

International Standard Audiovisual Number

ISAN, the only ISO Identifier for audiovisual content



ISAN
INTERNATIONAL AGENCY

INTERNATIONAL AGENCY

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ISAN International Agency
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CH-1204 Geneva

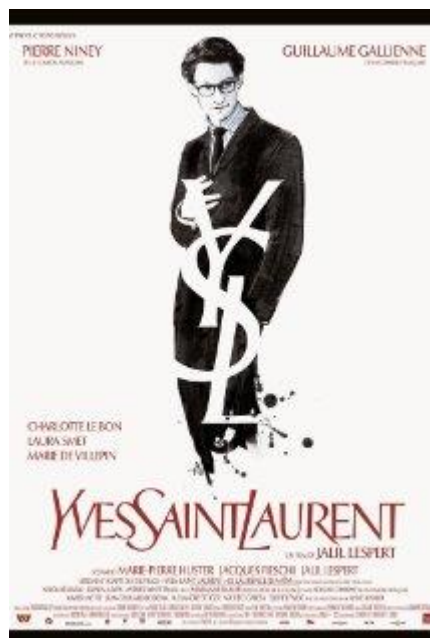
Tel.: + 41 22 545 10 00 Fax: + 41 22 545 10 40

Email: regis.flad@isan.org www.isan.org



Why ISAN?

Yves Saint Laurent



France
Jalil Lespert

ISAN 0000-0003-7FF4-0000-U-0000-0000-L

2014

Saint Laurent



France / Belgium
Bertrand Bonello

ISAN 0000-0003-81D5-0000-E-0000-0000-W

Why ISAN ?

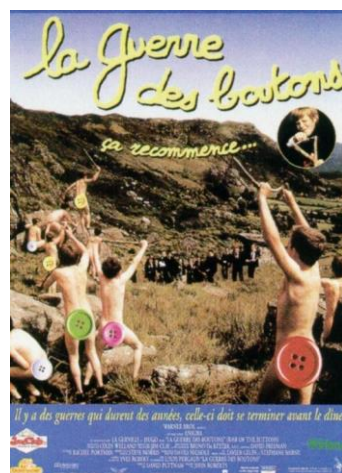
La Guerre Des Boutons



1961

Yves Robert

ISAN 0000-0001-70CF-0000-9-0000-0000-A



1994

John Roberts

ISAN 0000-0000-3F04-0000-A-0000-0000-7



2011

Yann Samuel

ISAN 0000-0003-1021-0000-I-0000-0000-K

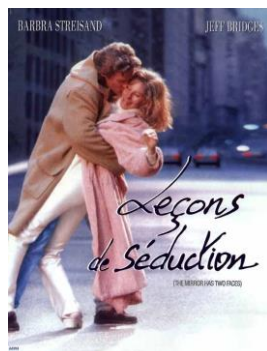
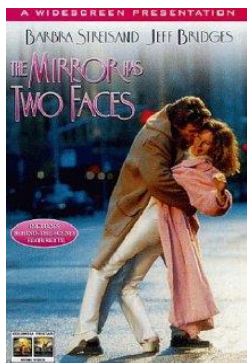
Christophe Barratier

ISAN 0000-0002-F2D8-0000-H-0000-0000-N

Why ISAN?

The Mirror has Two Faces 1996

ISAN 0000-0000-0BF1-0000-O-0000-0000-2



La Leçon de Séduction
(France)

Le miroir a deux visages
(Canada)



L'Amore ha Due Facce
(Italy)

Lo Specchio a Due Facce
(Switzerland)

The Mirror has Two Faces 1958

ISAN 0000-0000-515A-0000-6-0000-0000-J



Le Miroir a Deux Faces
(France)



Lo Specchio a Due Facce
(Italia)

Why ISAN?

The Man Who New Too Much

1934

Alfred Hitchcock

1956



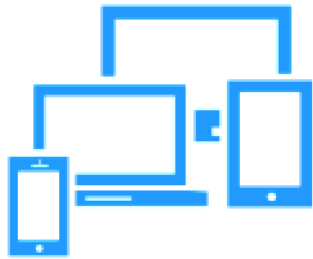
ISAN 0000-0000-50E4-0000-9-0000-0000-A



ISAN 0000-0003-F50B-0000-A-0000-0000-7

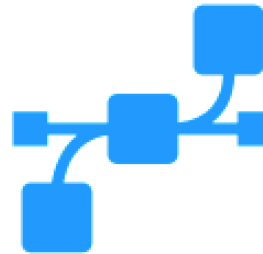
Why ISAN?

**Three main trends are transforming the audiovisual market:
Digitalization - Increase of Content - Multiplication of Stakeholders**



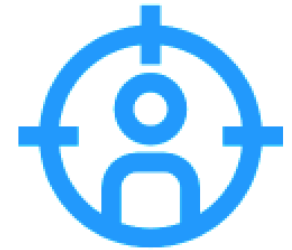
New consumption modes
Streaming & Replay

6.4 screens per household in France*
65% of web surfers use VOD*

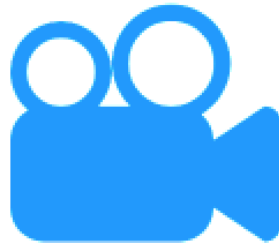


Multiplication of distribution channels

+49% of channels between 2009 &
2015 in European Union *



Audience fragmentation



Operators fragmentation

X2 #Production companies between 2000 & 2013 in France*



Increasing number of digital native content

*Sources: Médiamétrie, 2016, European Observatory of Audiovisual

Why ISAN?

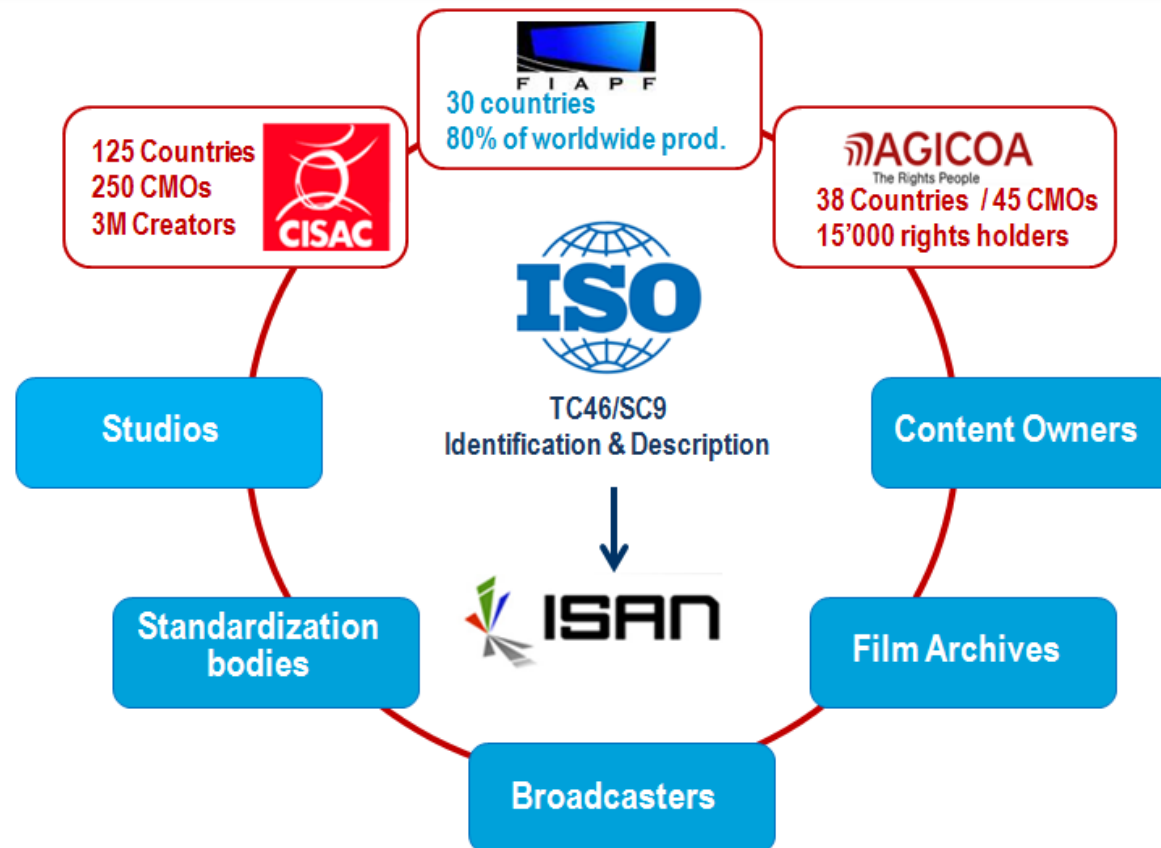
In the digital space, precise identification of audiovisual content is much needed:

- ✓ Automate digital audiovisual processes for content delivery, reporting, rights management...
- ✓ Help the content to meet its audience in digital distribution (discovery & suggestion)
- ✓ Collect and redistribute royalties to rights holders
- ✓ Help protecting content against piracy
- ✓ Aggregate fragmented sales information, perform analytics & market analysis
- ✓ Measure fragmented audience: TV, catchup, VoD, OTT, cinema, video ...

ISAN helps to reduce errors and conflicts,
ISAN brings efficiency and helps to save time & money

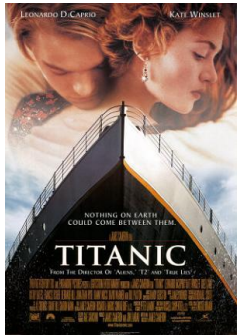
What is ISAN ?

International Standard Audiovisual Number



ISAN applies to all audiovisual contents

Works



Versions of work

Editing versions : director's cut, localized, censored, ...

Languages versions: dubbing, subtitling, audio description...

Media versions: Digital files (VoD, OTT, EST), Digital Cinema (DCP), Blu-ray, DVD, Celluloid, Tape...

Related content & related items

Trailer



Behind The Scenes



Making Of



Sound Track



Closed Captions



etc...



