

Remarks / Please note


Nr.	Message:
1	The whole database is coded and maintained in English. Please do only insert English text.
2	Unknown values are always coded with 9999
3	Values, which are not applicable, are always coded with 8888
4	German "ß" is coded with "ss". German Umlauts (ä,ö,ü), are written out (ae, oe, ue).
5	For each time slot and each camera used during a time slot (i.e. at the same time), a .txt file is created with the metadata specified later on in the codebook.
6	If a recording is interrupted for more than 10 minutes, a new .txt-file must be created.
7	Continuous traffic observations are to be separated by corresponding .txt-files in accordance with environmental changes (such as the onset of rain) or occurring events (such as football matches).







Folder structure and folder content

Nr.	Message:
1	A folder with the current date is created for each day of recording: YYYYMMDD
2	The following files are stored in a day folder per time slot (e.g. 08.30). Files marked as mandatory must always be included!

File	Description	Filename suffix / ending	Please note	Mandatory
.txt-file	Contains general information describing the traffic observation. Structure and content see metadata	/	For every time slot and camera a .txt-file is created. If there is an interruption of more than 10 minutes, a new .txt-file is created.	X
.csv-file	Contains all points of interests (=interactions) inclusive wrong behavior of road users marked during the observation. Includes also the time when a focus shift appeared.	_poi	File was introduced in Feb. 2022.	X
Original video	Original video files per time slot	_org		X
Calibrated video	Calibrated video files per time slot	_cal		
Analysis file	The analysis files of the videos	_ann	The file ending with .tlgx is specified by DataFromSky. The file ending with .csv contains exported trajectories from video analysis (e.g. from .tlgx files)	
Intrinsics	The intrinsic camera parameters used for the video analysis	_int	The intrinsics may often be the same. Nevertheless, copy and rename it for every video.	X
Extrinsics	The extrinsic camera parameters used for the video analysis	_ext		

Screenshot: Day recording „Structure of folder and content“

 Some cameras (e.g. Mavic Mini) may no longer require calibrated video recording!

i > VideoDB > 02_Static > 01_Urban > 01_Node > 02_3W > 01_Dry > 20200728			Folder name
Name	Änderungsdatum		
 20200728_0830_Sid_StP_3W_d_1.txt	28.07.2020 12:02		.txt-file
 20200728_0830_Sid_StP_3W_d_1_1_ann.tlgx	10.08.2020 17:31		Analysis-file
 20200728_0830_Sid_StP_3W_d_1_1_cal.mp4	01.08.2020 19:31		Calibrated video
 20200728_0830_Sid_StP_3W_d_1_1_ext.mat	16.12.2020 15:13		Extrinsics
 20200728_0830_Sid_StP_3W_d_1_1_int.mat	24.09.2019 16:08		Intrinsics
 20200728_0830_Sid_StP_3W_d_1_1_org.MP4	28.07.2020 08:43		Original video

