



# **Applying Multi-Document Summarization to the Singapore Memory Portal**

**Chris Khoo, and students**

**Wee Kim Wee School of Communication & Information  
Nanyang Technological University, Singapore**



# Singapore Memory Portal (SMP)

<https://www.singaporememory.sg/>

- Cultural heritage portal by the National Library, Singapore
- Crowd-sourced from the public
  - Collect memories (reminiscences) about Singapore's history, culture, society, life/lifestyle and landscape/architecture



## **THE CASE**

**Cultural heritage portals are not organized to support user learning**





ADD YOUR  
MEMORY

DISCOVER  
MEMORIES

CHRONOLOGY

LOCATION

LATEST

ktm



## SEARCH RESULTS

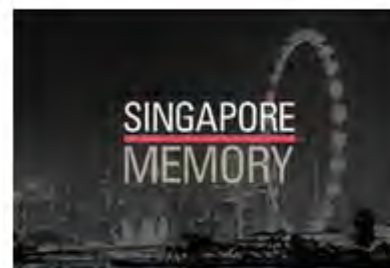
NO OF RESULTS : 42



Remembering our Pioneer Train ...

by N/A

These are our pioneer train drivers, senior drivers with more than 30 years experience since the 1930s, who have driven various steam locomotives on ...



Walking down KTM railway track...

by N/A

When I was at the age of 7-12 years, I walked a lot, to school, library (with a short trip by bus). I lived at Everton Park and studied at Silat Pri...



KTM train

by N/A

KTM train passing by Choa Chu Kang (CCK), where I live.



KTM locomotive in Tanjong Paga...

by N/A

(This is an excerpt from an interview with retired KTM train operator Mr. Abdul Halim) KTMK: Dear Mr. Halim, please tell us about yourself. AH: I w...



In 1988, I was 17 years old. I was catching the KTM train from KL to Singapore. I was alone and I just



They shut the rail And a lost world is created The weed grows the birds make it their home Over the rusty



Highlights Collections Browse Contributors Sign In / Register

463,198 memories added



ADD YOUR  
MEMORY

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## COLLECTIONS



### irememberAlkaffMansion

Share with us your memories and stories of love and celebration at Alkaff Mansion!

[VIEW THIS COLLECTION](#)

[ADD MEMORIES](#)



### What's Your SG Environment Story?

If you have a story to share, we want to hear from you!

[VIEW THIS COLLECTION](#)

[ADD MEMORIES](#)



# The case

- Knowledge organization
- Summarization
- Visualization

Of portal content to support **User Learning**

## Assumption

Learning about a topic involves synthesizing information into a **coherent understanding**

-- some kind of **knowledge organization** that links related aspects





# **Organizing heritage resources to tell a story**

**Museum and heritage professionals realize that for heritage resources to engage the general public, they need to be organized to tell a story, embedded in a narrative context, or stimulate storytelling.**

**(“Are museums about stories or objects?”, 2009)**

# Knowledge organization scheme with 2 levels

## Upper-level Taxonomy

- To support user **browsing**
- To provide a topical overview and browse structure

