

# THE ACEHNESE ORNAMENT DOCUMENTATION: A STUDY OF ORNAMENT ELEMENTS OF RUMOH ACEH OF IBRAHIM HASAN

**\*Mirza Irwansyah<sup>1</sup>, Zulhadi Sahputra<sup>1</sup>,  
Muhammad Heru Arie Edytia<sup>1</sup> & Niko Andeska<sup>2</sup>**

**\*Corresponding Author**

<sup>1</sup>*Architecture and Planning Department, Faculty of Engineering, Universitas  
Syiah Kuala, Banda Aceh, Aceh, Indonesia*

<sup>2</sup>*Program Studi Seni Rupa dan Desain, Institut Seni Budaya Indonesia Aceh,  
Aceh Besar, Aceh, Indonesia*

mike.hasan@gmail.com, zulhadi.sahputra@unsyiah.ac.id  
muhammad.heru@unsyiah.ac.id, nikoandeska@isbiaceh.ac.id

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## ABSTRACT

*Rumoh Aceh, Acehnese traditional house, has its original ornament to be preserved. Currently, the existence of ornaments in Aceh houses has begun to be threatened since the declining number of Aceh houses. In addition, the replacement of ornaments on the replica of Aceh houses in Taman Ratu Safiatuddin is quite limited. This paper aims to observe the essential or basic forms of ornaments of Rumoh Aceh elements through collecting data by field observation and tracing as one of the attempts in preserving Acehnese ornaments digitally. The data are traced and analyzed using AutoCad 2019 and Google SketchUp Pro 2019. The data reveals four basic forms of wall ornaments of Ibrahim Hasan's Rumoh Aceh: squares, rectangles, circles, and triangles. These basic forms are rooted in floral and geometry forms and are used in every Rumoh Aceh. This digital documentation model is proposed to increase interest and make it easier for the next generation, both the general public and construction workers, to study, reconstruct, and develop Acehnese ornaments.*

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**Keywords:** *Acehnese ornaments, Basic Form, Wall, Rumoh Aceh*

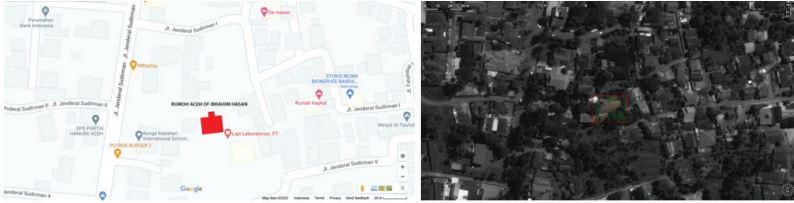


## **INTRODUCTION**

Aceh traditional house is one of the diversities that Aceh province, Indonesia has in addition to other art and culture such as customs, rituals, art materials, music, and culinary. Rumoh Aceh as an asset reflects the life of the cultured Acehese people that is rich in important values, especially in design. The design includes ornaments that give color to the values of form, structure, and aesthetics. In addition to the declining people's interest in building Rumoh Aceh, the declining presence of utoeh (skilled craftsmen), especially in the field of ornaments, has made the existence and sustainability of these ornaments difficult. Their skills are taught from generation to generation directly in construction time without proper documentation. Therefore, it is essential to document the information and knowledge related to Aceh traditional architecture design as a literature for the future generation. The people of Aceh, especially the young people, have lost interest in knowing the ornamental values that have been passed down for years.

Ornament is one of the essential elements in traditional houses in Indonesia including Rumoh Aceh, the traditional house of Acehese. Not only does it have a certain meaning, but it also functions as Rumoh Aceh's soul which contains and describes Islamic messages (Hasan, 2009). Ornament also provides an excellent visual aesthetic for the design of a traditional house. However, along with the decreasing number of Rumoh Aceh which is due to several factors (Meutia, 2020), the presence of Acehese ornaments is also threatened with extinction.

