Traffic pattern of a mixed-use forest road in Hungary

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Background

- Mixed use of forest roads
- No data on public use
- Pilot project to take digital photos of road users
- Aim to determine traffic composition and visitor numbers
- 3 years of image based traffic data
The counter system
The counter system
Image analysis

- 50,000 photos analysed by interpreters
- Self developed software
- Pedestrians, cyclists, cars, trucks, motorcyclists, horsecarts, horseriders and forestry machinery were distinguished
- Activities like recreation, forest operations, were assigned to road users
Available data

- Background
- Counter system
- Image analysis
- Visitor numbers
- Conclusion
- Further use
Pedestrians, cars and cyclists dominate
Trucks are under-represented
Predicted visitor numbers

- Estimation from 3 years density functions
- Around 55,000 visitors yearly
Significant difference between week-end and workdays
Number of pedestrians by months

- Don’t like hot days
- Varying weekend numbers
- Locals on workdays
Number of cyclists by months

- Weather dependent
- Summer peak season
Number of cars by months

- Constant all year
- Lower on weekends
- Mainly forestry personnel
Conclusion

- Yearly visitor numbers can be estimated by camera surveillance
- Peak seasons by user types can be determined
- Conflicts could be assessed
- Cyclist are the most weather dependent
- Car traffic is generated by the forestry company
Further use

- Network level visitor flows
- Visitor management support
- New criteria for forest road network planning
- New criteria for upgrading existing roads
- Support for other research activities