

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

Document n°427

Orlando , December 6-9 , 1988

Title : Simulation results at higher bit rates using RM6

Source : FRANCE , FRG

Two labs have applied the p*64 kbit/s RM6 algorithm at bit rates 300 Kbit/s , 1.1 Mbit/s , 2 Mbit/s .

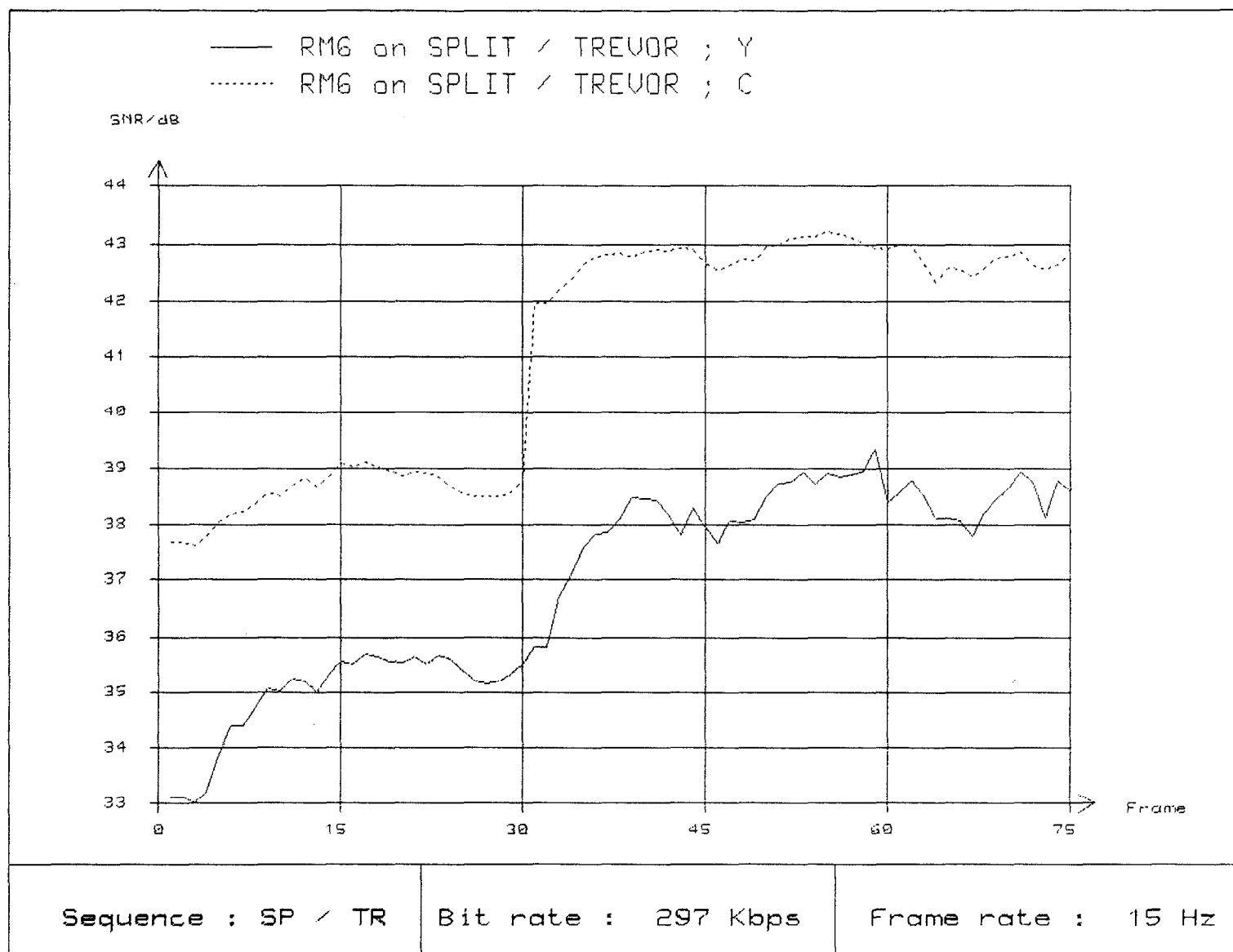
Annexed to that document is an example of results concerning the COST , SALESMAN and CAR sequences. Tables and curves allow some comparison with RM5. Some sequences have been simulated at higher frame rates.

