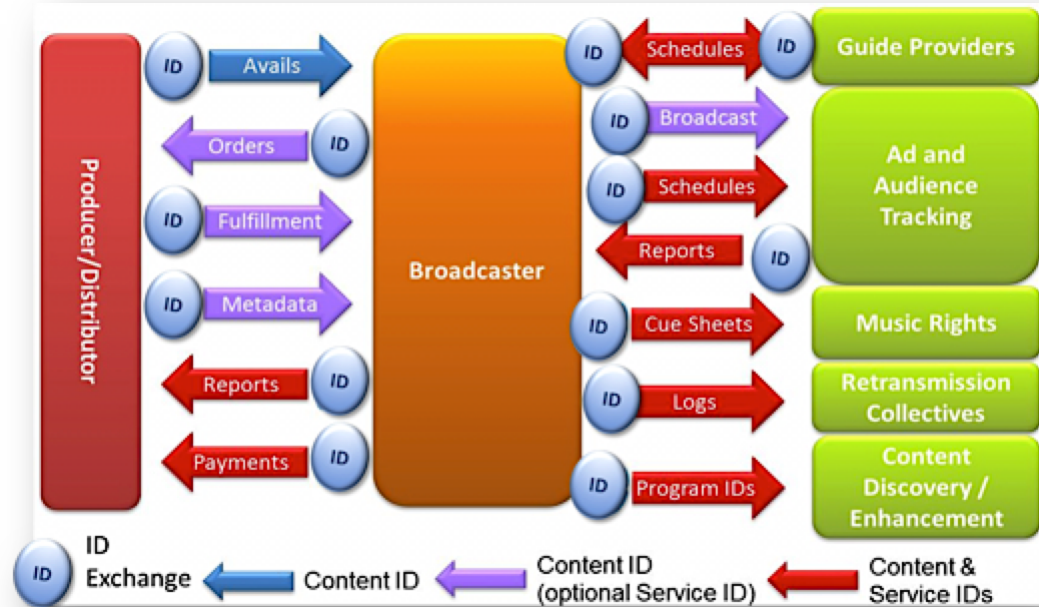


A faded background image of three jockeys racing horses on a track. The jockeys are wearing different colored silks: white, blue, and yellow. The horses are in full gallop, kicking up dust. The text is overlaid on this image.

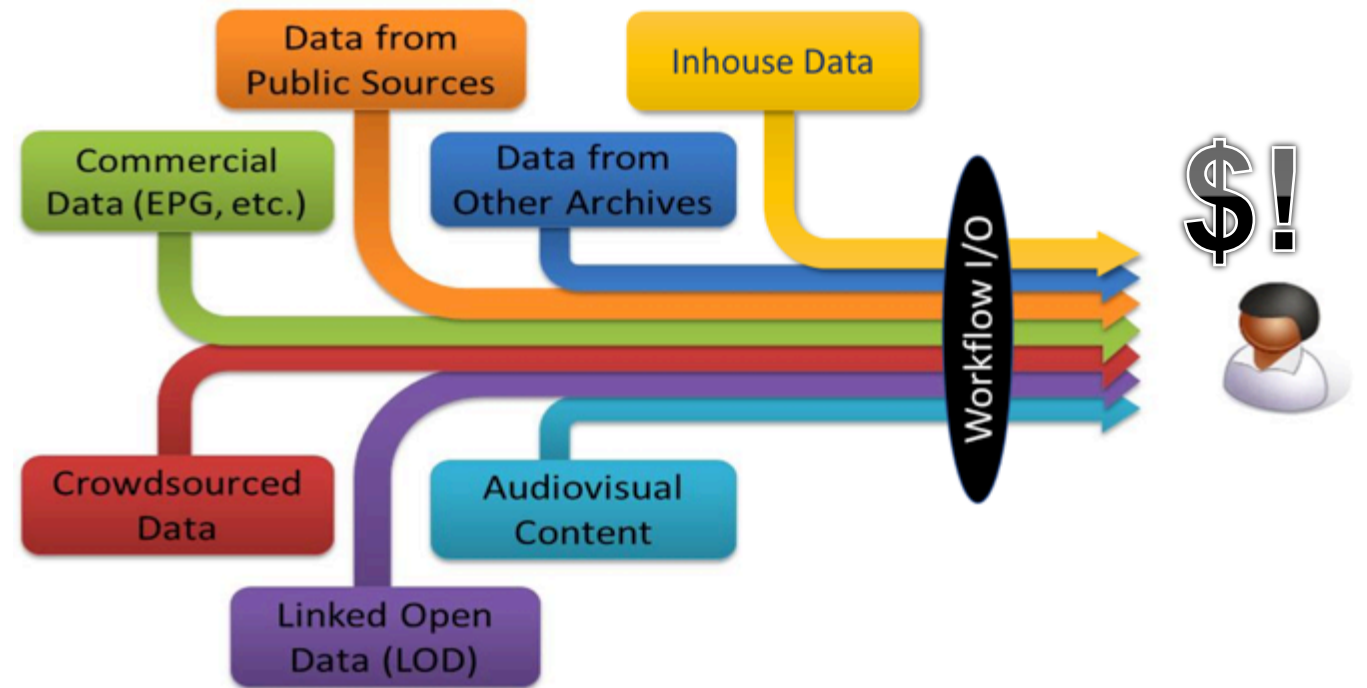
Trifecta: three dynamic international M&E Supply-Chain Initiatives