Documentation of ornaments in traditional houses is one of the steps to preserve the existence of ornaments. Proper documentation is needed to store visuals including the form and function of ornaments based on digital or three-dimensional models. Therefore, this digital documentation model is expected to revive and increase interest as well as make it easier for the next generation, both public and private sectors, to study, reconstruct, and develop Aceh ornaments. This development will also be able to preserve the beauty and richness of ornamental values.



**Figure 1. Location of Case Study**

Source: Modified from Google and Apple Maps

This research was conducted to document the ornaments of Aceh through digital-based modeling. The case studies studied in this research are the ornaments of the Rumoh Aceh belonging to Ibrahim Hasan which is located on Jl. General Sudirman No.41, Geuceu Iniem, Banda Aceh. This Rumoh Aceh has a complete structure and ornamental form. The modeling of these ornaments will be carried out through a data collection process and digital-based modeling. Recording and measurements are carried out through the data retrieval stage followed by redrawing through digital modeling. Modeling is done using Google SketchUp Pro 2019. The objectives of this research include locating and identifying ornaments used in Rumoh Aceh owned by Ibrahim Hasan, and also documenting two and three-dimensional ornaments digitally.

## LITERATURE REVIEW

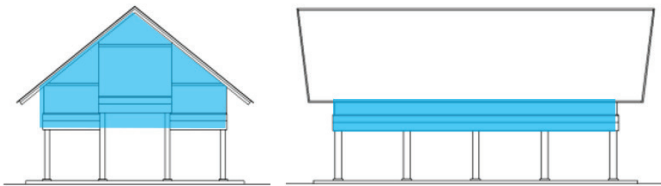
### Ornament as Element

In architecture and decorative arts, the ornament is a decoration used to beautify part of a building or object. Ornaments as works of art can add to the aesthetic element of an object/product which will ultimately add value to the object or product. In this case, there are ornaments that are passive and active elements. Passive means that the ornament only serves to decorate objects or buildings. While the active function of ornaments means that apart from decorating an object, it also supports other things on the object such as supporting the construction or strength of an object.

According to Aryo Sunaryo (2009:4) the presence of an ornament has

several functions, including (1) purely aesthetic functions, (2) symbolic functions, and (3) technical/constructive functions. A purely aesthetic function is an ornament function to beautify the appearance of a form (object) or building. The symbolic function is an ornamental function that is made in addition to having a function to decorate an object but also has a certain symbolic value in it, according to certain norms (customs, religion, other social systems). While the technical/constructive function is an ornament that structurally has a technical function to support, connect, or strengthen the building.

Rumoh Aceh generally has ornaments on almost all construction elements, ranging from structural elements, wall elements, to roof elements. The most dominant position of ornaments is on the wall and roof elements.



**Figure 2. Ornament position illustration on Rumoh Aceh**

Source: Zulhadi, 2020

In an architectural context, the ornament has an essential role in the expression of architectural work. Apart from being an element to beautify buildings, ornaments are also an architectural element that functions as a medium for expressing meaning and identity, especially in vernacular architecture. The role of ornament can be a small-scale element on the facade as an expression to represent the narration of a building.

Farshid Moussavi and Michael Kubo (2008) in their book “The Function of Ornament” try to explain how functional architectural ornaments can express the beauty of buildings in a more contemporary form. Farshid Moussavi classifies the functions of contemporary ornaments in architecture, including: (1) form as ornament, (2) structure as ornament, (3) screen as an ornament, and surface as an ornament.

## **Archipelago (Nusantara) Ornaments**

Based on decorative motifs or shape patterns, Aryo Sunaryo (2009:15) groups ornaments into 2 types, namely (1) geometric ornaments motif and (2) organic ornaments motif. Geometric motifs generally use elements such as lines and planes. Geometric motifs developed from repeated points, lines, or planes from simple to complex patterns.

