

An Artificial Intelligent of Princess Mandalika Legend: A New Strategy to Sustain the Resort of Mandalika-Lombok

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Abstract: A qualitative research is focused on a new architecture concept of the Mandalika Tourist Region of Lombok. As an Infrastructure Project to rapidly a one of the Ten National tourism of Indonesia's priority. According a phenomenological research within a multidiscipline actors was found an uniqueness of the Sasak local legend, named a story of the Princess Mandalika. She is a myth of the Lombok Land. Until now, the annually festival to remind her legend was held on February. To remind her the videos, performing art, dance, and sculpture was created. Especially to enrich the resort region an artificial intelligent of architecture may create as a part to sustain the spirit of the legend. An Augmented Reality (AR) may created in the surround of the district area. The Augmented Reality (AR) is a visual communication graphic design related the Princess Story through the added images on the real world. Visitors my need a 'smart glasses' within the three general characteristics; a). The combination of real environment with virtual objects, b). An Interactive display, c). a Display in 3D. By a Visual Prototyping Augmented Reality as images can manipulation the Princess Mandalika present on the region within the Sasak Architecture background. So, by exploiting the legend the foreign tourists more enjoyed about the locale culture of Indonesia. In architecture is a part of the architecture-event.

Keywords: Architecture-event, Artificial intelligent, Augmented reality, The princess mandalika, Sasak architecture

Introduction

The Mandalika Resort at Lombok

Recently, the tourism region of Lombok had gained attention in the President Joko Widodo era (2014-2019). To encourage the national tourism destinations, so he has set 10 priorities of tourism destination projects. In the previous era of President Susilo Bambang Yudhoyono, he also concerned in this region by published his policy in 2011. Both of Presidents has to give attentions to the same region as well as to continue the President Suharto's program. As a tourist region, has a geographical region that has been designated by a governmental organization or tourism bureau. Usually, the tourism region has name created by specifically for tourism purposes. The names often evoke certain positive qualities of the area and suggest a coherent tourism experience to visitors. Now the tourism region named the Mandalika tourism district had located in Central Lombok, Nusa Tenggara Barat islands had managed by ITDC -Indonesia Tourism Development Corporation. The Mandalika tourist region is one of "The 10 of the Leading of Tourism Destination" composed as the Indonesia's main tourism area, and it set by President Joko Widodo, among others; (1) Lake Toba, (2) Tanjung Lesung (3) Borobudur, (4) Bromo, (5) Tengger, (6) Semeru, (7) Mandalika, (8) Wakatobi, (9) Morotai Island and (10) Labuan Bajo (sportnews, 2016). In achieving the target of the foreign tourists visit as well as 12 million peoples, and 260 million trips of the locale tourist the the Minister of Tourism, Mr. Arief Yahya (Kompas, 2015) was tasked by the President to set up a strategies number to prepared, divided into two types, namely the National Tourism Strategic Areas and the Special Economic Zone Tourism – KEK. The ten of the tourism destinations that need to be explored the attractiveness. The major of the tourist destination that has a natural panoramic of beach, such as Tanjung Lesung, Mandalika, Wakatobi, Morotai and Labuan Bajo. To establishment the Mandalika Resort needs to explored the advantages the sense of place. Joko Widodo who always wish to create a new ways to make a sense of the events "festival for the peoples". It will be associated with the tourism destinations of the Mandalika tourist region by exploration the locally that can be carried as a festival that is

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worth the socio-economic and cultural. He inspired by Soekarno thought about the cultural age than the ruling class.

As the tourist region, the Mandalika contained a commercial establishment that to provide most of a vacationer's wants. There are maybe facilitating such as food, drink, lodging, entertainment, sport and also shopping including the resort hotel. PT ITDC as the resort management mandate of the Indonesia government have prepared a visionary Master Plan which includes the building regional infrastructure and facilities of international standard. (Masterplan, 2015, ITDC). They had preparation the investment strategies for the investors to invest in the Mandalika Tourism Region around 1,255 hectares. The Masterplan in 2015 are contains three (3) of major development of Mandalika Tourism is "The Place To Be". First, to creates the independent and sustainable tourism. Second, to provide the international standard infrastructure and, the third, to develop the principle of preservation and ecological restoration. To accelerate the investment it need to prepare the smooth circulation integrated with investments and rate the economy of local communities. Basically, the tourist region facilities including the hotel resort. The originally term of resort may be used for a hotel property that provides an array of amenities including entertainment and recreational activities. Herewith, the purpose of this study is expected to contribute in the forms of:

1. Inspiring discourse on creative people in the field of Information Technology in general and Visual Communication Architects and Designers, explores designs with existing (and future) technological support.
2. preparing a new paradigm related to AI Technology, Increased Reality
3. Utilizing future technology for local content of tourism in Indonesia. Through the Visual Design Prototype for Enhanced Reality Technology with Google Glass devices (for the Mandalika Resort area in Lombok) which aims to enrich one of the 10 leading tourism destinations in Indonesia.

