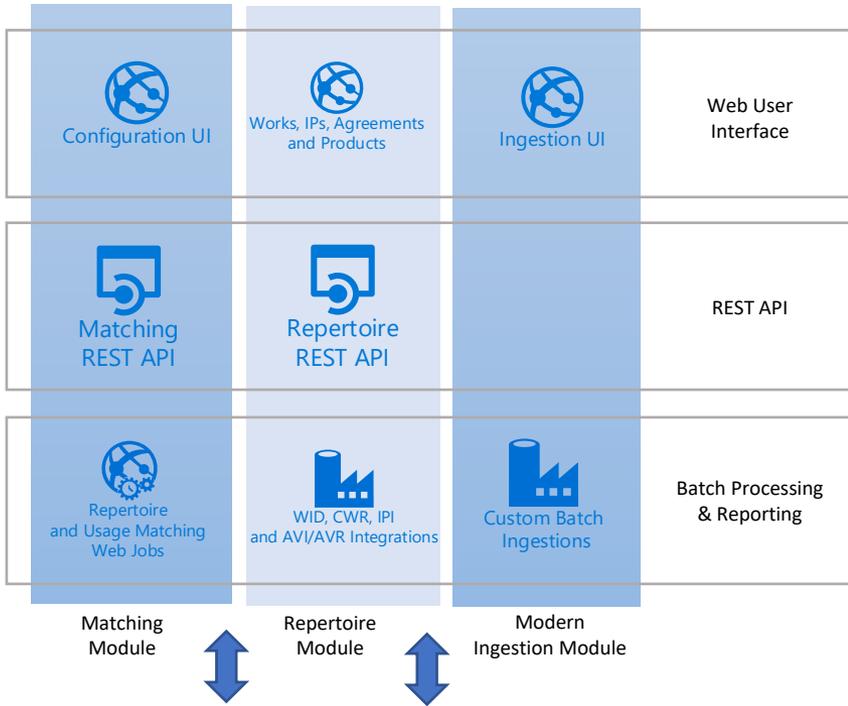


Matching Engine Repertoire Management Solution Overview

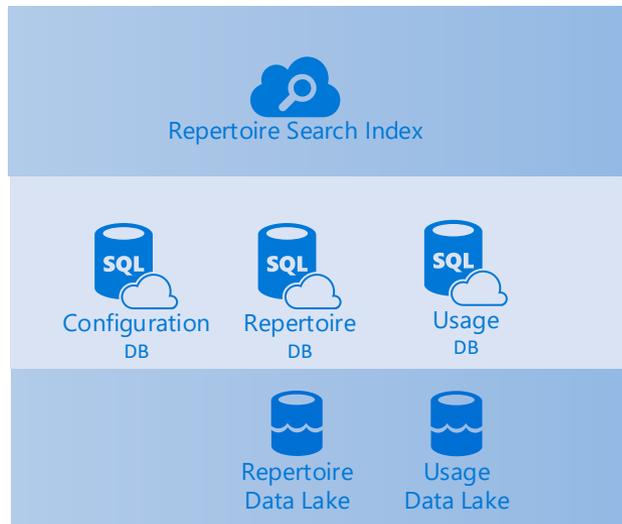
Solution Architecture



Modern cloud native application
Responsive web-based user interface

Web APIs support real time integration for matching and repertoire management

Azure Databricks and Azure Data Factory batch data processes ensure highly scalable data processing



Azure Search Index to provide fast response times for user queries and matching.

