

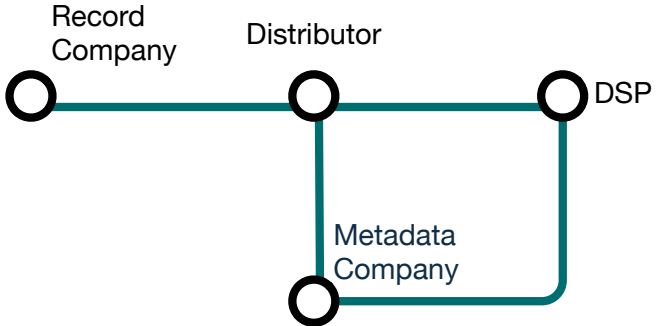
Digital Data Exchange, LLC (DDEX)

Media Enrichment And Description (MEAD)

September 2023



Media Enrichment And Description



Media Enrichment and Description (MEAD) —

Why do we need MEAD?

User experiences change with device

Bigger screen size used to lead to a richer experience



User experiences change with device

Bigger screen size used to lead to a richer experience



Artificial intelligence allows screens to disappear



Enhancing user experiences

Google, play something from "Slowhand"

Alexa, play me the song Eminem sampled in "Stan"

Siri, play me Ed Sheeran's latest track

Cortana, play me something from the female singer on the live version of "Don't give up"

What data is needed for the AI?

- To provide meaningful results to “Play something from the female singer on the live version of ‘Don’t give up’” the AI needs:
 - A list of all popular tracks called “Don’t give up”
 - To differentiate between live and studio versions
 - Records of all contributors on those tracks with their names and gender
 - To be able to identify from those contributors, a prominent female singer
 - Identify another track by that female singer
- To provide a meaningful result to “Play me Ed Sheeran’s latest track” the AI needs:
 - The release dates of all Ed Sheeran tracks
 - A list of Ed Sheeran tracks currently being promoted in the territory of the user
 - To distinguish the latter from the former because the “latest track” is **not** necessarily the most recently released one

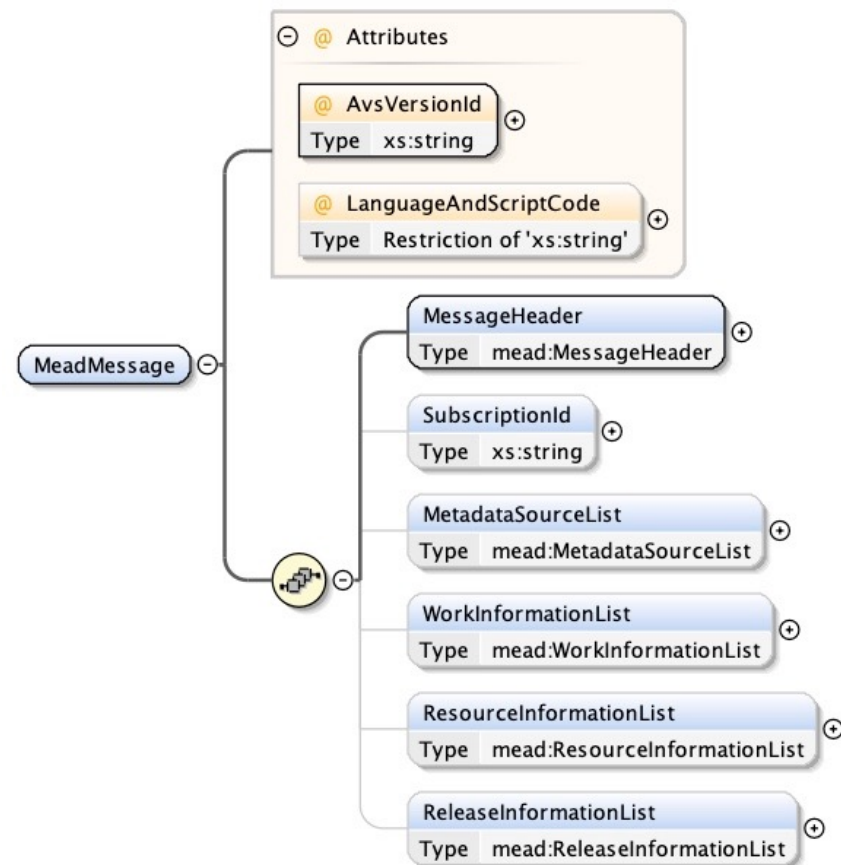
Benefits of such data being available

- Amazon Music and Universal Music Group (UMG), recently shared details about their implementation of MEAD
- They carried out “before” and “after” tests
- Showed addition of high-quality genre and mood data increased streams and decreased skip rates
 - 4.6% increase in streams
 - 11.9% increase in streams on algorithmic stations and playlists
 - 7.8% decrease in skip rate
- Press release [here](#)

Media Enrichment And Description (MEAD)

High level message overview

- Communicating information about
 - Musical works
 - Sound recordings or music videos
 - Releases



Few mandatory elements

- Virtually everything is optional
 - Allows niche metadata providers to add their expertise
 - Mandatory:
 - `MessageHeader`
 - Core data to identify the entity described
- MEAD message is a “Statement of Truth”
 - Only applies to elements that were sent in the past

What data does MEAD support?