File naming convention

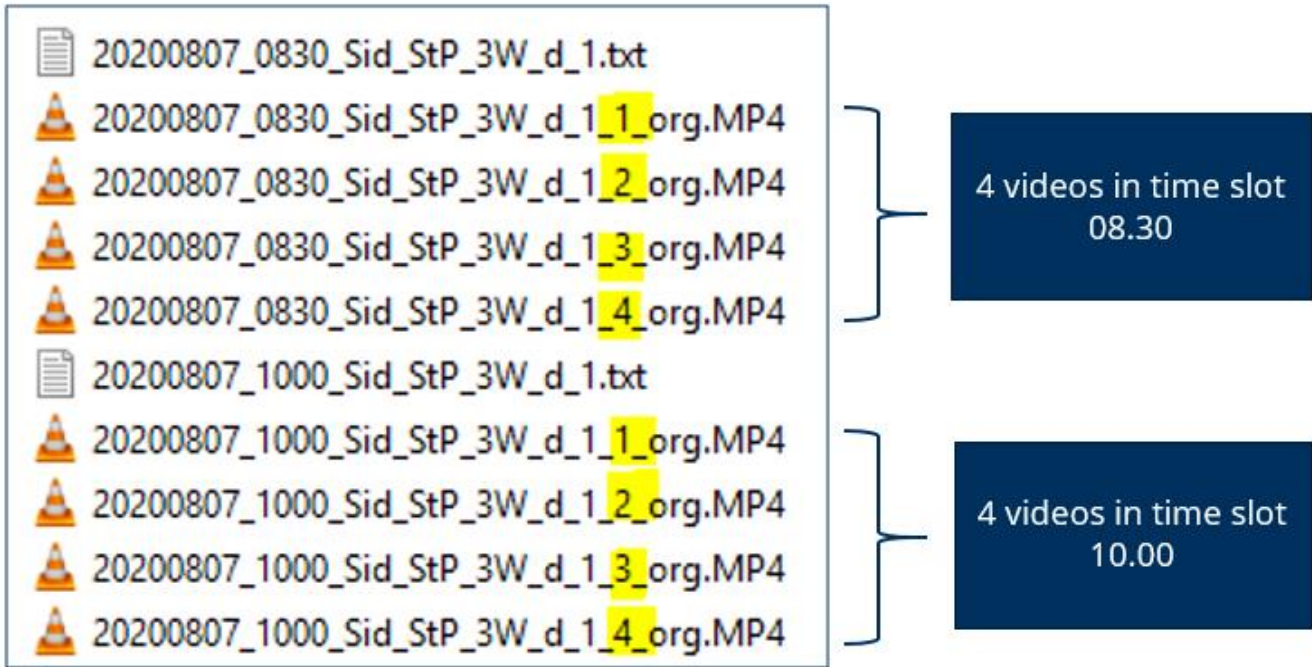
Nr.	Message:
1	All files in a folder are named according to the following convention.
2	For .txt-files the attributes "Number" and "File" are omitted!
3	If the "Street2" attribute does not exist, "Street1" is simply inserted in its place again.

Convention: Date_Time_Street1_Street2_Geometry_Light_Camera_Number_File

Example: 20200901_083045_StP_Sid_3W_d_1_2_org

Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
Date	YYYYMMDD	YearMonthDay	01.09.2020	20200901
Time	HHMMSS	HourMinuteSeconds in 24 hour scheme	08.30 and 45 seconds am	083045
Street1	String ("B"->"ss")	First three letters of the full street name of the first street in focus of the video.	St. Petersburger Straße	StP
Street2	String ("B"->"ss")	First three letters of the full street name of the second street in focus of the video.	Sidonienstraße	Sid
Geometry	4W+	Node with more than 4 arms	Traffic observation at Tjunction	3W
	4W	Node with 4 arms		
	3W	Node with 3 arms		
	Ot	Other node		
	L1	One lane in total at curve / straight		
	L2	Two lanes in total at curve / straight		
	L3	Three lanes in total at curve / straight		
	L4	Four lanes in total at curve / straight		
	L5	Five lanes in total at curve / straight		
	L6	Six lanes in total at curve / straight		
	L6+	Five lanes and more in total at curve / straight		
Light	d	Daylight recording	Recording during the day with daylight	d
	n	Recording at dusk / night		

Camera	Integer	Number of the camera from which the file originates. Several cameras can theoretically be used per recording. Consecutive numbering, starting with 1.	Use of one camera for the recording, which means that this camera is automatically camera Nr. 1	1
Number	Integer	Number of the video file per time slot. During a time slot (e.g. 08:30), several individual videos can be made. Sequential numbering, starting at 1 (this information is omitted for the text file).	File belongs to the second video made during the time slot	2
File	poi	Point of interests / interactions	Original video	org
	org	Original video		
	cal	Calibrated video		
	ann	Analysis file		
	ext	Extrinsics		
	Integer	Intrinsics		
	(empty)	(omits for .txt-files)		



Metadata

Nr.	Message:
1	Each text file is structured according to the following scheme.
2	The whole database is coded and maintained in English. Please do only insert English text.
3	Unknown values are always coded with 9999
4	Values, which are not applicable, are always coded with 8888
5	German "ß" is coded with "ss". German Umlauts (ä,ö,ü), are written out (ae, oe, ue).
6	For each time slot and each camera used during a time slot (i.e. at the same time), a .txt file is created with the metadata below.
7	If a recording is interrupted for more than 10 minutes, a new .txt-file must be created.
8	Continuous traffic observations are to be separated by corresponding .txt-files in accordance with environmental changes (such as the onset of rain) or occurring events (such as football matches).

