EIDR
Entertainment Identifier Registry

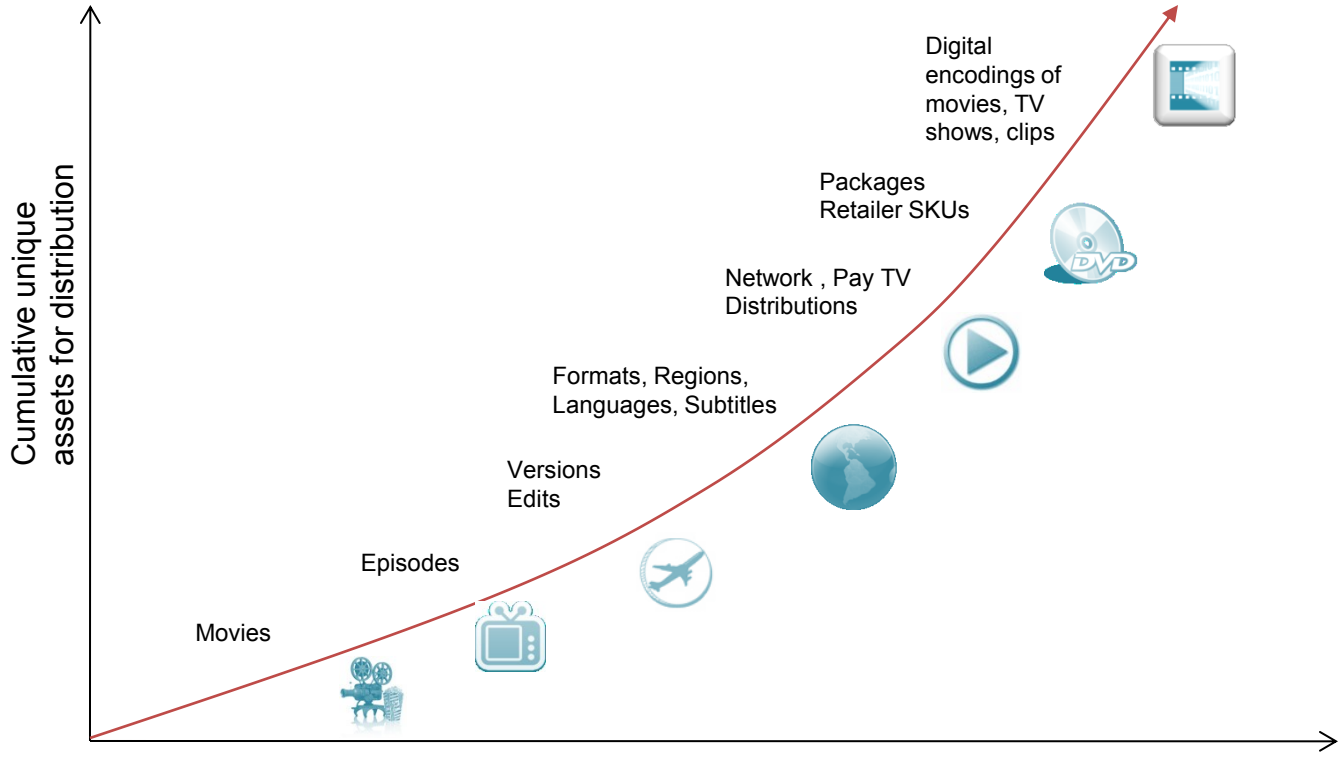
Overview

November 2014

The Need for a Global Unique Identifier Registry

EIDR
Entertainment Identifier Registry

Millions of film and TV products created each year



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What is EIDR – one page summary

