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Title:	Issues with some scenes in the proposed pools of scenes for the MM tests as proposed by ILG in April 2007		

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Introduction

The ILG proposed a pool of scenes to be used in the MM subjective tests. Following this excellent initial proposal, a visual review of all the scenes was conducted by Psytechnics. The review consisted in watching every single clip and looking for obvious visual artifacts (e.g. noise, edge distortion, excessive blurring, de-interlacing artifacts etc.) existing in the original content or artifacts that could have been introduced during the processing (e.g. de-interlacing, resizing) of the videos from the different original formats.

The review was performed by an expert viewer (who works in the field of quality assessment). However, the expert watched the videos at normal playback speed and **viewed each video only once** to make his judgment. It is therefore believed that any artifact detected by this viewer appears in a very obvious way in the video and will also be detected by a panel of naïve viewers.

During the review, artifacts were found in some of the scenes in the proposed pool. We believe that these scenes will produce a too low MOS score during the subjective testing phase (i.e. lower than 4 on the numerical equivalent of the ACR scale) and are therefore not suitable to be used as reference videos in the MM tests.

Proposal

Scenes for which visible artifacts were found are marked in red and brief explanations of the artifacts are provided. We believe that these scenes will obtain a MOS lower than 4. The MM test plan specifies that any SRC receiving a MOS lower than 4 will be examined and if, in the opinion of the ILG, the poor MOS values for these source sequences are due to inferior quality then they shall be removed and not included in the subsequent data analysis. This means that all corresponding PVSs will also be removed for the data analysis for the evaluation of FR and RR models since these are evaluated using DMOS.

We propose to replace these scenes, either by reprocessing the original content to try eliminating the reported artifacts or by replacing completely the content by a new one when the artifacts can not be suppressed by reprocessing.

Additionally, some scenes showing slight degradations are marked in orange. We suggest replacing these scenes as well if possible by re-processing the original content as artifacts are light and could probably be suppressed by careful re-processing (of the de-interlacing).

It is important that VQEG ensure (as much as possible) that reference videos (SRCs) will get a high MOS ($\geq$ 4) since this is crucial for computing DMOS and for the evaluation of full-reference and reduced-reference models. We advice being conservative and replace reference videos when we suspect they could potentially get a low MOS. By acting very carefully at this stage of the MM project, VQEG can limit greatly the number of data points that could risk being discarded once subjective tests have been completed.

List of scenes (as provided by the ILG on 26 April 2007)

QCIF Common Set

IRCCyN_anim1_qcif.avi
CU_SRC_bbshoot_qcif.avi
NTIA_SRC_SusieStill_qcif.avi
CU_SRC_bcancer2_qcif.avi
KBS_SRC_gayoB_qcif.avi
CU_SRC_presents1_qcif.avi

CIF Common Set

IRCCyN_anim13_cif.avi
CU_SRC_presents3_cif.avi (Analogue-like signal with some blurring that could produce a low MOS)
NTT_SRC_Talk_1-4_cif.avi
KBS_SRC_mubankA_cif.avi
NTIA_SRC_WashdcStill_cif.avi
CU_SRC_bbfoul_cif.avi (video is noisy/blurry as if poor analogue signal)

VGA Common Set

NTIA_SRC_stadpan_vga.avi
SVT_SRC_crowdrunP_vga.avi
KBS_SRC_newsG_vga.avi (video is slightly blurry especially in the 1st part, probably due to deinterlacing)
KBS_SRC_gayoD_vga.avi
NTIA_SRC_duckmovie_vga.avi
OPT_SRC_013_vga.avi

QCIF Scene Pools

qcif.A – 25fps

IRCCyN_Gob2_qcif.avi
OPT_SRC_016p_qcif.avi
ITU_SRC_BicycleRace_qcif.avi
PSY_SRC_skidh02_qcif.avi
T_W_01_q.avi
SQ_SRC_Living_Room_qcif.avi
CRC_SRC_Carrousel25fps_qcif.avi
OPT_SRC_010_qcif.avi

qcif.D – 25fps

OPT_SRC_015p_qcif.avi
OPT_SRC_021_qcif.avi
ITU_SRC_f1raceB_qcif.avi
NTIA_SRC_ftballslow_qcif.avi
T_W_06_q.avi
T_W_04_q.avi
FT_SRC_news_qcif.avi
NTIA_SRC_playerout25fps_qcif.avi

qcif.G – 25fps

NTIA_SRC_fcnstop25fps_qcif.avi

T_W_09_q.avi
ITU_SRC_f1raceA_qcif.avi
ITU_SRC_arrividerci2_qcif.avi
OPT_SRC_006_qcif.avi
SQ_SRC_Living_Room_qcif.avi
FT_SRC_news_qcif.avi
PSY_SRC_drink01_qcif.avi