Time

Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
Timestamp	YYYYMMDD_HHMMSS	YearMonthDay_HourMinuteSeconds (HourMinuteSeconds in 24 hour scheme)	01.09.2020 at 08.30 and 45 seconds am	20200901_083045
RecordingTime [minutes]	Integer	Recording time per time slot in minutes (length of all single videos per time slot / txt-file)	5 videos with 5 minutes recording time each per time slot / txt-file -->	25
Weekday	Monday	Day of week, when the recording takes place.	Recording on Monday	Monday
	Tuesday			
	Wednesday			
	Thursday			
	Friday			
	Saturday			
	Sunday			
PublicHoliday	Yes	Indicator, if recording is on a public holiday. Public holiday must be valid for the location to be recorded.	Recording on Easter-Monday	Yes
	No			
	9999			

Organizational

Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
Status	ExternPublic	External public	Data is from public external source	ExternPublic
	ExternRestricted	External restricted		
	ExternTempRestricted	External temporary restricted		
	TUDPublic	Public within TUD	Data can be used within TUD without restrictions	TUDPublic
	TUDRestricted	Restricted use within TUD	Data can only be used by data owner	TUDRestricted
	TUDTempRestricted	Temporary restricted use within TUD		
Source	String	(German) Abbreviation of the institution collecting the data.	Lehrstuhl Kraftfahrzeugtechnik	LKT
StudyID	String	Unique identifier of the study framing the data collection. Unchanged for all videos within a study. Given by the responsible institution.	Traffic observation as part of SePIA-project.	SePIA
EmployeeID	Integer	Unique identifier of the employee collecting the videos. Remains constant for all data collections. Given by the responsible institution. Every institution gets a fixed ID-range, e.g. 0-100.	Max Mustermann from LKT. LKT has an assigned ID-range from 0 to 100.	11

Environment				
Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
Temperature [°C]	Integer	Rounded outdoor temperature in degree Celsius, e.g. read from the current weather display.	Weather app shows 15.4 degrees Celsius outdoor temperature for the observed location.	15
	9999	unknown		
RoadCondition	Dry	Dry road surface	Dry road surface, i.e. road surface is not clearly evidently wet, due to e.g. rain	Dry
	Wet	Wet road surface		
	Icy/snow-covered	Icy / snow-covered surface		
	Slippery	Slippery (e.g. due to oil, leaves)		
	9999	unknown		
RoadSurfaceTemperature [°C]	Integer	Rounded road surface temperature in degree Celsius, e.g. measured by a infrared thermometer at the observed location.	Infrared thermometer pointed at the asphalt road surface shows a temperature of 9.2 degrees Celsius.	9
	9999	unknown		
Sunshine	No	No sunshine	Strong sunshine right now --> The sun shines strong right now.	Strong
	Light	Light sunshine		
	Strong	Strong sunshine		
	8888	not applicable		
	9999	unknown		
Rain	No	No rain	No rain right now --> It is not raining right now.	No
	Light	Light rain		
	Strong	Strong rain		
	8888	not applicable		
	9999	unknown		
Fog	No	No fog	No fog right now --> There is no fog right now.	No
	Light	Light fog		
	Strong	Strong fog		
	8888	not applicable		
	9999	unknown		
Snow	No	No snow	Strong snow right now --> It is snowing right now --> The variable does NOT mean, that there is snow on the street! Snow on the street ist coded in the variable RoadCondition.	Strong
	Light	Light snow		
	Strong	Strong snow		
	8888	not applicable		
	9999	unknown		

Wind	No	No wind	Light wind right now --> There is light wind right now.	Light
	Light	Light wind		
	Strong	Strong wind		
	8888	not applicable		
	9999	unknown		
WindSpeed [km/h]	Integer	Rounded wind speed in km/h, e.g. taken from the Drone, the KopterProfiApp or wetteronline.de.	Drone displays a current windspeed of 12.5 km/h	13
	9999	unknown		
Light	Day	Daylight recording	Recording during the day with daylight	Day
	Night	Recording at dusk / night		
	8888	not applicable		

TrafficSummary				
Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
TrafficVolume	High	High traffic volume	Subjective estimation is, that the average traffic volume was middle over the whole observation time.	Middle
	Middle	Middle traffic volume		
	Low	Low traffic volume		
	9999	unknown		
TrafficJam	No	No traffic jam	There was one traffic jam during the observation	Yes
	Yes	Yes, there was a traffic jam		
	9999	unknown		
RoadUserMost	Car		Most of the road users during the observation were cars.	Car
	Truck / Bus			
	Bicycle	also e-scooters		
	Motorcycle			
	Pedestrian			
	Other			
	9999	unknown		
RoadUserSecondMost	Car		Second most of the road users during the observation were pedestrians.	Pedestrian
	Truck / Bus			
	Bicycle	also e-scooters		
	Motorcycle			
	Pedestrian			
	Other			
	9999	unknown		

