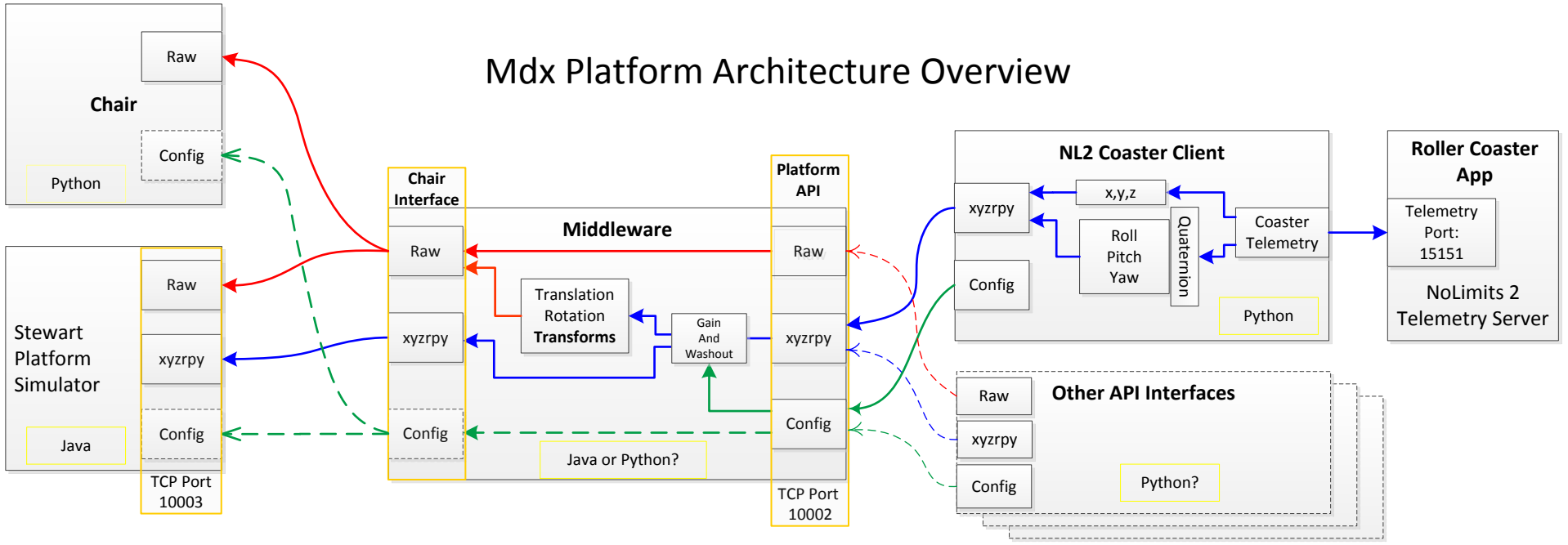
Mdx Platform Architecture Overview



Movement methods:

Method identifier:

"raw" - array of raw values indicating length of the six muscles

"xyzrpy" – aray of six values for xyz translations and rotations

x translation is forward/backward movement (surge)
y translation is side to side movement (sway)
z translation is up/down movement (heave)
x rotation is tilting on front/back axis (roll)
y rotation is tilting on lateral axis (pitch)
z rotation is tilting on vertical axis (yaw)

argument units default to normalized values (range between ± 1.0)

In future, "units":"real" can be included in message to provide real world mm values for translation, degrees for rotation

args:

An array of six floating point values

Example: send command with 10% heave (upward movement), -20% roll (bank)

{"jsonrpc":"2.0","method":"xyzrpy","args":[0.0, 0.0, 0.1, -0.2, 0.0, 0.0]}

Configuration Method: - identifier "config"

(each of the following arguments is optional)

"blocking" true/false – (current version only supports false)

"gainX" float multiplier for x values
"gainY" float multiplier for y values
"gainZ" float multiplier for z values
"gainRoll" float multiplier for roll values
"gainPitch" float multiplier for pitch values
"gainYaw" float multiplier for yaw values
"gain" float multiplier for all 6 DOF
- all above gain factors default to 1.0

"washoutX" washout factor for x values
"washoutY" washout factor for y values
"washoutZ" washout factor for z values
"washoutRoll" washout factor for roll values
"washoutPitch" washout factor for pitch values
"washoutYaw" washout factor for yaw values

- washouts default to 1.0, lower numbers increase the rate values will decay to 0

Example: set overall gain to 0.5 and yaw washout to 0.996

{"jsonrpc":"2.0", "method":"config", "gain":0.5, "washoutYaw":0.996}