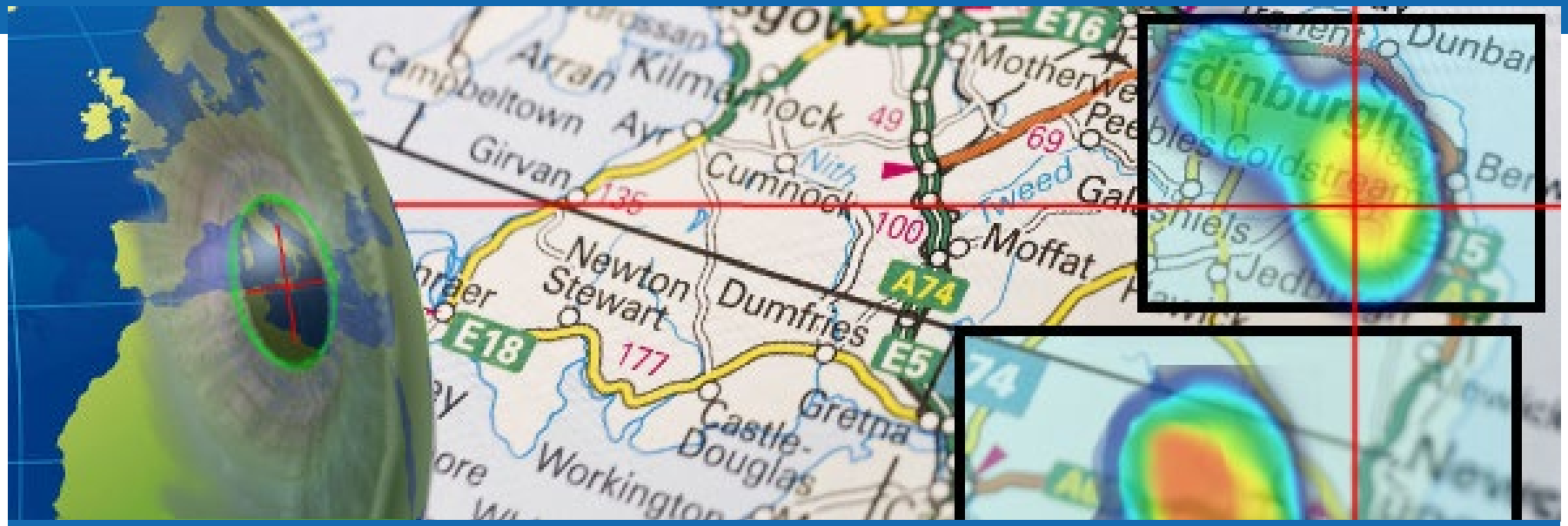


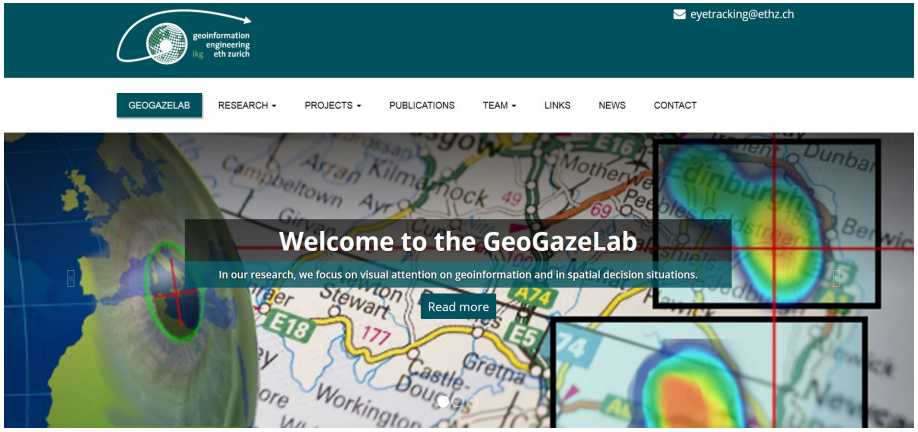
The GeoGazeLab at D-BAUG

Dr. Peter Kiefer

Institute of Cartography and Geoinformation
Dept. of Civil, Environmental and Geomatic Engineering
pekiefer@ethz.ch

