

# EIDR and Digital Cinema

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# Arts Alliance Media – Main business activities

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## Deployment Entity

- Digital Cinema pioneer – deployment and operation of UKFC Digital Screen Network
- Financing and deployment of digital cinema equipment through direct sales and financed through Hollywood Virtual Print Fee (VPF) programme
- First European company to sign VPF deals with Hollywood studios
- First Exhibitor conversion project in Europe (CGR, France)
- Deals extended to cover South Africa (sole deployer) and Latin America (one of only two deployment entities)
- 6000 screens deployed

## Service & Support

- UK based full end-to-end installation and maintenance services
- UK based Network Operations Centre (NOC) connected to and supporting 5000 screens
- Partner NOCs in Miami servicing Latin America and Brazil servicing Brazil

## Leading Cinema Software Provider

- World leading Theatre Management System (TMS) installed globally at over 28000 screens
- Pioneer in centralised circuit management and end to end cinema automation
- Other software products covering Key Delivery Message (KDM) management, NOC tools, electronic content delivery and cinema on-screen advertising optimisation

# Arts Alliance Media – Previous activities and experience

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## **Content Mastering and Distribution**

- Pioneer services established in UK to service UKFC Digital Screen Network
- Evolved to content mastering and distribution activities across Europe, handling 1000's of titles, mainly for independent distributors
- Business unit sold to Moving Picture Solutions in 2014 to focus on software



## **Alternative Content (Event Cinema)**

- Leading European acquirer and distributor of cinema alternative content
- Live (satellite) and recorded (DCP) based services
- Events included worldwide distribution of Royal Opera House opera and ballet
- Business unit spun off to separate company (Arts Alliance) in 2014

# Tracking content – AAM requirements

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## **VPF Contract Administration**

- Measurement of content playback through recovery and analysis of equipment playback logs
- Calculation of equivalent virtual prints (based on concurrent playbacks)
- Calculation of VPF fees due

