

B. Belmudez等人在论文《An approach for modeling the effects of video resolution and size on the perceived visual quality》中，研究了视频质量，分辨率，码率之间的关系。整篇论文内容较长，在此摘录其部分实验数据。

该论文做了2个实验，实验的设置如下表所示。可见分辨率包含QCIF，CIF，QVGA，VGA等多种分辨率，码率从32kbps-1024kbps不等。

Table I
EXPERIMENTAL SETTINGS

Video codec		H264 Baseline Profile	
Video format (*the notation QCIF_VGA means original QCIF upscaled to VGA's size)		Experiment 1	Experiment 2
		VGA, CIF, QVGA, QCIF, QCIF_VGA(*), QVGA_VGA, CIF_VGA	VGA, CIF, QVGA, QCIF, QCIF_QVGA, QCIF_CIF, QVGA_CIF
Key frame interval (sec)		1	
GOP Pattern		IPPPP	
Video Bit rate (kbs)	VGA	128, 256, 512, 768, 1024	
	QVGA, CIF, QVGA_CIF, QVGA_VGA, CIF_VGA,	64, 128, 256, 512, 1024	
	QCIF, QCIF_QVGA, QCIF_CIF, QCIF_VGA	32, 64, 128, 256, 512	
Frame rate (fps)		25	
Viewing Distance (cm)		50	
Video Content		Interview, Football Movie, Music clip	

得到的结论如下面两张图，横坐标是码率，纵坐标是视频质量（MOS，取值1-5，值越大代表视频质量越好）

实验1：

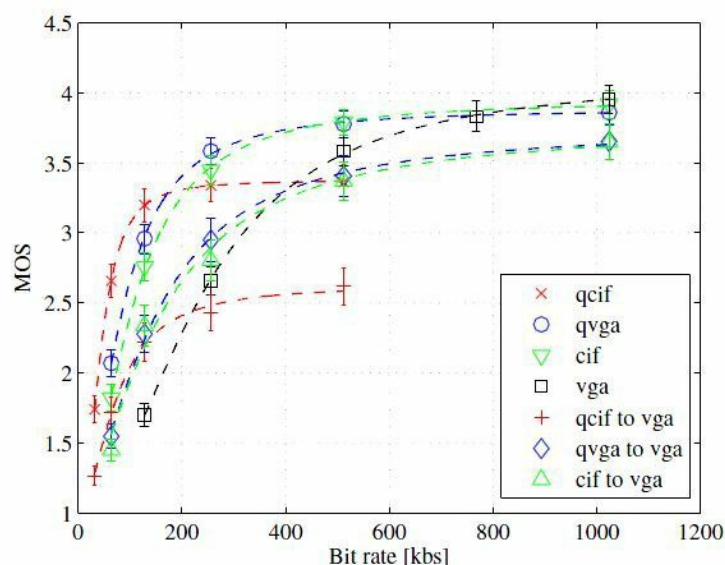


Figure 1. Perceived quality as a function of bit rate for experiment 1. The dashed line represents the data fitting using the parametric model ITU-T Rec. G.1070

实验2：

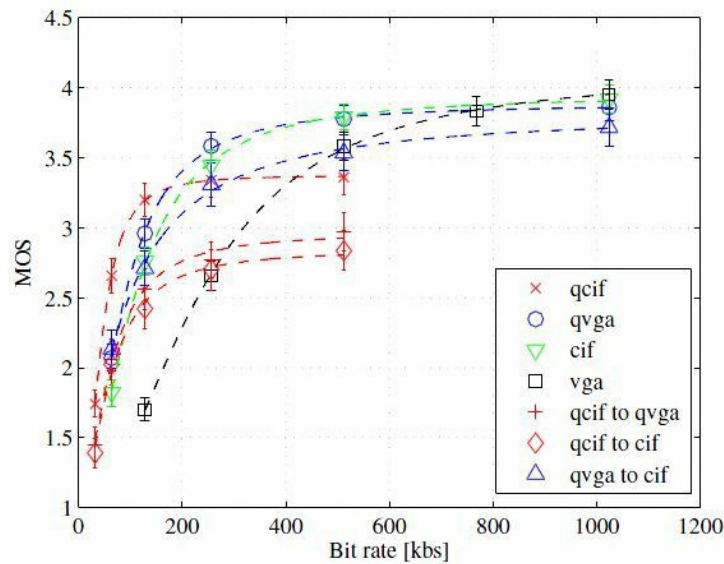


Figure 2. Perceived quality as a function of bit rate for experiment 2. The dashed line represents the data fitting using the parametric model ITU-T Rec. G.1070

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可见在低码率的情况下，小分辨率的视频质量较好（其实这是个众所周知的结论，= =）。论文其他内容有待以后再分析。

论文地址：<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6123390>

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