## Lower-level Ontology relations

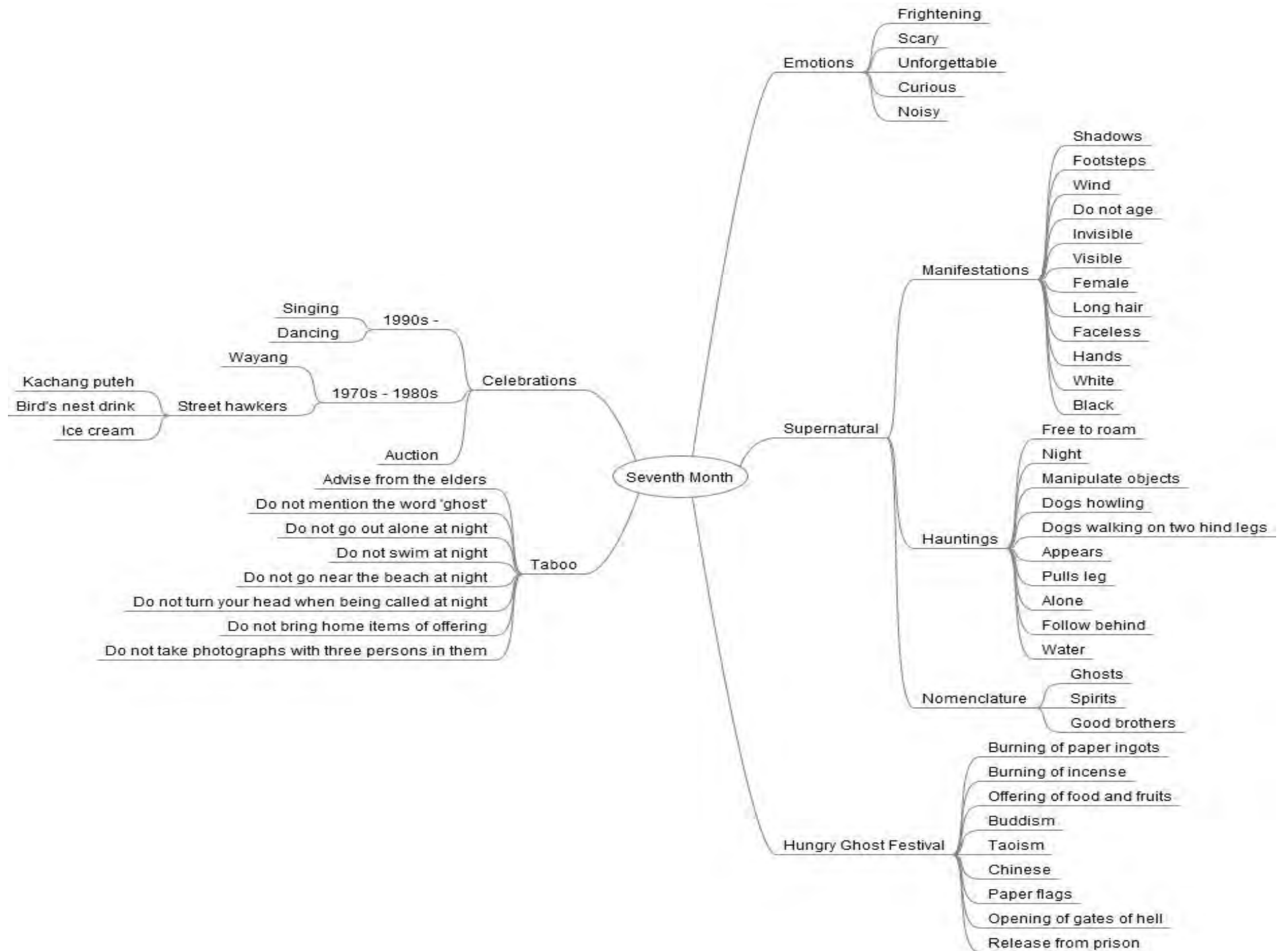
- To support user **learning** and information synthesis
- To represent the types of information available on specific topics





# Our approach

- We asked students to read postings on a particular topic and write an essay (in point form) on the topic
- They also drew a **mind map** to represent important concepts and relations
- We study how users synthesize an understanding of a topic, as reflected in the essay
- Analyze the types of information selected and how they are organized





# Organization structure

## Basic facts

- Most of the essays start with one to three sentences summarizing the basic facts about the topic
- Suggests that people have some idea what constitutes basic facts about a particular type of event or entity



# **Festivals**

## **Basic facts**

- **name and alternative names**
- **definition (what it is)**
- **date of origin (when first held)**
- **origin story (how it came about)**
- **typical date (e.g., month it is typically held)**
- **frequency (e.g., annual)**
- **associated people group (who celebrates it)**
- **the main activities and performance items**

**May include related festivals and a short interesting or amusing fact about the festival**





## SENTENCE CATEGORIZATION DEMO



SEARCH RESULT FOR "CHINGAY" : 89

Festival Category

Name **22**  
 Function **16**  
 Significance  
 Experience/memory **67**  
 Origin  
 Date **17**  
 Associated people group **2**  
 Associated activity/event **48**  
 Program item  
 Related festival  
 Interesting fact  
 Timeline **14**  
 Cultural attribute **12**  
 Location **1**  
 Wish **13**  
 KeyPhrase **66**

D3 Mindmap



Singapore Memory



SMA-0545e59f-0cb5-4fcf-b47e-5a95a672cc9a

Limelight The array of colours, emitted by millions of L.E.D lights, sparkled in the darkness from the floats. The water-filled stage in front greeted me with its reflective, silvery surface. Despite this vibrant atmosphere, waves of anxiety washed up the shores of my heart. Long, endless rows of spectators brimming with excitement and clapping away, further added to my nervousness. Just...