Point of interests				
Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
NumberPOIs	Integer	Total number of POIs observed during the traffic observation in and outside of the focus area.	During the whole observation 10 different POIs were observed.	10
	9999	unknown		
NumberPOIOutsideFocusArea	Integer	Total number of POIs observed during the traffic observation OUTSIDE of the focus area. The focus area is the area, where e.g. the drone flies exactly above. Often it is the center of the intersection.	During the whole observation 5 different POIs were observed at an gas station, which has an entry to the road at the end of the intersection. This situation exists e.g. at Chemnitzer Straße / Würzburger Straße in Dresden.	5
	9999	unknown		
POIFalse	No	No POI was falsely marked	During the whole observation one POI marked was incorrect.	Yes
	Yes	There was at least one POI falsely marked		
NumberPOIFalse	Integer	Total number of POIs falsely marked during the traffic observation	During the whole observation 3 POIs were falsely marked.	3
	9999	unknown		
Accident	No	There was no accident during the observation	During the whole observation no accident happened.	No
	Yes	There was at least one accident during the observation		
	9999	unknown		
NumberAccidents	Integer	Total number of accidents happened during the traffic observation	During the whole observation 1 accident happened.	1
	9999	unknown		
NearAccident	No	There was no very critical situation during the observation	During the whole observation one very critical situation, a "near accident", happened.	Yes
	Yes	There was at least one critical situation during the observation		
	9999	unknown		

NumberNearAccidents	Integer	Total number of near accidents happened during the traffic observation	During the whole observation 2 near accidents happened.	2
	9999	unknown		
SpecialOperationVehicle	No	There was no special operation vehicle driving by with flashing lights and/or sirens during the observation	During the whole observation one emergency car and one police car drove by with flashing lights and sirens.	Yes
	Yes	There was at least one special operation vehicle driving by with flashing lights and/or sirens during the observation		
	9999	unknown		
NumberSpecialOperationVehicles	Integer	Total number of special operation vehicles driven by with flashing lights and/or sirens during the traffic observation	During the whole observation 2 cars from the accident research with flashing lights drove by.	2
	9999	unknown		
ObstacleOnRoad	No	There was no obstacle on the road during the observation	During the whole observation one street sweeper drove by slowly hindering the subsequent traffic.	Yes
	Yes	There was at least one obstacle on the road during the observation		
	9999	unknown		
NumberObstaclesOnRoad	Integer	Total number of obstacles on the road during the traffic observation	During the whole observation one street sweeper drove by slowly hindering the subsequent traffic.	1
	9999	unknown		
NumberVehicleVehicle	Integer	Total number of interactions between vehicles and vehicles.	<p>Interaction is when at least one road user reacts or should react to the other.</p> <p>Vehicle can be any vehicle with usually four wheels: Trucks, buses, cars, ...</p> <p>Example: When turning one following vehicle reacted to a turning car. There were no more vehicle-vehicle interactions.</p>	1
	9999	unknown		

NumberVehicleCycle	Integer	Total number of interactions between vehicles and bicycles.	Interaction is when at least one road user reacts or should react to the other. Cycles can be any vehicle similar to bicycles: Bicycles, E-bikes, E-scooters, ...	1
	9999	unknown	Example: When turning one cyclist reacted to a turning car. There were no more vehicle-cycle interactions.	
NumberVehicleBike	Integer	Total number of interactions between vehicles and bikes (e.g. motorcycles).	Interaction is when at least one road user reacts or should react to the other. Bikes can be any vehicle similar powered two wheelers: Motorcycles, trikes, ...	1
	9999	unknown	Example: When turning one motorcycle reacted to a turning car. There were no more vehicle-bike interactions.	
NumberVehiclePed	Integer	Total number of interactions between vehicles and pedestrians.	Interaction is when at least one road user reacts or should react to the other. Pedestrians can be any type of pedestrians: Pedestrians, wheel-chairs, ...	1
	9999	unknown	Example: When turning one pedestrian reacted to a turning car. There were no more vehicle-pedestrians interactions.	
NumberCycleCycle	Integer	Total number of interactions between cycles and cycles.	Interaction is when at least one road user reacts or should react to the other. Cycles can be any vehicle similar to bicycles: Bicycles, E-bikes, E-scooters, ...	1
	9999	unknown	Example: When turning one cyclist reacted to another cycle. There were no more cycle-cycle interactions.	
NumberCycleBike	Integer	Total number of interactions between cycles and bikes.	Interaction is when at least one road user reacts or should react to the other.	1
	9999	unknown	Example: When turning one cyclist reacted to a turning motorcycle. There were no more cycle-bike interactions.	
NumberCyclePed	Integer	Total number of interactions between cycles and pedestrians.	Interaction is when at least one road user reacts or should react to the other.	1
	9999	unknown	Example: When turning one cyclist reacted to a crossing pedestrian. There were no more cycle-pedestrian interactions.	
NumberBikePed	Integer	Total number of interactions between bikes and pedestrians.	Interaction is when at least one road user reacts or should react to the other.	1
	9999	unknown	Example: When turning one motorcycle reacted to a crossing pedestrians. There were no more bike-pedestrian interactions.	