HITS LA – October 2018

The Problem



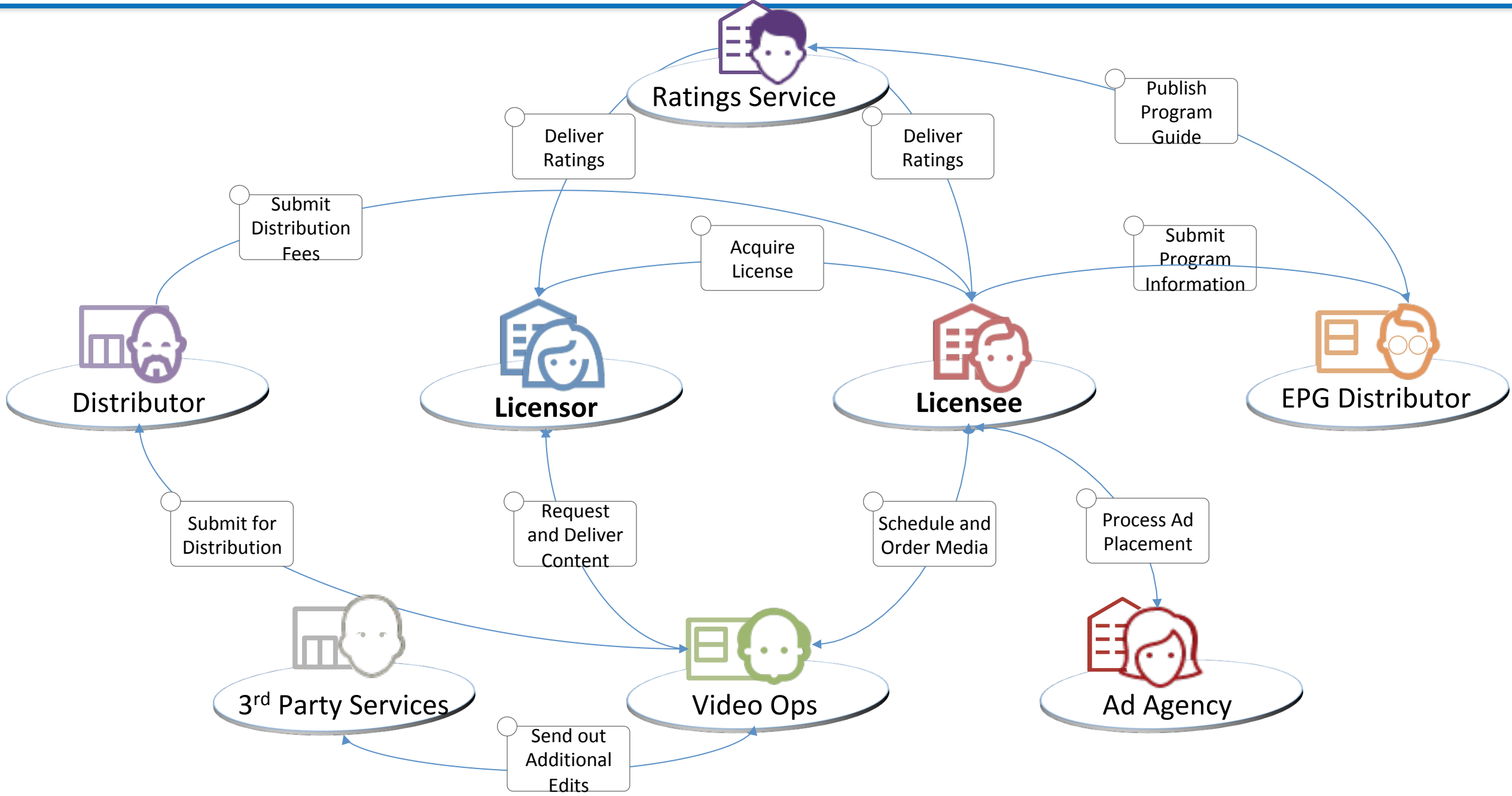
Traditionally, different M&E organizations use different IDs



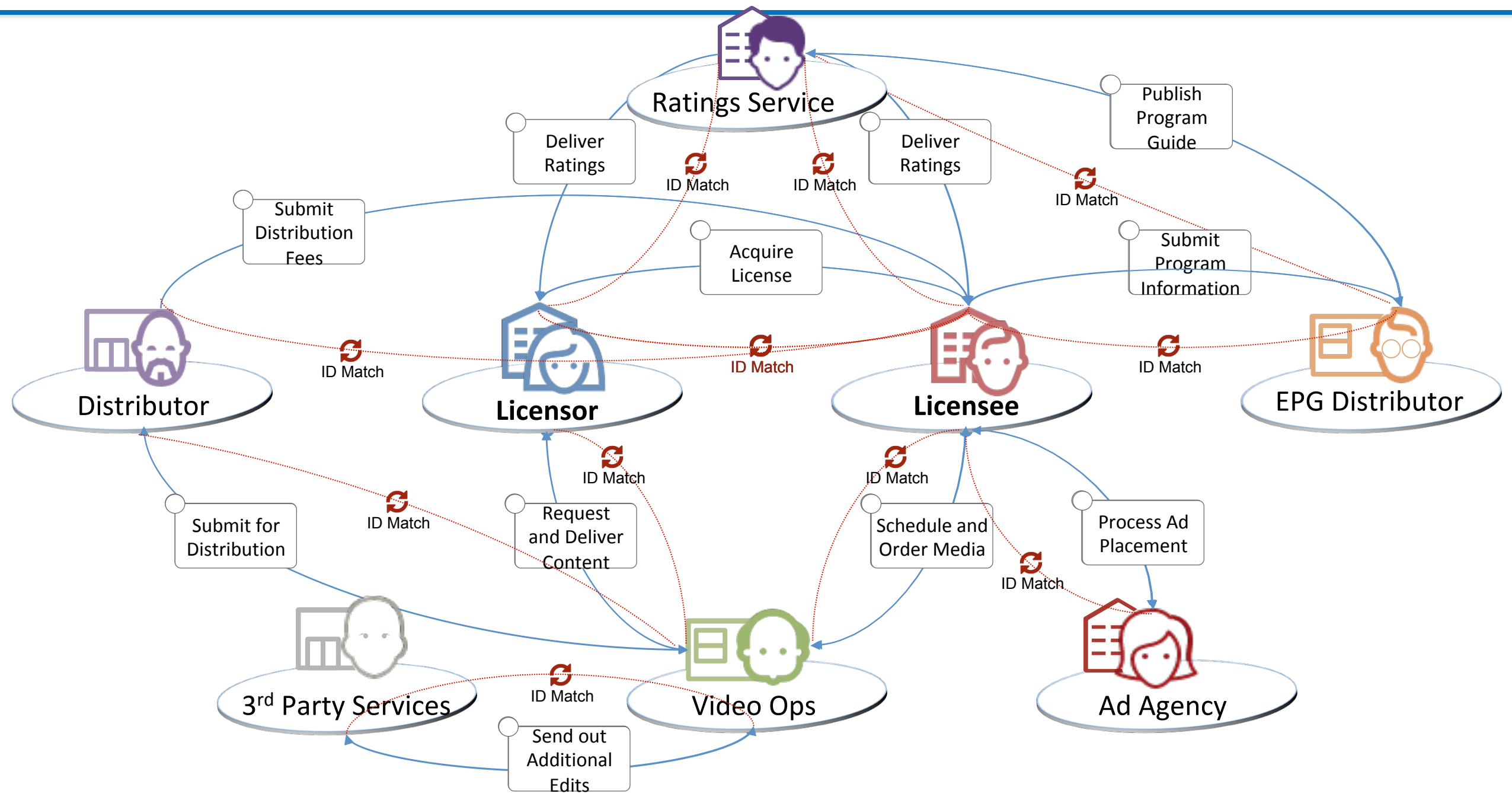
Resulting in a high number of IDs to process and match

