

# UX Raptor: Data description

This document describes the data file that can be downloaded from Viomba's extranet.

## Introduction

UX Raptor is a service from Viomba, in which the customer can give Viomba's test users group tasks to complete. When the test users complete the tasks, they are being recorded, and the results are made available to customer in Viomba's extranet.

The extranet allows customer to download the results in a file, too. The purpose of the download is enable customer to further analyse the data using its own tools.

## File format

The file available from extranet is JSON-encoded data object.

## Data structure

Each result is an object, which contains the following root-level properties:

property	contents
result	<b>string</b> , either " <i>success</i> " or " <i>fail</i> " depending on the outcome of the download request
panelist	<b>object</b> , details the person who completed the task
video	<b>object</b> , describes the video file of the screen capture
impressions	<b>array</b> , contains the data on each individual page impression in the result.
notes	<b>array</b> , contains the observations and goals data on the screen capture

## Panelist

The panelist object contains the following properties:

property	contents
panelist.id	<b>number</b> , the panelist's unique identifier. The identifier is never subject to change for the same panelist.
panelist.domicile	<b>string</b> , the panelist's domicile. Given as ISO-3166-1 code, but in lower case. For example, " <i>gb</i> " = United Kingdom.
panelist.gender	<b>string</b> , the panelist's gender. Either " <i>male</i> " or " <i>female</i> "
panelist.year_of_birth	<b>number</b> , the panelist's year of birth. For example, <i>1980</i> .
panelist.locale	<b>string</b> , defines the locale of the panelist. The format is a ISO-639-1 language code, underscore, ISO-3166-1 country code. For example: " <i>en_GB</i> " (British English).
panelist.timezone	<b>string</b> , the time zone of the panelist. The format is from the IANA time zone database endorsed by ICANN. An example value is " <i>Europe/London</i> ".

## Video

The video object contains the following properties:

property	contents
video.url	<b>string</b> , the URL of the video, given in its full length containing the schema part (https://). The video has no access control other than the URL, which is not easy to guess.  The video file is in .webm media container file format, video being VP8 encoded.
video.start	<b>string</b> , the date / time when the screen capture started. The format is "yyyy-mm-dd hh:ii:ss". The time is UTC.
video.local_time	<b>string</b> , same as video.start, but the time is given in the panelist's local time.
video.duration	<b>number</b> , the time duration of the video in milliseconds (60000 = one minute).
video.datasize	<b>number</b> , the byte size of the video file.

## Impressions

The impressions array contains one or more impression object. Each impression object details a page impression displayed on the screen capture.

property	contents
impression.start	<b>string</b> , the date / time when the impression started. The format is "yyyy-mm-dd hh:ii:ss". The time is UTC.
impression.local_time	<b>string</b> , same as impression.start, but the time is given in the panelist's local time.
impression.offset	<b>number</b> , the time offset of the impression from the video start. Given in milliseconds.
impression.duration	<b>number</b> , the life time of the impression. Given in milliseconds
impression.viewed	<b>number</b> , the total time of the panelist's gaze measured on the browser window during the impression. Given in milliseconds.
impression.window_width	<b>number</b> , the panelist's browser width in pixels at impression start.
impression.window_height	<b>number</b> , the panelist's browser height in pixels at impression start.
impression.scroll_path	<b>array</b> , data on changes to the scroll position and/or the size of the document on the panelist's browser. Empty, if there were no scrolling or window resize events during the page impression.
impression.gaze_path	<b>array</b> , data on the panelist's gaze path on the screen during the impression (see later)
impression.mouse_path	<b>array</b> , data on the panelist's mouse movement / buttons during the impression (see later)
impression.emotions	<b>array</b> , data on the panelist's emotions during the impression (see later)

### Impression.scroll\_path

Each member of the `impression.scroll_path`-array is a point of measurement of the document scroll position in the panelist's browser, and the browser's dimensions. The sampling rate of the measurements varies in the data sets (delta t between the measurement points).

property	contents
<code>scroll_path.t</code>	<b>number</b> , the time offset of the measurement point from the start of the parent <code>impression.start</code> . Given in milliseconds.
<code>scroll_path.x</code>	<b>number</b> , measured horizontal scroll offset of the document from the browser's left edge in pixels.
<code>scroll_path.y</code>	<b>number</b> , measured vertical scroll offset of the document from the browser's top edge in pixels.
<code>scroll_path.width</code>	<b>number</b> , measured width of the panelist's browser in pixels.
<code>scroll_path.height</code>	<b>number</b> , measured height of the panelist's browser in pixels.

