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あらまし

CC: Closed-Caption

CC

Visual Concept

2

キーワード Visual Concept

Summarization of news videos based on the consistency of news text and image contents

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Abstract This report proposes a method for summarizing news videos by selecting scenes whose image contents are consistent with the news texts. News videos are valuable resources because daily events are recorded in them. Therefore, there is a demand for efficiently watching a large amount of them. Some text-based methods for summarizing news videos have been proposed. However, they summarize news videos based on only their text contents, which leads to the problem that they do not take into account their image contents. Thus, the proposed method selects scenes whose image contents are consistent with the text contents considering "Visual Concepts" of each scene. Two kinds of subjective experiments were performed in order to evaluate the performance of the proposed method. As a result, we confirmed the effectiveness of the proposed method for various news topics.

Key words News video, summary, Visual Concept, Closed-Caption

1. はじめに

a

b

1

[1]

[2]

1

2 Visual Concept

CC: Closed-Caption

[3] [4] 1

[5] [6]

DCT

Visual Concept [7]

Visual Concept

3

2 Visual Concept

2.1 事前処理

2. ニュース文と画像内容の一致性を考慮した複数ニュース映像の要約

4

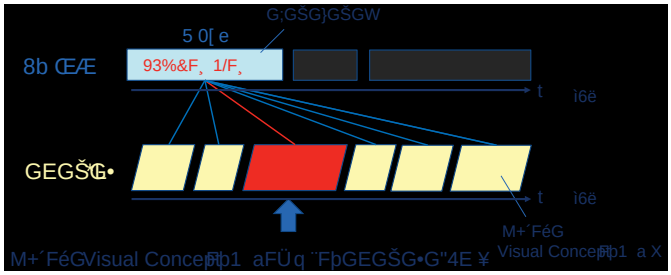
[8]

1

[9]

3

Visual Concept



5

Concept

2.4 要約映像の編集

Visual Concept

2.4.1

5

1 2.3.1

Visual Concept

2 1

3

1

1 Visual Concept 2.2.2

WordNet

Visual Concept

2.4.2

2

[9] 6

1

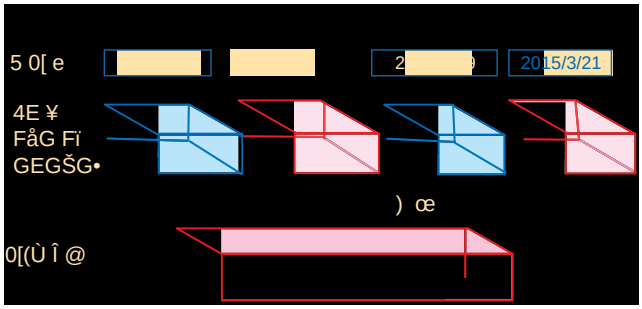
2

3

3. 実 験

2

3.1 ニュース文の内容と一致するシーンの選択方法に関する評価



6

1

	1	56%
	2	47%
	3	34%
	4	72%
	14	84%
	5	84%
	7	93%
	15	94%

	8	69%
	9	44%
	10	78%
	6	47%
	11	59%
	13	84%
	12	91%
		69.2%

3.1.1

NHK News7

15

- NHK News7
- 2013 1 14 2013 5 12
- Visual Concept 1

3.1.2

20 32

1

- 設問
- 回答方法

= (4)

3.2 実験結果と考察

32

69.2%

a 3 b
9

a 3 b
10

1 2 3

1 1
tf-idf

Visual Concept

2

Visual Concept

Visual
Concept
3 3

Visual Concept
3
3

3
3 9 10

Kumagai
[11]

4. む す び

謝 辞

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