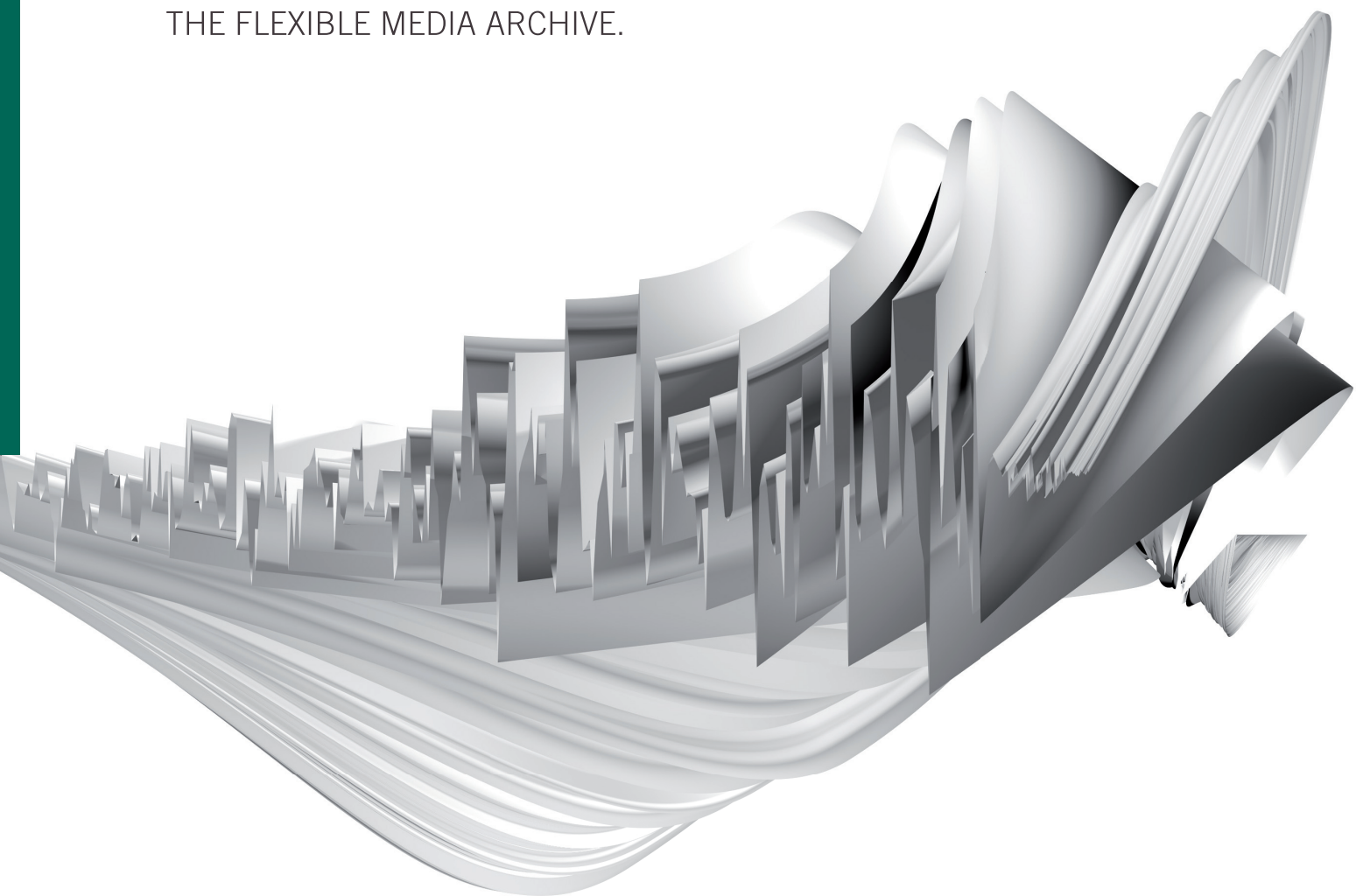


CREATING
ARCHIVE
INNOVATIONS

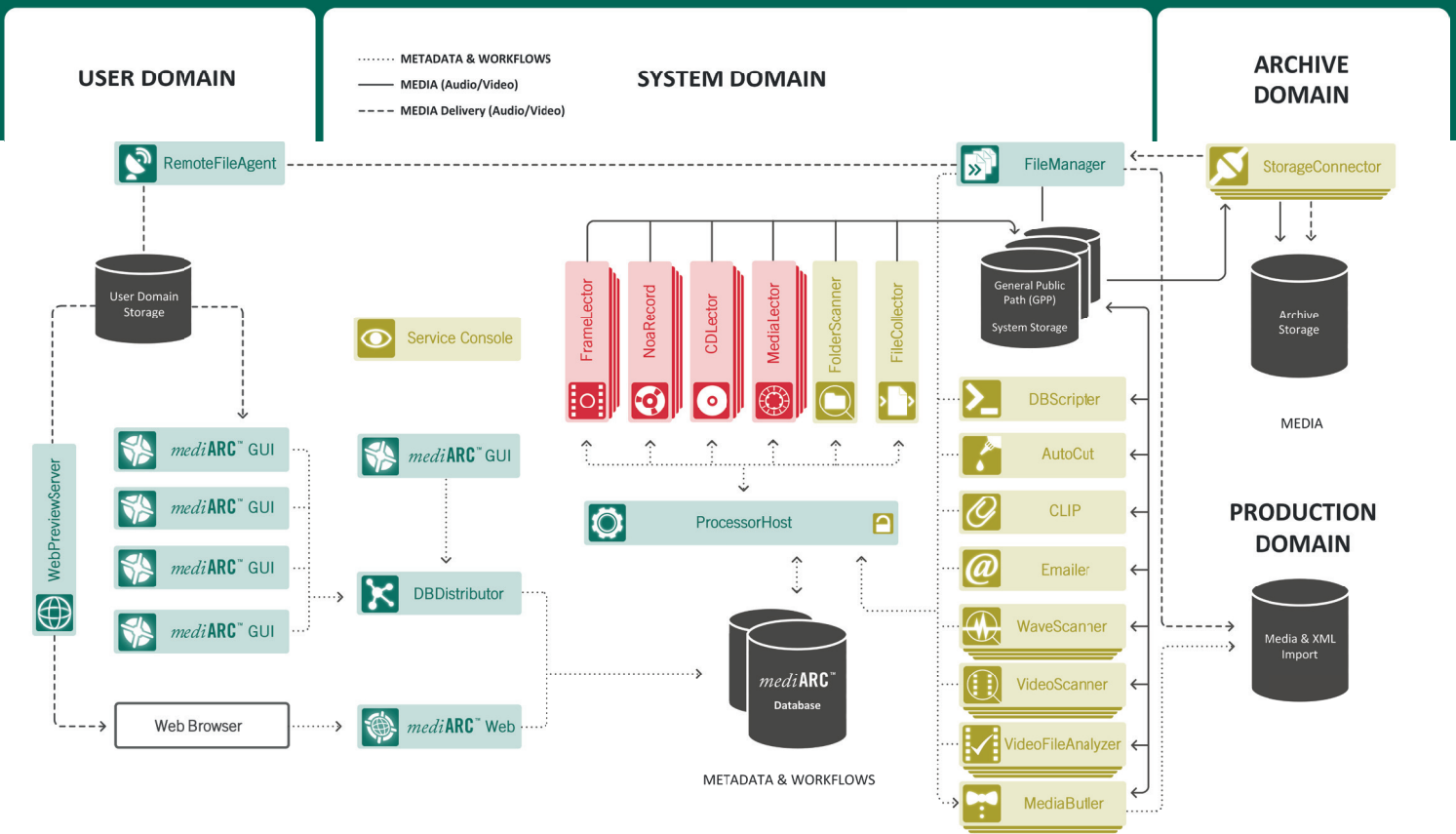


*medi*ARC™

METADATA – MEDIA – WORKFLOWS.
THE FLEXIBLE MEDIA ARCHIVE.



Broadcasters and archivists today face daunting challenges when it comes to ensuring that media content is preserved and accessible for the long term. Many broadcasters see their media archive as the heart and soul of their organization. Yet the sheer number of content sources and formats, and the fact that content is constantly changing and evolving, makes it difficult to manage, especially when it comes to digitizing, describing, linking, and storing that content in a way that makes it easy to find and access. Broadcasters and archivists need an asset management system that can ingest, describe, archive, and deliver content so that it fits archival requirements not just for the present, but also for decades into the future. Whereas production departments typically focus only on the next playout date, archival description of content has to serve history, cultural identity, and cultural heritage.



