Practical Assignment 1: Voice-based Interaction

Interaction Technology Course, 2013-2014

Deadline: 13/9/2013, at 23.00

Requirements:

1. Hardware: computer + headset.

2. Software: Microsoft Visual Studio C#

3. Use the empty project provided in the practical1.zip file (available in the course website).

4. Your solution must work on lab machines

Instructions:

- Part 0: (not graded)

  1. Write a program to convert voice-to-text (show the text when someone speaks at the microphone) and text-to-voice. For both functionalities, use the windows speech library: System.Speech. More specifically, use the System.Speech.Recognition and System.Speech.Synthesis namespaces, API's can be found at:
     http://msdn.microsoft.com/en-us/library/system.speech.recognition.aspx
     http://msdn.microsoft.com/en-us/library/system.speech.synthesis.aspx

     Note: the program should be able to handle both individual words and simple sentences (such as: "hello", "world").

- Part 1: (to be graded)

  1. Write a voice-to-text program to convert only specific spoken words into text. To this end you will need to create a custom grammar which will only contain the specific words which need to be recognized (look for example at the GrammarBuilder class in the System.Speech.Recognition namespace). The words which need to be recognized are: left, right, top, bottom.

  2. Create a simple application that replaces the mouse as an input device for this application by controlling the mouse pointer through the voice commands: left, right, top and bottom.

To Submit:

1. The code and the project file of Part 1

2. The executable program of Part 1

3. Names and student numbers of the group members.

4. Submit via (max. 20MB): http://www.cs.uu.nl/docs/submit/

Notes:

1. Fairness: if you find that the members of your group do not work properly, report this to us. We will reduce their grade, and might increase yours (depending on the circumstances).

2. Questions and others related to the practicals (including late submissions) should be sent to: interactiontechnology2013@gmail.com