MAS.632 Conversational Computer Systems
Fall 2008

Problem Set 5

1. Synthesis of proper names.

   a) Why is speech synthesis of proper names useful?
   b) Why is synthesis of names not a trivial problem?
   c) Briefly describe a text pre-processor for synthesizing surnames.

   Indicate the reason for each step, and some idea of how "correct" you'd expect
   the output to be.

2. Synthetic versus recorded speech output.

   For each of the following applications, decide whether you should use text-to-
   speech or recorded speech. Justify your decision. Think about who your users are,
   and how they will use the application. In the context of the particular application,
   specify the major advantage of your choice. Also suggest a significant difficulty
   which must be overcome for the success of the application. What kind of
   database does your program need to access?

   Two paragraphs on each application is adequate.

   a) A program to allow users of a computer system to phone a
   number and hear the system load and the names or login-IDs of
   current users logged in to media-lab (or another group computer of
   your choice). There is no user input; anyone in the world may call
   and get this information (but the service is oriented towards the
   users of the computer system)

   b) A talking elevator in a department store. At each floor it
   announces what departments are to be found on that floor. (In Japan,
   this task is done by young women. They bow, too, at each floor.
   Your system need not worry about bowing).

   c) A "dial-by-name" program for the Media Lab. You call it up, and
   spell a person's name using touch tones. The program then dials the
   number for you and transfers the call. This is geared as much
   towards outside callers as for Media Lab folks calling each other.

   d) A program to tell you whether a given flight for your favorite
   airline is on time, or expected arrival/departure time. Input is touch
   tones over the phone. The caller must know the flight number.

   e) A variation on current telephone company directory assistance.
   Now, a human takes your request and a computer reads you the
   number. We would like to augment this to also recite the party's
   address.