	Party	Work	Resource	Release
Focus Track	X			
Influence and Similarly	X	X	X	X
Charting and Awards	X	X	X	X
Vocal Register	X	X	X	
Where used?	X	X	X	X
Biography	X			
Photos	X	X	X	X
Is recorded by / Has created	X	X	X	X
Time signature / Harmonic		X	X	
Mood, Styles, Genre, Theme		X	X	X
Lyrics		X	X	

The list is **not** exhaustive

What data does MEAD support?

	Party	Work	Resource	Release
Alternative titles		X	X	X
Nicknames	X			
Classical work hierarchies		X		
Links to (other) recordings		X	X	
Sampling information			X	
Information about recording session			X	

The list is **not** exhaustive

What data does MEAD support?

	Party	Work	Resource	Release
Alternative titles		X	X	X
Nicknames	X			
Classical work hierarchies		X		
Links to (other) recordings		X	X	
Sampling information			X	
Information about recording session			X	

All free-form information can be accompanied with pronunciation information (IPA preferred)

The future of the MEAD

Proactive Mode

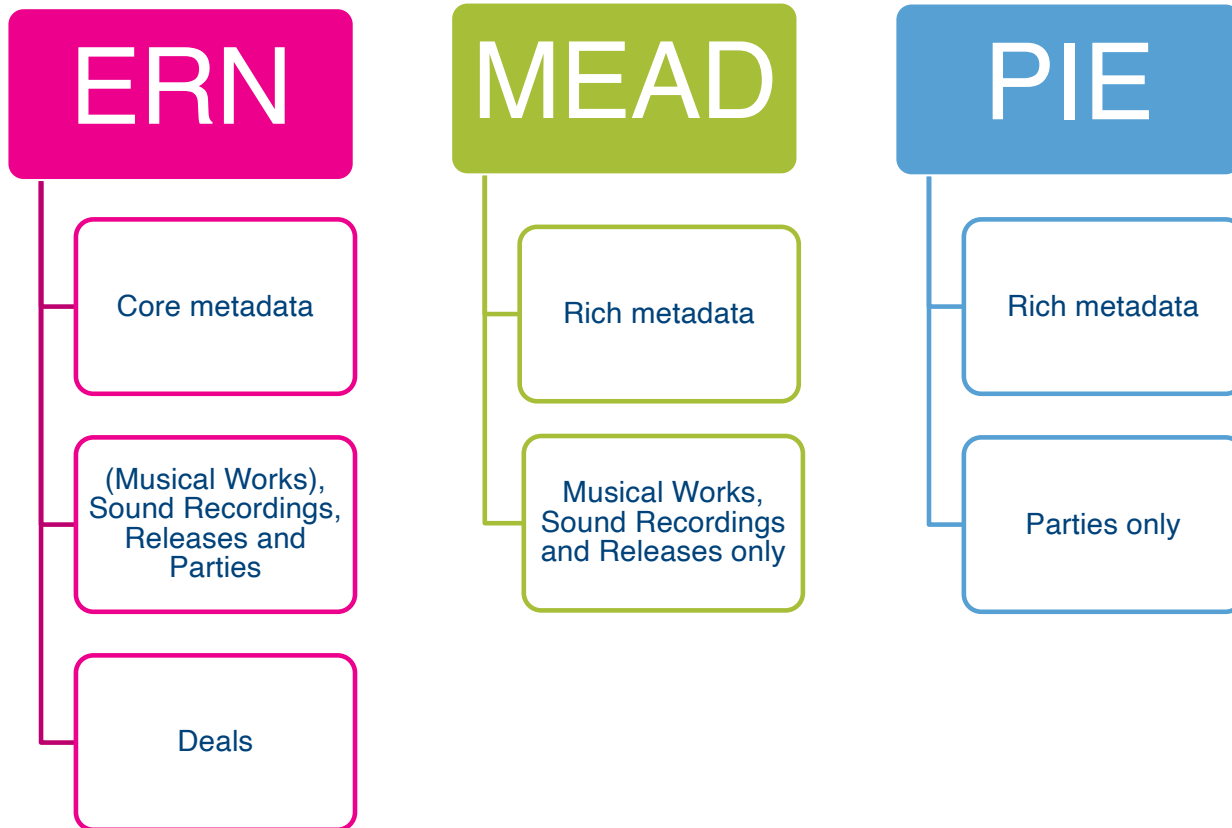
- Metadata provider sends MEAD file to DSP proactively
- Examples
 - Record company's MEAD file accompanies ERN message
 - Other data provider sends out regular MEAD updates

