sampler_1.xbe

Attributes

```
xbe name=sampler_1 evaluate=yes limit_tstep=yes save_history=yes allow_ssw=no
+  compute_time_parms=yes
#
# sample and hold
Jacobian: variable
input_vars: x
output_vars: y
aux_vars:
iparms: index=0
sparms:
rparms:
+  T=10u
+  t0=0
+  v_previous=0
+  dt=1u
+  epsl1=0
+  epsl2=0
stparms: y_st=0
igparms:
outparms: x y
```

Description

`sampler_1.xbe` is used to sample a signal (`x`) at uniform intervals. The parameters have the following meaning:

`T:` sampling interval.

`t0:` offset which determines the position of the first sample.

`dt:` `dt` is related to the resolution of the output $y(t)$. It should be small as compared to `T`.

`index:` `index` specifies the index of the element. If there are several `sampler_1` elements in the circuit, each must be assigned a different integer as `index`.

`x` and `y` are made available as output variables.

Fig. 1 shows a circuit example using `sampler_1.xbe` and `delay_discrete_1.xbe`, and Fig. 2 shows the asscoiated waveforms.

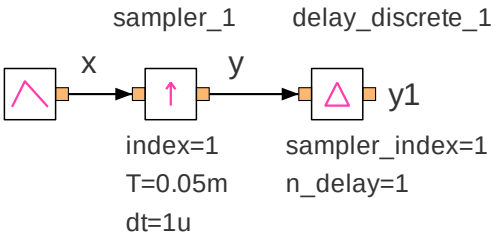

Figure 1: Schematic diagram of a sample application of `sampler_1.xbe`.

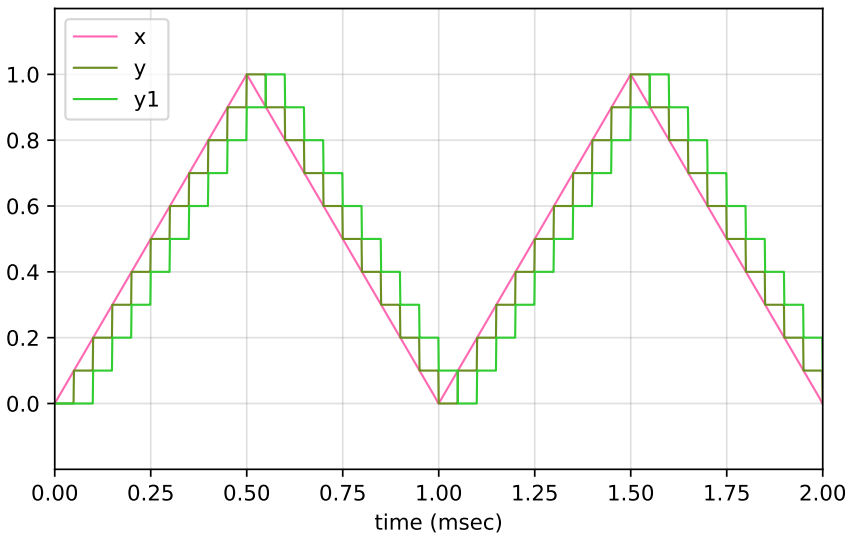

Figure 2: Waveforms obtained with the circuit of Fig. 1.