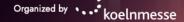
#### Code +:

Cyber Archiving, Interactive
Documentary, and Immersive
Experience for the Digital
Heritage Narratives of Asia







#### Presentations

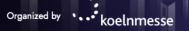
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Time	Presenter	Title
9-10 am	Mr. Chen Wu Wei	Cyber Archiving of Namsan Heritage
10-11 am	Ms. Sun Yunke, Mr. Wang Letian	Mapping and Interactive Documentary of Batik Lawyan in Java
11 am-12 pm	Mr. Zhu Yanru, Mr. Xiong Haochen	Mixed Reality Narrative for Erhu Artist Arbin
12 pm	Closing Session	Q&A



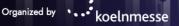




{ Session }

# Cyber Archiving of Namsan Heritage







#### Contents

Namsan and Its Religious Assets

Iconography of Namsan Deities

Samneung Gok, Yeombul-am, and Sinseon-sa

Digital Heritage Narrative







## Namsan and Its Religious Assets

Unified Silla Period

Samguk Sagi (History of the Three Kingdoms)

Samguk Yusa (Memorabilia of the Three Kingdoms)







## Namsan and Its Religious Assets

Excavation site

Statue

Rock carving

Pagoda







## Namsan and Its Religious Assets

T'ap Kok, Bul Gok,

Miru Kok, Samneung Gok,

• • • • •





# Iconography of Namsan Deities

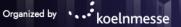
Maebul

Sanjon

Yukjonbul

Bodhisattva







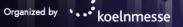
# Iconography of Namsan Deities

Petroglyph

Statue

Rock carvings







# Samneung Gok, Yeombul-am, and Sinseon-sa









# Samneung Gok, Yeombul-am, and Sinseon-sa









# Samneung Gok





## Samneung Gok

**Entrance | Samneung Valley** 









Limb of statues Limb of statuesPetroglyphs









Limb of statues

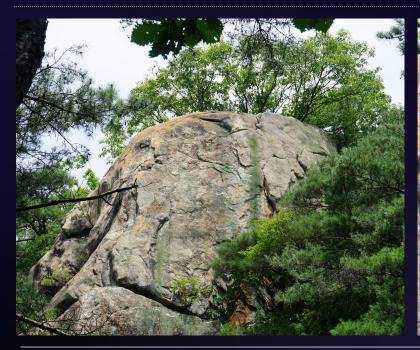








Maae Seongak statue









Seongak Yukjonbul | Buddha Hexad









Seongak Yukjonbul | Buddha Hexad





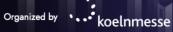




Maae Buddha statue

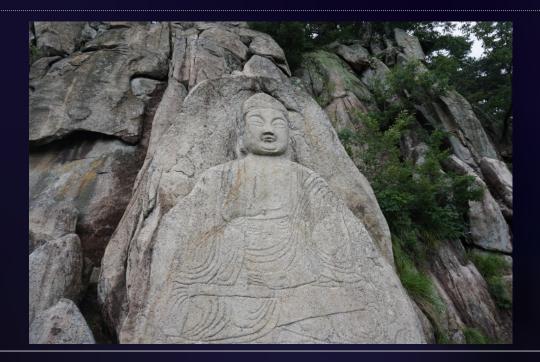








Maae Buddha statue





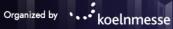




Maae Buddha statue









Seated Stone Buddha Statue

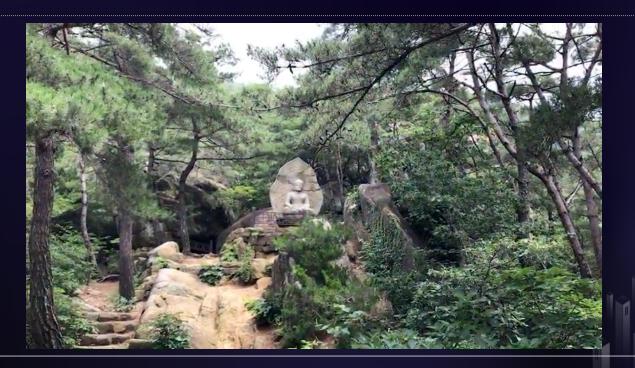








Seated Stone Buddha Statue









Seated Stone Buddha Statue







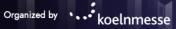


Avalokitesvara Bodhisattva Statue











## Sinseon-sa





#### Danseoksan

Rock carvings | Sinseon-sa Temple



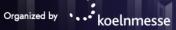














#### Yeombul-am





Maaerae Statue | Dongwa-sa Temple



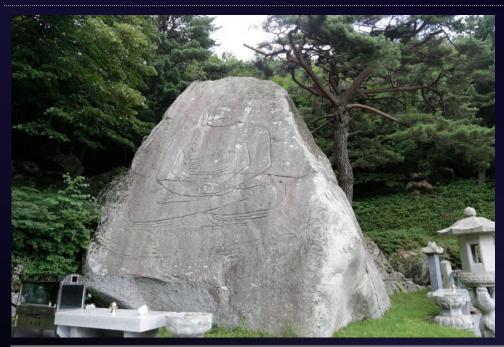








Maaerae Statue | Dongwa-sa Temple









