

## A Uniform Resource Name (URN) Namespace for Eurosystem Messaging

### Abstract

This document defines and registers with IANA a Uniform Resource Name (URN) namespace for usage within messages standardized by the Eurosystem. The URN namespace is managed by Deutsche Bundesbank, which is a member of the European System of Central Banks (ESCB).

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## 1. Introduction

The European System of Central Banks (ESCB) is composed of the European Central Bank (ECB) [ECB] and the national central banks (NCBs) of all 27 EU Member States (Article 107.01 of the Treaty) -- whether they have adopted the Euro currency or not. One central bank belonging to the ESCB is Deutsche Bundesbank [DBBK], which, for the purpose of this document, is acting on behalf of the ESCB. The term Eurosystem is used to refer to the entity composed of the ECB and the NCBs of those member states that have adopted the Euro currency. For further information on the tasks of the ESCB and the Eurosystem, please refer to the ECB web site ([ECB], [ESCB], [Eurosystem]).

The ESCB provides the TARGET2 (Trans-European Automated Realtime Gross Settlement Express Transfer) system for market infrastructure; it is an interbank payment system for the real-time processing of cross-border transfers throughout the European Union. In addition, the ESCB is currently implementing TARGET2-Securities, a future securities settlement platform that offers a new, harmonized and centralized method of settling securities in central bank money. The TARGET2-Securities project was initiated by the Eurosystem as platform owner in 2006. TARGET2-Securities is currently under development. Four central banks of the Eurosystem -- Deutsche Bundesbank, Banque de France, Banca d'Italia, and Banco de Espana (4CB) -- are entrusted with the development and the operation of the platform. For details, see [T2S\_ECB] and [T2S\_DBBK].

The future users of TARGET2-Securities will communicate and exchange information with the platform via messages (a set of structured information) following the ISO 20022 Standard [ISO20022-RA].

This document specifies and registers with IANA a URN Namespace for the Eurosystem, which will be populated initially by names for abstract and concrete entities used in TARGET2-Securities messaging, but may be used for similar purposes in the future.

## 2. Namespace Considerations

The goal of the requested namespace is to ensure the stability and uniqueness of the names of various items that are used within the messages exchanged between the Eurosystem and the users of TARGET2-Securities (or potentially, other future projects of the Eurosystem).

It is essential that names of items (such as the XML schema describing the message itself) can be used to identify the resource even years after the message has been exchanged. This context requires a new namespace owned by, and under the perpetual control of, the Eurosystem.

The messaging context of the needed identifiers necessitates the usage of Uniform Resource Identifiers (URIs) as specified in Internet STD 66 [RFC3986].

The persistent identifiers needed are protocol-independent resource names -- the same resource may exist in multiple physical locations, and thus be accessible via multiple URLs, but there's the need for a single abstract identifier as a handle (name) for it.

Thus, the logical choice for the placement of such a namespace is the use of Uniform Resource Names (URNs), as defined by [RFC1737] and [RFC2141] (and its work-in-progress successor), by specifying a new URN Namespace [RFC3406] for the Eurosystem.

## 3. Community Considerations

The Eurosystem messages carrying the resource names are exchanged in IP networks. Although the mass production use of the assigned URNs will be contained in messages carried in cryptographic digital envelopes or Virtual Private Networks, the message-related resources being persistently named need to be referred to and resolved in the public Internet. The transparency requirements (needed for establishing and maintaining public trust into the subject financial transaction systems), open software development processes, and software deployment require the origin and authority for the URNs to be easily identified, and the URNs to be resolved on the public Internet. URI references to the Eurosystem resources will be used in connection with identifiers drawn from previously standardized Formal URN Namespaces allocated to other international treaty organizations,

and it is mandatory that the authority behind the new URNs be easily and clearly identified, and be at a perceived "equivalent" standards level, parallel to the existing ones. Therefore, a mnemonic, Formal URN Namespace Identifier is needed for the intended purpose.

Thus, this document specifies a "Formal URN Namespace" using the procedures laid down in RFC 3406 [RFC3406] (and incorporates some of the additional information under discussion for its work-in-progress successor into the registration template below).

The requested URN Namespace Identifier (NID) is 'eurosystem'.

#### 4. Registration Template for the Eurosystem URN Namespace

The registration template below makes references to Internet STD 66, RFC 3986 [RFC3986].

Namespace ID: eurosystem

Scope / kind of named resources:

Resources related to Eurosystem messaging.

This namespace is reserved to the Eurosystem and its community.