qcif.I – 25fps

OPT_SRC_020_qcif.avi
PSY_SRC_footb01_qcif.avi
ITU_SRC_ccraceA_qcif.avi
OPT_SRC_013_qcif.avi
T_W_08_q.avi
NTIA_SRC_stadpan25fps_qcif.avi
IRCCyN_Gob2_qcif.avi
T_W_03_q.avi

qcif.J – 30fps

CRC_SRC_bench_qcif.avi
KBS_SRC_wanggunD_qcif.avi
NTIA_SRC_playerout_qcif.avi
KBS_SRC_leeparkA_qcif.avi
KBS_SRC_newsH_qcif.avi
NTIA_SRC_twoducks_qcif.avi
NTIA_SRC_guitar3_qcif.avi
KDDI_SRC_SD08_qcif.avi

qcif.K – 30fps

NTIA_SRC_tea1p_qcif.avi
KBS_SRC_newsG_qcif.avi
NTIA_SRC_stadpan_qcif.avi
NTIA_SRC_overview2_qcif.avi
KBS_SRC_winterA_qcif.avi
KBS_SRC_gayoA_qcif.avi
KDDI_SRC_3D11_qcif.avi
KDDI_SRC_SD03_qcif.avi

qcif.L – 30fps

NTIA_SRC_collage1_qcif.avi
CRC_SRC_carrousel_qcif.avi
ITU_SRC_popple_qcif.avi
NTIA_SRC_spectrum1_qcif.avi
KBS_SRC_newsF_qcif.avi
NTIA_SRC_bells5_qcif.avi
KDDI_SRC_SD01_qcif.avi
KDDI_SRC_SD19_qcif.avi

qcif.P – 30fps

NTIA_SRC_cartalk1_qcif.avi
KDDI_SRC_3D02_qcif.avi
NTIA_SRC_pghtruck2a_qcif.vai
KBS_SRC_wanggunB_qcif.avi
KDDI_SRC_SD14_qcif.avi
KBS_SRC_mubankBp_qcif.avi
NTIA_SRC_ffgear_qcif.avi
ANSI_SRC_vtc2mp_qcif.avi

qcif.S – 30fps

NTIA_SRC_rfdev2_qcif.avi
NTIA_SRC_rbtnews1_qcif.avi
NTIA_SRC_bpit5_qcif.avi
KBS_SRC_gayoE_qcif.avi
KBS_SRC_leeparkC_qcif.avi
NTIA_SRC_twogeese_qcif.avi
NTIA_SRC_pghvansd_qcif.avi
SMPTE_SRC_bicycles_qcif.avi

qcif.T – 30fps

KBS_SRC_mubankE_qcif.avi
NTIA_SRC_catjoke_qcif.avi
NTIA_SRC_towtruck1_qcif.avi
KBS_SRC_wanggunC_qcif.avi
KDDI_SRC_3D10_qcif.avi
NTIA_SRC_pghtruck2a_qcif.avi
KDDI_SRC_SD15_qcif.avi
KBS_SRC_newsD_qcif.avi

qcif.U – 30fps

CRC_SRC_volleyball_qcif.avi
NTIA_SRC_fcnstop_qcif.avi
KBS_SRC_wanggunG_qcif.avi
NTIA_SRC_music3_qcif.avi
CU_SRC_presents4_qcif.avi
NTIA_SRC_schart2_qcif.avi
NTIA_SRC_fish5_qcif.avi
KBS_SRC_newsEp_qcif.avi

qcif.V – 30fps

NTIA_SRC_tea4_qcif.avi
CRC_SRC_headshot_qcif.avi
KDDI_SRC_SD11_qcif.avi
KBS_SRC_soccerD_qcif.avi
KBS_SRC_mubankBp_qcif.avi
NTIA_SRC_bpit2_qcif.avi
KBS_SRC_newsH_qcif.avi
NTIA_SRC_rbtnews2_qcif.avi

qcif.W – 30fps

NTIA_SRC_playerout_qcif.avi
KBS_SRC_leeparkD_qcif.avi
KBS_SRC_mubankD_qcif.avi
KBS_SRC_newsG_qcif.avi
KBS_SRC_gayoB_qcif.avi
KDDI_SRC_SD16_qcif.avi
YONSEI_SRC_zooC_qcif.avi
KDDI_SRC_3D04_qcif.avi

qcif.X – 30fps

NTIA_SRC_firemovie1_qcif.avi
CRC_SRC_volleyball_qcif.avi
NTIA_SRC_cchart3pp_qcif.avi
CRC_SRC_carrousel_qcif.avi
CRC_SRC_bench_qcif.avi

