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

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SOURCE: NTT, KDD, NEC and FUJITSU

TITLE : NUMBER OF CODED PELS PER LINE

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1. Introduction

As a consequence of the choice of 8 x 8 block size, a slight reduction of coded pels per line from 360 to 352 was suggested in the last Tokyo meeting (see Section 5.6/Document #103R). We support this idea.

2. Active Pels per Line in Television Standards

CCIR Rep.624-2 describes 'Nominal line period' and 'Line-blanking interval in Table I-1. These figures correspond to the following number of pels when sampled with the frequency 13.5 MHz specified in Rec. 601.

Table 1 Television standards

Item	525/60	625/50
Nominal line period	63.5555 µs (858)	64 µs (864)
Line-blanking interval	10.9 +/- 0.2 µs (147 +/- 3)	12 +/- 0.3 µs (162 +/- 4)
Number of active pels (4:2:2 system)	711 +/- 3	702 +/- 4
Number of active pels (2:1:1 system)	355 +/- 2	351 +/- 2

It is found from this table that reducing the number of coded pels per line to 352 implies that the following active pels are discarded;

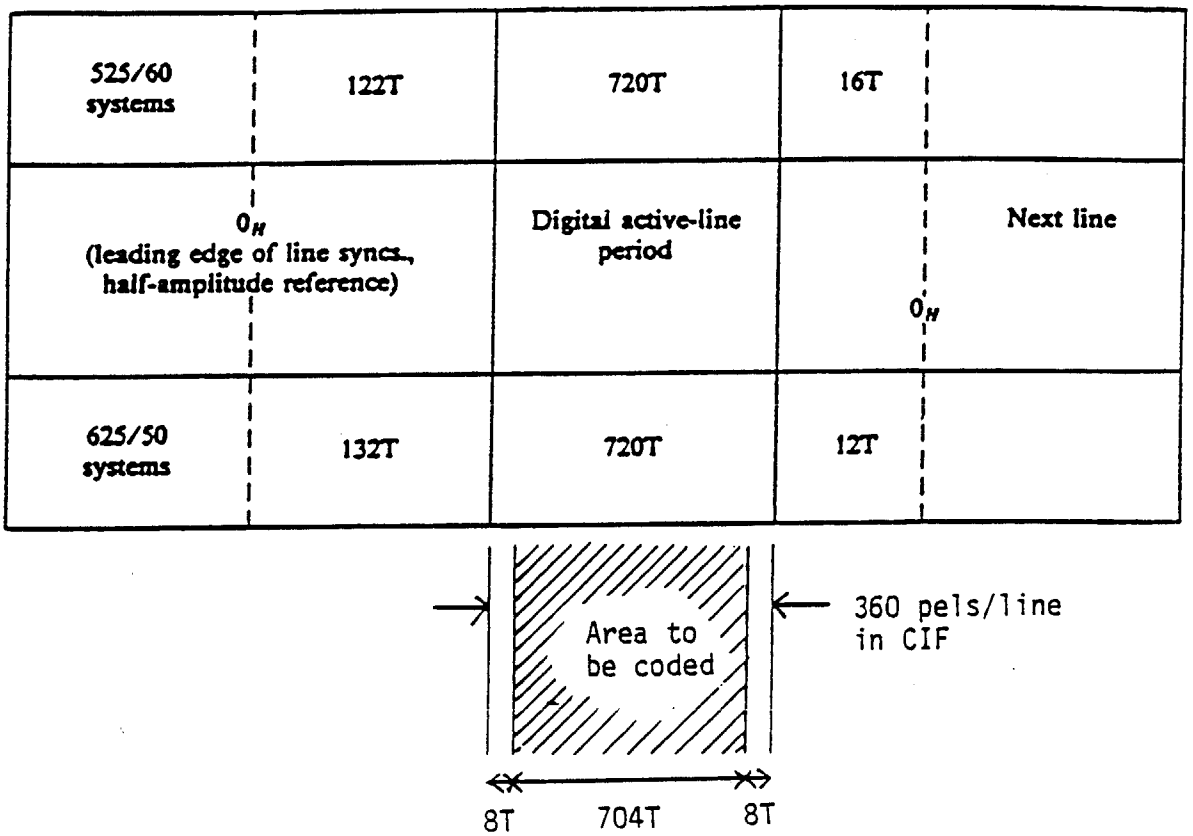
1 % for 525/60 television system
0.3 % for 625/50 television system

This will not cause any substantial problems because monitors are usually overscanned.

3. Definition of Coded Area

The above reduction of coded pels should be defined at the input of the source coder, not as a modification of Common Intermediate Format.

Since the area to be coded should be taken from the center part of the active-line period, the relationship among input picture, CIF and the area to be coded can be shown as in Figure 1, using Table 1/ANNEX II to CCIR Rec.601.



T = one luminance sampling clock period (74 ns nominal).

Figure 1 Definition of area to be coded

4. Conclusion

We support the reduction of coded pels per line to 352, proposing that the reduction should be defined as a part of source coding algorithm and that the area should be taken from the center of the active-line period.