DRAFT PROTOCOL 01:

TU DELFT LAB EXPERIMENT

VARIUM: Visual Artifacts Interference Understanding and Modeling

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I. RESEARCH QUESTION

This study aims to understand the influence of a set of artifacts on the quality of video, their relationship with the content and to determine the their impact on visual quality perception. The set of artifacts used in this study was chosen among those most perceptually relevant for digital video applications (e.g. blockiness, blurriness, packet-loss etc). Later, a design for an objective metric for overall video quality considering visual attention and specific spatial and temporal artifacts, their reciprocal impact and their mutual importance for a wide range of video content is expected to be achieved.

II. EXPERIMENTAL SETUP

For the experimental session, subjects will be requested to score a set of test videos with different combinations of artifacts. The experiment will be performed in a room with constant illumination of approximately 70 lux. Each subject will access the stimuli on a $23''$ LED monitor of 1360×768 resolution. The distance between the subject's eyes and the video monitor will be 3 times the monitor screen's height.

Subjects will be put straight ahead of the monitor, centered at or slightly below the eye height for most of them. A chinrest will be used to guarantee a constant distance between the subject's eyes and the monitor. The room has a table, 2 chairs, a chinrest, 2 CPUs, mouses, keyboards , 2 displays' and a *SensoMotoric Instruments* GmbH Eye Tracker.

All subjects will assess all experimental stimuli and, during quality scoring, their eye-movements will be recorded (by Eye-Tracker). The user interface for the experiment was implemented using the *Neurobehavioral Systems* software Presentation. It is expected a total of 20 observers from the Delft University of Technology.

A. Video Database

The video database used in this experiment was generated from seven high-definition videos (original videos) with 1280×720, 50 fps and 10 seconds duration and those correspond to a diverse content (Basketball, Romeo and Juliet, Park Run, Cactus, Park Joy, Barbecue and Into Trees), as depicted in Figure 1. From the original videos were generated several different degraded versions (more details can be seen in the Subsection II B and in Tables I and II).

FIG. 1: Screenshots of the first frame of the sequences included in Experiment.

B. Artifacts

New versions of each original video were generated by different combinations of artifacts. Blockiness, blurriness and packet loss artifacts were used to generate test sequences [1]:

- 7 original videos have been distorted with different combination packet-loss, blurriness and blockiness at different strengths;
- 4 different strengths of blockiness and blurriness were used: 0.2, 0.4, 0.6 and 0.8 [2];
- 3 different packet loss ratios were used, PckErr_1 $= 0.7\%$, PckErr_2 $= 2.6\%$ and PckErr_3 $= 8.1\%$ [3].

Thus, the 41 combinations (blockiness, blurriness and packet loss) $\times 7$ (original videos) $+7$ original videos will generate a total of 294 videos. So, some choices must be taken on the videos to be selected since this is a large database of videos to be judged in a single experiment. These choices can be based on the results of the previous experiments, as following:

1. total necessary time to execute the overall experiment;
2. previous experiments have shown that mean annoyance and strength scores are not significantly different among packet loss ratios 0.7 and 2.6 and among packet loss ratios 2.6 and 8.1. Thus, this experiment will use the most significant scores, i.e., 0.7% and 8.1% packet loss ratios. Table I shows the combinations using different packet loss ratios;
3. blockiness and blurriness strength value of 0.6. Previous experiments have shown that blockiness and blurriness artifacts were usually identified as blocky and blurry, respectively. In combined blocky-blurry artifacts the salience of blockiness increased and blurriness decreased as artifact strength increased. The blocky artifacts produced higher annoyance values than the blurry ones when Total Squared Error was the same. Table II shows the combinations using different blockiness and blurriness strengths. Thus, this experiment will use the most significant blockiness and blurriness strength.

