Draft1 - Sequence

I - Definition

A **frame** describes a video at a given time. A frame should be linked to a sequence.

II - Attributes

II.1 - Definitions

A sequence can have the following attributes:

- **camera_orientation**, three angles which describe the orientation of the camera. One is called camera_orientation_north, it corresponds to the "yaw", the angle in comparison to the north. The other is called camera_angle_vertical, it corresponds to the "pitch". The last one is called camera_angle_horizontal, and corresponds to the "roll".
- **drone_gps_coordinates**, the GPS coordinates of the drone.
- **detected_object**, if one or multiple objects are detected on the frame.
- **frame_time**, the time of the frame on the video.
- **zoom_ratio**, the zoom ratio between the shortest and the current focal. The ratio is equal or greater than 1.

II.2 - Description

II.2.1 - Graphical representation

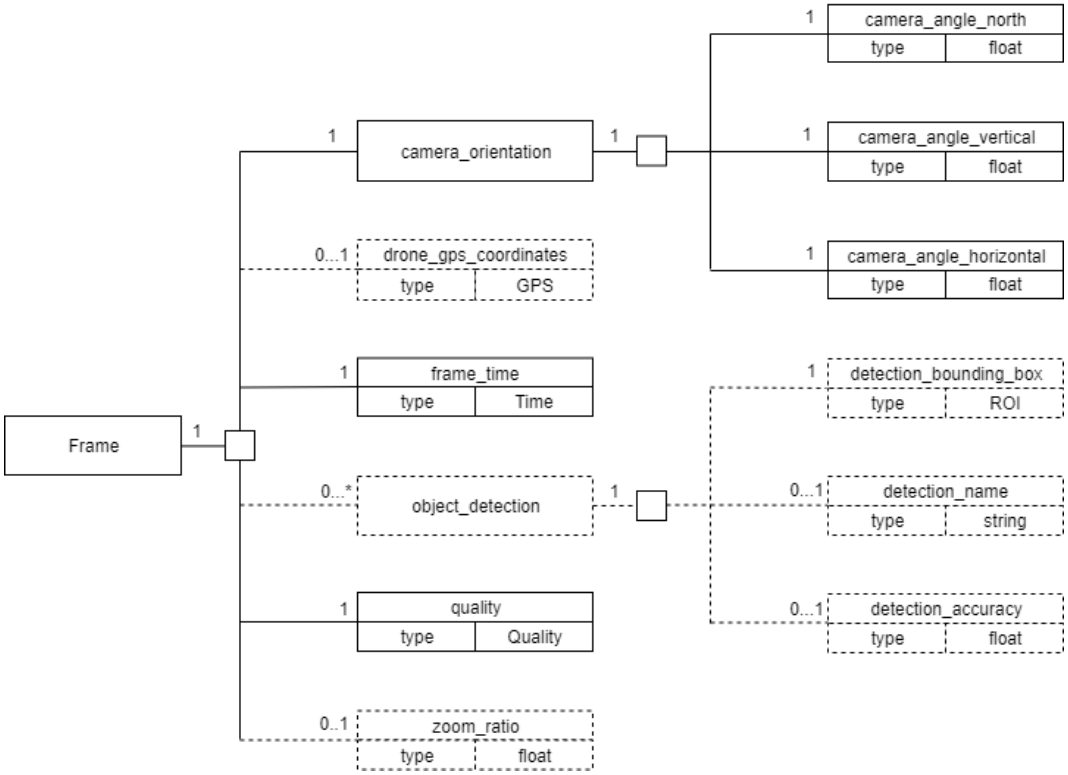

Figure 1: Graphical representation of a frame

II.2.2 - Description table

Name	Type	Expected length	Optional	Significant
camera_orientation	Orientation	-	Yes	2
gps_coordinates	GPS	-	Yes	2
detected_object	Detection	-	Yes	2
frame_time	Time	-	No	1
quality	Quality	-	No	-
zoom_ratio	float	-	Yes	2

Table 1: Description table

III - Examples


```
{ "frame_id" : ObjectId("5bedacdde92e0f1838941fd9"),
"camera_orientation" : { "camera_angle_north" : 15.2342,
                         "camera_angle_vertical" : 20.7542,
                         "camera_horizontal_angle" : 148.3742},
"drone_gps_coordinates" : { "altitude" : 12.01,
                            "latitude" : 048.452652,
                            "longitude" : -001.6406947},
"frame_time": "2019-05-02T16:28:15,562+02:00",
"object_detection" : { {"detection_bounding_box" : { "x_ini" : 146,
                                                     "y_ini" : 253,
                                                     "x_length" : 55,
                                                     "y_length" : 63},
                        "dectection_name" : "person",
                        "detection_accuracy" : 0.9567},
                       {"detection_bounding_box" : { "x_ini" : 12,
                                                     "y_ini" : 14,
                                                     "x_length" : 500,
                                                     "y_length" : 150},
                        "dectection_name" : "car",
                        "detection_accuracy" : 0.9222}},
"quality" : 2,
"zoom_ratio" : 1.00}
```


Figure 2: Example of a frame in json