### Impression.gaze\_path

Each member of the `impression.gaze_path`-array is a point of measurement of the center point of the panelist's gaze. The sampling rate of the measurements varies, and there may be gaps in the points (panelist's gaze has gone outside the computer screen).

property	contents
<code>gaze_path.t</code>	<b>number</b> , the time offset of the measurement point from the start of the parent <code>impression.start</code> . Given in milliseconds.
<code>gaze_path.d</code>	<b>number</b> , the duration of the measurement point in milliseconds (the end of the measurement is therefore <code>t+d</code> milliseconds from the <code>impression.start</code> )
<code>gaze_path.x</code>	<b>number</b> , the horizontal offset of the measured centre point of the panelist's gaze on the document from the left edge of the document in pixels.
<code>gaze_path.y</code>	<b>number</b> , the horizontal offset of the measured centre point of the panelist's gaze on the document from the top edge of the document in pixels.
<code>gaze_path.cx</code>	<b>number</b> , the horizontal offset of the measured centre point of the panelist's gaze on the browser window from the left edge of the inner window in pixels.
<code>gaze_path.cy</code>	<b>number</b> , the vertical offset of the measured centre point of the panelist's gaze on the document from the top edge of the inner window in pixels.
<code>gaze_path.fixated</code>	<b>boolean</b> , whether or not the panelist's gaze is fixated on the location, or if the gaze is simply roaming about.
<code>gaze_path.in_client</code>	<b>boolean</b> , whether or not the measurement point is on the browser inner window.

### Impression.mouse\_path

Each member of the `impression.mouse_path`-array is a point of measurement of the location of the panelist's mouse pointer and buttons pressed. The sampling rate of the measurements varies.

property	contents
mouse_path.t	<b>number</b> , the time offset of the measurement point from the start of the parent impression.start. Given in milliseconds.
mouse_path.x	<b>number</b> , the horizontal offset of the measured location of the mouse pointer on the document from the left edge of the document in pixels.
mouse_path.y	<b>number</b> , the horizontal offset of the measured location of the mouse pointer on the document from the top edge of the document in pixels.
mouse_path.cx	<b>number</b> , the horizontal offset of the measured location of the mouse pointer on the browser window from the left edge of the inner window in pixels.
mouse_path.cy	<b>number</b> , the vertical offset of the measured location of the mouse pointer on the document from the top edge of the inner window in pixels.
mouse_path.b	<b>number</b> , the mouse buttons pressed down by the panelist as a bitmap, when button values are: 1 = left mouse button 2 = right mouse button 4 = center mouse button. ( value: 0 = no buttons pressed, 1 = only left, 2 = only right, 3 = left and right, 4 = only center, 5 = left and center, 6 = right and center, 7 = all three buttons pressed )

### Impression.emotions

If the task was set to capture panelist's emotions with web cam, the emotion data is given in impression.emotions array. Each member in the array is a point of measurement of the panelist's emotions. The sampling rate of the emotions varies, and there may be gaps between the measurements.

Also, the presence of pupil diameter data is subject to the task settings.

property	contents
emotions.t	<b>number</b> , the time offset of the measurement point from the start of the parent impression.start. Given in milliseconds.
emotions.d	<b>number</b> , the duration of the measurement point in milliseconds (the end of the measurement is therefore t+d milliseconds from the impression.start)
emotions.joy	<b>number</b> , 0 - 99, the amount of joy measured
emotions.fear	<b>number</b> , 0 - 99, the amount of fear measured
emotions.disgust	<b>number</b> , 0 - 99, the amount of disgust measured
emotions.sadness	<b>number</b> , 0 - 99, the amount of sadness measured
emotions.surprise	<b>number</b> , 0 - 99, the amount of surprise measured
emotions.contempt	<b>number</b> , 0 - 99, the amount of contempt measured
emotions.engagement	<b>number</b> , 0 - 99, the amount of engagement measured

emotions.valence	<b>number</b> , -99 - 99, the amount of negative or positive valence measured
emotions.pupil	<b>number</b> , the diameter of the panelist's pupil, given in millimeters.

## Notes

The notes array contains 0 or more note-items describing the contents of the screen capture. The source of the notes are the Viomba's extranet, which enables users to write their observations directly on the video, and originating web-server, which can emit information of reaching goals via Javascript to Viomba.

property	contents
note.id	<b>number</b> , the note's globally unique and persistent identifier.
note.type	<b>string</b> , either "observation" or "goal"
note.offset	<b>number</b> , integer, the time offset from the beginning of the screen capture when the note starts. Given in milliseconds.
note.text	<b>string</b> , the textual contents of the note. If the type is observation, the text written by the user. If the type is goal, the name of the goal.
note.duration	<b>number</b> , integer, the timely duration of the comment. Optional. If present, this would be merely a suggestion for an interface, for example, how to present the note.
note.cx	<b>number</b> , integer. The horizontal offset from the left edge of the video for the location of the note. Optional.
note.cy	<b>number</b> , integer. The vertical offset from the top edge of the video for the location of the note. Optional.
note.user	<b>string</b> , the email address of the user who made the note. Optional.