NumberSingleObjects	Integer	Total number of interesting actions of single objects.	This POI is normally marked, when one single object makes an error. Single objects can be vehicles, cycles, bikes, pedestrians or any type of road user.	1
	9999	unknown	Example: During the observation, one car made an priority error without having any interaction.	
NumberMultiObjects	Integer	Total number of multi-object-interactions.	This POI is normally marked, when there are several interactions at the same time, which cannot be distinguished anymore. Multi objects can be vehicles, cycles, bikes, pedestrians or any type of road user.	1
	9999	unknown	Example: During the observation, three cars and one pedestrian showed an interaction at the same time.	
NumberTurnAround	Integer	Total number of turn-arounds.	This POI is normally marked, when one road-user makes an turn-around. Turn arounds can be performed by any type of road user except pedestrians.	1
	9999	unknown	Example: During the observation, one car turned around.	
NumberOther	Integer	Total number of other interactions.	This POI is normally marked, when there is an interaction, which does not fit to the other interactions.	1
	9999	unknown	Example: During the observation, there was one interaction not fitting to the other interactions.	

Behavior Errors

Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
BehaviorError	No	There was no behavior error during the observation.	During the whole observation one car showed a wrong behavior, it drove through a red traffic light.	Yes
	Yes	There was at least one road user having a behavior error during the observation.		
	9999	unknown		
NumberBehaviorError	Integer	Total number of behavior errors during the observation.	During the whole observation one car showed a wrong behavior, it drove through a red traffic light.	1
	9999	unknown		
NumberVehicleError	Integer	Total number of behavior errors of vehicles during the observation.	During the whole observation one car showed a wrong behavior, it drove through a red traffic light.	1
	9999	unknown		
NumberCycleError	Integer	Total number of behavior errors of cycles during the observation.	During the whole observation one bicycle showed a wrong behavior, it drove through a red traffic light.	1
	9999	unknown		
NumberBikeError	Integer	Total number of behavior errors of bikes during the observation.	During the whole observation one motorcycle showed a wrong behavior, it drove through a red traffic light.	1
	9999	unknown		
NumberPedError	Integer	Total number of behavior errors of pedestrians during the observation.	During the whole observation one pedestrian showed a wrong behavior, he ignored a red traffic light.	1
	9999	unknown		
NumberPassedPriority	Integer	Total number of passed priorities to other road users during the observation.	During the whole observation one car has passed its priority to another road user, e.g. a bicycle, instead of claiming the priority for itself. The coding refers to the road user, which passes the priority.	1
	9999	unknown		
NumberRoadUseError	Integer	Total number of road use errors during the observation.	Road use errors can be, e.g.: - Wrong lane / road used. - Wrong side of road used.	1
	9999	unknown		

