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)
```javascript
async(req, res) => {
  const id = req.query.id
  if (!/^[0-9A-F]{4}-[0-9A-Z]{5}$/i.test(id)) {
    return res.status(400).send('Invalid ID: $\{id\}$')
  }

  console.log('Resolving', id)
  const info = await EIDR.resolve(id)
  return res.json(info)
}
```
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
The Reshuffle “Poster” Project

https://github.com/reshufflehq/reshuffle-movieposter-example

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.
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 and TSV return options via type parameter/Accept header via the same API

• Next, we will:
  – Integrate the new APIs into our own operations (public Web UI, etc.)
  – Add new resolution types and formats (EN 15907, RDF, ISAN, 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 API
- Ease of re-use demonstrated by the “poster” application
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