Azure SQL databases for core relational data

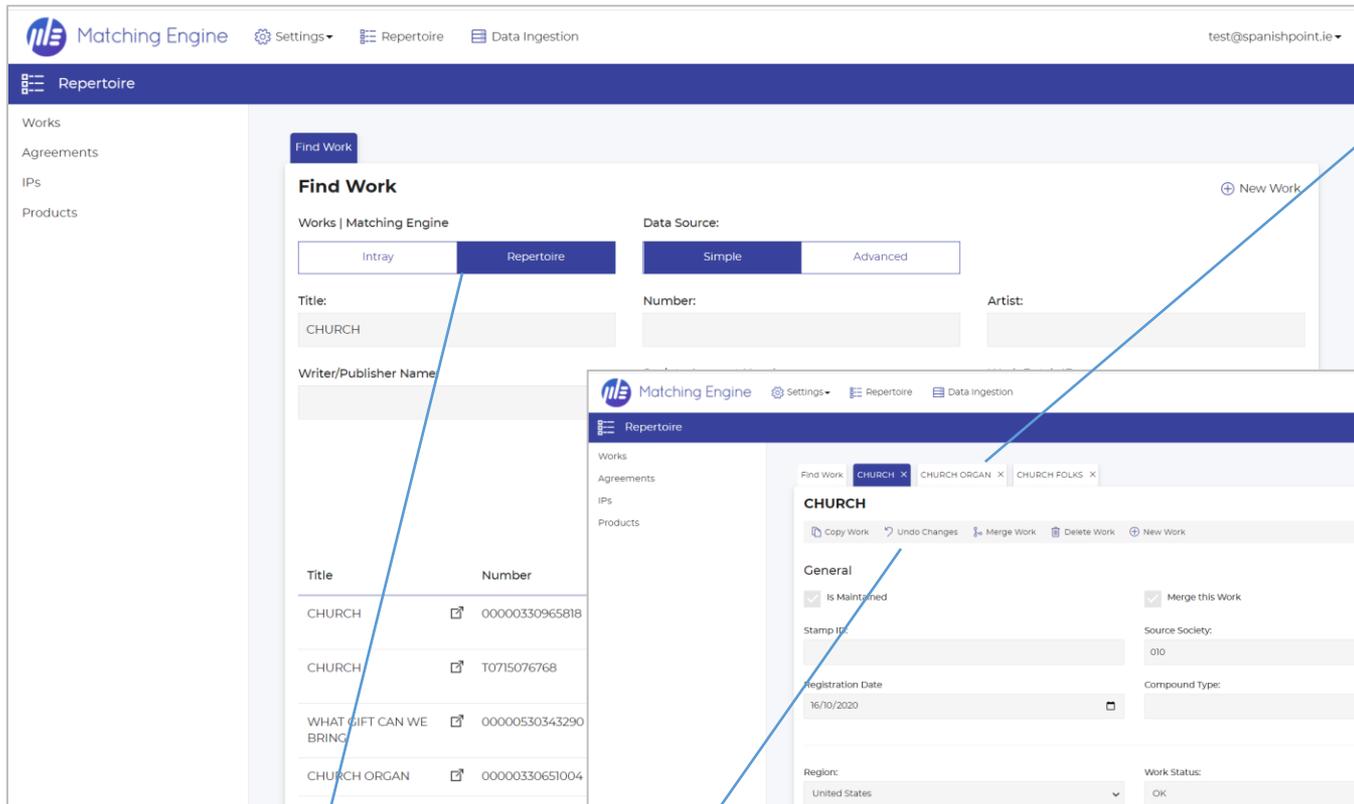
Azure Data Lake provides highly scalable and cost-effective storage for data exchange and reporting



Repertoire Management – Key Features

- Modern Intuitive Web Based Application
- Multi Territory
- Supports Mechanical and Performing Rights
- Supports configurable lines of business
- Integrated Version History to track all versions of work information
- Agreement Based
- Modern Ingestion for Repertoire – Extensible for other formats
- CWR Ingestion and Acknowledgements
- WID Ingestion
- Integrated with core Matching module for repertoire matching and reconciliation
- IPI Integration
- Cloud Native

