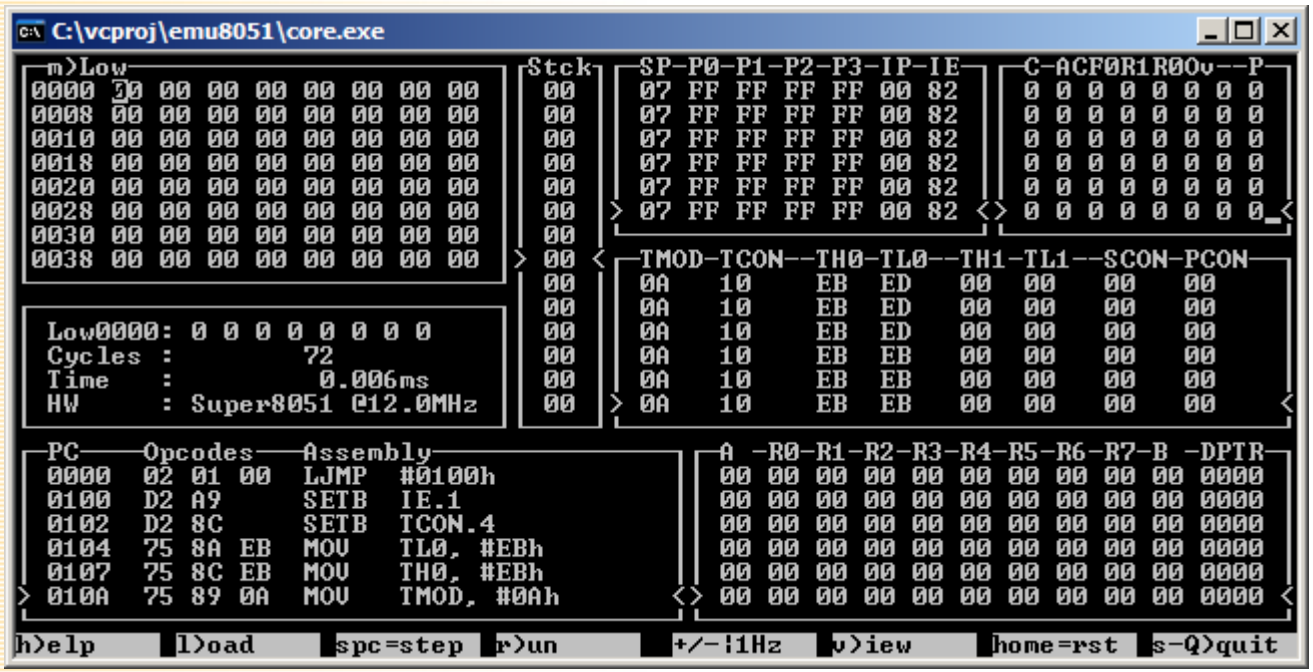
Real Time Logic Simulator

Jari Komppa
March 27, 2008

Outline

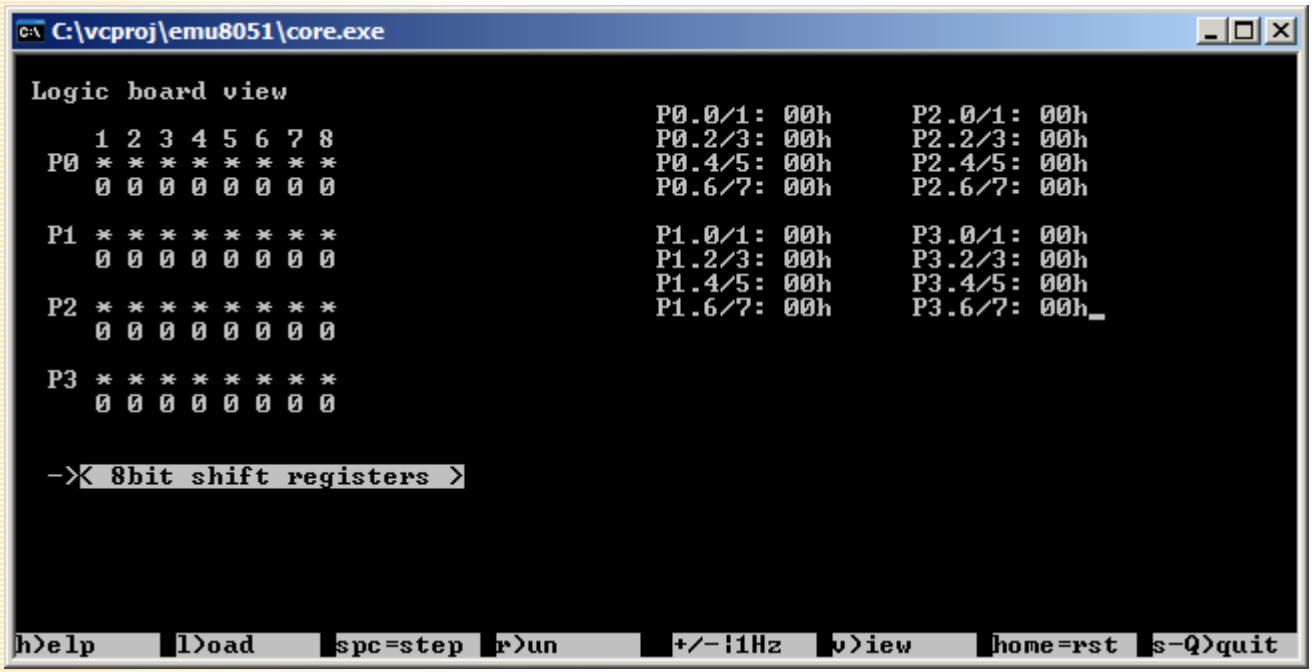
- Development of the idea
- Development process
- The result