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[1] These artifacts have been used in previous experiments of this project.
[2] These blockiness and blurriness strengths have been used in previous experiments of this project. In previous Experiment's documentation the algorithms for generating both the artifacts are described.
[3] These packet loss ratio have been used in previous experiments of this project.

Combination	Packet-Loss	Blocky	Blurry
1	0.7	0.0	0.4
2	8.1	0.0	0.4
3	0.7	0.0	0.6
4	8.1	0.0	0.6
5	0.7	0.4	0.0
6	8.1	0.4	0.0
7	0.7	0.4	0.4
8	8.1	0.4	0.4
9	0.7	0.4	0.6
10	8.1	0.4	0.6
11	0.7	0.6	0.0
12	8.1	0.6	0.0
13	0.7	0.6	0.4
14	8.1	0.6	0.4
15	0.7	0.6	0.6
16	8.1	0.6	0.6

TABLE I: Combinations of the packet loss ratio (PckErr 1 and 3) with blockiness and blurriness artifacts.

Combination	Blocky	Blurry
1	0.0	0.6
2	0.6	0.0
3	0.6	0.6

TABLE II: Strength of artifacts (blockiness and blurriness) and combinations used to generate degraded videos.

Thus, taking into account these choices, it results into 19 combinations $\times 7$ (video versions) $+7$ original videos $= 140$ videos.

III. EXPERIMENTAL METHODOLOGY

During the experiment, the experimenter will be guiding the subject through all sessions. The experiment is divided into calibration, free viewing, training (split in two parts), practice and a main experiment (split in three parts: two breaks and two equipment calibration in between):

- In the calibration, participants will be requested to focus on different points spread over the monitor screen, and their eye fixations will be recorded to calibrate the eye-tracking data.
- In free viewing session, participants will be asked to freely look at seven high quality videos, as if they are watching TV at home.
- In the training, participants will be shown all four high quality videos. Then the user will be shown the videos with the strongest defect derived from each of the four high quality videos. The intent of this stage is to familiarize the test subjects with the endpoints of the defect range and to define the task that they will perform.

- In the practice stage, participants will run through a limited number of practice trials of the experiment. The practice trials give the subject a chance to work through the data entry procedure and shake out last minute questions or concerns. The initial responses may also be somewhat erratic. The practice stage will allow the test subject responses to stabilize. No data will be collected during this task.

- The main experiment is split into 3 parts. In all of them, the participants will be asked to estimate the annoyance of defects or impairments of each degraded video. After each sequence, the subject will be asked "Did you perceive any impairments or defects in the video?", prompting for a "yes" or "no" answer. Then participants will be asked to perform the annoyance task consisting of giving a numerical judgment of how annoying the detected impairment is. At the end of each session a break will be given. The break will not have a time limit, but it is expected that the participant takes a break of around 5 to 10 minutes. Once the participant is ready to continue, he/she will be instructed to begin the next session and the calibration task will be repeated. Once the calibration task is finished, the participant will rate the remaining videos, and so on. When it is done, he/she may leave the room. A more detailed explanation about the experiment itself can be given to the participant, if is required.

Video lists used in the Experiment

ORIGINAL VIDEO LIST

Video	Packet-Loss	Blocky	Blurry
blkblr_v1_1280 × 720_0	0.0	0.0	0.0
blkblr_v7_1280 × 720_0	0.0	0.0	0.0
blkblr_v8_1280 × 720_0	0.0	0.0	0.0
blkblr_v9_1280 × 720_0	0.0	0.0	0.0
blkblr_v10_1280 × 720_0	0.0	0.0	0.0
blkblr_v11_1280 × 720_0	0.0	0.0	0.0
blkblr_v12_1280 × 720_0	0.0	0.0	0.0

TABLE III: Original video list used during Free-viewing session.

