Dealing with rosbags

Rosbag Pacakage

This ros package includes a set of tools to record, and playback reocrded bags. For example if our bagfile is named `recording.bag` :

- Summary about the messages and topics in a bag `rosbag play recording.bag`
- playback the recorded bag `rosbag play recording.bag`

Check the documentation for more.

Exporting images from bag files using image_view package

Example for depth and color extraction from bag file.

- Please replace the topic name with a suitable topic from your bagfile. You could use `rosbag info` to check topic names you have.
- First, run the image saver command to extract images
    - Color (replace `/camera/137322071445/color/image_raw` with your color topic)

```
rosrun image_view image_saver image:=/camera/137322071445/color/image_raw _save_all_image:=all _filename_format:=export/color%
```

Depth (replace `/camera/137322071445/aligned_depth_to_color/image_raw` with your depth topic)

```
rosrun image_view image_saver image:=/camera/137322071445/aligned_depth_to_color/image_raw _encoding:=16UC1 _save_all_image:=a
```

- Then, playback the recorded bag file

```
rosbag play recording.bag
```

Exporting images using python

- If you want more control on your processing pipeline you could check rosbag cookbook
- You could also modify the `visualizer.py` code to save data instead of visualization.

Visualization

- You could playback the bag file and use `rviz` to visualize your color and depth topics as `Image` .
- You could also use the `visualizer.py` code

Recording

You could use `rosbag record` to record color and depth topics for example to record multiple color, depth, and camera_info topics we could use the following command

```
rosbag record $(rostopic list | grep "aligned_depth_to_color/image_raw$\|/color/image_raw$\|/color/camera_info$\|/aligned_depth_to_c
```

- The `rostopic list | grep ...` will list all topics matching the regular expression we feed.
- Here, the regex checks for topics ending with any of the following strings
    - `aligned_depth_to_color/image_raw`
    - `color/image_raw`
    - `/color/camera_info`
    - `aligned_depth_to_color/camera_info`
- `--split size 4096` command will split the output into multiple files each of size 4GB