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

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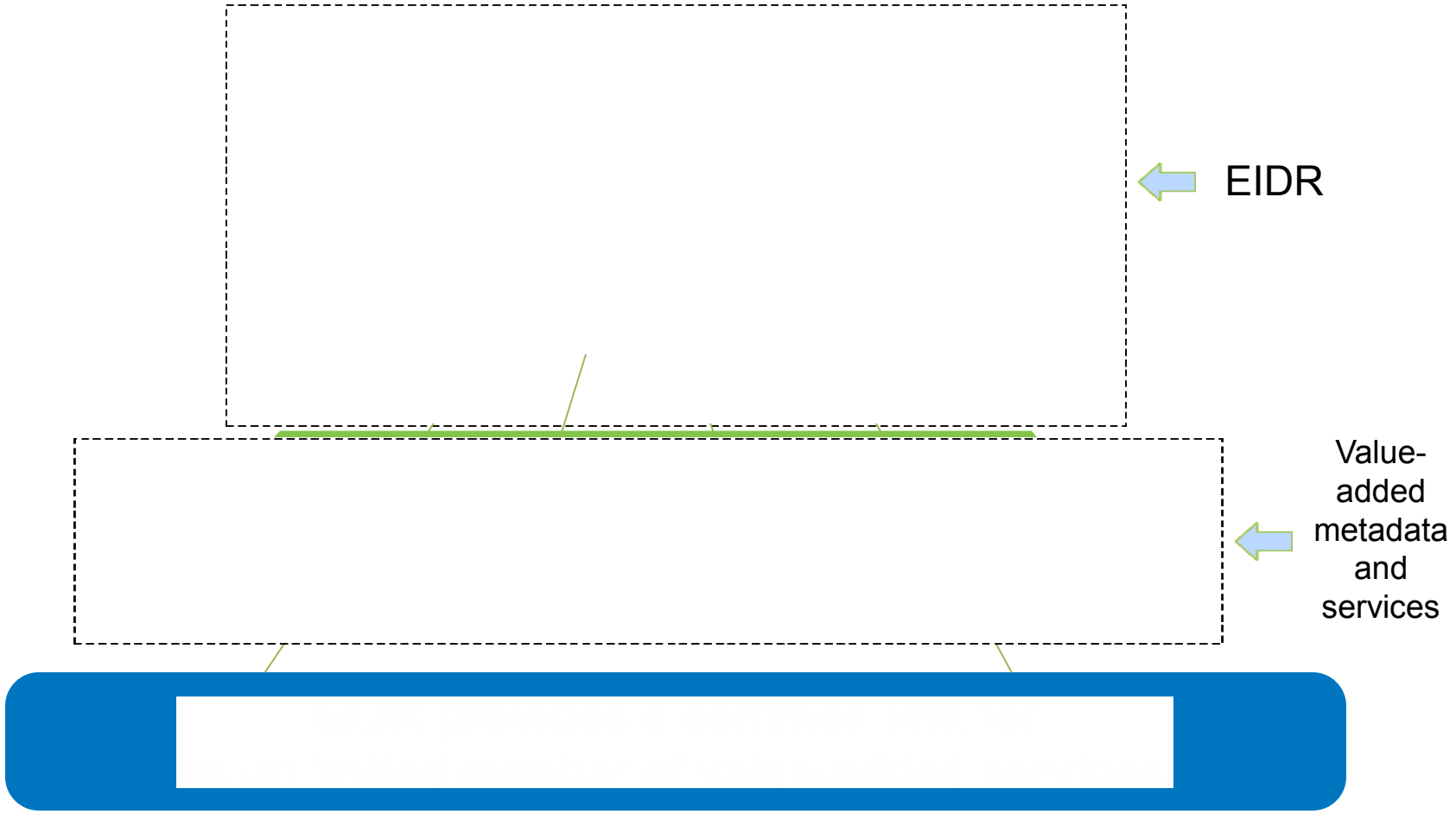
EIDR – enabling scalable content services



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What EIDR helps the industry do

- More profitable online distribution
- Automated VOD delivery, ingestion & dynamic ad insertion
- Direct audience measurement across platforms
- Accurate metadata matching & acquisition
- Faster data roll-up across platforms, workflows, and channels
- Efficient catalog matching & ingest
- Standardized content discovery across operators, vendors, platforms & geographies
- Automated rights reporting & recovery

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Who is EIDR?

Archives

BFI Film Forever
BUFVC
IVA Internet Video Archive

Producers & Programmers*

NBC Universal
Univision
Disney
ABC
Viacom
Warner Bros.
Crown Media Family Networks
HBO
Showtime
MediaKraft
Muse Entertainment Enterprises
Sony Pictures
Paramount
AMC Networks
Fox

*Including wholly-owned affiliates, e.g. ESPN, et al

Aggregators

IDEMAND
Vubiquity
ifp

Distributors

Google
swisscom
Comcast
Netflix
vudu
Time Warner Cable
verizon
SHAW
bright house networks
Microsoft

Reporting, tracking, business intelligence

EXACTUALS
rightsline
mediamorph
RENTRAK
RSG Media
FilmTrack

Infrastructure and media services

Cisco
deluxe
clearleap
WATCHWITH
viaccess-orca
Digitalsmiths
CINRAM
civolution
T3Media
Adobe
technicolor
PRIME FOCUS
CANOE
VERANCE
riversand
Orchestra Networks
The Registration Bureau
V2SOLUTIONS
Vobile
NTT Labs
SCREENPLAY
s&t

Metadata

baseline
rovi
RED BEE
Uitgeverij Veronica
WEST10

Industry & standards organizations

movielabs
CableLabs
JLabs
Japan Cable Laboratories
Motion Picture Association of America
SMPTE
The Corporation for National Research Initiatives
doi
DEG
Ad-ID
entertainment merchants association
MESA
Media & Entertainment Services Alliance

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Independent non-profit registration agency

- Built and run by the industry
- Supported by annual member dues
  - Tiered dues based on size
  - Membership open to large and small ecosystem players
- Board of directors chosen from among promoter members
  - 9-member board with ability to expand as needed
  - CableLabs, Comcast, Deluxe, Disney, MovieLabs, Rovi, Sony Pictures, Warner Bros, Google
- Commitments in by-laws to cost-recovery model, open terms of use, and IP non-assert
- Participants control new features and technical development through Technical Working Group

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Straightforward annual fee structure

Annual Revenue	Basic User Fee	Promoter Fee (includes Basic User Fee)	Board fee (includes Promoter Fee)
< $100M	$5,000	$35,000	$40,000
$100M - $500M	$10,000		
$500M - $1B	$20,000		
>$1B	$25,000		

Newest Members

- ITV
  - Also joins board of directors
- Archives
  - US Library of Congress, IndieCollect
- Metadata providers
  - BindInc, media-press tv, ebs
- Advertising and metrics
  - AdGorilla, ScreenPlay
- Services and infrastructure
  - ODMedia, CSG/ContentDirect
- UK AV Agency
  - Founders of ISAN UK
  - Continues its role as an ISAN RA
  - EIDR service bureau for small producers
  - Provides EIDR/ISAN cross-registration for those who want it
  - Local support services for EIDR in the UK