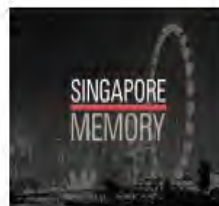
SMA-df1e8c23-69e4-4ef8-bb2f-96b3214967af

The little red dot people call home What is the meaning of home? Is it a place we live in? Or is it a place we feel safe? Is it the place our families are? To me, home, is where we feel that warm feeling deep in our hearts, where we make many memories, whether sweet or sour. It is where we belong-Singapore. My grandparents often tell me wonderful stories about Singapore's past. How we gained ind...



SMA-76f5792e-570e-4d84-9ae0-f8bff00f8abe

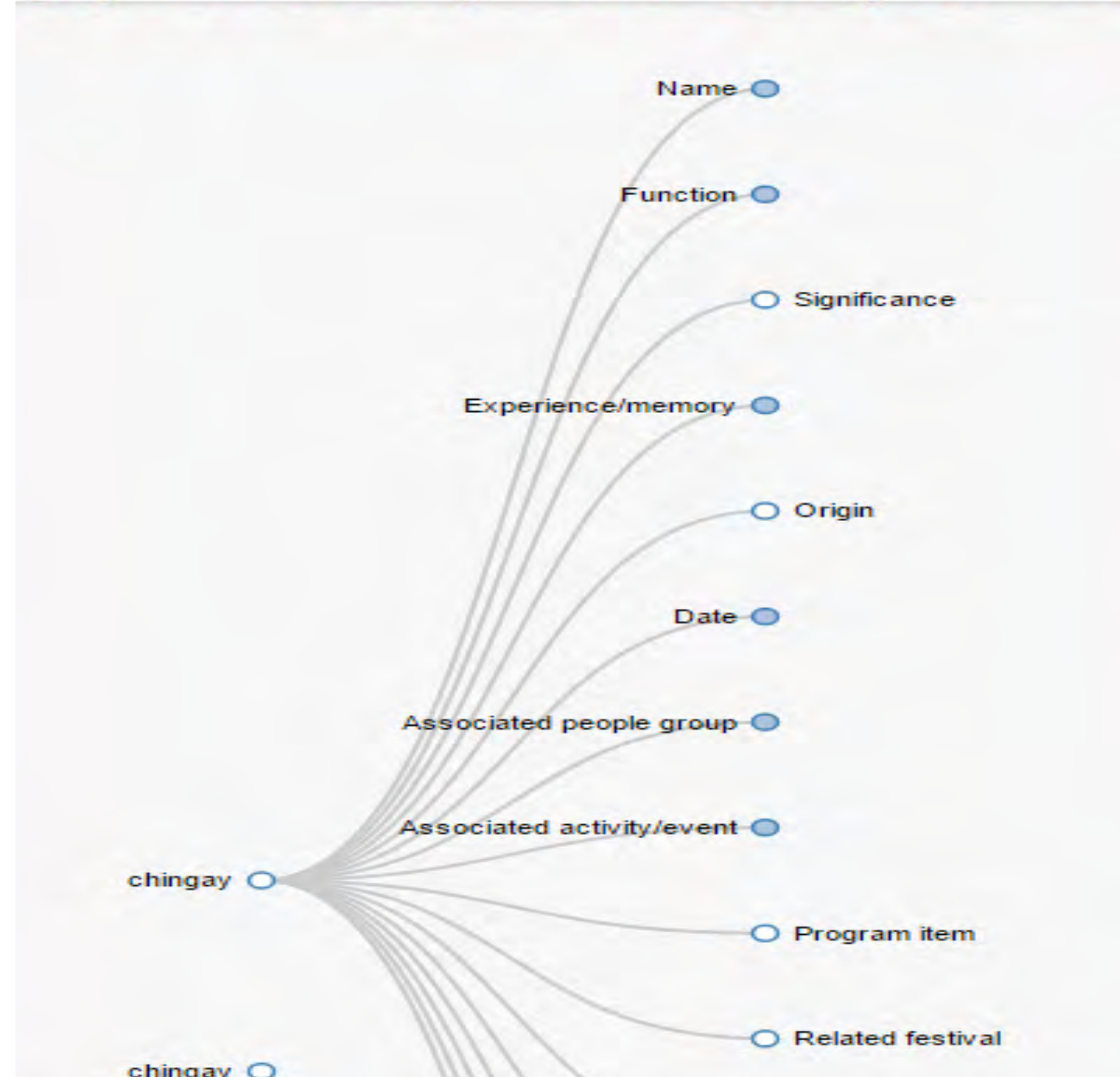
I participated in Chingay! 2013 for the first time... It felt good having known i was part of such a huge parade and i have contributed to the success of the parade.....