TRAINING VIDEO LIST

Video	Packet-Loss	Blocky	Blurry
blkblr_v2_1280 × 720_0	0.0	0.0	0.0
blkblr_v3_1280 × 720_0	0.0	0.0	0.0
blkblr_v4_1280 × 720_0	0.0	0.0	0.0
blkblr_v5_1280 × 720_0	0.0	0.0	0.0

TABLE IV: Original video list used during Training session.

Video	Packet-Loss	Blocky	Blurry
blkblr_v2_1280 × 720_3	0.0	0.0	0.6
blkblr_v3_1280 × 720_15	0.0	0.6	0.6
blkblr_v4_1280 × 720_12	0.0	0.6	0.0
blkblr_v6_I12_PckErr3	8.1	0.0	0.0

TABLE V: Degraded video list used during Training session.

PRACTICE TRIAL LIST

Video	Packet-Loss	Blocky	Blurry
blkblr_v2_1280 × 720_15	0.0	0.6	0.6
blkblr_v4_1280 × 720_10	0.0	0.4	0.4
blkblr_v5_I12_8_PckErr3	8.1	0.4	0.0
blkblr_v6_1280 × 720_0	0.0	0.0	0.0

TABLE VI: Video list used during Practice Trial session.

VIDEO LIST OF MAIN EXPERIMENT

Combination	Packet-Loss	Blocky	Blurry	Combination	Packet-Loss	Blocky	Blurry
blkblr_v1_1280 × 720_0	0.0	0.0	0.0	blkblr_v7_I12_10_PckErr1	0.7	0.4	0.4
blkblr_v1_1280 × 720_3	0.0	0.0	0.6	blkblr_v7_I12_10_PckErr3	8.1	0.4	0.4
blkblr_v1_1280 × 720_12	0.0	0.6	0.0	blkblr_v7_I12_11_PckErr1	0.7	0.4	0.6
blkblr_v1_1280 × 720_15	0.0	0.6	0.6	blkblr_v7_I12_11_PckErr3	8.1	0.4	0.6
blkblr_v1_I12_2_PckErr1	0.7	0.0	0.4	blkblr_v7_I12_12_PckErr1	0.7	0.6	0.0
blkblr_v1_I12_2_PckErr3	8.1	0.0	0.4	blkblr_v7_I12_12_PckErr3	8.1	0.6	0.0
blkblr_v1_I12_3_PckErr1	0.7	0.0	0.6	blkblr_v7_I12_14_PckErr1	0.7	0.6	0.4
blkblr_v1_I12_3_PckErr3	8.1	0.0	0.6	blkblr_v7_I12_14_PckErr3	8.1	0.6	0.4
blkblr_v1_I12_8_PckErr1	0.7	0.4	0.0	blkblr_v7_I12_15_PckErr1	0.7	0.6	0.6
blkblr_v1_I12_8_PckErr3	8.1	0.4	0.0	blkblr_v7_I12_15_PckErr3	8.1	0.6	0.6
blkblr_v1_I12_10_PckErr1	0.7	0.4	0.4	blkblr_v8_1280 × 720_0	0.0	0.0	0.0
blkblr_v1_I12_10_PckErr3	8.1	0.4	0.4	blkblr_v8_1280 × 720_3	0.0	0.0	0.6
blkblr_v1_I12_11_PckErr1	0.7	0.4	0.6	blkblr_v8_1280 × 720_12	0.0	0.6	0.0
blkblr_v1_I12_11_PckErr3	8.1	0.4	0.6	blkblr_v8_1280 × 720_15	0.0	0.6	0.6
blkblr_v1_I12_12_PckErr1	0.7	0.6	0.0	blkblr_v8_I12_2_PckErr1	0.7	0.0	0.4
blkblr_v1_I12_12_PckErr3	8.1	0.6	0.0	blkblr_v8_I12_2_PckErr3	8.1	0.0	0.4
blkblr_v1_I12_14_PckErr1	0.7	0.6	0.4	blkblr_v8_I12_3_PckErr1	0.7	0.0	0.6
blkblr_v1_I12_14_PckErr3	8.1	0.6	0.4	blkblr_v8_I12_3_PckErr3	8.1	0.0	0.6
blkblr_v1_I12_15_PckErr1	0.7	0.6	0.6	blkblr_v8_I12_8_PckErr1	0.7	0.4	0.0
blkblr_v1_I12_15_PckErr3	8.1	0.6	0.6	blkblr_v8_I12_8_PckErr3	8.1	0.4	0.0
blkblr_v7_1280 × 720_0	0.0	0.0	0.0	blkblr_v8_I12_10_PckErr1	0.7	0.4	0.4
blkblr_v7_1280 × 720_3	0.0	0.0	0.6	blkblr_v8_I12_10_PckErr3	8.1	0.4	0.4
blkblr_v7_1280 × 720_12	0.0	0.6	0.0	blkblr_v8_I12_11_PckErr1	0.7	0.4	0.6
blkblr_v7_1280 × 720_15	0.0	0.6	0.6	blkblr_v8_I12_11_PckErr3	8.1	0.4	0.6
blkblr_v7_I12_2_PckErr1	0.7	0.0	0.4	blkblr_v8_I12_12_PckErr1	0.7	0.6	0.0
blkblr_v7_I12_2_PckErr3	8.1	0.0	0.4	blkblr_v8_I12_12_PckErr3	8.1	0.6	0.0
blkblr_v7_I12_3_PckErr1	0.7	0.0	0.6	blkblr_v8_I12_14_PckErr1	0.7	0.6	0.4
blkblr_v7_I12_3_PckErr3	8.1	0.0	0.6	blkblr_v8_I12_14_PckErr3	8.1	0.6	0.4
blkblr_v7_I12_8_PckErr1	0.7	0.4	0.0	blkblr_v8_I12_15_PckErr1	0.7	0.6	0.6
blkblr_v7_I12_8_PckErr3	8.1	0.4	0.0	blkblr_v8_I12_15_PckErr3	8.1	0.6	0.6