NTIA_SRC_collage5_qcif.avi
NTIA_SRC_heli02_qcif.avi
SMPTE_SRC_birches1_qcif.avi

CIF Scene Pools

cif.B – 25fps

SQ_SRC_ChildrenPlaying_cif.avi
ITU_SRC_ccraceA_cif.avi
SVT_SRC_PrincessRunPP_cif.avi
NTIA_SRC_ftballslow_cif.avi
IRCCyN_SRC_Gob3_cif.avi
T_W_02_cif.avi
PSY_SRC_inter01_cif.avi
NTIA_SRC_stadpan25fps_cif.avi

cif.E – 25fps

SVT_SRC_ParkJoyPP_cif.avi
FT_SRC_visio_cif.avi
OPT_SRC_015p_cif.avi
PSY_SRC_ccski01_cif.avi
NTIA_SRC_heli0225fps_cif.avi
PSY_SRC_festi01_cif.avi
OPT_SRC_009_cif.avi
T_W_07_c.avi

cif.G – 25fps

NTIA_SRC_fcnstop25fps_cif.avi
T_W_09_cif.avi
ITU_SRC_f1raceA_cif.avi
ITU_SRC_arrividerci2_cif.avi
IRCCyN_SRC_Gob3_cif.avi
SQ_SRC_Living_Room_cif.avi
FT_SRC_news_cif.avi
PSY_SRC_drink01_cif.avi

cif.H – 25fps

OPT_SRC_020_cif.avi (first half of the video is very noisy)
PSY_SRC_ccski02_cif.avi
CRC_SRC_volleyball25fps_cif.avi
FT_SRC_visio_cif.avi
OPT_SRC_016p_cif.avi
SVT_SRC_CrowdRunP_cif.avi
NTIA_SRC_heli0225fps_cif.avi
OPT_SRC_008_cif.avi

cif.J – 30fps

CRC_SRC_bench_cif.avi
KBS_SRC_wanggunD_cif.avi
NTIA_SRC_playerout_cif.avi
KBS_SRC_leeparkA_cif.avi (blinking around edges in the 1st part of the video)
KBS_SRC_newsH_cif.avi
NTIA_SRC_twoducks_cif.avi
NTIA_SRC_guitar3_cif.avi
KDDI_SRC_SD08_cif.avi

cif.L – 30fps

NTIA_SRC_collage1_cif.avi
CRC_SRC_carrousel_cif.avi
ITU_SRC_popple_cif.avi
NTIA_SRC_spectrum1_cif.avi
KBS_SRC_newsF_cif.avi
NTIA_SRC_bells5_cif.avi
KDDI_SRC_SD01_cif.avi
KDDI_SRC_SD19_cif.avi

cif.M – 30fps

CRC_SRC_houseoffer_cif.avi
NTIA_SRC_brick2_cif.avi
NTIA_SRC_heli02_cif.avi
NTIA_SRC_magic1_cif.avi
KBS_SRC_soccerB_cif.avi
KDDI_SRC_SD16_cif.avi
CRC_SRC_mobike_cif.avi
KBS_SRC_mubankA_cif.avi

cif.N – 30fps

NTIA_SRC_firemovie1_cif.avi
NTIA_SRC_fcnstop_cif.avi
CBC_SRC_LePoint_cif.avi
NTIA_SRC_wfall_cif.avi
SMPTE_SRC_birches2_cif.avi (the video looked artificial creating a perception of low quality – maybe because original content was analogue?)
KDDI_SRC_3D09_cif.avi (a few lines of green pixels at the bottom that could be disturbing + the 1st scene cut happens too soon. The SRC used in the test will go from frame 60 to 300 and the 1st scene cut occurs at frame 83, i.e. around 0.7 sec after beginning)
NTIA_SRC_fish1_cif.avi
CRC_SRC_redflower_cif.avi

cif.O – 30fps

NTIA_SRC_pghtalk1a_cif.avi
CRC_SRC_headshot_cif.avi
ITU_SRC_ungenerique_cif.avi
CRC_SRC_FlamingoHilton_cif.avi
KBS_SRC_newsA_cif.avi
KBS_SRC_newsBp_cif.avi
CRC_SRC_volleyball_cif.avi
NTIA_SRC_bpit1_cif.avi

cif.Q – 30fps

NTIA_SRC_hose_cif.avi
NTIA_SRC_stadsc_cif.avi
KBS_SRC_morningBp_cif.avi
CBC_SRC_BetesPasBetesP_cif.avi
NTIA nstopbf_cif.avi
NTT_SRC_Block_2-1_cif.avi
KBS soccerD_cif.avi
Yonsei_SRC_zooA_cif.avi