# Digital Heritage Narrative

Aerial Survey

Documentation



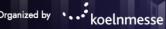


#### Aerial Survey

Samneung Gok | Samneung Valley









#### Aerial Survey

Samneung Gok | Samneung Valley



EXCO, Daegu, South Korea





#### Documentation

Samneung Valley | Recap Pro









# Driving Diversity

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#### Contact }



#### Chen Wu-Wei

Assistant Arts Professor, IMA
Affiliated Faculty, CGA
NYU Shanghai
wc54 @ nyu.edu







**Conference** 17 - 20 November 2020 **Exhibition** 18 - 20 November 2020

EXCO, Daegu, South Korea

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# Mapping and Interactive Documentary of Batik Laweyan in Java







## Project Aim

- Propose the concept of Digital Heritage+.
- Use interactive documentary (Batik project as an archetype), where interaction occurs between people and intangible cultural heritage (ICH), to resurge and encourage ICH to be ingrained in people's everyday life.
  - Glocalization
- Bridge the gap between researcher community and general public.







## What is Interactive Documentary?

"Any project that starts with an intention to document the real and that does so by using digital interactive technology can be considered an interactive documentary (idoc)"

[Sandra Gaudenzi, 2014]



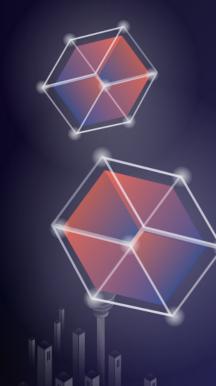




### Four Interactive Modes

- 1. Conversational Mode
- 2. Hypertext Mode
- 3. Participative Mode
- 4. Experiential Mode

[Aston & Gaudenzi, 2012]







### Four Interactive Modes

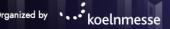
Conversational Mode That Dragon, Cancer



Hypertext Mode Journey to the End of the Coal



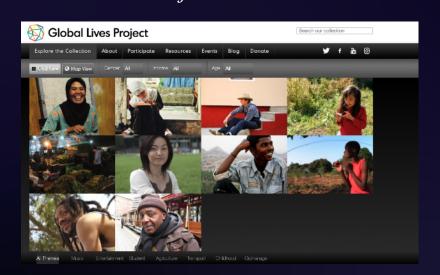






### Four Interactive Modes

### Participative Mode Global Lives Project



## Experiential Mode Frankie Project







### Why i-doc?

### Traditional Digital Heritage Projects

- Maps, 3D Models, Articles/Blogs, etc.
  - o lack of narrative framework
  - o lack of interactivity (monotonous interactivity, viewers' community)

Interactive Documentary can compensate for the shortage

• **Feature: "Constructing** the Truth rather than representing the truth". [Aston and Gaudenzi, 2012]

I-doc as a mean of digital heritage: Redesign traditional elements and incorporate them into the interactive documentary





### **BATIK**

Introduction to Batik





## **Driving Diversity DAEGU**

### What is Batik?

SIGGRAPH ASIA 2 20





An old Javanese word that means "to dot" or "to stipple"