WHAT IS mediARC™ ?

Based on NOA's proven, easy-to-use, open technologies, the NOA mediARC system is a flexible framework for media archive management that makes the whole process easier and more efficient for broadcasters and archives of all sizes. mediARC's modular structure means you can scale the application perfectly to fit your own performance, security, and distributed usage requirements.

mediARC answers the need for structured and flexible content management that has to last for decades, and comes with a range of powerful tools that can digest petabytes of information. mediARC can handle the complex structures needed for proper description and efficient use of an archive's content, so you can link media data to metadata and storage on a granular level, and even apply

FRBR (Functional Requirements of Bibliographic Records). A powerful and exceptionally fast search engine, capable of combining structured and full-text search capabilities, allows easy access to information through a graphical user interface.

Developed in cooperation with dedicated broadcasters, the mediARC system is designed to meet requirements in three fundamental areas – metadata (description of the media content), media storage and conversion, and workflows (controlling, creating, and processing information).

mediARC AT A GLANCE

Developed with broadcasters and archivists by NOA

Flexible framework for media archive management based on NOA's proven, easy-to-use, open technologies

Scalable to fit collections of all sizes

Customizable to accommodate a broad spectrum of performance, security, and user requirements, including major broadcasters with hundreds (or more) of users, and millions of archive entries

Powerful search engine can perform structured and full-text searches with an average response time of less than 1 second

Addresses three fundamental areas – metadata, media, and workflows

Compatible with most third-party systems

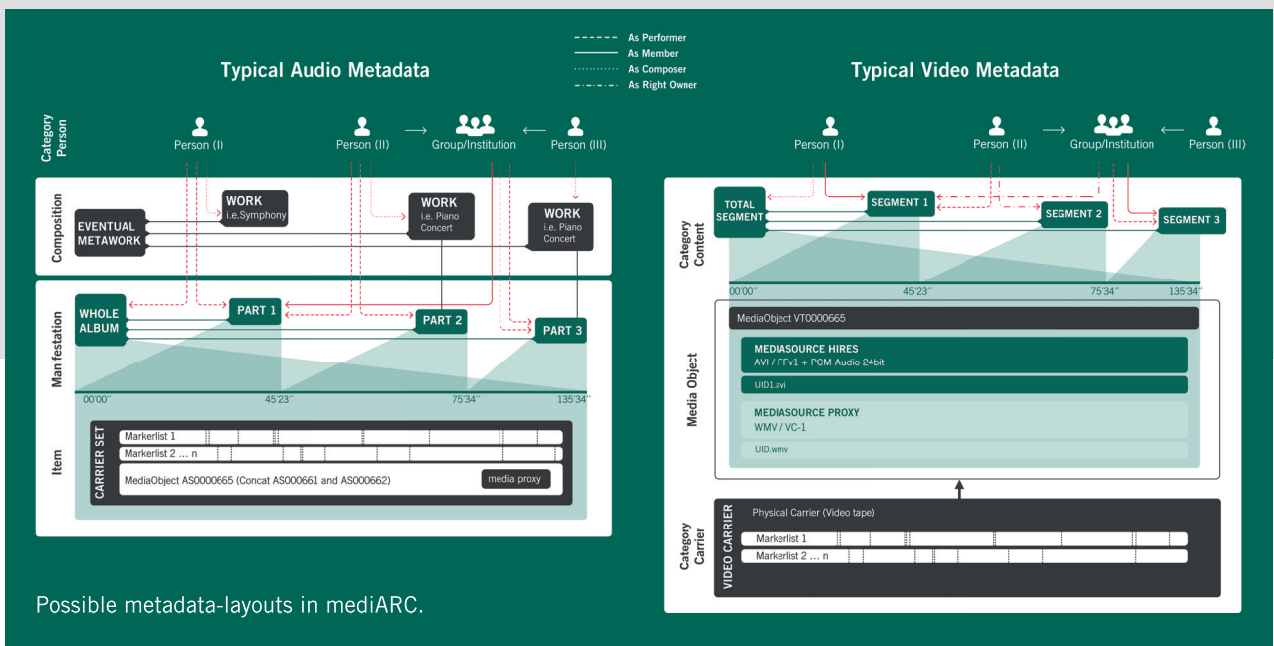
Based upon ORACLE technology

Many broadcasters see their media archive as the heart and soul of their organization.