GeoGazeLab

- Team
  - Dr. Peter Kiefer, Senior Scientist
  - Prof. Dr. Martin Raubal, Chair of Geoinformation Engineering
  - Dr. Kuno Kurzhals, PostDoc
  - Doctoral Students: Fabian Göbel, Tiffany C.K. Kwok, Luis Lutnyk, David Rudi



http://geogaze.ethz.ch/

Geographic Human-Computer Interaction

Gaze-Based Interaction with Maps

Gaze-Informed Location-Based Services

Interaction With Urban Spaces

Tourist Assistance and Wayfinding

Aviation

Instructor Assistance for Training

Gaze-Based Interaction in the Cockpit

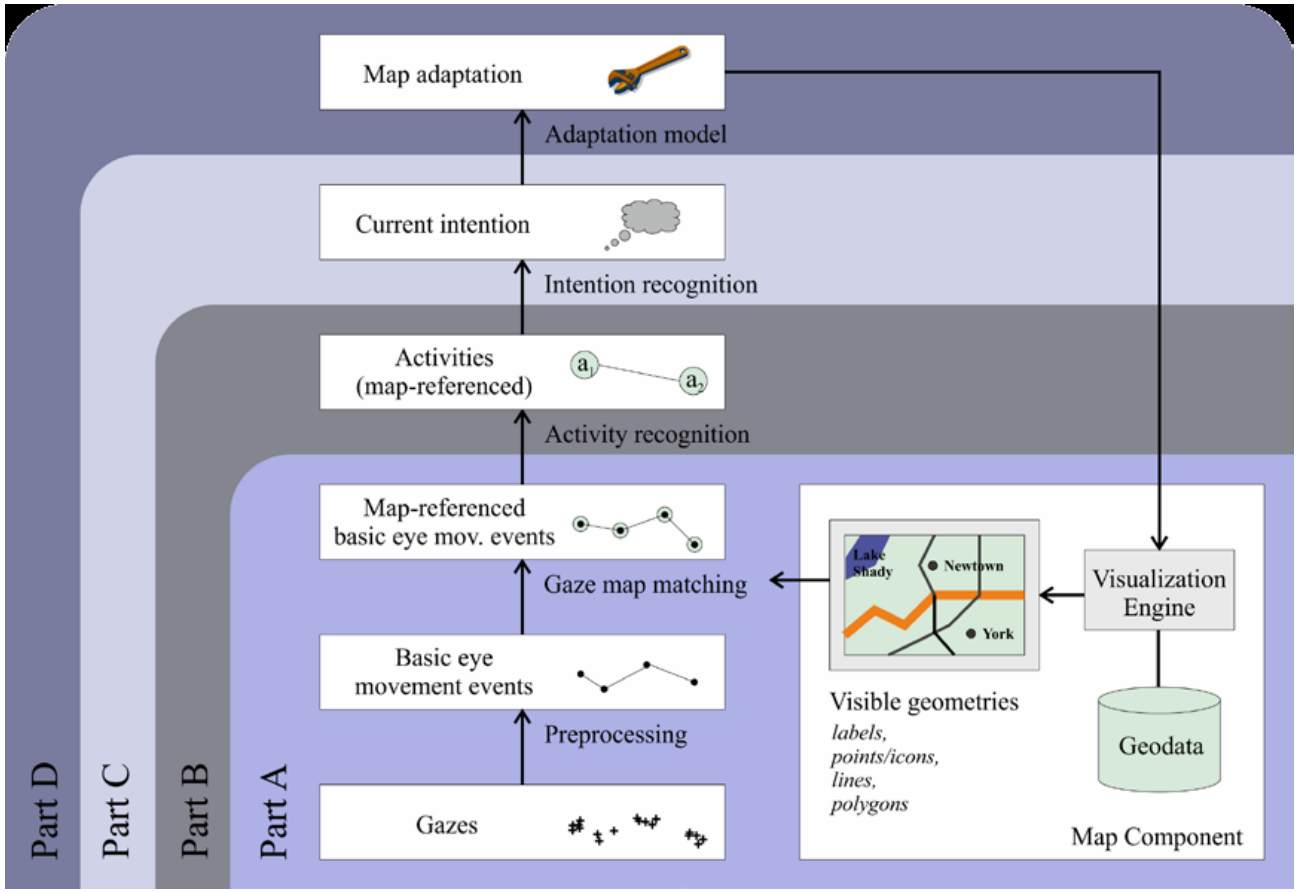
Eye Tracking

In research …

… and on the consumer market.


