Funny Digital Electronics with Open Source FPGAs

Juan González Gómez
@Obijuan_cube
https://github.com/Obijuan

http://fpgawars.github.io/
• I am not a Jedi, but I am trying…
• I am an assistant professor at Rey Juan Carlos University in Madrid, Spain
• I am also a researcher in Robotics at the Robotics Lab in Rey Juan Carlos University
Icestorm project: Thank you very much!

- Icestorm project (May, 2015): Clifford Wolf, Mathias Lasser
- The first **fully open source toolchain** in history
Motivation

Is it possible for kids or non-tech people to design digital circuits?

Can we create libre tools for allowing them to learn digital electronics?
Icezum Alhambra v1.1

https://github.com/FPGAwars/icezum/wiki

- Author: Eladio Delgado
- From en Pinos del Valle (Granada, Spain)
- Arduino-like board with and Open source FPGAs
- Arduino compatible
- Easy connection of sensors / actuators
- Really nice for making Educational open-source Robots
Made in Kicad
Icestudio

https://github.com/FPGAwars/icestudio

Author: Jesús Arroyo
Panel example
Peripherals

**PCBprints**: 3D printed boards
Made in FreeCAD
Example 1: Hello world
Hello world: Physical implementation
Live demo...
Modular Robot
May the Open Source FPGAs be with you...

Thanks! :-}
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