

Saal: 21:15 01:00 Day: 1 Track: CCC nA
Simulacron-3

Title: **The rad1o**

Subtitle: Listen to all the things

Speaker: **Sec, RFguy, schneider**

Short: *We will give a introduction on what your badge can do. An overview of the hardware details and software options as well as the history of it's creation.*

Long: When arriving at the Camp, you got a shiny electronic badge called rad1o. We will show what went into making it, and what interesting things you can do with it. This talk will cover the inception and creation of this years Camp Badge. From a description of the hardware including differences to the HackRF one, the software concept and extension possibilities to first projects done by attendees. The Badge contains a full-featured SDR Transciever workable in a Range of about 50-4000 MHz. It is based on a Wimax Transciever which sends I/Q samples in the range of 2.3 to 2.7 GHz to an ARM Cortex M4 CPU. The CPU then can then process them stand alone for various applications (like FM receiveing, Spectrogram display, RF Controlled power plugs, etc.) or send the samples via USB 2.0 to a Computer where they can be processed with the help of GNU Radio. The extended frequency range is provided by a mixer that can be inserted into the RF path. For immedeate usage, the board contains a 2.5 GHz chip antenna which can be replaces with an easily soldered Antenna connector for usage in different frequency ranges. The rad1o als contans han LCD and Joystik as known from the r0ket from the last CCCamp.