Data Model

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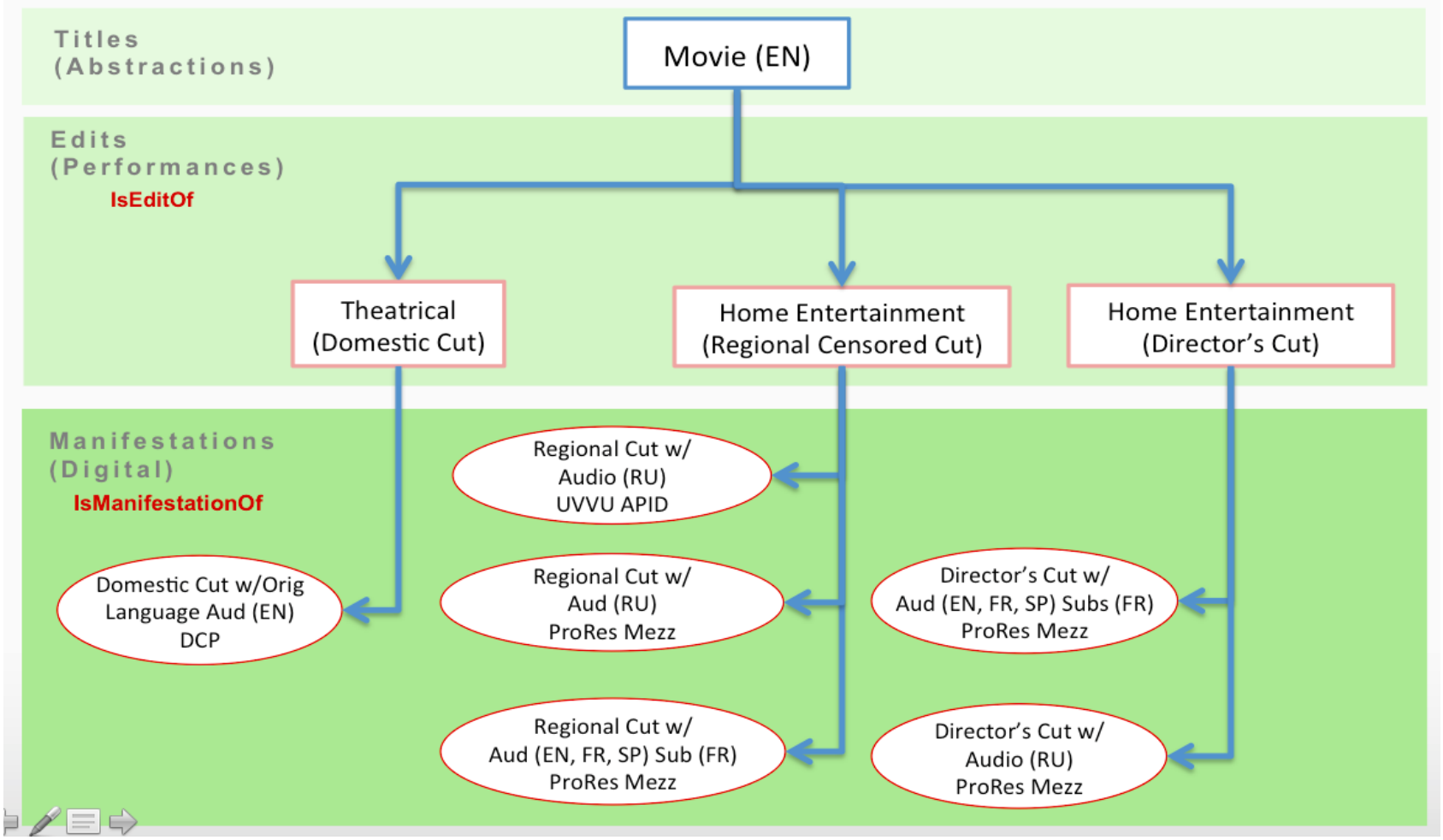
Example EIDR movie hierarchy with multiple versions