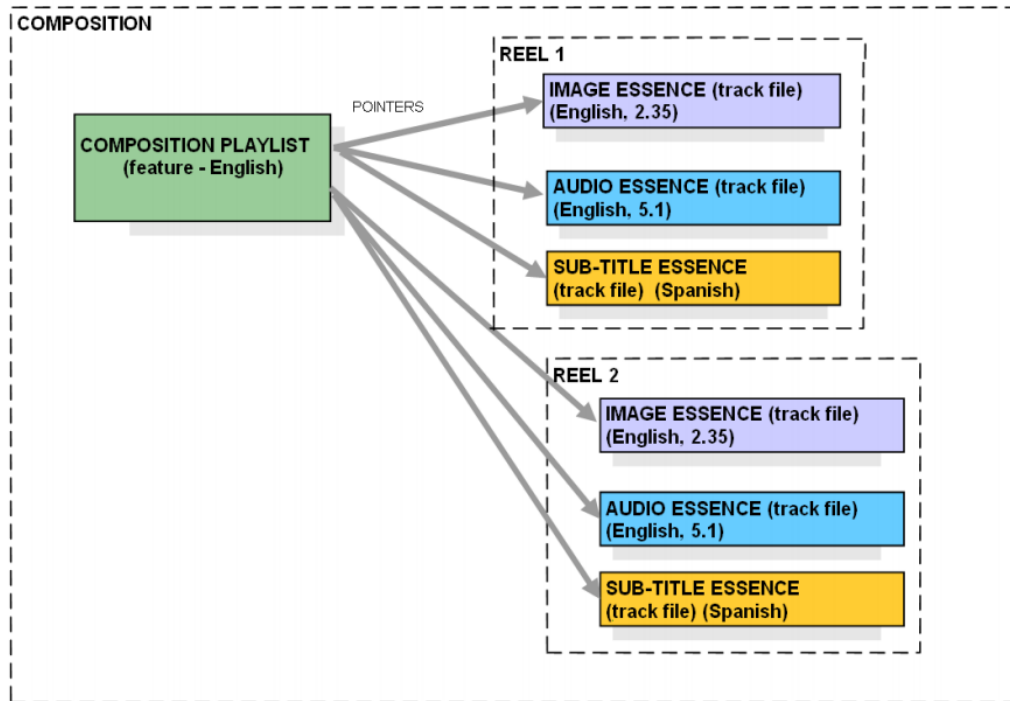
## **Exhibitor System Requirements**

- Exhibitor playback reporting of features and trailers
- Targeting trailers and advertisements and add-on services to specific film titles
- Automated selection of appropriate content versions to match auditorium capabilities and session requirements
- Automated KDM management

## **Future Possibilities**

- Automated content delivery
- Automated KDM delivery
- Data mining and behavioural analysis
- Automated end-to-end workflows

# Digital Cinema Content primer – the Composition Play List



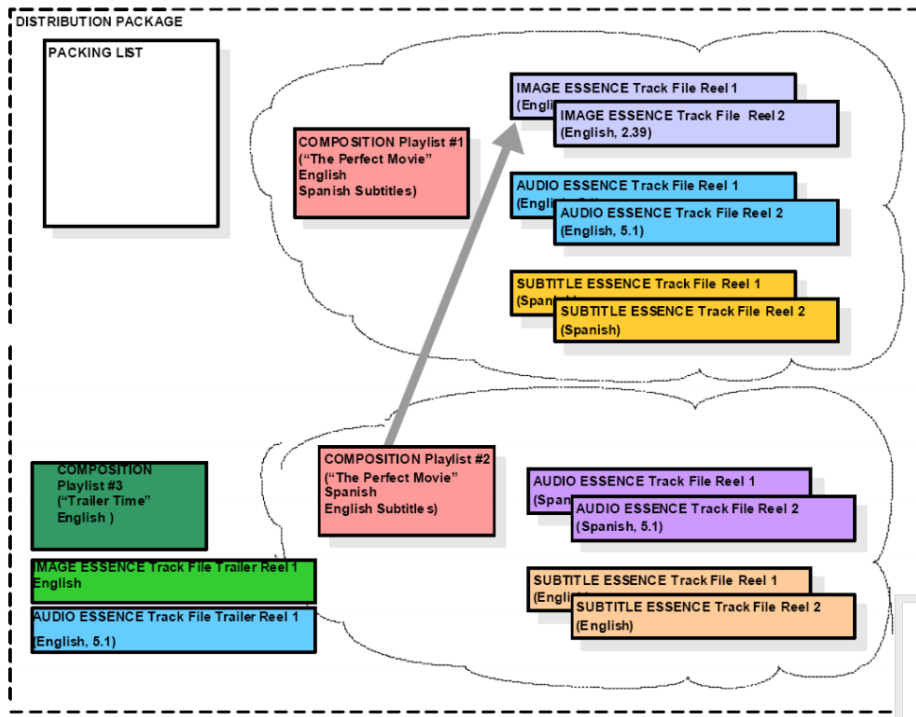
## Composition

- CPL (1)
- Picture assets (1..n)
- Audio mxf assets (1..n)
- Audio mxf assets (1..n)
- Subtitle assets (0..n)

## Composition Playlist (CPL)

- represents smallest unit of playable content
- Feature/trailer/advertisement etc.
- Not content essence itself – XML file with pointers to essence
- Not equivalent to DCP

