



Book Industry Study Group

# ROADMAP OF IDENTIFIERS

## INCLUDING AN EXPLANATION OF IDENTIFIERS

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*Comments and suggestions concerning this Roadmap are encouraged.  
Please send all correspondence to [info@bisg.org](mailto:info@bisg.org)*

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# Explanation of Identifiers

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## Introduction

The creation and assembly of textual works can involve a number of creators or contributors and a number of created elements.

In a similar way, the distribution of these works can involve a variety of manifestations and distribution methods.

Over the past few decades, identifiers have been defined to allow consistent reference to these contributors, elements, manifestations, and distribution processes. It is increasingly useful to establish linkages between these identifiers where there are relationships that can be exploited, either commercially or for intellectual benefit.

The various identifiers shown on the accompanying graphic differ in nature depending both on their function and origin. As a group, though, they enable, or potentially enable establishment of the linkages.

The administration of the identifiers differs also. In some cases, each individual identifier is assigned or registered by the indicated agency. In other cases, the agency assigns unique prefixes or ranges and the using community manages the specific identifiers.

## A Higher Level Identifier

### DOI – Digital Object Identifier

#### Purpose

Identifies “objects” of intellectual property of any kind; it is a digital identifier of objects, not an identifier of digital objects only

Serves a dual role

Most important, provides Internet resolution for identifier strings of any kind, making actionable for Internet search existing identifiers of elements or objectives

Second, a DOI may be assigned directly to any entity, thereby making that entity actionable (searchable) for internet purposes

#### Managing/Registering Agency

Several registering agencies under the auspices of the DOI Foundation

#### Commercial Opportunities

Makes any other identifier actionable (searchable) via the Internet

Could provide links to different works by the same creator through a Party Identifier (if implemented) associated with the DOI

Can provide Internet resolution for any string

Influences search engine results through volume of links

Provides a mechanism for keeping links fresh by shielding queries from URL changes

Provides a means for assembling original and subsequent products from intellectual property objects

## Creator (Contributor) Identifiers

### PI – Party Identifier (Concept)

#### Purpose

Identify any interested party involved with the creation or contribution of a specific element of intellectual property

May include authors, illustrators, artists, editors, publishers, collecting agencies, community groups, service organizations, etc.

#### Managing/Registering Agency

An all-encompassing Party Identifier is currently in the conceptual stage; there is no agency at this time

#### Commercial Opportunities

Could provide expanded global identification of any creator or contributor; the IPI (see below) does not cover all contributing parties

Could provide significant linkages to all creators or contributors to a work, including associations and corporate entities

Could provide a means of distinguishing between parties with similar or even identical names

Could also provide a means of linking to the same party operating under different names (e.g., pseudonyms, d/b/a's, etc.)

### IPI – Interested Party Identifier

#### Purpose

Identifies the author or artist who is the creator of a specific element of intellectual property

#### Managing/Registering Agency

Nearly 100 agencies in a proprietary arrangement under the auspices of the International Confederation of Societies of Authors and Composers (CISAC)

#### Commercial Opportunities

Provides identification for royalty funds transfers and rights determination

Enables linking to (finding) other works or objects by the same author or artist

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## Assembly Indicators

### ISTC – Intl Standard Text Code

#### Purpose

Identifies uniquely a textual work

#### Managing/Registering Agency

A consortium consisting of RR Bowker, Nielsen BookData, and CISAC (see IPI) is the registration authority

#### Commercial Opportunities

Provides an unambiguous connector to information about the work in different internal and external databases

Enables linkage to the objects and creators of the objects that comprise the work, and through these linkages to other objects and works

Enables linkage to various manifestations of the work

Facilitates royalty fund transfers

### LC Number – Library of Congress Number

#### Purpose

Identifies the catalog record created for a book by the Library of Congress

#### Managing/Registering Agency

Library of Congress

#### Commercial Opportunities

Provides a key to databases of library catalog records

## Manifestation Indicators

### EAN – International Article Number

#### Purpose

Identifies a specific product, though not a specific unit of that product

Is a 13-digit identifier (EAN-13), though some occurrences or formats can be expressed with fewer digits (See Comments)