Several types of geometric ornaments are generally found in the Nusantara, including:

1. Meander ornament motif; edge ornaments whose basic form is a winding line.
2. Pilin ornament motif; ornaments in the form of spiral curved lines or hook curves.
3. Slope ornament motif; ornaments that have the basic shape or pattern of parallel slanted lines.
4. Banji ornament motif; ornaments that have a basic shape of curved lines that cross and are similar to the shape of a propeller.
5. Kawung ornament motif; an ornament formed from intersecting circles.
6. Tumpal ornament motif; ornaments that have the basic shape of a triangular plane.

Meanwhile, organic ornament motifs that are generally found in the archipelago (Nusantara) include:

1. Human figure ornament motif
  - a. The intact figure motif is a depiction of the human figure in areas that are relatively untouched by foreign influences. In general, they still carry on the "primitive" style as a depiction of their ancestors and are a continuation of monumental art forms in prehistoric times.
  - b. Mask and Kala motif is a depiction of essential parts of the human body such as the head and face.
  - c. Mamuli motifs and other body parts are depictions of certain organs of the body.
  - d. Wayang motifs are depictions of ancestral spirits and characters in the epic Ramayana and Mahabharata.

## 2. Animal (fauna) ornament motifs

Types of animal motif ornaments are animals that can be found in the archipelago according to the environment of each region. This type of motif is divided into several groups, including:

- a. Bird motifs: chicken, duck, and bird motifs.
- b. Water and reptile motifs: fish, snake, and dragon motifs.
- c. Motifs of land animals: motifs of buffalo, horses, elephants, lions, and other animals.

## 3. Ornament motifs of plants (flora)

Currently, plant ornaments are a major part of the world of ornamentation in Indonesia. Generally, floral motifs emphasize the aesthetic aspect of decoration, so that not all types of motifs contain symbolic meanings. The forms of floral motifs that are often used include:

- a. Floral motif
- b. Leaf motif
- c. Stem motif
- d. Seed/fruit motif
- e. Budding motif
- f. Tendril motif
- g. and so forth

## 4. Nature and landscape ornament motifs

Nature and landscape motifs are created by taking inspiration from nature such as:

- a. Sun motif
- b. Moon motif
- c. Star motif
- d. Cloud motif
- e. Mountain motif
- f. Water motif
- g. Scenery motif
- h. and so forth

## 5. Technological motifs, calligraphy, and abstract ornaments

- a. Technological motifs are motifs made of objects that contain technological values,
- b. Many calligraphy motifs were originally found on tombstones, which

later were developed and applied to mosques and other buildings. This motif can be in the form of an interwoven arrangement of Arabic letters, often combined with interwoven motifs that form plant tendrils,

c. Abstract motifs are motifs with unrecognizable compositions.

## **Aceh Ornament**

Basically, the ornaments in Aceh as a whole have similarities between one region and another. The difference lies in the creativity and inventiveness in the design of ornamental motifs by the ornament engravers of each region. Ornament is a manifestation of artistic value in the form of paintings or carvings that make decorations both on traditional houses, clothes, household appliances, and others, all of which are inspired by the noble philosophy of the supporting community.

Creativity is the creation of ornamental art that cannot be separated from the behavior patterns of the Acehnese people. Acehnese ornamental art is a cultural product inherited from the traditions of its ancestors who have undergone a long journey which in the end it forms a cultural identity from local wisdom for the community that created it. Experiences and lessons learned from nature and supported by the creativity of the community give birth to ornamental art that contains aesthetic and ethical content that is full of traditional values that are related to the Acehnese culture.



**Figure 3. The variety of Ornaments on Rumoh Aceh Ibrahim Hasan**

Source: Author

Acehnese ornamental art is one of the results of a cultural process that still survives and has a strong relationship with supporting traditions.

Ornamental art for the people of Aceh is not only the language of pictures but also a manifestation of the soul which contains deep meaning and philosophy of life rooted in the community. Ornamental art has functions, educational, moral, and spiritual values. The carvings are taken from environmental motifs that have to do with the life of the Acehnese people.

