Analysis of online map by Justinas Lekavičius

An existing online map has been selected and analysed. It is a Vilnius city driver information system (<https://www.sviesoforai.lt/zemelapis/>).

The map is used to inform users of ongoing traffic changes, road maintenance, traffic accidents and traffic jams. Traffic speeds are also displayed on the map in different colors (1 – 5 km/h displayed in red, 6 – 15 km/h displayed in orange, 16 – 25 km/h displayed in yellow and 26 – 60 km/h displayed in green).

Map

Description automatically generated

Zooming into the map reveals a camera icon, clicking on it allows viewing video feed of the camera on site.

Graphical user interface, website

Description automatically generated

To develop such a system, several layers are needed. One layer for displaying traffic accidents, one layer for work maintenance, one layer for traffic restrictions, one layer for traffic jams, one for camera feeds and one layer for traffic speeds. Traffic speed layer data type is vector lines, displayed in different colors based on different speed, and the other layers are vector images for traffic sign icons. Camera feed layer display is dependent on scale zoom, only being displayed on 200m zoom level. Other layers are not affected by zoom levels, except for the traffic speed layer – line visual quality (resolution) increases or decreases when zoomed in or out.

The layer data may be stored in .shp format files.

* For displaying traffic accident layer correctly, data is needed for each accident, with data for location, such as street (E.G. J. Jasinskio g. 17), and the start and end dates of the accident (if the accident was resolved or is being resolved at the moment).
* The same applies for road maintenance data layer, however the end date will likely be more precise (as there are preliminary dates for when maintenance will be done).
* Traffic restriction layer has the same data as the above layers, expect with additional location data, as traffic restrictions may range from one street to another, not just one street (E.G. K. Kalinausko g. nuo J. Basanavičiaus g.).
* For the traffic jam layer, location data is needed (where the traffic jam is located on the map), and when the traffic jam started. As there is no way to predict when the traffic jam will clear up, only one time data is needed.
* For traffic speed layer, road data is needed (to draw vector lines on the map), and speed data (to draw lines in different colors).
* For camera feed layer, camera locations on the map and names (E.G. K255\_1) are needed. Cameras are grouped by their location on specific streets or intersections, so several cameras may be in the same location (near each other).

Finally, inspecting the source of the page reveals that the system ArcGIS by Esri is used for the map display.

Text

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