- Original idea: graphical UI to my 8051 simulator (which is a console application)

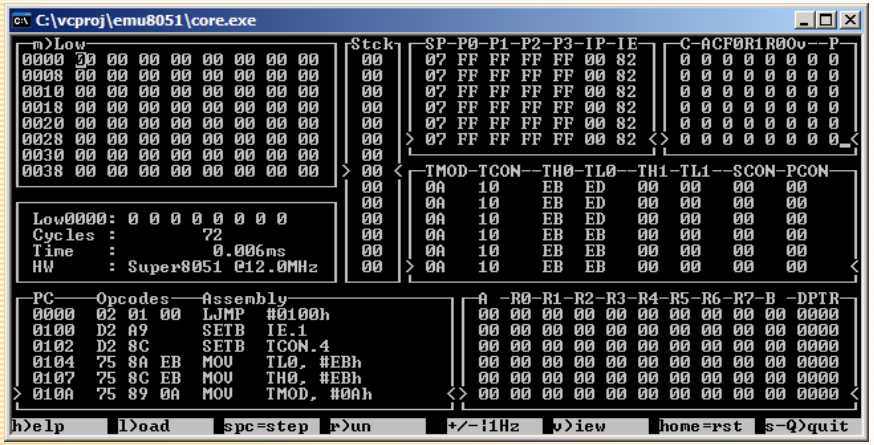


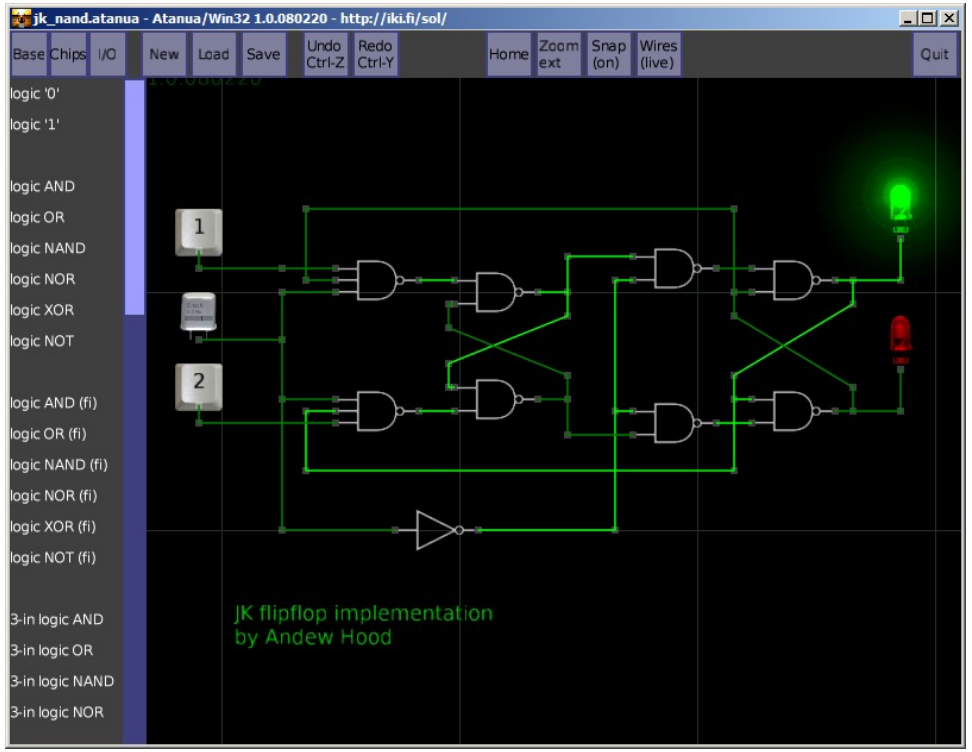
- http://iki.fi/sol/8051.html

- The original simulator had a 'logic board' view – LEDs, buttons, other peripherals..