Combination	Packet-Loss	Blocky	Blurry	Combination	Packet-Loss	Blocky	Blurry
blkblr_v9_1280 × 720_0	0.0	0.0	0.0	blkblr_v11_1280 × 720_0	0.0	0.0	0.0
blkblr_v9_1280 × 720_3	0.0	0.0	0.6	blkblr_v11_1280 × 720_3	0.0	0.0	0.6
blkblr_v9_1280 × 720_12	0.0	0.6	0.0	blkblr_v11_1280 × 720_12	0.0	0.6	0.0
blkblr_v9_1280 × 720_15	0.0	0.6	0.6	blkblr_v11_1280 × 720_15	0.0	0.6	0.6
blkblr_v9_I12_2_PckErr1	0.7	0.0	0.4	blkblr_v11_I12_2_PckErr1	0.7	0.0	0.4
blkblr_v9_I12_2_PckErr3	8.1	0.0	0.4	blkblr_v11_I12_2_PckErr3	8.1	0.0	0.4
blkblr_v9_I12_3_PckErr1	0.7	0.0	0.6	blkblr_v11_I12_3_PckErr1	0.7	0.0	0.6
blkblr_v9_I12_3_PckErr3	8.1	0.0	0.6	blkblr_v11_I12_3_PckErr3	8.1	0.0	0.6
blkblr_v9_I12_8_PckErr1	0.7	0.4	0.0	blkblr_v11_I12_8_PckErr1	0.7	0.4	0.0
blkblr_v9_I12_8_PckErr3	8.1	0.4	0.0	blkblr_v11_I12_8_PckErr3	8.1	0.4	0.0
blkblr_v9_I12_10_PckErr1	0.7	0.4	0.4	blkblr_v11_I12_10_PckErr1	0.7	0.4	0.4
blkblr_v9_I12_10_PckErr3	8.1	0.4	0.4	blkblr_v11_I12_10_PckErr3	8.1	0.4	0.4
blkblr_v9_I12_11_PckErr1	0.7	0.4	0.6	blkblr_v11_I12_11_PckErr1	0.7	0.4	0.6
blkblr_v9_I12_11_PckErr3	8.1	0.4	0.6	blkblr_v11_I12_11_PckErr3	8.1	0.4	0.6
blkblr_v9_I12_12_PckErr1	0.7	0.6	0.0	blkblr_v11_I12_12_PckErr1	0.7	0.6	0.0
blkblr_v9_I12_12_PckErr3	8.1	0.6	0.0	blkblr_v11_I12_12_PckErr3	8.1	0.6	0.0
blkblr_v9_I12_14_PckErr1	0.7	0.6	0.4	blkblr_v11_I12_14_PckErr1	0.7	0.6	0.4
blkblr_v9_I12_14_PckErr3	8.1	0.6	0.4	blkblr_v11_I12_14_PckErr3	8.1	0.6	0.4
blkblr_v9_I12_15_PckErr1	0.7	0.6	0.6	blkblr_v11_I12_15_PckErr1	0.7	0.6	0.6
blkblr_v9_I12_15_PckErr3	8.1	0.6	0.6	blkblr_v11_I12_15_PckErr3	8.1	0.6	0.6
blkblr_v10_1280 × 720_0	0.0	0.0	0.0	blkblr_v12_1280 × 720_0	0.0	0.0	0.0
blkblr_v10_1280 × 720_3	0.0	0.0	0.6	blkblr_v12_1280 × 720_3	0.0	0.0	0.6
blkblr_v10_1280 × 720_12	0.0	0.6	0.0	blkblr_v12_1280 × 720_12	0.0	0.6	0.0
blkblr_v10_1280 × 720_15	0.0	0.6	0.6	blkblr_v12_1280 × 720_15	0.0	0.6	0.6
blkblr_v10_I12_2_PckErr1	0.7	0.0	0.4	blkblr_v12_I12_2_PckErr1	0.7	0.0	0.4
blkblr_v10_I12_2_PckErr3	8.1	0.0	0.4	blkblr_v12_I12_2_PckErr3	8.1	0.0	0.4
blkblr_v10_I12_3_PckErr1	0.7	0.0	0.6	blkblr_v12_I12_3_PckErr1	0.7	0.0	0.6
blkblr_v10_I12_3_PckErr3	8.1	0.0	0.6	blkblr_v12_I12_3_PckErr3	8.1	0.0	0.6
blkblr_v10_I12_8_PckErr1	0.7	0.4	0.0	blkblr_v12_I12_8_PckErr1	0.7	0.4	0.0
blkblr_v10_I12_8_PckErr3	8.1	0.4	0.0	blkblr_v12_I12_8_PckErr3	8.1	0.4	0.0
blkblr_v10_I12_10_PckErr1	0.7	0.4	0.4	blkblr_v12_I12_10_PckErr1	0.7	0.4	0.4
blkblr_v10_I12_10_PckErr3	8.1	0.4	0.4	blkblr_v12_I12_10_PckErr3	8.1	0.4	0.4
blkblr_v10_I12_11_PckErr1	0.7	0.4	0.6	blkblr_v12_I12_11_PckErr1	0.7	0.4	0.6
blkblr_v10_I12_11_PckErr3	8.1	0.4	0.6	blkblr_v12_I12_11_PckErr3	8.1	0.4	0.6
blkblr_v10_I12_12_PckErr1	0.7	0.6	0.0	blkblr_v12_I12_12_PckErr1	0.7	0.6	0.0
blkblr_v10_I12_12_PckErr3	8.1	0.6	0.0	blkblr_v12_I12_12_PckErr3	8.1	0.6	0.0
blkblr_v10_I12_14_PckErr1	0.7	0.6	0.4	blkblr_v12_I12_14_PckErr1	0.7	0.6	0.4
blkblr_v10_I12_14_PckErr3	8.1	0.6	0.4	blkblr_v12_I12_14_PckErr3	8.1	0.6	0.4
blkblr_v10_I12_15_PckErr1	0.7	0.6	0.6	blkblr_v12_I12_15_PckErr1	0.7	0.6	0.6
blkblr_v10_I12_15_PckErr3	8.1	0.6	0.6	blkblr_v12_I12_15_PckErr3	8.1	0.6	0.6