Derived from the word 'ambatik'

The suffix 'tik' means little dot, drop, point or to make dots

### **BATIK**

What is batik







**Diversity** 



### **Introduction to Batik**

**Geographical Distribution** 



Design - Making



Tools





Meaning - Symbols









## Uncertain Origin

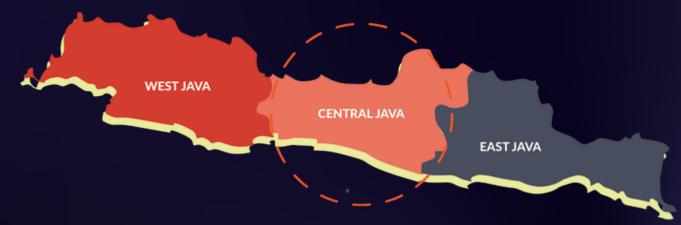








### Uncertain Origin



- Evolution
- Javanese Batik achievements



### **BATIK**

What is batik



History - Origin - Development





Diversity



**Geographical Distribution** 

Design - Making





Tools

**Patterns** 

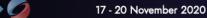


Meaning - Symbols





**Introduction to Batik** 

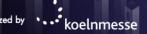




## Geographical Distribution









### Design

### Geometric motifs and Free form design

### **Geometric Motifs:**

- Geographical difference
- Reserved for particular groups of people
- Social rank eg. royalty, Sultan and etc.

### Free form design

Based on stylized patterns of natural forms or imitations of a woven texture

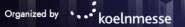




## Symbols - Meaning

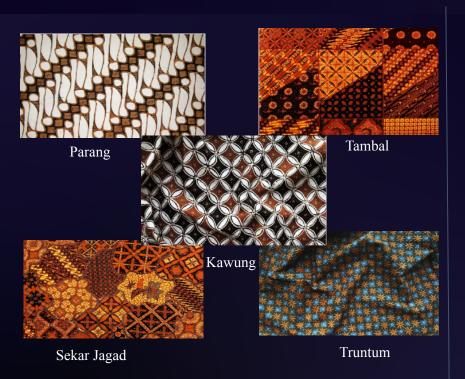
- Indonesian identity
  - Everyday life/ ceremonial events
  - Spiritual meaning
- Social hierarchy
  - Ordinary people vs. royalty
- Foreign influences





## Motifs (Patterns)

**Traditional** Modern

















## Interactive Design for Indonesian Batik





### Previous Literature

"A fundamental challenge for designers and the designer community is to move from designing 'things' (object, artifacts) to designing Things (socio-material assemblies)" --- Pelle Ehn(Malmo university)

things Objects, Artefacts
Things Practices, Representations, Expressions, Knowledge and Skills

We aim to create a human centered experience







### Heritage and the Creative Industry - Nanci Takeyama

This project was a dialogue between the design of 'things' and Things.

**Conclusion:** Design needs to start by understanding the meaning and importance of culture and design of Things can contribute to heritage.







## Case Study: Bagan Project

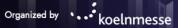
Propose interactive documentary as an approach to create a digital preservation of cultural heritage project

Aston, J. and Gaudenzi, s. 2012. Interactive documentary: setting the field. Studies in Documentary Film 6, 2, 125-139.



May 2018 | By Google Arts & Culture







## Case Study: Bagan Project

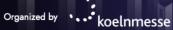






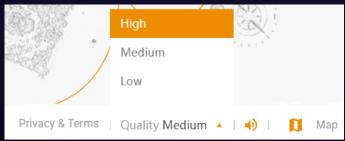








### **Functional Tabs**



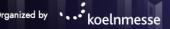




### Digital Heritage+

- Unlike previous digital heritage projects, we propose the concept of Digital Heritage+
- We understand 'things' as separate digital objects (video footages, 3D models, code, etc.)
- Instead of solely creating 'things', we connect them to design 'Things'
- Programmers, artists, researchers and TV producers, together with our audiences, produce human-centred, narrative-based content, to express and construct the facts of intangible cultural heritage







## People- thing/Thing Binary

People to thing/Thing

thing/Thing to People

People to People

People to People





## Co-creation and Participatory Design

Rethink the design of interactive documentary in technological, cultural and human side







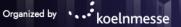
## Co-creation and Participatory Design

"Co-creative media provides a tool for describing the ways in which participatory media are facilitated by people and organisations, not just technology..."

