**SauleBoard – project review video (time: 2 minutes)**Scene 1 - This is 10 Watts monocrystalline solar panel.

Scene 2 - And this is 7 Amp-hours lead-acid battery.

Scene 3 - That’s nearly all you need for the simples solar power system. However, in order to really use the potential of photovoltaic cells, and not damage the battery during the charging process, you need one more thing – a charge controller.

Scene 4 - This is SauleBoard, solar charger with Maximum Power Point Tracking algorithm and Bluetooth communication. It’s primary job is to take care of the process of charging lead-acid batteries from the solar energy, and to do its best to deliver as much power as possible form the photovoltaic cells.

Scene 6 - It consists of two main sections: step-down switching regulator and microcontroller and communication part.

Scene 7 - Step-down switching regulator is based on LM2576 adjustable chip, that requires only few additional components like capacitors, diode or inductor to work efficiently.

Scene 8 - On the other side of the board you can see the microcontroller and bluetooth section.

Scene 9 - SauleBoard use AT Mega 328 as it’s brain, that controlls the energy flow, takes measurements of input and output voltage as well as the current flowing from the PV panel. It also adjust the output voltage and generate frequent reports that are sent over bluetooth and standard serial port.

Scene 11 - The project is open source, and all the files are available at my github page. And since it’s still under development I will be very grateful for any piece of advice or thoughts on the SauleBoard or whole solar system.

Scene 12 - If you would like to find out more, see the article about SauleBoard at DesignSpart website, where I placed longer description, photos and source files.

Thank you for watching.

Scene 10 - On the PCB you can also find testpoints, additional header connected to unused I/O pins for future development purposes, and jumpers that can be used as an interface for external analog or digital switches.