DELIVERING NEW SERVICES WITHOUT BUILDING NEW SERVICES

An EIDR API Shim Case Study

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EIDR is the Digital Glue that Binds the Industry

EIDR provides ISO-standard, globally-unique IDs for audiovisual works
All asset types: Movies, Compilations, Series, Seasons, Episodes, Edits, Clips, etc.

EIDR IDs are akin to:
- ISBNs for books
- VINs for automobiles
- UPC/EAN barcodes for consumer products

EIDR-enabled automation has saved the industry thousands of labor hours and millions of dollars
The Blessing and Curse of a Mature API

- EIDR has issued > 2¼ million content IDs
- EIDR services ≈350 million API calls per year
- Global M&E customers have integrated the EIDR API into mission-critical systems operating 24/7/365
- Changing the existing EIDR API would require:
  - Careful planning and cautious delivery
  - Senior-level architects and developers
  - Extensive planning and testing prior to release
  - Limited to no tolerance for risk or experimentation
Expanding the EIDR API with Reshuffle

**Problem Statement:** Deliver new features, faster to meet our clients’ needs

**Case Study:** Expand EIDR ID resolution and query services to support JSON resolution in addition to EIDR-native XML
  - New resolution formats are our most common user request, with JSON and TSV leading the list

**The Approach:**
  - Use Reshuffle’s open-source integration platform to develop new API shims
    - Encapsulate the standard EIDR XML-based API communications in a reusable EIDR Connector
    - Create modular/reusable service scripts
    - Deliver new API services with minimal JavaScript customization

**Benefits:**
  - Build and deliver new APIs and new services faster (a.k.a., delight our users)
  - Supports quick iteration for testing and incremental refinement in production (a.k.a., more Agile)
  - Lowers development/delivery costs (a.k.a, delight our management)
Resolve One ID Script

```javascript
async(req, res) => {
  const id = req.query.id
  if (!/^\d{10}\.$/.test(id)) {
    return res.status(400).send('Invalid ID: ${id}.'
  }
  console.log('Resolving', id)
  const info = await EIDR.resolve(id)
  return res.json(info)
}
```
LIVE DEMO #1

XML & JSON Resolution (URL)
Pass Through Query (cURL)
Beyond the Case Study: A Practical Demo

https://.../movie-poster?name=abominable

① GET request
② Name to EIDR ID
③ EIDR ID to image
④ GET response

Movie Poster API

Script

EIDR Connector

Movies Anywhere Connector
The Reshuffle “Poster” Project

NOTE: This open source demonstration relies on Alternate IDs in the EIDR registry (which are not guaranteed to be populated on every record) and third-party services outside of EIDR’s control.

https://github.com/reshufflehq/reshuffle-movieposter-example
LIVE DEMO #2

JSON Search, ID Resolution, and Search Results Sorting

(Courtesy MovieLabs)
Success So Far and EIDR’s Next Steps

- In very little time, with comparatively little effort, EIDR has delivered:
  - Resolve, Pass-Through (XPath) Query, and JSON Query APIs
  - Integration with the EIDR Content ID, Video Service, and Party registries
  - Support for all EIDR resolution types (Full, Self-Defined, Alternate IDs, etc.)
  - JSON return options via type parameter/Accept header via the same API

- Next, we will:
  - Add new resolution types and formats (Tab-Delimited, EN 15907, RDF, ISAN, etc.)
  - Integrate the new APIs into our own operations (public Web UI, etc.)
  - Transition EIDR from linked-data friendly to linked-data native support
  - TSV and JSON EIDR match, register, and modification
EIDR Case Study Recap

• EIDR provides AV asset IDs for automation that appear in mission-critical applications, so new services cannot cause disruption

• Delivering new EIDR API services quickly and with little effort will:
  – Reduce barriers to adoption for corporate IT departments
  – Reduce barriers to adoption for new kinds of applications

• The open source Reshuffle integration platform:
  – Isolates EIDR API connectivity from business logic
  – Requires minimal JavaScript customization
  – Encourages experimentation, reuse, and agile delivery

• Ease of use demonstrated by JSON resolution

• Ease of re-use demonstrated by the “poster” and “linked data” applications
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