GNU Radio

Project Update

Ben Hilburn
<table>
<thead>
<tr>
<th></th>
<th>Total Unique Visitors</th>
<th>Maximum Unique Visitors</th>
<th>Minimum Unique Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Month</td>
<td>69,311</td>
<td>4,898</td>
<td>3,112</td>
</tr>
</tbody>
</table>

**Unique Visitors**

![Graph showing unique visitors trend over time with peaks and troughs.](image_url)
Participation in Software Coding Programs

- Google Summer of Code
- Summer of Code in Space
GRCon17

- Another year of growth!
- Another year of everyone waiting until the last minute to buy their tickets!
- Discussion about next year needs to start soon!
Bei der #rscompetition programmiert ihr auf Basis von @gnuradio! Jetzt anmelden und bis zu 3000USD gewinnen: bit.ly/2mJs2zw
Rohde & Schwarz Engineering Competition

World League 2017

We present the winners of this year’s Engineering Competition:

1st place: team 3-DAM from Karlsruher Institut für Technologie

2nd place: team Kommando Spezialkräfte from Karlsruher Institut für Technologie

3rd place: team MaGNUificent from RWTH Aachen

Congratulations to the winners!
Changes in the Developer Community

- Tons of GNU Radio development happening
- Most of it is in Out-of-Tree Modules
Reverse Engineering Outernet

Blog Post Walkthrough: http://gnuradio.org/blog/reverse-engineering-outernet/
Reverse Engineering Outernet

Blog Post Walkthrough: [http://gnuradio.org/blog/reverse-engineering-outernet/](http://gnuradio.org/blog/reverse-engineering-outernet/)
Radio Astronomy

Images from Juha Vierinen’s presentation:
Geophysical Remote Sensing with GNU Radio
Radio Astronomy

- Juha Vierinen’s work at Haystack Observatory
  - Presented at GRCon13: slides, video
- National Radio Astronomy Observatory
  - Presented at Cyberspectrum 10: Using GNU Radio for Astronomy Research, Public Outreach
- Open Source Radio Telescope Project (OSRT)
  - Building a community for open source radio telescopes
- Canadian Centre for Experimental Radio Astronomy (CCERA)
  - Goal: Make something like this accessible to everyone
Starting to get good results from the tracking dish, not bad for a 39° pass NOAA-19 HRPT #sdr #gnuradio i.imgur.com/Cfw9lpH.jpg
For sale on Amazon, a hacking gadget that is a car thief’s dream... and our team using it took just two minutes to break into this £100,000 Range Rover
wat
GNU Radio Tutorials at Shmoocon

Shmoocon 2017: Sniffing IR Signals and More! - Hak5 2120

16,204 views

Hak5 ©
Published on Jan 18, 2017
Navy Sends Out An H.O.S. Challenge—Hack Our Ship—to Woo Millennial Tech Talent
HACKtheMACHINE Winners
Changes in the Developer Community

- **Upside:** High levels of community activity, exciting developments.

- **Downside:** GNU Radio’s core suffering from less attention.
Broadening of the Community

- Most people use a variety of tools
- Starting to see this reflected more in the active participants
Broadening of the Community

- Most people use a variety of tools
- Starting to see this reflected more in the active participants
- GNU Radio is used:
  - Stand-alone
  - Part of a workflow
  - Paired with other tools
  - As a dependency for other tool

- GNU Radio is often the common denominator with other tools & communities
Our Major Challenges

● How do we support sustainable development for GNU Radio’s core?

● How do we improve our code quality and stability?

● How do we lower the barrier-to-entry and make GNU Radio more accessible?
Parting Thought

GNU Radio is primed to really take-off if it gets the support it needs.

Goals:
1. Improve the accessibility & usability of software radio.
2. Provide a tool that can be used for the entire design cycle: simulation, in-the-loop prototyping, and deployment.
3. Make GNU Radio flowgraphs the standard model for software radio design.