

Review of the Archival Systems of the National Museum of Modern and Contemporary Art, Korea

The Data Management System of the MMCA

The National Museum of Modern and Contemporary Art, Korea (MMCA) of Korea currently operates four systems to manage their collection: the collection management system (UMSS), Korean Library Automation System (KOLAS), Archive Management System (AMS), and Institutional Archive Management System (IAMS). Users who visit the MMCA website can search the information created by these systems. This article reviews the MMCA's art archive and online system by mainly focusing on AMS. Let us first look at the characteristics of and relationship between the four systems built by the MMCA.

First built in the 1990s, the UMSS was renewed several times. The current version was built in 2022. The Collection Team uses the UMSS to manage comprehensive information of MMCA's collection, including the history of the acquisition of the artwork, its price, copyright, exhibition, history of management, explanation, and statistics. The artwork's price, personal information of the owner of the copyright, or information that requires special consideration in terms of management can only be seen by a few administrators within the Collection Management Team. The registrar handles the exhibition history such as loaning and transporting artwork, and the researchers write the Korean and English explanations of the artwork.

Only employees of the museum who can login through the internal network, or employee users, can directly access this information on the collections. General users can look up information on the collection provided by MMCA's website. The system is designed to link information between the UMS and website: after the administrator creates information in the UMS, the website is updated accordingly within 24 hours. The information open to the public in this way are the artist's name, title of artwork, production year, material, size, area, management number, exhibition status, and explanation, together with high-resolution images of the artwork. Users can use the basic

search or advanced search option to access information of the collection. The advanced search option allows the user to search by keyword, artist, production year, year of acquisition, material, exhibition location, and area. In addition, for a more intuitive user experience (UX), which is a crucial when building websites today, clicking on the buttons on the screen that indicate the genre of the collection such as paintings, drawings, prints, and photographs takes users to the artwork in that specific genre. Alternatively, if the user does not use search or choose a genre but continues to click on the images of the artwork displayed on the first page, they can browse the entire MMCA collection.

The KOLAS that is currently being used was not developed by the MMCA. The MMCA uses the KOLAS built by and distributed to all public and private libraries across Korea by the National Library of Korea. If the librarians create bibliographical information through KOLAS, users can look up this information on the MMCA's website. Users can use the basic search or advanced search option, the latter of which allows the user to search by title, keyword, author, publisher, and publication year. The bibliographical information that can be searched is the title, edition, publication status, format, series, periodical, standard number, and categorization number. Since the MMCA library claims to specialize in art, it mainly collects art books. The material is categorized by the Korean Decimal Classification (KDC). The library has many Korean books and consistently makes sure the bibliographical information, but the library material is not linked to the exhibitions, collection, or research material of the MMCA. In addition, while the books published by the institution can be downloaded as PDF files from the website, they are not linked to the KOLAS or the book search menu, which are issues that remain to be resolved.

There are two archive management systems: the AMS, which was designed in 2014, and the IAMS, which was designed in 2022. The AMS is a system that generally manages and oversees the metadata of the MMCA's archives and is linked to the Archive search menu on the website. IAMS is an internal system that submits the institutional archive created by employee users online and allows them to view records of the MMCA that is not open to public on the website. IAMS differs from AMS in that it is an internal system that supports work such as the exhibition, collection, and education within the MMCA.

These four systems are run by a single department, the Collection Material Management Division, within the MMCA. The Collection Material

Management Division is largely made up by the Collection Management Team, the Library Management Team, and the Archive Management Team, each of which independently run their management system. At a glance, combining and managing the collection, library, and archive together would seem to be more efficient, but there are practical issues that make this difficult such as when each system was built, the fact that they have been operated separately for a long time, and the obstacles in designing a system that can combine and manage material with different properties and metadata values.

In sum, the MMCA has four systems built to manage the collection, library, and archive. The teams in charge of each system independently create metadata and manage user information. Information is differentially open depending on whether the user is an employee user or a general user, who can either directly access the systems or access open information through the MMCA website, respectively.