One AV Work = One ISAN

Core information

ISAN	0000-0001-68EC-0000-X-0000-0000-C	
Type	Feature Film	Kind
Year of reference	2006	Year of 1st publication
Duration	90 MIN	
Colour	Yes	
Composite	No	

Production information

Coproduction	No
Production companies	
Countries of reference	
Original languages	English

Title information

Original	Language	Title
Yes	ENG	Casino Royale

Participants information

Type	Firstname / Lastname
Producer	Barbara Broccoli
Producer	Michael G. Wilson
Director	Martin Campbell
Screenwriter	Neal Purvis
Screenwriter	Robert Wade
Actor	Daniel Craig
Actor	Judi Dench
Actor	Eva Green
Actor	Mads Mikkelsen
Actor	Jeffrey Wright
Scriptwriter	Paul Haggis



Core information

ISAN	0000-0000-1C49-0000-4-0000-0000-P	
Type	Feature Film	Kind
Year of reference	1966	Year of 1st publication
Duration	130 MIN	
Colour	Yes	
Composite	No	

Production information

Coproduction	Yes
Production companies	Fam Artists Sa Famous Artists Prod
Countries of reference	United Kingdom
Original languages	English

Title information

Original	Language	Title
Yes	ENG	Casino royale

Participants information

Type	Firstname / Lastname
Producer	Jerry Bresler
Producer	Charles K Feldman
Director	John Huston
Actor	Woody Allen
Actor	Ursula Andress
Actor	W Holden
Actor	Deborah Kerr
Actor	David Niven
Actor	P Sellers
Actor	Orson Welles



ISAN is linked to Metadata

Original Title + International Titles
Duration (MIN / SEC)
Original language(s)
Work Type (Feature Film, Documentary, etc...)
Year of reference (Copyright or production)
Country (ies) of reference
Color Kind
 Year of first publication
 Production companies
 Full name of principal **director(s)**
 Full name of **Cast** (actors scriptwriter, etc...)
 External **IDs** (e.g. ISRC, UMID, EIDR, ...)
 Work **Composites** (list of ISAN)
Episode # (episodic works)
Season # (episodic works)

1 Work = 1 ISAN



Title: **Casino Royale**
 Year: **2006**
 Dir: **Martin Campbell**

?

=



Title: **Casino Royale**
 Year: **1966**
 Dir: **John Huston**

ISAN is Unique – Global - Permanent



What is ISAN ?

ISAN is a Global Standard Identifier



Serie 1234-5678-9101-0000-E-0000-0000-A

Episode 1234-5678-9101-0004-X-0000-0000-A

Work 1234-5678-9101-0000-E-0000-0000-A

Version 1234-5678-9101-0004-X-0000-00A1-Y

URN:ISAN: 0000-0001-DB15-0000-X-0000-000C-N

ISAN is a registered Namespace Identifier (NID) with IETF and IANA. ([IETF RFC 4246](#))

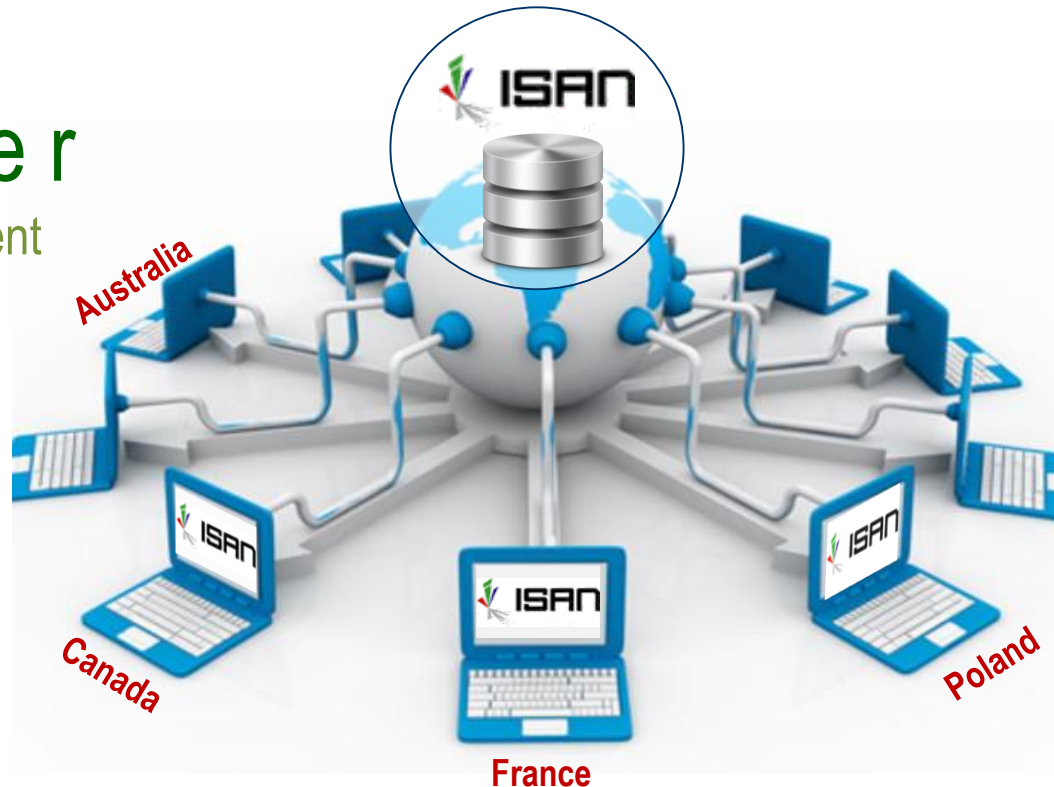


ISAN is operated by...

A worldwide network of Registration Agencies

Register

Audiovisual content



Search Lookup

ISAN Identifiers

connected to the central ISAN registry



How does ISAN work?

The producer* creates the ISAN

* or a trusted third party



Title: **Casino Royale**
Year: 1966
Dir: John Huston

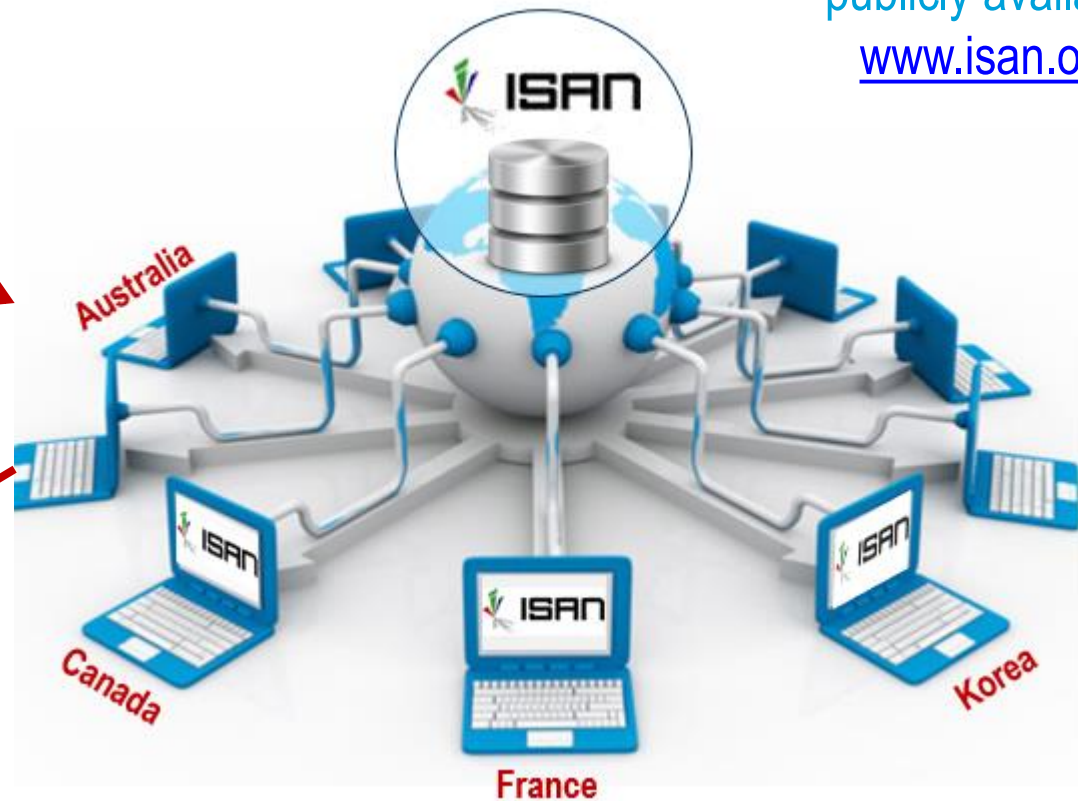
Broadcasters, Digital Platforms, etc..
Create Version ISAN



ISAN 0000-0001-6046-0000-T-0000-0000-O

ISAN and meta-data are
publicly available

www.isan.org



...then, everyone can use it.

ISAN in audiovisual standards

Distribution



AMWA:

AS-03

AS-11

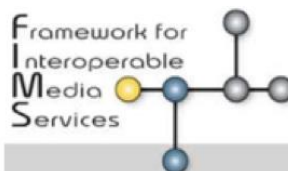
UK DPP



Digital
Cinema
Package



BXF



Delivery



a — l — s — c



www.tv-anytime.org



Reporting



Archiving



EN 15744:
EN 15907:



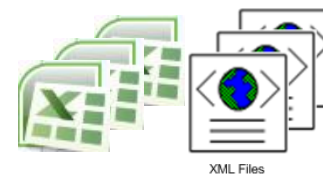
Accessing the ISAN Registry

Rest API



registration
search
lookup

Files



Bulk registration
Bulk search / matching

Web interface



Web Application

registration
search
lookup



registry
snapshots



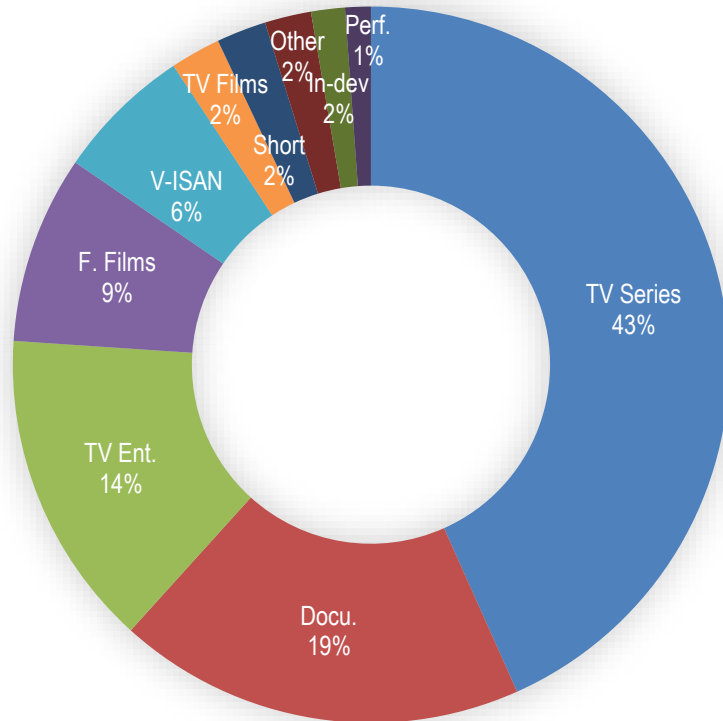
User Copy

Local search
& lookup



ISAN in numbers: The ISAN Registry

+1'300'000 ISAN



80'000 New ISAN / Year

ISAN identify productions from

Europe (54%)

Asia (3%)

N. America (40%)

Lat. America (3%)

33% produced after 2008

50% produced after 2002

80% produced after 1985

+1M Linked IDs

AGICOA

EIDR

ITV

IMDB

Lumiere

Netflix

Microsoft

Procinema

CNC

Wikidata

Le Film Documentaire

Google

etc ...