(examples, BBC, A+E, Google Play, Viacom)

Onboarding Broadcast Content

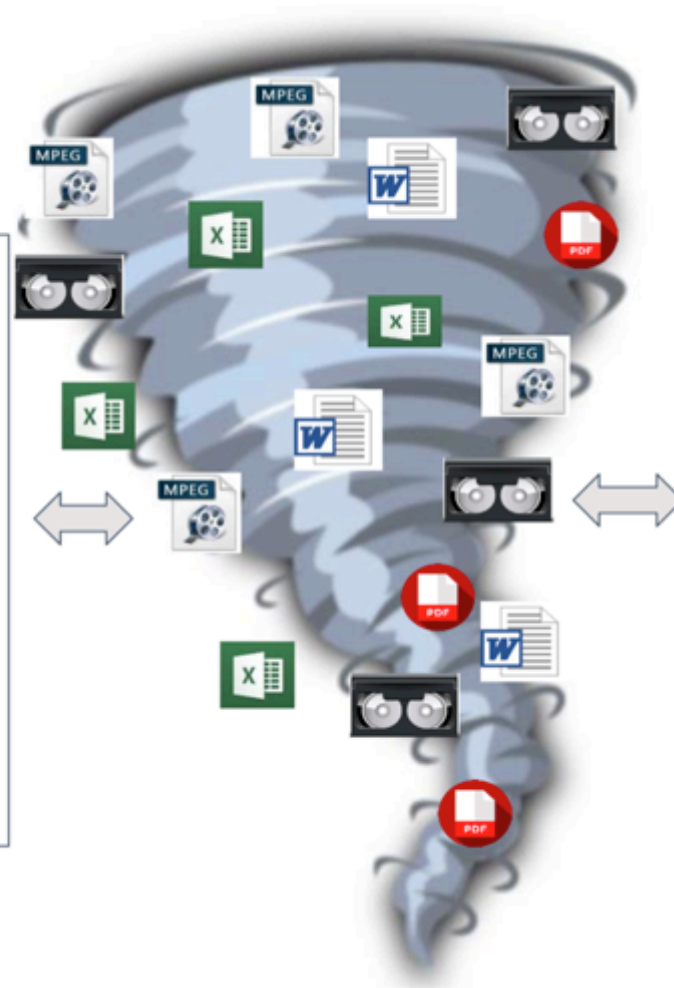
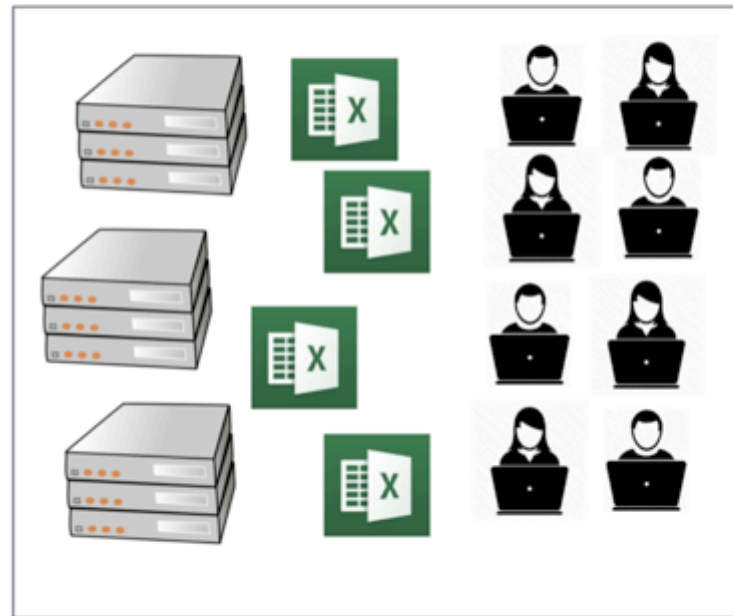


