



EUROPEAN COMMITTEE FOR BANKING STANDARDS

IBAN: STANDARD IMPLEMENTATION GUIDELINES

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1 INTRODUCTION

A standard account number system is essential for efficient bank systems. Standard domestic account number systems are fully developed throughout the world.

Trade, and in consequence all forms of financial transactions, including payments, continue to become more and more global and cross-border in nature. While the proportion of cross-border European payments is still marginal in relation to total payments volume (about 1%), there is a growing pressure to improve their efficiency with regard to cost, speed and quality. Such improvements require a standard method of enabling cross-border account formats to be interpreted, and account numbers capable of easier validation.

A procedure whereby this can be established now exists. Following a European initiative, the ISO 13616 IBAN (International Bank Account Number) was published in 1997 [and revised in 2003¹](#). Several of the features, which ECBS members argued should be incorporated into ISO 13616 failed to obtain sufficient international support. ECBS has therefore published EBS 204, a Standard which incorporates these European agreed additional features and capable of being adopted by all banks within Europe in a consistent way. Adoption of these supplementary features will substantially simplify the routines required to process account number recognition and validation. An IBAN electronically formatted in accordance with the requirements of EBS 204 will automatically fulfil all the requirements of ISO 13616. Thus a European bank adopting the supplementary features will be able to use them for cross-border transactions both within and beyond Europe. At the same time, it is important to note that this SIG is equally relevant whether the supplementary features have been incorporated or not.

The IBAN is composed of the country code, two check-digits and a national bank/account number. It is represented in electronic means without separators (e.g. BE99123456789...) and on paper with a blank after each block of 4 characters (e.g. BE99 1234 5678 9...).

The implementation of IBAN by both originating bank and receiving bank enables :

- Automatic processing of foreign bank account identifications ;
- Uniform validation of foreign bank account identifications.

The implementation of EBS 204 is supported by means of these Implementation Guidelines, and by the use of the ECBS Technical Report 201 Register of European Account Numbers, which describes the format of European Account Numbers.

Following the European Central Bank's ⁽²⁾ and European Credit Sector Associations' recommendations ⁽³⁾, all European banks should have implemented the IBAN in their systems by the end of the year 2001.

¹ [The ISO 13616 minor revision of 2003 aligns the paper-based print format of ISO with that of ECBS as defined in EBS204.](#)

² « Improving Cross-border Retail Payment's Services », September 1999 and Progress Report in September 2000

³ Definition of Straight-Through-Processing for Euro Transactions, July 2000

2 SCOPE

These Implementation Guidelines are complementary to the IBAN standard ECBS EBS 204 and provide guidelines for national banking committees, banks and customers with regard to the co-ordinated introduction of the IBAN and best practices for its use. It comprises background information and a check list.

The IBAN is a generic identification method for accounts for funds, securities, etc. Taking into account the first application domain of IBAN, this document is, however, particularly oriented to :

- Funds accounts ;
- Beneficiary accounts ;
- Cross-border payments.

3 DEFINITIONS

3.1 Basic Bank Account Number (BBAN)

The BBAN (Account Number) is the identifier used by financial institutions which identifies uniquely in an individual country the account of a customer at a financial institution.

See TR201 for examples of BBAN.

3.2 International Bank Account Number (IBAN)

An expanded version of the Basic Bank Account Number (BBAN) used internationally to uniquely identify the account of a customer at a financial institution.

3.3 Capture of IBAN

The process of converting an IBAN from paper to electronic format.

3.4 Generation of IBAN

The one time process of creating an IBAN for an account. This process is under the sole responsibility of the bank servicing the customer's account.