ISAN Users Worldwide

14'000 ISAN Registrants from **81+** Countries

+1500 new
adopters every year

Film archives / databases

Producers

Collecting Societies

15 Appointed
ISAN Registration
Agencies (RA)

Distributors

Data Providers

11 RA In Europe

Studios

Market Analytics

Post Production

Broadcasters

Authors

Digital Platform

+ 4 Prospective agencies

Performers

Public Organisations

Media Funds

+16'000 ISAN Users



Collecting societies



A collage of various media company logos, including Gaumont, Sony Pictures, Warner Bros., Paramount, Memory Tech, TFI, Fox, Universal, CBS, Caracol Television, King Records, Capa Press, Disney, Arte, Itv, France Télévis, Endemol, 2 Entertain, Shine, Rteve.es, Televisa, Studio Canal, and 10000+.

A collage of various media company logos, including Apple iTunes, YouTube, fnacPLAY, dailymotion, Microsoft, vitis, MY 7FI, CBCtelevision, SFR PLAY, videofutur, CANAL VOD, OCS, arte, francetvpluzzVAD, FILMOTV, SRF, univers|ciné, LIBERTY GLOBAL, filmotech, M7 Group, RTL, and 100+.

pluriMedia
L'Agence TV, Ciné, loisirs

media press

GG media

OFS

GfK

bmat
music innovation

eurodata TV
worldwide

KANTAR MEDIA

Bindinc.

Transparency

ina

LUMIERE

bbm
CANADA

CINANDO
Join + Connect

Hadopi

A collage of logos for various technology and media companies, including Microsoft, Marquise Technologies, Cisco, MediaGeniX, DALET, VOD Factory, Blu-print, Imagine Communications, Qualis Audio, NorthPlains, Semsoft, OpenCub, DreamLogic, PCI, Scenarist BD, and etc..

FIAPF

SCAPR

DGC

DIRECTORS GUILD OF CANADA

JVA JAPAN VIDEO SOFTWARE ASSOCIATION

CISAC

SAA

Writers Guild of Canada

EUROOCINEMA

EUROCOPYA
European Copyright of Video Management Society of Producers for Private Amusement Copying

us pa
union canadienne de la production audiovisuelle

Writers Guild of America
DGA

etc.

CNC

Library and Archives Canada
دليل السينما العربية
arabcinema

cineteca nazionale

IFROCIBERICA
CIBO

INSTITUT VALENCIÀ DE LA GÈNOMA I DE LA CINEMA

etc..



ISAN use cases



New European Regulations

France (since 2017)

CNC requires ISAN for all AV projects they finance (25% international)

- Script writing & production
- Distribution
- Digital Platforms

Switzerland (since 2017)

Legal obligation to report ISAN for Digital Platforms

- Domestic & foreign productions
- Domestic & foreign platforms that distribute content in the country
- Platforms require ISAN for distribution in Switzerland (apple, ..)

European Union (since 2018)

- EU Commission engage work for the adoption of a Standard ID in Europe
- EC Promotes the interoperability between ISAN & EIDR.
- **Required an interoperable ID for all Media Program Funding**



ISAN Use Case: AV projects identification & tracking by funding organisations

Public & private **Film Funds** use ISAN to identify and track the projects they finance (grants, tax credit, etc...)

- ✓ ISAN (or indev ISAN) is required for selected projects (creation, production, distribution...)
- ✓ Indev ISAN is activated (=> regular ISAN) when the project is completed
- ✓ The funding org. collects usage statistics inc. ISAN on the distribution of the resulting works

ISAN helps audiovisual funding organization to follow the projects they finance and measure their funding strategy!



ISAN Dissemination

Digital platforms: report usage with ISAN

- European regulations (France, Switzerland): these ISAN are available worldwide
- Arte, Apple, Google, Netflix, Microsoft, FilmoTV, SFR Play, ...

International rights registries: process international rights

- Producers (IRRIS – AGICOA)
- Authors (IDA – CISAC)
- Music (AVI – CISAC)
- Performers (VRDB – SCAPR)

Metadata & analytics: deliver data enriched with ISAN to their customers

- **Broadcast logs** : Eurodata TV, Kantar media (Spain), INA (private copy -FR), Business Bureau (LatAm), ...
- **TV listing, EPG**: Plurimedia (FR), Mediapress TV (EU), Bindinc (NL), European Metadata Group
- **VoD Market analysis**: GfK, NPA, BFS, EAO
- **Fingerprint monitoring**: INA, BMAT, ALPA (Google)

ISAN Use Case: Delivering Film Content for the iTunes Store

NEW **ISAN mandatory in Switzerland**



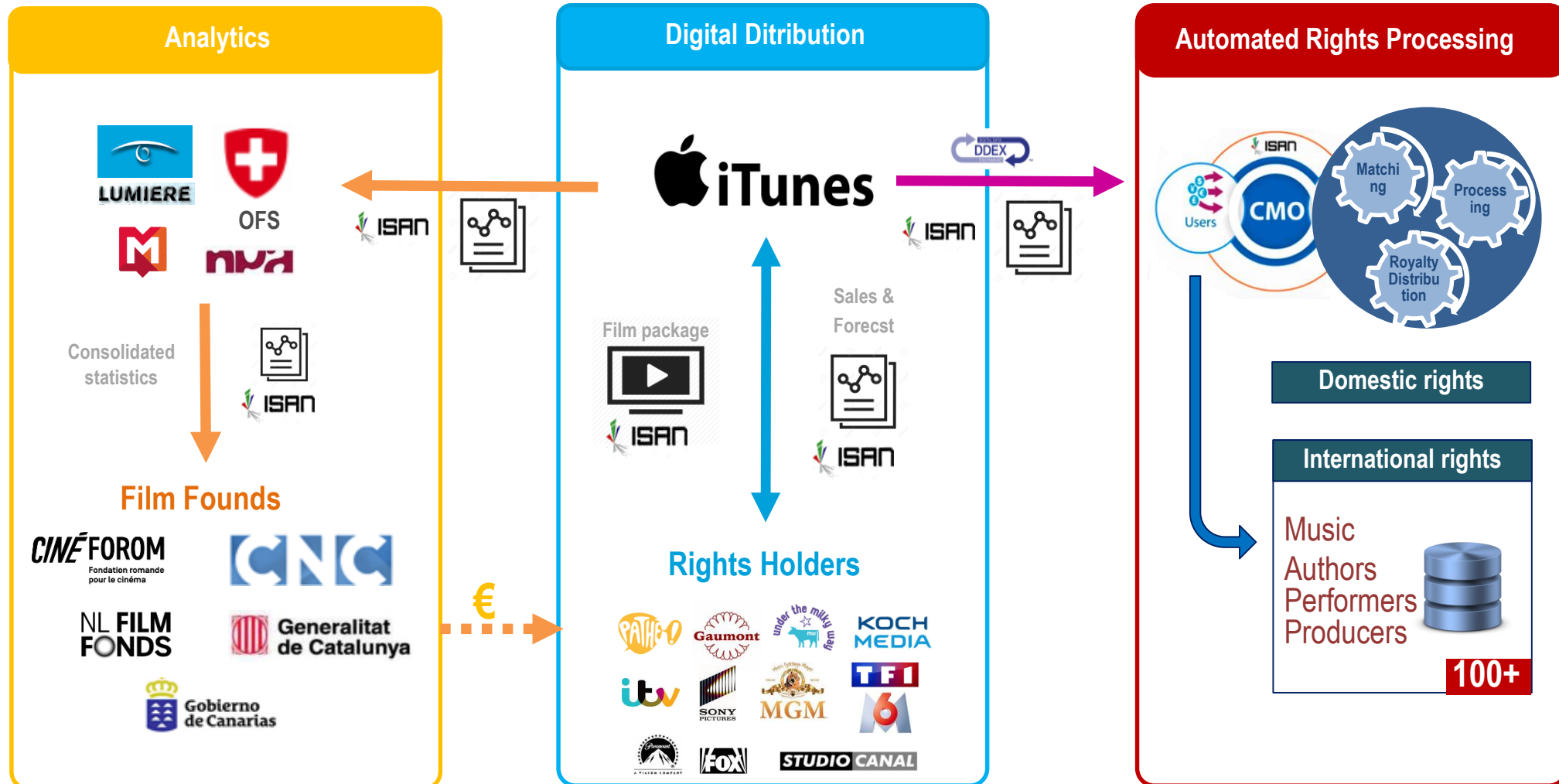
- Sales and income reports with ISAN (easy consolidation with data from other platforms)
- Usage reports to CMOs (DDEX) for automated rights management