The Relationship between the MMCA Collection and Online Service

To understand the MMCA's archive management systems, AMS and IAMS, it is necessary to first look at the MMCA's archive categorization system. Unlike books, the archive is made up of diverse kinds of items and metadata categories. In particular, because the art archive includes many visual and auditory material, the archive system and information service are designed differently depending on the properties of the physical material owned by the institution.

The archive of MMCA can be largely divided into the institutional archive and special collection. The institutional archive refers to museum material produced as each department of the museum carries out their respective work, such as exhibitions, education, and research. The special collection refers to material produced outside of the museum by entities such as major artists, theorists, or art organizations. The material is managed and serviced by the three locations of the MMCA at Gwacheon, Seoul, and Cheongju.

The archive center at the MMCA Gwacheon first opened in 2013 and is the key archive that stores most of the originals of the archive acquired by the MMCA. The Gwacheon location oversees the MMCA's museum archive, which is divided into the seven collections of exhibitions, education, research

and academics, architecture, residency, cultural events, and other. There are currently over 130 thousand items in the museum archive from 1969 up to the present. The collection archive is divided into the figure collections, thematic collections, small-scale material, and material owned by the artist. As of July 2023, the Gwacheon location manages over 244 thousand items, which consist of over 172 thousand items in the figure collections, over 47 items in the thematic collections, over 790 items in small-scale material, and over 25 thousand items in material owned by the artist. The archive center at the MMCA Seoul manages over 88 thousand items that consist of over 65 thousand items in the thematic collections, over 10 thousand items in the artist material, and 760 items in special material. The MMCA Cheongju archive is small and manages the library and archive together, with over 9 thousand items including books, periodicals, and local artist archives.

Distinguishing the institutional archive and the special collection has an important influence on the archive service, since copyright is an important issue in servicing art archives. The MMCA owns the copyright of the museum archive, which is a kind of archive of the institution, and the information service both online and offline are relatively free of limitations. On the other hand, if the copyright is owned by the creator of the work such as the artist, art organization, or theorist, the museum has to consider many factors when servicing the information online or offline even if it is the one physically collecting and permanently storing the material. This particularly affects the online archive service. As mentioned above, the archive system the user can access differs depending on whether the user is an employee or a member of the general public. The archive system for general users needs to be designed while considering many factors at the same time, such as copyright, the right to duplicate and transfer, fair use, and illegal piracy.

For instance, in the case of the institutional archive, of which the MMCA owns the copyright, general users can download all printed material such as posters or brochures of past exhibitions on their personal computers as PDF files from the website. In the case of the special collection, however, of which the copyright is owned externally, the webpage only allows the search of mainly textual information. The MMCA began to manage the special collection since 2012. This was when the understanding of copyright was clear, and the museum received agreements from the owner of the copyright concerning the use of the copyrighted material when acquiring the material. Unlike the archive system

used by visitors who physically come to the MMCA, the online archive system that general users can access freely from anywhere, anytime needs to consider factors such as the right to duplicate and transfer, the right of ownership, the right of ownership that can emerge by the viewer using the material, and the violation of personal rights. This means it can only service partial information.

This is the same for the collection. The MMCA website provides high-resolution images of their collection, which requires obtaining the right to use the copyrighted material from the owner of the copyright or the family members or gallery entrusted with the copyright. Although the MMCA can disclose the list or show the thumbnails of the artwork in their collection for nonprofit purposes without becoming involved in legal problems, making high-resolution images of the artwork open to the public on a website anyone around the world can access requires legal permission. In this case, the items that were added to the collection after the copyright law was adopted in Korea and the concept of copyright was established do not pose a problem. Forms were signed to obtain permission to use copyrighted material during the process of acquiring the artwork, and high-resolution images of these pieces are posted on the website. However, the MMCA, which opened in 1969, began collecting artwork since 1971 and currently owns over 10 thousand items. Many of the artworks collected during the early stages after the museum opened were acquired without obtaining permission to use the copyrighted material, nor is the quality of the photographs taken of these images good enough to service high-resolution images on the website. To make the information of these artworks available on the website, permission to disclose information must be obtained from the owners of the copyright for each item, not to mention retake photographs of the artworks.