Registration Information:

- version number: 1
- date: 2014-02-18

Declared registrant of the Namespace:

- Registering organization:  
Name: Deutsche Bundesbank (member of ESCB)  
Address:  
Wilhelm-Epstein-Strasse 14  
D-60431 Frankfurt  
Germany  
URI: <http://www.bundesbank.de/>
- Designated contact person:  
Name: Miriam Ortseifen  
Address:  
Deutsche Bundesbank  
Zentrale, T2- und T2S-Service-Management  
Wilhelm-Epstein-Strasse 14  
D-60431 Frankfurt am Main  
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Email: iso20022@bundesbank.de

Declaration of syntactic structure of NSS part:

The structure of the Namespace Specific String is a flat space of printable URI characters (<pchar>; see [RFC 3986](#)), with a preference for short letter-digit-period-hyphen-based strings. The NSS has no knowable structure outside of the context of the Eurosystem community internal resolver.

Relevant ancillary documentation:

None

Conformance with URN Syntax:

No special consideration.

Rules for Lexical Equivalence of NSS part:

No special consideration.

Usage of query part:

There is no support for query instructions or other components of the query part to be used in URI references to 'eurosystem' URNs.

Usage of fragment part:

The fragment part of URI references to 'eurosystem' URNs has no particular specified utility.

Identifier uniqueness considerations:

Identifiers are opaquely assigned by Eurosystem URN Registration that guarantees uniqueness. This is simply achieved by reliably keeping track of already assigned names and comparing all new proposed names to the ones already present in the database. If the name already has been assigned, a new one has to be proposed.

Identifier persistence considerations:

Assigned URNs will not be reused and will remain valid beyond the lifecycle of the referenced resources. However, it should be noted that although the URNs remain valid, the status of the referenced resource may change.

#### Process of identifier assignment:

Names are granted by Eurosystem URN Registration via proprietary registration procedures.

Future changes to the assignment methods may allow others to assign sub-spaces of the flat namespace, but again, this knowledge is only valid internally and should never be inferred or relied upon externally.

#### Process of identifier resolution:

Eurosystem URNs are resolved via URN resolvers run under Eurosystem responsibility.

Initially, resolution service will be provided via a web page listing the assigned names and the related metadata of the named resources.

#### Validation mechanism:

None specified.

### 5. Example

The following example is listed for pedagogical reasons only; it is not guaranteed to become actually assigned.

urn:eurosystem:xsd:reda.012.001.01

### 6. Security Considerations

Since the URNs in this namespace are opaque, there are no additional security considerations other than those normally associated with the use and resolution of URIs and URNs in general (see the Security Considerations in Internet STD 66 [[RFC3986](#)], [RFC 2141](#) [[RFC2141](#)], and [BCP 66](#) [[RFC3406](#)]).

It is noted, however, that attempting to resolve a Eurosystem URN through a resolver other than the one provided by the Eurosystem is error prone. In any case, it is not considered authoritative.

## 7. IANA Considerations

### 7.1. Registration of Formal URN Namespace 'eurosystem'

IANA maintains the registry of URN Namespaces [[IANA-URN](#)] and has registered a new Formal URN Namespace with the NID 'eurosystem' as per [BCP 66](#) [[RFC3406](#)], using the registration template given above in [Section 4](#).

## 8. Acknowledgements

The authors would like to acknowledge the advice and constructive input received from Subramanian Moonesamy and Alfred Hoenes, as well as David Black and the IESG for Last Call comments that helped to improve this document.

## 9. References

### 9.1. Normative References

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- [RFC3406] Daigle, L., van Gulik, D., Iannella, R., and P. Faltstrom, "Uniform Resource Names (URN) Namespace Definition Mechanisms", [BCP 66](#), [RFC 3406](#), October 2002.
- [RFC3986] Berners-Lee, T., Fielding, R., and L. Masinter, "Uniform Resource Identifier (URI): Generic Syntax", STD 66, [RFC 3986](#), January 2005.

### 9.2. Informative References

- [DBBK] "Deutsche Bundesbank", <<http://www.bundesbank.de/>>.
- [ECB] "European Central Bank", <<http://www.ecb.int/>>.
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- [IANA-URN] IANA, "Uniform Resource Names (URN) Namespaces", <<http://www.iana.org/assignments/urn-namespaces/>>.

## [ISO20022-RA]

ISO 20022 Registration Authority, "ISO 20022 - Universal financial industry message scheme",  
<<http://www.iso20022.org/>>.

[RFC1737] Sollins, K. and L. Masinter, "Functional Requirements for Uniform Resource Names", RFC 1737, December 1994.

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[T2S\_ECB] European Central Bank, "ECB: About T2S",  
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