Homework 8

Text-to-speech

R.A.J. WACANNO (11741163)

8.1

```
# u o   a  e i   y
f1# = { 250, 360, 500, 750, 850, 610, 390, 240, 350, 365, 235, 370 }
f2# = { 595, 640, 700, 940, 1610, 1900, 2300, 2400, 1865, 1505, 2100, 1900 }

for i from 1 to size (f1#)
    Create KlattGrid: "kg" , 0, 0.2 , 6, 1, 1, 6, 0, 0, 0
    Add pitch point: 0.1 , 240
    Add voicing amplitude point: 0.1 , 90

    Add oral formant frequency point: 1, 0.0 , f1# [i]
    Add oral formant bandwidth point: 1, 0.0 , f1# [i]/10
    Add oral formant frequency point: 2, 0.0 , f2# [i]
    Add oral formant bandwidth point: 2, 0.0 , f2# [i]/10

    Play

    Remove
endfor

# [i] [ay] [u]
f11# = { 610, 850, 750 }
f12# = { 240, 235, 250 }
f21# = { 1900, 1610, 940 }
f22# = { 2400, 2100, 595 }

for i from 1 to size (f11#)
    Create KlattGrid: "kg" , 0, 0.4 , 6, 1, 1, 6, 0, 0, 0
    Add pitch point: 0.1 , 240
    Add voicing amplitude point: 0.1 , 90

    Add oral formant frequency point: 1, 0.0 , f11# [i]
    Add oral formant bandwidth point: 1, 0.0 , f11# [i]/10
    Add oral formant frequency point: 2, 0.0 , f21# [i]
    Add oral formant bandwidth point: 2, 0.0 , f21# [i]/10

    Add oral formant frequency point: 1, 0.2 , f12# [i]
    Add oral formant frequency point: 2, 0.2 , f22# [i]

    Play

    Remove
endfor
```

The listing doesn't show all phonetic symbols :(

8.7

```
<sentence>
    Ik had veel
    <prosody pitch="+0.5st">eerder</prosody>
    aan dit huiswerk moeten
    <prosody pitch="-0.5st">beginnen</prosody>
    .
</sentence>
<sentence>
    Ik hoop dat ik mij
    <prosody pitch="+0.5st">morgen</prosody>
    niet
    <prosody pitch="-0.5st">verslaap</prosody>
    .
</sentence>
<sentence>
    Anders moet ik het
    <prosody pitch="+0.5st">hoorcollege</prosody>
    naderhand
    <prosody pitch="-0.5st">
    terugkijken</prosody>
    .
</sentence>
```

8.8

Overall, the voices of eSpeak sound quite robotic. I do believe that for synthesis of single words, this method would be satisfactory, but for construction of sentences, it just misses a natural sound

8.9