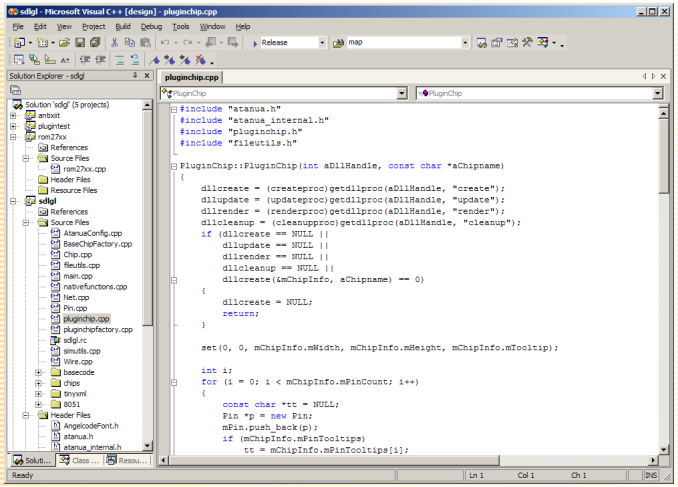
- 'Logic board' stole the show

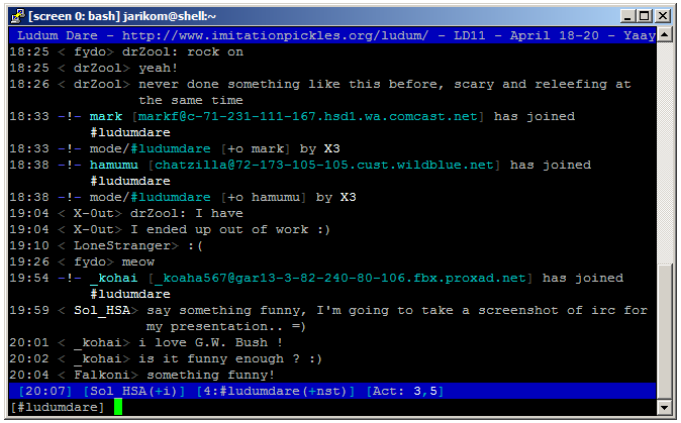


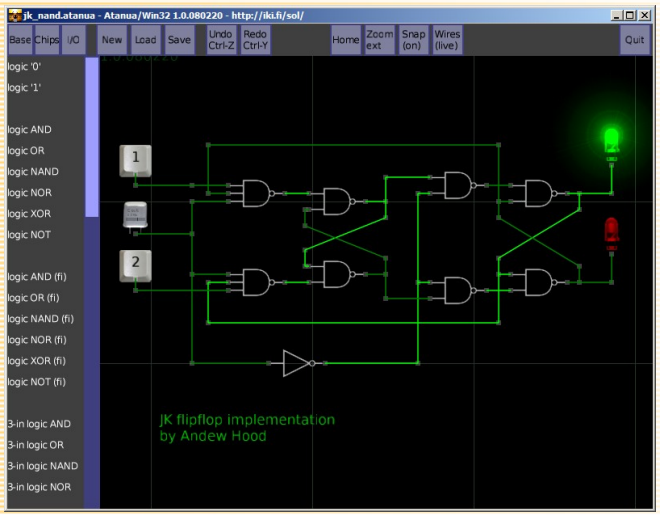