iTunes Package Film Specification

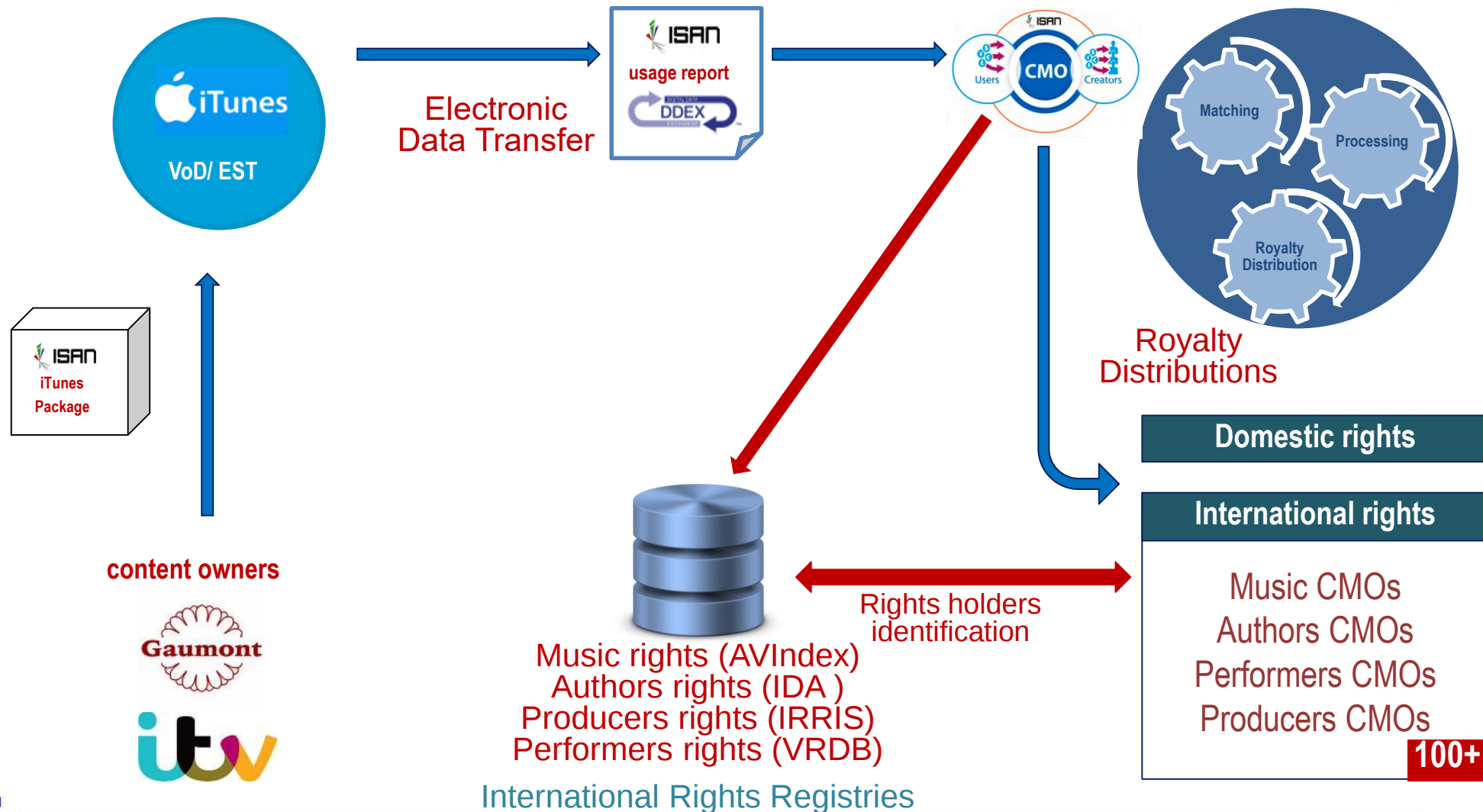
```
<?xml version="1.0" encoding="UTF-8"?>
<package xmlns="http://apple.com/itunes/importer" version="film5.0">
  <provider>Paramount</provider>
  <language>en-US</language>
  <video>
    <type>film</type>
    <subtype>feature</subtype>
    <vendor_offer_code>408CH98720X103</vendor_offer_code>
    <vendor_id>09736156444</vendor_id>
    <isan>0000-0000-03B6-0000-0-0000-0000-2</isan>
    <upc>09736156444</upc>
    <country>US</country>
    ...
  </video>
</package>
```

[learn more: itunespartner.apple.com](http://itunespartner.apple.com)

ISAN Use Case: Use of ISAN in Digital Distribution



ISAN Use Case: Workflow for automated rights processing using ISAN

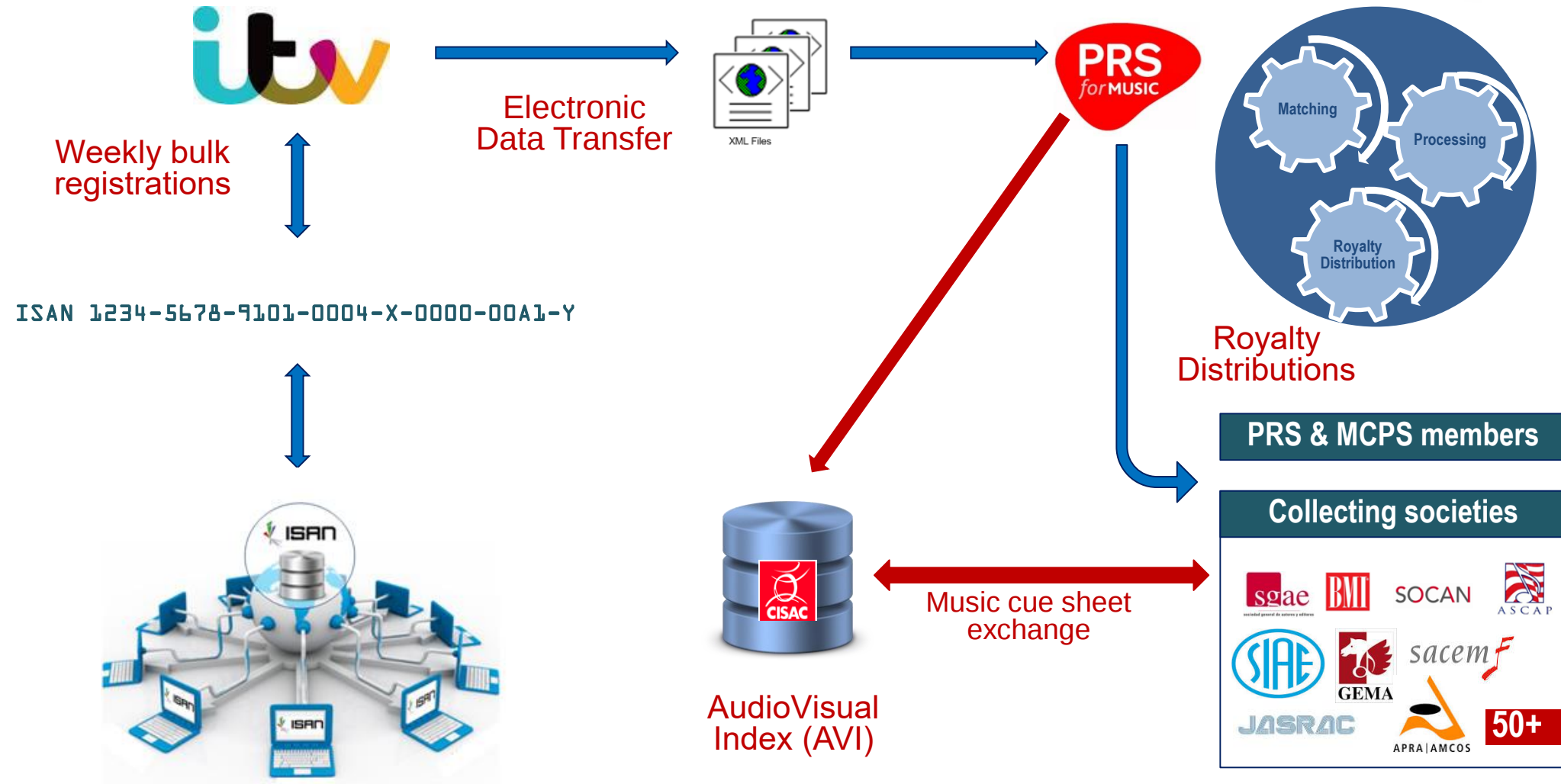


Use Case: ISAN simplifies music reporting of TV productions

- With the shift to digital the amount of data to process by CMOs has dramatically increased
- ITV, major commercial broadcaster in UK, has registered +100'000 productions with ISAN
- ITV use ISAN as a key identifier for their productions and is using ISAN in business message transactions such as music reporting to PRS for Music (as a start)
- ITV's ISANs are being populated in CISAC's AudioVisual Index (AVI), an important source of music cue sheets (music rights in AV content) for music rights societies
- The first time a production is broadcast, the full metadata set (including music cue sheet) needs to be reported.
- Thereafter for repeats and catch-up services, the ISAN is reported without the need for music cue sheets (saving of 23 metadata fields replaced by one ISAN)
- This is particular useful for catch-up content on 3rd platforms in the UK (BT Vision, Virgin Media, iPlayer, ITV player, 4OD, YouView etc.)

The use of ISAN brings greater automation to the music reporting process by ITV in the UK and reduces the cost for processing rights by PRS for music