The Negative Network Effect

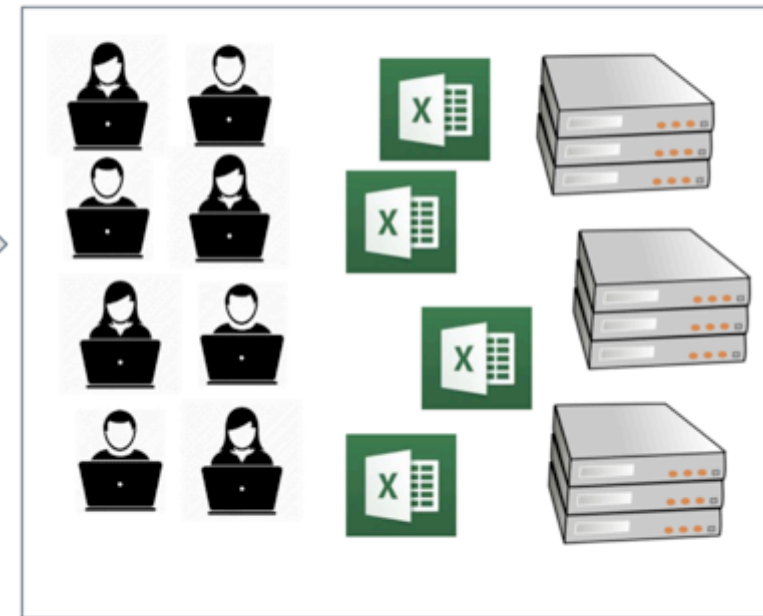


Metadata Workflow Maelstrom – Retailer Version

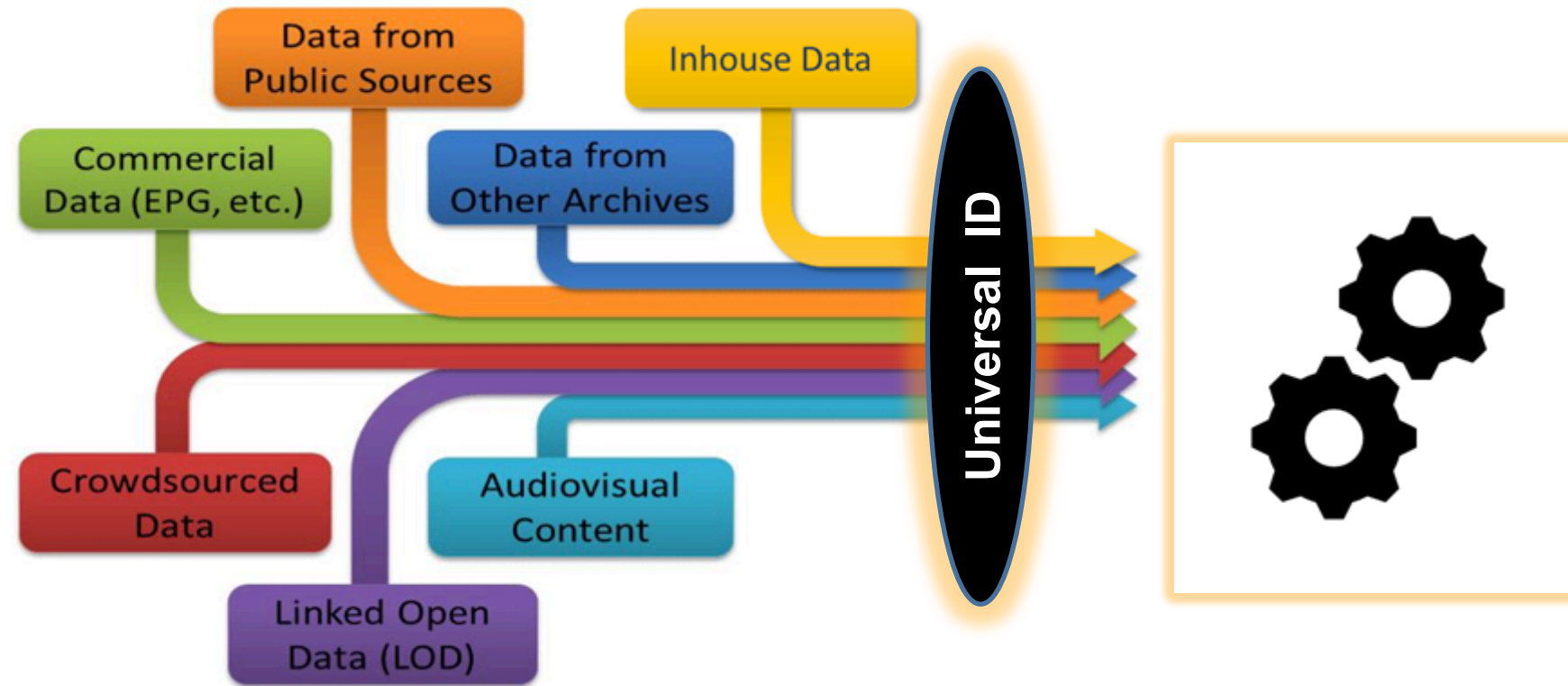
Studios Content Operations



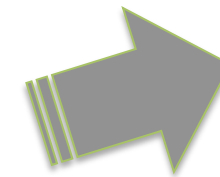
Retailer Content Operations



Benefits of a Universal ID



Use of on **unique ID** by all partners allows **workflow automation**



Efficiency
Speed

About EIDR: One-Page Overview

What EIDR is

- .Global registry for **unique** identification of movie and TV content
- .Designed for automated machine-to-machine communication
- .Flexible data hierarchy down to the product & SKU level, incl. edits, clips, composites, encodings, and relationships

EIDR Purpose

- .Make digital distribution **competitive**
- .Help reduce costs
- .Improve collaboration and automation across multiple application domains & platforms
- .Enable new businesses and create new efficiencies

What EIDR is Not

- .Profit-making
- .Rich commercial metadata
- .Ownership or rights information
- .US-only

EIDR Technology Summary

- .Interoperable, standards-based infrastructure
- .Built on ISO Digital Object Identifier (DOI) standard
- .Application integration through public APIs and schemas, freely available SDK for members
- .Efficient infrastructure for new and existing applications