NumberPriorityError	Integer	Total number of priority errors during the observation.	Priority errors can be, e.g.: - Traffic lights / traffic signs ignored. - Right before left ignored. - Any other priority rule ignored.	1
	9999	unknown		
NumberTurningError	Integer	Total number of turning errors during the observation.	Turning errors can be, e.g.: - Wrong turning. - Wrong reverse driving. - Wrong entering into flowing traffic.	1
	9999	unknown		
NumberSideBySideDrivingError	Integer	Total number of side by side driving errors during the observation.	Side by side driving errors can be, e.g.: - Wrong lane change. - Wrong side-by-side driving. - Wrong zip procedure (Reißverschlussverfahren)	1
	9999	unknown		
NumberBehaviorTowardsPedestrianError	Integer	Total number of behavior towards pedestrian errors during the observation.	Behavior towards pedestrian errors can be, e.g. wrong behavior towards pedestrians: - When turning. - At zebra / pedestrian crossings. - At other locations.	1
	9999	unknown		
NumberOvertakingError	Integer	Total number of overtaking errors during the observation.	Overtaking errors can be, e.g. : - Overtaking on the right. - Overtaking without enough sight / information - Other overtaking errors	1
	9999	unknown		
NumberDriveByError	Integer	Total number of drive by errors during the observation.	Drive by errors can be, e.g. : - Driving despite an obstacle. - Not considering other traffic when driving around an obstacle.	1
	9999	unknown		
NumberDistanceError	Integer	Total number of distance errors during the observation.	Distance errors can be, e.g. : - Too less distance (to stop without heavy braking) - Heavy breaking without reason	1
	9999	unknown		
NumberSpeedError	Integer	Total number of speed errors during the observation.	Speed errors can be, e.g. : - Faster than allowed. - Speed not suitable (also too slow)	1
	9999	unknown		
NumberStationaryTrafficError	Integer	Total number of stationary traffic errors during the observation.	Stationary traffic errors can be, e.g. : - Improper stopping or parking. - Improper securing in case of loading / unloading. - Other parking errors.	1
	9999	unknown		

NumberOtherError	Integer	Total number of other errors during the observation.	Other errors can be, e.g. : Any other behavior error not fitting to one of the other categories.	1
	9999	unknown		

Error cause				
Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
CauseError	No	There was no explicit cause for a behavior error during the observation.	During the whole observation one car made a priority error due to an environmental cause (e.g. blinding sun)	Yes
	Yes	There was at least one explicit cause for a behavior error during the observation.		
	9999	unknown		
NumberCauseError	Integer	Total number of causes of behavior errors during the observation.	During the whole observation one car made a priority error due to an environmental cause (e.g. blinding sun)	1
	9999	unknown		
NumberVisualCause	Integer	Total number of visual causes of behavior errors during the observation.	Visual causes of behavior errors can be, e.g.: - Visual obstacles. - Any other obstacles restricting the information acquisition.	1
	9999	unknown		
NumberEnvironmentalCause	Integer	Total number of environmental causes of behavior errors during the observation.	Environmental causes of behavior errors can be, e.g.: - Blinding sun. - Heavy rain / snowing - etc.	1
	9999	unknown		
NumberTechnicalCause	Integer	Total number of technical causes of behavior errors during the observation.	Technical causes of behavior errors can be, e.g.: - Broken car -	1
	9999	unknown		

Special remarks

Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
Remarks	String	<p>Indication of special circumstances, e.g. surveys during or after pandemics. In addition, indication of special events with influence on the traffic situation, e.g. soccer matches.</p> <p>In the case of shape "Curve", also indication of whether "Low Curvature" or "High Curvature" (Curvature = curve curvature) .</p> <p>If a location has more than 3 streets, the street names are coded from street 4 (see "Street3").</p> <p>If the data set contains a time restriction in the status, the date from which it can be used by others can be entered here.</p>	There is nothing to note.	8888
	8888	not applicable		
FocusShift	No	There is no shift of the video focus in the video.	Due to a breeze, the drone drifted away during the video recording and was then manually retrieved back to the intersection centre point. This resulted in the crossing centre not being filmed for a short time.	Yes
	Yes	There is a shift of the video focus in the video.		
	9999	unknown		
	8888	not applicable		

Location				
Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
Location	Urban	Within a locality	Traffic observation within Dresden.	Urban
	Rural	Outside a locality		
	Highway	Highway. The highest road class visible in the image is decisive for the assignment.	Intersection that is on the ramp of a highway	Highway
	9999	unknown		
City	String	City / town name	Traffic observation within Dresden	Dresden
	8888	not applicable (e.g. highway)		
	9999	unknown		
ZipCode	Integer	Zip code of exact location	Traffic observation within Dresden, Sidonienstrasse next to Hauptbahnhof Nord	01069
	8888	not applicable		
	9999	unknown		
Street1	String ("ß" -> "ss")	Full street name of the first street in focus of the video	Sidonienstraße	Sidonienstrasse
	9999	unknown		
Street2	String ("ß" -> "ss")	Full street name of the second street in focus of the video	St. Petersburger Straße	St. Petersburger Strasse
	8888	not applicable		
	9999	unknown		
Street3	String ("ß" -> "ss")	Full street name of the third street in focus of the video. All other streets are coded in "Remarks"	No third street.	8888
	8888	not applicable		
	9999	unknown		
GPSLong [WGS84]	±ddd.ddddd°	GPS longitude (WGS84) of the centre point of the video recording.	Longitude in WGS84	51.041767
	9999	unknown		
GPSLat [WGS84]	±ddd.ddddd°	GPS latitude (WGS84) of the centre point of the video recording.	Latitude in WGS84	13.735796
	9999	unknown		