As for books, the MMCA cannot make the contents of books of which they do not own the copyright available on their website. In this case, the website provides brief bibliographical information. The only books the MMCA allows general users to view the contents on the website are material they own the copyright of, such as monographs, sourcebooks, or chronologies published by the MMCA. In short, to understand the online information systems of the MMCA's collection, books, and archive, there needs to be a distinction made between the system that can be used upon visiting the museum in person and the system that can be accessed through the website.

The MMCA Archive User System

Archive User System for General Users of Website

Among the MMCA's collection, books, and archive, this section will look at the user system of the archive. First, let us look at the archive user system of the MMCA website. Placing the cursor on the Research menu of the website opens the submenu Library and Archive. Clicking on Library and Archive leads to information on using the archive centers of the MMCA Gwacheon, Seoul, and Cheongju and opens the submenu Search Archive. By clicking on Search Archive, the user can access the MMCA's collection archive and museum archive.

The institutional archive contains material called by combining the name of the artist, theorist, or theme to the term collection. Currently, 18 collections are open to the public. This material are the items the archivist activates on the AMS to link with the website. Activating this function links the material in the AMS with the archive menu of the MMCA website after 24 hours. Clicking on a collection in the archive leads to a webpage containing the information of the collection and the structure of the archive. The MMCA's archive divides the described material into six levels following the guidelines of the manual: collection, series, subseries, project, item, and component. At the level of collection, the material is described by 19 areas; at the level of series, 20 areas, and at item, 26 areas (see Table 1).

Following these guidelines, clicking on a collection on the webpage provides information on the production year, overview, creator, history of possession, category and content, keywords, and language. The tree diagram on the left shows information on the series. Since a single art collection is usually made up of hundreds to even tens of thousands of pages of material, the archivist creates levels such as series or item to make it easier to access the large mass of material in the collection. The AMS characteristically provides a tree diagram on the website to make the structure of the levels easier to grasp. If the user chooses the collection and series they want to access, the production year, type, creator, category and content, keywords, language, and history of possession are available as information of the series. If there is a subseries, the production year, creator, and category and content are shown. If the user chooses the series, the production year, type, creator, whether they can view the original, category and content, language, and acquisition are available as

information of the item.

Let us take a look at how the information is organized on the website. The archive menu on the website shows the representative image and brief explanation of each collection in the special collection and institutional archive. The explanation provided in this screen corresponds to the contents of overview in the archive information and describes the composition of the material and information of the donor. Clicking on the representative image of the collection takes the user to information of the collection including production year, size, and category and content. The following is the collection of the promising Korean experimental artist Kang Kukjin as an example.

Information of the Kang Kukjin Collection

- **Production year:** 1939–2014
- **Size:** 120 boxes
- **Overview:** Material created or collected by the modern artist Kang Kukjin (1939–1992), which consists of photographs of performances and artwork (prints, paintings, etc.), slides, printed material of exhibition, and drawings (donated by Hwang Yangja).
- **Creator:** Kang Kukjin
- **History of Possession:** Material created or collected by Kang Kukjin and his wife, Hwang Yangja. After the Kang Kukjin's death, the material was in the personal possession of Hwang Yangja, who donated them to the MMCA.
- **Category and Content:** The Kang Kukjin Collection is a comprehensive record of the work and life of Kang Kukjin (1939–1992) as an artist and educator. The collection consists of 5 series. Series I is made up of photographs recording the work he did from 1964 to 1992 such as Nonkkol (1964–1966), Happening (1967–1969), 3 Dimensional (1972–1974), and Paintings and Prints (1972–1992). Series II is made up of printed material of solo exhibitions and group exhibitions that Kang Kukjin participated in as well as printed material Kang Kukjin owned. Series III is material produced or received by Kang Kukjin as he participated in exhibitions during his work as an artist. They include guestbooks, various official documents, and critiques of the exhibitions. Series IV is publications created or collected by Kang Kukjin and includes newspaper or magazine clippings, books, and bulletins collected by Kang Kukjin. Series V is records made by Kang Kukjin besides his work as an artist. They mainly consist of personal records such as letters he

exchanged with his acquaintances, records he produced as a student from his schooldays at Dongpyeong Elementary School to the Graduate School of Education, Konkuk University, records he produced or collected as a professor at Hansung University, and records he produced or collected while traveling around and outside of Korea.