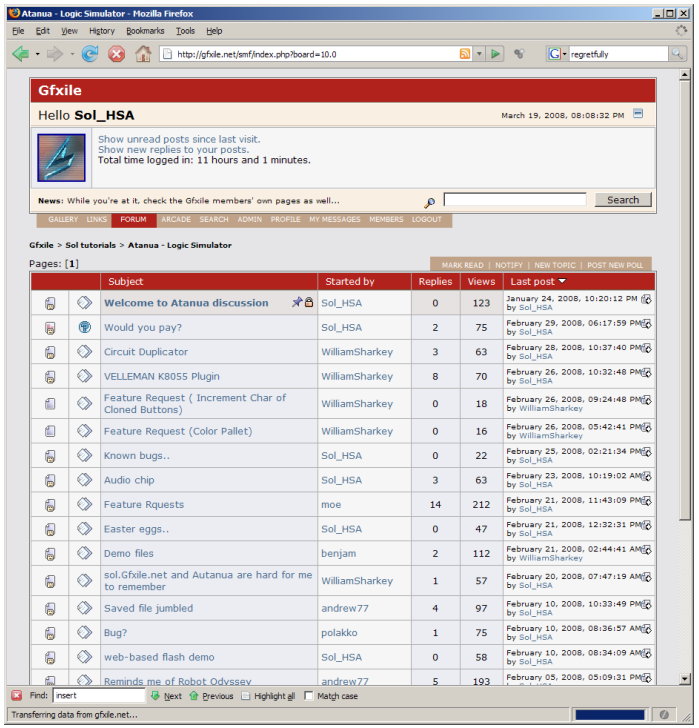
Atanua

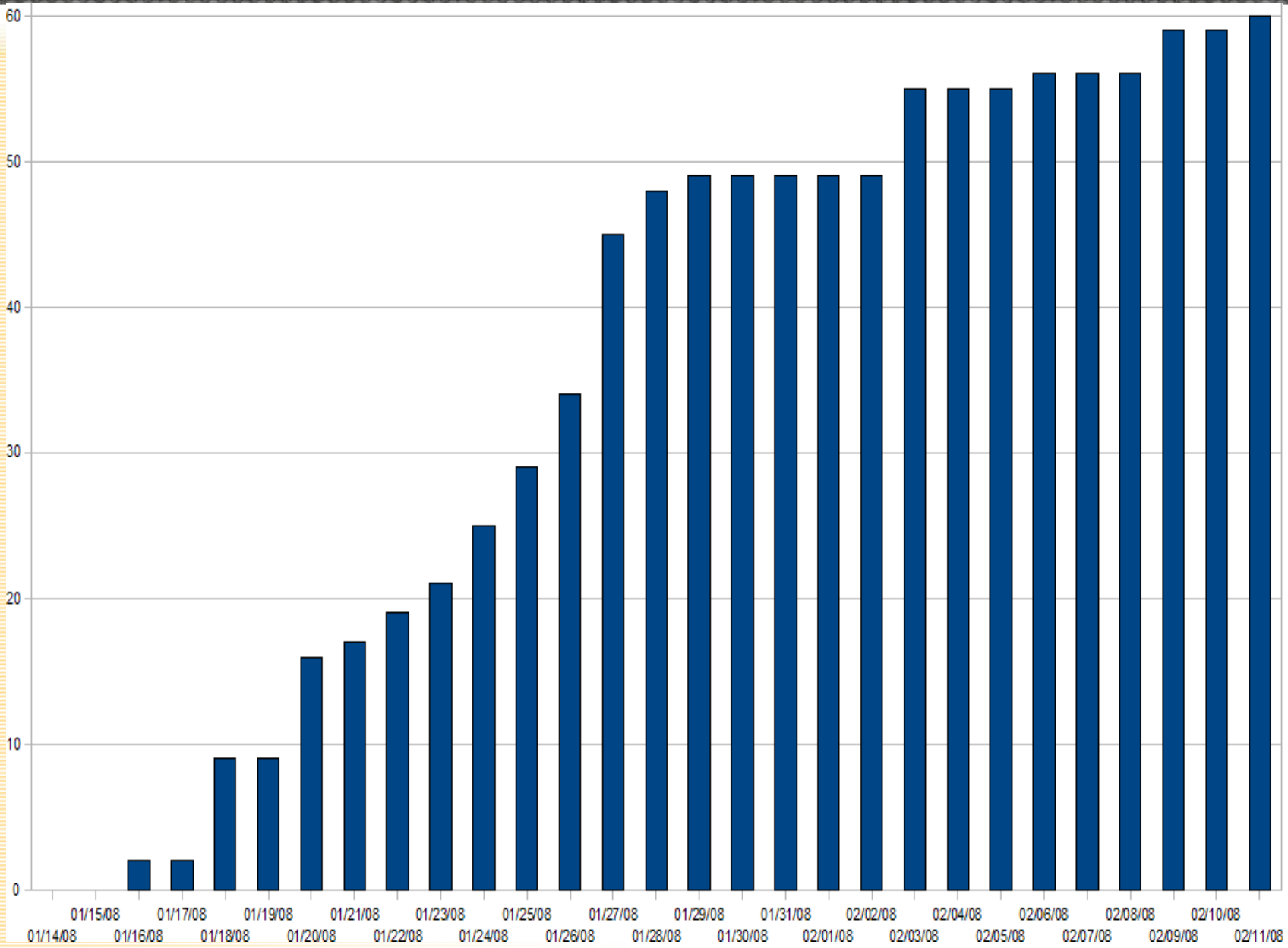
Real time logic simulator







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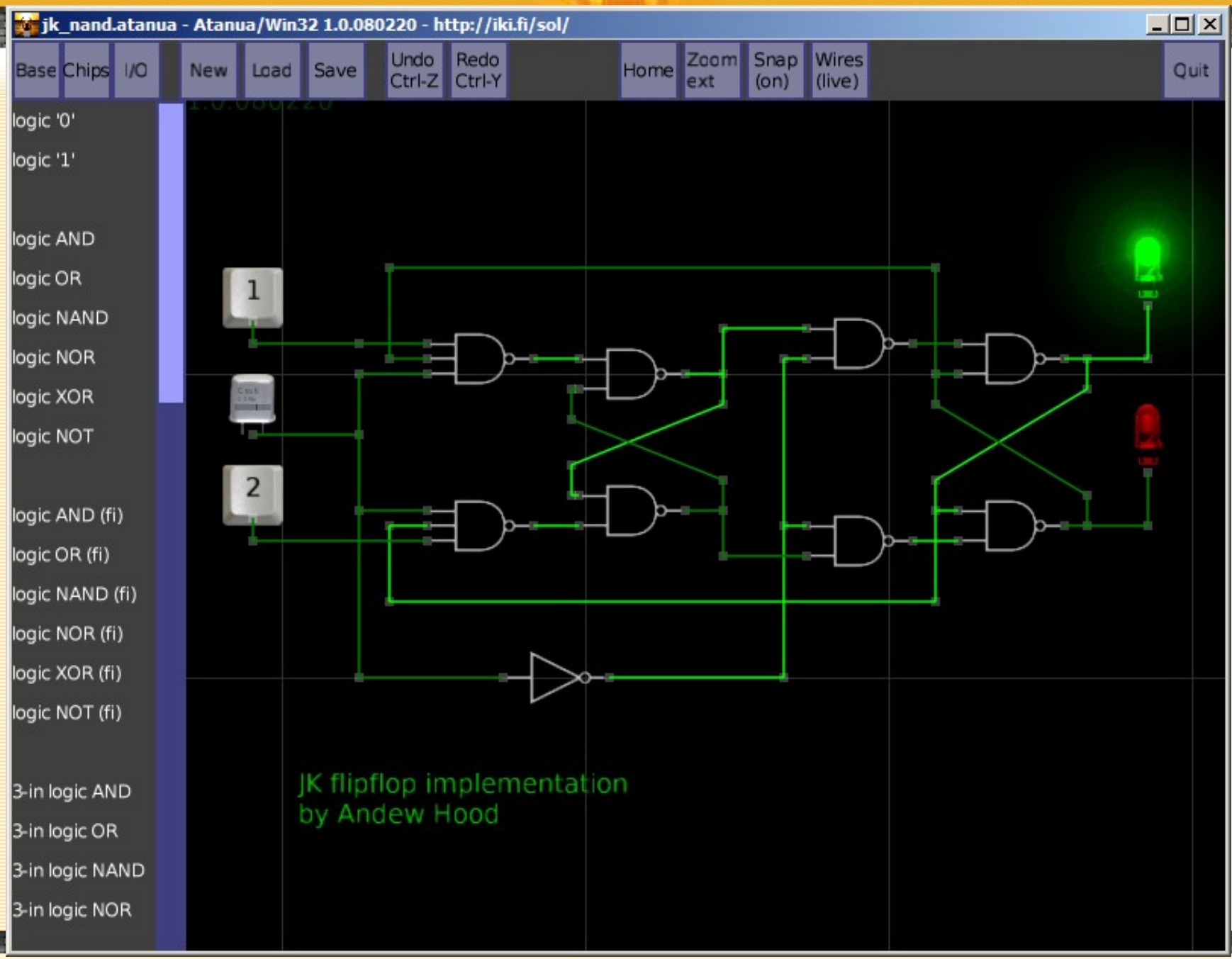