"The term complicates the idea that participatory culture is the product of an autonomous relationship between the individual creator and the magic of technology"

Spurgeon et. al, 2009







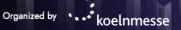
## Co-creation and Participatory Design

A central question arises: How can participants not just take part as cocreators, but also how to define the terms of projects?

Emerging projects suggest what participatory design approach might be within documentary.

Eg. Question Bridge subjects being asked the question VS. being able to post questions







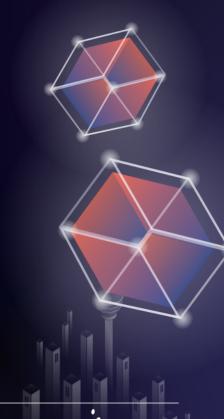
### How to design a Digital Heritage+ project?

- 1. Brainstorm on a particular culture
- 2. Find out what elements to include if making a traditional documentary
- 3. Confirm what parts can be digitalised (e.g. 3D models) and what parts cannot (normally video clips)
- 4. Define which interactive narrative mode to use (fundamental of i-Doc)
- 5. Design a prototype (UI, UX)
- 6. Develop creative code
- 7. Test and finalise the project with audience



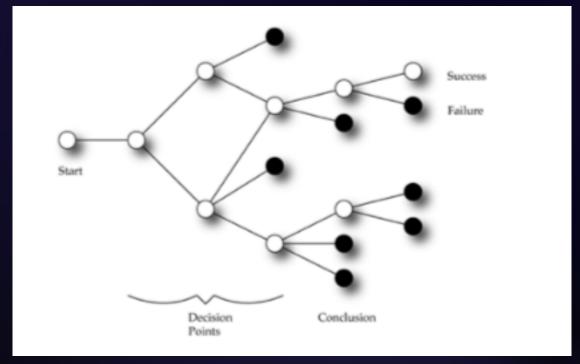


# Fundamentals of i-doc: Interactive Narrative





## **Branching Structure**







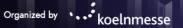


### Pseudo-linear (Fictional) Narrative

One Day Tour







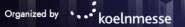


## Pseudo-linear (Fictional) Narrative

#### Features

- Construct the reality
- Give more agency to the audience
- Allow better integration of components and videos like a real experience

