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APPLICATION OF INTERACTIVE TECHNOLOGY IN THE INTERIOR OF THE JAKARTA AQUARIUM

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ABSTRACT

Indonesia is the largest archipelagic country in the world and has a wealth of marine biota; the results of this marine biota are often used by the community as a resource. However, there are still many people who do it the wrong way, one of which is by carrying out illegal activities that should not be carried out, one of which is by catching fish using explosives, which can damage the marine ecosystem. This might happen because of the lack of public education about the richness of marine life. Therefore, a public aquarium was established, which aims to be a means of recreation and education for the community. However, seeing that the atmosphere of the Jakarta Aquarium does not support education, a redesign was carried out by paying attention to interior elements, circulation, aesthetics, and room acoustics. An interesting way to educate the public about recreational areas is to apply interactive technology to make it more interesting and not boring for visitors. This design uses the design method pioneered by Rosemary Kilmer and W. Otie Kilmer, which consists of 8 processes: commit, state, collect, analyze, ideate, choose, implement, and evaluate. It is hoped that the application of interactive technology to the interior of the Jakarta Aquarium can create an atmosphere and visuals that can provide a memorable experience for visitors so that the main goal of educating the public about the importance of preserving marine life can be properly conveyed.

Keywords: *Marine biota, interactive, education, interior*

1. PREFACE

Based on a quote from the Directorate General of Marine Spatial Management, Indonesia is the biggest archipelago country in the world. From Sabang to Merauke, Indonesia has 17,499 islands with a total area of around 7.81 million km2. Of the total area of the area, 3.25 million km2 is ocean, and 2.55 million km2 is the Exclusive Economic Zone. Only about 2.01 million km2 is land. (DIREKTORAT JENDERAL PENGELOLAAN RUANG LAUT, 2020)

With the extent of the existing sea area, Indonesia has enormous marine and fishery potential. Indonesia's wealth in marine biota provides an attraction for people to take advantage of the sea or waters as a resource, but unfortunately, it is often abused by the locals. It seems that people don't care and even exploit the waters excessively, one of which is by catching fish using trawlers or explosives, which has been regulated in the Law of the Republic of Indonesia Number 45 of 2009 concerning Amendments to Law Number 31 of 2004 concerning Fisheries, Article 9: This action is a crime that can destroy the marine ecosystem and even lead to extinction (Muhamad, 2012). This phenomenon raises critical issues that must be addressed immediately by raising public awareness and encouraging people to participate in the conservation of Indonesian waters' biological wealth.

It is possible that the community does not preserve the sea because of the lack of public insight into the beauty of the marine wealth they have. Therefore, one of the solutions that can be taken to broaden people's insight into the wealth and beauty of marine biota is to establish tourist and

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local attractions that can educate about marine biota, such as public aquariums, such as one in Indonesia, namely the Jakarta Aquarium.

The Jakarta Aquarium is a recreational arena that offers entertainment as well as education with current technological sophistication such as interactive technology, which can be used as an effort to create more meaningful and quality learning. (Nursit, 2016). Besides being able to enjoy the beauty of the underwater world, you can also get to know the life of the aquatic biota in it, from fresh water to sea water. With the implementation of interactive technology at the Jakarta Aquarium, it is hoped that the public will be more educated about the beauty of marine biota and develop a love for underwater biota.

The Jakarta Aquarium is also the first public aquarium to be located in a shopping center, so the basis for the establishment of the Jakarta Aquarium is not only limited to displaying aquatic animals but also equipped with other supporting facilities such as souvenir shops and restaurants. The existence of these supporting facilities is intended to be able to provide services and the maximum level of satisfaction to visitors. in addition to the facilities provided to increase the attractiveness of visitors. The development of tourist attractions is generally carried out through revitalization and redesign (redesign). Revitalization is the construction of infrastructure facilities with the aim of reviving or renewing tourist attractions as tourist destinations as well as recreational facilities. (Sukarno et al., 2019).

2. RESEARCH METHOD

The method used in the design of the Jakarta Aquarium is the design process method by Rosemary Kilmer (Kilmer & Kilmer, 2014), which consists of 8 processes:

1) Commit
   According to Kilmer (2014:181), recognizing design problems and committing to them is the first step a designer takes in the design process.
2) State
   Defining the problem as detailed as possible can have a major influence on solving the problem.
3) Collect
   After defining and having a clear understanding of the problem, the information is used to develop the program.
4) Analyze
   At this stage, the designer begins to produce simple visual sketches by developing them from conceptual diagrams to final design plans.
5) Ideate
   Generate creative ideas or alternatives to achieve project objectives. Look for different creative ways to solve problems and define the overall design concept. The resulting idea must gain a thorough understanding of the problem.
6) Choose and Refine
   The designer chooses the most appropriate or best option to see how the chosen concept fits their needs, goals and wants.
7) Implement and Construct
   This step communicates ideas through final drawings, plans, renderings, and other forms of presentation.
8) Evaluate
   Evaluate the final result of the design that has been made.

