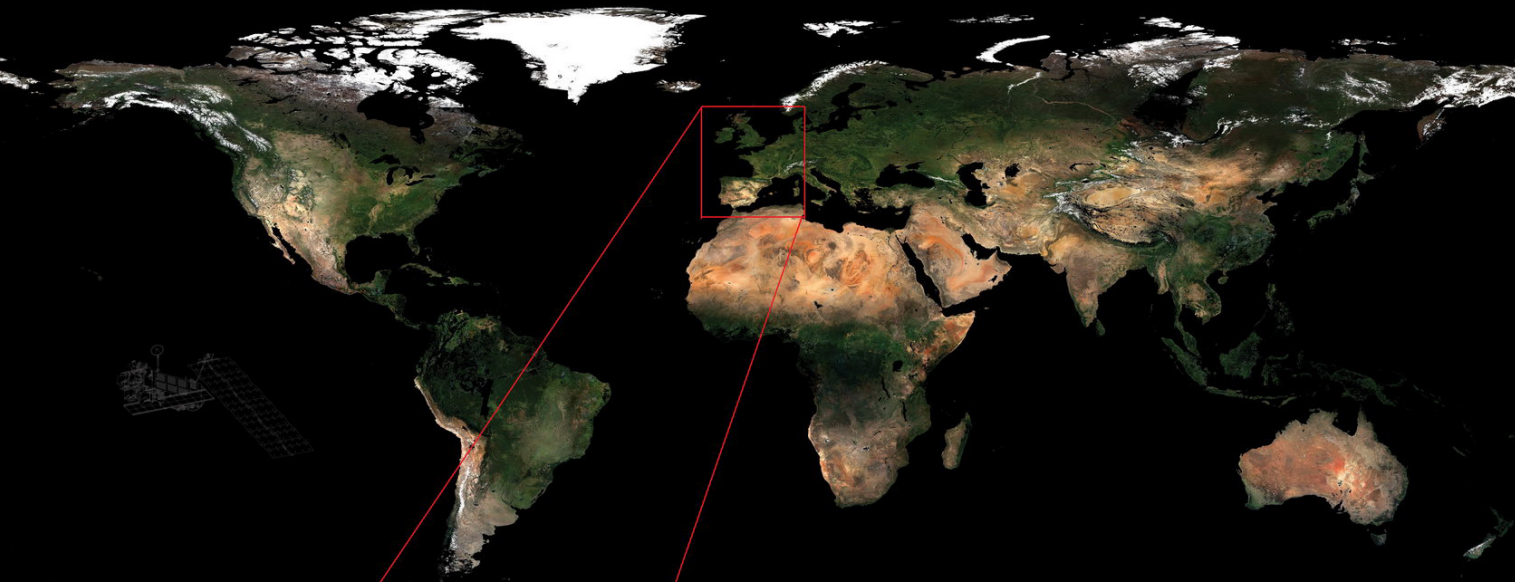
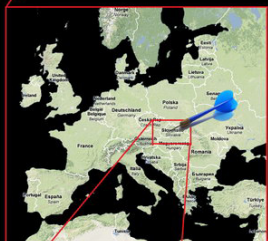


# Reverse Geocoding



:: Geocoding = process of assignation of a unique identifier - GPS (40°26'21"N, 79°58'36"W) of geo location to a object

:: **Reverse geocoding** = process of finding and object (street, hotel) that is closest one to the given geographical coordinates

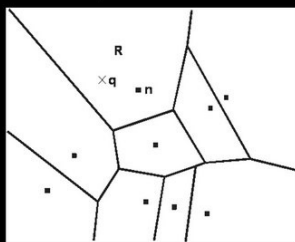


brute force enhanced by chess-board method

OCR based approach

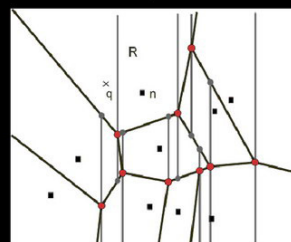
graph based approaches

Voronoi diagram and Kirkpatrick's method

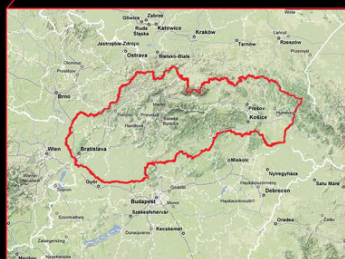


- subdivision into regions
- Voronoi decomposition
- using Fortune's algorithm
- task: to find a region into which the point belongs to

Trapezoidal decomposition



- trapezoidal map
- random incremental construction
- composed of segments and lines



## Problem:

- analyzing current state of art in reverse geocoding techniques
- **how to find the closest available information for a GPS point**
- acquisition of the object/coordinate pairs for all the objects
- building a database - to measure and store GPS informations
- available data and tools, free of use - Google Maps API
- **introducing new techniques**

## Conclusion:

- analysis of reverse geocoding
- existing solutions comparison by complexity (time and calculation)
- **new process as an alternative solution**
- combining existing partial treatment of subproblems + new way how to solve problems

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