

# Facility Identifiers

16 June, 2008 M Karagosian

## Overview

Automated digital cinema security key exchange between a theatre and multiple key providers requires a common identifier for the theatre. NATO's Digital Cinema System Requirements v2.0, section 6.4, states:

### 6.4 Facility Identifiers

Theatres shall be identified by a unique URI (Uniform Resource Identifier, as defined by IETF RFC 3986). The unique URI for each location shall be obtained from the Theatre Owner, and shall be the FacilityID used in Facility List Messages (FLM)<sup>1</sup>.

However, theatres are not the only consumers of digital cinema security keys. The format must be generalized to extend to any entity requiring an exchange of security keys. Accordingly, this specification defines a method for uniquely naming key-interchange locations using the URN Namespace<sup>2</sup>.

## Requirements

The naming format defined in this specification is designed to meet these requirements:

- Globally unique: the name must be unique around the world.
- Ability for any entity, located anywhere in the world, to generate and manage a Facility Identifier.
- Not require maintenance of an on-line resource associated with a name.

## Method

Each key-interchange location shall be uniquely named with a Facility Identifier constructed per the following format:

**urn:x-facilityID:<domain-name>:<location identifier>**

where:

**URN** Namespace is defined per RFC 2141.

**x-facilityID** is an Experimental Namespace as defined in RFC 2611. (This may be replaced by a Formal NID at a later date.)

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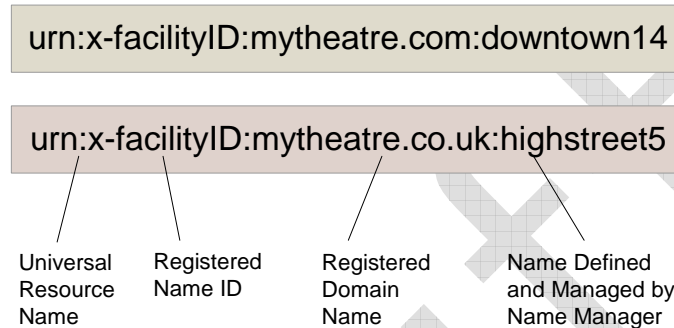
<sup>1</sup> See SMPTE 430-7 D-Cinema Security: Facility List Message.

<sup>2</sup> Note: URN is a form of URI. See W3C Note 21 September 2001: URI's, URL's, and URN's: Clarifications and Recommendations <http://www.w3.org/TR/uri-clarification/#contemporary>. See also IETF RFC 3986 and RFC 2141.

<**DOMAIN-NAME**> is a registered domain name belonging to the Name Manager. To ensure uniqueness, the name must be registered with an ICANN-accredited registrar.

<**LOCATION IDENTIFIER**> is a unique identifier within the "urn:x-facilityID:<domain-name>" namespace, created and managed by the Name Manager. The identifier characters are restricted to the valid characters defined for Namespace Specific String in RFC2141.

Examples:



## Name Manager Role

The Name Manager is the entity responsible for assigning and maintaining the Facility Identifier uniquely associated with the key-interchange location. The Name Manager shall be, or shall obtain its authority from, the entity that operates the business at the key-interchange location.

## Name Changes

The Facility Identifier is bound to the SMPTE 430-7 Facility List Message (FLM), and thus communicated to those responsible for managing and distributing security keys by means of the FLM. Likewise, Introduction of a new Facility Identifier shall be by means of the FLM. Those entities that receive and manage FLMs should resolve the new Facility Identifier by means of the d-cinema security certificates and contact information included in the FLM.

## References

1. NATO Digital Cinema System Requirements v2.0.
2. SMPTE 430-7 D-Cinema Security: Facility List Message.
3. IETF RFC 3986 Uniform Resource Identifiers (URI): Generic Syntax.
4. IETF RFC 2141 URN Syntax.
5. IETF RFC 2611 URN Namespace Definition Mechanisms.
6. IETF RFC 3151 A URN Namespace for Public Identifiers.