# Digital Cinema Content primer – the Digital Cinema Package



## DCP

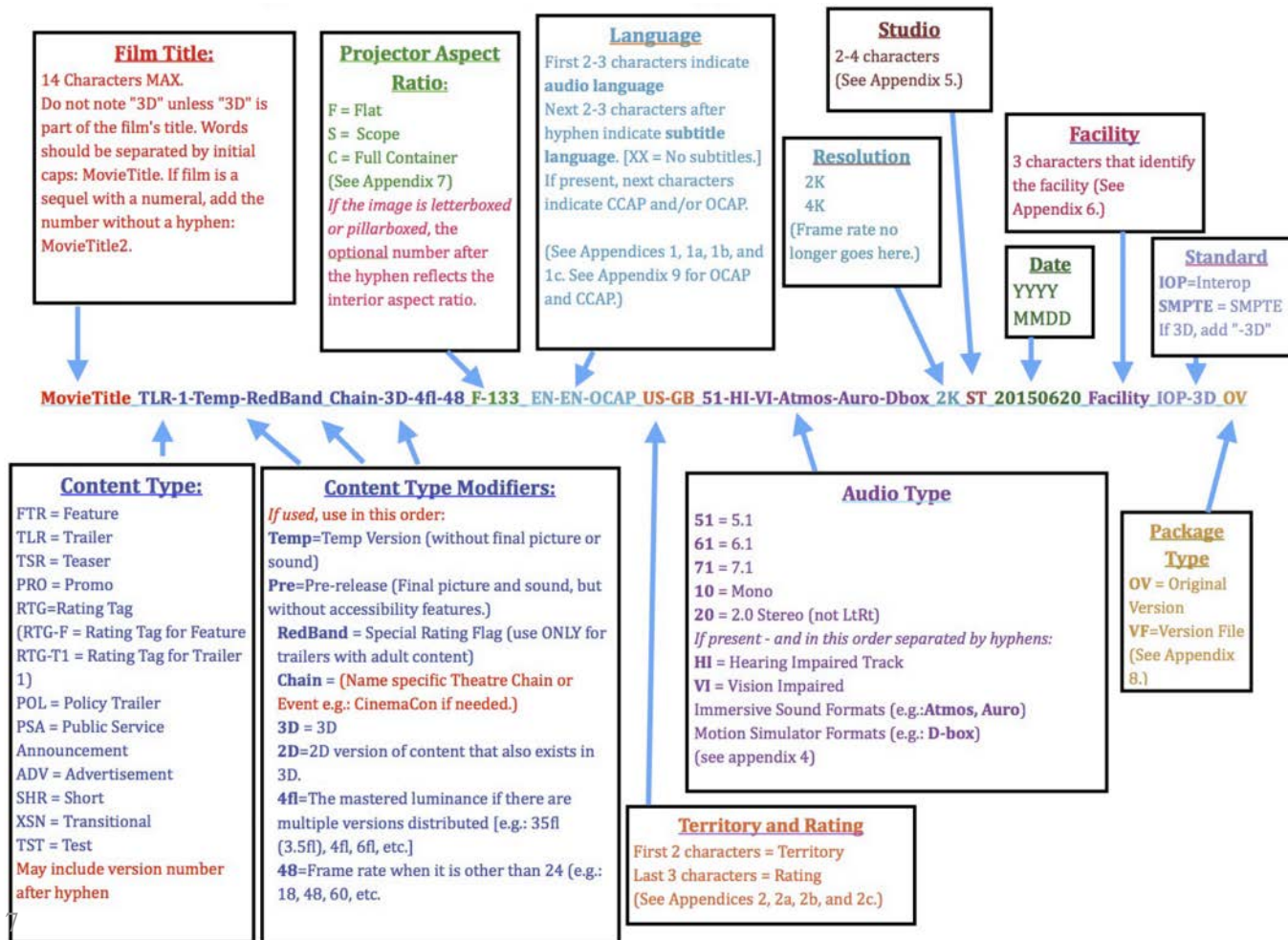
- CPL (0..n)
- PKL (1)
- Picture mxf assets (0..n)
- Audio mxf assets (0..n)
- Subtitle assets (0..n)
- ASSETMAP (1)