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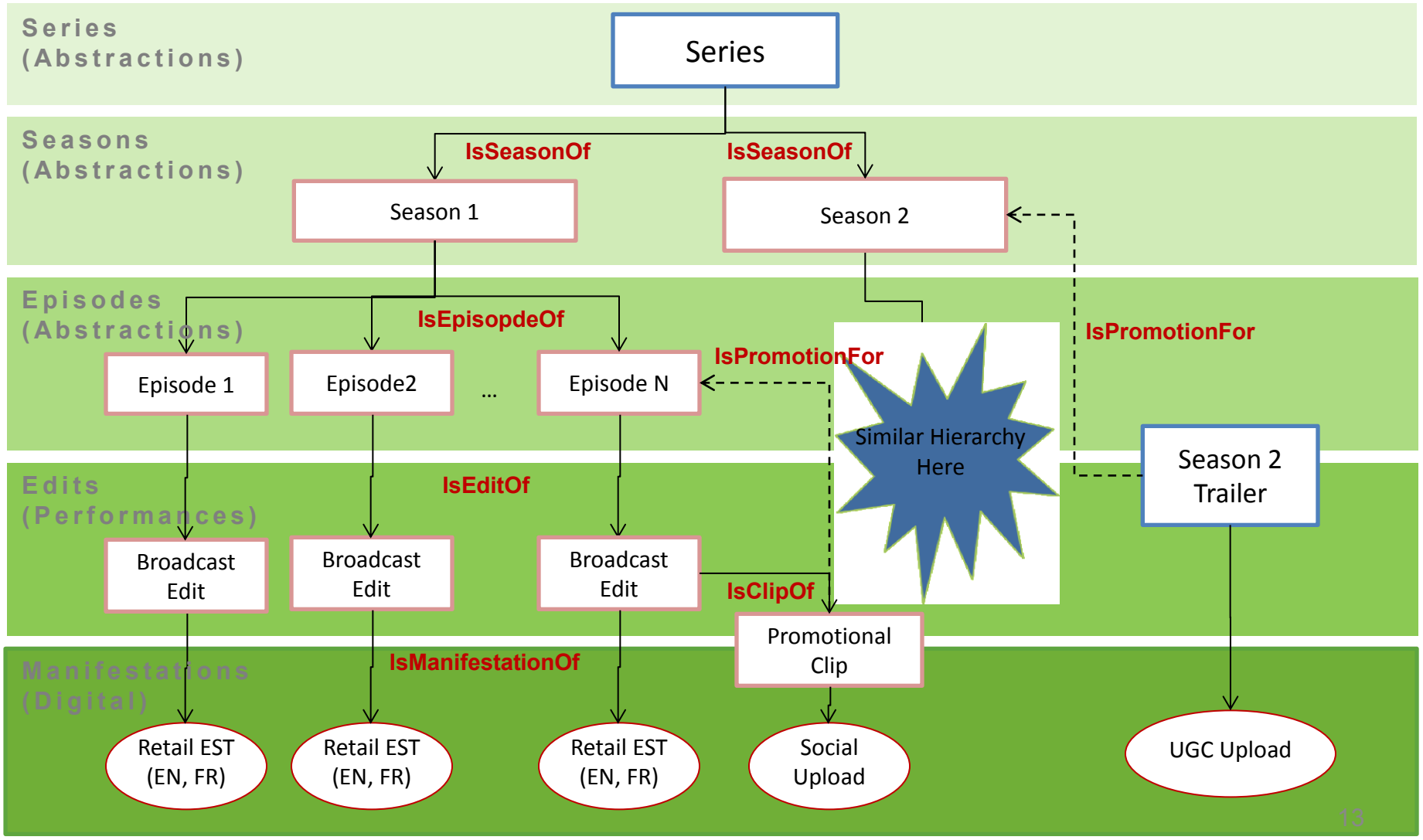
Example EIDR episodic hierarchy



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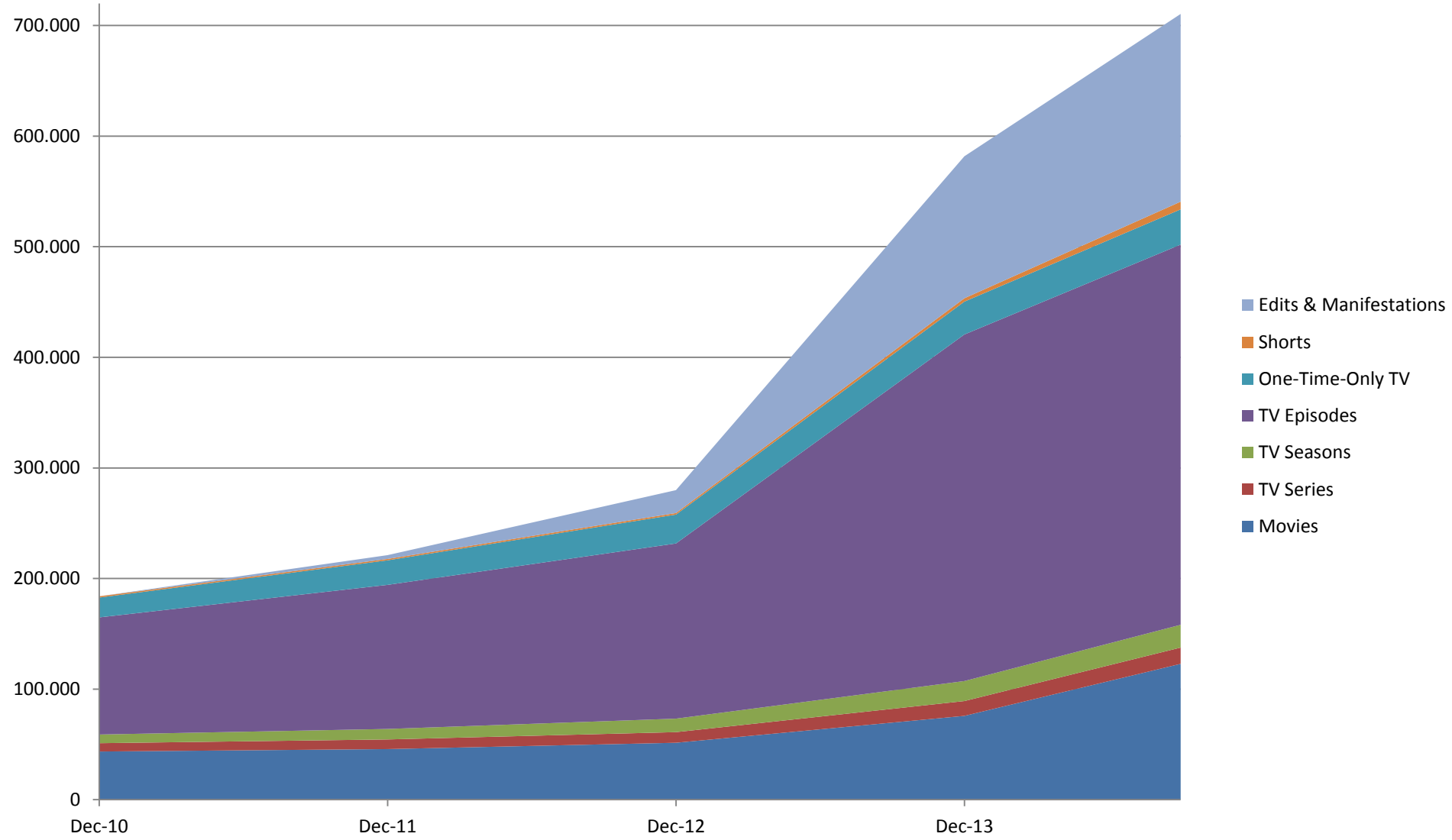
Growth rate