Shape	Node	Intersection / junction	Video recording at a 4-way intersection in Dresden	Node
	Curve	Curve		
	Straight	Straight		
Geometry	4W+	Node with more than 4 arms		
	4W	Node with 4 arms	Roundabout with 4 arms	4W
	3W	Node with 3 arms	Tjunction in Dresden	3W
	Ot	Other node		
	L1	One lane in total at curve / straight		
	L2	Two lanes in total at curve / straight		
	L3	Three lanes in total at curve / straight		
	L4	Four lanes in total at curve / straight	4 lanes in total at straight street (two in every direction)	L4
	L5	Five lanes in total at curve / straight		
	L6	Six lanes in total at curve / straight		
	L6+	More than six lanes in total at curve / straight		
	9999	unknown		
ConstructionSite	Yes	Yes, there is a construction site at the observed location.	During the observation there was a temporary construction site at the location.	Yes
	No	No, there is no construction site at the observed location.		
	9999	unknown		
TrafficRegulation	Highway junction	Total view of a highway junction including on- and off-ramps. (German: "Anschlussstelle")		

Interchange	Plan-free junction, with all roads being highways (that is, only changes between highways are possible). (German: "Autobahnkreuz").		
Ramp	Connection section in plan-free junctions.		
Entry/exit	Acceleration / deceleration lane for entry or exit		
Fully signalized	Intersection is fully controlled by traffic lights	Intersection with traffic lights	Fully signalized
Partially signalized	Intersection is partially controlled by traffic lights		
Yield-controlled	No stop sign at the intersection		
Stop-controlled	At least 1 stop sign at the intersection		
Roundabout	Normal roundabout without targeted guidance of vehicles and with fixed central island		

	Turbo roundabout	Pre-sorting of the exit directions		
	Mini roundabout	Centre island can be driven over		
	Inflected right of way	Intersection has inflected right of way		
	Uncontrolled	Intersection is uncontrolled		
	Cycle street	Bicycles have right of way, even over cars		
	One way street			
	Traffic calmed area	e.g. living area		
	Shared space	Nobody has right of way, road users communicate with each other		
	Pedestrian zone			
	Other			
	8888	not applicable (in case of straight or turn)		
	9999	unknown		
GreenArrow	Yes			
	No			
	9999	unknown		
LeftTurnProtection	Yes	Left turners have their own lane incl. own traffic lights		
	No			
	9999	unknown		

Bypass	Yes			
	No			
	9999	unknown		
BusLane	Yes			
	No			
	9999	unknown		
BusStop	Yes			
	No			
	9999	unknown		
SeparatedTram Tracks	Yes			
	No			
	9999	unknown		
SharedTramTracks	Yes			
	No			
	9999	unknown		
TramStop	Yes			
	No			
	9999	unknown		
IndependentCyclePat h	Yes	Independent cycle path without footpath	Elberadweg	Yes
	No			
	9999	unknown		
SeparatedCyclePath	Yes	Footpath and cycle path are separated		
	No			
	9999	unknown		
SharedCyclePath	Yes	Common footpath and cycle path		
	No			
	9999	unknown		

UnprotectedCycleLane	Yes	Cycle path without structural separation		
	No			
	9999	unknown		
ProtectedCycleLane	Yes	Cycle path with structural separation		
	No			
	9999	unknown		
PedestrianSignals	Yes	Traffic lights for pedestrians		
	No			
	9999	unknown		
PedestrianRefuge	Yes			
	No			
	9999	unknown		
ZebraCrossing	Yes			
	No			
	9999	unknown		
CurbExtension (Deleted in version 2.0)	Yes	Extended side space (German: "Vorgezogener Seitenraum")		
	No			
	9999	unknown		
SpeedCalming	Yes			
	No			
	9999	unknown		
SpeedCamera	Yes			
	No			
	9999	unknown		
SpeedLimitMax [km/h]	Integer	Maximum (highest) speed limit of all segments observed in km/h	Maximum speed limit is 50 km/h due to urban location	50
	9999	unknown		

