

The Atlanta GPS-based Prompted Recall Travel Study



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Standard GPS Study Within Household Travel Survey



Purpose: Audit CATI trip reporting accuracy

Methodology:

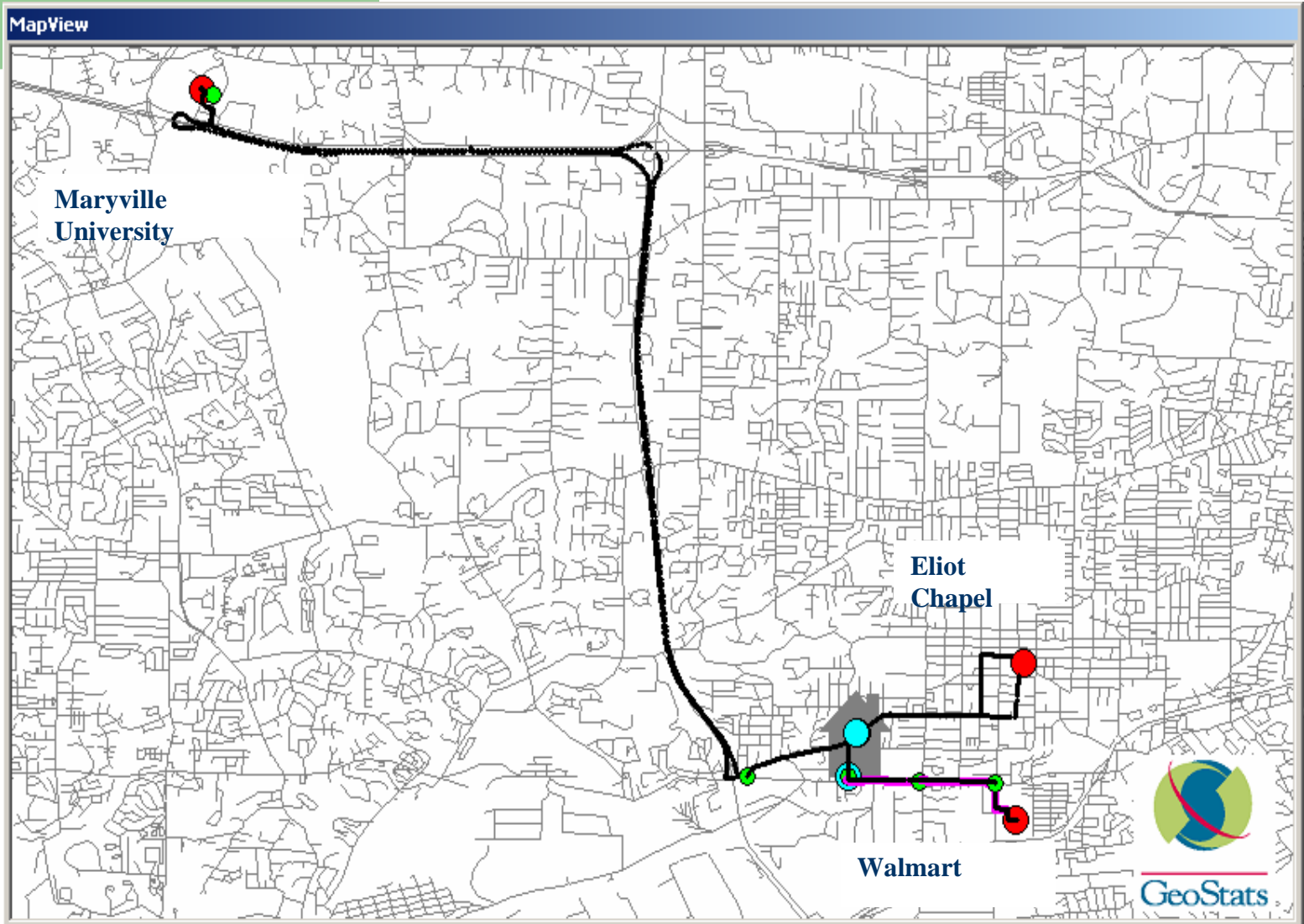
- 1) Study households are recruited, initial CATI data collected
- 2) GPS data is collected passively in each vehicle or for each person in a given household on assigned travel day(s)
- 3) CATI travel data is collected after travel day(s)
- 4) GPS data is processed within TIAS, with trips ends identified
- 5) CATI data is imported and matched to GPS trips, adjustments to GPS trips are made as justified
- 6) Summary statistics are generated, including trip rate correction factors



