

2nd International Symposium on Chinese NewsML

On Digitalization of News

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Outline

- ◆ **A brief review of media and related technology**
 - ⚙ **progress on media materials**
 - ⚙ **digital media**
- ◆ **A general model of digitalization**
- ◆ **Considerations on digitalization of News**
- ◆ **Concluding remarks**

A brief historical review of media

◆ Progress of Media

⚙ Changing in media materials

➤ **nature media → fabricated material media**
➤ **energy media → digital energy media**

⚙ **new media material → new tools**
➤ **new technology**

➤ **new ways of expression**

➤ **new concepts and new applications**

Being digital...

- ◆ New media introduces new functions and better performance.
- ◆ Digital energy media is the only media.
 - ❁ Any media that had ever been used in history can be transformed into digital media
 - ❁ The only media is usually called “multi-media”.
- ◆ In fact, any “form” can be digitalized. The collection of “digital archives” will provide synergy effect of collections.

Media and Civilization

Three-stages of civilization

⚓ **Audio Space**

⚓ **Visual Space**

⚓ **Audio Space**

— with electronic multimedia

Marshall McLuhan,
Understanding Media,
McGraw-Hill, 1964

stages

Expression system

Media Material

Audio Space

口語

Acoustic wave
No consumption

(素養問題)

Visual Space

文字

Material fabricated
with consumption

(功能素養問題)

**Audio Space
Electronic World**

多媒體

Energy-state in
material, almost no
consumption while
using

A General Model of Digitalization

Three aspects of digitalize an object

◆ Digitalize its appearance (form)

- ✿ Text, figures...
- ✿ Typesetting, binding...

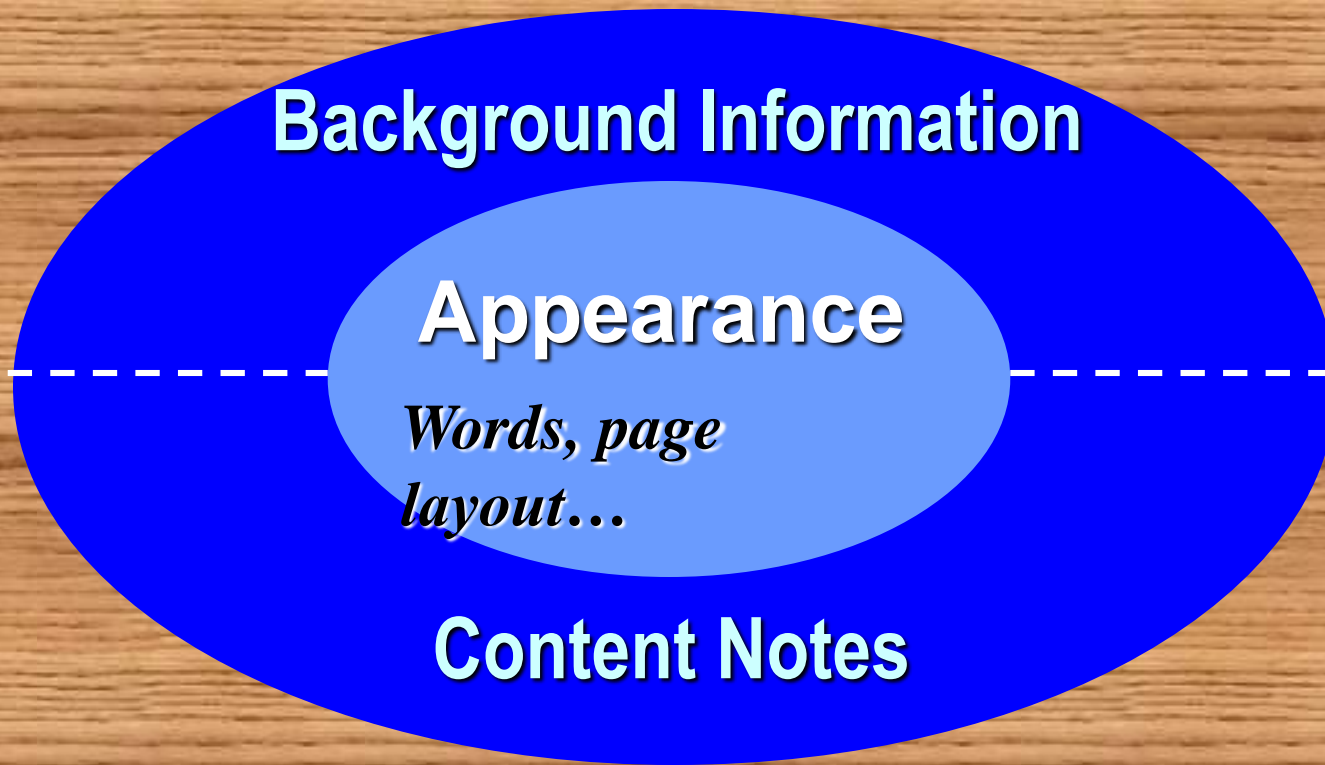
◆ Digitalize background information

- ✿ Bibliographic information
- ✿ Metadata for various purposes
- ✿ ...

◆ Digitalize content related information

- ✿ Interpretations
- ✿ Explanatory notes
- ✿ ...