#### Managing/Registering Agency

EAN.UCC (GS1 as of January 1, 2005)

#### Commercial opportunities

Provides a unique product identifier

Enables standardized processing throughout the supply chain

Enables global capture of point of sale data

Is a member of the GTIN family and can be expressed in 14-digit format

#### Comments

Provides UPC inclusion by reserving identifier numbers with the leading digit '0' for UPC

Provides ISBN-13 inclusion by reserving identifier numbers with leading digits '978' and '979'

Provides a shorter visible number for small products in the compressed form of EAN-8

### EPC – Electronic Product Code

#### Purpose

Identifies a specific product, and can identify a specific unit of that product as well

Also identifies packaging level and a specific package (see Distribution Identifiers)

#### Managing/Registering Agency

EPC Global, Inc.

#### Commercial opportunities

Enables processing and individual tracking of a specific unit all through the supply chain

Enables unit tracking of high ticket items

#### Comment

Privacy issues are a paramount factor in the possible application of EPC to specific copies of books or other intellectual property

### GTIN – Global Trade Item Number

#### Purpose

Encompasses a family of identifiers, all unique and all expressible in a 14-digit field

Identifies (through family members) a specific product or the packaging level of a product, but not a specific unit or a specific package

#### Managing/Registering Agency

EAN.UCC (GS1 as of January 1, 2005)

#### Commercial Opportunities

Provides a standardized system of identifying products or packaging levels of products

Enables efficient and standardized processing throughout the global supply chain

#### Comment

UPC, EAN -13, and EAN/UCC-14 are all members of the GTIN family

The EAN/UCC-14 identifies the packaging level (unit, carton, pallet) of products

### ISBN – Intl Standard Book Number

#### Purpose

Identifies a specific physical manifestation of the book, though not a specific unit of the book

#### Managing/Registering Agency

International and national ISBN Agencies; RR Bowker manages the US ISBN Agency

#### Commercial opportunities

Provides a unique product identifier for books

Enables standardized processing for book distribution and bookselling worldwide

By encapsulation in the Bookland EAN or transition to ISBN-13, enables standardized processing throughout the global supply chain

Enables capture of point of sale data

#### Comment

The ISBN, until now 10-digits, will become a 13-digit identifier and fully compatible with EAN-13 in January 2007 (see Comments under EAN).

# Explanation of Identifiers

## Product Identifier Relationships

### ISSN – Intl Standard Serial Number

Purpose

Identifies periodical publications, including electronic serials

Managing/Registering Agency

National Serials Data Program (NSDP) of the Library of Congress; internationally, there are 76 national centers coordinated by the International Centre in Paris

Commercial Opportunities

- Provides a unique product identifier for serial publications
- Enables standardized processing throughout the supply chain
- Enables global capture of point of sale data and inventory management

### UPC – Universal Product Code

Purpose

Identifies a specific product, though not a specific unit of that product

Managing/Registering Agency

EAN.UCC (GS1 US as of January 1, 2005)