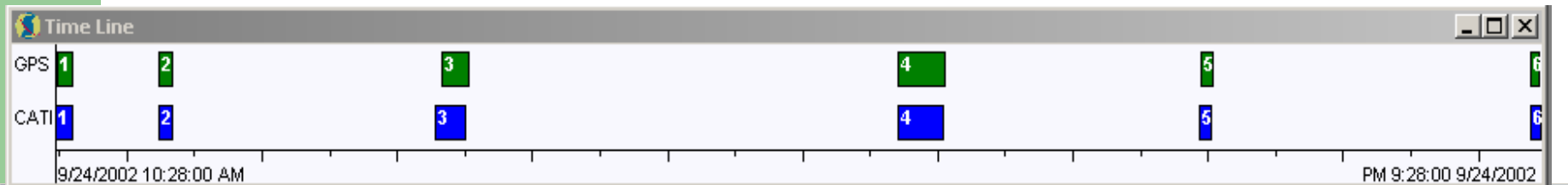
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GPS Trip Identification and Analysis System



	Trip Type	Dep Loc	Arr Loc	Dur	Dist	Dep Date	Arr Date	Dep Time	Arr Time	Match Status
▶ ⊕	CATI 1	HOME	WALMART	8.0		9/24/2002	9/24/2002	10:28 AM	10:36 AM	MATCH_BY_TIME
⊕	GPS 1			6.0	1.5	9/24/2002	9/24/2002	10:29 AM	10:35 AM	MATCH_BY_TIME
⊕	CATI 2	WALMART	HOME	6.0		9/24/2002	9/24/2002	11:14 AM	11:20 AM	MATCH_BY_TIME
⊕	GPS 2			6.1	1.8	9/24/2002	9/24/2002	11:14 AM	11:20 AM	MATCH_BY_TIME
⊕	CATI 3	HOME	MARYVILLE UNIVERSIT	13.0		9/24/2002	9/24/2002	1:17 PM	1:30 PM	MATCH_BY_TIME
⊕	GPS 3			11.3	9.1	9/24/2002	9/24/2002	1:20 PM	1:31 PM	MATCH_BY_TIME
⊕	CATI 4	MARYVILLE UNIVERSITY	HOME	20.0		9/24/2002	9/24/2002	4:42 PM	5:02 PM	MATCH_BY_TIME
⊕	GPS 4			21.3	9.7	9/24/2002	9/24/2002	4:42 PM	5:03 PM	MATCH_BY_TIME
⊕	CATI 5	HOME	ELIOT CHAPEL	5.0		9/24/2002	9/24/2002	6:56 PM	7:01 PM	MATCH_BY_TIME
⊕	GPS 5			4.5	1.7	9/24/2002	9/24/2002	6:57 PM	7:01 PM	MATCH_BY_TIME
⊕	CATI 6	ELIOT CHAPEL	HOME	5.0		9/24/2002	9/24/2002	9:23 PM	9:28 PM	MATCH_BY_TIME
⊕	GPS 6			4.0	1.5	9/24/2002	9/24/2002	9:23 PM	9:26 PM	MATCH_BY_TIME

GPS to CATI Trip Comparison

GPS-based Prompted Recall

Purpose: Reduce / replace CATI retrieval



Methodology:

- 1) Study households are recruited, initial CATI data collected
- 2) GPS data is collected passively in each vehicle or for each person in a given household on assigned travel day(s)
- 3) Within 2-3 days after travel day(s), GPS data is processed within TIAS referencing CATI recruitment data (ie habitual locations), with trips ends and trip characteristics identified
- 4) GPS-based trips are presented back to participants via prompted recall website for travel confirmation and completion
- 5) Summary statistics are generated



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Example Feedback Screen



Person: 88034100
Travel Date: 07/02/2002

List of Trips

Trip#	StartTime	EndTime	MaxSpeed	Purpose
1:	8:05	8:35	25 MPH	Work
2:	10:15	10:30	34 MPH	School
3:	12:00	12:12	43 MPH	Home

Add Delete Save

Graphical Representation

A map showing three trips plotted as colored lines on a road network. Trip 1 is a blue line, Trip 2 is an orange line, and Trip 3 is a red line. The trips are numbered 1, 2, and 3 on the map.

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Proposed Scope and Timeline



Sample: Atlanta HHTS participants (1-2 member households) or new recruits

Methodology:

NuStats recruits two households for first week as prepilot

NuStats recruits eight households for second week pilot

GeoStats deploys units, collects units, provides website for feedback

Date: December 2002



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Future Opportunities



- Conduct expanded pilot study
- Implement as method for continuous travel survey
- Consider enhancement for travel blending – providing feedback along with recommendations for reducing travel time and emissions



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