Digitalization of an Object



Reference Links

◆ ***Inter-textuality***

- ❁ between texts

 - *Julia Kristeva*

- ❁ between disciplines

◆ ***Context Reference Links***

- ❁ authorial context, readership context

- ❁ personal, cultural, and social context

◆ ***Multimedia Reference***

- ❁ text to/from object

- ❁ Humanities vs. Nature

A Model of Digitalization

Multi-media
References

Context
References

Background Information

Appearance

Content Notes

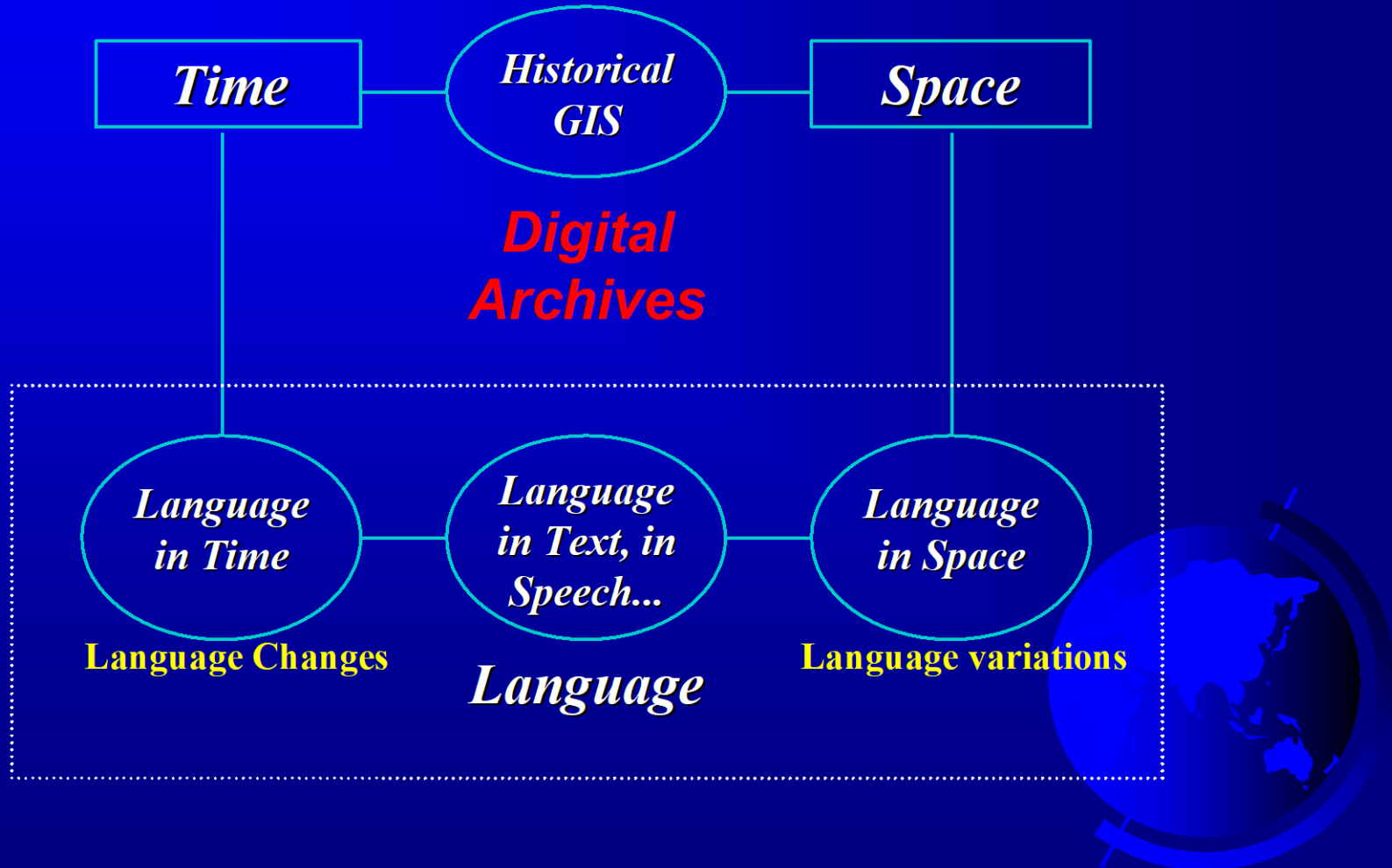
Intertextuality

A two-tiers structure of documentation

◆ Nature language and meta-language

Digital object	Expression system
Appearance	Nature language, signs and art languages
Background info.	Meta-language
Content notes	
Context references	

Space, Time and Language Coordinates for Digital Archives



Important Issues

- ◆ Organization re-engineering
- ◆ Intellectual property right
- ◆ Time, Space and Language Coordinates
- ◆ Multi-lingual issues
- ◆ Public information systems
- ◆ Technical Specifications and Standards
- ◆ Meta-language and Documentation
- ◆ Cooperation and collaboration
- ◆ ...

Considerations on the Digitalization of News

News Markup

- ◆ According to our model of digitalization
 - ⚙ various markups
 - ⚙ creation of background information
 - ⚙ content markup

Just as Examples

Content markup may serve as...

- ❁ a way to differentiate straight news and comments
 - within a news
 - link news and comments
 - among comments
- ❁ a way to bring journalism and education closer
 - news, science reporting and technical communication
 - links between news database and other databases
 - links between news database and course wares

Connecting to outside world

◆ **Inter-textuality**

- ❄ Among news
- ❄ news to other texts

◆ **Context references**

- ❄ Both news writing and news understanding are heavily influenced by context. Providing context information is a merit of digitalization.

◆ **Multi-media references**

- ❄ Link news to the physical world we living in.

Concluding Remarks

- ◆ Sooner or later news will be digitalized.
- ◆ News digitalization is a typical knowledge engineering work.
- ◆ News digitalization is new to all of us. It is a typical “learning by doing” kind of work. Besides, this work involves many specialties. Therefore, cross-discipline cooperation and collaboration will be the key to success.

Concluding Remarks

- ◆ After news being digitalized, the news enterprise will more close to the outside world, especially with some knowledge-based fields. Such as:
 - ❁ education, library and information science, archival studies, information management , cognitive science...

The End

Thank you very much