Who is EIDR? - Board of Directors



EIDR Members

Content Identification Ecosystem

PRODUCTION

CONSUMER

Producers & Programmers

Metadata and Content Discovery

Distributors

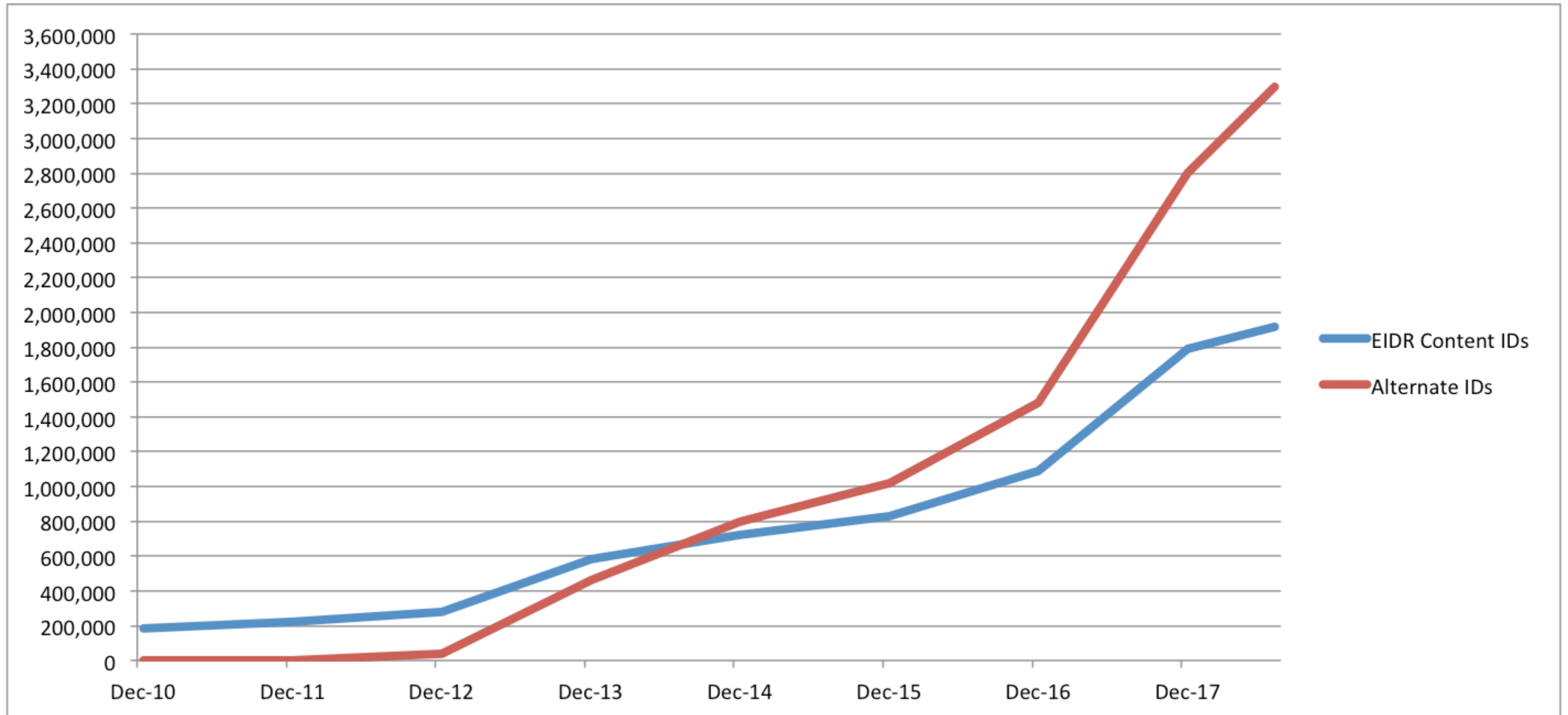
Infrastructure & Media Services

Reporting, Rights Tracking, Business Intelligence

Aggregators

Archives

Rapid growth in 2015 - 2018, and beyond



Signs of Adoption and Value

Strong adoption within the digital media industry

EIDR coverage for Movies...overall 98%

Disney	90%
Fox	99%
NBCU	99%
Paramount.....	100%
Sony	100%
WB	99%

Standards-based tech free from any vendor-lock

Standard DOI prefix for EIDR Content IDs: 10.5240/

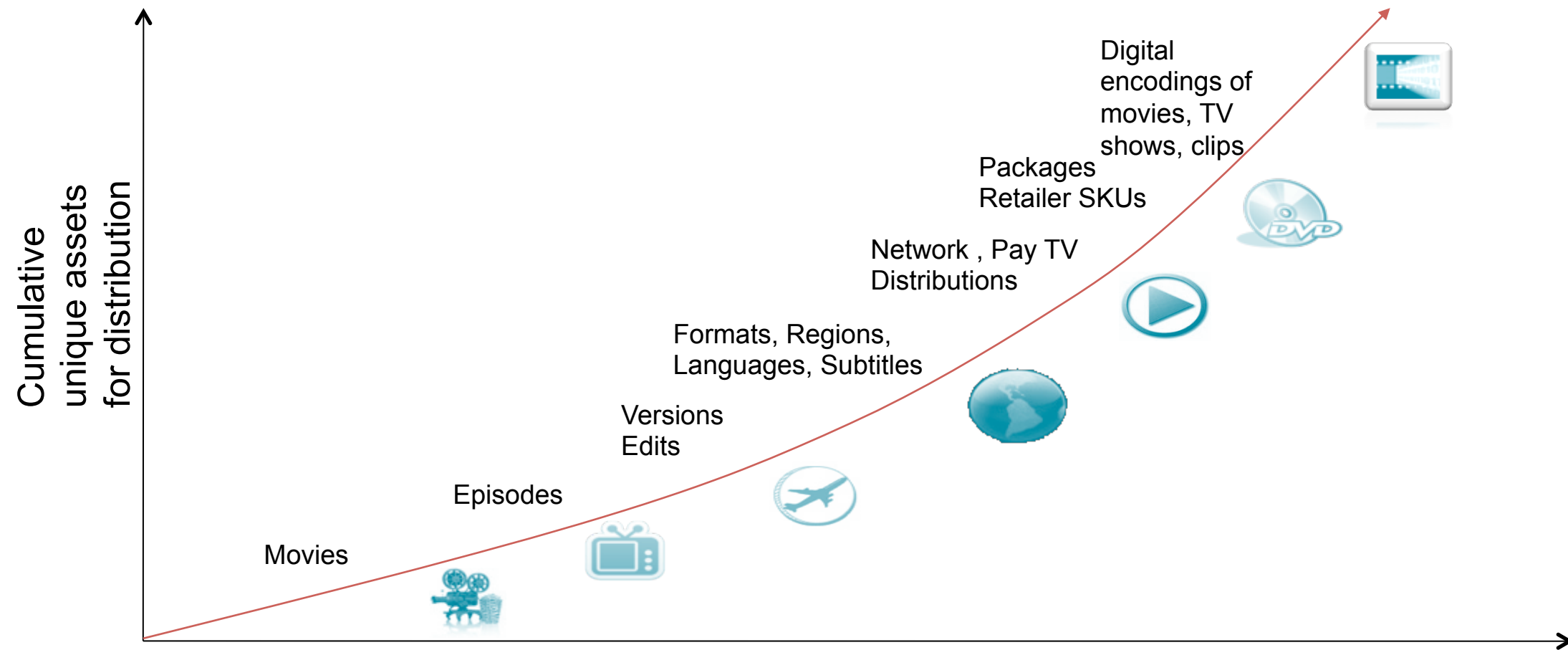
Unique suffix for each asset: XXXX-XXXX-XXXX-XXXX-XXXX

Check digit: C

ISO doi

As a non-profit industry consortium, EIDR (Entertainment Identifier Registry) develops and manages an API-accessible registry of global IDs for all movie and TV content based on ISO's read-for-free DOI (Digital Object Identifier) standard.

However... titles, versions, & encodings continue growth



Digital technology + new formats + new devices have caused the number of unique assets to explode

A Liminal Moment - Defined

- Adjective
- Definition of liminal
 - 1: Relating to a transitional or initial stage of a process.
 - 2: Occupying a position at, or on both sides of, a boundary or threshold, being an intermediate state, phase, or condition ([in-between](#), [transitional](#))

EIDR is having a “moment”

1. IMF for Broadcast & Online – (DPP, SMPTE)
2. EMA Avails Standard – (Digital Supply Chain Alliance = EMA, DEG, MovieLabs)
3. CIMM TAXI Complete – (CIMM, Kantar Media, Ad-ID, EIDR, SMPTE)

#1: IMF for Broadcast & Online



OPERATIONAL GUIDELINES
SUPPLEMENT

**INTEROPERABLE
MASTER FORMAT –
BROADCAST & ONLINE**



- Announcement at IBC 2018 – recently approved SMPTE TSP 2121:2018 IMF Application DPP (ProRes) standard
- EIDR is the preferred Universal Unique ID in DPPs documentation
- *“The UUID is the key to the IMF workflow; without it - we are dead”*
– François Abbe, founder & president, Mesclado & Governor for SMPTE’s EMEA, Central & South America Region