## **Characteristics of Aceh Ornaments**

Acehnese culture is strongly influenced by Islamic culture. Therefore, most of the motifs, ornaments, and designs of Acehnese crafts are translations of Islamic culture. According to Barbara Leigh (1989:151), the motifs used in Aceh are divided into 5 categories, including:

1. Geometric motif.
2. Vegetable life motif.
3. Bird life motif.
4. Other animal life motifs.
5. Typical Islamic motifs.

The most widely used ornaments are floral motifs. However, ornaments with human figures and animal motifs are not allowed in Islam because they can symbolize idols. Although there are animal ornaments, they have usually been abstracted into geometric shapes.

The motifs of vegetable/ plant/ flora life are often transformed into religious values which are interpreted as a Muslim Garden plant paradise. Plants have meaning in the Islamic conceptual framework that links gardens and natural plants with paradise gardens, human survival, and the development of human abilities. Flowers and vines are a source of inspiration for the development of Aceh's ornamental designs.

Acehnese ornamental motifs and their development are dynamic. This can be seen from the change of Hindu motifs into more Islamic motifs. The richness of Aceh's ornaments reflects traditional elements (regional specialties) and has also undergone renewal so that there are ornaments that contain similarities with other regions in Indonesia.



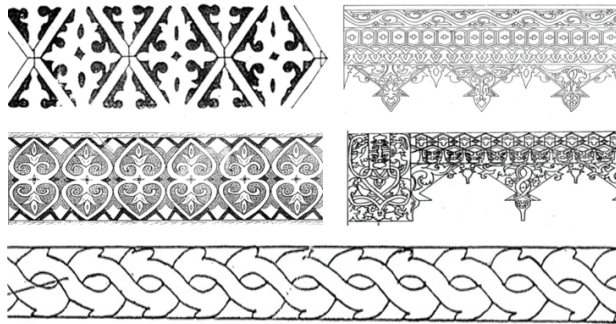


Figure 4. The forms of Acehese Ornaments

Source: Kasim, 1996

## Ornament Preservation

Ornament is one of the important elements in traditional house architecture in Indonesia in general and Aceh in particular. The existence of Aceh ornaments is starting to be rare as people's interest in Acehese houses decreases. This happened because of the existence of Rumoh Aceh which began to be replaced by the presence of modern houses with concrete construction (Zulhadi, 2020).

Based on several existing literature studies, references to Acehese ornaments have not been comprehensively documented. This issue raises concerns for the research team regarding the existence of Aceh ornaments which have not been well documented. Therefore, preserving Acehese ornaments through digital technology-based documentation become this objective study, so that the traces of the richness of Acehese ornaments can be recognized by the future generation. This act begins by documenting Acehese ornaments located in Ibrahim Hasan's Rumoh Aceh.

## METHOD

The preservation of Aceh's ornaments based on digital technology can be done through the development of both 2D (two) and 3D (three) dimensional ornament models using AutoCAD and Sketchup software. Both of these software are tools that are often used in the field of architecture. The limitation of this research is that it only documents the ornaments without

finding the reason why the owner has chosen these ornaments and the rationale behind them.

The process carried out in this research include:

- 1.Literature study and literature review;
- 2.Collecting primary and secondary data;
- 3.Determination of the boundaries of ornament documentation;
- 4.Determination of the category of ornaments;
- 5.2D Modeling with AutoCAD software;
- 6.3D Modeling with Google Sketchup software; and
- 7.Create a database of Aceh ornaments in the case studies taken.

Literature studies and literature reviews were carried out to obtain references related to ornamentation in traditional Acehnese houses. One of the aspects analyzed is that the characteristics of Acehnese ornaments are strongly influenced by Islamic culture and the functions of ornaments such as aesthetic, symbolic, and technical/constructive functions. Literature studies and literature reviews do not only refer to books, but also to journals and scientific articles that are contextual to the research topic.