The Artificial Intelligent in Architecture

Now, Increased Reality Technology has the opportunity to enrich ambience in tourist destinations through ways that have not been thought of before, for example; a). Able to present images of 'figures in the past dimension' and even visualize mythical stories into the present reality, b). Presenting visually with the atmosphere you want to feel, (atmosphere of the sea, mountains, morning, evening, or night) c). Even presenting other information such as: infographic, information / explanation of certain artifacts, including narratives, storylines as well as sponsorship messages as philanthropy. The idea of the union can be realized through devices equipped with Enhanced Reality technology, one of which is "Google" smart glasses, or called: "Google Glass".

Referring to Widya and Ardhiati, 2013 and Milgram and Kishino's post, 1994, said the possibility of merging and fusing the real world and cyberspace into a continuum of virtuality. On the far left side is a real environment that only contains real objects, and the far right is a virtual environment that contains virtual objects. In the way the Increased Reality works, which is closer to the left side, the environment is real and objects are virtual, while in augmented virtuality or virtuality increases, which are closer to the right side, the environment is virtual and objects are real. Increased reality and added virtuality are combined into mixed reality or mixed reality.

In addition to offering a variety of advantages and benefits offered this technology also gave rise to criticism, in the form of concerns (especially) the negative social and health impacts that will be caused, especially after Google announced the patent rights and Smart Glasses will be launched at the end of 2013. However, we must remain prepared for technological advances and can use them for positive purposes, because their ability to create new spaces and dimensions in various disciplines of imaginary architecture is the advantage of the technology of Increased Reality.

Mandalika of Lombok Folklore Legend as the Resort Storyline

According to President Joko Widodo's wish to create "festival for the peoples" so it adopted into Mandalika Resort then, at 2017 PT ITDC hiring to PT Perentjana Djaja Architect to strengthen the conceptual by a collaborative design team between architect, masterplaner, landscaper, business analyst, civil engineer, anthropologist, and mitigation expert. By referring a phenomenological investigation in the Central of Lombok region so Architect adopted the Event-Cities Theory (Tschumi,1997) and created Architecture-Event of Derrida's (Derrida, 2009) such as; (a) sequences, (b) the open-serialize, (c.) narrative, (d) cinematic, (e) the drama, and (f) the choreography. According to Storm's idea of tourist region trend; "Every region had its own 'soul'...an organic part of the nation" (Storm, 2003), then elaborated the folklore legend Princess Mandalika of

has related with the locale heritage tradition of “Bau Nyale” Festival to be the resort storyline and the closely way to “branded” of resort region.

Architecture-Event Concept of the Princes Mandalika

By refers to Architecture-Event concept of Derrida thus it necessary to adopt a storyline as the core of resort’s theme. The storyline will be mutually within the six criterias of the Architecture-Event concept, namely; a. sequences, b. the open-serialize, c. narrative, d. cinematic, e. the drama, and f. the choreography (Derrida, 2009). The six criterias will adopt as the spirit of the Resort Design of Guidelines – RDGL. The Mandalika tragic legend is the storytelling about the “Princess of Mandalika”. A fairy tale of the beauty princess on the South coast of Lombok. She is a beautiful daughter of the King of Tonjang Beru. The beauty and elegance of the Princess was invited the competitive situation that affects hardness of the Princes of the Earth Sasak-Lombok. The competition atmosphere that gave a depth concern of the Princess. She need to avoid the fragmentation by doing a samadi or pray to Godness how to decide to throw in one of the princes. She got an inspired during her silence samadi. She invites all of the Princes to came at the early morning in South of the Kuta beach in Lombok in the 10-20 of the months of Sasak. All the Princes and Lombok people came in the South Beach. In the early in the morning the Princess Mandalika arrived by carried on the stretcher gold, and stopped at a pile of rocks near the sea. The Princess stand up while outspoken that, on this day, she can’t choose one among all the Princes. The princess believed her destiny will be becoming as the “nyale” or worms that are beneficial for all the Sasak people. Suddenly, she threw herself into the South sea, and the legend continues by a “nyale” tradition as a ritual tradition of Lombok to see a set of colourfull worm that only comes once a year on the same beach.

The Monad’s of Mandalika-Lombok

To explore the indigenus of Sasak is need to finding the core of the Sasak culture named the monad of the Mandalika itself as the basic design. The monad term of Leibniz in 1898 to describe the immortal of the artistic soul. Is the intangible of atom or the smallest molecules particle of the objects. Leibniz was found the monad of Baroque around the 1660-1760 based on the form of the material fluidity, elasticity, the shape of mechanical as well as the spirit of immaterial forms named drapes/ indentation fabric. The Indonesian monad was interpreted through the basics of art carving namely “ukel” - a never ending circular shape of the Mandalika Endemic Flower. By spatial investigation into a heritage housing of Karang Bayan of Lombok Barat district was found the originally of “Mandalika-Carved” located as the twin doors of the heritage. Then, the “Mandalika –Carved” adopted as the architectural based of design.