Database Mode

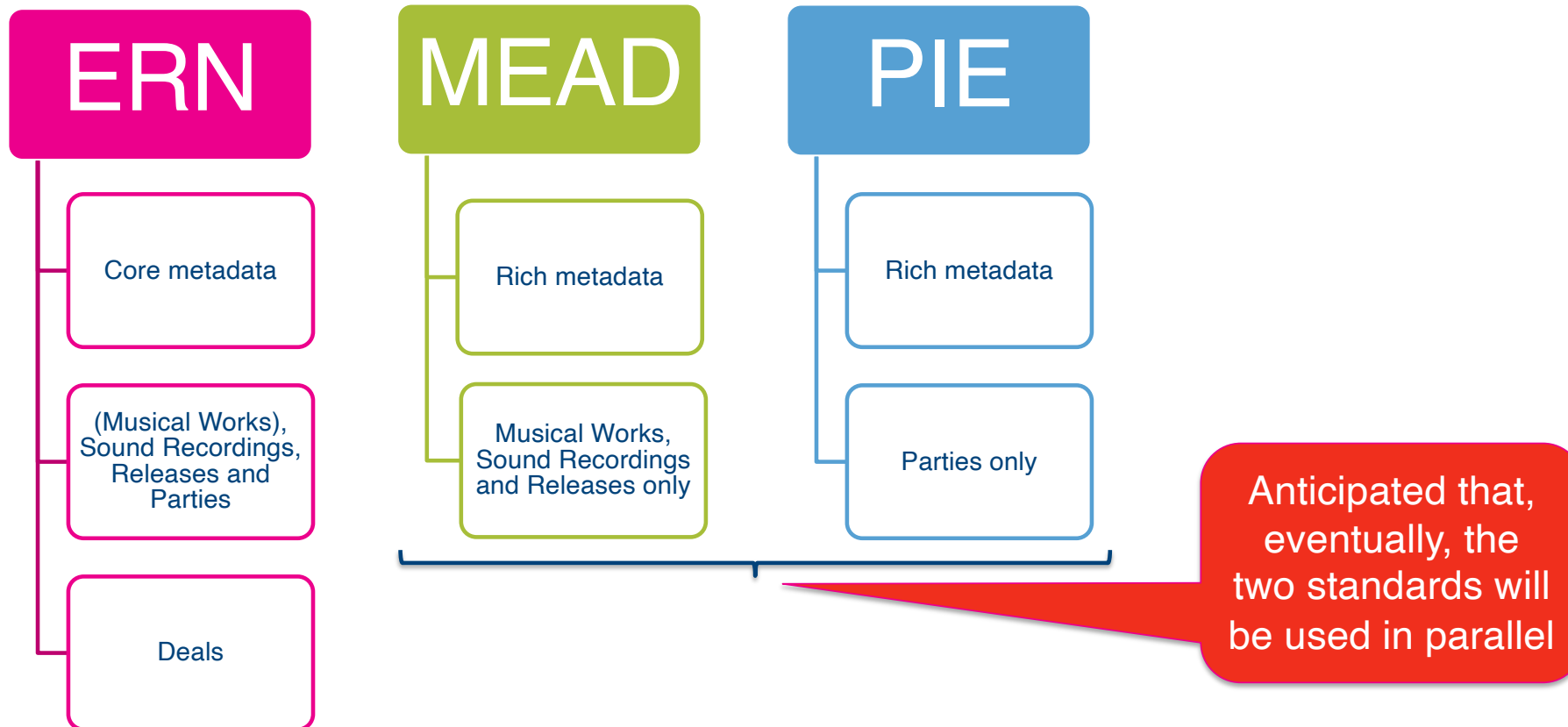
- Metadata provider sends out MEAD file in response to a specific question from DSP, for example:
 - “Do you know when Eric Clapton was Number 1 in China?”

MEAD and PIE choreographies

Supply chain and marketing



Supply chain and marketing



Supply chain and marketing

Supply chain and marketing data delivery from a record company or distributor can operate in parallel

ERN

Core metadata

(Musical Works),
Sound Recordings,
Releases and
Parties

Deals

MEAD

Rich metadata

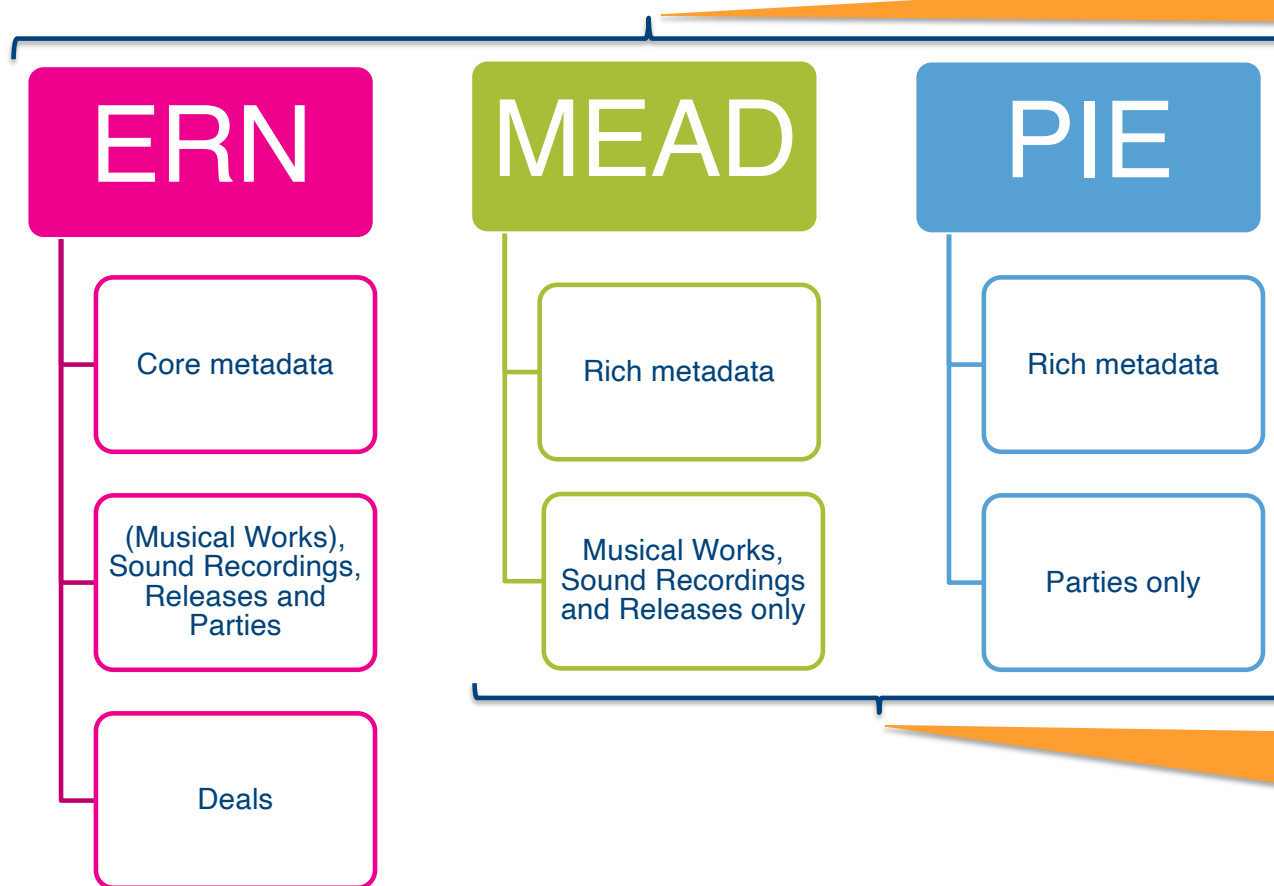
Musical Works,
Sound Recordings
and Releases only