Simulated components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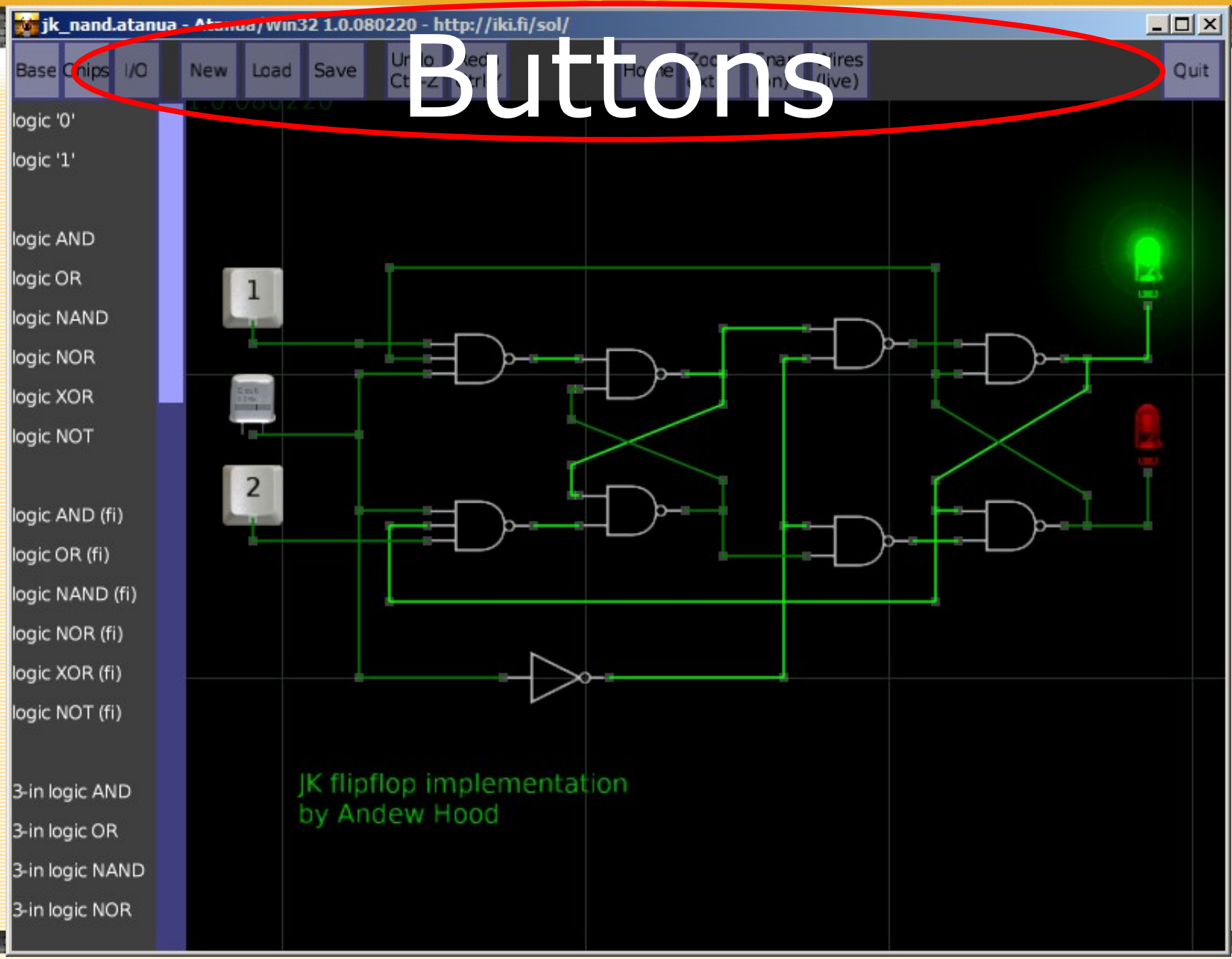
JK flipflop implementation
by Andew Hood