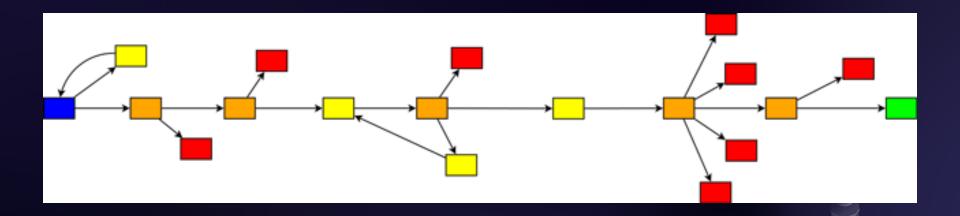






### Forms of Interactive Narrative

- Gauntlet



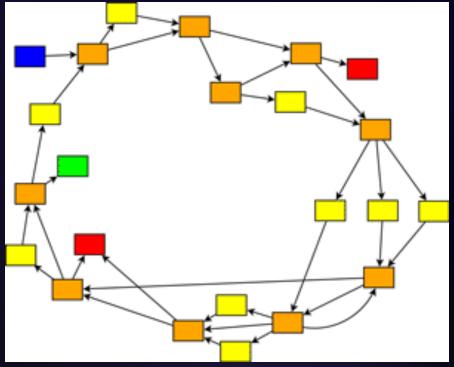






### Forms of Interactive Narrative

- Loop and Grow



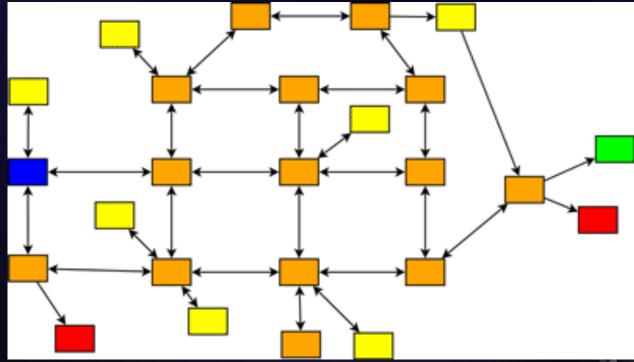






### Forms of Interactive Narrative

- Open Map









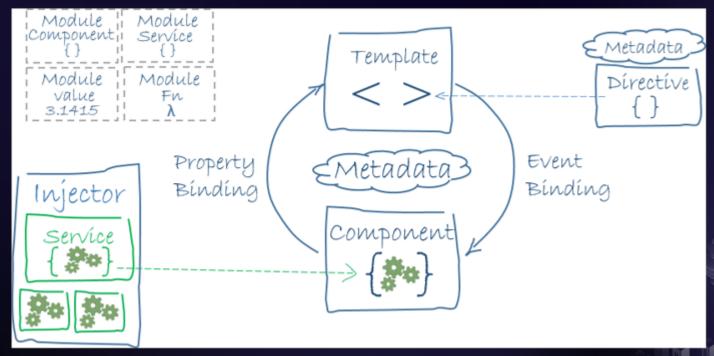
### Technology Involved

- Prototype -- Axure
- Web Development
  - Current: html css js
  - Future development: framework eg. angular
- Database (for different story components)
  - Current: local storage
  - Future development: MongoDB or MySQL





# Component/Services Concept







# Module & Component-based Structure

#### Features

- Maintainable
- Easy to build the connection between the content and programme module





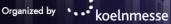


# Module & Component-based Structure

Practices (How to build the programme)

```
E.g.
    Map Module - > {
              Map Component
              Third-party Map API service
         Forum Module - > {
         Landing Page -> Landing Page Component
    Comments -> Comments Component
    LogIn/Validation Service, Registration Service, FetchData Service
```





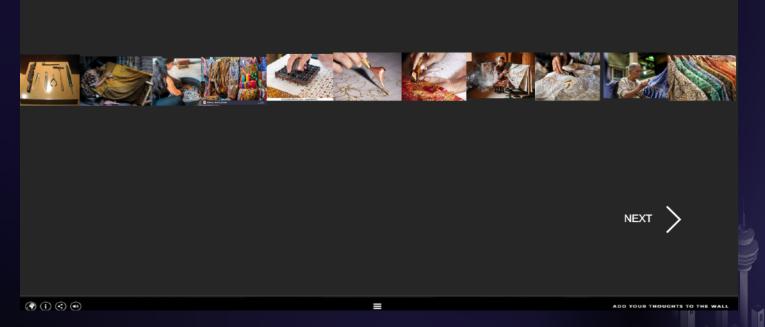


**Landing Page Stories** Gallery/Interactive Map Game **Ending Page (Forum/Featured Contents)** 





# Project Demo



https://github.com/kratewong/Batik-Laweyan-in-Java







# Future Development

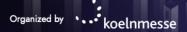




# Mapping and Crowdsourcing Technology

- Map serves as an index to locate and display specific Batik Laweyan
  - The UI of an interactive map would deliver a better user experience
     → more real and immersed experience
- Interactive map is a place where crowdsourcing technology could take place
- Write comments/upload files
- Mapping data comes from crowdsourcing







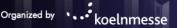
# Crowdsourcing

"Crowdsourcing can be thought of a specialized variant of <u>outsourcing</u>, one where specific content is solicited from a large, and often anonymous, online community. Individuals respond to a call for information by providing small amounts of data."

