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A Uniform Resource Name (URN) Namespace  
for the Common Language Equipment Identifier (CLEI) Code

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Abstract

This document describes a Uniform Resource Name (URN) namespace (RFC 3406) for the assignment of the Common Language Equipment Identifier (CLEI) code, which is used in messages standardized by ANSI. The URN namespace is managed by Telcordia Technologies, Inc., as the maintenance agent for ANSI T1.213. The CLEI code is a globally unique, ten-character alphanumeric intelligent code assigned by Telcordia Technologies at the request of equipment suppliers. The CLEI code identifies communications equipment by specifying product type and features. There is a one-to-one relationship between a CLEI code and supplier's product ID (the manufacturer's name and the part number along with its version number).

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## 1. Introduction

Many circuit cards used in the global telecommunications network have a CLEI code assigned and have a bar code or two-dimensional symbol on a label affixed to the front. Service providers utilize the CLEI code to:

- o Track inventory, both working and spare
- o Handle logistics (movement of circuit cards, along with the serial number)
- o Provision equipment
- o Maintain asset records (accounting information)

The goal of the CLEI namespace is to ensure the stability and uniqueness of the names of various (specific) items that are used within the messages exchanged between equipment of the global telecommunications network.

The assigned maintenance agent for the CLEI code, Telcordia Technologies, is responsible for assigning certain equipment and other identifiers (e.g., location, manufacturer/supplier) for the telecommunications industry. The code assignment process identifies the structure and intelligence of the CLEI code to identify the circuit card's form, fit, functions, and features. Equipment may exist in multiple physical locations with the exact same form, fit, functions, and features; such equipment will have the same CLEI code if their product ID is the same.

## 2. Specification Template

Namespace ID:

"CLEI"

Registration information:

Version 1

Date: 2004-12-31

Declared registrant of the namespace:

Telcordia Technologies, Inc.  
Customer Support Center  
8 Corporate Place  
Piscataway, NJ 08854

U.S.A.  
+1.732.699.5577  
<http://www.commonlanguage.com>

#### Declaration of syntactic structures:

The structure of the Namespace Specific String is a flat space of 10 characters, as defined in [T1.213][T1.213a].

#### Relevant ancillary documentation:

[T1.213] and [T1.213a].

#### Identifier uniqueness considerations:

Identifiers are assigned by Telcordia URN registration that guarantees uniqueness for items with different form, fit, functions, and features. This is achieved simply by comparing all new proposed names to the already assigned names contained in a database. If the name already exists, a new one is created per the rules of the process. See [T1.213][T1.213a] for assignment examples.

#### Identifiers persistence considerations:

The process defined by ANSI and the CLEI maintenance agent ensure that the binding between the name and its resource is permanent, and that names are not reassigned.

#### Process of identifiers assignment:

A CLEI code is an intelligent code that consists of 10 alphanumeric characters with 4 data elements. The first data element is considered the basic code with the first 2 characters indicating the technology or equipment type, and the third and fourth characters denoting the functional sub-category. The second data element represents the features, and its three characters denote functional capabilities or changes. The third data element has one character and denotes a reference to a manufacturer, system ID, specification, or drawing. The fourth data element consists of two characters and contains complementary data. These two characters provide a means of differentiating or providing uniqueness between the eight character CLEI codes by identifying the manufacturing vintage of the product. Names are assigned via procedures defined in [GR485].

#### Process for identifier resolution:

Telcordia URNs are resolved via Telcordia resolvers run under Telcordia responsibility. For further information see [www.commonlanguage.com](http://www.commonlanguage.com).

#### Rules for lexical equivalence:

Lexical equivalence of two CLEI URN namespace specific strings is defined as an exact, case-insensitive string match. CLEI codes are assigned in a case-insensitive fashion, so that there will not be two CLEI codes that differ only in case. See [T1.213] and [T1.213a] for further information.

#### Conformance with URN syntax:

No special consideration.

#### Validation mechanism:

None specified.

#### Scope:

Global.

### 3. Examples

The following three examples are based on the examples provided in [T1.213a], and correspond with three different sets of features by three different manufacturers (Nortel Networks, Lear, and Lucent Technologies) producing "D4CE" (a particular D4 channel bank type) equipment. The fourth example refers to a SONET power unit convertor of Alcatel.

URN:CLEI:D4CE18B7AA  
URN:CLEI:D4CE4248AA  
URN:CLEI:D4CE363PAB  
URN:CLEI:SNPWBBC7AA

### 4. Namespace and Community Considerations

CLEI codes have historically been used in a variety of communications equipment (see examples above and [T1.213a]). There are circumstances in which entities with CLEI codes need to be managed or exposed in a larger context, such as the general Internet. In these

cases, the use of the CLEI URN namespace will provide general interoperability benefits to the Internet at large, as well as to specific internets.

## 5. Security Considerations

There are no additional security considerations other than those normally associated with the use and resolution of URNs in general.

However, note that attempting to resolve a Telcordia URN through a resolver other than the one provided by Telcordia is not considered authoritative.

## 6. IANA Considerations

The IANA has registered the formal URN namespace CLEI within the IANA registry of URN NIDs.

## 7. Acknowledgments

The contributions of the Entity MIB Working Group members are gratefully acknowledged. Special thanks go to Mike Heard, Juergen Schoenwaelder, Dave Perkins, and Dan Romascanu.

## 8. Normative References

- [RFC3406] Daigle, L., van Gulik, D., Iannella, R., and P. Faltstrom, "Uniform Resource Names (URN) Namespace Definition Mechanisms", RFC 3406, October 2002.
- [T1.213] ATIS T1.213-2001, Coded Identification of Equipment Entities in the North American Telecommunications System for Information Exchange, 2001, [www.ansi.org](http://www.ansi.org).
- [T1.213a] ATIS T1.213a, Supplement to T1.213-2001, Coded Identification of Equipment Entities in the North American Telecommunications System for Information Exchange, to correct the representation of the Basic Code in Figure B.1, 2001, [www.ansi.org](http://www.ansi.org).
- [GR485] GR-485-CORE, COMMON LANGUAGE Equipment Codes (CLEI Codes), Generic Requirements for Processes And Guidelines, Issue 5, Telcordia Technologies, April 2004.

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