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Database overview: record types

Category	Dec-10	Dec-11	Dec-12	Dec-13	Oct-14
Title-level records:					
Movies	43,573	45,774	51,501	75,800	122,850
Shorts	1,121	1,224	1,406	3,039	6,962
One-Time-Only TV	17,952	22,199	26,112	29,709	31,865
TV Episodes	105,891	130,284	158,371	313,328	343,737
TV Series	7,541	8,719	9,613	13,409	14,714
TV Seasons	7,837	9,486	12,197	18,082	20,596
Edits & Manifestations	0	3,460	20,701	128,379	169,708
Total records	**183,915**	**221,146**	**279,900**	**581,746**	**710,588**

Alternate IDs

Type	Volume
Sony	201,358
Warner Bros.	112,054
ISAN	79,645
IMDb	77,551
Flixster/Rotten Tomatoes	71,340
Baseline	65,341
Veronica	30,803
Netflix	27,255
Red Bee	25,928
The Cinema Source	20,942
Amazon	17,913
ITV (2 kinds)	14,456
NBCUniversal	13,854
BFI	5900

Use Cases

Developing applications across media windows

Theatrical

- Ratings
- Archives
- Digital cinema packages
- Box office sales tracking

EST/Online

- UltraViolet
- All online retail
- Avails
- Metadata
- Mezz file delivery
- Standardized content discovery
- Reviews
- Home video sales reporting

TV Broadcast

- Direct audience measurement
- Cross-platform tracking
- Int'l TV distribution
- Music cue sheets
- Rights collections
- BXF, ATSC, EBU, EN metadata mappings

Video On-Demand

- MVPD VOD ingestion & delivery
- VOD ad insertion
- CableLabs specs
- Guide data
- Search & recommendations
- Parental ratings
- VOD sales tracking

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Saves money

- Match once, then never again
  - Integrate with new vendors & partners faster and cheaper
  - Purchase metadata from any source with one ID
- Reuse one ID across all work flows
  - No need to reinvent the wheel for every work flow & channel
- Streamline consolidation of supply chain and performance data
  - Improve reporting/invoicing capabilities
  - Reduce fuzzy text matching of orders, deliveries, invoices, & reports
  - Speed internal roll-ups & reports
  - Text string processing is expensive
- Reduce customer queries on deliveries, versions, assets
- Reduce manual QC efforts on deliveries

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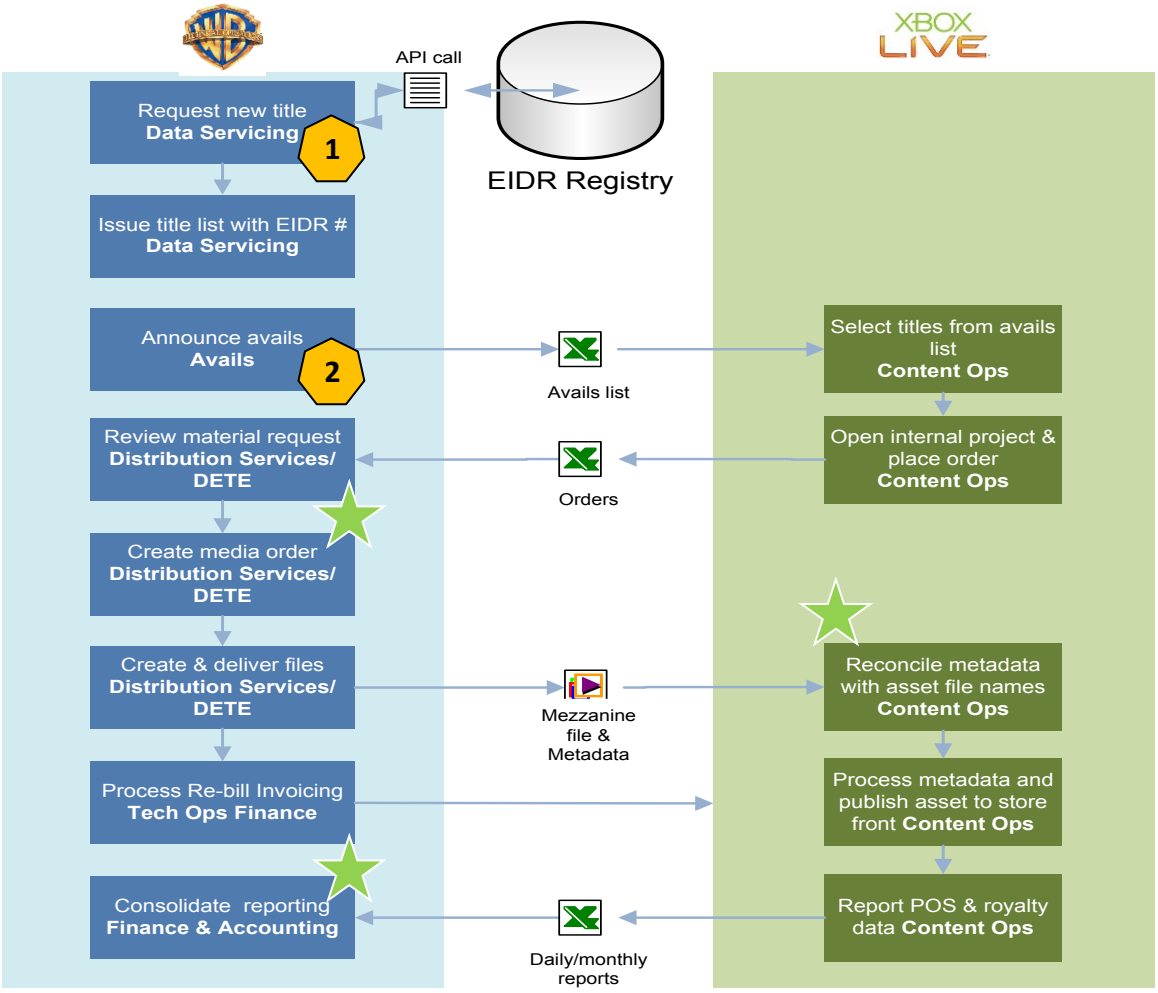
Case study - Warner Bros & Xbox Live

