Binary Coded Decimal
DSP	Domain Specific Part
IDI	Initial Domain Identifier
IDP	Initial Domain Part
ISO DCC	ISO Data Country Code (a particular form of Network Layer address, see annex A of BS ISO/IEC 8348 : 1993)
MTA	Message Transfer Agent
NSAP	Network Service Access Point
O/R	Originator/Recipient
OSI	Open Systems Interconnection
PTO	Public Telecommunication Operator
SDE	Submission and Delivery Entity
UA	User Agent
UKRA	UK Registration Authority

The following are defined in clause 5 of this standard:

UK DCC	relating to 'ISO DCC' Network Layer addresses in the UK
UKDI	UK Domain Identifier
UKDP	UK Domain Part
UKDSP	UK Domain Specific Part
UKFI	UK Format Identifier