Air-quality Aware Bicycle Routing with CYCLERS

Pavol Žilecký
STAND G5

www.cyclers.city
Cyclists are exposed to air-pollution

High resolution air-pollution data: Flanders

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Multi-criteria Bicycle Routing Engine

Developed specially for cyclists

- Flexible and extendible cycling first optimization criteria
- Alternative set of routes
- Penalize turns
Multi-criteria Bicycle Routing Engine

Continuously learning from GPS tracks

- Learns where cyclists really riding
- Correct map data
Multi-criteria Bicycle Routing Engine

- Personalized
- Time-Dependent
- Multi-Purpose Routes
- Community-enriched
Cleanest Air Routes
Air-quality-aware bicycle routing

Input Data
- Map Data
- Elevation Data
- GPS Tracks Data
- Traffic Intensity Data

Route Network Model

Multi-criteria Bicycle Routing Engine
- Travel Time
- Popularity
- Cycling Comfort
- Safety

Integration

Routing

API

Webs & Mobile Apps

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Cleanest Air Routes
Air-quality-aware bicycle routing

Input Data
- Map Data
- Elevation Data
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Route Network Model
Routing

Multi-criteria Bicycle Routing Engine
- Travel Time
- Popularity
- Cycling Comfort
- Safety
- Pollution Exposure / Air-quality

Air-quality Data
Integration

API

Webs & Mobile Apps

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CLEANEST AIR ROUTES!
Belgium Cleanest Air Routes

Bicycle Routing App with Web Frontend

- Advance Bicycle Routing Engine
- **Cleanest Air Bicycle Routes** – avoiding highly polluted routes
- Detailed Cycling Maps
- Belgium Coverage
- **Launch: September**

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