average_mv_2.xbe

Attributes

```
xbe name=average_mv_2 evaluate=yes save_history=yes allow_ssw=no
#
# compute moving average without clock signal
#
Jacobian: variable
input_vars: x
output_vars: y
aux_vars:
iparms:
sparms:
rparms:
+   T=1
+   y0=0
+   epsl=0
stparms:
igparms:
outparms: x y
```

Description

   average_mv_2.xbe is used to compute the moving average (y) of the input signal (x), by averaging over an interval T. x and y are made available as output variables.

   Fig. 1 illustrates the working of this element. x3 is obtained by adding a triangle wave (x2) to a sine wave (x1) and is then averaged using average_mv_2.xbe. The averaging interval T is chosen to be the period of the triangle wave, and we therefore expect to get the sine wave back after averaging. Note that the average waveform lags behind the sine wave by $T/2$.
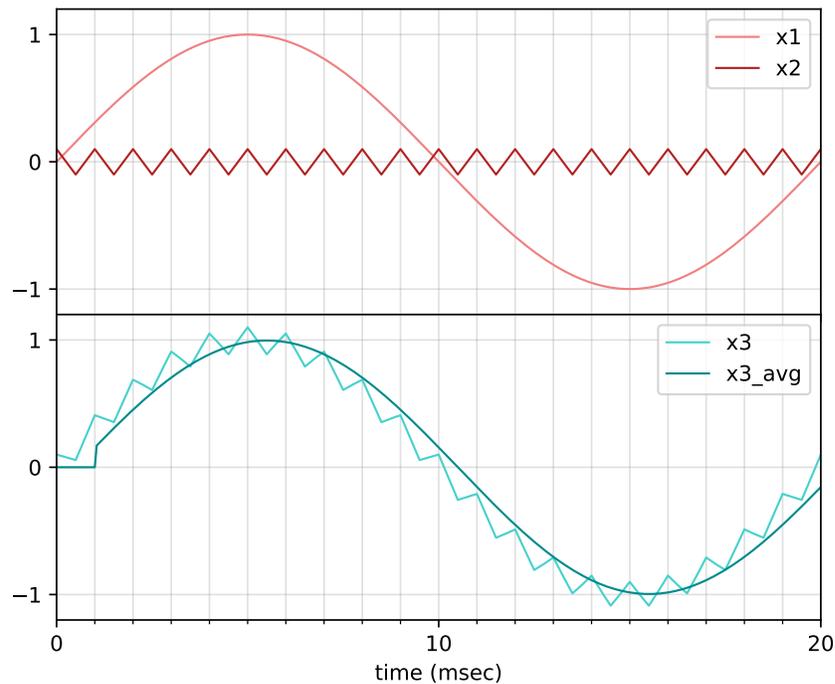
Figure 1: Sample waveforms for average_mv_2.xbe.