**Procedura per convertire video RGB in frame ad eventi con Esim\_Ros (con wsl)**

* Aprire wsl e run : ***(1)*** *roscore*
* Aprire **altro** wsl e run : **(2)**

*conda activate vmr*

*echo "source ~/sim\_ws/devel/setup.bash" >> ~/setupeventsim.sh*

*chmod +x ~/setupeventsim.sh*

*alias ssim='source ~/setupeventsim.sh'*

*ssim*

*export DISPLAY=$(ip route|awk '/^default/{print $3}'):0.0*

* *(per visualizzare: Scaricare* ***xlaunch*** *e run* ***config.xlaunch*** *nel desktop(oppure crea nuova conf. spuntando la casella ‘disable access control’)*

***Comandi presenti su github (esim-ros) per processare frame:***

***Estrarre frame RGB* (20fps):** *ffmpeg -i video.mp4* ***-filter:v fps=fps=20*** /*path\_dest/frames\_%04d.png*

***Creare file csv:*** *roscd esim\_ros*

*python scripts/generate\_stamps\_file.py -i /path\_dest*/esim *-r 20.0*

***Creare file bag:***

* *rosrun esim\_ros esim\_node --data\_source=2 --path\_to\_output\_bag=/path/vide****o.bag*** *--path\_to\_data\_folder=/path\_dest/ --ros\_publisher\_frame\_rate=30 --exposure\_time\_ms=10.0 --use\_log\_image=1 --log\_eps=0.1 --contrast\_threshold\_pos=0.15 --contrast\_threshold\_neg=0.15*

**Per visualizzare:**

*rosrun dvs\_renderer dvs\_renderer events:=/cam0/events*

*rosbag play /tmp/cheetah\_example/out.bag -l -r 0.1*

*rqt\_image\_view /dvs\_rendering*

***Per estrarre i frame ad eventi dal file bag:***

*Eseguire in* ***altro*** *wsl (in totale sono 3): Rieseguire* ***(2) e poi***

***rosrun dvs\_renderer dvs\_renderer events:=/cam0/events***

***Creare il file explor.launch: (path\_launch)***

<launch>

<node pkg="rosbag" type="play" name="rosbag" required="true" args="/path\_save/file.bag"/>

<node name="extract" pkg="image\_view" type="extract\_images" respawn="false" required="true" output="screen" cwd="ROS\_HOME">

<remap from="image" to="/dvs\_rendering"/>

*<param name="sec\_per\_frame" value="0.1"/>*

*</node>*

*</launch>*

***Estrarre event:***

roslaunch ***path\_launch***/export.launch

* *dove salva frame -> cd ~*

*mkdir path\_event*

*mv ~****/.ros/****frame\*.jpg path\_event/*

**-------**

**Tagliare video**

ffmpeg -i video.mp4 -ss 00:00:15 -t 00:00:30 -async 1 -strict -2 video\_cut.mp4