PIE

Rich metadata

Parties only

Supply chain and marketing

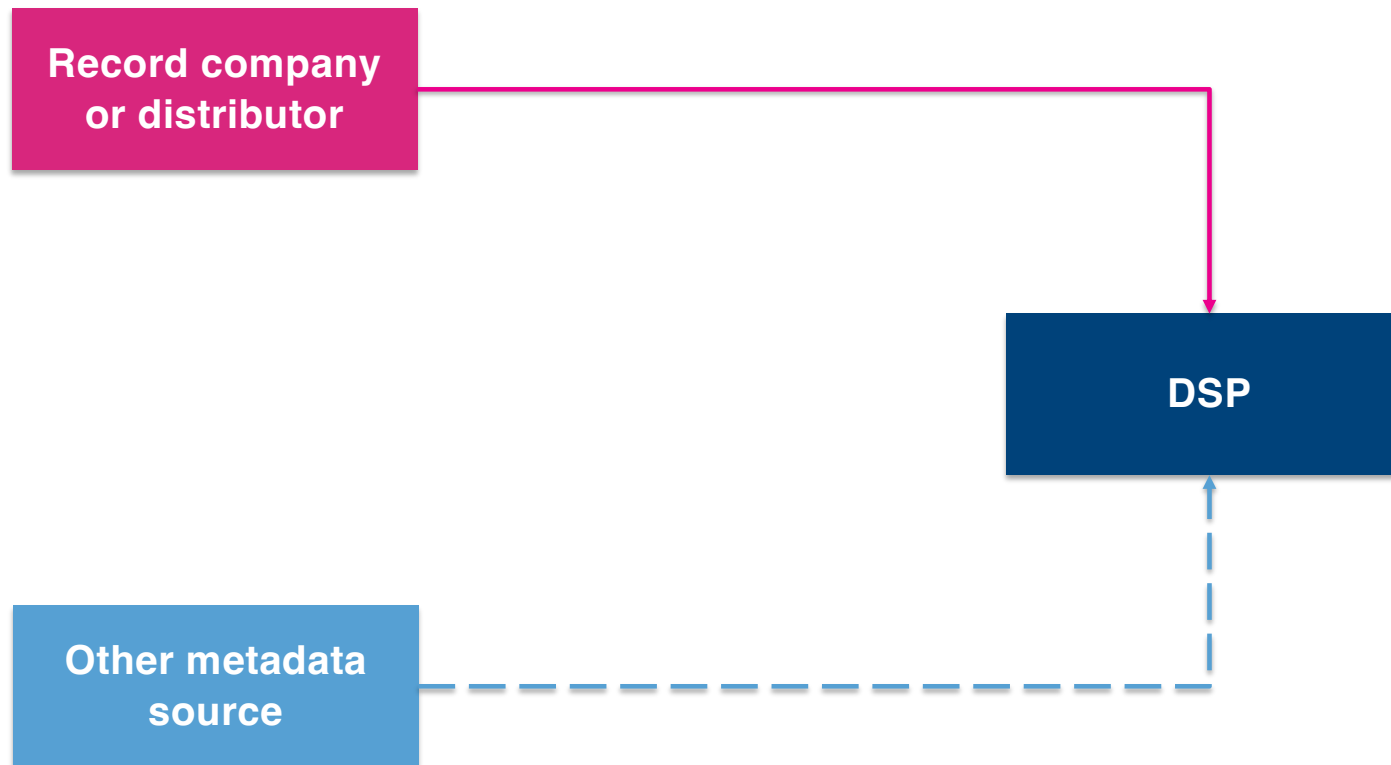


Supply chain and marketing data delivery from a record company or distributor can operate in parallel