3.5 Notification of IBAN

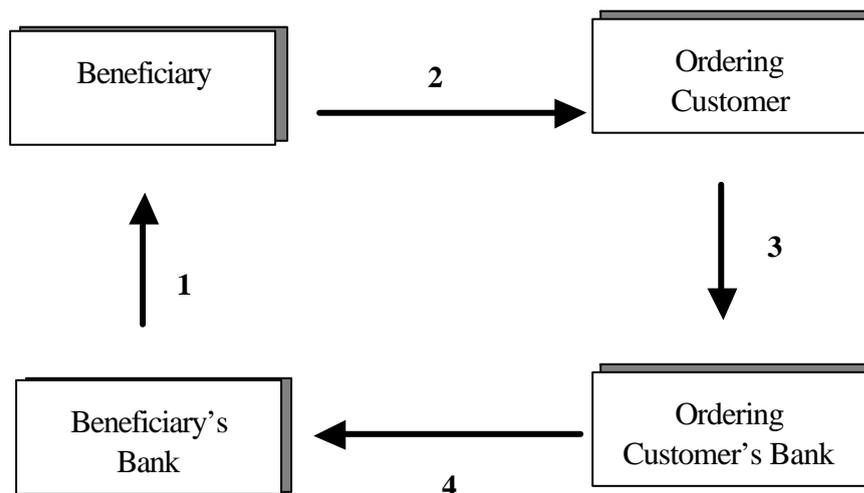
The one time operation of notifying the account owning customer of the IBAN generated for the account.

3.6 Transfer of IBAN

Transport of the IBAN in an operational message

4 SCHEME OVERVIEW

An IBAN may be used to identify an account in all forms of financial transaction. Banks (and customers) are involved in two ways : firstly, the one-time generation and notification of IBAN by banks to their customers ; secondly, the operational use of the IBAN (capturing, recognition, processing, validation, transfer).



1. The IBAN is made available to the beneficiary by its bank.
2. The beneficiary's IBAN is forwarded to the ordering customer by such means as invoice, letterhead, International Payment Instruction, EDIFACT INVOIC.
3. Ordering customer submits a cross-border credit transfer order, which includes the beneficiary's IBAN.
4. The cross-border credit-transfer message includes the beneficiary's IBAN, which has been validated by the ordering customer's bank. After receipt of the message by the beneficiary's bank the beneficiary's account will be credited.

5 SUPPLEMENTARY FEATURES OF EBS 204 OVER ISO 13616

ISO 13616 is the basic standard for the international banking community. ECBS EBS 204 contains four supplementary specifications the adoption of which will enhance the benefits obtainable from the implementation of the International Standard.

The supplementary features of ECBS EBS 204 are explained below. The first and last of these supplementary features (restriction to the use of upper case letters only, and formal written format) are primarily designed to reduce errors in transcribing an IBAN from written to electronic format. The second and third of the features (fixed length per country, and explicit identification of the bank) are designed primarily to simplify automatic processing.

5.1 Only uppercase letters

The ISO specification allows lowercase and uppercase letters for the BBAN. The ECBS specification allows only uppercase letters for the BBAN, thus reducing the possibility of more transcription and capturing errors.

5.2 Length

The ISO specification allows a variable length for the BBAN because of the large variation in length of existing account numbers. The ECBS specification requires however a fixed length BBAN per country (code) (by means of leading zeros) in order to:

- increase uniformity;
- enhance the transcriptability;
- allow automatic (and visual) length checks.

5.3 Bank identification code

The bank identification code is not formally defined within IBAN in the ISO specification. The full benefits from the use of the IBAN will only be achieved where the IBAN provides the capability for the automatic identification of the bank servicing the account, thereby facilitating the routing of transactions. This is not possible if the bank identification code is implicit and/or variable length.

This objective requires additional ECBS specifications :

- The bank identification code must be explicit per country (code).
- The BBAN must have a bank identification code fixed in position and length per country (code), using leading zeros as necessary.

5.4 Paper format

5.4.1 Separators

The ISO paper format specification allows the BBAN to exist in domestic format with domestic separators. This presentation enables co-existence for cross-border and domestic use.

This (free) format is however not optimal for error-free IBAN transcription and data capture. The ECBS specification requires, where ISO 13616 recommends, the IBAN presentation to be split into groups of four characters separated by a blank, eg for a maximal length :

□□□□ □□□□ □□□□ □□□□ □□□□ □□□□ □□□□ □□□□ □□

This will :

- ensure a high uniformity and recognition level ;
- create uniform forms and data-entry screens which support easy and error-free transcription ;
- facilitate bi-directional conversion between electronic and paper formats ;

5.4.2 IBAN Tag

In a paper-based environment, a field tag in the format 'IBAN:' should be printed, but is not included as part of the IBAN.

6 EUROPEAN-INTERNATIONAL COORDINATION

Consistency of the specification of ISO 13616 and EBS 204 means that messages in either format can be equally well handled by European banks (and customers), although the full automation benefits are only obtainable with messages formatted with the supplementary specifications of EBS 204.