- **Keywords:** Happening, 3 Dimensional, Installation, Nonkkol, Korean Young Artist Exhibition, Sinjeondongin, Print, Line, Rhythm, Light of History

- **Language:** Japanese, Chinese, German, Korean, English

From reading this information, the user can learn about the size of the 120-box collection, the donor, and the history of possession, among others. The donor and history of possession are important information that makes it possible to confirm the authenticity of the archive collection and the legal rights. The category and content outline how the material has been categorized. The user can find out which series the information they are seeking are part of or discover that material they did not know of are categorized under a similar theme. The keywords not only express the characteristics representing the Kang Kukjin Collection but also let the user learn about linked information in the MMCA such as exhibitions, collections, books, or seminars that can help the user understand the Kang Kukjin Collection. For instance, if the user looks up the first keyword, Happening, on the website, the results include the works of Paik Nam June and Joseph Beuys in the MMCA collection. This allows the user to further deepen and expand their understanding of the theme. The tree diagram showing the levels on the left of the webpage show the series level and the subseries level of the Kang Kukjin Collection. The user can intuitively grasp how the collection is intellectually controlled. Clicking on Publications, the first series of the Kang Kukjin Collection shown in the diagram, leads to the information below.

Information of the Kang Kukjin Collection Series

- **Production year:** 1968–2011

- **Size:** 20 boxes

- **Creator:** Sisa Tonginsinsa, JoongAng ilbo, Chosun ilbo, DongA ilbo, etc.

- **Category and Content:** This series consists of the publications such as newspapers, magazines, and books that Kang Kukjin and his bereaved family collected. It comprises 4 subseries depending on the type of the

material. Subseries “a” is made up by newspaper clippings collected by Kang Kukjin, newspaper articles on Kang Kukjin, and newspaper articles collected by his bereaved family after his death. It comprises 3 projects depending on the person who collected the material. Projects 001 and 002 are individual newspaper clippings made by Kang Kukjin, and 003 are newspaper clippings on the solo exhibition held in 1995 collected by the bereaved family. Subseries “b” is made up by magazines featuring Kang Kukjin that were clipped by Kang Kukjin himself or his bereaved family from 1967 to 2007. Subseries “c” is made up by art books Kang Kukjin owned between 1952 and 1985 and books on performance art in the 2000s featuring Kang Kukjin’s work. Subseries “d” is made up by bulletins and academic journals owned by Kang Kukjin. All the material is organized chronologically by production year.

If the user clicks on the subseries level shown on the same screen, they can see information on the subseries and the items included in the series. The reference code, title, production year, creator, and whether they can view the original are shown for the item in the series or subseries. Clicking on the item in the table takes the user to the information of the item.

Information of the Kang Kukjin Collection Item

- **Production year:** 1967

- **Creator:** DongA ilbo

- **View Original:** Possible (Original at the MMCA Gwacheon)

- **Category and Content:** Consists of newspaper article “Philosophy of Structuralism, the New Flow of Thought after Sartre” published in DongA ilbo on July 11, 1967

- **Keywords:** Kang Kukjin

- **Language:** Korean

- **Acquisition:** Donated by Hwang Yangja

The way the menu is designed following the archive’s level of description and the described elements makes it possible for users without any knowledge on the archive collection to understand the archive’s structure step by step and grasp how the vast collection is organized. At the same time, however, the archive system, which is formed only by textual lists, only performs the role as a simple navigation for experts who actually visit the archive center in person, rather than display detailed information and encourage utilization of

the material. The largest issue is the copyright, of course, but there are other important issues to resolve in the future including the way visual and auditory art material introduced only by text, the lack of any images, and how the information is only available in Korean.