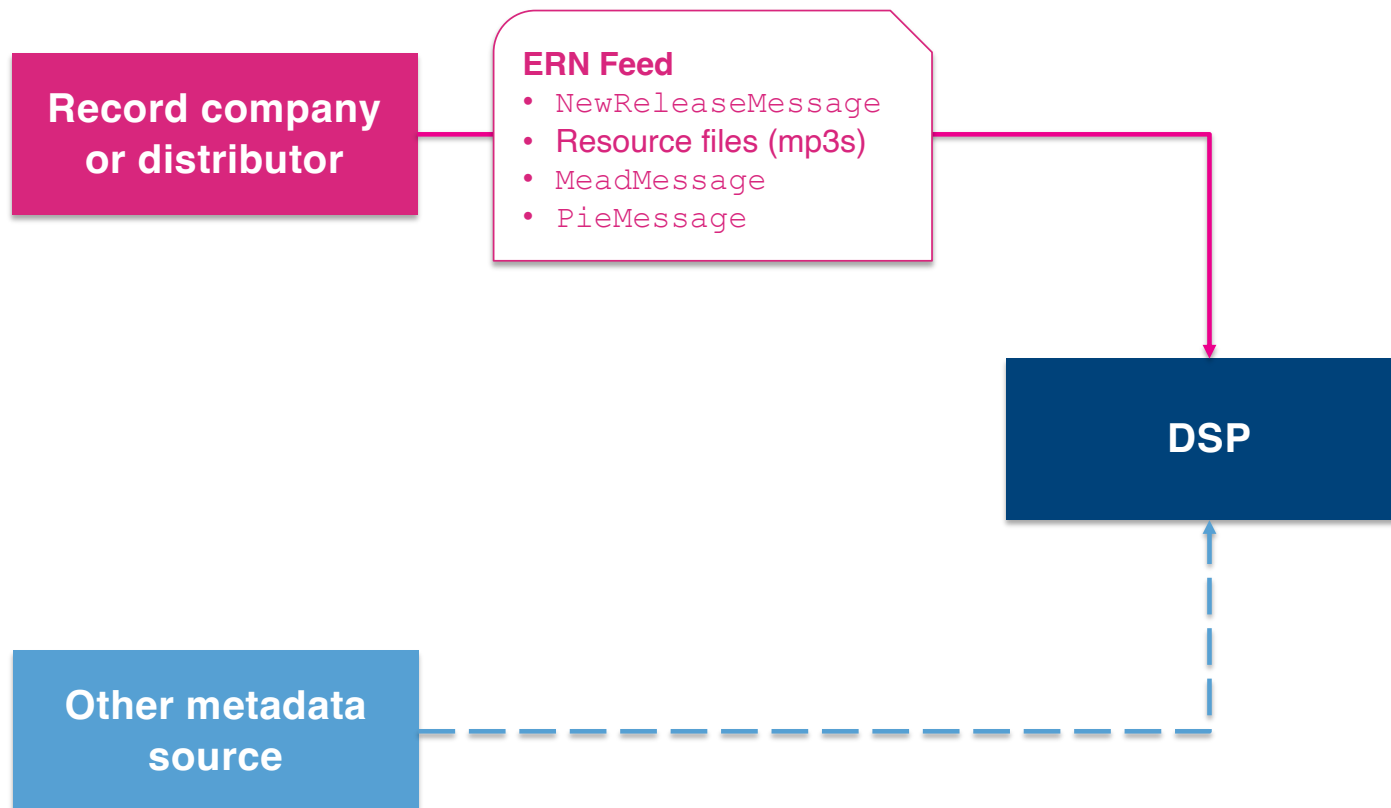
Other marketing data sources include:

- Metadata companies
- Music publishers
- Collective rights management organisations.....