“I WANT TO KNOW ABOUT SONGS EDITED IN ENGLAND WITH MARK KNOPFLER AS COMPOSER EXCEPT BETWEEN 1990 AND 1991.”

ORGANIZE YOUR METADATA WITH mediARC METADATA

Metadata is always changing because content is always changing. Tomorrow's structure of metadata description could differ significantly from today's. Some say a non-structured, full-text database is the answer, but a strict hierarchical relationship between entities is not sufficient to describe the content of an archive. mediARC METADATA overcomes that problem by allowing you to define an unlimited number of logical entities and link options between entries for these entities.



METADATA

BENEFITS

Incorporate new link types, roles, and functions while the system is running. Metadata remains consistent with its existing relationship

Built-in custom full-text search engine has an average response time under 1 second

Full-text index is updated permanently so that every piece of information is immediately searchable after posting

SQL-based, structured functionalities can be combined with the full-text search, enabling more complex searches and statistics

GUI client supports both browsing and editing of metadata records, paying equal attention to content and entity relationships

Support of different locales (e.g. Arabic, Bulgarian)

Batch editing of multiple items at once

Grouped search results allow quick navigation in different category tabs

Item form scripting allows to define custom rules for metadata editing

UNIQUE FEATURES

Phonetic Search

Semantic metadata navigation over item links

Support for Functional Requirements for Bibliographic Records (FRBR)

Controlled redundancy management over materialized links

Variety of edit types available (hierarchical choice lists, string lists, look-up controls to other categories, advanced date/time controls, XML panels, picture, and many others)

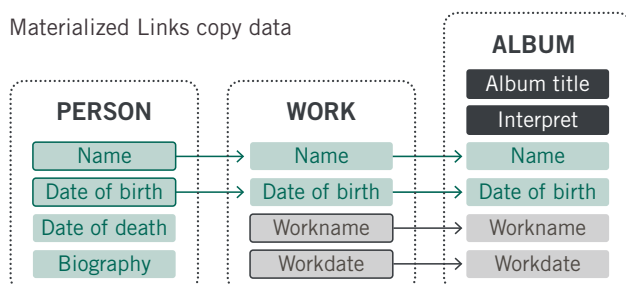
Regular expression support on field level

Unicode support

“We required a system with a comprehensive and flexible metadata structure for describing audio assets. The mediARC system, which incorporates highly functional tools like an easy-to-use feature for consolidating metadata entries, met our exacting standards. In my opinion, mediARC has become the tool of choice for enabling an enterprise to make the most of its archive.”

Robert Oravec,
Technical Director
of major public radio

Materialized Links copy data



HOW DO YOU SPELL TSCHAIKOWSKY?

Phonetic search and Alternative Names let you find the wrong spellings, and Materialized Links help to normalize automatically correct spellings across FRBR-like categories.

MANAGE YOUR MEDIA WITH mediARC MEDIA

mediARC MEDIA organizes audio, video, and other content in media object containers. A media object container (or “media object”) can keep different formats of the same program in different versions and resolutions, even if they have time offsets relative to each other. The system can handle any media format as long as a compatible player module is available.

With mediARC, you can link media objects to multiple metadata entries regardless of whether they are complete or in segments. That means you can create logical cross-correlations even with different qualifiers describing the role of the connection of the media to its context.



“Because of the mediARC system, we are at last able to surmount what had been the overwhelming challenge of preserving our valuable archive for future generations. mediARC makes both the process of migration and ongoing management of the collection easier, while at the same time greatly improving its transparency.”

Dan Barabas, Golden Fonoteca Project Manager for SRR
(Radio Romania)

MEDIA

BENEFITS

Configurable Metadata Extracts can be delivered in a tandem file together with the desired retranscoded partial essence

Maintain consistent archive descriptions by storing media file information transparently within the mediARC database system

Configure availability of preview and pre-listening files based on your security requirements

Process hundreds of gigabytes of files 24/7 within digitization workflows

Instant prelistening/previewing accessible from several logical and geographical locations (support for regional access)

Quick navigation through video files by automatically detected shot images, arranged in a tile view

Represent any piece of media in multiple formats, which also includes preview copies.

