

INTEGRATION OF AN ACTIVITY-BASED MODEL SYSTEM
AND A RESIDENTIAL LOCATION MODEL

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ABSTRACT

We present an integrated discrete choice model system of a household's residential location choice and its members' activity and travel schedules. A daily schedule consists of tours, characterized by destinations, times of day and travel modes. The activity and travel models supply the residential model with an accessibility measure for each household member, namely the expected maximum utility among available daily activity schedules, conditioned by the chosen pattern of tours and, for workers, the workplace. A nested logit model system is estimated and applied for Boston. It does not fit the data quite as well as a work-trip based comparison model, but its predictions capture additional effects attributable to the more comprehensive accessibility measure.