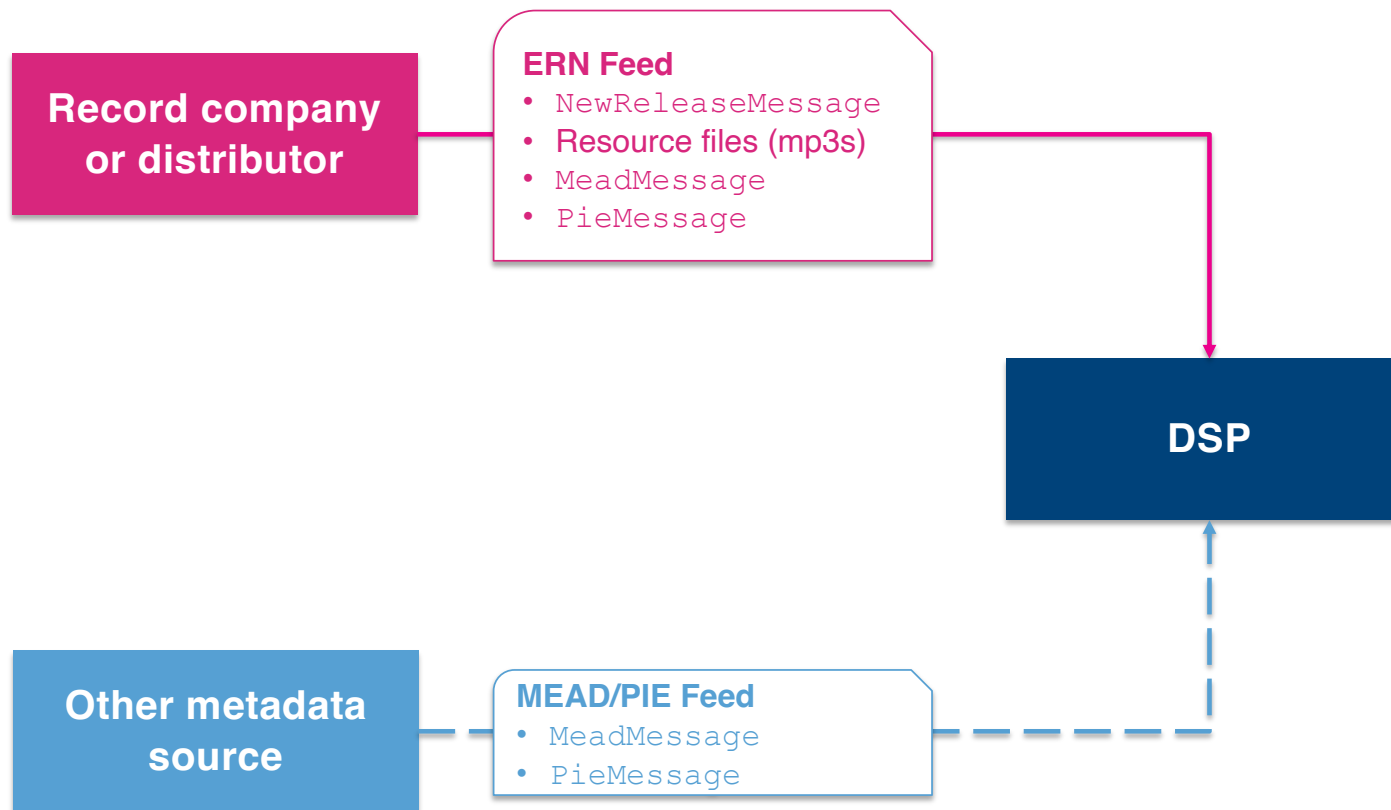
Choreography for MEAD and PIE



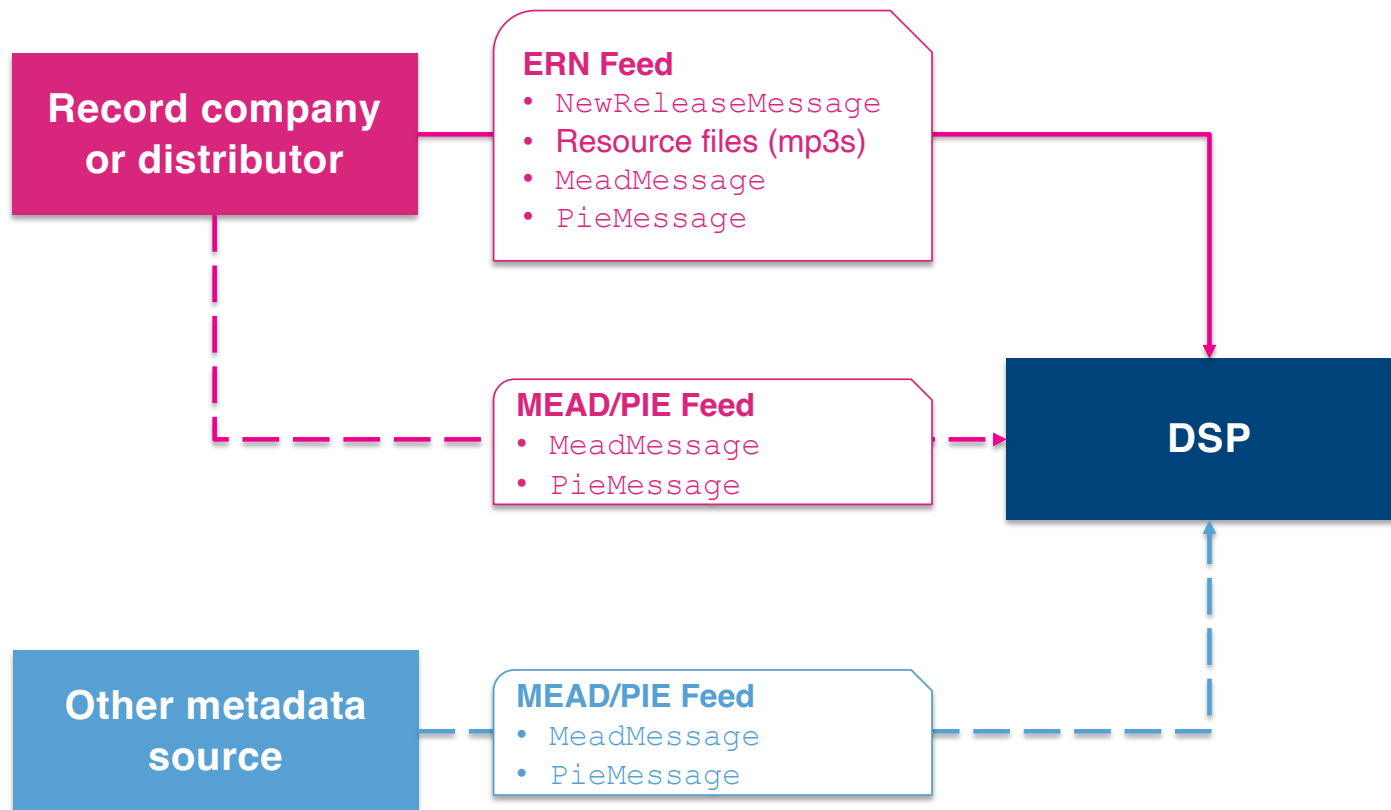
Choreography for MEAD and PIE



Choreography for MEAD and PIE



Choreography for MEAD and PIE

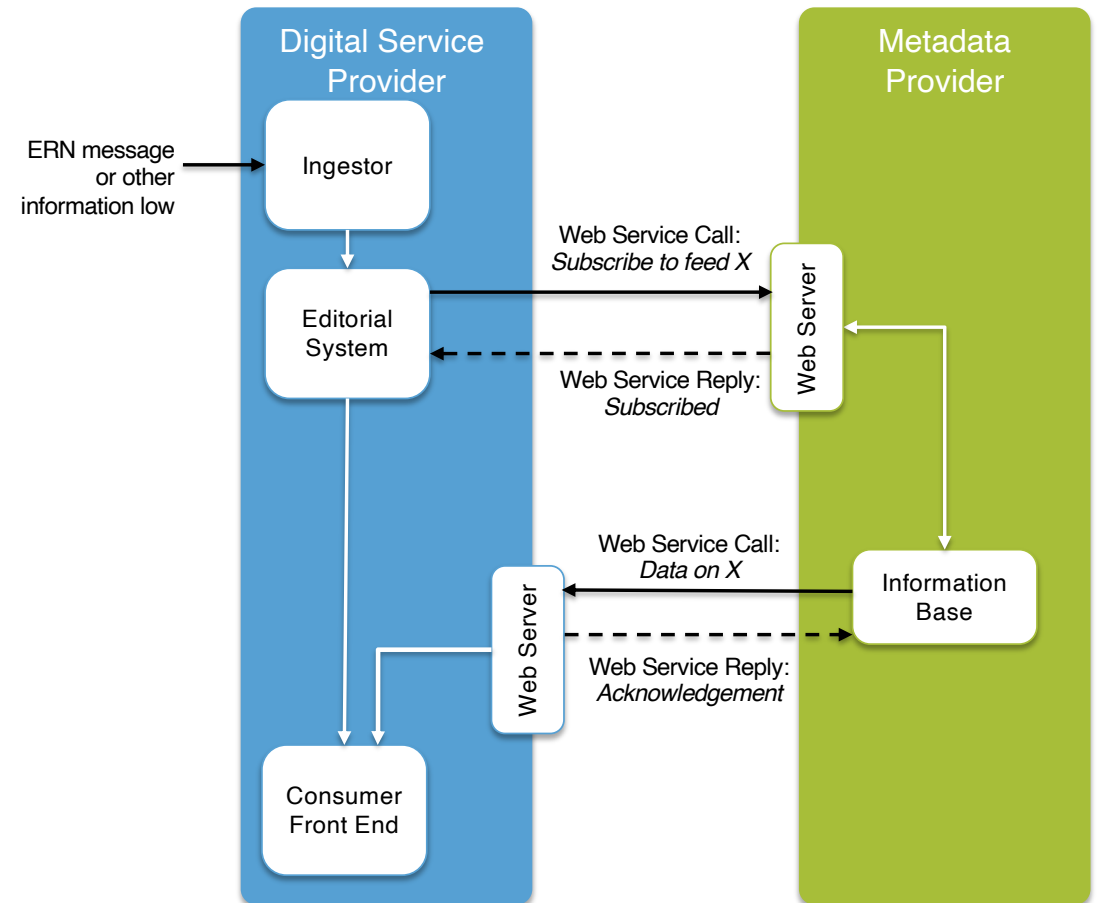


Choreography for MEAD and PIE

- MEAD/PIE when sent alongside ERN message
- Symmetric web service
- Atom-based web service
- Cloud storage
- MEAD/PIE file is treated as “just another resource file”
- In ERN-4, MEAD/PIE file signalled as a “supplemental document”
- In ERN-3, MEAD/PIE file signalled as a `Text` resource with a user-defined `TextType` of either `MeadMessage` or `PieMessage`