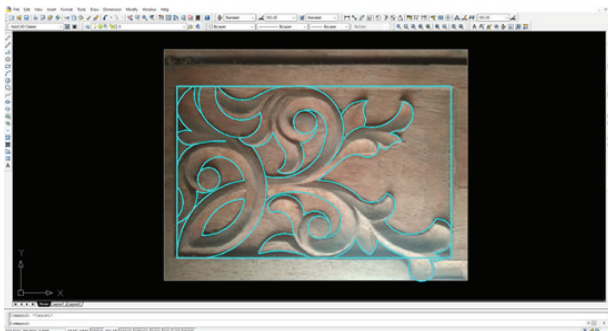
The next phase is collecting primary and secondary data. Primary data is obtained directly through field observation or surveys, documentation, and direct measurements on the object of research. Field data collection was assisted by five students. The focus of ornaments digitizing is only conducted on the main object of Rumoh Aceh, not including the kitchen house which is located at the back of the main house. The kitchen house contains similar ornaments as the main house. Documentation and measurement of ornaments are carried out based on the location of the elements to facilitate the process of identifying the ornament categories.



**Figure 5. The process of Documentation and Measurement of Acehnese Ornaments**

Source: Author

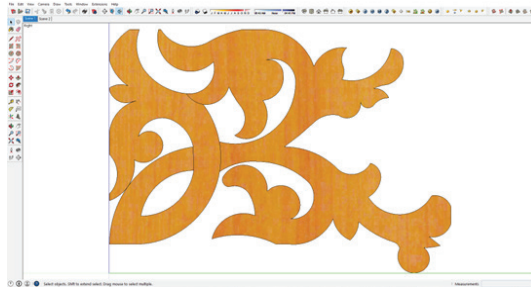
Based on the results of the documentation and measurements data, the ornament drawings were modeled in two dimension (2D) using AutoCAD software. The first step in modeling is to insert photos / documentation of ornaments into AutoCAD. The ornament pattern is drawn by tracing on the planar photo of the ornament that has been scaled based on the results of measurements in the field.



**Figure 6. AutoCAD interface in the Ornamentation Tracing Process**

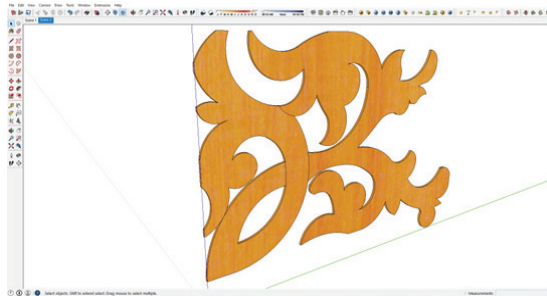
Source: Author

Three-dimensional modeling is done by importing ornament files in AutoCAD format into Google Sketchup software. In this software, the shape of the ornament is created by developing the geometry and rendering the wood material to match the original ornament on the object of research. The last phase is to create a database of ornaments that have been digitally modeled.



**Figure 7. Google SketchUp Interface in the Two-dimensional Ornamentation Tracing Process**

Source: Author



**Figure 8. Google SketchUp Interface in the Three-dimensional Ornamentation Tracing Process**

Source: Author

## DISCUSSION



















Preservation of Acehne ornaments based on digital technology in the case study of Rumoh Aceh owned by Ibrahim Hasan has produced several identifications and digital modeling of ornament images, which consist of the following:

























1. Thirty-three models of ornaments and their location on Rumoh Aceh;
2. Transformation of ornaments in the house of Aceh Ibrahim Hasan into































- 2-dimensional and 3-dimensional drawings employing AutoCAD and Google Sketchup software;
- 3.Functional analysis of ornaments such as aesthetic functions, symbolic functions, and technical functions.













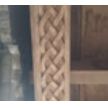

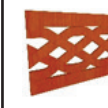








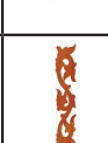
The identification and design of these ornamental figures can be described in the following table:

**Table 1. The Identification and Design of the Ornaments**

No.	Category	Name	Existing Ornaments	2D Model	3D Model
1.	Geometry and floral ornaments	Ornament of bungong pucok rebong (shoots of bamboo shoots)			
2.	Geometry and floral ornaments	Ornament of bungong awan sitangke			
3.	floral ornament	Ornament of bungong kundo (kundo flower)			
4.	Geometry and floral ornaments	Ornament of bungong pucok reubong (shoots of bamboo shoots) and bungong puta taloe dua			
6.	floral ornament	Ornament of bungong awan-awan			
7.	floral ornament	Ornament of bungong pucok reubong (shoots of bamboo shoots) and bungong awan si tangke			