## Digital Cinema Package (DCP)

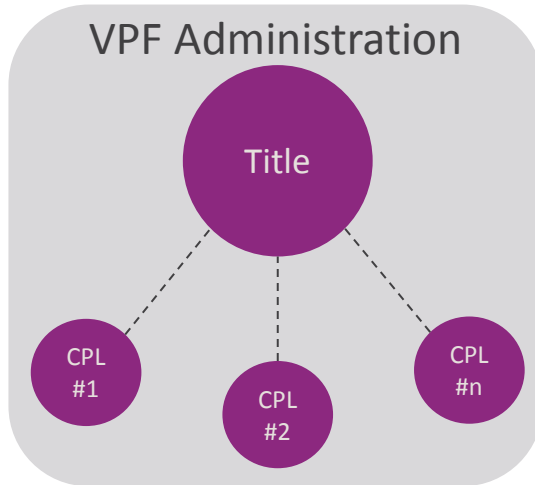
- Contains a number of CPLs and/or content assets (essence)
- CPLs may point to essence not included in the DCP
- Contents of DCP described by Packing List (PKL) XML file
- File paths described by ASSETMAP
- Distribution Packages may contain a number of DCPs

# CPL identifiers

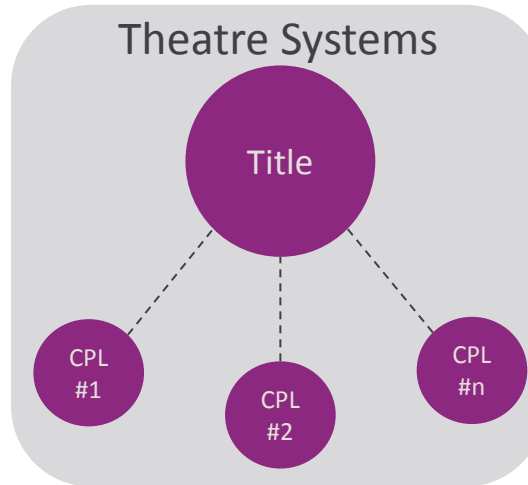
- UUID (automatically generated)
- CPL Content Title Text (human readable, following naming convention)
- Limited Metadata (in current Interop DCP version)



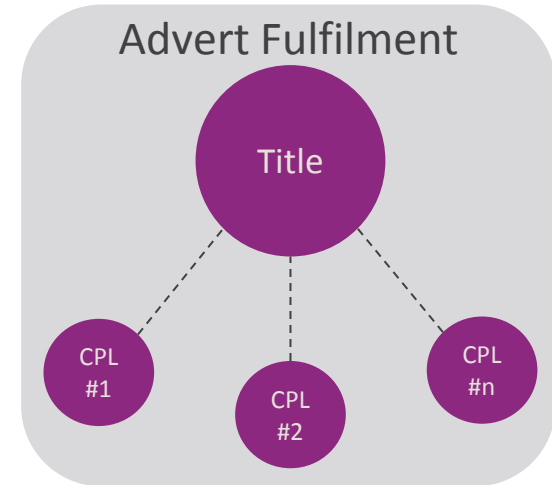
# CPL Mapping



- Link detected playbacks to distributor booking



- Link POS title to correct content
- Target trailers to titles
- Title playback reporting



- Target adverts to titles
- Insert advert packs to shows with matched CPLs

- Required to establish relationships between CPLs and Titles
- Intensely manual
- Up to 50 CPLs per title per territory
- Prone to Error
- Multiple Places
- Multiple Entities



# Candidates for EIDR Registration (Manifest level)

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## **Mxf Essence Assets**

- Only represent part of a composition. Arbitrary division (reel)  
Only represent one track of reel (picture, audio, subtitle)

## **DCP (PKL)**

- May represent multiple compositions, not necessarily from same film title

## **CPL**

- + Represents a single title (either feature or trailer)  
Most useful unit of content from cinema's perspective
- Not an actual encoding, represents multiple assets  
Many different versions, therefore many different registrations to make