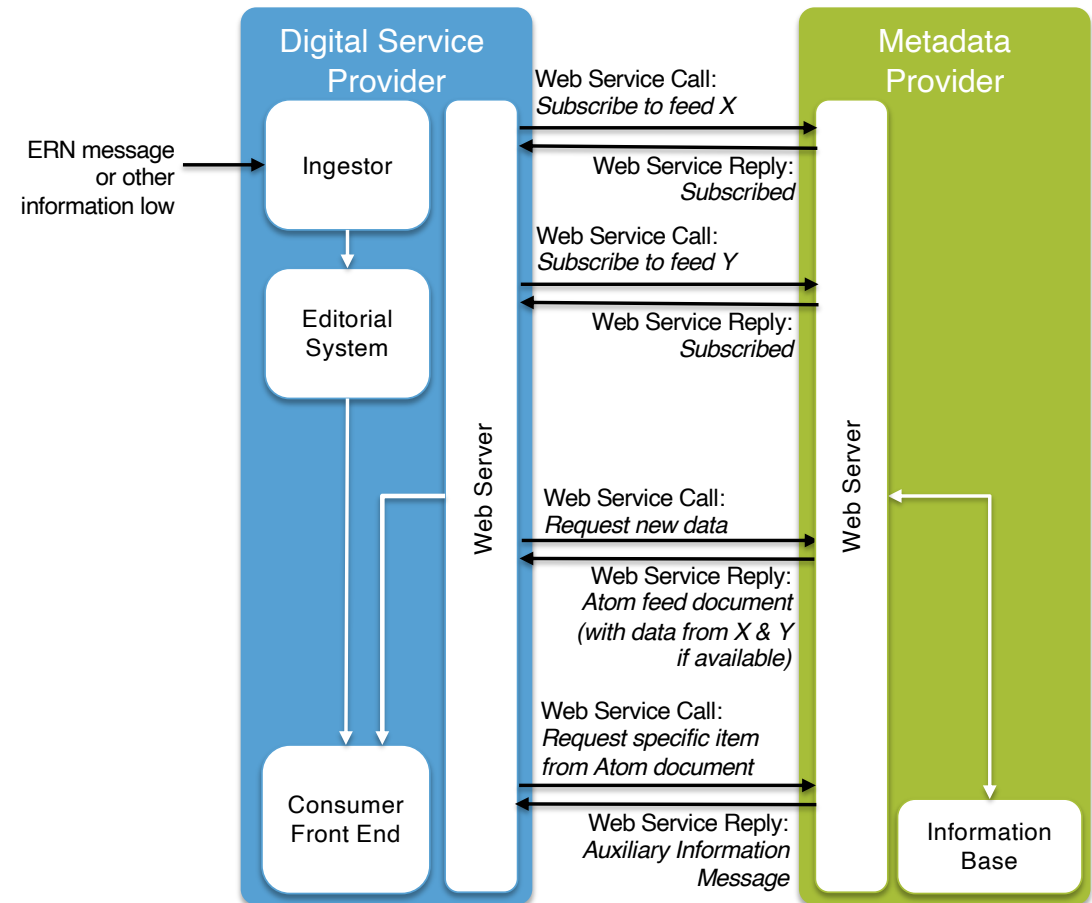
Choreography for MEAD and PIE

- MEAD/PIE sent alongside ERN message
- **Symmetric web Service**
- Asymmetric web service
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Choreography for MEAD and PIE

- MEAD/PIE sent alongside ERN message
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- **Asymmetric web service**
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Choreography for MEAD and PIE

- MEAD/PIE sent alongside ERN message
- Symmetric web Service
- Asymmetric web service
- Cloud storage
- Follows ERN choreography standard for cloud storage
- Two approaches
 - File-by-file
 - Batched
- File naming convention

Identifying the source: “who says?”

- Essential information for MEAD and PIE
- Source maybe different from message sender
- Not all data comes from one source
- Some data elements are “journalistic”, for example, biographies, photographs, ...
- Some data elements should better come from the authoritative source, for example, historic charting information

Identifying the source: example

```
<Biography>
```

```
<Text>
```

```
John Winston Ono Lennon MBE  
was an English singer,  
songwriter and peace  
activist who gained  
worldwide fame as the  
founder, co-lead vocalist,  
and rhythm guitarist of the  
Beatles. His songwriting  
partnership with [...]
```

```
</Text>
```

```
<Author>Wikipedia</Author>
```

```
</Biography>
```

Identifying the source: example

```
<Biography>
```

```
<Text>
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```
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```

```
</Text>
```

```
<Author>Wikipedia</Author>
```

```
</Biography>
```

```
<MetadataSource>
```

```
<PartyName>
```

```
<FullName>
```

```
<Name>Niels Rump</Name>
```

```
</FullName>
```

```
</PartyName>
```

```
</MetadataSource>
```

Identifying the source: example

```
<Biography>
```

```
<Text>
```

```
John Winston Ono Lennon MBE  
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```

```
</Text>
```

```
<Author>Wikipedia</Author>
```

```
</Biography>
```

```
<MetadataSource>
```

```
<PartyName>
```

```
<FullName>
```

```
<Name>UMG</Name>
```

```
</FullName>
```

```
</PartyName>
```

```
<MetadataSourceType>
```

```
RightsController
```

```
</MetadataSourceType>
```

```
</MetadataSource>
```

Identifying the source: example

```

<Biography>
  <MetadataSourceReference>
    U1
  </MetadataSourceReference>
  <Text>
    John Winston Ono Lennon MBE
    was an English singer,
    songwriter and peace
    activist who gained
    worldwide fame as the
    founder, co-lead vocalist,
    and rhythm guitarist of the
    Beatles. His songwriting
    partnership with [...]
  </Text>
  <Author>Wikipedia</Author>
</Biography>

<MetadataSource>
  <SourceReference>
    U1
  </SourceReference>
  <PartyName>
    <FullName>
      <Name>UMG</Name>
    </FullName>
  </PartyName>
  <MetadataSourceType>
    RightsController
  </MetadataSourceType>
</MetadataSource>

```

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