SMA-f80a991f-7be0-47f5-b09c-8226654fb800

I participated in Chingay last year (2012) and I have met awesome people there. We shared the tough times, the happy times and the post performance withdrawal syndromes. We forged friendships that was worth keeping and remembering. Earlier last week, one of my friend who was in my Chingay group passed away due to cancer. We were rather close during our Chingay trainings and her death was painful...

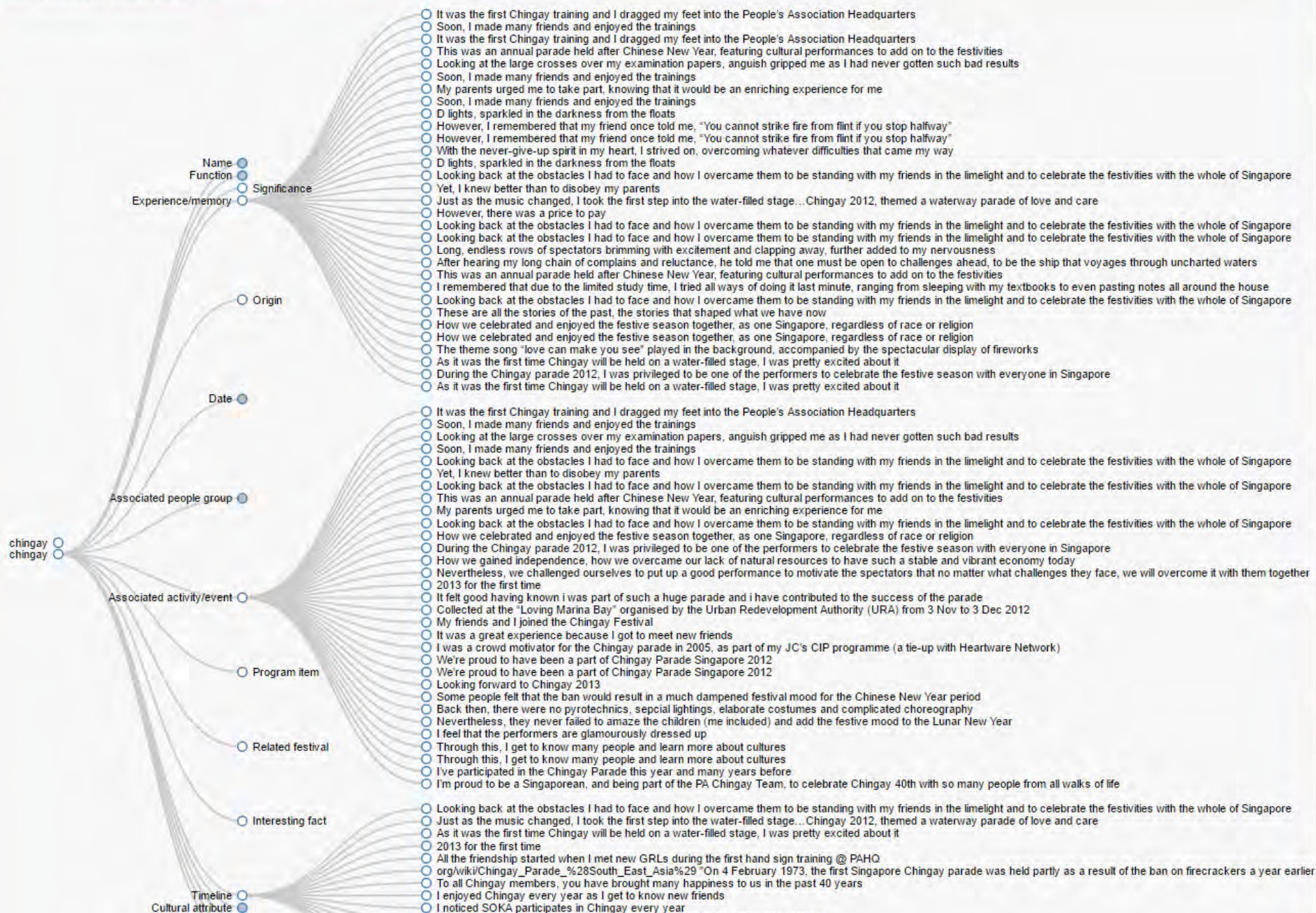
## Singapore Memory Portal D3 layout Tree





# Japore Memory Portal D3 layout Tree

click to expand or collapse nodes





**Thank you very much!**