UNIQUE FEATURES

Multiple configurable marker list support per media object

Open media support (MIME extension triggered viewer/ player)

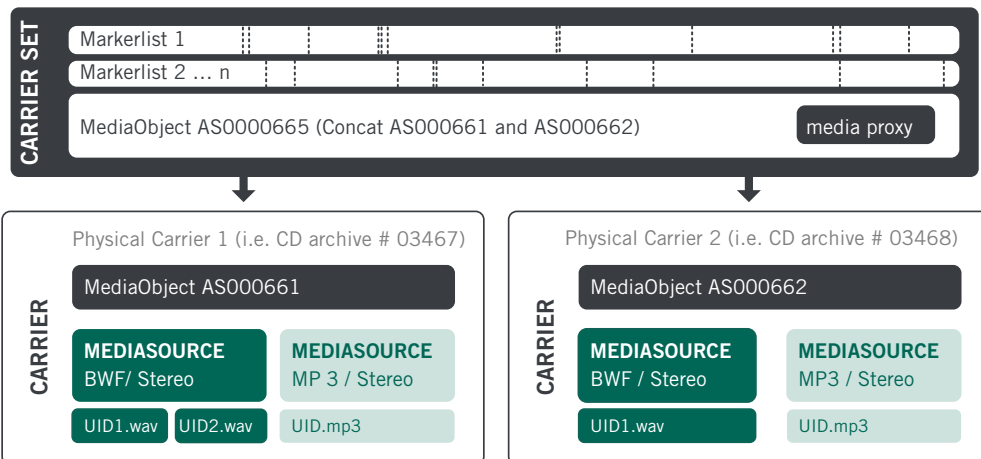
Dedicated isolation layers between archive, system, and userplane (OAIS concept)

Database-controlled storage management

Transparent essence management

Comfortable editing of media formats (audio and video)

Link media objects to multiple metadata entries regardless of whether they are complete or in segments.



Example of media management and layout.

CONTROL, CREATE, AND PROCESS INFORMATION WITH MEDIARC WORKFLOWS

mediARC WORKFLOWS is designed to link production procedures to specific media or metadata results. Examples include delivering assets from an archive, validating metadata edits, or an extended QC process.

mediARC WORKFLOWS allows the metadata and content to work with production systems transparently. mediARC's built-in workflow engine uses NOAComm – NOA's royalty-free, open interfaces – to handle large-scale automatic processes, which allows for efficient use of distributed processors in a setup. This infrastructure is used for all basic input/output tasks around the archive, including ingestion and exporting. You can also manually adjust any workflow, organize it into hierarchies and tasks, or create your own set of specialized workflows.

"The mediARC system's metadata and workflow capabilities have become assets we count on for the future at RTV Slovenija. We're working well within our deadlines and are happy with the decision to go with NOA. In addition, we have seen great success with mediARC at our regional stations in Koper and Maribor."

Martin Zvelc, Technical Manager at RTV Slovenija

Manually adjust any workflow, organize it into hierarchies and tasks, or create your own set of specialized workflows

WORKFLOWS

BENEFITS

One system incorporates workflows for all major archive management tasks – from ingest and production embedding, to advanced content mining and managed media delivery – for maximum ease and efficiency

Trigger a workflow manually, with an NOA processor, or a third-party processor

Use mediARC GUI as QC Validation Viewer to validate hundreds of video or audio files with RF Traces or TAS traces (see ingestLINE) to the archive