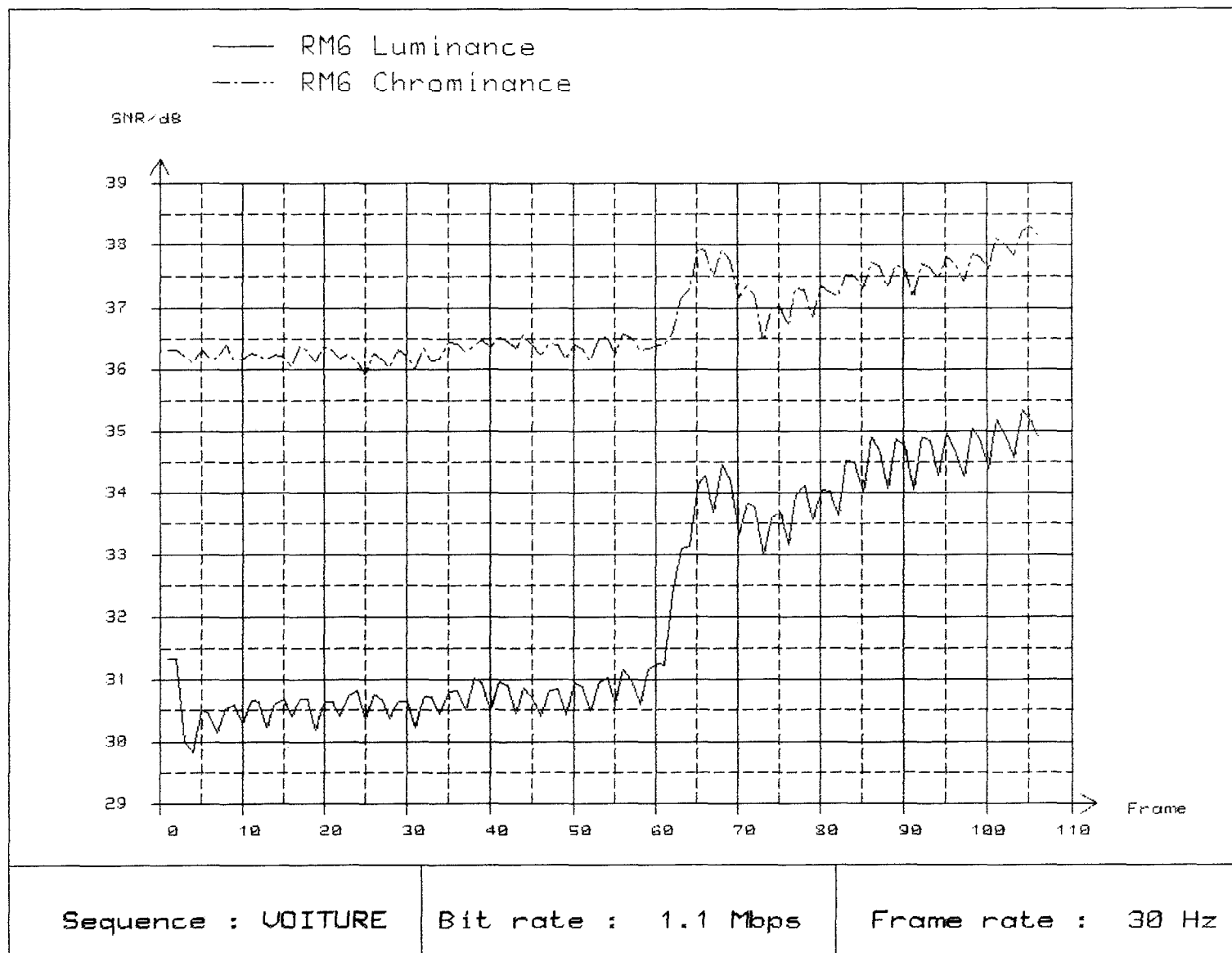
Statistics : RM6 vs RM5 results
 Bit rate : 297 Kbps
 Source : CNET/FRANCE
 Date : 24/11/88

