OpenHRP-3.0.0 - Side Approach

The following changes with respect to the code first issue for the PA-10 Pivot Approach are reported here. These concern the simulation version and not actual HIRO yet.

## Parameters

FitRegressionCurves.m::GoodFirThreshold – was changed from 0.70 to 0.90

CompoundMotionCompositions::CleanLoops – was changed from 3 to 2

The GradientClassification parameters were scaled down as they needed adjustment to be compatible with this new lower magnitude data-sets. The values were scaled as follows:

if(~strcmp(StrategyType,'HSA'))

pimp =1000.0; nimp = -1\*pimp; % These are a later addition but are indexed as positions 7 and 8

bpos = 100.0; bneg = -1\*bpos;

mpos = 10.0; mneg = -1\*mpos;

spos = 1.0; sneg = -1\*spos;

zero = 0.0;

% HIRO

else

pimp = 80.0; nimp = -1\*pimp; % These are a later addition but are indexed as positions 7 and 8

bpos = 46.0; bneg = -1\*bpos;

mpos = 23.0; mneg = -1\*mpos;

spos = 1.0; sneg = -1\*spos;

zero = 0.0;

end

% 1) Scale values by 0.5 if domain is less than 0.1

if(domain < 1.9)

factor = 10.0;

pimp = pimp/factor; nimp = -1\*pimp; % These are a later addition but are indexed as positions 7 and 8

bpos = bpos/factor; bneg = -1\*bpos;

mpos = mpos/factor; mneg = -1\*mpos;

spos = spos/factor; sneg = -1\*spos;

elseif(domain < 0.1)

factor = 100.0;

pimp = pimp/factor; nimp = -1\*pimp; % These are a later addition but are indexed as positions 7 and 8

bpos = bpos/factor; bneg = -1\*bpos;

mpos = mpos/factor; mneg = -1\*mpos;

spos = spos/factor; sneg = -1\*spos;

end

## Code Additions

1. A new filter was added at the “Primitives” level – used temporal context.   
     
   For every two contiguous primitives, if either one of them is 5 times longer than the other one, the shorter one is absorbed into the longer one, and all their values are adjusted appropriately. Magnitude values are averaged and time values are shifted to ensure seamless continuity of primitive sequences throughout the data.
2. A new filter was added at the “Refinement” level of the LLBeh Struc. If there are FIX’s followed by either PUSH/PULL/ALGN/SHIFT or in reverse order, merge to FIX. Amplitude and average magnitude values were used to make such mergers. Both with threshold of 0.75.