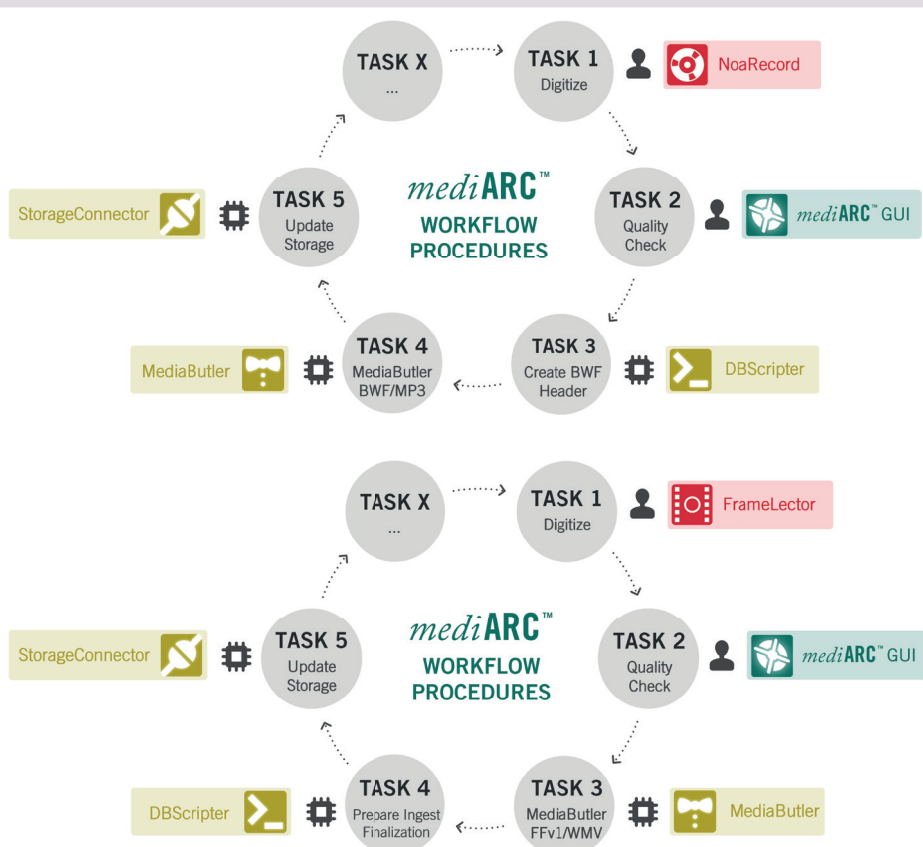
UNIQUE FEATURES

NOA Workflow Engine directly attaches hundreds of processors

Business process modeling tool to combine human interaction and automatic processes

Full NOA ingestLINE™ integration

Full NOA actLINE™ integration



THE MODULES THAT MAKE IT ALL HAPPEN

mediARC relies on these modules to handle all functions in the system in a seamless, transparent way. All of these components work together behind the scenes to ensure you get all of the mediARC benefits with none of the fuss. It just works!



DBDistributor

DBDistributor is the database proxy the mediARC GUI uses to communicate with the database. With it you can configure multiple database connections, each with an optional fail-over connection.



mediARC GUI

Designed with the skilled archivist and archive management tasks in mind, the mediARC GUI is a Windows® application that you use to access most of the mediARC functions. It's the starting point for creating and describing an archive object, modeling or managing a workflow, and researching assets within the mediARC database.

- Quality Control processes.
- Report printOuts
- System and workflow design
- Search favorite management and publishing
- Player integration with waveform display and marker display
- Shop and basket system for personal orders
- Beneficiary concept for orders (FTP, Users, Systems, Clients, RemoteFile-Agents)



mediARC WEB

mediARC WEB is a limited intranet Web version of the mediARC client. Any authorized user can log on to this online catalog to search metadata, prelisten/preview media assets, and order items in the archive. The archive manager can restrict access to specific metadata categories for different groups of users.



WebPreviewServer

WebPreviewServer acts as a streaming server for preview requests from mediARC Web. WebPreviewServer uses the preview cache of the mediARC system for reading in media files, and it restricts access to media data by limiting the playable file range and the time the file URL is available.



ProcessorHost

The ProcessorHost is the database proxy for processors, the software modules that handle specific tasks within a workflow, such as the actLINE and ingestLINE processors. It is also responsible for rights management for different processes, and Garbage Collection (GC) of temporary workflow files within the General Public Path (GPP).



FileManager

The FileManager is the link between the user domain, the system domain, and the archive domain. FileManager moves files among the different domains using dedicated policies such as file-system-based copies, RemoteFileAgent, and StorageConnector. FileManager selects the appropriate access method depending on the request it receives (fulfilling typical OAIS needs).



StorageConnector

StorageConnector acts as scalable conduit between the system domain and the archive. It works with the FileManager to shuttle files between the two domains. It can run its own transactions on asynchronous protocols, which makes it perfectly suited to talk to HSM or Storage Content Management Systems (SCMS).

Storage Connector can register up to n-paths with a specific size limit and comes with a multi-instantiated program structure with MD5 checksum mechanisms. Plug-ins allow partial file restore over third-party systems, and because it scales in both size and throughput as it connects to the mediARC workflow engine, it can be installed in a grid-based environment.