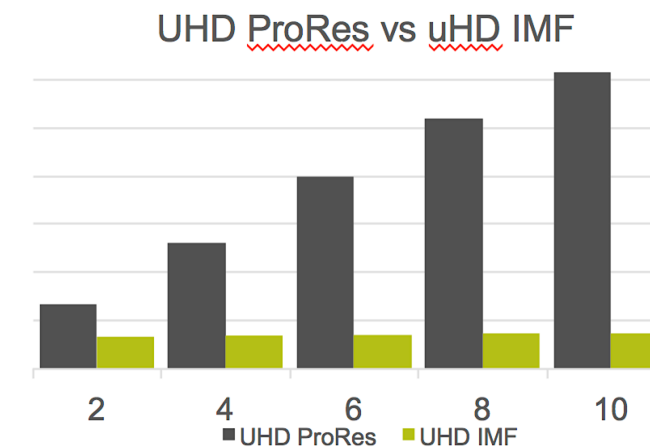
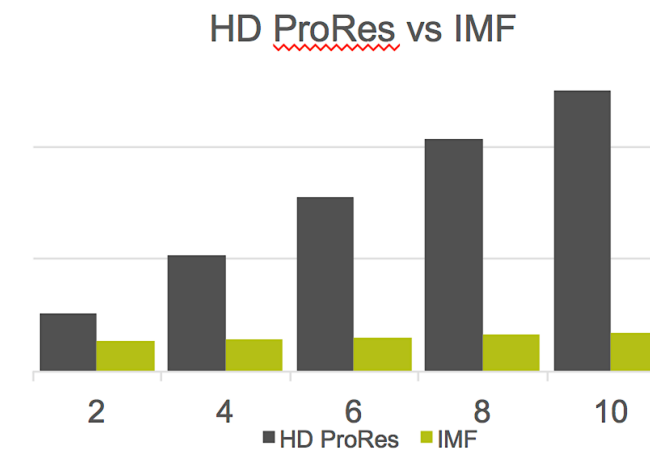
Who supports the IMF for Broadcast Standard?



IMF for Broadcast Value - Storage

Benefits in figures: Storage & Files Size

No. of versions 60 min program	HD ProRes 422 25 FPS (Without IMF)	IMF 25 FPS ProRes 422	UHD ProRes 422 25 FPS 740 Mbps (Without IMF)	IMF UHD 25 FPS ProRes 422
1	103 GB	103 GB	334 GB	334 GB
2	206 GB	107 GB	668 GB	338 GB
4	412 GB	115 GB	1.3 TB	346 GB
6	618 GB	123 GB	2 TB	354 GB
8	824 GB	131 GB	2.6 TB	362 GB
10	1 TB	139 GB	3.3 TB	370 GB



IMF for Broadcast Value - Performance

Benefits in figures: Performance

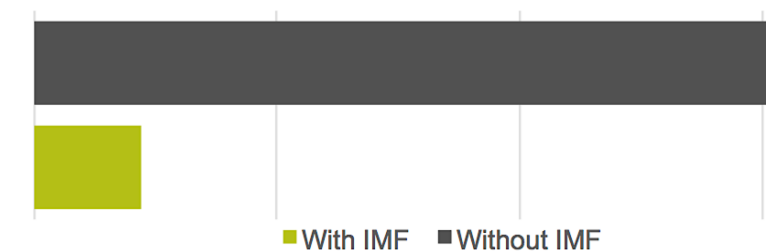
DELIVERY: Example Speed 100 Mbps

TV SHOW	Localised Versions Masters	Media to Transfer (ProRes)	Media to Transfer (with IMF)	Time Transfer without IMF	Time Transfer IMF
	2	206 GB	107 GB	5h 09m	2h 40m
10	1 TB	147 GB	25h 37m	3h 40m	

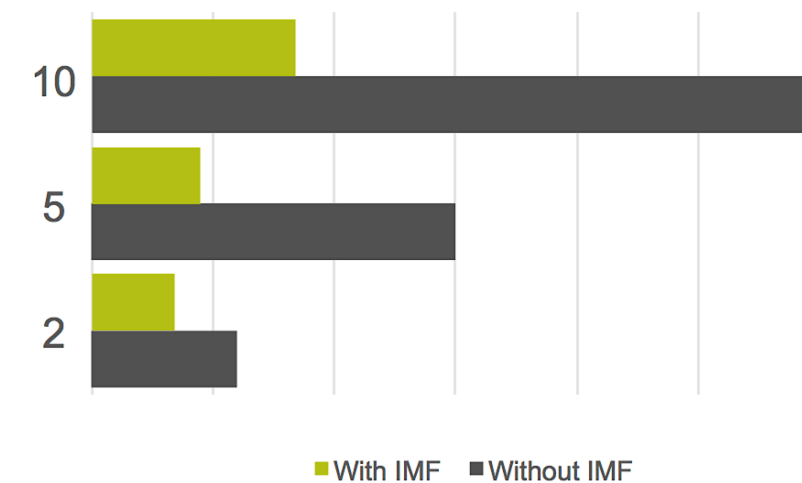
TRANSCODING: Example 1/2 Real Time

TV SHOW	Localised Versions Masters	Rendering to ProRes If 1/2 Real Time	Rendering to IMF Only Difference to OV Master
	2	60 min	34 min
5	150 min	45 min	
10	300 min	84 min	

Transfer Time for 10 Versions

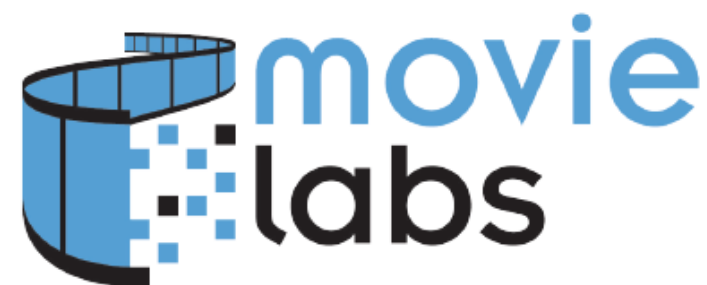


Rendering Time



#2: EMA Avails Standard

Digital Supply Chain Alliance



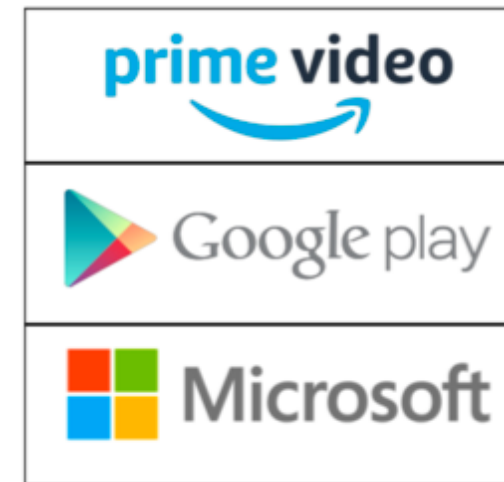
EMA Avails v1.7.2 (Excel) & EMA Avails v2.2 (XML) support EIDR as the ContentID of choice

Who supports the EMA Avails Standard?