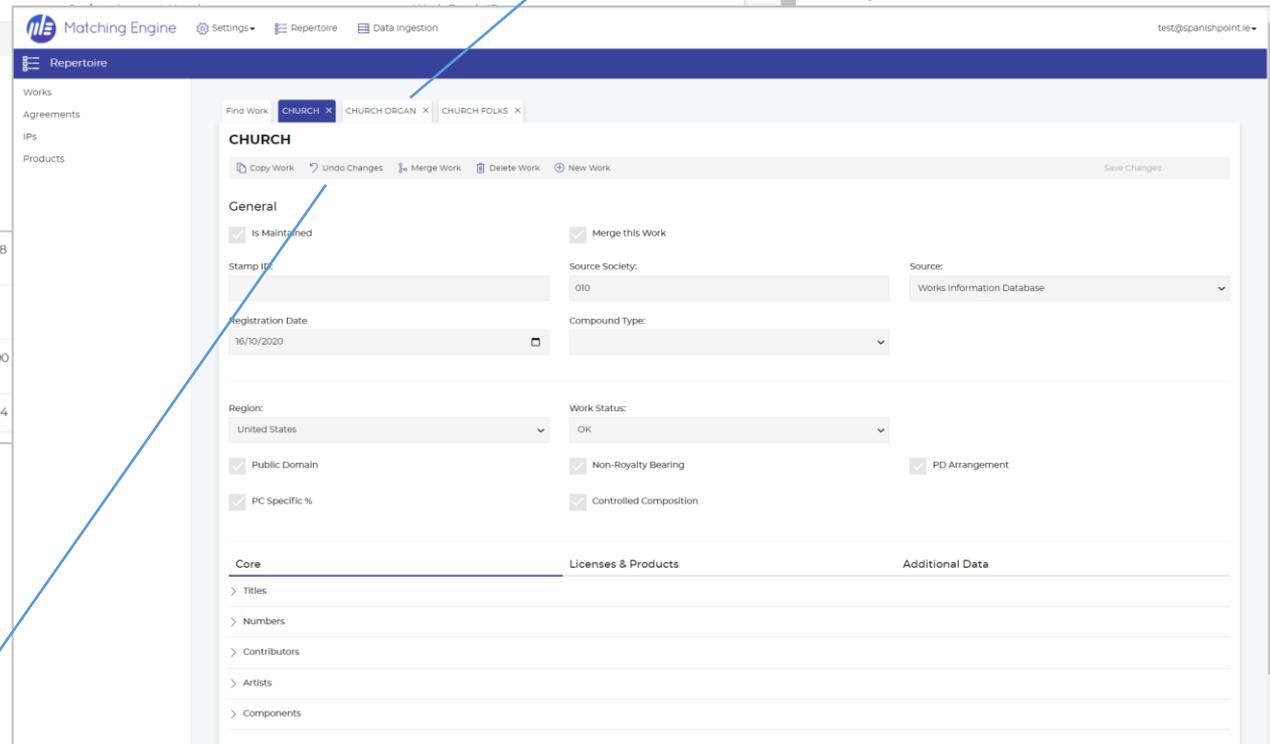
Modern Intuitive Web Based Application



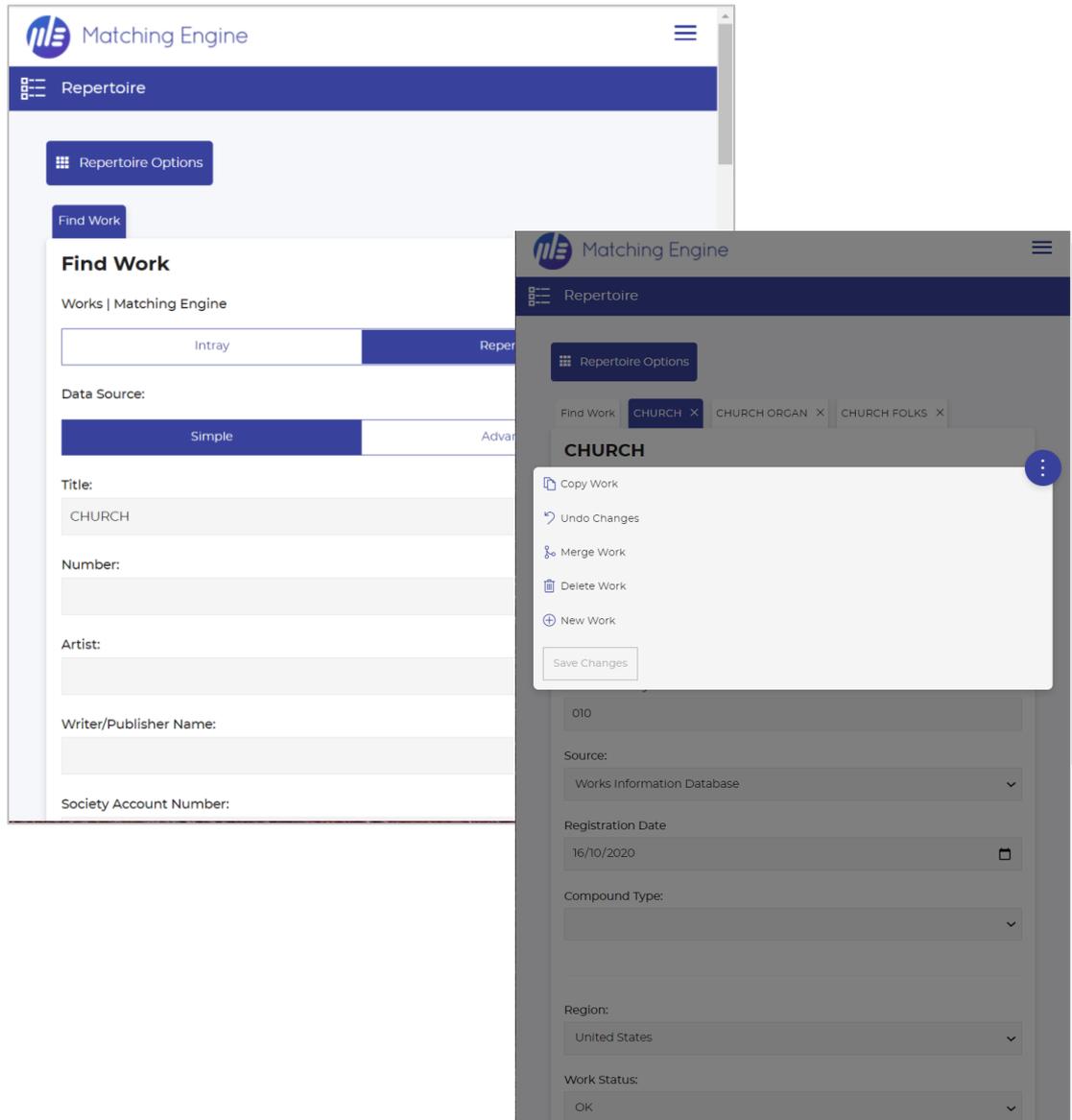
Modern intuitive web-based application makes managing repertoire fast and easy to use. Tabbed model makes it easy to work on multiple works at the same time, compare information between works and even keep multiple works, IPs, Agreements and Products visible at the same time