A Backbone of Mandalika’s Main Road and TOD System

By a phenomenological investigation in spatially experience around the region’s extensive reach 1,255 ha are the hilly lands and beaches. Because of the huges of the region then it need to easely the estate management. Finally, the Architect Team propose the solutions based on the region topography and the natural panoramic has two main potential namely West Region and the East Region. The result of the study is to find a “Resort Design Guideline (RDGL)” as a world-class tourism region facility. To visualized it refers to the Mandalika Masterplan 2015 by analyst the potentially of the resort region and proposed such as; (1) A Backbone of Mandalika Resort main road (2) The toponimi name of the Mandalika Districts Area (3) “the Teten of Sasak” Cultural Buffer Zones (4) The Natural Disaster at once as the Landmark of Mountain Hills.

A Backbone of Mandalika’s Main Road and TOD System

The TOD - Concepts Transit Oriented Development is the best point to solve the huge tourist region of Mandalika Resort to easily visitors integrated system of transport. The potential travelers in around on the Kuta Beach of Lombok may facilitated as well as by the inspiring atmospheres. By located the TOD at the Marina District around the Kuta Beach. The Marina beach is planned to be the berthing ships from Australia and others, so it potentially as the mixed used area of the waterfront area. The variety activities are supported by a public open space such as the open plaza that functioned as a Folk Art Performances at once to anticipation of natural disaster. The monorail of Mandalika may be prepared by the Indonesian monorail of PT Pembangunan Perumahan. They need the double track of monorail services tourist travel to back and forth from/ to Marina. The

Architect Team had proposed a panoramic backbone road of Mandalika by explore all of the region potentially vista such as; mountains, endemic plants (typical flowers), lagoon, rivers, and natural beach. The many of the Mandalika hills looks like similar characteristic so visitors may had loost of orientation. Then, it need to the hills identity at once with the space to anticipated the natural distater of Lombok such as tsunami and flood.

“The Teten of Sasak” as a Cultural Buffer Zones

The uniqueness of architecture proposed is to accommodation the originally of Sasak people of Lombok as a part of the tourist region by named “the Teten of Sasak” as a buffer zones to give an appreciation to the locale people of Lombok island (Faturrahman, 2017). According Faturrahman as the Sasak’s of Lombok expert, the Teten is role as a melting pot of the culture to reduce the economic risk of disparities between the tourist and the original people of Sasak. The Teten may be embodiment as a joint area between the Sasak with tourists for economic trade/ exchange goods of Sasak’ s craft by facilitating a vernacular architecture of Sasak named Berugah. (Fathurahman, 2016).

The Toponimi Named of Mandalika Districts Area

By using the Toponimi named theory of places, then Architect proposed the Mandalika District creates by the spirit of place of Mandalika. Architect proposed to rename the old districts by replacing the essentiality based on the spirit of the origin site/place. The indigenous of the cosmology of Lombok maybe adopted as the spirif of Lombok. All the Mandalika Districts tobe in 18 districts divided as the 16 Districts of the Old Districts and the Additional District of MotoGP District and the Underwater District, (A) Cultural Village Renewal, (B) The Gateway, (C)The Lagoon, (D)The Cultural Village, (E) The Family District, (F) The Hill Top West, (G)The Golf District, (H) The Heart West, (I) The Hill Top East, (J) The Heart East, (K) Luxurious Enclave, (L) The Conservative, (M) Theme Park, (N) Fisherman Wharf District, (O) The Mangrove, (P) (Q)The Moto GP, (R) The Underwater Facility.

The Mitigation Area of Tourism Region

By reffers to the rules of BNPB – Badan Nasional Penanggulangan Bencana as the government care to the natural disaster (BNPB, 2010). In other hand the huge of resort region needs to the architectural sign, such as the statue, the sculpture, the monument, the tower etc. Then, the Architect had proposed the Mandalika natural disaster catchment areas at once as the Mandalika landmark of the mountain hills. By create a serial of landmark of architecture so, PT ITDC as the resort management had investment of to the region to the tsunami natural distaster inlines with the tourist destination. The specific treatment requirement of the space within a stage construction as the tsunami barrier. By create an “arsitektur -panggung” – is the levelling architectural to protect the tsunami disaster. The morphology of “arsitektur-panggung” created as the mitigation area at once as the landmark architectural of the resort region. (Michalski, 1998).