ISAN Use Case: Automated workflow for music rights processing with ISAN





bmat provides ISAN in TV reports



Monitors 3000 radio & TV stations worldwide

channel	country	start date	start time	duration	program title	original title	release year	ISAN
AMERICA TV	PERU	20/03/2016	19:00	5400	El Juicio del Viejo Drum	The Trial of Old Drum	2000	0000-0000-3DA6-0000-1-0000-0000-Y
AMERICA TV	PERU	03/04/2016	21:00	7200	Rápido y furioso	The Fast and the Furious	2001	0000-0000-3FE7-0000-C-0000-0000-1
ARTE	GERMANY	03/02/2016	19:15	5400	Midnight in Paris	Midnight in Paris	2011	0000-0002-D005-0000-B-0000-0000-4
ARTE	GERMANY	03/02/2016	21:40	6900	Paradies: Liebe	Paradies: Liebe	2012	0000-0003-49C0-0000-G-0000-0000-Q
CANAL +	FRANCE	16/01/2016	13:15	5040	Papa ou maman	Papa ou maman	2015	0000-0003-F034-0000-B-0000-0000-4
CANAL +	FRANCE	17/01/2016	8:10	5400	Paddington	Paddington	2014	0000-0003-E90E-0000-S-0000-0000-R
CANAL 13	CHILE	07/02/2016	19:30	6600	Esto es guerra	This Means War	2012	0000-0003-110B-0000-V-0000-0000-I
CANAL 13	CHILE	07/02/2016	21:20	9600	El día de la Independencia	Independence Day	1996	0000-0000-5FED-0000-L-0000-0000-B
CANAL 5	MEXICO	05/01/2016	3:00	9000	La Mexicana	The Mexican	2001	0000-0000-F354-0000-J-0000-0000-H
CANAL 5	MEXICO	05/01/2016	16:00	3600	Tortugas Ninja	Teenage Mutant Ninja Turtles	2014	0000-0003-D5F5-0000-I-0000-0000-K
CANAL 7	ARGENTINA	30/01/2016	6:00	7200	Una vida difícil	Una vita difficile	1961	0000-0000-7854-0000-1-0000-0000-Y
CANAL 7	ARGENTINA	31/01/2016	6:00	9000	El gran atasco	L'ingorgo - Una storia impossibile	1978	0000-0000-AC77-0000-Y-0000-0000-9
CANAL 9	ARGENTINA	05/03/2016	21:00	7200	Punto de Exterminio	Termination Point	2007	0000-0001-D082-0000-6-0000-0000-J
CANAL 9	ARGENTINA	06/03/2016	18:15	7200	Sky Kids	The Flyboys	2008	0000-0002-637C-0000-7-0000-0000-G
CANAL CARACOL	COLOMBIA	13/02/2016	13:30	7200	Shrek 2	Shrek 2	2004	0000-0001-5F36-0000-P-0000-0000-0
CANAL CARACOL	COLOMBIA	13/02/2016	15:30	7200	Monsters vs. Aliens	Monsters vs. Aliens	2009	0000-0002-24BF-0000-1-0000-0000-Y
HBO	USA	27/01/2016	11:00	6600	Happy Feet	Happy Feet	2006	0000-0001-89FC-0000-W-0000-0000-F
HBO	USA	04/03/2016	5:00	9300	The Departed	The Departed	2006	0000-0001-981E-0000-S-0000-0000-R
ITALIA 1	ITALIA	27/01/2016	20:10	8700	Una notte al museo	Night at the Museum	2006	0000-0001-89FD-0000-5-0000-0000-M
ITALIA 1	ITALIA	03/02/2016	4:05	2700	Highlander	Highlander	1993	0000-0000-D0A2-0038-R-0000-0000-U

Business bureau (Lat. Am) provides ISAN in TV reports



Suscripción a alertas



Títulos identificados con Código ISAN

Mostrar registros por página

	TÍTULO ORIGINAL ▲	PAÍS ◆	AÑO LANZAMIENTO ◆	PRODUCTORA ◆	CÓDIGO ISAN ◆	CUENTA DE PLATAFORMA ◆
+	\$9.99	Israel, Australia	2008	Lama Films, Australian Film Finance Corporation (AFFC)	0000-0001-FBBA-0000-6-0000-0000-J	9
+	1	USA	2013	Diamond Docs, Exclusive Media Group, Flat-Out Films	0000-0003-A137-0000-V-0000-0000-I	28
+	10 Items or Less	USA	2006	Reveal Entertainment, Revelations Entertainment, Mockingbird Pictures	0000-0001-F819-0000-G-0000-0000-Q	4
+	10 Things I Hate About You	USA	1999	Touchstone Pictures Mad Chance Jaret Entertainment	0000-0000-2AE7-0000-P-0000-0000-0	30
+	10 to Midnight	USA	1983	Cannon Group, City Films	0000-0000-E0A7-0000-B-0000-0000-4	3
+	101 Dalmatians	USA	1996	Walt Disney Pictures Wizzer Productions Great Oaks Entertainment	0000-0000-2AE8-0000-U-0000-0000-L	6
+	101 Dalmatians II: Patch's London Adventure	USA	2003	Disney Television Animation, Walt Disney Pictures	0000-0001-1526-0000-P-0000-0000-0	6

Spain: Kantar Media provides ISAN in TV reports

KANTAR MEDIA

SPAIN

N	Título	COD ISAN	Cadena	AMBITO	Fecha	Hora	DUR	GEN	AM	CUOTA
1	CINE / LAS ENTRAÑAS DE LA BESTIA	0000-0000-EDCD-0000-3-0000-0000-S	PARAMOUNTCHANNEL	GEN	01/02/17	02:30:00	30	JAR	0,1	3,1
2	CINE / EL GUERRERO AMERICANO 2:LA CONFRONTACION		PARAMOUNTCHANNEL	GEN	01/02/17	02:59:43	85	JAR	0,1	4,6
3	CINE / EL LUTE,CAMINA O REVIENTA	0000-0001-C735-0000-7-0000-0000-G	PARAMOUNTCHANNEL	GEN	01/02/17	04:24:54	115	JAB	0,1	7,1
4	SIN LIMITES		PARAMOUNTCHANNEL	GEN	01/02/17	06:20:12	42	JFF	0,1	4,1
5	CINEXPRESS		PARAMOUNTCHANNEL	GEN	01/02/17	07:02:40	12	BDD	0,0	1,8
6	CINEXPRESS		PARAMOUNTCHANNEL	GEN	01/02/17	10:45:15	16	BDD	0,0	0,2
7	A UN PASO DEL CIELO / EL ESPIRITU DEL LOBO	0000-0002-B0A1-0001-J-0000-0000-H	PARAMOUNTCHANNEL	GEN	01/02/17	11:01:00	61	JEF	0,1	0,9
8	CINE / LOS JUSTICIEROS DEL OESTE	0000-0000-4336-0000-3-0000-0000-S	PARAMOUNTCHANNEL	GEN	01/02/17	12:10:02	101	JAJ	0,1	0,9
9	CINE / VILLA CABALGA	0000-0000-75BF-0000-J-0000-0000-H	PARAMOUNTCHANNEL	GEN	01/02/17	13:51:30	132	JAJ	0,2	0,8
10	CINE / LA HORA DE LOS VALIENTES	0000-0000-2B5D-0000-H-0000-0000-N	PARAMOUNTCHANNEL	GEN	01/02/17	16:07:02	133	JAM	0,4	1,5
11	CINE / SIETE DOLARES AL ROJO	0000-0000-0A48-0000-Z-0000-0000-6	PARAMOUNTCHANNEL	GEN	01/02/17	18:19:37	113	JAJ	0,5	2,1
12	CINE / JUGANDO CON LA MUERTE(2010)	0000-0002-A395-0000-O-0000-0000-2	PARAMOUNTCHANNEL	GEN	01/02/17	20:12:09	110	JAR	0,5	1,4
13	CINE / YO SOY LA JUSTICIA	0000-0000-FC42-0000-V-0000-0000-I	PARAMOUNTCHANNEL	GEN	01/02/17	22:02:20	103	JAI	1,2	2,8
14	CINE / MAXIMA CONDENA	0000-0003-D908-0000-R-0000-0000-U	PARAMOUNTCHANNEL	GEN	01/02/17	23:53:34	109	JAR	0,4	2,1
15	CINE / DAMAGE(2009)	0000-0002-5DAD-0000-5-0000-0000-M	PARAMOUNTCHANNEL	GEN	01/02/17	25:42:46	47	JAR	0,1	2,1
16	CINE / DAMAGE(2009)	0000-0002-5DAD-0000-5-0000-0000-M	PARAMOUNTCHANNEL	GEN	02/02/17	02:30:00	57	JAR	0,1	1,8

ISAN Use Case: Content Recommendation

Cisco Videoscape Media Suite EPG

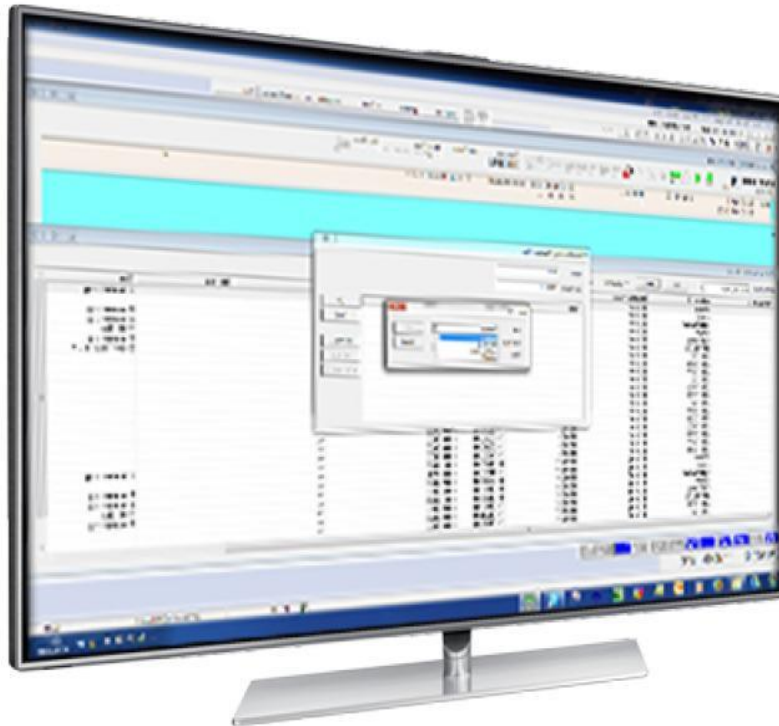
Better monetize content with ISAN



ISAN binds linear content with recommended non linear content such as other episodes of a serie, supplemental material or similar movies ... for purchase or rental.

ISAN Use Case: Linear & file based content delivery

Imagine D-Series DSX™ Advanced Playout Automation



Linear & File based content delivery is empowered with open metadata exchange via BXF, MXF, AAF and ISAN.

Read more on imaginecommunications.com ...