Content Providers



Retailers



EMA Avails Value: Google “Round Trip” Use Case

Google adopted EMA Avails with EIDR Identification for content acquisition for the Google Play store.

- Originally took **50 hours** to onboard a title (elapsed time)
- Average onboarding time is now ***12 minutes***

EIDR IDs carried in the full round-trip to help automate the entire supply chain.

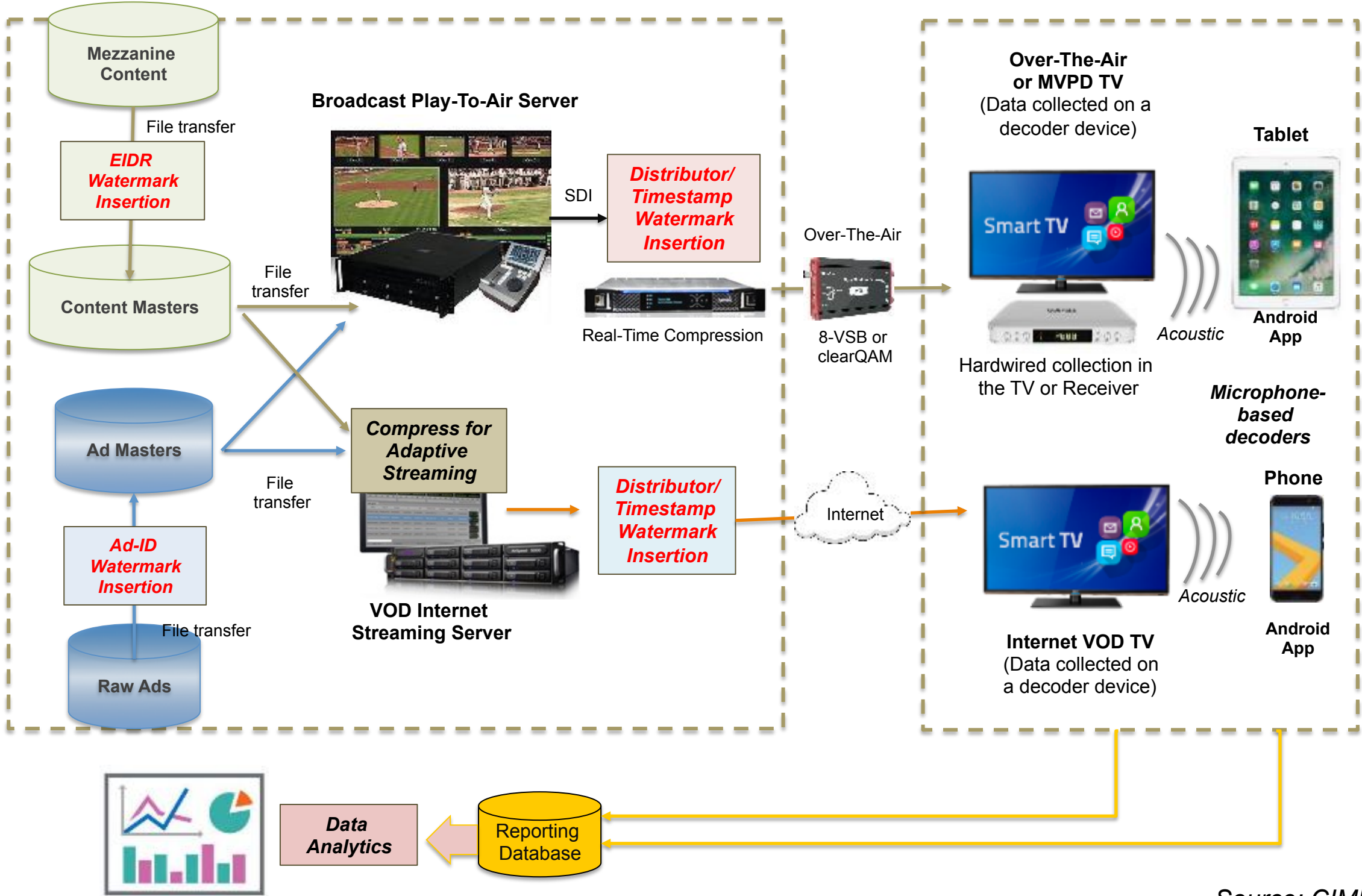


#3: CIMM TAXI Complete



What is TAXI Complete?

- **TAXI = Trackable Asset Cross-Platform Identification**
- Standardized identification of video assets:
 - Ad-ID for ads
 - EIDR for content (Entertainment ID Registry)
- Pair of open standard audio watermarks (SMPTE & Kantar Media):
 - IDs bound to assets to persist throughout entire distribution eco-system
 - Distributor ID and Time Stamp embedded to allocate viewing credit



Who Supports CIMM Taxi Complete?

KANTAR MEDIA



Ad-ID



CIMM Members



A's

A-E NETWORKS

ANA



CBS CORPORATION

Discovery COMMUNICATIONS

iab.

