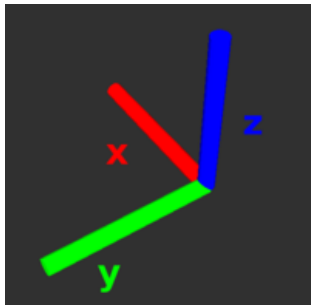


Standard Units of Measure and Coordinate Conventions

- Various units used in ROS, x,y,z axis and direction of rotation are described in the following address. Based on this as possible.

<http://www.ros.org/reps/rep-0103.html>



[Right Figure Source : http://en.wikipedia.org/wiki/Right-hand_rule]

- Basically, for the rotary axis, use x,y,z axis as shown in the upper left figure. Apply the right-hand rule and the direction of winding with right hand is the + direction.
- The rotation angle uses radians. For example, if the robot is rotated from 12 o'clock to 9 o'clock in its place, it is said that the robot has rotated by +0.7853 radian on the z-axis.
- In addition, length uses [m](meter), mass uses [kg](kilogram), time uses [sec](second), current uses [A](ampere), angle uses [rad](radian), period uses [Hz](Hertz), force uses [N](newton), power uses [W](Watt), voltage uses [V](voltage), and temperature uses [°C](Celsius).

Quantity	Unit
length	meter
mass	kilogram
time	second
current	ampere

Quantity	Unit
angle	radian
frequency	hertz
force	newton
power	watt
voltage	volt
temperature	celsius