ISAN Use Case: Blu-ray Disk

ISAN is the recommended Content ID in
AACCS (Advanced Access Content System)
used to protect Blu-ray disks

AACCS helps to ensure content is secure accross
devices and media while it maintains the highest
standards and flexibility.

more on <http://www.aacsla.com/home>

The AACCS logo consists of the letters "AACCS" in a bold, black, sans-serif font, centered within a light gray rectangular box with rounded corners.

advanced access content system



ISAN Use Case: Linguistic versions identification


CINANDO
Join & Connect

Subtitles



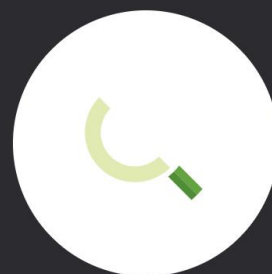
MARCHÉ DU FILM
FESTIVAL DE CANNES

Key features



Share & Monetize

- Share subtitles with more than 300 VOD platforms, 1.500 distributors and 1.700 festivals
- Monetize subtitles with no intermediaries and retain 100% of the revenues



Search & Find

- Browse referenced subtitles with advanced search tools
- Festivals & Distributors: find and acquire films subtitles in your language
- VOD platforms: find and acquire multi-language versions for a specific film



Check & Conform

- Subtitles providers approved by the Cinando team
- Quality check and conversion to TTML standard advanced format
- Unique ISAN number for each subtitle version



Archive & Protect

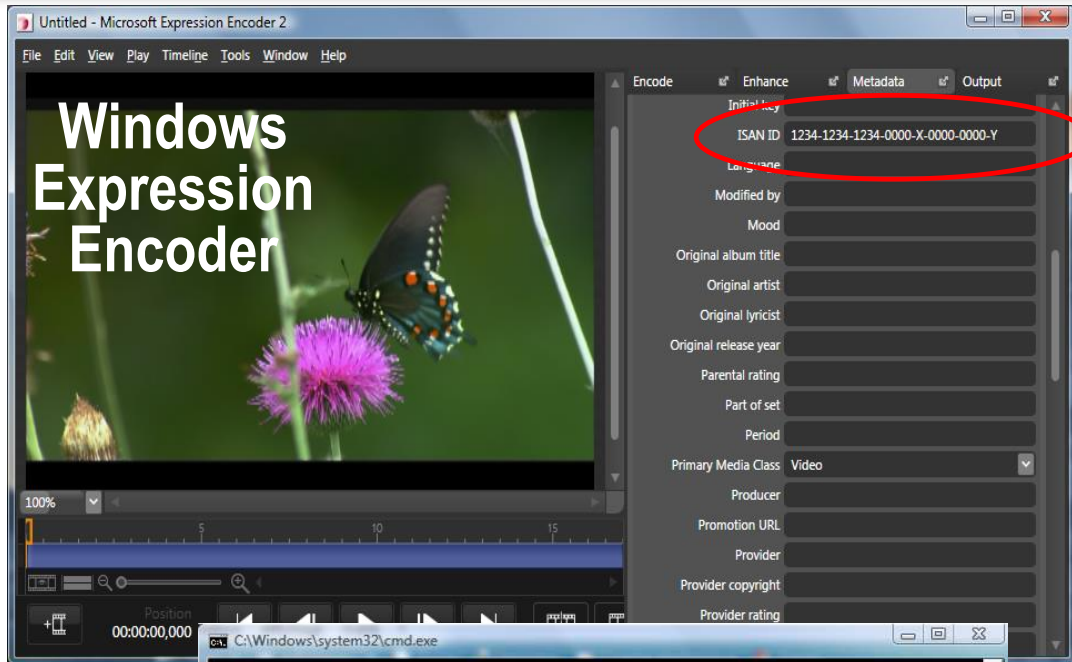
- Long-term, free and secure repository to archive subtitles
- Automatic notification to film rights-holders when subtitles are shared

Co-funded by the
European Union



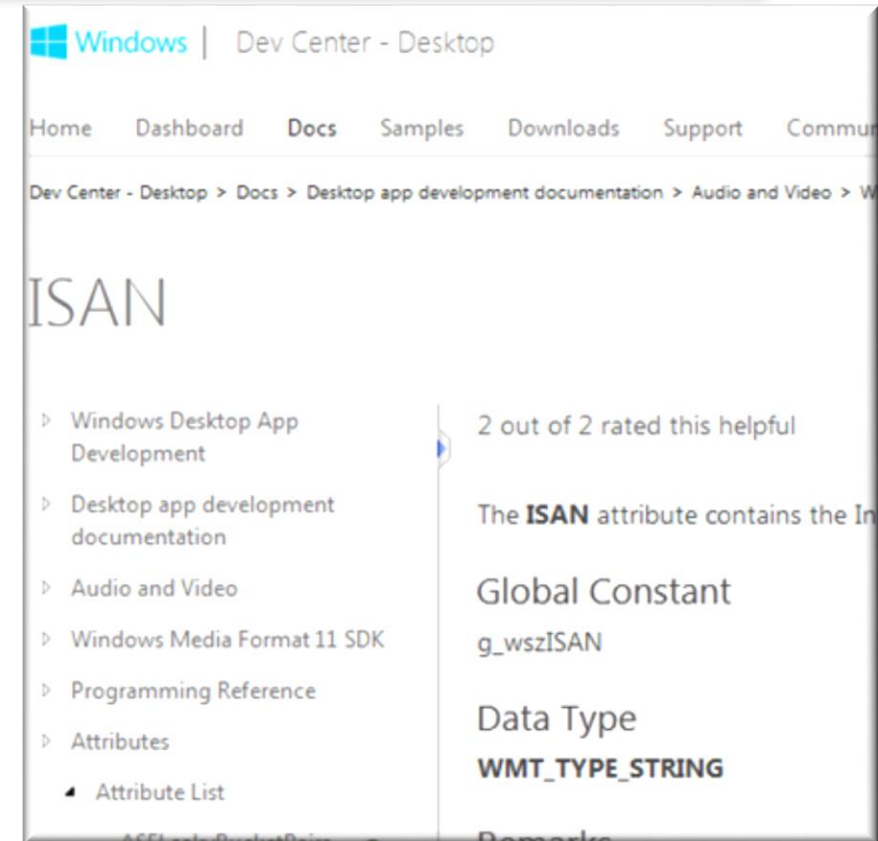


ISAN Use Case: Embed ISAN in Windows Media files



```

C:\Windows\system32\cmd.exe
D:\ISAN\ISAN_injector>MetadataEdit.exe C:\Insects.wmv show 0
**
** Idx Name Stream Language Type Value
**
** 0 Duration 0 0 QWORD 169930000, 0x00000000a20ed1
**
** 1 Bitrate 0 0 DWORD 904232, 0x000dcc28
** 2 Seekable 0 0 BOOL True
** 3 Stridable 0 0 BOOL True
** 4 Broadcast 0 0 BOOL False
** 5 Is_Protected 0 0 BOOL False
** 6 Is_Trusted 0 0 BOOL False
** 7 Signature_Name 0 0 STRING ""
** 8 HasAudio 0 0 BOOL False
** 9 HasImage 0 0 BOOL False
** 10 HasScript 0 0 BOOL False
** 11 HasVideo 0 0 BOOL True
** 12 CurrentBitrate 0 0 DWORD 895000, 0x000da818
** 13 OptimalBitrate 0 0 DWORD 895000, 0x000da818
** 14 HasAttachedImages 0 0 BOOL False
** 15 Can_Skip_Backward 0 0 BOOL False
** 16 Can_Skip_Forward 0 0 BOOL False
** 17 FileSize 0 0 QWORD 1693208, 0x00000000019d618
** 18 HasArbitraryDataStream 0 0 BOOL False
** 19 HasFileTransferStream 0 0 BOOL False
** 20 WM/ContainerFormat 0 0 DWORD 1, 0x00000001
** 21 Title 0 0 STRING "Insects"
** 22 Author 0 0 STRING "Regis Flad"
** 23 WMFSVersion 0 0 STRING "1.0.6000.6324"
** 24 WMFSNeeded 0 0 STRING "0.0.0.0000"
** 25 IsUBR 0 0 BOOL False
** 26 WM/ISAN 0 0 STRING "00000001D1D000002000000000"
D:\ISAN\ISAN_injector>pause
  
```



Windows Media SDK
(encoder / decoder)

[more on msdn.microsoft.com](http://msdn.microsoft.com)

ISAN Use Case: ISAN use in Media Asset Management

Telescope DAM SW by North Plains Systems

Asset Container Record

ISAN Schema Element
(String Field)

Collateral Metadata
Objects
(Container Field)

SandBox : Gallery : "PIA03454.avi" (Info)

File: PDZ_T01.wmv

Created: 07/23/2005 07:28:23 Modified: 04/22/2005 23:58:33

Type: WMV (Windows Media Video) Size: 10.48 Mb

Info: 320 pixels wide, 240 pixels high, 2 tracks, 27.74 (sec)

Contained in: Templates

Asset Type: Video

Accession ID: 59003.04.M

Title: Perfect Dark Zero Trailer

Title Notes:

ISAN ID: ISAN 0000-0001-6046-0000-T-0000-0000-0

ISAN Graphic: 17 Documents

Production Date: Feb 15, 2000

Production Staff: Joe Brown Charles Lyell

Production Source: MS Studios

SAL Project ID: 12345

Performers: Zed McFire Rev. Fordyse
Eliz. Barrett Browning



ISAN Organisation Overview

ISAN Organization Overview

ISAN = ISO 15706

... 163 countries



- ✓ ISO is **the owner of the ISAN standard** and related IP (ISAN Registry, etc...)
- ✓ ISAN is **maintained and reviewed by ISO** with the approval of its members
- ✓ The management of ISAN and operational & implementation specification is delegated to ISAN-IA (via the Registration Authority Agreement) who reports to ISO.



Registration Authority Agreement (RAA): defines the **Role, Responsibility and Obligations** of ISAN-IA and ISAN RA



- ✓ **Manage & Operate the ISAN Standard** in compliance with the ISO RAA, report to ISO
- ✓ Operate the ISAN Registry and make sure it is accessible to all ISAN users.
- ✓ Appoint & support ISAN Registration Agencies (ISAN RA)
- ✓ Specifies with ISAN RA recommended practice.



Registration Agency Agreement: defines the Role, Responsibility and Obligations ISAN RA in accordance with ISO RAA



- The Registration Agency (RA) is established to serve a **specific country or region**
- ✓ Deliver the **ISAN Registration Service** to local audiovisual users
 - ✓ Facilitate the **access to the ISAN Registry**
 - ✓ Make sure that ISAN complies with local needs and practices



ISAN is regulated by ISO

- ✓ **RAND Principle:** "reasonable and non-discriminatory" terms and conditions shall apply.
- ✓ **Accessibility of the ISAN Registry:** ISAN data shall be accessible to all ISAN users.
- ✓ **ISAN Service Fees** shall be reasonable and delivered on a strict Cost Recovery principle
- ✓ **Compliance with competition laws:**
 - ✓ Local ISAN Service fees are defined by each RA: harmonization of fees = illegal price fixing.
 - ✓ ISAN users are **free to be serviced by the ISAN RA of their choice** (not necessary the one appointed in their country).
 - ✓ ISAN users are **free to change for another ISAN RA**, anytime .
- ✓ **Reporting:** ISAN-IA is obliged to report to ISO on a yearly basis (activity, obligations fulfillment,...)
- ✓ **Audit:** ISO has an audit right on ISAN-IA (agreements, books, records, documentation etc...).
- ✓ **RAA Reassignment:** ISO is entitled to reassign the ISAN Registration Authority mandate to another organization if justified by a good cause (obligation violation, bankruptcy, etc...).