Bynum et. al,2019

Application: Create a Batik Laweyan online community where users can upload comments and share photos/videos to the forum







# Gallery









### Gamification

- A Batik Texture Design Workshop
- The game will allow players to customise their own clothes by using the knowledge gained from the documentary
- Upload your design, appreciate other people's design
- Game Incentive Mechanism -> Badge System, Popup messages, etc.
- Use map to find the nearest designer and their Batik design/ different design styles
- Community Engagement (share the design to online community/social media)

#### Features:

- Customisable -> interactivity
- Location-based -> close to the real life
- Social Media Friendly -> Community building
- Business Potential -> Further development





Tools

Wajan Canting



Cap



Wax



Dyes



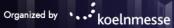




# Crafting Space/Workshop





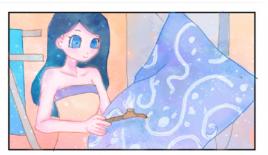




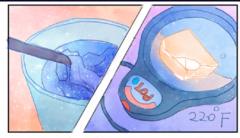
# Making Process



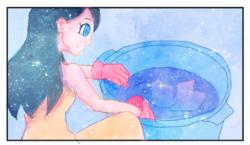
Step 1: Drawing the pattern on your fabric with a pencil.



**Step 3:** Start applying your wax with tools of your choice. You can use Tjanting tools to create detail and fine line designs.



Step 2: Pre-wash your fabric to remove any impurities that might interfere with dyeing.Pre-dye a few of your fabrics in some different base colors.Start melting your premixed Batik Wax in the little melting pot.

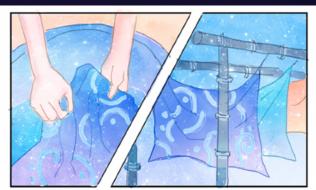


**Step 4:** Tub Dye the fabric, first using the lightest or brightest color that will be on the piece and will mix well with successive colors.

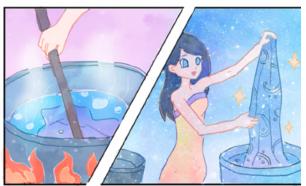
koelnmesse



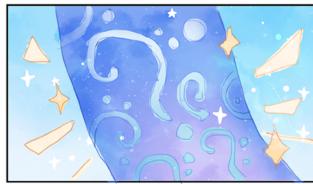
# Making Process



**Step 5:** Rinse and gently hand wash the fabric in Synthrapol and allow to dry. Use lukewarm water so as not to melt your wax!



**Step 6:** Choose a pot to boil the wax out. Wash your fabric one last time.Dry your fabric.



**Step 7:** Now you can get to sewing, quilting, wrapping or just hang it up because it looks so good you can't bare to cut it up!





# The Use of Question & Quiz

- Quiz as narrative
  - XX percentage of people made the same choice (Instant feedback to the user once they finish quiz/question)
- Quiz as a research tool
  - Collecting data and displaying the data to audience
  - The possibility of sending the quiz answer to database for further study

- Concept:
  - Data-driven narrative
  - Inspired by interactive news/ journalism









# Interaction with Real Space

### Media Installation

- 3 screening (life & batik, making process, batik architecture) and 1 control device

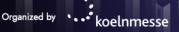


Img source: <a href="http://">http://</a>

marcinignac.com/projects/digital-

type-wall/\_SE01701.jpg



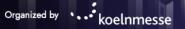




### Conclusion

The shift from Digital Heritage to Digital Heritage+, realized by interactive documentary, resurges and encourages ICH to be ingrained in people's everyday life and allows more interaction to happen between the general public and scholars.







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Global Lives Project - A Video Library of Life Experiences. Global Lives Project, 2020. https://globallives.org/

Honkytonk Films – Online screening: Journey To The End Of Coal. *Honkytonk.fr*, 2020.

That Dragon, Cancer. That Dragon, Cancer, 2020. <a href="http://www.thatdragoncancer.com/">http://www.thatdragoncancer.com/</a>.