To Generate the Creative Economic of Festival

The “Bau Nyale” Festival is an annual tradition in the early morning on the Kuta South Beach of Lombok. The estimated tourist visitors more than 100,000 peoples. The “Bau Nyale” Festival activities, among others; (a) the cultural parade, (b) the culinary festival, (c) the Princess Mandalika Competition, (d) the Betandak-Bekayak Event, (e) The commemoration of “Bau Nyale”; the Peresean, the Cilokaq Festival, the Surfing Contest, the Volley Beach and the Photography Contest. The commemoration of “Bau Nyale” celebrate then the locale governments by closed to all schools and their institutions in order the peoples can flocked to the event. The big event encourages the atmosphere of joy because they lived together in the open space area of surround of the Seger Hills.

Based on the “Bau Nyale” Festival 2017 the district created a temporary parking, a livinghood along the coast, a temporary market, a temporary toilet, a stage entertainment. The early morning is the peak of the “Bau Nyale” Festival. Visitors took place the seashore to across the sand and rocks in the South Beach. So, they prefer to ware a shorts skirts, pants or clothing to avoid the hit water from the beach. By learned the habit of visitors during the festival, so the Mandalika Resort can encourage to visitors to ware the originally Sarong of Sasak during the “Bau Nyale” Festival to generate the creative economy value of the craftman of Lombok weaving

and the rattan handicrafts of Lombok to participate in creating the distinctive products. The architectural solutions to encourage the creative economy in the “Bau Nyale” Festival is proposed the architectural solutions such as: (a) preparing food trucks or used car to maintain the appearance and cleanliness, (b) preparing a camping ground facilities and cooking equipment permanently, (c) water resources facility and toilet, associated with the drainage, (d) waste disposal facilities, (e) Information facilities, (f) wifi access, (g) the culture stage facilities in knock-down to easily installed and removed.

“Left-Right Tracks Parade“ to Visitor Seats

The locale potentially of Sasak is the “Bau Nyale” Festival is contributed by all of Nusa Tenggara Barat province delegates to participate to the Putri Mandalika Competition and held by a Great Parade. It is the embryo of a world class fashion carnival. By learned the success story of the Jember Fashion Carnival (Faris, 2017). He told about his success story to be the international communities of carnival by strengthen the Jember human resources by exploring the mythical legend related the place. So, the storytelling about Princess Mandalika can be leading as the main storylines to the parade by invited the world class of festivals community artist to join annually in Mandalika Resort. To facilitate the event, so Architect proposed the Parade’s Architectural Solutions by design the “Left-Right Tracks Parade“ to provide a comfort zones by created a visitors cover seats non-permanent along the road crossed of the cultural parade.



Figure 1. The artistic status related to *The Princess of Mandalika Legend* (Source: Yuke Ardhiati, 2017).



Figure 2. The artistic Amenity Core of Mandalika Resort Master Plan shows the originally heritage curve of Mandalika based on “ukel” form - a never ending circular shape of the Mandalika Endemic Flower (Source: PT Perentjana Djaja, 2017).

Artificial Intelligence Design Process

The availability of data in the form of photo/ image documentation related to Princess Mandalika to complete the needs of Increased Reality in the form of various properties and characteristics are artifacts that must be informed, such as: statues and monuments, architectural forms, sea atmosphere, building interiors, and so on. At present, these data are stored as part of the Resort Design Guide of PT ITDC which was developed with PT Perentjana Djaja Architect Consultants.

The application of Increased Reality for Indonesian tourism destinations is expected to improve the experience of tourists (who use Google Glass in the future) when traveling. Increased Reality will display in the view of Google Glass users in a visualization, including:

1. "Real" information about the location and features, including comments made by previous visitors from internet access.
2. Allows tourists to experience simulations of historical events, places and objects by making them enter into their visual views.
3. Presenting location information with audio and text (including translators of all languages prepared by Google Translate).

Conclusion

Post the Master Plan of Mandalika Tourist Region of Lombok created by PT Perentjana Djaja Architect, the AI may create to enrich the district. The prospect of the AI project; (a) to create the sacred spot related to the origin of religion of Sasak itself and the legend of Putri Mandalika. By thus the Architect's Team was accommodate the President Joko Widodo's idealist to wish to create "festival for the peoples". They strengthen the Mandalika Resort Master Plan by adopted the heritage tradition "Bau Nyale" Festival as well as the folklore legend "the Princess Mandalika". The legend adopted to be a storyline of the resort a world-class tourist region. (b) The Resort Design Guidelines of Mandalika Resort was adopted the Architecture-Event design approach by accommodated the six criterias. (c) One of the uniqueness of the Mandalika Resort Master Plan is "the Teten of Sasak" Cultural Buffer Zones the resort region guaranty to be a sustainable resort area because of they reduce the disparities between visitors and the locale people of Sasak- Lombok.

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