1. Submission Title

SigInt for the Masses: Building and Using a Signals Intelligence Platform for Less than $150

1. Speaker Name(s)

Josh Conway (CrankyLinuxUser)

1. Speaker Email (*this is how we will contact you*) **Hidden from reviewers**

jwcrawley@gmail.com

1. Speaker biography (*150 words or less per speaker*) **Hidden from reviewers**

Josh Conway is a hacker, systems administrator, 3d printer software & hardware developer, amateur radio operator, musician, and more. He finds interest in creating new things, reusing tech in different ways, and abusing ‘unintended’ methodologies hidden inside hardware and software.

He is a member of BloomingLabs, the first hackerspace in Indiana, along with the cat-wrangler for the local 2600 meeting. Previous projects include: 3Dollar Scanner, Facial Recognition for your Con, and Thalmic Myo Open Sourcing via Public Hacking.

1. Abstract for your talk (*200 words or less*) **Please refrain from including identifying information**

“Who said something? What did they say? Where did they say it? What can I do with it?” These are the questions people have when working with unknown radio systems. This is the art and science of Signals Intelligence (SigInt).

We discuss the basic requirements for working with SigInt, along with a sample platform using a Raspberry Pi and a RTLSDR radio receiver. The discussion will then briefly touch on other hardware that can enable SigInt work, that are not incorporated in the demo platform. We then dive into the software stack that makes SigInt work.

The following software will be used: Linux (Raspbian), RPITX, RTLSDR libraries, GnuRadio (gr-inspector), GQRX, and other accompanying tools. We will use FCC ID’s, manual scanning of spectrum, and gr-inspector to find and target potentially vulnerable frequencies and protocols as well as show how exploits could commence. We will **attempt** a live demo of such an attack using a system the presenter brings in.

1. Detailed talk outline **Please refrain from including identifying information**

See attached

1. Whether this would be your first speaking engagement at a conference

Security & hacking con: Yes.

3D printing con: No

1. Whether this talk has been previously given at another conference

Nope.

1. Shirt Size

XLT -or- 2XL (in case there are no tall variants)

1. Equipment Needs (*beyond internet access and AV equipment*)

None extra.