**ISAN-IA and ISAN RA are not for profit association created (by not for profit organizations)
for the sole purpose of Managing / Operating the ISAN Standard**

ISAN Intellectual Property

- ✓ ISO is the exclusive owner of the ISAN standard (ISO 15706-1 & ISO15706-2).
- ✓ All **intellectual property** related to the proper functioning of the ISAN standard, such as the [ISAN Registry](#), trademarks, documents, etc.. **is owned by ISO and licensed to ISAN-IA**.
- ✓ **Metadata** submitted by registrants in the ISAN Registry **are the property of the registrant** who grants a non exclusive, perpetual worldwide **license to ISAN-IA and ISO**.
- ✓ **ISAN identifiers are public** and can be stored, used, circulated for free and freely by anyone (irrespective of commercial and non commercial purpose).
- ✓ ISAN-IA can sub-license ISAN metadata to third parties: a cost recovery based contribution can apply for preparing data and processing scheduled updates.

ISAN-IA & RA Governance

The ISAN-IA association is composed of 3 main bodies:

- ✓ The General Assembly: validates the accounts and nominates the auditors.
 - ✓ The Administration Committee: composed today by representatives of the founding Members: CISAC, AGICOA, FIAPF, and representatives of the ISAN RA.
 - ✓ The Registration Agency Committee (RAC): composed of representatives of all ISAN RA, the RAC coordinate local efforts and reports local experience, specification or requirement and propose evolutions of the ISAN system to the AC.
- ISAN-IA's bylaw enables to **accept other industry representatives in its governance structure** such as Archives, Broadcasters, Digital Platforms, Data providers, etc... **willing to play an active role** in the development of ISAN.
 - ISAN RA are distinct legal entities, not for profit associations created for this specific purpose.
 - ISAN RA are usually co-founded by several local constituents of the audiovisual industry:
 - ISO 15706 requires that local producers support or are represented in the RA
 - Artists, music societies, broadcasters, national archives, etc...

ISAN metadata model

Audiovisual Works & Versions

Work / AV Work ⇔ ISAN

- ✧ Distinct Intellectual Creation (Realization) with constant characteristics throughout all its versions
- ✧ A Work refers to all its derived versions; it is **Abstract** (no one can point a particular medium for the Work)
- ✧ A Work exist because it has been realized (1st manifestation). Unfinished projects (e.g. Clouzot's "L'Enfer" 1964) are not considered as works (Index ISAN)

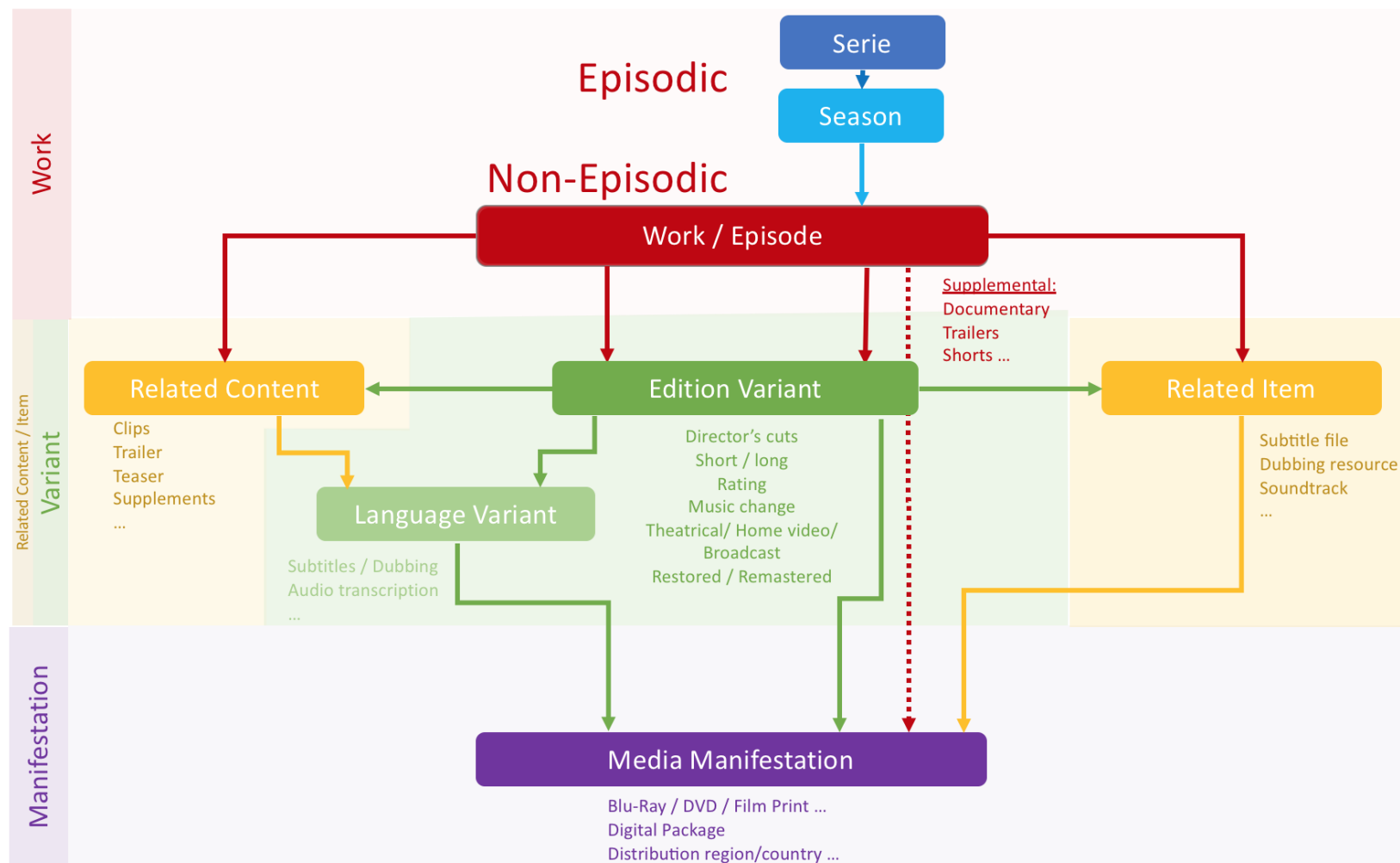
Variant of the AV Work (version) ⇔ V-ISAN

- ✧ Changes to the AV Work that do not significantly alter the nature of the intellectual Creation (not a ≠ Intellectual Creation).
- ✧ A Variant refers to all its derived manifestations, It is an **Abstract** thing.
- ✧ Changes can be one or a combination of : *minor editions, dubbing, subtitling, alterations of the soundtrack,...*

Manifestation of a work or a variant (version) ⇔ V-ISAN

- ✧ Fixation of the AV Work or a Variant on a **physical medium** (film print, tape, optical disk, ...) or a **logical medium** (i.e. without a fixed physical carrier) such as **digital files** or **streams**.
- ✧ A manifestation points a specific version of the Work, it refers to a **Real** thing.
- ✧ Defined with the technical properties of the media embodiment (Image Format, Encoding Details, Media of Fixation, ...)

ISAN work & version relationship





ISAN Work & Version Metadata Elements

Minimal descriptive metadata required to unduplicate AV works

SINGLE AV WORK

Title of audiovisual work/content
+ alternate titles (when applicable)

Duration (in minutes and/or seconds)

Original language(s)

Work Type (Feature Film, Documentary, TV entertainment, etc...)

Year of reference (Copyright or production)

Country (or countries) of **reference**

Color Kind

Year of first publication

Main production company

Full name of principal **director(s)**

Full name of **participants** (actors scriptwriter, etc...)

Linked **IDs** (e.g. ISRC, UMID, EIDR, ...)

Work **Composites** (list of ISAN



EPISODIC WORK

Title of the Serial

Episode Title

Episode Number

Season

VERSION of an AV Work

Version Type

- Language, Edition (Clips,...) (*Expression*)
- Media (*Manifestation*)
- Related Content (e.g. Bonus, Soundtrack ...)
- Related Item (e.g. *Boxed set, ...*)

Parent Relationship

Title & Descriptive Name

Release Year / Date

Version Running Time

Linked Identifiers (ISRC, UPC, EIDR...)

Spoken & Written Languages

Image Details (Color, Definition, Ratio, 2D/3D)

Media embodiment (DVD, BR, EST, VOD,...)

Audio & Video codec + encoding profiles

Distribution (countries + channel/platform)

Rating & Content Alert

Version Composites (list of Version ISAN)