Integration Points

- WB's MSB metadata management system to the EIDR directory. Requests and applies new EIDR #'s to WB titles. (1)
- WB's MSB system to the Avails system (RRTS) to provide the EIDR # on avails titles (2)
  - Facilitating Microsoft reporting back to WB with EIDR detail

Benefits Identified

- Reduction in QC efforts
- Reduction in customer queries
- Improved reporting / invoicing capabilities



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Savings with one partner

- EIDR added to ordering, delivery, sales and royalty reporting
- Results for one studio and one retailer
  - Direct savings = 650 hours/year (partial implementation)
  - Future savings = 1,100 add'l hours/year (full implementation)
- Assume 5 partners = 8,750 hours/year

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Enables automation

- WB/Xbox case study identified savings w/o automation
- EMA, DEG, MovieLabs, DECE cooperating on specs to enable automation
  - Rely on a common ID to link data across work flows
  - Avails, metadata delivery, file delivery, reporting
- Deployed now - Google Play & studios automating avails
- Comcast automating VOD ingestion
  - System matches programmer deliveries with metadata using EIDR IDs
- Cable industry automating DAI for VOD
- Studios, metadata providers, archives using EIDR API for registrations

Case study – Google Play avails

- Google Play deploys EMA Avails spec w/ EIDR IDs today
  - Primarily 1st and 2nd-level EIDR IDs
- Already deployed with 2 major partners
  - In progress with two more studios
- Asking all content partners to adopt
  - In discussions w/ partners across North America & Europe

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Quantified savings

Processing Time for Batch of 1000 Avail Updates		
	Before use of EMA Avails w/ EIDR	After use of EMA Avails w/ EIDR
Title matching, de-dupe, parsing, including research & partner communications	~25 hours	0.1 hour
Apply final updates & audit	~25 hours	0.1 hour
Total	**50 hours**	**0.2 hour**

Reduces 50-hour reconciliation to <1/2 hour of processing time. Benefits multiply across *tens of thousands* of avails.

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Increases revenues

- New Comcast X1 platform has delivered double-digit increases in VOD sales
  - Uses EIDR to automate VOD ingestion & matching
- Streamlines dynamic ad insertion for VOD
- Lowers risk of missed window starts
  - Faster ingestion and setup for online retail
- Enables cross-platform delivery like UltraViolet
- Links screens, platforms, metadata sources, sales channels
- Enables new models for sell-up, direct audience measurement, micro-transactions

EIDR glues it all together

- Goal = end-to-end automation of the digital supply chain
  - Order, ingest, market, upsell, track, report, reconcile, pay
  - Common, resolvable ID from start to finish
- Standards drive automation
- Specs bound with one common ID