TABLE VII: Degraded videos used during main experiment session.

Instructions showed during the experiment

1^{st} **Instruction:**
Please type in your name and press return

2^{nd} **Instruction:**
Welcome! Thank you for participating in this experiment. The experiment is divided in 5 *sessions:*
(1) *Equipment Calibration,*
(2) *Free Viewing,*
(3) *Training,*
(4) *Practice Trials,*
(5) *Main Experimental Session.*
At the beginning of each session, I will briefly explain what you are required to do at each stage. Left-click to continue.

3^{rd} **Instruction:**
The distance from the monitor to your eyes is very important during the presentation.
Please put your head on the CHIN-REST in front of you. Try not to lean backward.
Left-click to continue

4^{th} **Instruction:**
(1) *CALIBRATION SESSION*
Please, wait for a few seconds while I adjust the system.
When the system is ready, I will ask you to continue.
Left-click to continue

5^{th} **Instruction:**
(1) *CALIBRATION SESSION*
You are going to see a series of small black SQUARES on the screen.
At each screen, one black square will appear at a different position.
Please, keep your eyes fixated on each of these squares.
Left-click to continue

6^{th} **Instruction:**
(1) *CALIBRATION SESSION Thank you! The calibration is now complete.*
Left-click to continue

7^{th} **Instruction:**
(2) *FREE VIEWING SESSION You are now going to watch a series of* 7 *videos.*
Please, watch them as if you were at home watching TV.
Whenever you are ready to start, please left-click to continue.

8^{th} **Instruction:**
(3) *TRAINING SESSION*
This study is concerned with defects or impairments in video images and their effect on human viewers.
We are not concerned with the content of the videos.
We are interested in whether or not you see any defects or impairments in the videos that we will show, and if so, how annoying defect is.
Left-click to continue

9^{th} **Instruction:**
(3) *TRAINING SESSION*

Here is how you will determine the annoyance value. I am about to show you a set of sample clips.
The sample clips include two sets of videos. The first set has 4 *high quality videos.*
Left-click to play the set of high quality videos.

10^{th} **Instruction:**
(3) *TRAINING SESSION*
The second set has degraded videos. They will give you an idea of the range of quality that you will be seeing.
You are to assign an ANNOYANCE value of 10 *to the most annoying video among the sample clips.*
Left-click to play the set of impaired videos

11^{th} **Instruction:**
(3) *TRAINING SESSION*
Did you see any defects?
Remember that the most annoying defect that you have seen is to have a value of 10.
If the annoyance value of a defect in the experiment is half of the worst sample clip, give it a 5*;*
if it is $1/10th$ *as bad, give it a* 1.
If the defect did not annoy you at all, call it zero.
Left-click to continue

12^{th} **Instruction:**
(4) *PRACTICE TRIAL SESSION*
Before we start the experiment, you will have 4 *practice trials to be sure that you understand the task.*
You will be asked to perform the exact same tasks you will perform in the main experiment.
You will respond in these trials just like you will in the main experiment.
We will not use the data from the practice trials, so don't be concerned if you make a mistake here.
If you have any questions or concerns, feel free to ask me.
Left-click to continue

13^{th} **Instruction:**
(4) *PRACTICE TRIAL SESSION*
You will be presented with one video clip on each trial.
Each clip will last 10 *seconds and will be played once.*
After the clip is played, questions will appear on the monitor.
The same questions will be asked after every trial. Do not spend a lot of time thinking about your responses.
We want to know your initial impressions.
Left-click to continue

