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New Technologies: Research needs

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GPS traces

- Fast and robust map matching (embedded in commercial software)
- Imputation of gaps in routes
- Understanding the quality impacts of different network resolutions on distance and travel time estimates
- Matching different networks to each other

Locations

- Identification of locations (in particular for car-based only traces) (Schönfelder and Axhausen, 2004)
- Imputation of trip purposes (using all available data sources) and other attributes (group size, expenditure)

Integrating GPS based information

- Control of “no-trip” days
- Imputation of missing journeys
- Imputation of missing trips
- Adjustment of trip durations
- Adjustment of trip timings

Classifying environments using GIS datasets

Current state of knowledge:

- Local networks/environments impact usage of local (slow) modes
- Otherwise no further impacts have been classified

New approaches:

- Areawide measures of speed
- Areawide classification of network constitution/configuration (Marchall, 2005)
- Variance of activity locations

Understanding the participants

- Differential self-selection
- Impact of incentives on participation and self-selection

Other technology issues:

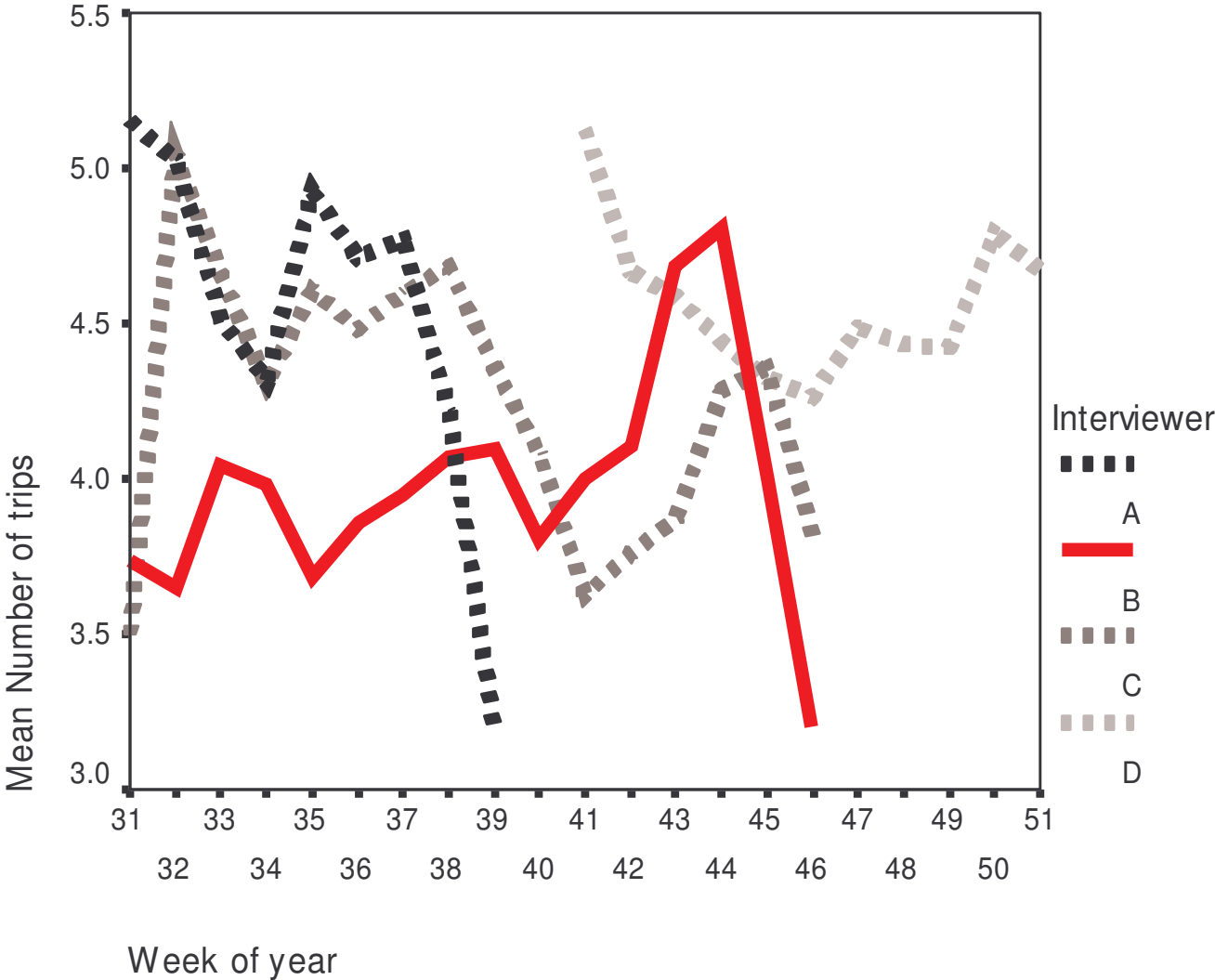
Archiving the data (and results):

- Standards for travel data
- (Transfer of) standards for network data

Quality control:

- Monitoring the interviewers (by clients)
- Tracing editing and imputation of values in survey data sets

2003 Thurgau: Interviewer effect by week of year



Sources

Axhausen, K.W. (2001) The 2003 Thurgau six-week diary: Fatigue and other aspects in a long-duration survey, Meeting of the COST Action 355, Namur, December 2004.

See <http://www.ivt.ethz.ch/vpl/publications/presentations/v112.pdf>

Schönfelder, S. and K.W. Axhausen (2004) Structure and innovation of human activity spaces, *Arbeitsberichte Verkehrs- und Raumplanung*, **258**, IVT, ETH Zürich, Zürich.

See <http://www.ivt.ethz.ch/vpl/publications/reports/ab258.pdf>