# Another approach

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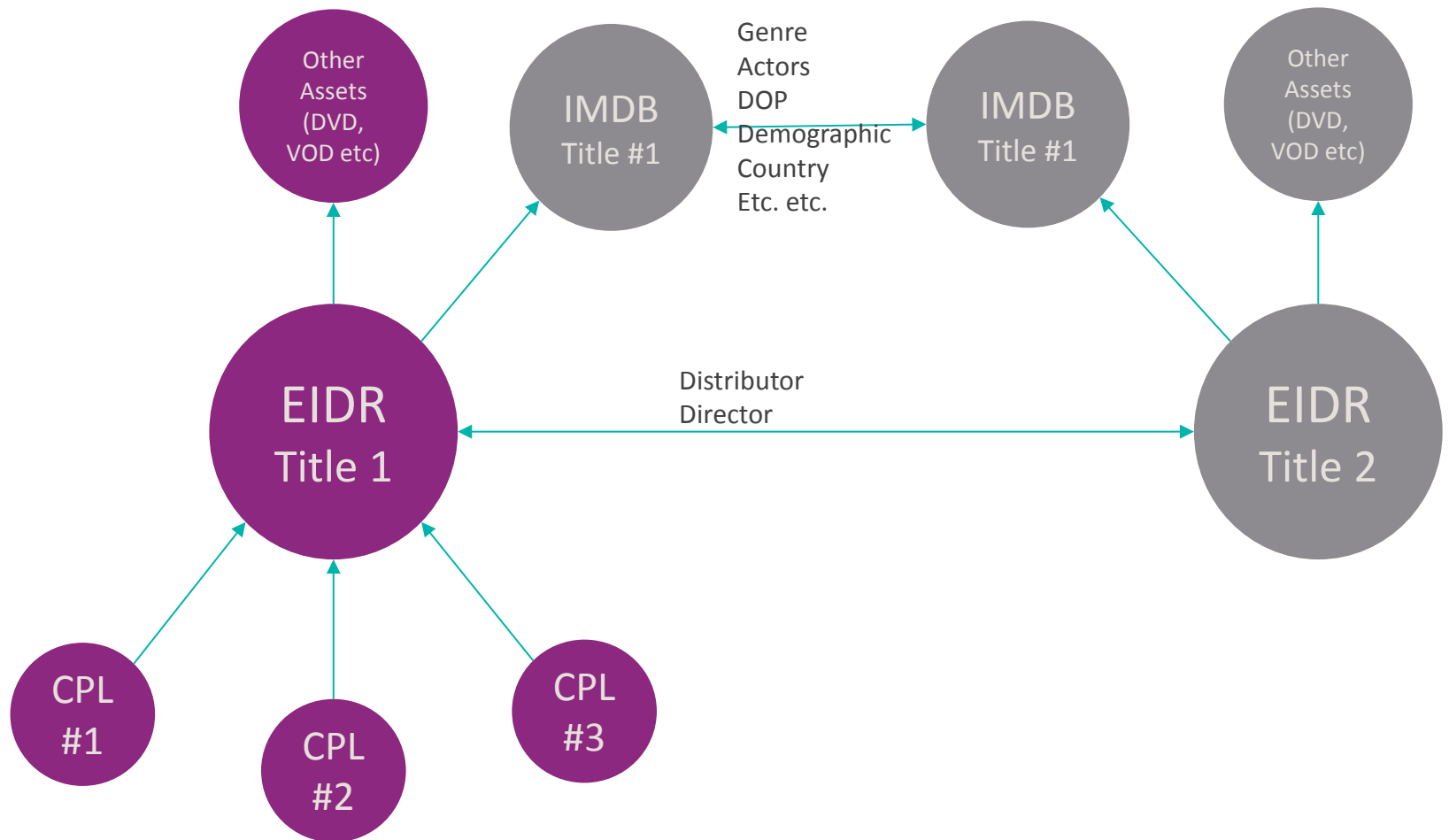
## **Embed EIDR identifier into the CPL**

- Links CPL to EIDR record without needing to make multiple registrations
- Forthcoming “SMPTE DCP” version of CPL includes additional metadata (ST-429-16) including extensibility, potentially usable to carry an EIDR identifier

