sampler3.gce

Attributes

```
mainvars: x y
iparms: n_delay=1
rparms: tperiod=10u t0=0 dt=1u
```

Description

`sampler3.gce` is used to delay a sampled signal `x` by 1/2/3 periods. The delayed quantity is made available as `y`. The parameters have the following meaning:

`n_delay:` `n_delay`=1/2/3 gives a delay of 1/2/3 periods.

`tperiod:` sampling interval.

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

`dt:` `dt` specifies the interval used to force a time point before the sampling time. `dt` should be small as compared to `tperiod`.

AC behaviour is not implemented.

Fig. 1 shows results obtained with `sampler3.gce`. The corresponding circuit file is given below.

```
title: testing of sampler3.gce

greal tperiod=0.02m delta_t=0.2u
begin_circuit
   gelement type=vsrcac vxn=v a=5 f_hz=1k

   gelement type=sampler2 x=v y=v0
+     tperiod=tperiod t0=0 dt=delta_t

   gelement type=sampler3 x=v0 y=v1
+     tperiod=tperiod t0=0 dt=delta_t
+     n_delay=1
   gelement type=sampler3 x=v0 y=v2
+     tperiod=tperiod t0=0 dt=delta_t
+     n_delay=2
   gelement type=sampler3 x=v0 y=v3
+     tperiod=tperiod t0=0 dt=delta_t
+     n_delay=3

   outvar:
+     v=var_of_v
+     v0=var_of_v0
+     v1=var_of_v1
+     v2=var_of_v2
+     v3=var_of_v3
end_circuit

begin_solve
   solve_type=startup
   initial_sol initialize
   method: t_startup=0
end_solve
begin_solve
   solve_type=trns
   initial_sol previous
   begin_output
      filename=samplertest3.dat
      variables: v v0 v1 v2 v3
   end_output
   method: norm_2=1.0e-5 itmax_trns=10000 back_euler=yes
+    t_start=0 t_end=1.0m delt_const=0.02m delt_min=0.1u
end_solve
end_cf
```

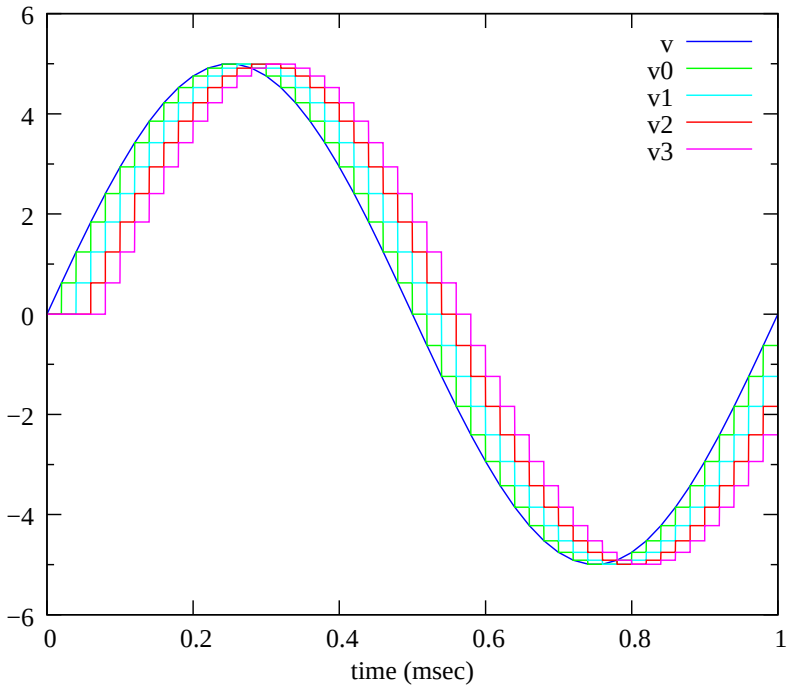

Figure 1: Waveforms obtained with `sampler3.gce` (see the circuit file for details).