Automation benefits will be more readily achieved by :

- The regular updating of ECBS Technical Report 201;
- The regular tracking and reporting of national implementations of EBS 204.

7 COORDINATION. A NATIONAL IMPLEMENTATION PLAN

7.1 National co-ordination

To ensure that all banks in all countries have time to make the necessary preparations, it is recommended that a co-ordinated plan for the introduction of IBAN is prepared at national level because :

- many customers are multibanked and may therefore ask all their banks for an IBAN ;
- intermediary banks may receive IBANs from their correspondents even if they have not issued IBANs to their customers.

A national banking association would be a suitable body responsible for reaching agreement upon the details of the national co-ordination plan, and for monitoring its progress. Matters for inclusion in a national plan could be :

- agreement on the national scope of IBAN ;
- planning of national activities e.g. to co-ordinate, agree and communicate on the scope of usage of the IBAN to enable capturing systems to be adapted accordingly.
- production and publication of documentation ;
- communication throughout the banking industry ;

The IBAN was initially developed to identify the beneficiary's account in cross-border payments. However, it may also be used :

- in the domestic context ;
- for the identification of the ordering customer account ;
- for other (non-payment) transactions.

7.2 Definition of the BBAN

The BBAN format of the national account number identifier may not be precisely identical to the normal domestic format in cases where the supplementary features are implemented.

In defining the national BBAN structure, account should be taken of a number of factors, including:

- The structure should be suitable to integrate financial accounts in all domestic financial institutions (including postbanks, etc).
- Notwithstanding the check digits in the IBAN, the BBAN should include the domestic check digit(s) if they are necessary for automatic processing in the domestic systems.

- Countries with a domestic account number composed of separate bank/branch/account identifiers will be required to define the sequence of these identifiers within the BBAN.

8 BANKS

8.1 Notification of generated IBAN to bank customers

IBAN should be made available to all customers. There are different ways to transmit that IBAN to the customer (upon request, account statements, home banking applications,...) and each institution is free to proceed the more convenient way according to domestic business practices and/or conventions with its customers.

It should always be transmitted alongside the ISO BIC code of the beneficiary's bank.

8.2 Adaptation of input systems for processing financial transactions

The presence of an IBAN can be detected from the two starting alpha characters which signify the ISO country code followed by two numeric digits which signify the IBAN check digits. There are no domestic account numbers known which start with two alpha characters followed by two numeric digits.

The IBAN concept requires only one validation algorithm for all IBANs issued by all banks across the globe. Banks are recommended to validate IBANs when they are captured from the paper format and to consider the possibility of adding supplementary checks (e.g. length check, where appropriate). It is recommended that input/capturing systems should firstly delete the possible preceding tag "IBAN" and all non-alphanumeric characters (especially blanks) before the IBAN is validated.

To ensure that valid IBANs are not rejected, banks which carry out detailed validation as part of the process of capturing foreign account numbers will need to modify their systems to recognise and validate IBANs (such modifications to include instructions received both electronically and on paper). The action to be taken in the event of a validation error are outside the scope of this SIG, and will depend upon local circumstances and agreements.

8.3 Routing for banks

Banks want to avoid intermediaries in order to reduce the time taken in processing commercial payments to a minimum. Consequently they wish to address payment messages directly to the beneficiary's bank or, in the case of mass payments, to a preferred correspondent bank in the country of the beneficiary's bank.

The BIC code of the beneficiary's bank will be required alongside the IBAN because the IBAN cannot be used as a routing tool until :

- there is a wide-spread adoption of IBANs across the world;
- IBANs are validated on input of payment orders/credit transfers for processing;

- the routing mechanisms are generally able to recognise and interpret IBANs from all over the world.

The routing mechanisms will need to be able to interpret all IBANs to optimise network routing. As a first, simple, stage, they will need to recognise the country code. At the second, more sophisticated, stage, they will need to recognise the bank identification within that country by understanding the various national formats ⁽⁵⁾.