Zurich
Stadtpolizei Zürich
Urania
Marktlücke
Falke
Balci
St. Peter
Storchen
Hellberg
MCM
Fraumünster
Münsterhof/
Stadthausquai
Frauenbad
Stadthausquai
Bauschänzli
Pier 7
Rena
Quaibrücke
Pizzeria Molino
Limmatquai
Le Cèdre
Vallocaia
NAO
Fera
Comics-Shop
1001
Relief
VMC
COS
Holzbueb
Sisters
diallo
zum Loch

Gaze-Based Interaction with Maps



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Example Application Scenario: Control Room

- Decision making under time pressure
- Multi-display environment
- Multiple users

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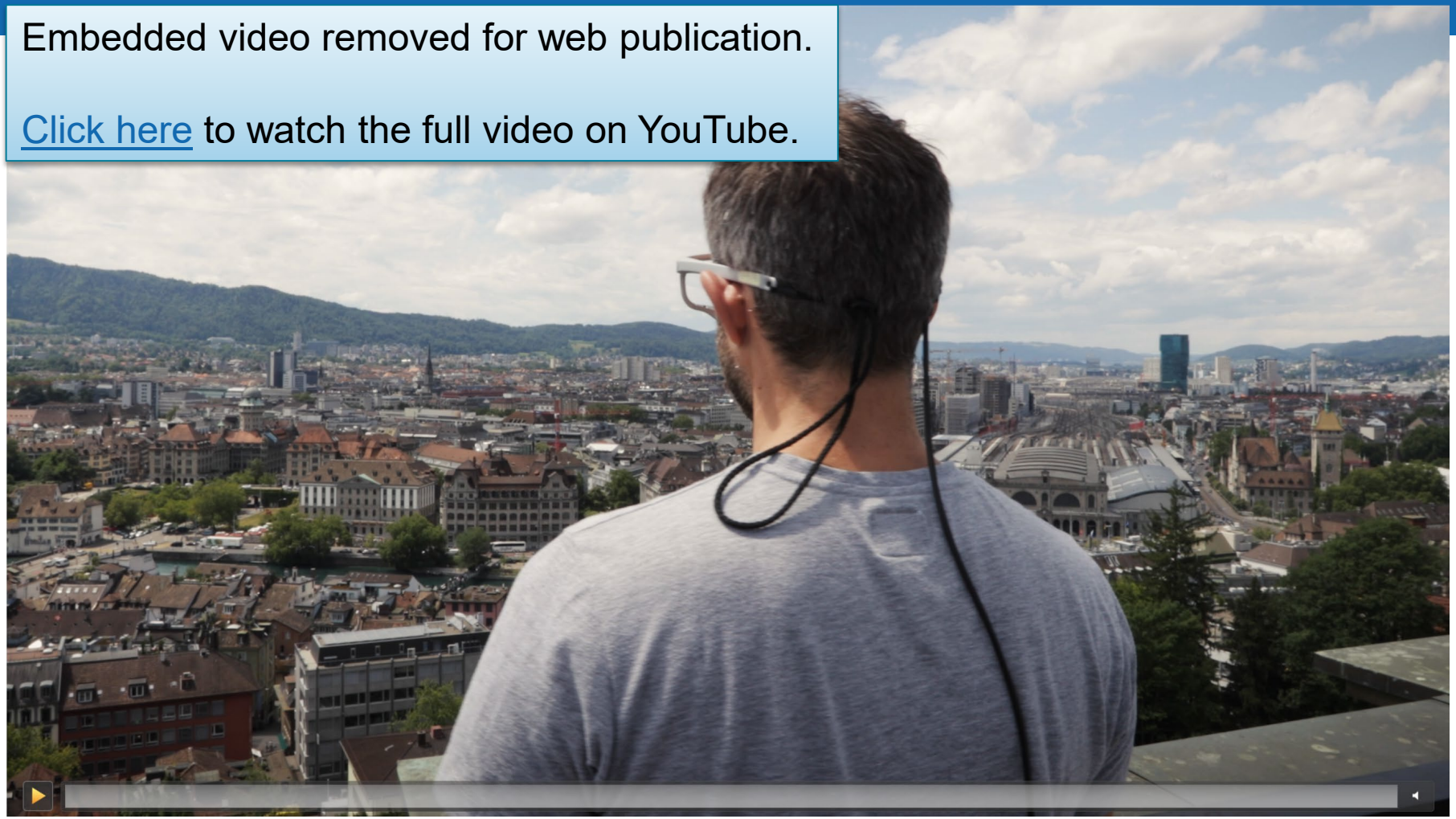
Click here to watch the full video on YouTube.



Video for the Scientifica 2017 exhibition

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Vasileios-Athanasios Anagnostopoulos, Michal Havlena, Peter Kiefer, Ioannis Giannopoulos, Konrad Schindler, and Martin Raubal. Gaze-informed location based services. *International Journal of Geographical Information Science*, 31(9):1770-1797, 2017

