CCITT SGXV
Working Party XV/1
Specialists Group on Coding for Visual Telephony

Doc. #514
1989.6.13

Source: Japan
Title: Maximum Frame Rate Specification According with the Number of Significant Blocks in each Frame

1. Introduction

Document #456 (at Oslo meeting) has shown that:

a) Software TV CODEC can be implemented easily if the Maximum Frame Rate is decreased when a large number of blocks in one Frame are determined to be significant, and,

b) only a few dummy bits are required to decrease the Maximum Frame Rate when usual video signal (natural TV signal) is transmitted.

"The amount of transmitter's processing to be added for controlling the maximum frame rate" is considered this time.

2. Transmitter's processing amount to be added

"The limitation of the maximum number of coded bits" are adopted as the Flexible Hardware specification to make Hardware TV CODEC easier to be implemented. These limitation is, however, quite meaningless or fetters for the most of Software TV CODEC.

"Transmitter's processing amount to control the maximum frame rate according with the number of significant blocks in one frame" is compared with "the processing amount to limit the maximum number of coded bits". The flowchart is shown in Fig.1.

Fig.1 shows that:

a) the number of coded bits is used for maximum frame rate control and maximum coded bits limitation. The number can be calculated by only one counter or common software processing.

b) the amount of the other processing is similar.

3. Conclusion

Processing amount to be added is comparable to that for the limitation of maximum coded bits per frame that is adopted as the Flexible Hardware specification. It is desired to study "the maximum frame rate control according with the number of significant blocks per frame" toward the final Recommendation so that both Hardware TV CODEC and Software TV CODEC are easy to be implemented.

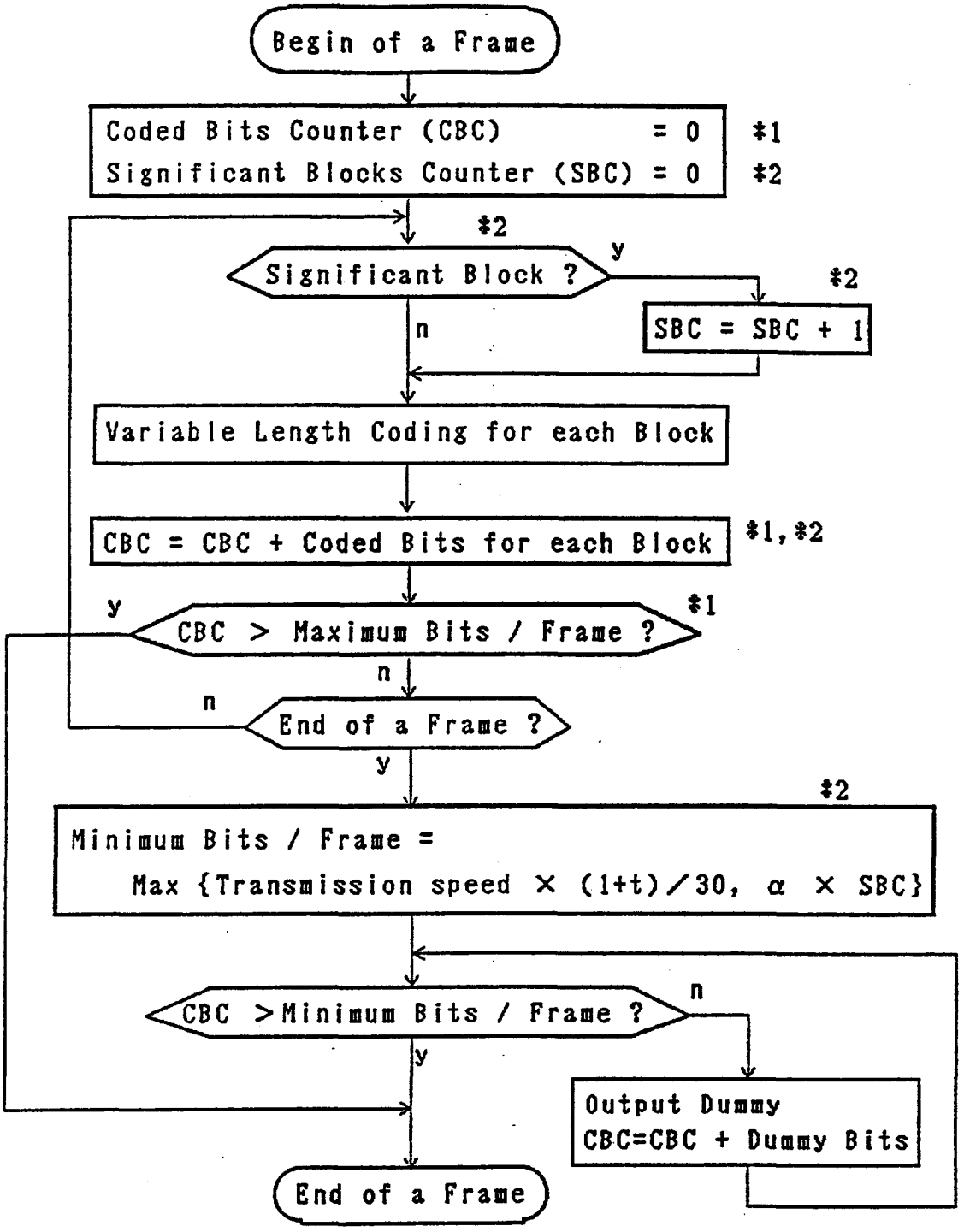

Fig.1 Example of Transmitter Flowchart for Maximum Frame Rate Control According with the Number of Significant Blocks in each Frame.

*1: for Limitation of Maximum Bits / Frame

*2: for Maximum Frame Rate Control Proposed this time