# Acknowledgement

Junhao Guan - Web technology support

Mbak Dhian - Consultant of Batik textiles

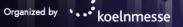
Weiye Dai - Painting

Wuwei Chen - Coordinator, supervisor

Ranang Agung Sugihartono - Documentary film production

Indonesian Institute of the Arts, Surakarta - Academic support







### Lecturers



Letian Wang

Letian Wang is an M.Sc. student studying interactive digital media at Trinity College Dublin. He previously exchanged to Coventry University, where his research on the interactive documentary (i-doc) began. He has a BA in Film Director/ Journalism from Communication University of China, Nanjing. His research interest includes i-Doc, Digital Media Art, Digital Heritage, Gamification and HCI. Letian is also a multimedia. storyteller. His short film JUMP got several nominations at Birmingham Film Festival. Letian's interactive documentary Lolita Fashion, which explored i-Doc's business potential, is one of the very first i-Doc practices in Mainland China.



Yunke Sun

Ms. Yunke Sun is pursuing her graduate studies at the MSc Digital Humanities Studies in the Department of Information Studies at University College London. Ms. Sun graduated from University of California, Santa Barbara with B.A. in both Psychology and International Relations, Sun is fascinated with how the human mind and brain interact with cultures and societies. Her current research includes topics of human computer interaction, especially affective interface or affective design. Sun is also interested in the combination of humanities and technologies to help implement preservation of cultural heritage, with a focus in East Asia.





### Co-Authors





### Ranang Agung Sugihartono, S.Pd., M.Sn.

<u>ranang.as@gmail.com</u> ranang@isi-ska.ac.id

I am an alumni of the Malang University and Bandung Institute of Technology. Currently, I am a lecturer in the Television & Film Department at Indonesian Institute of the Arts Surakarta. Another of my activities are researching and writing for scientific journals and books. The books that have been published are entitled Teknik Foto Virtual Reality 360° (2007); Animasi Kartun: Dari Analog Sampai Digital (2010); Editing: Film, Televisi, dan Animasi (2019), In addition, I am also as an Editor in Chief of CAPTURE: Jurnal Seni Media Rekam and as Managing Editor of ARTISTIC: International Journal of Creation and Innovation.



# Dhian Lestari Hastuti, S.Sn., M.Sn.

dhianlestarihastuti@gmail.com dhian@isi-ska.ac.id

Dhian Lestari Hastuti is a lecturer at the Interior Design Study Program, Department of Design, Faculty of Arts and Design, Indonesian Institute of the Arts Surakarta since 2008. I have been active in arts and cultural heritage activities, especially in the Community of Batik Laweyan area since 2006 until now. I also have contributed to the Creative Economy development since 2012, and have even been the Chair of the Solo Creative City Network in Surakarta since 2015 until now. Currently, I am pursuing a Doctoral program in Fine Arts and Design, Bandung Institute of Technology since 2019.





# Mixed Reality Narrative For Erhu Artist Abing

Yanru Zhu & Haochen Xiong

September, 2020

### **Course Outline**

- Research Background Chinese Folk Music on the Move
- Introduction of Erhu, A'Bing, and His Memorial Museum
- Our Application on the Museum Idea, Methodology, and Demo
- Expansion on the Application What's Next?



# **Contradictory Situation**

- Progress such as how the Chinese government tries to promote its development as a way to carry forward its traditional culture
- We did not see the extensive acceptance of it in the current mass culture of China:
  - It is perceived as inferior to western pop music
  - Always tagged as "out-of-date" and "stagnant" among the younger generations

### Chinese Folk Music Throughout The History of China

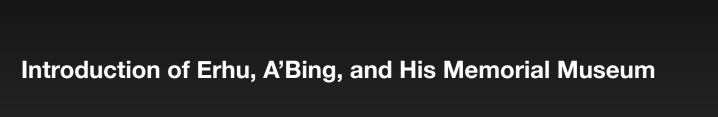
- Ancient Time (before 1840)
  - the content and the form of music within China have been distinguished according to the corresponding social strata, mainly between the literati and the greater public
  - the absorptions of foreign music culture happened in the formation of Chinese music
- Modern Time (1840 1949)
  - The emphasis of this period comes from how the great social instability that happened in China has changed the way people look at "tradition" and all the appendage around it, in which music born one of the most brunt of it

# **Current Situation**

Progress

Stagnation

• The relationship with the government



# Erhu (二胡)

- A traditional Chinese instruments
- A two-stringed bowed musical instrument, more specifically a spike fiddle, and sometimes known in the Western world as the Chinese violin or a Chinese two-stringed fiddle.