ParkingLots	Yes			
	No			
	9999	unknown		
Tunnel	Yes			
	No			
	9999	unknown		
Bridge	Yes			
	No			
	9999	unknown		
Gradient	Flat	Gradient between or equal to -2 % and +2 %		
	Rising/descending	Gradient above +2 % or below -2 %		
	9999	unknown		
TrafficRegulationText	String	Any other comment on traffic regulation or facilities ("free text")		8888
	8888	not applicable		

Measurement				
Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
Type	Accident_Statistics	Collected data are accidents	Videos taken by drone or stationary camera	Static
	Static	Data is from traffic observation		
	Dynamic	Data is from NDS studies		
	Individual	Data is from individual fusion		
Mounting	Stationary	Stationary mounted camera	Observation by drone	Drone
	Drone	Camera mounted on drone		
	9999	unknown		
MountingAngle [°]	Integer	Rounded angle of incidence of the camera in degrees with stationary mounting	Angle of incidence of 45 degrees	45
	8888	not applicable, e.g. for drones		
	9999	unknown		
CameraHeight [m]	Integer	Rounded height of the camera in metres - for stationary and for drone-based recordings	Drone flies at height of 60 metres	60
	8888	not applicable		
	9999	unknown		
NumberOfCameras	Integer	Number of cameras used for the traffic observation at the same time.	Traffic observation with 2 cameras at the same time (out of two different perspectives)	2
	8888	not applicable		
	9999	unknown		
CameraType	String	Manufacturer and model name for the camera used.	Manufacturer: GoPro Model: Hero Session4	GoPro Hero Session4
	8888	not applicable		
	9999	unknown		
CameraSRN	String	Unique Identification number of the camera used, which corresponds to the serial number. For drones, the serial number of the drone is given if the built-in drone camera was used.	Traffic observation with built-in drone camera. Drone is Mavic Mini with serial number XYZ123.	XYZ123
	8888	not applicable		
	9999	unknown		
Sensor ["]	String	Image sensor size in inches.	Image sensor has a size of 1/2.3 inches	1/2.3
	8888	not applicable		

	9999	unknown		
Megapixel [megapixel]	Integer	Effective pixel in megapixel.	Camera has 18 megapixel	18
	8888	not applicable		
	9999	unknown		
FOV [°]	Integer	Field of view in degree (rounded)	Field of view is about 72 degree.	72
	8888	not applicable		
	9999	unknown		
ResolutionWidth [pixel]	Integer	Resolution (width / horizontal) in pixel	Resolution width of 1920 pixel.	1920
	8888	not applicable		
	9999	unknown		
ResolutionHeight [pixel]	Integer	Resolution (height / vertical) in pixel	Resolution height of 1080 pixel.	1080
	8888	not applicable		
	9999	unknown		
FPS [1/s]	Integer	Frames per seconds in 1/s	Recording with 25 fps	25
	8888	not applicable		
	9999	unknown		
Mode	Default	Standard camera-mode	GoPro with wide-angle mode	Wide
	Wide	Wide-angle mode		
	String ("free text")	Any other mode		
	8888	not applicable		
	9999	unknown		

App details

Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
ListDBAppVersion	Float	Version of ListDBApp used to conduct the traffic observation	Data was recorded with ListDBApp version 0.3.0	0.3.0
	8888	not applicable		
	9999	unknown		

Analysis status				
Attribute [unit]	Attribute values	Explanation	Example (Description)	Example (Value)
VideoAnalysisDFS	Yes	Video analysis with software from DataFromSky was conducted (tlgx-file).	Video was not analyzed with DataFromSky yet.	No
	No	No video analysis with software from DataFromSky was conducted.		
	8888	not applicable		
	9999	unknown		
VideoAnalysisLKT	Yes	Video analysis with software from Lehrstuhl Kraftfahrzeugtechnik was conducted.	Video was analyzed with software from Lehrstuhl Kraftfahrzeugtechnik	Yes
	No	No video analysis with software from Lehrstuhl Kraftfahrzeugtechnik was conducted.		
	8888	not applicable		
	9999	unknown		
VideoAnalysisIVST	Yes	Video analysis with software from IVST TUD was conducted.	Video was analyzed with software from IVST (e.g. OpenTrafficCam)	Yes
	No	No video analysis with software from IVST TUD was conducted.		
	8888	not applicable		
	9999	unknown		

End of codebook