vislvis® – Vision-based Visibility Measurements

Automated representation of complete visible range

THE INNOVATION COMPANY

The Task

- Automated evaluation of visibility and distance for every single camera
- Using all suitable cameras for getting a complete representation of visibility at your location

Your Benefits

- Frequently updated information about visibility
- Plausibility check of local visibility sensors
- Less stress for operators in critical situations

Capabilities

- Works with off-the-shelf cameras
- Measurement of visibility and distance
- Can deal with various weather and daylight situations

Integration

- Customized solution for your specific application requirements
- Can be integrated into existing surveillance systems
- Customized and standard reporting (e.g. METAR)

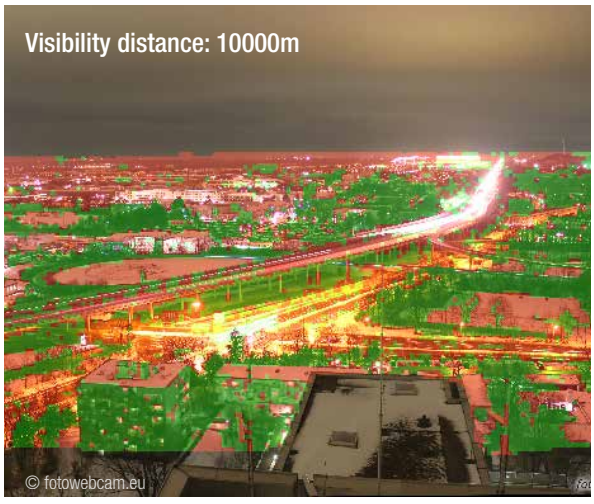
vislvis® – reliable automated meteorological measurements

Key functionality

- All-daytime and all-weather operation
- Operates like a human observer
- Up to 60 visibility reports per hour
- Small-scale fog and ground fog detection
- Integrated software-solution for camera stabilization for mast-mounted cameras

Applications

- Automating visibility determination while maintaining an observer‘s strengths.
- Through spatially broader deployment options, improving the coverage of current weather and thus forecasts.
- Generating more accurate weather warnings in poor visibility conditions.



vislvis® – automation and stress reduction at the airport

Key functionality

- Scientifically proven procedure and developed for use in air traffic
- Unique visibility calculation for every non-sky camera pixel
- Provision of prevailing visibility and minimum visibility (according to ICAO Annex 3)
- Conformity with AUTO-OBSERVATION requirements (According to ICAO and WMO)
- Automatic generation of standardized visibility reports

Applications

- Early detection of ground fog situations
- Generation of automatic reports according to ICAO
- Weather monitoring and reporting for drone flights
- Remote-Tower support system

vislvis® – visibility measurements with snow coverage values

Key functionality

- Software-only solution for automated reporting of visibility and snow detection
- Derivation of the tendency of snow coverage for individual image regions (e.g. specifically for road areas)
- Added value by using same camera infrastructure due to transfer learning
- Additional quality reporting and system diagnosis

Applications

- Early, remote detection of impending danger of slippery roads or runways due to snow
- Improved forecasting quality through spatially and temporally higher resolution observations of snow cover
- Monitoring of the winter service

Description	Status
Meadow Back	93.06 %
Road	7.74 %
Cycle Path	44,58 %

JOANNEUM RESEARCH DIGITAL

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JOANNEUM RESEARCH develops solutions and technologies for business, industry and public authorities over a wide range of sectors and conducts applied cutting-edge research on an international level. DIGITAL is a pioneer and reliable partner in the fields of digital innovation and transformation and develops high-tech solutions that function reliably and robustly in practical use under rough conditions.

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MeteoSolutions GmbH is a specialist service provider for meteorology when it comes to developing individual software systems to process meteorological data and applies special meteorological procedures, or when scientific, technical software support is required during meteorological research and development.

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