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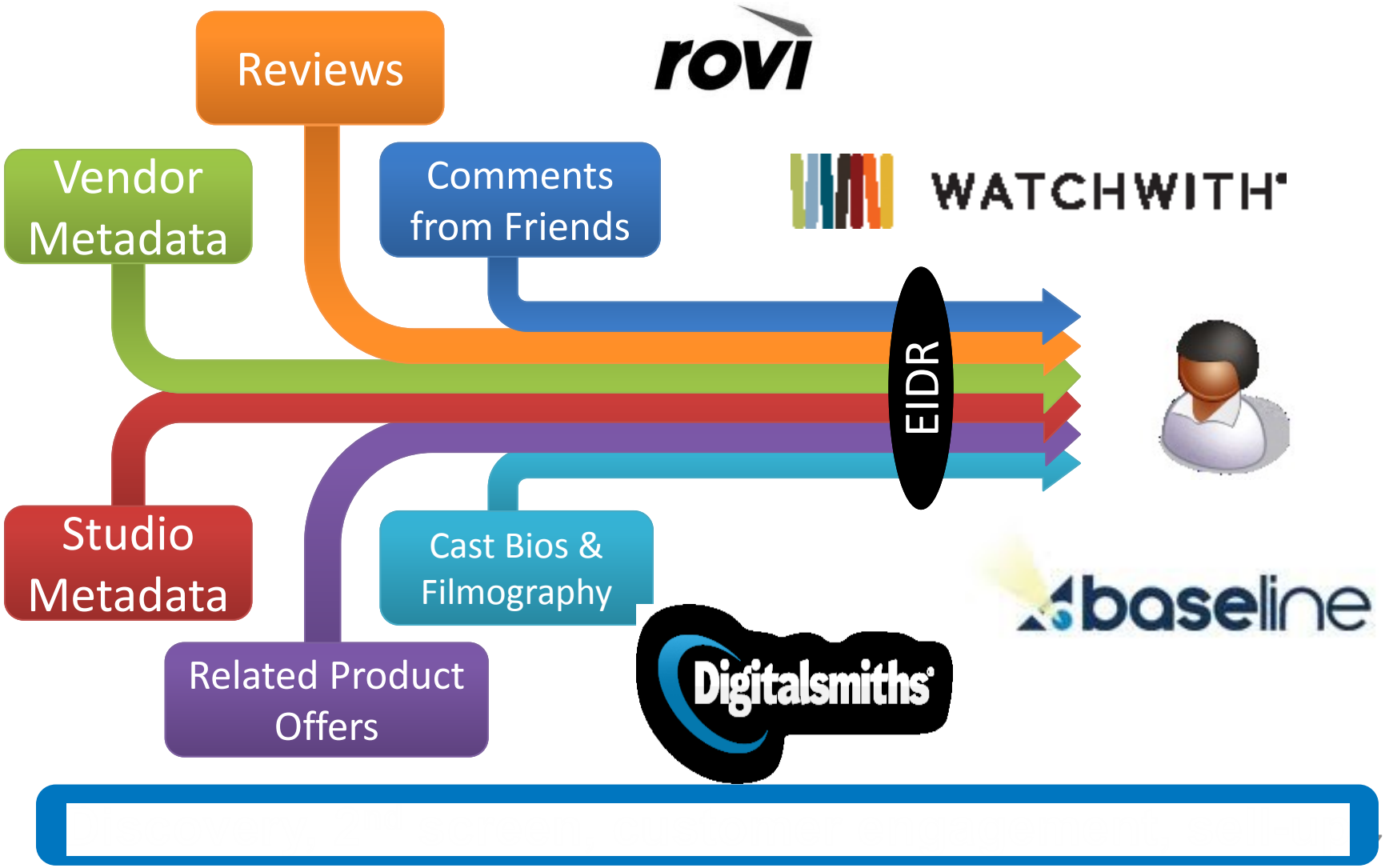
Metadata enrichment



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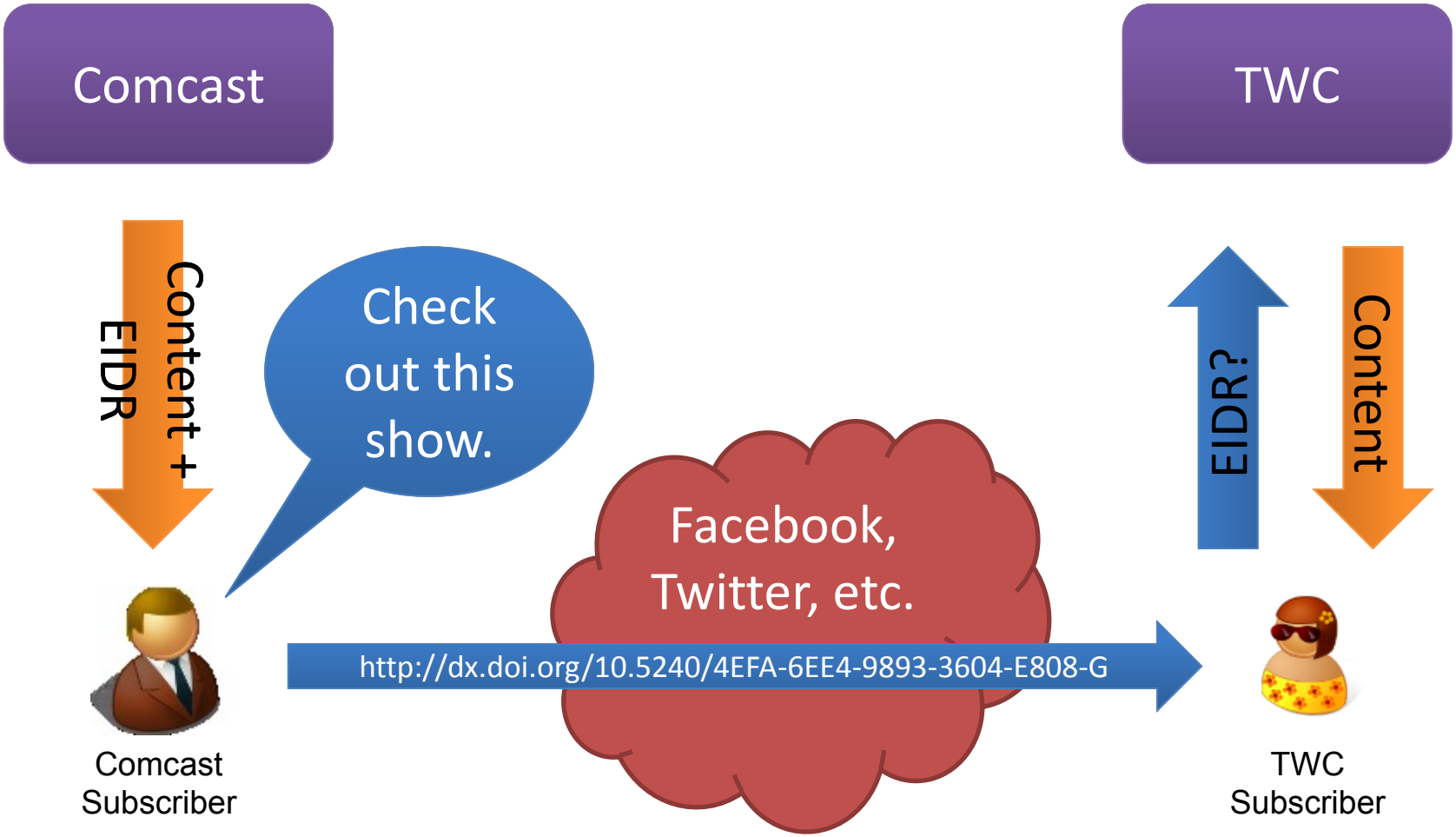
Social media discovery across MVPDs