# Erhu (二胡)

Known by more people from the Central Plains

**Song Dynasty** 

Introduced international techniques and standards

**Modern China** 

#### **Tang Dynasty**

Originated from Xiqin(奚琴), a proto-Mongolic instruments

#### **Yuan Dynasty**

Used as a solo or ensemble in a banquet, and appeared in military performances

[Working In Process]

# A' Bing (阿炳)

- 17 August 1893 4 December 1950
- A Chinese musician specializing in the erhu and pipa
- Famous for its music pieces such as 二泉映月 (The Moon's Reflection on the Second Spring) and 大浪淘沙 (Big Waves)



## A' Bing (阿炳) - Timeline

#### Learning

He learned instruments with talent from his father and famous musicians in the town.

#### **A Critic**

He performed music on the street with the theme of reflecting the current situation of people and nation.

#### **Music Live Forever**

His music was heard by academia, and people were amazed by his emotional music. Sadly, he passed away soon after the first time his songs were officially recorded.

#### Born

Father was a Taoist priest, and her mother was a widow who passed away one year after his birth.

#### **Lost Eye Sights**

The death of his father and bad operation of the temple drove A' Bing into poverty.

#### Suffer More

He was prohibited from playing Erhu because the content is related to politics. What made things worse was that he suffered more from diseases. However, he composed many pieces of music with reference to his life experience.

[Working In Process]

# A' Bing Memorial Museum (阿炳纪念馆)

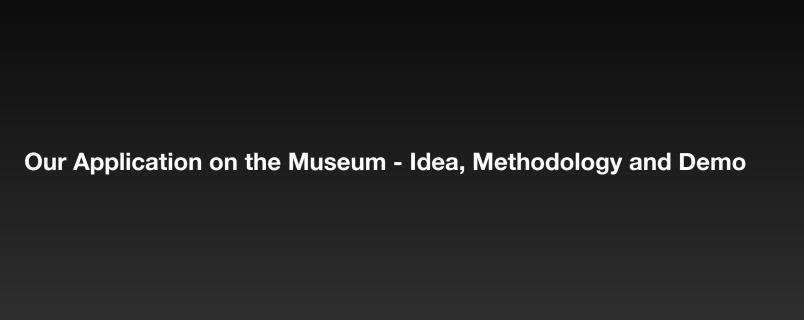


- Located in the downtown of Wuxi City but few visitors
- Whole exhibition experience is "out of date"

# A' Bing Memorial Museum (阿炳纪念馆)



- Uses objects and papers to present the life story of A' Bing
- Basically no narrative in the museum
- Audience cannot have a vivid conception of A' Bing after visit.

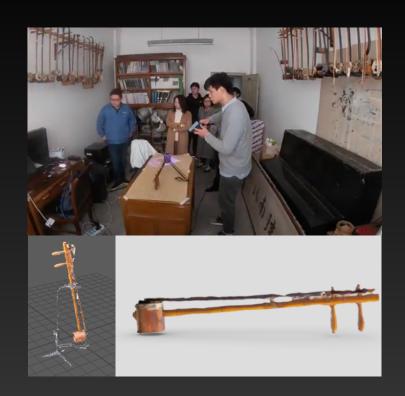


# **Mixed Reality Narrative**

The goal for this part is to create a new way of storytelling for A' Bing, Erhu, and also traditional Chinese music as a whole. As we found the confusion in the current exhibition system, we aim to discuss the possibilities of applying mixed reality narrative to our targeted field so that a better visual and acoustical bond can be built between the exhibition and the audience.

# **Photogrammetry 1**

We previously visited a museum exhibiting an Erhu owned by A' Bing. With their permission, we use photogrammetry technique to record a 3D model of A' Bing's Erhu.



# Photogrammetry 2

A'Bing's Memorial Museum

# **Mixed Reality Narrative in the Museum**

We want to give the a visual contact as the interaction with the museum so that the visitors can closely feel the space and also the story back to A'Bing's time. In all, we want to tell the visitors that what we should learn from the space is actually not "protecting" but "creating", for Chinese Folk Music





### Thanks!