Video for the Scientifica 2017 exhibition

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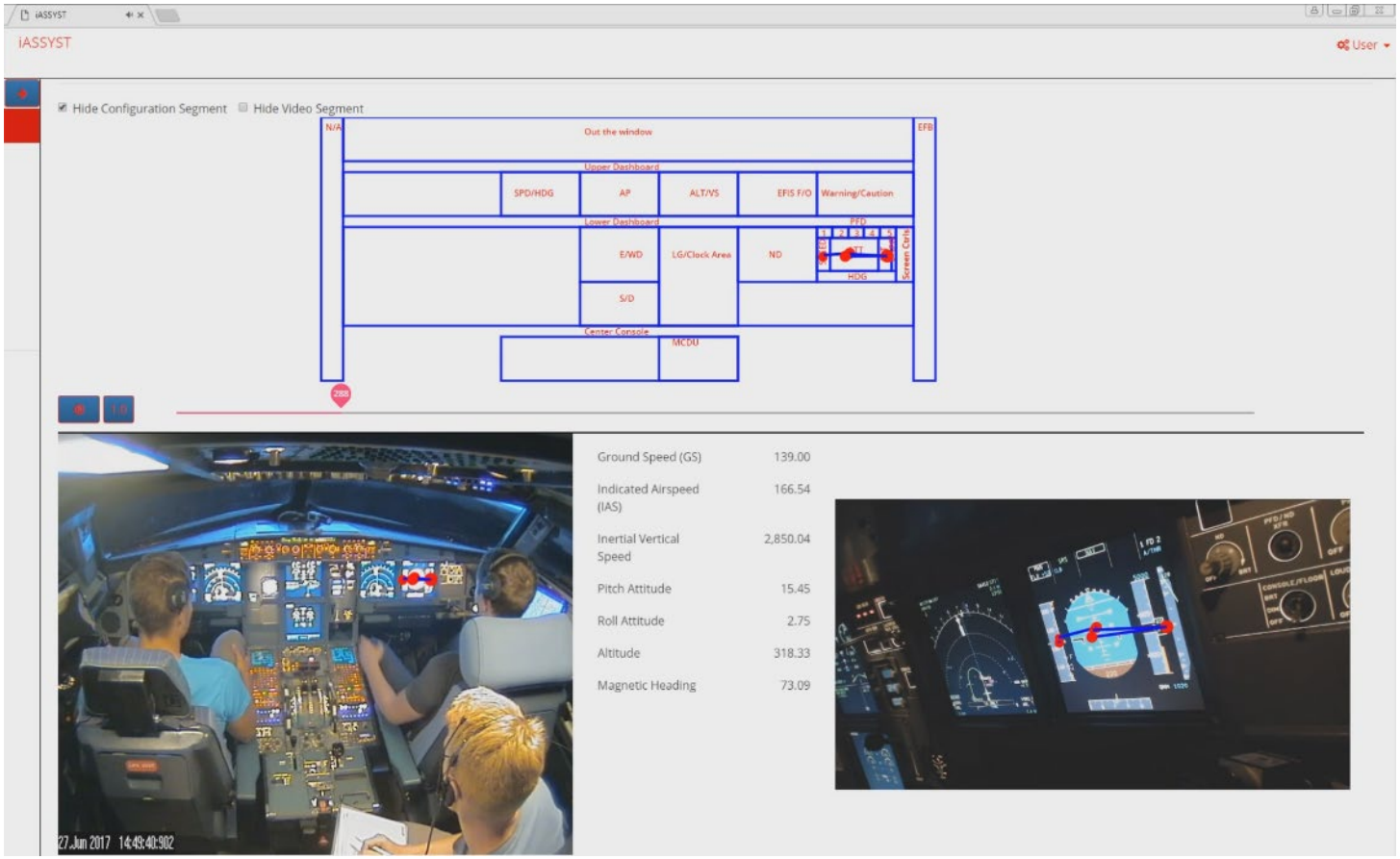
Research Grant [ETH-38 14-2]

Tiffany C.K. Kwok, Peter Kiefer, Victor Schinazi, Benjamin Adams, and Martin Raubal.
Gaze-guided narratives: Adapting audio guide content to gaze in virtual and real environments.
In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*, CHI '19,
New York, NY, USA, 2019. ACM


LIFE VEST

Eye Tracking in Aviation Training



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David Rudi, Peter Kiefer, and Martin Raubal.
The instructor assistant system (iASSYST) - utilizing eye tracking for commercial aviation training purposes.
Ergonomics, 2019. accepted

Gaze-Based Interaction in the Cockpit

Pilot Eye Gaze and Gesture tracking for Avionics Systems using Unobtrusive Solutions

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THALES

David Rudi, Peter Kiefer, Ioannis Giannopoulos, and Martin Raubal.
Gaze-based interactions in the cockpit of the future - a survey.
Journal on Multimodal User Interfaces, 2019. accepted

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Thank you for your (visual and auditory) attention

http://geogaze.ethz.ch/

pekiefer@ethz.ch

Geographic Human-Computer Interaction

Gaze-Informed Location-Based Services

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