RemoteFileAgent

RemoteFileAgent works with the File-Manager to transfer encrypted files to the user's domain. Each user access domain gets its own RemoteFileAgent. A user access domain can be a local network on the premises where the mediARC system operates, or a distant network, such as a regional station.



Emailer

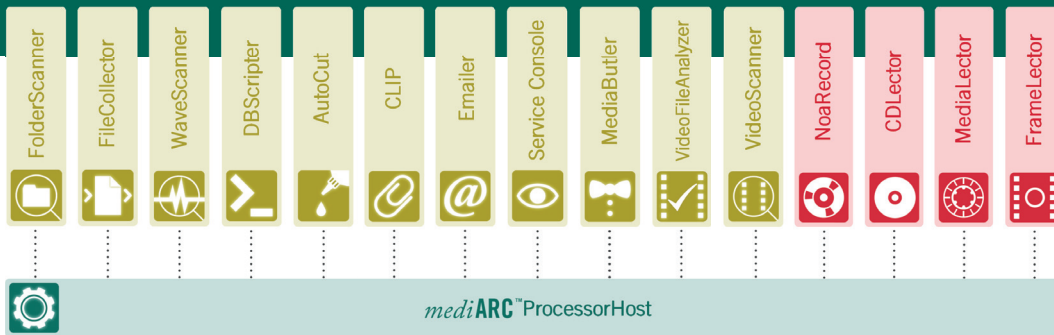
The NOA Emailer is a processor application built into a workflow that notifies you of specific workflow conditions. When the condition arises, it triggers an email. For example, you would receive an email when a certain workflow completes or fails.

marcAPI

The mediARCAPI is a PL/SQL package that gives an API access to the mediARC system. The mediARCAPI is designed for access via Oracle database connections, or by HTTP via an Apache Web server over a PHP-based API wrapper (restapi.php). Typically you would use the API to access low-level, detailed information about items within mediARC, or to trigger a workflow.

“The archives have over a number of years been in the focus for an ongoing change regarding processes and services – all related to the digitization of sound and video-archives and their integration within Public Service production systems. In this process SRF has chosen to work closely together with NOA. NOA has not only provided a technical platform for different kinds of workflows, but also valuable know-how.”

Björn Blomberg, SRF Sweden



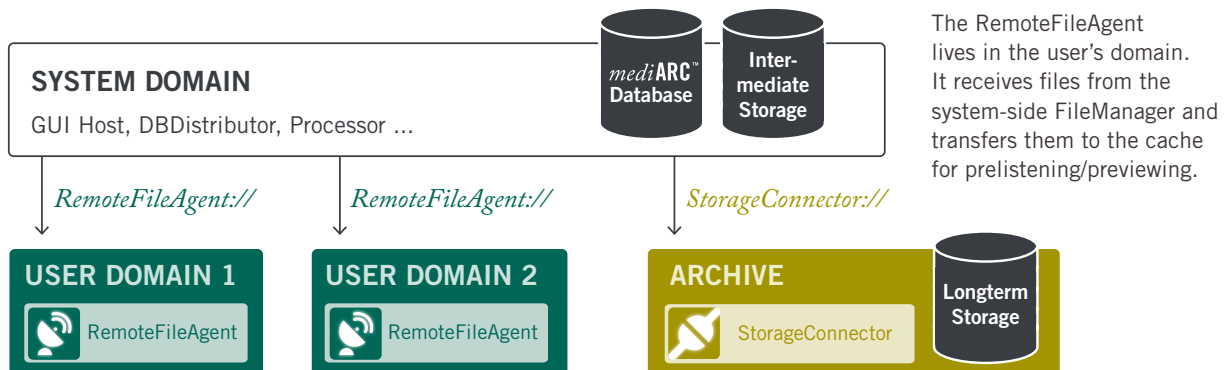
actLINE™

mediARC relies on proven technology from actLINE software modules for content reshaping. actLINE integrates seamlessly with the mediARC system via the ProcessorHost.