cif.R – 30fps

KBS_SRC_mubankCp_cif.avi
KBS_SRC_soccerC_cif.avi

KDDI_SRC_3D01_cif.avi (a few green lines at the bottom of the clip that could be disturbing)
ITU_SRC_MobileCalendar_cif.avi
NTIA_SRC_drumfeet_cif.avi
NTIA_SRC_fishrob1_cif.avi
CRC_SRC_CaesarsPalace_cif.avi
NTIA_SRC_collage5_cif.avi

cif.U – 30fps

CRC_SRC_volleyball_cif.avi
NTIA_SRC_fcnstop_cif.avi
KBS_SRC_wanggunG_cif.avi
NTIA_SRC_music3_cif.avi
CU_SRC_presents4_cif.avi
NTIA_SRC_schart2_cif.avi
NTIA_SRC_fish5_cif.avi
KBS_SRC_newsEp_cif.avi

cif.W – 30fps

NTIA_SRC_playerout_cif.avi
KBS_SRC_leeparkD_cif.avi
KBS_SRC_mubankD_cif.avi
KBS_SRC_newsG_cif.avi
KBS_SRC_gayoB_cif.avi
KDDI_SRC_SD16_cif.avi
YONSEI_SRC_zooC_cif.avi
KDDI_SRC_3D04_cif.avi

cif.X – 30fps

NTIA_SRC_firemovie1_cif.avi
CRC_SRC_volleyball_cif.avi
NTIA_SRC_cchart3pp_cif.avi
CRC_SRC_carrousel_cif.avi
CRC_SRC_bench_cif.avi
NTIA_SRC_collage5_cif.avi
NTIA_SRC_heli02_cif.avi
SMPTE_SRC_birches1_cif.avi (the video looked artificial creating a perception of low quality – maybe because original content was analogue? This was not perceived with the QCIF version)

VGA Scene Pools

vga.C – 25fps

ITU_SRC_popple625_vga.avi
PSY_SRC_skidh03_vga.avi
OPT_SRC_004_vga.avi (video is really noisy)
PSY_SRC_festi02_vga.avi
T_W_05p_v.avi
SVT_SRC_CrowdRunP_vga.avi
OPT_SRC_008_vga.avi (video is really noisy)
T_W_02_v.avi

vga.E – 25fps

SVT_SRC_ParkJoyPP_vga.avi
FT_SRC_visio_vga.avi
OPT_SRC_015p_vga.avi

PSY_SRC_ccski01_vga.avi
NTIA_SRC_heli0225fps_vga.avi
PSY_SRC_festi01_vga.avi
OPT_SRC_009_vga.avi (visible deinterlacing artifacts around edges of the cars + some strange vertical pattern across the entire image – These do not appear in the CIF version)
T_W_07_v.avi

vga.F – 25fps

SVT_SRC_IntoTree_vga.avi
ITU_SRC_ccraceB_vga.avi
OPT_SRC_006_vga.avi (video is very noisy and some blinking edges appear at some point in the background)
T_W_10_v.avi (slight deinterlacing artifacts around the edges of the car)
T_W_08_v.avi
OPT_SRC_001p_vga.avi (video is very noisy)
ITU_SRC_CalMobB625_vga.avi (heavy blurring and some deinterlacing artifacts causing noisy edges)
NTIA_SRC_ftballslow_vga.avi (slight deintelacing artifacts around players' edges during the slow motion)

vga.H – 25fps – *repeat of CIF set*

OPT_SRC_020_vga.avi (first half of the video is very noisy)
PSY_SRC_ccski02_vga.avi
CRC_SRC_volleyball25fps_vga.avi
FT_SRC_visio_vga.avi
OPT_SRC_016p_vga.avi
SVT_SRC_CrowdRunP_vga.avi
NTIA_SRC_heli0225fps_vga.avi
OPT_SRC_008_vga.avi (clearly visible noise on CGI content is disturbing – this does not appear in the CIF version)

vga.K – 30fps

NTIA_SRC_tea1p_vga.avi
KBS_SRC_newsG_vga.avi
NTIA_SRC_stadpan_vga.avi
NTIA_SRC_overview2_vga.avi
KBS_SRC_winterA_vga.avi
KBS_SRC_gayoA_vga.avi
KDDI_SRC_3D11_vga.avi
KDDI_SRC_SD03_vga.avi