Table 1. Areas and Elements of Description of the MMCA's Collection Archive

Area	Collection	Series	Item
Identity Area	Level of Description	Level of Description	Level of Description
	Reference Code	Reference Code	Reference Code
	Title	Title	Title
	Production Year	Production Year	Production Year
		Type	Type
	Size	Size	Number
	Location	Location	Location
			Representative Image
Background Area	Creator	Creator	Creator
			Acquisition Information
	Creation of Material, History of Possession	Creation of Material, History of Possession	History of Possession
Content and Structure Area	Category and Content	Category and Content	Category and Content
	Keywords	Keywords	Keywords
Conditions of Access and Use Area		Access Environment	Access Environment
	Use Environment	Use Environment	Use Environment
	Language	Language	Language
			Properties of Medium
			Digitalization
			View original
			Location of Original/ Duplicate if Existing
Related Materials Area	Related Art Material	Related Art Material	Related Art Material
Note Area	Notes	Notes	Notes
Description Control Area	Person in Charge of Description	Person in Charge of Description	Person in Charge of Description
	Rules and Agreements	Rules and Agreements	Rules and Agreements
	Date of Description	Date of Description	Date of Description
	Reasons and Basis for Correction	Reasons and Basis for Correction	Reasons and Basis for Correction

Archive User System for Visitors of Archive Center

The MMCA created the form to obtain permission to use copyrighted material when collecting the material, received the copyright owner's consent, and acquired the right to use the collected archive for nonprofit purposes for the first time in 2012. This right consisted mainly of making the copyrighted material open to the public during museum programs such as exhibitions, publications, and seminars as well as to visitors of the archive center. In other words, the information that can be accessed when visiting the archive centers of the MMCA Gwacheon, Seoul, or Cheongju in person is much broader than that of the online archive user system.

Visitors of the archive centers can view all open information of the archive through the archive search system, including images and videos. The search system can be accessed via the search PCs arranged in the room created for this purpose. The homepage explains how to use the material in the collection and their location and displays the Art Research Center shortcut. Unlike the online archive search function on the website, which requires the user to go through five to six levels, the visitor can access the material in just two levels. Clicking on the Art Research Center shortcut takes the visitor to the material search menu linked with AMS. This menu shows a list of 38 collections. Clicking on each collection displays the information of the archive according to the classification system. Unlike the website, the visitor can view the use environment, notes, the description guidelines that were referenced, and attached files.

In addition, the archive center at MMCA Seoul developed and runs a Single Channel Video Viewer System, which allows the visitors to view videos in the MMCA's collection that are hard to see unless they are being exhibited. This viewer system provides the information and explanation of the video artwork in both Korean and English, and the artworks can be searched by name of artist or production period. This search and classification system contributes to making the search function intuitive for the visitors and encourages visitors to stay in the system longer. The Single Channel Video Viewer System currently stores over 100 video artworks, and monthly views at the archive centers of MMCA Gwacheon, Seoul, and Cheongju reach over 1,000 on average in total. The material is updated every year following acquisition of new artwork for the collection.

Finally, the archive center at MMCA Seoul built and runs the Lee Jungseob and Park Sookeun Catalogue Raisonné Viewer System. In 2019, the archive center at MMCA Seoul created a separate viewer system for the digital works of Lee Jungseob and Park Sookeun that were donated by the Korea Arts Management Service. This viewer allows visitors to view the images and textual material such as explanations, newspaper clippings, and magazine articles of all works of both artists. Upon entering the system, the visitor can first choose between Lee Jungseob and Park Sookeun, and the following screen lets the visitor view images of works by genre or period.

For instance, if the visitor chose Lee Jungseob, the genre of his work shows the categories of painting-drawing, 3-dimensional, postcard paintings, silver foil drawings, and published art. The visitor can choose any category and view images of the artwork in the category. Clicking on the images takes the visitor to a page showing detailed information including history of title, history of year, history of possession, history of exhibition, references, citation, reference images, and researcher notes. Using this system shows that Lee Jungseob's work *Bull*, which is known as his most representative work, first appeared in which publication for the first time under what title, which exhibitions, and what the sources of all this information are. The arrangement of the material and structure of the system indicates that the collection and archive system was meant for use by experts including researchers specializing in the field.