3. RESULT AND DISCUSSION

Jakarta Aquarium & Safari was inaugurated on 16 October 2018 by the Minister of Maritime Affairs and Fisheries, Susi Pudjiastuti and is located in Jl. Letjen S. Parman No.106, RW.5, Tj. Duren Sel., Kec. Grogol petamburan, Kota Jakarta Barat, Daerah Khusus Ibukota Jakarta, 11470. And has 2 floors with a total area of 7200m². Jakarta Aquarium has a vision, namely to become a reference in the field of entertainment – education and conservation of marine biodiversity in Indonesia.

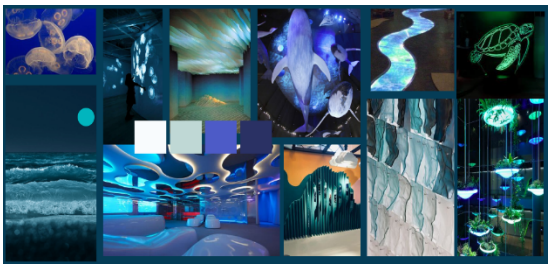
There is also the mission of the Jakarta Aquarium itself which is to provide interesting and interactive entertainment – education about biodiversity sustainability for families (Jakarta Aquarium, n.d.). In order to fulfill the vision and mission of the Jakarta Aquarium, interactive technology has been implemented to sharpen the vision of the Jakarta Aquarium, namely to become a reference in the field of entertainment and education for Indonesia's marine life. Some of the keys in making interactive tourist attractions (Djohari et al., 2022):

a) Create a linear flow in the museum.
b) Design that invites visitors to interact.
c) Involve physical activities or games to provide knowledge and experience.
d) Using modern technologies such as video, audio and mobile in design elements to attract attention.

The redesign of the Jakarta Aquarium carries the theme "Descendants of the Sea." The word descendant itself means "descent" or "duplication." If interpreted as a whole, it means "Descent from the Sea." The application of this theme is made in accordance with the order of the rooms that will be passed by visitors. If the sea begins at the beach, then the reception area will also resemble the beach. And so on to the very end of the display area.

The dominant color used in this design is a monochromatic blue, the basic color of the sea, with touches of neutral colors such as white, but there are also additions of contrasting colors as accents and metaphors for the colors of coral reefs found in the sea.

Figure 1
Moodboard



The atmosphere concept given to the design of the Jakarta Aquarium is modern, nature and interactive which is supported by the respective utilities in each room but is more focused on the game of lights to create the desired ambiance. As well as the use of projection mapping to support interactive impressions on several space dividers.

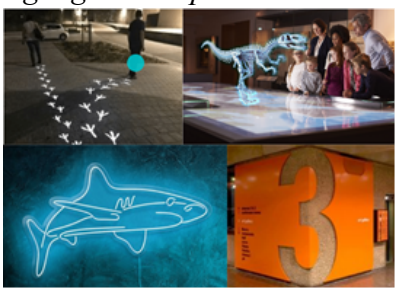
Signage Concepts

The Jakarta Aquarium is a public space and classified as an exhibition and educational tourist spot. The use of signage can be an important thing to convey information, so that information

can be conveyed better, signage will be made attractive and interactive (Hanifunisa & Swasty, 2020):

a. Area divider sign.
b. Floor plan information.
c. Circulation direction information.
d. Collection type information.
e. Information on directions to toilets, lifts and stairs.
f. Information on emergency exits & restrictions.

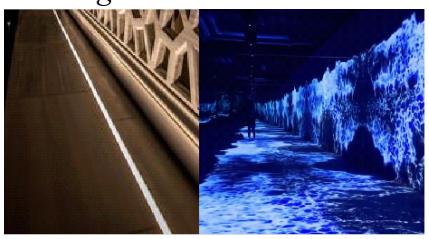
Figure 2
Signage Concepts



The signage design concept that will be made is simple and modern, which is more dominated by the use of LED strips and contrasting colors from the dominant color of the room so that visitors can see it clearly and make it more attractive.

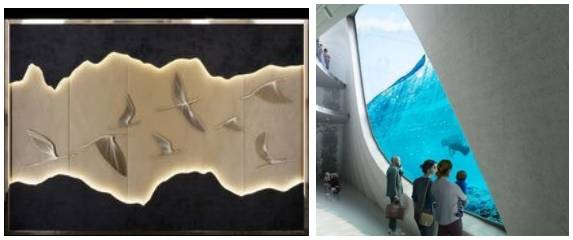
1. The concept of forming space
   The following is the application of the concept to the space divider or circulation.

Figure 3
Flooring



a) Floor: There is a floor line as a direction of circulation, equipped with the use of a hidden lamp. Some rooms use projection mapping to add an interactive impression. The material used is colored epoxy with a semi-gloss finish.

