

Commercial Detection in Media

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Abstract - In recent years commercial detection has become a much research area of digital media because of its huge importance. This commercial detection is also found in online media. Our goal is to reduce the commercial break keeping both commercial producers and audiences. But the task of detection of commercial in media is highly difficult because of varieties involved. Varieties involved are start and end of commercial break is not fixed, number of commercials appearing in a break is also not fixed, and duration of each commercial is different. Duration of commercial advertisement depends on the time, how much the program should be broken. Here we are using some techniques for commercial detection. The techniques included in the proposed work are concept of frequency of number of cuts and appearance of caption text.

Keywords: FLD Classifier, Thresh Value.

1. INTRODUCTION

Advertise is a way to publicize the product by giving the information like features and working of the product to people. It draws good attention towards the product of which the advertisement is. It serves as an interface between people and product.

As the products are promoted in advertisements people get aware of these products, their pros and cons, and are able to decide which product is worth for them. These advertisements are a big financial source for media broadcasters as well as for the channel sponsors. But, "excess of everything is bad". Excess of these media commercials effects the TRP of commercial as well as news channels.

As the advertisement increases within a serial or any show, it reduces the interest of audiences from that show. Many people detected some effects of advertisement on serials, shows and channels. A Albiol et al. detected media commercials based on assumption that T.V. or network logo disappears during advertisements. Pinar Duygulu et al proposed a method of two schemes of commercial detection. His one scheme was based on repeated sequence detection and another was based on FLD classifier that uses distinctive colour and audio features for commercial detection. Few different methods and algorithms to overcome the commercial detection problems are proposed in this paper. The contents of this paper are organised as follows: In section 2, we address the overview of commercial detection problems. Section 3 describes the phases in solving commercial detection problem which includes identification of commercial break and two

proposed algorithms to deal with the commercial detection problems and finally, section 4 concludes the write-up.

2. OVERVIEW OF COMMERCIAL DETECTION PROBLEMS

Commercials in media are investigated on the basis of detection for the years. Breaking the video into consistent scenes semantically is possible. But, the problem is to identify that which scene is commercial and which is non-commercial.

In television, several commercials are joined together into a segment. These commercial segments are inserted into various videos in media like news, serials and other shows. The problem related to this is duration of commercials in different T.V shows is more. So we discuss some of the methods to reduce the commercials.

Some of the methods that help in reducing the duration of commercials are mentioned below.

They are reducing the number of cuts and adding texts like COMING UP and BACK IN FEW MINUTES.

Below block diagram shows the methods used to reduce the commercials as well as useful for viewers, as they will not change the T.V SHOW.

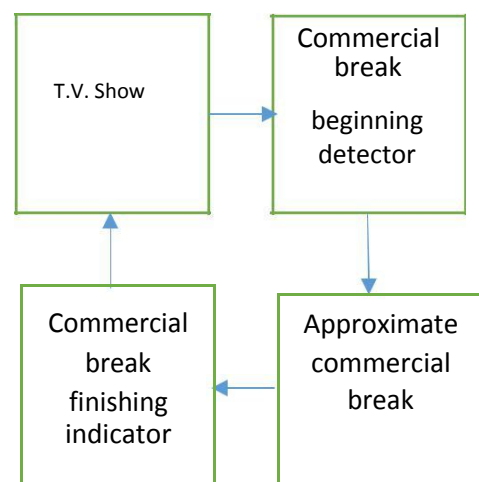


Fig 1. The block diagram of the proposed commercial detection system

3. PHASES IN SOLVING COMMERCIAL DETECTION PROBLEM

a) Identification of commercial break

To solve the commercial detection problem first, we have to identify the commercial break. This identification requires “cut”. cut is nothing but transitions in between the successive shots. Editing between two individual consecutive shots is said to be a ‘cut’. First, the video is divided into different bunches of 1000 frames, each bunch is termed as block. Then cuts are identified in each block. If number of cuts are greater than the thresh-value then, that part is identified as commercial block. If five or more blocks contains these commercial block, then it is identified as a commercial break.

b) Algorithms

❖ Algorithm for detecting exact start frame of commercial break

1. Let 1st candidate commercial block of identified commercial break be known as F1.
2. Detect the presence of the “COMING UP” caption in each frame of the F1 block, and blocks surrounded by F1 block, using template detection algorithm. The template detection algorithm will return the correlation coefficient.
3. Put the flag = true if correlation coefficient is greater than 0.8. This indicates presence of caption text “COMING UP in frame.
4. If flag = true and difference between correlation coefficient of consecutive frames is greater than thresh-value then the frame where difference is greater than thresh-value is declared as first frame of commercial break.
5. If flag = false then first frame of the FIRST block is declared as first frame of commercial break. As it gives the first position where maximum color difference is appearing as might be the case in serial and commercial. Therefore, it is the highest probability where first commercial is starting.

Below figure shows the detection of exact start frame of commercial break.



Fig 2: Frames identified as before and after start of commercial break

❖ Algorithm for detecting exact end of commercial break.

1. Let the last block in identified candidate commercial break be known as L1 and the block following L1 block as N1.
2. Check the number of cuts in N1 block. If numbers of cuts in N1 block are equal to (thresh_value-1) or more then the first cut frame in the N1 block is identified as exact end of commercial block.
3. Else last cut frame in L1 block is considered as the exact end of commercial break.

Below figure shows the detection of exact end of commercial break.



Fig 3: Frames identified as after and before end of commercial break

4. CONCLUSION

By implementing these phases, an effective commercial break detection scheme is proposed for T.V. shows. This work and scheme can be enhanced ahead as per the change in requirements. The proposed scheme can be implemented in other simulating softwares. This scheme helps in reducing commercial breaks. Keeping both commercial producers and audiences.

5. REFERENCE

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