## **Considerations**

- Would require standardisation of how to use extended metadata to include EIDR ID
- Would require distributors to register titles and pass on identifiers to mastering providers
- Would require mastering providers to embed EIDR identifier into the CPL
- Could it be made mandatory?
- Link at Title, or Edit level? (or both)

# Linking via EIDR through CPL metadata



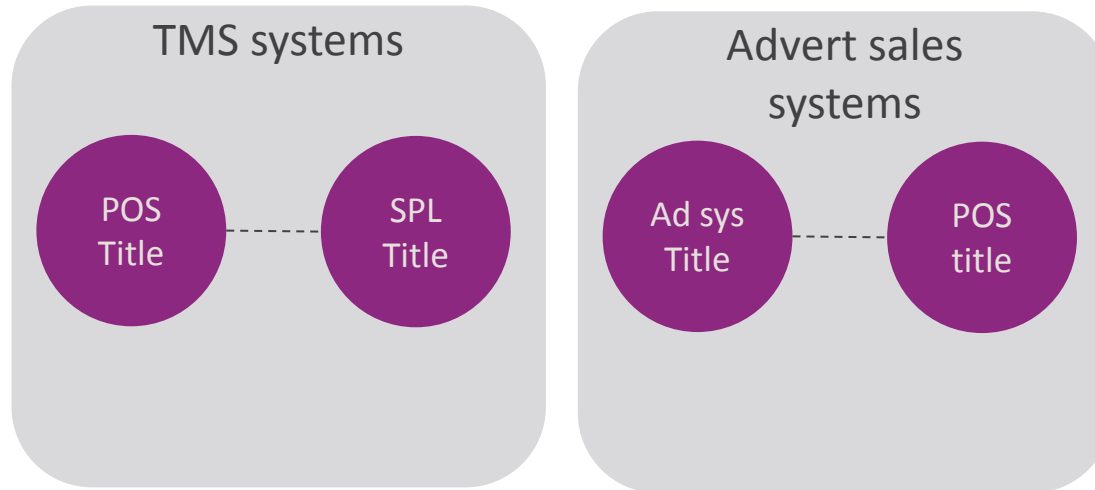
## Other Workflow Identifiers

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Entity	Activity	Asset	Numeric Identifier
Film Producer	Production	Film Title	Producer Proprietary
Film Distributor	Distribution	Film Title	Distributor Proprietary
Post House	Post Production	DCDM	Post House Proprietary
DCP Mastering Provider	Mastering	Multiple CPLs	CPL UUIDs
DCP Fulfilment Provider	Content delivery	Distribution packages	Service Provider Proprietary
KDM Fulfilment Provider	KDM generation/delivery	KDMs	CPL UUIDs
Exhibitor POS/Back Office	Booking, Scheduling	Film Title	Exhibitor Proprietary / Rentrak / EDI
Exhibitor TMS/SMS	Presentation	CPLs	CPL UUIDs
		Film Title	Exhibitor/Software provider Proprietary
Rentrak/EDI	Box Office Reconciliation	Film Title	Rentrak/EDI
3rd party service providers	Ancilliary Services	Film Title	Proprietary

# Title Mapping

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- Relate POS titles to shows for automatic scheduling
- Relate POS schedules to advertising targeting