vga.L – 30fps

NTIA_SRC_collage1_vga.avi
CRC_SRC_carrousel_vga.avi (clearly visible noise and blurring)
ITU_SRC_popple_vga.avi
NTIA_SRC_spectrum1_vga.avi
KBS_SRC_newsF_vga.avi
NTIA_SRC_bells5_vga.avi
KDDI_SRC_SD01_vga.avi
KDDI_SRC_SD19_vga.avi (visible deinterlacing artifacts around edges of women's shoes)

vga.M – 30fps

CRC_SRC_houseoffer_vga.avi
NTIA_SRC_brick2_vga.avi
NTIA_SRC_heli02_vga.avi
NTIA_SRC_magic1_vga.avi
KBS_SRC_soccerB_vga.avi (clearly visible deinterlacing artifacts)
KDDI_SRC_SD16_vga.avi (slight blurring)
CRC_SRC_mobike_vga.avi

KBS_SRC_mubankA_vga.avi (visible deinterlacing artifacts, especially around edges – see TV display in the background + blurring)

vga.N – 30fps

NTIA_SRC_firemovie1_vga.avi
NTIA_SRC_fcnstop_vga.avi
CBC_SRC_LePoint_vga.avi
NTIA_SRC_wfall_vga.avi
SMPTE_SRC_birches2_vga.avi (the video looked artificial creating a perception of low quality - maybe because original content was analogue?)
KDDI_SRC_3D09_vga.avi (clearly visible deinterlacing artifacts towards the top of the image around edges + a few lines of green pixels at the bottom that could be disturbing + the 1st scene cut happens too soon.)
NTIA_SRC_fish1_vga.avi
CRC_SRC_redflower_vga.avi

vga.O – 30fps

NTIA_SRC_pghtalk1a_vga.avi
CRC_SRC_headshot_vga.avi
ITU_SRC_ungenerique_vga.avi
CRC_SRC_FlamingoHilton_vga.avi (clearly visible artifacts around edges and blurring)
KBS_SRC_newsA_vga.avi (some lines of white pixels moving on the top right of video – the CIF version is OK as these lines are not really visible at CIF resolution)
KBS_SRC_newsBp_vga.avi (clearly visible deinterlacing artifacts in the middle portion of the video)
CRC_SRC_volleyball_vga.avi
NTIA_SRC_bpit1_vga.avi

vga.P – 30fps

NTIA_SRC_cartalk1_vga.avi
KDDI_SRC_3D02_vga.avi (some deinterlacing artifacts on the person's face)
NTIA_SRC_pghtruck2a_vga.vai
KBS_SRC_wanggunB_vga.avi
KDDI_SRC_SD14_vga.avi (could spot de-interlacing artifacts around the edges of the woman's shirt)
KBS_SRC_mubankBp_vga.avi
NTIA_SRC_ffgear_vga.avi
ANSI_SRC_vtc2mp_vga.avi

vga.Q – 30fps

NTIA_SRC_hose_vga.avi
NTIA_SRC_stadsc_vga.avi (2nd part of the video is slightly noisy in the portion showing the football field – due to low-light video capture)
KBS_SRC_morningBp_vga.avi (video is very noisy)
CBC_SRC_BetesPasBetesP_vga.avi
NTIA nstopbm_vga.avi
NTT_SRC_Block_2-3_vga.avi
KBS soccerD_vga.avi (heavy blurring probably due to deinterlacing)
Yonsei_SRC_zooA_vga.avi (clearly visible blurring and edge noise artifacts + some moving lines of black pixels at bottom of image)

vga.R – 30fps

KBS_SRC_mubankCp_vga.avi
KBS_SRC_soccerC_vga.avi (heavy blurring probably introduced by the deinterlacing)
KDDI_SRC_3D01_vga.avi (a few green lines at the bottom of the clip that could be disturbing)
ITU_SRC_MobileCalendar_vga.avi (clearly visible deinterlacing artifacts on the calendar and other objects)
NTIA_SRC_drumfeet_vga.avi
NTIA_SRC_fishrob1_vga.avi
CRC_SRC_CaesarsPalace_vga.avi (clearly visible noise around edges and blurring)
NTIA_SRC_collage5_vga.avi

vga.S – 30fps

NTIA_SRC_rfdev2_vga.avi
NTIA_SRC_rbtnews1_vga.avi
NTIA_SRC_bpit5_vga.avi
KBS_SRC_gayoE_vga.avi
KBS_SRC_leeparkC_vga.avi (visible deinterlacing artifacts)
NTIA_SRC_twogeese_vga.avi
NTIA_SRC_pghvansd_vga.avi
SMPTE_SRC_bicycles_vga.avi (visible deinterlacing artifacts and noise)