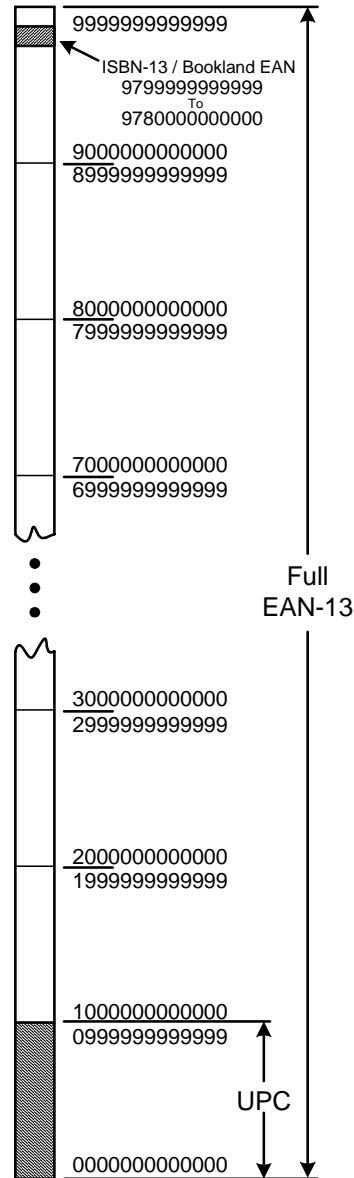
Commercial opportunities

- Unique product identifier for general retailing in the US and Canada over the past three decades
- Enables standardized processing throughout the supply chain
- Enables capture of point of sale data

Comment

The UPC is included in the EAN identifier system by prefixing the UPC with '0'. The range of EAN identifiers with the leading digit '0' is reserved for UPC

The UPC is a member of the GTIN family and can be expressed in 14-digit format



Notes:

The full theoretical numerical range of the International Article Number (EAN) is from 0000000000000 to 9999999999999.

Sub ranges of varying size are assigned to participating countries.

By virtue of its originating role, the UPC is assigned 0000000000000 to 0999999999999, or the lower 10% of the EAN range.

The Bookland prefixes are '978' and '979', so the Bookland EAN, and thus the ISBN-13, is assigned 9780000000000 to 9799999999999.

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## Distribution Identifiers

### EPC – Electronic Product Code

#### Purpose

Identifies both a specific packaging level and a specific package (or other container) of the product, through incorporation of the GTIN

#### Managing/Registering Agency

EPC Global, Inc.

#### Commercial opportunities

Provides a unique product and/or package identifier

Enables standardized processing and individual tracking of shipping containers throughout the supply chain

#### Comment

In light of privacy issues related to specific copies of books or other intellectual property, EPC and RF Identification are expected to find initial application in book distribution in tracking cartons, pallets, or other shipping containers

### GLN – Global Location number

#### Purpose

Identifies a specific physical location, legal entity, or functional entity

#### Managing/Registering Agency

EAN.UCC (GS1 as of January 1, 2005)

#### Commercial Opportunities

Provides identification of physical and mailing addresses (street addresses, dock doors, and Post Office boxes)

Also provides identification of corporate entities independent of their address, corporate divisions, ledger accounts, internal departments, or any other identifiable entity

Provides an efficient standardized system of identifying locations or entities globally

Is widely used to identify locations, including book industry locations, outside the US

#### Comment

The GLN is very powerful, since each individual GLN is assigned by an organization building on their own EAN.UCC Company Prefix.

As a result, GLNs can identify any entity pertinent to an organization's existence or operation

### SAN – Standard Address Number

#### Purpose

Identifies a specific US Book Industry physical location (including Post Office boxes)

#### Managing/Registering Agency

US ISBN Agency assigns individual SANs on request

#### Commercial Opportunities

Provides a unique and standard identifier for all physical addresses in the US book industry

#### Comment

Unlike ISBN or GLN, SANs are not assigned by the using organization under an issued prefix; thus the breadth of SAN application tends to be limited

### SSCC – Serial Shipping Container Code

#### Purpose

Identifies a specific shipping container and relates it to the Advance Ship Notice sent via EDI (container includes pallets and cartons as well as other forms of enclosing shipments)

#### Managing/Registering Agency

EAN.UCC (GS1 as of January 1, 2005)

#### Commercial Opportunities

Provides unique identification of a specific individual container and enables associating an electronic packing list with the container

Enables standardized processing and individual tracking throughout the global supply chain

#### Comment

Often referred to as "License Plate Number" since it is analogous to the license plate on a motor vehicle in identifying a specific container