Innovative Intray area where work information from external sources can be viewed, validated and then posted to Repertoire

Advanced repertoire management actions including copying and merging works. Full version history of work information is maintained.



Modern Intuitive Web Based Application



Fully responsive application enables you to manage repertoire wherever you are, on any device.

Modern Intuitive Web Based Application



The screenshot displays the 'Matching Engine' web application interface. The top navigation bar includes the logo, 'Settings', 'Repertoire', and 'Data Ingestion' menus, along with the user email 'test@spanishpoint.ie'. The main header is 'Repertoire'. A left sidebar lists 'Works', 'Agreements', 'IPs', and 'Products'. The main content area is titled 'Find Work' and features a 'New Work' button. Below this, there are tabs for 'Intray' and 'Repertoire', and sub-tabs for 'Simple' and 'Advanced'. The search form includes fields for 'Title' (containing 'CHURCH'), 'Number', 'Artist', 'Writer/Publisher Name', 'Society Account Number', and 'Work Batch ID'. A 'Search' button is positioned below the form. The results section shows '72 Results' and a pagination control set to '10 per page', displaying '1 of 8' items. The results are presented in a table with columns for Title, Number, Writers, Publishers, Artists, and Compound Type.

Title	Number	Writers	Publishers	Artists	Compound Type
CHURCH	00000330965818	DEANDRE ALLEN SHAIFER	DRE KING PUBLISHING		
CHURCH	T0715076768	JAMES CLAUDE JR MATTHEWS	MUSIC EMPORIUM PUBLISHING COMPANY		
WHAT GIFT CAN WE BRING	00000530343290	JANE M MARSHALL	HOPE PUBLISHING COMPANY		
CHURCH ORGAN	00000330651004	JOSEPH M SABA	VIDEOHELPER INC		

Repertoire module allows you to maintain:

- Musical Works
- Agreements
- IP Information (Creators and Publishers)
- Products

There are several types of Product Supported:

- Cue Sheet / AV Work
- Recording
- Bundle
- Advertisement

Multi Territory, Agreements Based with Configurable Lines of Business



Region: United States Work Status: OK

Public Domain Non-Royalty Bearing PD Arrangement

PC Specific % Controlled Composition

Core Licenses & Products Additional Data

> Titles

> Numbers

Contributors

Repertoire Distribution Other

	IPI Number	Account #	Name	Role	Perf %	Mech %	Relation	Territory	Source	Reg Date	% of Pub	Remove
1	34531760	:	DEANDRE ALLEN SHAIFER	CA	50					dd/mm/yyyy		Remove
2	340077493	:	DRE KING PUBLISHING	E	50					dd/mm/yyyy		Remove

Add New

Multiple “Regions” (Territories) can be defined enabling you manage repertoire for different territories within the same instance of the system. Share, Agreement and some header level information such as Work Status, Public Domain etc are territory specific.