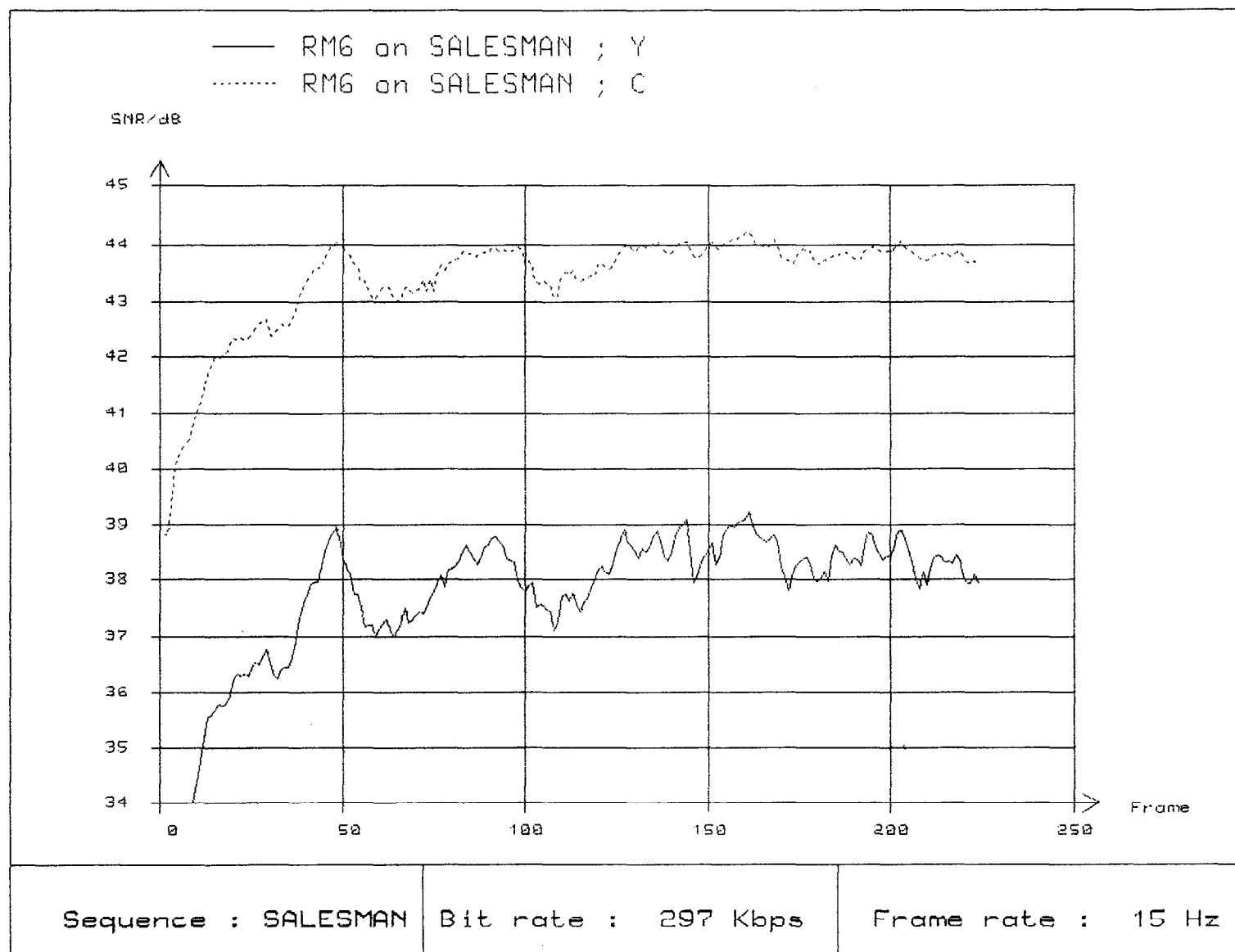
Coding scheme Sequence Frame rate	RM5 SPLIT/TREVOR 10 Hz	RM6 SPLIT/TREVOR 15 Hz
R.M.S. Y C	3.29 2.23	3.74 2.38
S.N.R. Y C	37.78 41.18	36.67 40.60
Step size	13.22	13.54
Nbr of non zeroes	Y: 4.97 C: 2.13	4.16 1.79
Nbr of zeroes	Y: 11.29 C: 5.55	6.97 2.94
MACRO BLOCK TYPE		
Overflow	0	0
Fixed	145	174
Fixed MC	1	2
Inter	110	94
Inter MC	138	121
Intra	-	3
NUMBER OF BITS		
MB Attributes	708	746
Motion vectors	1124	807
E O B	2989	2262
Coefficients : Y C	23218 1369	15060 691
Total	29508	19566

Statistics : RM6
 Bit rate : 1.1 Mbit/s
 Source : CNET/FRANCE
 Date : 24/11/88

Sequence Frame rate	CAR 1.1 Mbit/s
R.M.S. Y C	6.52 3.70
S.N.R. Y C	31.84 36.77
Step size .	19.47
Nbr of non zeroes	Y: 5.25 C: 1.95
Nbr of zeroes	Y: 10.32 C: 9.52
MACRO BLOCK TYPE	
Overflow Fixed Fixed MC Inter Inter MC Intra	0 47 25 138 181 1
NUMBER OF BITS	
MB Attributes Motion vectors E O B Coefficients : Y C	1940 1191 3266 27735 1331
Total	35463







Statistics : RM6 vs RM5 results
 Bit rate : 297 Kbps
 Source : CNET/France
 Date : 24/11/88

Coding scheme Sequence Frame rate	RM5 SALESMAN 10 Hz	RM6 SALESMAN 15 Hz
R.M.S. Y C	4.15 2.10	3.38 1.74
S.N.R. Y C	35.78 41.67	37.55 43.30
Step size	13.02	8.45
Nbr of non zeroes	Y: 4.22 C: 1.56	5.91 1.77
Nbr of zeroes	Y: 27.88 C: 3.84	15.34 4.30
MACRO BLOCK TYPE		
Overflow	0	0
Fixed	106	185
Fixed MC	0	0
Inter	225	178
Inter MC	63	31
Intra	-	0
NUMBER OF BITS		
MB Attributes	895	898
Motion vectors	515	179
E O B	3469	1998
Coefficients : Y C	24268 523	15233 615
Total	29670	18923