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Call Early in the Evening on a Spring Day

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The CMU Let’s Go Spoken Dialogue System has been used daily for about three years to answer calls to
the Pittsburgh Port Authority for bus information in the evening and on weekends. This has resulted in a
database of over 50,000 spoken dialogues as of January 2008, one of the largest publicly available sets of this
type of data. While retraining the system with part of this data, it became apparent that there are times of
the day, of the week and of the year when the average number of successful calls is significantly higher. We
will present evidence, using these three measures of time (hour, day of week, month of year) and criteria such
as signal-to-noise ratio, estimated success rate, number of turns per dialogue, number of non-understandings
per dialogue, and barge-in rate to detect the regular, predictable appearance of high and low success rates
and to suggest methods for palliating this effect in order to increase overall dialogue success rates.