8.	Geometry and floral ornaments	Ornament of lhok taloe and kelopak bunga			
9.	floral ornament	Ornament of bungong meulu (jasmine flower) and bungong keumang			
10	floral ornament	Ornament of bungong kundo			
11.	floral ornament	Ornament of bungong jeumpa keumang (blooming flower of jeumpa)			
12.	floral ornament	Ornament of bungong awan awan			
13.	floral ornament	Ornament of bungong cirih (cirih flower)			
14.	Geometry and floral ornaments	Ornament of bungong pucok reubong (shoots of bamboo shoots) and bungong jeumpa (jeumpa flower)			
15.	floral ornament	Ornament of bungong sagoe			

16.	geometry ornament	Ornament of taloe meuputa (spinning rope)			
17.	floral ornament	Ornament of bungong sigendok (sigendok flower)			
18.	floral ornament	Ornament of sultur (jasmine flower)			
19.	geometry ornament	Ornament of geometry			
20.	floral ornament	Ornament of sisek boh meuria (sago fruit scales)			
21.	floral ornament	Ornament of bungong ayu-ayu (ayu-ayu follower)			
22.	floral ornament	Ornament of oen and pucok (daun dan pucuk)			
23.	floral ornament	Ornament of bungong awan si tangke			
24.	floral ornament	Ornament of taloe meuputa (spinning rope) and bungong seuleupok (lotus flower)			
25.	Geometry and floral ornaments	Ornament of taloe meuputa (spinning rope), lhok taloe and putik bungong (flower pistil)			

26.	Geometry and floral ornaments	Ornament of bungong glima			
27.	floral ornament	Ornament of bungong kundo			
28.	floral ornament	Ornament of bungong kipas (kipas flower)			
29.	floral ornament	Ornament of bungong ayu-ayu (ayu-ayu flower)			
30.	geometry ornament	Ornament of bungong puta taloe lhee			
31.	floral ornament	Ornament of bungong ayu-ayu			
32.	floral ornament	Ornament of bungong meulu (jasmine flower) and bungong keumang (blooming flower)			
33.	floral ornament	Ornament of bungong kundo			

Source: Author

## CONCLUSION

Preservation of Acehnese ornaments in Rumoh Aceh is necessary due to the gradual decline of ornaments on Rumoh Aceh. In order to preserve



the existence of Acehese ornaments, documentation of the ornaments in the Ibrahim Hasan's Rumoh Aceh is carried out which has a complete structure and form of ornaments. AutoCAD and Google SketchUp software are utilized to trace and rebuild as documentation methods based on digital technology. Preservation of Acehese ornaments as found in this research is carried out through the development of ornament models in both 2D (two) dimensions and 3D (three) dimensions.

Based on the results of the research that has been carried out, 33 forms of ornaments with various positions have been identified. In addition, aesthetic functions, symbolic functions, and technical functions have been documented in Acehese ornaments found in Rumoh Aceh owned by Ibrahim Hasan. This documentation should evoke interest of the public and make it easier for the next generation, both the general public and construction workers, to study, reconstruct, and develop Aceh ornaments. This development is also expected to be a step in preserving the beauty and richness of ornamental values.

Beside identifying the ornaments used by Rumoh Aceh which has rich and complete carvings, the findings of this research contribute towards the preservation of Acehese ornaments in the form of digital data. For future research, it is recommended that the standardization of the measurement for further remodeling of Rumoh Aceh be done, explaining the philosophical aspect, and analyzing the geometric factors.

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## AUTHOR CONTRIBUTIONS

All authors contributed to the design of the research, the questionnaire, and the write-up. The on-line survey, data cleaning and tabulation was undertaken by researcher. All authors have read and approved the final manuscript.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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