Archive User System for Employee Users

The MMCA built the IAMS for employee users in 2021 and, having created metadata over the past two years, is expecting to open the system during the latter half of 2023. One of the biggest reasons the MMCA is building a system for employee users is to ensure that the museum actively supports the work of the employees carrying out the key function of the museum, namely, exhibitions, education, collection, and research.

The key function of the IAMS is data collection and search. Needless to say, all recent records are born-digital archives. In other words, all records such as texts, images, videos are created, saved, and circulated in digital format. Designed with this digital environment in mind, the IAMS allows all employees to use the internal network from their work PCs, connect to the system, and

freely transfer and use the data. Since the MMCA runs residency programs at MMCA Gwacheon, Seoul, Deoksugung, Changdong, and Goyang, it is extremely important for employees that are physically at a distance to be able to easily submit produced data as well as access the special collection without visiting the archive centers in person. In particular, the IAMS was designed so that employee users are not limited by issues of copyright in the access or user environment and can view high-resolution images and videos in addition to the textual information. Additionally, unlike the AMS, which is administrator-oriented, the IAMS considers the employee user and provides statistical information of the data by source, form, theme, and period of the archive, making it possible to understand the overall outline of the archives owned by the MMCA.

Future Tasks

The Korean art world has increasingly become aware of the importance of archives during the past ten years and has actively held exhibitions or released publications that make use of archives. In addition to national and public art institutions across the country that have recently built archives, there are many archival institutions set to open in the next two to three years. This leads to the question, however, of whether the user systems of these archives are being developed sufficiently to keep up with the physical space allocated to archives and the vitalization of programs using archives. Korea still has a short history of having museums manage art archives, and in the early years, the focus tends to fall on the collection and creation of the physical material of the archive. In addition, building an archive system requires a large budget as well as an expert who understands both the languages of the artwork and the system. Such realistic issues make it difficult for museums other than a few national and public art museums to create a system.

Despite such practical issues, stimulating the use of the collections owned by museums, adopting archive systems, and improving their quality are urgent tasks. The MMCA, as the only national art museum in Korea, runs a program to distribute the AMS to other national and public art museums and support archivists in order to assist the archive system of small-scale museums. Since the AMS was designed to be optimal for a large collection and an environment

where programmers are permanently stationed to manage the servers, it may not work as efficiently in smaller museums as it does in the MMCA. However, considering how many places do not have a program to manage their material or how they choose the realistic option of managing their material with the KOLAS program, which cannot contain contextual information, this program to distribute AMS expects to be helpful at the very least.

The task that must be resolved first and foremost to improve the archive system is the issue surrounding copyright. Intellectual property rights guarantee the copyright owner's property rights and personal rights until 70 years after their death. This means that only the textual lists of art archives, which are mainly visual or auditory material, can be opened to the public on the archive system. This makes it difficult to reach the general users, who are used to an online environment where a vast amount of information can easily be searched and called up. Given how the MMCA is a public educational institution that collects and services their archive for nonprofit purposes, efforts should be made to find a balance between protecting the rights of the copyright owners and the rights of the users, to actively service the material, and to reflect this function in the system.

There have recently been movements arguing to explore ways to link the information owned by culture and arts institutions within Korea. Europeana serves as a good example of a well-built art archive information portal that transcends national borders. Many are raising the need to link information of the historical collection of the National Museum of Korea, the modern and contemporary art collection and archives owned by the MMCA, and the craft, design, and architecture of public art institutions. Of course, before immediately building a linking system, efforts to confirm the authenticity of each institution's information, understand the structure of the functions of each institution's system, and improve consistency and unity should be made beforehand.

Finally, the lack of translated information in the archive systems built by culture and arts institutions in Korea is a problem that should be resolved immediately. The largest characteristic of archives is that they guarantee originality and authenticity. Making objective material of Korean arts and culture into digital resource accessible from anywhere around the world through an online system is essential for vitalizing research on Korean art. The MMCA recently built an English website that lets researchers overseas understand the

flow of Korean art history at a glance by using the collection and archive of the museum. Although this is not the same as providing an English translation of entire the art archive owned by the MMCA but instead selecting certain material and translating them into English, such a website holds the potential to lead to heightened interest in Korean art and archives.

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