Buttons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JK flipflop implementation
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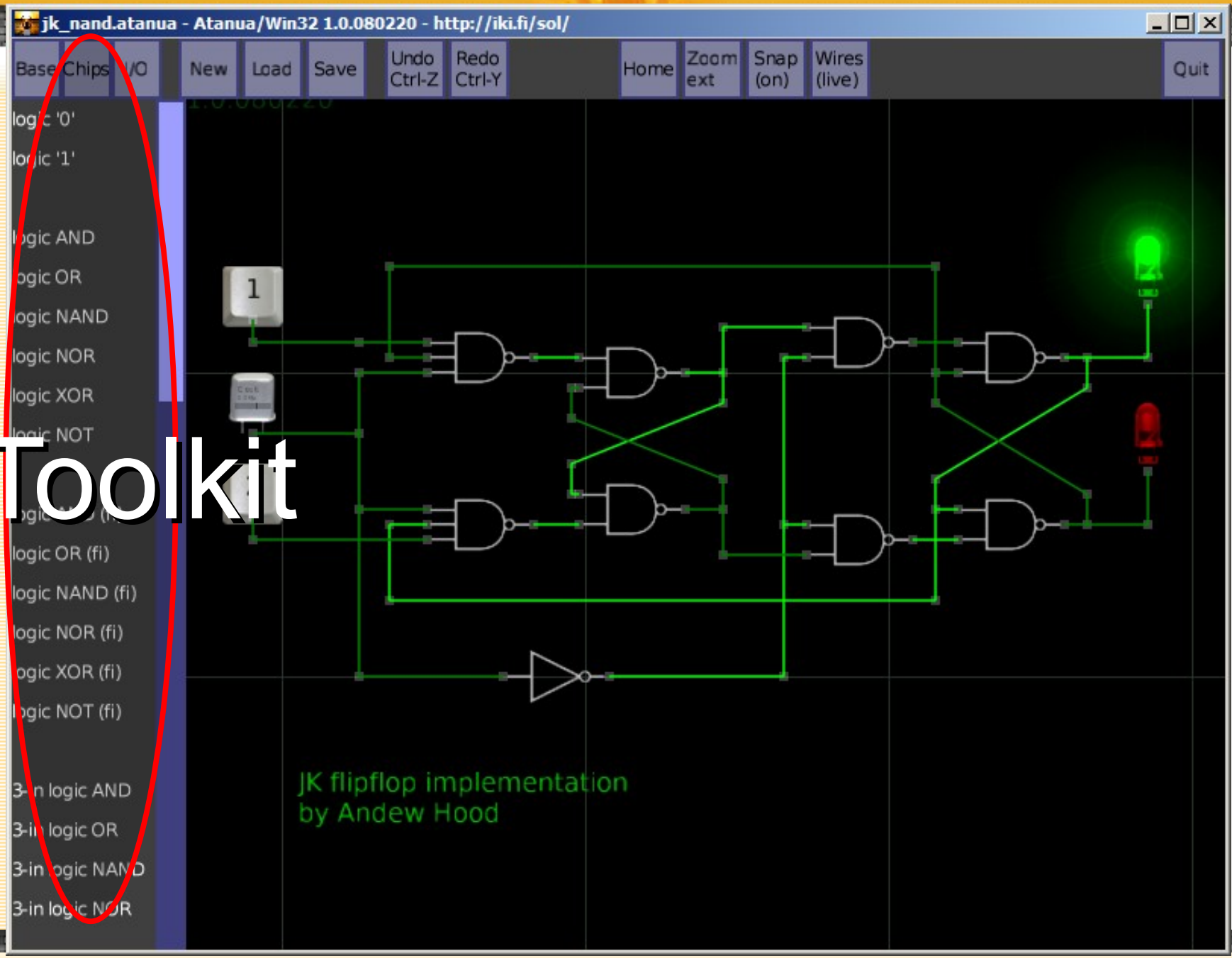
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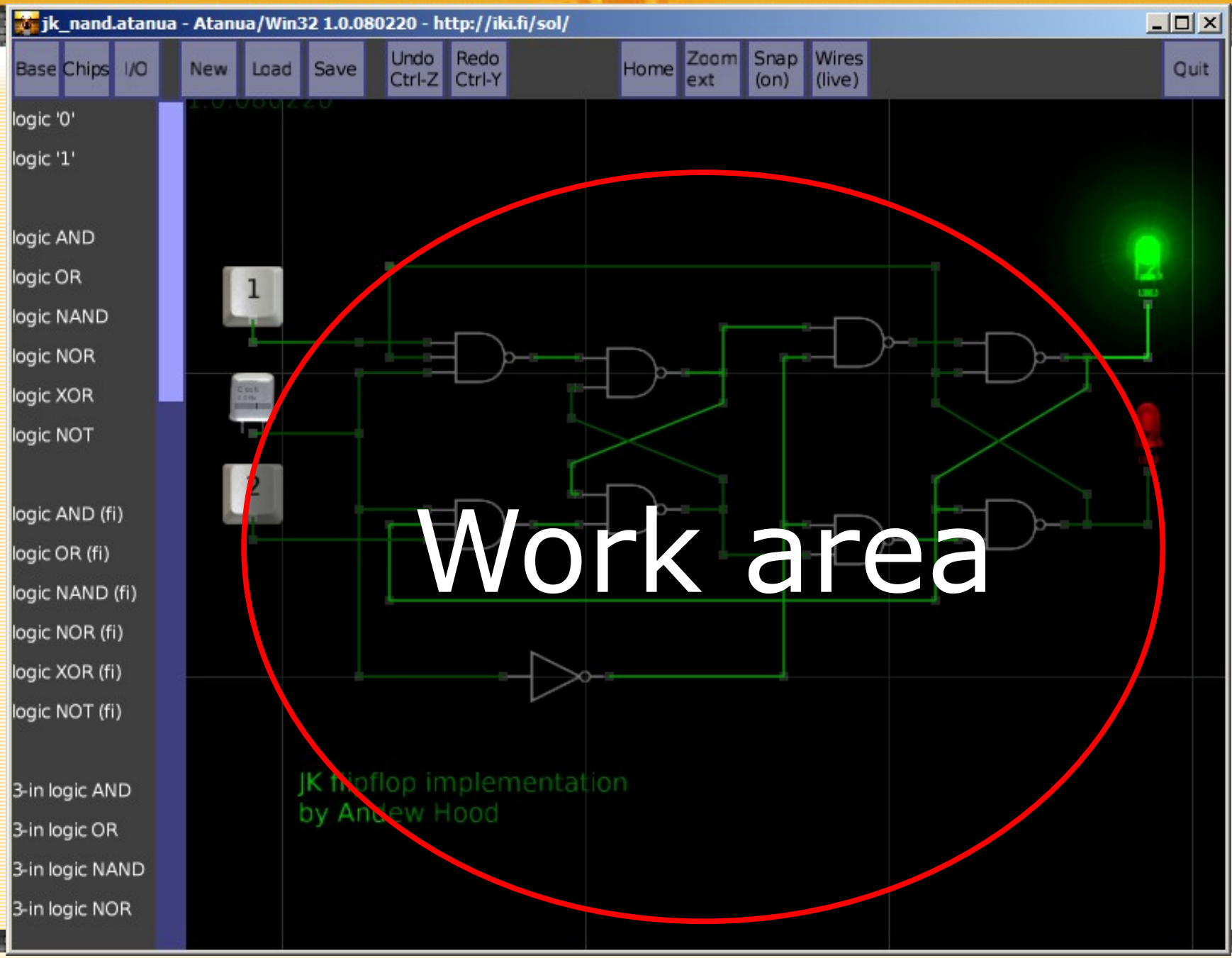
JK flipflop implementation
by Andew Hood