Figure 4
Walls



b) Walls: Walls have variations in each area/room, the walls are also equipped with hidden lights as additional ambients and texture games to projection mapping to add impressions and interactive experiences. Some of the materials used include wall paint, HPL, 3D wall panels, and acrylic.

Figure 5
Ceilings

c) Ceilings: The ceiling has different heights in several areas and uses a down ceiling which is equipped with a hidden lamp with additional decorations in several areas.

Lighting and Ventilation

Lighting in this design plays an important role, because the ambient in each room is determined by the lighting (Kelly, 2002) thus using various types of lamps such as:

a) Spotlight: which is used as a focal glow to show a particular object.
b) Pendant lamp: used as a play of brilliants which can increase the aesthetic value of the room.
c) Indirect light: which is found on the ceiling and walls, can be general lighting in the room and determines the atmosphere in the room.

The ventilation used is artificial ventilation using split AC in small areas or certain areas and using Central AC in the main rooms. Room temperature according to SNI standards reaches 20-25^{0}C (SNI 6197, 2011).

The following is the design implementation for the Jakarta Aquarium's main display space in accordance with the design aspects above and by applying interactive technology.

Figure 6
Main Display Perspective

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In the main display room, this can be seen on the floor using projection mapping, which depicts seawater flowing to show the flow of circulation. Then the signage is also made to light up, and there is a hologram to add an interactive impression to the room. The ceiling is also decorated with decorations that support the concept of "Descendants of the Sea."

4. CONCLUSIONS AND RECOMMENDATIONS

Indonesia is a country with the largest archipelago in the world, which of course has a wealth of marine life that can be used as a resource by the local community, but people often misuse it. This happens because of the lack of public education about the richness of marine life. Therefore, a public aquarium tourism park, such as the Jakarta Aquarium, was established.

However, looking at the interior atmosphere of the Jakarta Aquarium, it does not support interesting education for the public. Then do the application of interactive technology by paying attention to aspects such as concepts and themes, lighting, and ventilation, as well as the concept of forming space. Thus, it is hoped that the Jakarta Aquarium, which aims to be a place of recreation and education for the community, can be used to educate the public about the beauty and importance of preserving marine life.

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REFERENCE

Direktorat Jenderal Pengelolaan Ruang Laut. (2020). Konservasi Perairan Sebagai Upaya menjaga Potensi Kelautan dan Perikanan Indonesia. Kkp.Go.Id. https://kkp.go.id/djprl/artikel/21045-konservasi-perairan-sebagai-upaya-menjaga-potensi-kelautan-dan-perikanan-indonesia

Djohari, N., Setiawan, M. N., & Liauw, F. (2022). Penerapan Teknologi Interaktif Display dalam Perancangan Interior Museum Wayang Jakarta. *Mezanin, 4*(2), 73–82. https://journal.untar.ac.id/index.php/mezanin/article/view/19495

Hanifunisa, A., & Swasty, W. (2020). Signage Yang Informatif Dan Interaktif Pada the Heritage Palace Kota Surakarta Jawa Tengah. *Jurnal Bahasa Rupa, 3*(2), 95–103. https://doi.org/10.31598/bahasarupa.v3i2.452

Jakarta Aquarium. (n.d.). https://jakartaaquariumsafari.com/

Kelly, R. (2002). From Johnson' s Glass House to Seagram' s Glass Box (1948-1958) Margaret Maile Master' s Thesis: Spring 2002 The Bard Graduate Center 38 West 86 th Street New York, New York 10024.

Kilmer, R., & Kilmer, W. O. (2014). Designing Interiors. In Wiley (2nd ed.).

Muhamad, S. V. (2012). Illegal fishing di perairan indonesia: permasalahan dan upaya penanganannya secara bilateral di kawasan. *Jurnal Ilegal Fishing, 3*, 59–86. https://doi.org/10.1002/asi

Nursit, I. (2016). Pengembangan multimedia interaktif berbasis power point (macro-enabled) pada mata kuliah geometri euclid dalam pembelajaran matematika. *Media Pendidikan Matematika, 4*(1), 41–49. http://ojs.ikipmataram.ac.id/index.php/jmpm/article/view/127

SNI 6197. (2011). SNI 6197: 2011 Konservasi Energi pada Sistem Pencahayaan. Standar Nasional Indonesia, 1–38.

Sukarno, A. N., Agung Haryawan, I. G., & Ratih Prajnyani Salain, N. (2019). Redesain Interior Seaworld, Teater 4 Dimensi Taman Festival Bali Di Denpasar. *Jurnal Patra, 1*(1), 50–58. https://doi.org/10.35886/patra.v1i1.15

Denny, H., Nordlof, J., & Salem, L. (2018). "Tell me exactly what it was that I was doing that was so bad": Understanding the needs and expectations of working-class students in writing centers. *Writing Center Journal*, *37*(1), 67–98. https://www.jstor.org/stable/26537363