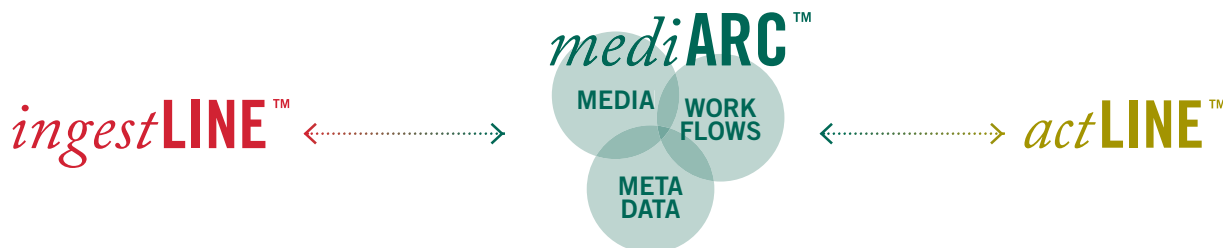


ingestLINE™

ingestLINE integrates seamlessly with the mediARC system via the ProcessorHost.



The RemoteFileAgent lives in the user's domain. It receives files from the system-side FileManager and transfers them to the cache for prelistening/previewing.



FAST FACTS ABOUT mediARC WORKFLOWS

What they do

mediARC workflows are designed to link business procedures to specific media or metadata results. Examples include delivering assets out of an archive, validating metadata editing, an extended QC process, or an interacted/approved delivery of a playlist towards a client.

Input

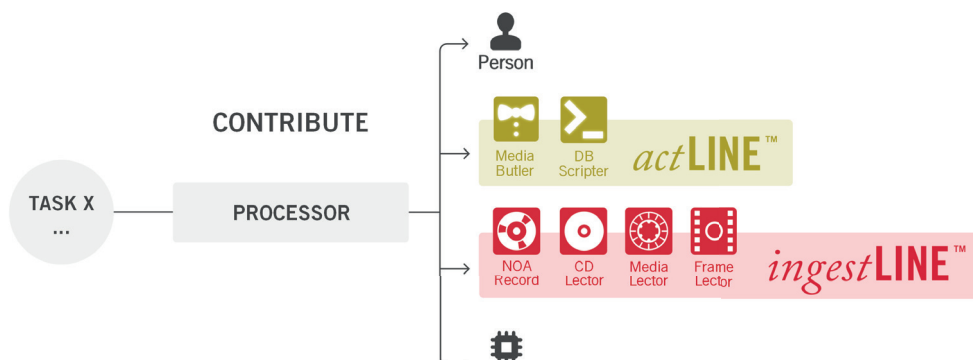
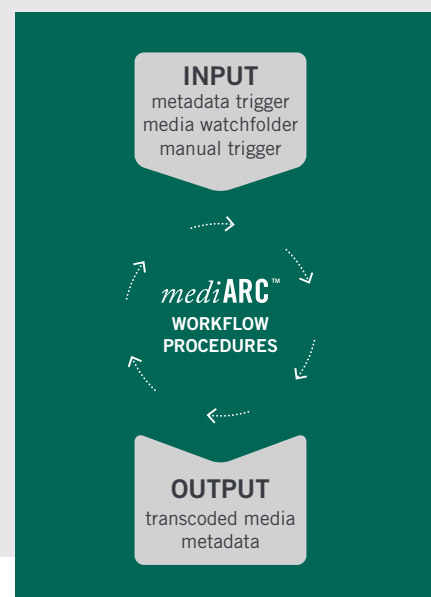
A workflow usually gets its input from a set of metadata that comes from either the archive category (e.g. "digitize this physical archive carrier") or from a predefined workflow template. The in/out elements can be driven from a user interaction (do this), an XML definition, or a metadata condition.

How they work

mediARC workflows work within Oracle transactions of the mediARC workflow engine. All tasks in a workflow can be processed by NOA processors or third-party processors, which can then connect to the workflow engine over NOAComm, NOA's open, royalty-free interface.

Results of a workflow

A mediARC workflow usually results in the output of media FTP site, a notification about the availability of certain content, or a simple metadata update.



Contributing to a workflow

A person or a machine can contribute to a workflow. Workflows can happen automatically when the system gets a command to execute a specific task within certain parameters. Or you can control a workflow manually with the "My Tasks" form in the mediARC GUI.

Managing workflow templates

It's easy to customize existing workflow templates (or create your own) using the mediARC Workflow Template engine. A complete workflow template manager lets you easily drag and drop tasks, and assemble decisions, loops, and threads.



CREATING
ARCHIVE
INNOVATIONS