iab. TECH LAB

Google

groupm

IPG MEDIABRANDS



Omnicom MediaGroup



scrippsnetworks interactive

TimeWarner



VIACOM

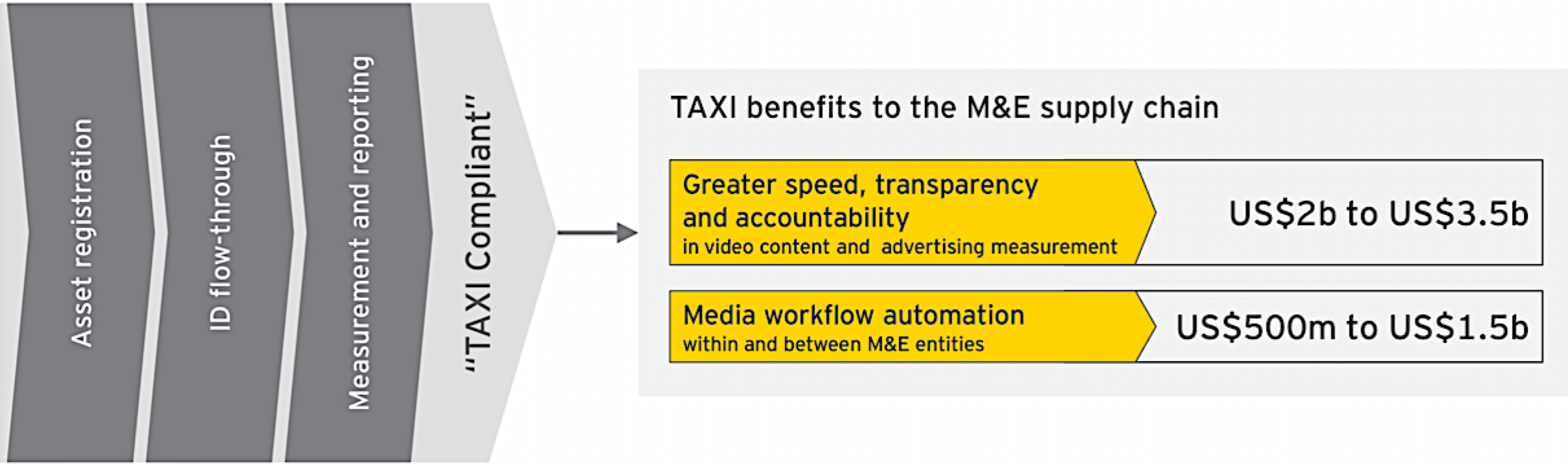


The WALT DISNEY Company

What is the Value of TAXI Complete?



Ernst & Young 2013 Study



Estimated TAXI **annual** economic benefits from industry-wide adoption **US\$2.5 billion to US\$5 billion**

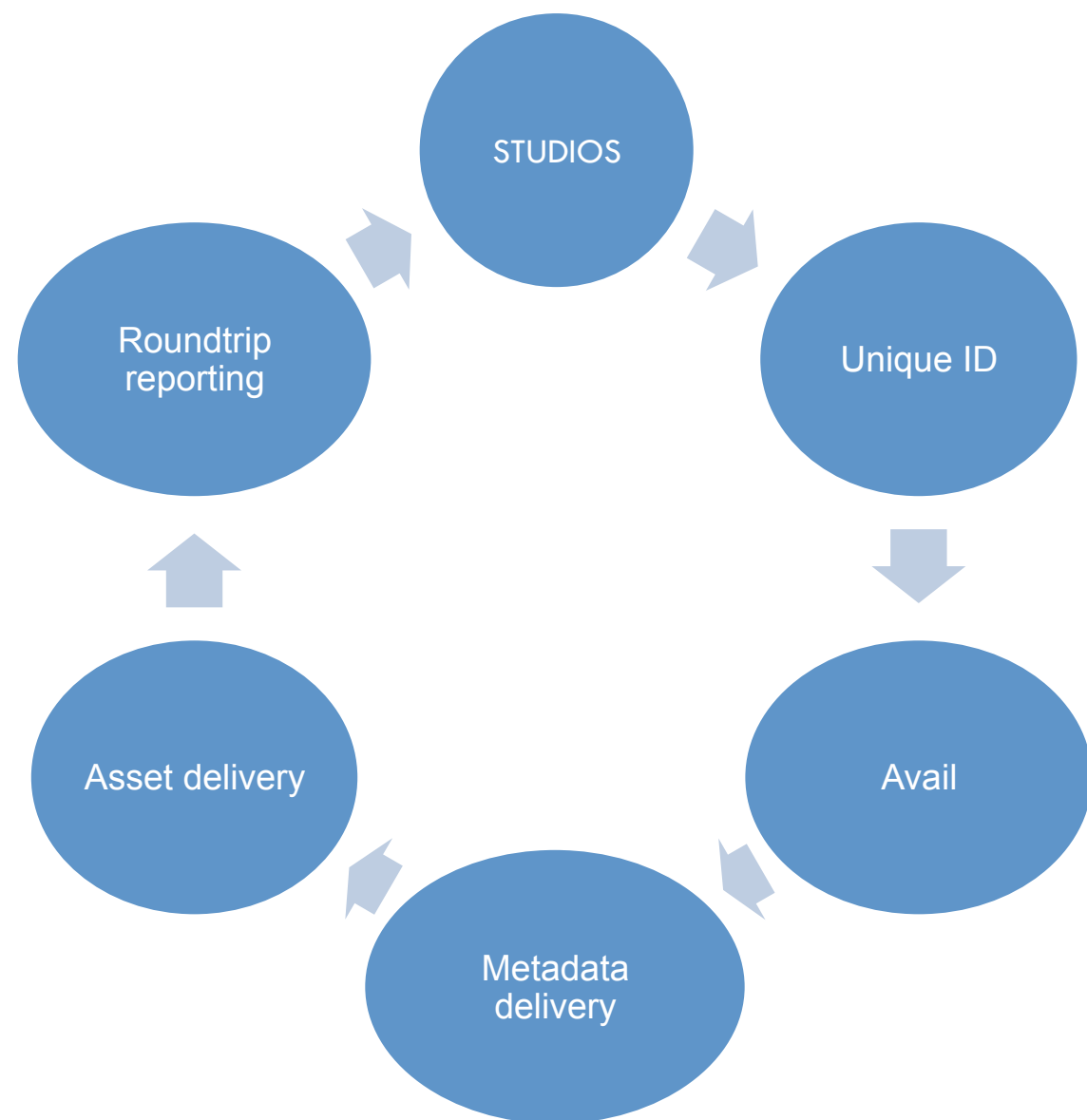
Another Study: Broadcast Ecosystem Savings

In 2016, a multi-company working group reviewed the opportunities and challenges of using EIDR IDs in Broadcast workflows.

	Non-EIDR	With EIDR
Setup Cost / IP	\$8.00	\$8.00
Transmission Cost / IP	\$1.50	\$ N/A
End to End Supply Chain Cost / IP <i>(assumes up to 12 setups and 11 transmissions)</i>	\$109	\$8.00
Estimated US Cost Annually	\$6.5mil	\$520,000
Estimated Global Cost Annually	\$33mil	\$2.7mil



2018 – Next-Gen Supply Chain for Next-Gen Content



- Combined efforts of studios, retailers, service providers, standards bodies, industry advocacy groups
- Supported by DEG, EMA, EIDR, MovieLabs, SMPTE, DPP
- Covering global platforms and regional partners
- Long-term vision
- Near-term key results that deliver value this year

Trifecta: EIDR at the Core



A reminder...

*“If you can’t identify it, you
can’t operationalize or
measure it;
if you can’t measure it you
can’t monetize it.”*



*Clyde Smith
Senior Vice President Advanced Technology
Fox Network Engineering and Operations*

Thank You!



EIDR