Toolkit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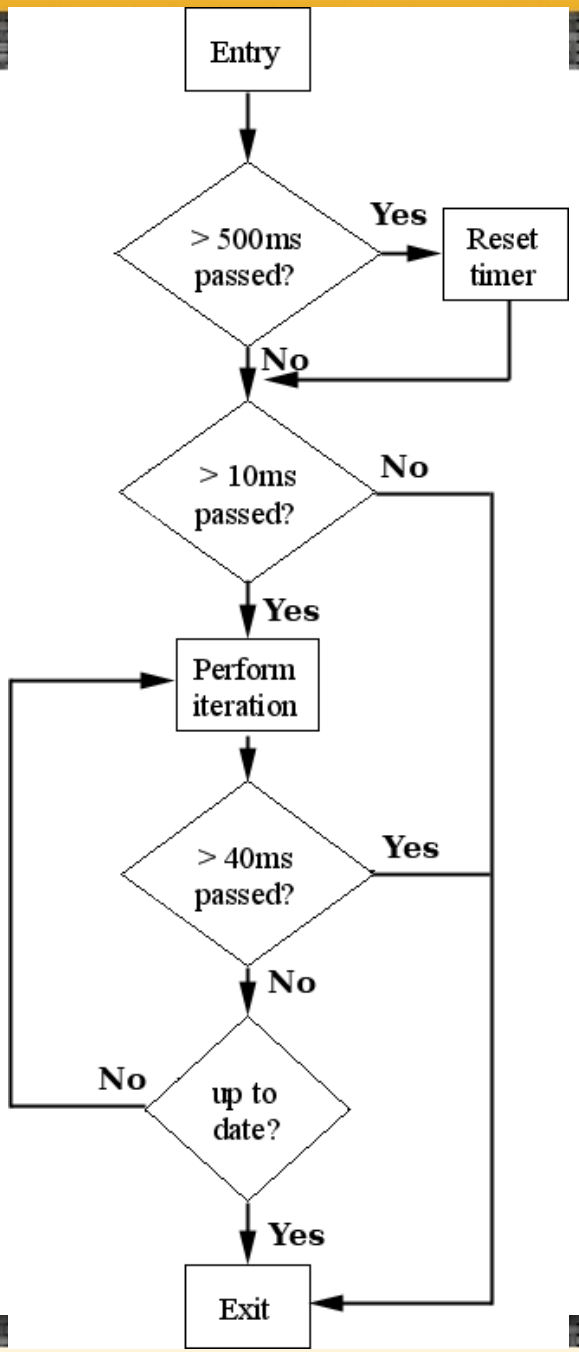
Work area
JK flipflop implementation
by Andrew Hood