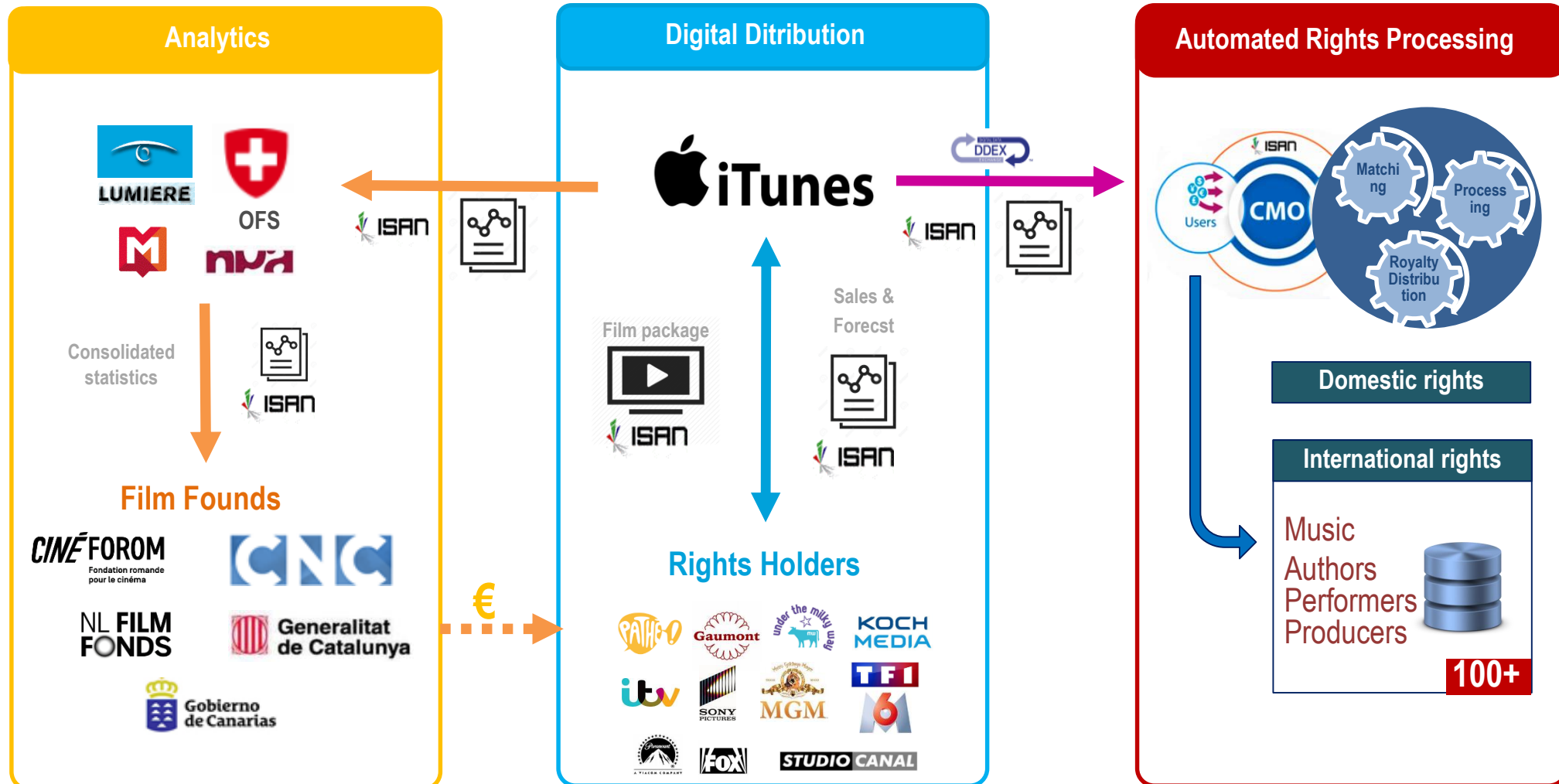
Resolution Service Provider (3rd party DB)

Up to 3 customizable metadata fields



Using ISAN in distribution workflows

ISAN Use Case: Use of ISAN in Digital Distribution



ISAN in audiovisual standards

Distribution



AMWA:

AS-03

AS-11

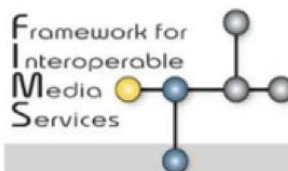
UK DPP



Digital
Cinema
Package



BXF



Delivery



a — l — s — c



www.tv-anytime.org



Reporting



Archiving



EN 15744:
EN 15907:





Standardized representations for ISAN

Printed Form

ISAN 1234-5678-9101-0004-X-0000-00A1-Y

URN Form

URN:ISAN:0000-0001-DB15-0000-X-0000-000C-N

ISAN is a registered Namespace Identifier (NID) with IETF and IANA. ([IETF RFC 4246](https://www.rfc-editor.org/rfc/rfc4246))

Hexadecimal & Binary Form (ISAN prefix and check digits can be omitted)

1234567891010004000000A1 000...0111011011000101010000000000000000000000000000000000 (96-bit binary number)

XML Form

<ISAN root="0000-0001-DB15" episode="0000" check1="X" version="0000-000C" check2="N" />

Retrieving existing ISAN

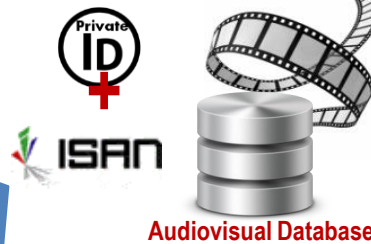
- Metadata Matching Service
- ISAN Rest API

Import ISAN for confirmed matches

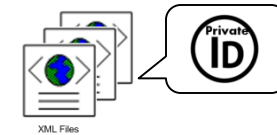


4

5



AV Metadata (XML/Json) File or API



ISAN retrieval (Matching)

2

3

Matching Results

Unique Match / No Match / Multiple Matches

Unique Match

No Match

Multiple Matches

9 Years Experience in Audiovisual Metadata Matching

Core information			
ISAN	0000-0001-48EC-0000-X-0000-0000-C	Kind	Feature Film
Type	Feature Film	Year of reference	2006
Duration	90 MIN	Year of 1st publication	
Colour	Yes		
Composite	No		
Production information			
Coproduction	No		
Production companies			
Countries of reference			
Original languages	English		
Title information			
Original	Yes	Language	ENG
Language	ENG	Title	Casino Royale
Participants information			
Type	Feature Film	Kind	Live Action
Producer	Barbara Broccoli	Year of 1st publication	1965
Director	Michael G. Wilson		
Screenwriter	Neal Purvis		
Screenwriter	Robert Wade		
Actor	Daniel Craig		
Actor	Judi Dench		
Actor	Eva Green		
Actor	Mads Mikkelsen		
Actor	Jeffrey Wright		
Screenwriter	Paul Haggis		

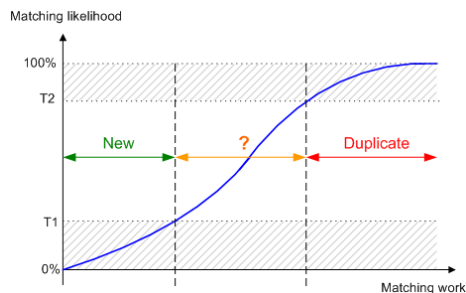


Multilingual data Matching & Unduplication

Assistance and service in
81 countries

15 local Registration
Agencies

Metadata Matching



Minimize the Human Work

Title information			Registrant PK (336329)
Original	Language	Title	
Yes	FRE	Ruffi a tokyo	
No	ENG	Ruffi in tokyo	

Title information			ISAN 0000-0000-6F14-0000-0-0000-0000-2
Original	Language	Title	
Yes	FRE	Du ruffi a tokyo	

List of Matching ISAN Candidates	
Title	Score
0000-0000-6F14-0000-0-0000-0000-2	82.35
Du ruffi a tokyo	
0000-0001-30C1-0000-7-0000-0000-0	69.25
Ruffi In Tokyo	
0000-0001-1B17-0000-0-0000-0000-2	64.73
Ruffi In Tokyo	
Ruffi a Tokyo	64.73

Core information			
Type	Feature Film	Kind	Live Action
Year of reference	1961	Year of 1st publication	
Duration	89 min		
Colour	No		
Composite	No		

Core information			
ISAN	0000-0000-6F14-0000-0-0000-0000-2		
Type	Feature Film	Kind	Live Action
Year of reference	1961	Year of 1st publication	1965
Duration	89 min		
Colour	Yes		
Composite	No		

Legend
matching score: 100%
matching score: 85%
matching score: 70%
matching score: 55%
matching score: 40%
matching score: 25%
matching score: 0%

Match confirmation tools

1. Auto-Confirm matches

Configure the 4 match confirmation rules

Rule 1: at least one

Rule 2: Year diff. < 5

Rule 3: Duration diff. < 5

Rule 4: at least one

2. Save Confirmed Match Results

Save confirmed matches with selected fields: ☐ Title ☐ Year ☐ Duration ☐ Colour ☐ Composite ☐ Language ☐ Work Type ☐ Substituted Data

ISAN	Year	Color	Composite	Language	Work Type	Substituted Data
0000-0000-6F14-0000-0-0000-0000-2	1961	Yes	No	ENG	Live Action	
0000-0000-6F14-0000-0-0000-0000-2	1961	Yes	No	ENG	Live Action	
0000-0000-6F14-0000-0-0000-0000-2	1961	Yes	No	ENG	Live Action	
0000-0000-6F14-0000-0-0000-0000-2	1961	Yes	No	ENG	Live Action	
0000-0000-6F14-0000-0-0000-0000-2	1961	Yes	No	ENG	Live Action	

ISAN Dissemination Use Cases

✓ Matching Service

- ✓ IDA (International authors rights registry), BfS (Swiss statistic office), ICAA (Spanish ministry of culture), Lumière (EAO), CNC (FR)

✓ ISAN Registry API

- ✓ Plurimedia, Eurodata TV / Mediametrie, Agicoa (International producers rights registry), VRDB (International performers rights registry)

✓ ISAN Registry Snapshots

- ✓ GfK, Business Bureau (Lat Am.), BMAT (music monitoring), AV Index (International Music rights registry)

ISAN Rest API

- ✓ REST API: read and write data in the ISAN Registry
- ✓ Data encoded in XML (Same schema as for file based data exchange) and JSON
- ✓ Double authentication:
 - ✓ API authentication : HTTP authorization header
 - ✓ ISAN registry authentication: custom X-ISAN authorization header

```
apiSignatureValue = Base64 (api_username:api_password)  
isanSignatureValue = Base64 (isan_username : MD5 (isan_password))
```

- ✓ Swagger active documentation <http://web.isan.org/api/> (contact us for credentials)
- ✓ List of operations
 - ✓ Register a new work or version of a work
 - ✓ Search in the ISAN Registry (Query)
 - ✓ Update informations for existing works or versions
 - ✓ Resolve ISAN codes or external identifiers (Lookup)
 - ✓ List child versions from an ISAN (hierarchical Registry browsing)

ISAN Registry API: Search & Lookup functions

✓ Lookup Service (ISAN resolutions / external IDs resolutions)

- ✓ Retrieve the metadata associated to an ISAN (all ISAN representations: classic, URI, ..)
- ✓ Validate an ISAN (check digits, existence, active/inactive)
- ✓ Translate ISAN ↔ External IDs

✓ Search Service

- ✓ Perform search in the ISAN registry (Oracle search: to be replaced soon by Solr)
- ✓ Filtering, Sorting, Pagination:

GET /api/works?**filter=string&sorting=string&limit=n&page=i**

- ✓ Search criteria (filter): « AND » combination between : Work Type, Serial Type, Title, Year, Duration, Participants (name / role), root ISAN (episodes of a serial)

To retrieve all feature films released on 2013
filter="setype::SW/wktype::FF|yor::2013"

To retrieve all documentaries or films where Clint Eastwood has participated
filter="any::Clint Eastwood/wktype::DO,FF"

=> supported operators: OR (|), exclusions (_), numeric intervals([xx-yy])

- ✓ Sorting: ascending (by default), descending (-) order, multiple fields are supported (**sorting**).
- ✓ Pagination: define the number of results per pages (**limit**) and call results page by page (**page**),