# Open Tech... *Future Making*

(an exploration of engineered art and social science with open-source hard/soft/etc-ware)

Future Making will be a rolling event over two days with around a dozen exhibits plus an hourly short stage show. The target audience is anyone curious, with secondary schools invited to attend if the timing of the event permits. The performers are expected to be engineers, musicians, social scientists, dancers, hackers and visual artists.
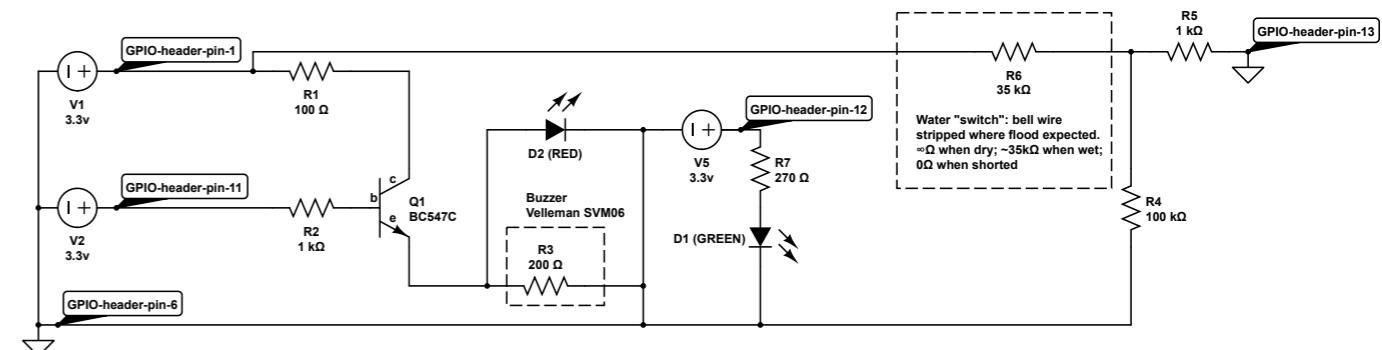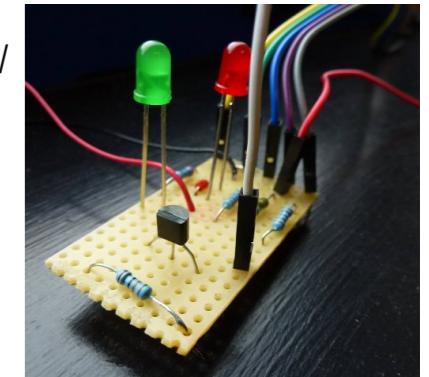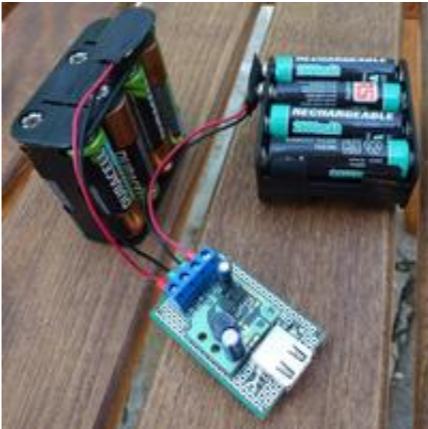
There is a new conjunction emerging around open hardware, maker culture, and art. Parallels exist with the explosive change in pop culture pressaged by punk in the late 1970s: from the Homebrew Computer Club trading circuits and information; from Iain M. Banks' legacy of utopian technofutures, blending electro-augmented humanity with benevolent AI; from the wearable electronics kits (e.g. from Adafruit.com — echoing Lady Ada Lovelace, inventor of the computer algorithm); to the latest rounds of sampling and remix.

Open-source hardware allows people to make their own robots, cameras, electrocardiagraph machines and even full computers by downloading schematics and building — incorporating any changes they need — and, typically, free open-source software is available to run these projects. 3D printers have helped this adoption of the open-everything ethos.

As RaspberryPi.org and many other sites testify, there are stacks of DIY projects based on the Raspberry Pi, and the flood showns no sign of slowing. The Pi is a small cheap computer which is very easy to cobble together with other devices. It has a large community behind it and is one of the drivers behind proposed changes in the schools ICT curriculum.

As part of a trend to open hardware and maker culture the Pi is also a vehicle for localist responses to climate change and peak oil: the more we manufacture locally the more secure we are (the Pi is made in Wales); the less energy we use the less carbon we pump into the atmosphere (the Pi is low power).

The cases of Edward Snowden, Chelsea Manning and Julian Assange, however, readily attest to questions around ownership of data, and 'patent-trolling' is slowing down the adoption of cheaper industrial processes — we will engage in an age-appropriate exploration of this topic in the context of the international 'broadcast' nature of the internet.

Buzzer and red LED circuit   Green LED circuit   Water sensor circuit