TIAGo Training Sessions

Voice synthesis

PAL
ROBOTICS

Introduction

Playing text-to-speech in terminal

- Tiago has an action server API to say written text. It is on the **/tts** action name of type pal_interaction_msgs/Tts

```
rostopic  pub /tts/goal pal_interaction_msgs/TtsActionGoal "header:
  seq: 0
  stamp:
        secs: 0
        nsecs: 0
  frame_id: ''
goal_id:
  stamp:
        secs: 0
        nsecs: 0
  id: ''
goal:
  text: {}
  rawtext:
        text: 'Hello world'
        lang_id: 'en_GB'
  speakerName: ''
  wait_before_speaking: 0.0"
```

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Playing text-to-speech with Python

```python
#!/usr/bin/env python
import sys
import rospy
from actionlib import SimpleActionClient
from pal_interaction_msgs.msg import TtsAction, TtsGoal

if __name__ == '__main__':
  rospy.init_node('say_something')
  if len(sys.argv) > 1:
    text = ""
    for arg in sys.argv[1:]:
      text += arg + " "
  else:
    text = "I like talking to people"

  rospy.loginfo("I'll say: " + text)
  # Connect to the text-to-speech action server
  client = SimpleActionClient('/tts', TtsAction)
  client.wait_for_server()
  # Create a goal to say our sentence
  goal = TtsGoal()
  goal.rawtext.text = text
  goal.rawtext.lang_id = "en_GB"
  # Send the goal and wait
  client.send_goal_and_wait(goal)
```

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Playing text-to-speech from web

- Access tiago's web interface http://tiago-0c:8080

- Go to the 5. Demos tab, type any text on the upper input box and press say.
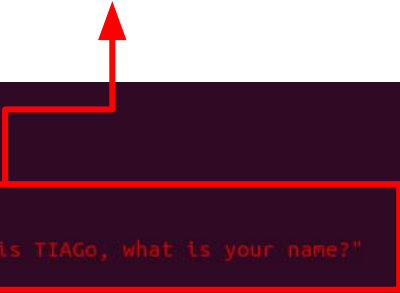
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Playing text-to-speech from web (II)

- Edit voice buttons

  ssh pal@tiago-0c

  cd .pal/wt

  vi wt_tiago_section.yaml

You may add your own sentences or
edit/remove existing ones

```
"5. Demos":
    type: "Commands"
    parameters:
        buttons:
            - name: "hi1"
              say:
                      text: "Hello, my name is TIAGo, what is your name?"
                      lang: "en_GB"
            - name: "hi2"
              say:
                      text: "I am TIAGo, the robot that adapts to your research needs, not the other way around"
                      lang: "en_GB"
            - name: "hi nice name"
              say:
                      text: "Oh, what a wonderful name"
                      lang: "en_GB"
            - name: "iam"
              say:
                      text: "I am from Barcelona. Where are you from?"
                      lang: "en_GB"
            - name: "iam nice place"
              say:
                      text: "Oh, nice place"
                      lang: "en_GB"
```
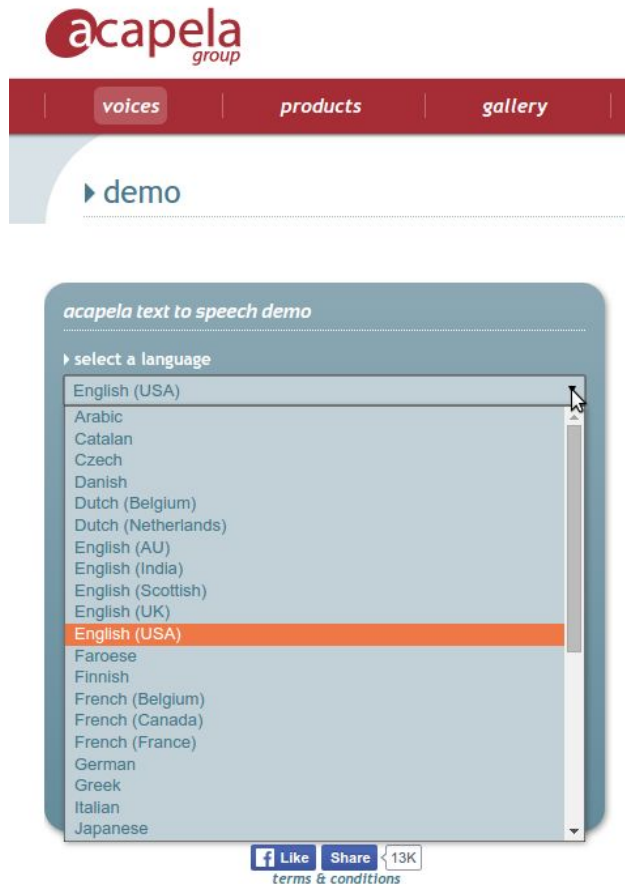
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Additional languages and voices

- TIAGo uses Acapela's voice synthesis software

- Additional languages and voices can be ordered and integrated into TIAGo:
  http://www.acapela-group.com/voices/demo/

Questions?