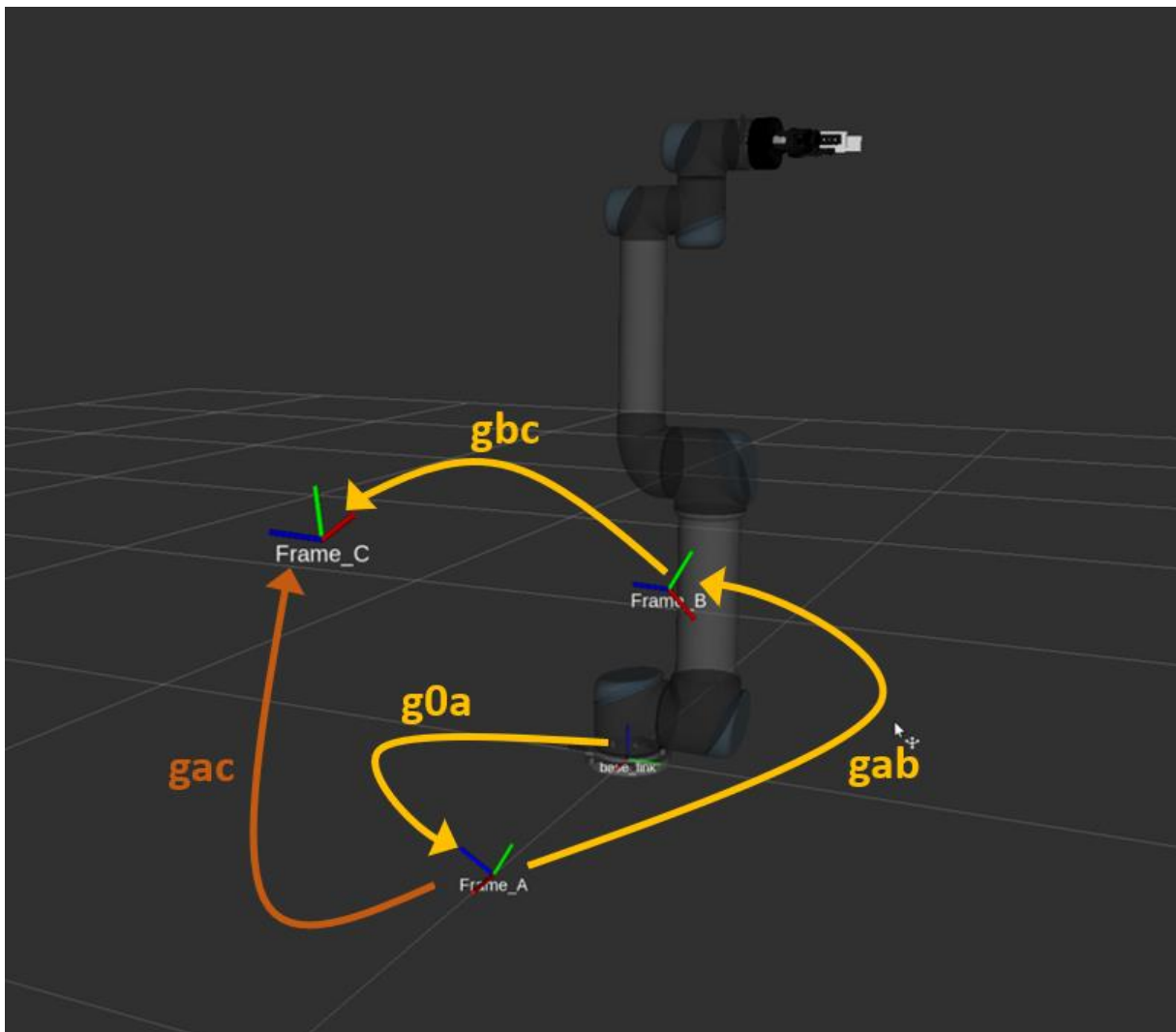


- $gac = gacreal$ :

The frames should be the same. Frame\_C coincides with the origin. Moving it  $gbc$  with Frame\_B as origin moves it to the position seen in the pictures. It can now be observed that, in Frame\_A, moving from A to B and then B to C is equivalent to the transformation from A directly to C.

The error between the frames is in the order of  $10^{-15}$  which is essentially 0. This small error originates from small rounding errors in matlab and reading the actual position of Frame\_C in RViz which has an (although small) error on it as well.

- Frames A, B and C visualization:



- Frames A2, B2 and C2 visualization:

