

Latches and Flipflops (B)

Copyright (c) 2011-2013 Young W. Lim.

Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.2 or any later version published by the Free Software Foundation; with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts. A copy of the license is included in the section entitled "GNU Free Documentation License".

Please send corrections (or suggestions) to youngwlim@hotmail.com.

This document was produced by using OpenOffice and Octave.

sr_nor_tb.v

```
module sr_nor(s, r, q, qb);  
  input s, r;  
  output q, qb;  
  
  wire P, S, G, PC;  
  
  nor #0.1 U1 (q, r, qb);  
  nor #0.1 U2 (qb, s, q);  
  
endmodule
```

```
s=0; r=1; // RESET  
#1 s=0; r=0; // HOLD  
#1 s=0; r=1; // RESET  
#1 s=1; r=0; // SET  
#1 s=0; r=1; // RESET  
#1 s=0; r=1; // RESET  
#1 s=1; r=0; // SET  
#1 s=0; r=0; // HOLD  
#1 s=1; r=0; // SET  
#1 s=1; r=0; // SET  
#1 s=1; r=0; // SET  
#1 s=0; r=1; // RESET
```

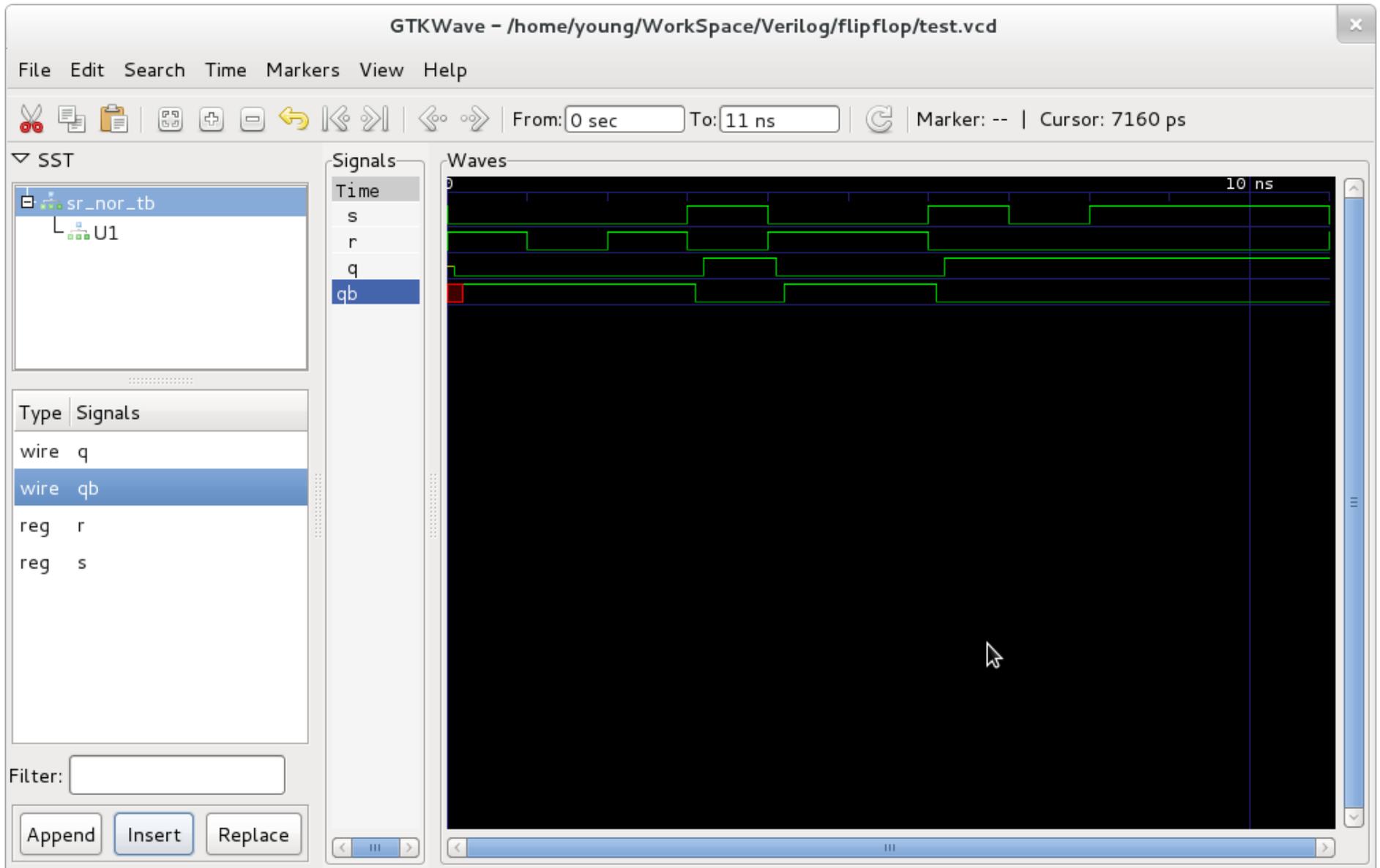
```
$finish;  
end // initial begin
```

```
endmodule
```

sr_nor.v

```
module sr_nor(s, r, q, qb);  
  input s, r;  
  output q, qb;  
  
  wire P, S, G, PC;  
  
  nor #0.1 U1 (q, r, qb);  
  nor #0.1 U2 (qb, s, q);  
  
endmodule
```

Waveform (1)



References

[1] <http://en.wikipedia.org/>