The routing mechanism operating outside the destination country initially only needs to recognise the destination country from the IBAN, in order to pass the transaction cross-border. The ordering bank then has the choice of sending the payment to their contractual partner in that country (mass payments) or sending the payment direct to the beneficiary's bank on establishing its identity within the destination country (direct routing). Only the routing mechanism operating inside the destination country needs to know the full construction of its own country's BBAN ⁽⁶⁾. It also needs access to the authoritative and up-to-date version of its own country's « sort code directory » or equivalent.

Until IBAN can be used with confidence as a routing tool, it is essential to rely on the BIC of the beneficiary's bank as, for example, in S.W.I.F.T. FIN messages. Therefore there will be a period in which such BIC codes will run alongside IBANs, with the inherent redundancy of the two overlapping concepts until IBAN adoption spreads across the world. For example, the International Payment Instruction (IPI) described in ECBS document EBS206 supports the combination of IBAN and BIC. It is expectable that in the future S.W.I.F.T. will make the BIC an optional field overriding the IBAN rather than a mandatory field regardless of whether the account number is an IBAN or not (BICs may continue to be required by specific applications, even if S.W.I.F.T. does not).

8.4 Receiving customer's bank processing

The receiving customer's (beneficiary's) bank will need to be able to validate the IBAN - and, if not carried out by the intermediary bank, to convert the IBAN into a domestic account number - for posting to the beneficiary customer's account.

8.5 Promotion of IBAN by banks

The best promotion would clearly be by a direct incentive to originator and/or

⁵ Some national account number formats may need adaptation in order to achieve clear and easy recognition of the account-holding bank. As defined in this standard, this means for each country that the bank identification is :

- ♦ in a fixed position in the BBAN (Basic, or national, Bank Account Number)
- ♦ has a fixed length
- ♦ is unique by bank.

For example, The UK and Netherlands have already prefaced their national account number format with the first four letters of the BIC in order to give the clarity required by the standard.

⁶ In such case, the intermediary receiving bank may need to validate and convert an IBAN to a domestic account identification format according to national clearing rules.

beneficiary possibly linked to specific products. Such commercial matters are, however, beyond the scope of this document.

The following possibilities for promotion may also be considered by banks :

- Creating an awareness of the need to change amongst their customers (and other organisations) ;
- Documentation including the national options (in order to ensure uniformity) and specific bank options/procedures ;
- Promotion of the standard International Payment Instruction (EBS206) ;
- A bank may also offer support to its customers in the introduction of IBAN e.g. by providing beneficiaries with stickers to be affixed to cross-border invoices ;
- Countries may also wish to include IBAN in their national standards.

9 CUSTOMERS

9.1 Documentation

A number of points arise :

- Customers working with several (domestic and foreign) banks must receive consistent information from all levels concerning IBAN and its implementation. All levels must ensure satisfactory arrangements are in hand to achieve this end ;
- Co-ordination in the development of documentation for customers may reduce costs for individual banks ;
- National documentation can be refined and adapted to local practices by national banking committees and individual banks.

9.2 Receiving customer (Beneficiary)

Having been issued with IBAN by his bank, the receiving customer (e.g. beneficiary, or seller) should expect to be able to obtain information from his bank about the scope of usage for his IBAN. Information should be available to him on whether it is suitable for domestic, or only for cross-border use; whether it is suitable for his own more widespread use, or only for communication to his buyers.

He should also be able to expect support from his bank concerning other matters relating to the use of IBAN, for instance:

- the use of the International Payment Instruction ;
- means by which he is able to inform his (cross-border) customers of his IBAN, e.g. means of amending, perhaps with affixed IBAN-sticker, his invoices, letterheads, forms, payment instructions; and
- the importance of the correct use of the IBAN together with the BIC for enhancing Straight Through Processing (STP) rates.

9.3 Ordering customer

Several points concerning IBAN may be made to originating customers (e.g. buyers), as potential transaction originators transporting IBANs to their own bank on behalf of the receiving customer towards whom the transaction is being directed :

- IBANs are transparent for retail transactions ;
- IBANs make validation possible for telebanking, FEDI.

9.4 Software vendors and other financial services providers

Support for IBAN amongst suppliers of software packages and other financial services providers, should be sought at both national and world-wide levels.

10 FOLLOW UP ACTIVITY

The successful implementation of IBAN in Europe will be supported by the ECBS Secretariat, including :

- the regular updating of Technical Report 201; and
- the regular reporting of conclusions derived from surveys.