The “Distribution” share tab shows the consolidated view of the work with agreements being applied. Additional tabs can be configured to represent different lines of business to reflect different representation between say “Online” and “Radio & TV”

The “Repertoire” share tab shows the consolidated view of the work without agreements being applied. I.E. The work as registered.

Multi Territory, Agreements Based with Configurable Lines of Business



Region: United States Work Status: OK

Public Domain Non-Royalty Bearing PD Arrangement

PC Specific % Controlled Composition

Core Licenses & Products Additional Data

> Titles

> Numbers

Contributors

Repertoire Distribution Other

	IPI Number	Account #	Name	Role	Perf %	Mech %	Relation	Territory	Source	Reg Date	% of Pub	Remove
1	340077493	:	DRE KING PUBLISHING	E	50		OP1			dd/mm/yyyy		Remove
2	345319760	:	DEANDRE ALLEN SHAIFFER	CA	50					dd/mm/yyyy		Remove
3	226464374	:	EMI APRIL MUSIC (CANADA) LTD.	SE	50		SP1, OP2			dd/mm/yyyy		Remove
4	269021863	:	SONY/ATV MUSIC PUBLISHING LLC	AM	50		SP2			dd/mm/yyyy		Remove

Add New

In the Distribution and other LOB specific share tabs agreements are applied dynamically and shown as related shares directly on the work. In this case EMI APRIL MUSIC CANADA and SONY MUSIC PUBLISHING LLS are added dynamically through agreements that exist for DRE KING PUBLISHING for this region (United States), date range, line of business etc.



Modern Ingestion for Repertoire, CWR and WID Integration, Extensible for other formats

The screenshot shows the 'Data Ingestion' module of the Matching Engine. The left sidebar contains a navigation tree with folders like 'usage', 'input', 'output', 'cwr', 'sony', and 'Archive'. The main area displays a file list under the path 'cwr > sony > Archive'. A blue progress bar at the top of the file list indicates '1 files are currently in progress' with a sub-item 'CW190240SA_128_3C10V21'. Below this is a table of files with columns for 'Name' and 'Last Modified'.

Name	Last Modified
CW190131SA_128_V21	Oct 9, 2020, 03:00:36 PM
CW190131SA_128_3C001V21	Oct 14, 2020, 04:09:35 PM
CW190131SA_128_3C002V21	Oct 15, 2020, 10:55:21 AM
CW190131SA_128_3C003_V21	Oct 15, 2020, 11:31:10 AM
CW190131SA_128_3C004_V21	Oct 15, 2020, 02:23:33 PM
CW190131SA_128_PKV21	Oct 14, 2020, 03:47:41 PM
CW190131SA_128_PK11_V21	Oct 21, 2020, 11:47:50 AM
CW190236SA_128_V21	Oct 14, 2020, 10:27:21 AM

Simple integrated progress reporting on background Azure Data Factory / Azure DataBricks jobs

Configurable repertoire ingestion locations within Azure Data Lake and visible to end users through Data Ingestion module UI. Each Data Lake folder can be exposed externally as an SFTP location with sub folders, such as "Archive" being designated to a "cool" storage tier enabling low-cost storage for large data volumes.

Out of the box support for key data exchange standards including CWR, WID and IPI.



Integrated with highly configurable Matching module and streamlined posting process

Matching Engine Settings | Matching

Match Type: Work to Work

CWR

AddUnmatchedToIndex
Indicates if a work that has no match should immediately be added to the index so that subsequent similar works being matched will be immediately grouped with that work. If this flag is set to True then once a work is identified as being unique it will immediately be added to the index. Other similar works that are subsequently matched will then be matched to this work. Must be True or False.

Inherited Value: true Or Custom Value: true

ApplyDisambiguation
If disambiguateFromNumbers are provided in the input work then all works in the index that have matching numbers and number types will be eliminated as possible matches for this input work. True or False

Inherited Value: true Or Custom Value: true

ArtistIgnoreWords
The Matching Engine will remove these values from the the input Artist names during before using them in text based matching. If a name is completely removed by this process then it is not used in matching. Delimited by semi-colon ";"

Inherited Value: UNKNOWN WRITER (999990);UNKNOWN PUBLISHER (999990); Or Custom Value: UNKNOWN WRITER (999990);UNKNOWN PUBLISHER (999990);

ComposerIgnoreWords
The Matching Engine will remove these values from the input Composer names before using that name in matching. If a name is completely removed by this process then it is not used in matching. Delimited by semi-colon ";"

Inherited Value: UNKNOWN WRITER (999990);UNKNOWN PUBLISHER (999990);UNKNOWN PUBLISHER (999990); Or Custom Value: UNKNOWN WRITER (999990);UNKNOWN PUBLISHER (999990);UNKNOWN PUBLISHER (999990);

ComposerMatchWritersOnly
If this flag is set to True then only the writers/composers on the input work must match with a work in the index in order for the work to be determined a match. I.E. Non writer/composer contributors such as publishers will not be taken into account. True or False.