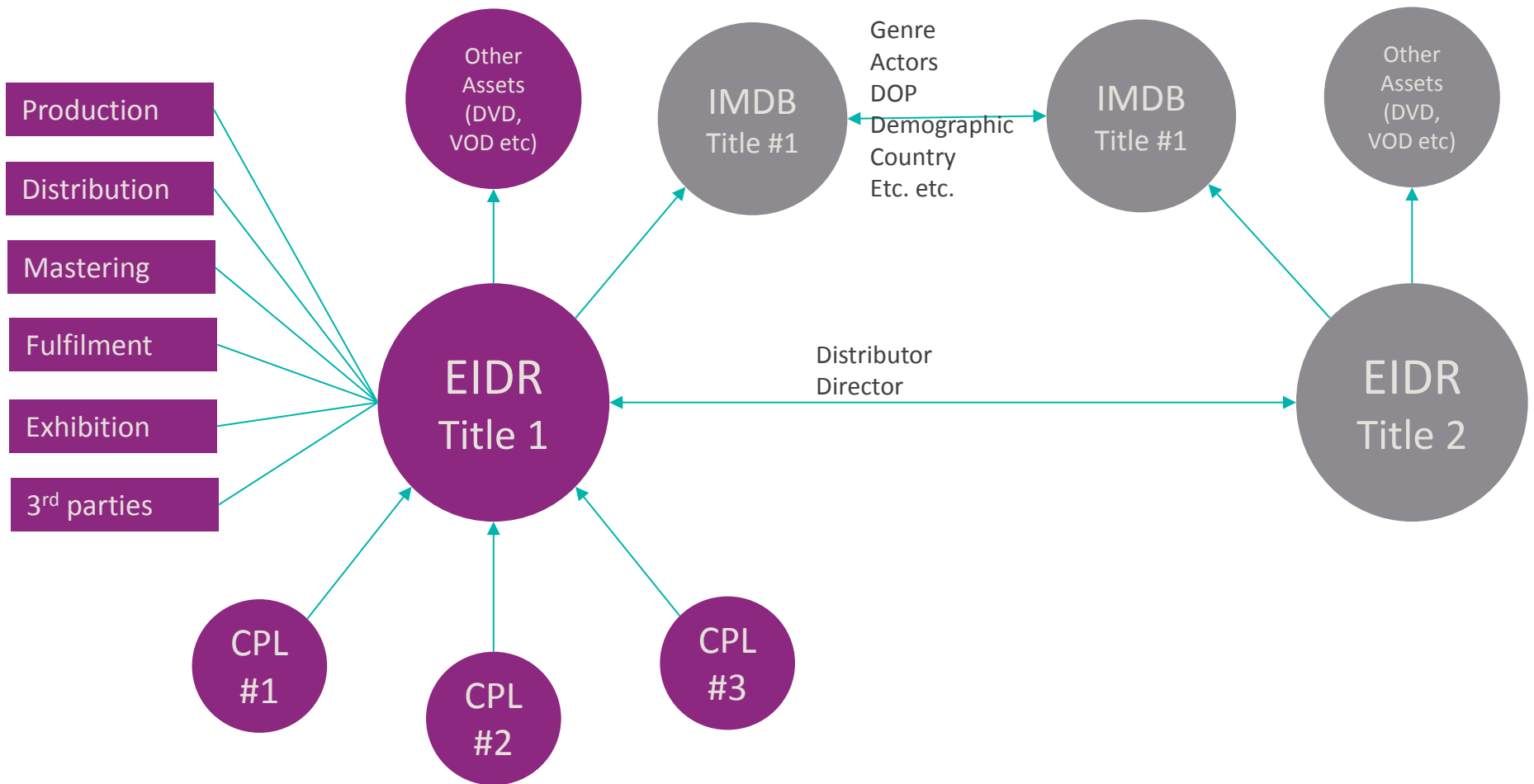
- Manual Process
- Multiple Places
- Multiple Entities

# Title mapping through EIDR

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- Encourage POS providers to adopt EIDR
- Encourage Distributors to adopt EIDR in booking systems
- Encourage 3<sup>rd</sup> parties to adopt EIDR
- Enables linking across the whole value chain

# EIDR as a common link



# Benefits

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## **Eliminate manual CPL mapping**

- Huge reduction in manual effort
- Elimination of human error

## **Facilitate Automation**

- Automate content delivery by linking booked title to DCP assets
- Automate Show Play List (SPL) creation by linking POS titles to DCP assets
- Automate KDM creation and delivery by linking booking to CPL

## **New Opportunities**

- Eg personal recommendations (cinema, DVD, VOD)
- Link Across different media types