Ad industry benefits

- Panel ratings not sufficient for new TV platforms
- Ad industry needs to measure viewership across platforms
  - Smart phones, tablets, PCs, connected TVs, etc.
- Direct measurement offers greater reach and accuracy
- Requires standardized IDs for programs and ads
- CIMM-TAXI industry group endorses EIDR as program ID
  - $500M annual savings from automated work flows
  - $2B annual upside in new and better ad opportunities
- Supported by research chiefs of ESPN, Viacom, NBC, CBS, and others

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Delivers a data analysis advantage

- Link performance data from multiple sources
  - Theatrical
  - Home video - EST, iVOD, SVOD, UltraViolet
  - MVPDs – VOD, EST
  - Advertising – C3, C7, direct measurement, DAI
- Multiple vendors
  - Rentrak, Nielsen, DEG data tracking, MediaMorph
- Related titles
  - Series/season/episode
  - Franchises
- International & domestic

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Summary

Equal, open access

- Anyone can use it
- Any member can register new records
- Published API
- Religion-free support for multiple development and integration models

Practical management

- Cross-company
- Cross-industry
- Collaborative
- Cheap

Infrastructure

- Providing IDs for commercial audio-visual works
- Sharp focus on the ID reduces complexity, provides clarity, speeds adoption

Technology

- Based on international standards
- Interoperability a primary design point
- Improves efficiency in existing processes
- Supports creation of new products and services

Technical Appendices

Developer support

- Web UI
  - Register, modify, resolve, browse, query
- Simple tools
  - Register, modify, query, resolve, etc
  - Bulk change, manage alternate IDs
- SDK
  - REST, Java, .NET
  - Published as source, with sample applications (see above)
- Other tools
  - Bulk registration provided by system operator
  - Catalog matching tool (external vendor)
  - Ultraviolet CFF registration
- Help with Proof of Concept implementations

Documentation

- Registrant documentation
  - Data fields guide
  - Best practices (Film, Episodic, and many corner cases)
- Technical documentation
  - Registry Users Guide, API documentation, a tutorial or two
- ID format guidelines
  - Standard, binary, URN, URI, compressed, etc
- Mapping guidelines for other metadata standards
  - ISAN, EN 15907, EBUCore
  - Base records only; taking input on versions and episodic

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Required fields for EIDR registration – standalone item (movie, OTO TV)

Fields based on type/class of work

- Can be done algorithmically

- **Referent Type**
  - Movie, TV, Short, Web (also Series, Season, Composite, Compilation, Interactive, Supplemental)
- **Structural Type**
  - Abstraction, Performance, Digital, Physical
- **Mode**
  - Visual, Audiovisual, Audio, Other
- **Publication Status**
  - Valid, In development

For a particular work

- Can usually be done algorithmically

- **Title and Title Language**
  - RFC 5646
- **Original Languages and Manifestations**
  - RFC 5646
  - Audio, Subtitle
- **Release Date**
  - YYYY (/MM/DD)
- **Approximate Length**
  - HH [:MM(:SS)]
- **Country of Origin**
  - ISO 3166-2, with extensions

Requirements and Best practices

Participants

- AssociatedOrg and Role
  - Company name or ID
  - Producer, Distributor, etc
- Directors
  - Up to 2 allowed
- Actors
  - Up to 4 allowed

Must have

- 1 AssociatedOrg
- OR 1 Director
- OR 4 Actors

Strongly Encouraged

- Alternate Title
  - Text Field
- Alternate ID
  - Ex. IMDb, ISAN, DOI, Proprietary IDs
- Participants beyond the minimum

Further resources

- **Documentation**
  - http://eidr.org/technology
- **UI**
  - http://ui.eidr.org
- **Examples**
  - Records through UI.
    - Lots of relationships (seasons, clips, etc)
      - https://ui.eidr.org/view/content?id=10.5240/BE8E-B5BA-E323-D321-EFA7-9
    - List of many Alternate IDs.
      - https://ui.eidr.org/view/content?id=10.5240/E5C6-A6EA-403E-5D80-8BBF-G
  - Records through DOI proxy for XML
    - http://doi.org/10.5240/E5C6-A6EA-403E-5D80-8BBF-G
  - Sample Registration XML in SDK
    - http://eidr.org/members-resource