Inherited Value: Or Custom Value:

Work to Work matching used to match Intray works ingested through CWR or any other supported repertoire format against repertoire works. Over 50 configurable rules that can be customised by source control the matching and work reconciliation process



AV Work Module (In Development)

Find Work | Repertoire: ALL ALONG THE WATCHTOWER | IP: DWARF MUSIC (USA) | Find Product | Product: NEIGHBOURS 123

Data Source
 Repertoire
 Intray

Search | Search by Work

Type: Cue Sheet
Number: _____
Name: NEIGHBOURS 123
Comments: _____
Artist Surname / Band: _____
Artist Firstname: _____

Type	Number	Title	Artist Surname / Band
Cue Sheet	2508537	NEIGHBOURS 123	

Find Work | Repertoire: ALL ALONG THE WATCHTOWER | IP: DWARF MUSIC (USA) | Find Product | Product: NEIGHBOURS 123

General
Type: Cue Sheet
Released: 11/ 5/2020
Track Count: 1
Licensee: _____
Label: _____

Source: Chart Research
Total Music Duration: : :
Last Modified: 11/05/2020 06:13:22
Merge Into:

Core | Cue Sheet Details | Works | APs | Comments | Content | AV Request | Licenses

Territory: AUSTRALIA
Category: Series
Year: 2020
Total Duration: 200
Air Date: 1/ 1/1753
Type: _____
Cue Sheet Type: Composite Cue Sheet
Destination: _____
Production: Acquired

Country Of Origin: AUSTRALIA
Date Of Revision: 1/ 1/1753
Code Of Revision: _____
Source Society: 021
Series Identifier: 10
Society Of Original Music: APRA
Date Submitted To AVI: 11/ 1/2020
Percentage Of Interest: _____
Ephemeral:

Find Work | Repertoire: ALL ALONG THE WATCHTOWER | IP: DWARF MUSIC (USA) | Find Product | Product: NEIGHBOURS 123

General
Type: Cue Sheet
Released: 11/ 5/2020
Track Count: 1
Licensee: _____
Label: _____

Source: Chart Research
Total Music Duration: : :
Last Modified: 11/05/2020 06:13:22
Merge Into:

Core | Cue Sheet Details | Works | APs | Comments | Content | AV Request | Licenses

Title	Number	Writers	Duration	Intray Work
YESTERDAY	00138456	Lennon JOHN ...	60	<input type="checkbox"/> View
ALL ALONG TH...	00230925	Dylan ROBERT	120	<input type="checkbox"/> View

Find Work | Repertoire: ALL ALONG THE WATCHTOWER | IP: DWARF MUSIC (USA) | Find Product | Product: NEIGHBOURS 123

General
Type: Cue Sheet
Released: 11/ 5/2020
Track Count: 1
Licensee: _____
Label: _____

Source: Chart Research
Total Music Duration: : :
Last Modified: 11/05/2020 06:13:22
Merge Into:

Core | Cue Sheet Details | Works | APs | Comments | Content | AV Request | Licenses

Request Details
Request Batch ID: _____
AV Status: _____
Request Date: _____
Received date: _____

Request this CUESheet
Required by date: 11/ 6/2020
Urgent:

[Request](#)

“AV Works”
represented and Cue
Sheet type “Products”

“AV Works” contain
musical works

Integration with AVI / AVR
to automatically ingest
data

Batch Updates / Catalogue Transfers (Can be added based on our experience below)



Transfer all works from a specific IP to another IP

Type	Number	Name	FirstNa
Patronym	00008946467	DWARF MUSIC (...)	

Type	Number	Name	FirstNa
Patronym	00008946467	DWARF MUSIC (...)	

Merge IPs. E.G. merge a "Dummy" IP with an IPI Base Number once the IPI data has been set up.



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