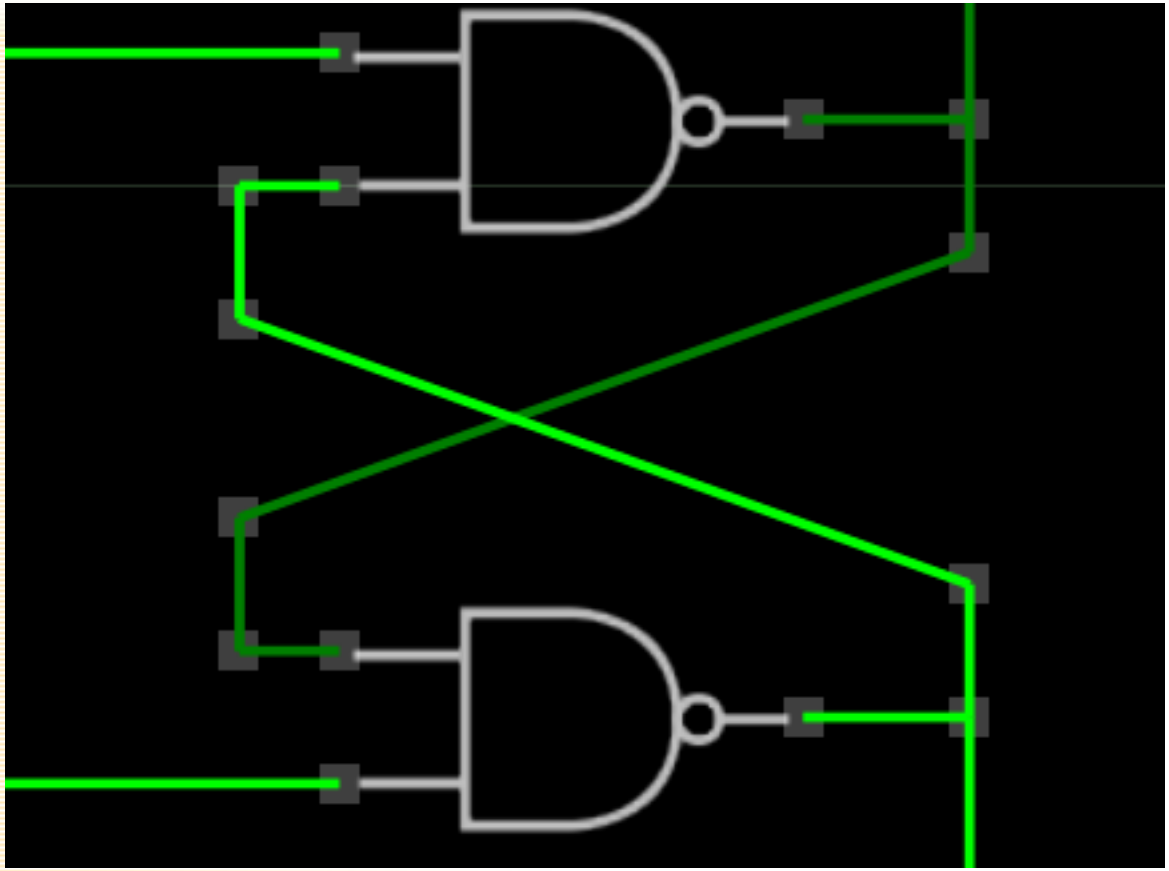
Demo..

Questions?

- Atanua: http://www.atanua.org
- My site: http://iki.fi/sol/
- 8051 emu: http://iki.fi/sol/8051.html

- Back-up slide: Implementation of the real-time logic simulation
- Logic simulation loop runs at 1000Hz regardless of graphics frame rate.





- Back-up slide:
  Problematic cross-connections