14^{th} **Instruction:**
(4) *PRACTICE TRIAL SESSION*
You will be asked to estimate the annoyance of defects or impairments in the video.
The defects can be found in any region of video and at any time during the clip.
After the clip is played, you will be asked: Did you see any defect or impairment?
If you did not see a defect, answer NO. Then, Left-click to play the next clip.
Left-click to continue

15^{th} **Instruction:**
(4) *PRACTICE TRIAL SESSION*
For those clips in which you do detect a defect or impairment, answer YES.
You will be then asked to indicate the annoyance of the defect you saw using a scale with values ranging from 0 *and* 10.
You are to assign an annoyance value of 10 *to the most annoying video.*

If the annoyance value of a defect in the experiment is half of the worst sample clip, give it a 5*; if it is* $1/10$*th as bad, give it a* 1*.*
If the defect did not annoy you at all, call it zero.
You should enter the scores using the mouse to LEFT-click on the desired value.
Left-click to continue

16^{th} **Instruction:**
(4) *PRACTICE TRIAL SESSION*
After you finished entering your choice of number, Left-click to play the next video.
Do you have any questions?
Left-click to start PRACTICE TRIALS.

17^{th} **Instruction:**
Did you perceive any impairments or defects in the video?

18^{th} **Instruction:**
(5) *MAIN EXPERIMENT SESSION*
The experiment is divided in 3 *parts. Each part should last approximately* 15 *minutes.*
A break will be given after of each part of the experiment is finished.
If you need to take a small break at any time, enter your answers for the most recent video, but wait to Left-click until you are ready to go on.
You should stop if you are confused about what to do.
If you realize you have entered data incorrectly, tell me and I will go back and fix it later.
Left-click to continue

19^{th} **Instruction:**
(5) *MAIN EXPERIMENT SESSION – PART I*
Do you have any questions?
Left-click to start PART I

20^{th} **Instruction:**
Did you perceive any impairments or defects in the video?

21^{st} **Instruction:**
This is the end of the first part of the experiment.
Please Left-click whenever you are ready to resume the experiment.

22^{nd} **Instruction:**
(1) *CALIBRATION SESSION – PART II*
You are now going to perform the calibration session again.
Please, wait for a few seconds while the experimenter adjusts the system.
When the system is ready, the experimenter will ask you to continue.
Left-click to continue

23^{rd} **Instruction:**
(1) *CALIBRATION SESSION – PART II*
You're now going to see a series of small black SQUARES on the screen.
At each screen, one black square will appear at a different position.
Please, keep your eyes fixated on each of these squares.
Left-click to continue

24^{th} **Instruction:**
Thank you! The calibration is now complete.
Left-click to start the Part II of the experiment.
Left-click to continue

25^{th} **Instruction:**
Did you perceive any impairments or defects in the video?

26^{st} **Instruction:**
This is the end of the second part of the experiment.
Please Left-click whenever you are ready to resume the experiment.

27^{nd} **Instruction:**
(1) *CALIBRATION SESSION – PART III*
You are now going to perform the calibration session again.
Please, wait for a few seconds while the experimenter adjusts the system.
When the system is ready, the experimenter will ask you to continue.
Left-click to continue

28^{rd} **Instruction:**
(1) *CALIBRATION SESSION – PART III*
You're now going to see a series of small black SQUARES on the screen.
At each screen, one black square will appear at a different position.
Please, keep your eyes fixated on each of these squares.
Left-click to continue

29^{th} **Instruction:**
Thank you! The calibration is now complete.
Left-click to start the Part III of the experiment.
Left-click to continue

30^{th} **Instruction:**
Did you perceive any impairments or defects in the video?

31^{st} **Instruction:**
This is the end of the experiment.Thank you for participating!