It’s Not Just About Embedded!
The Yocto Project
Josef Holzmayr
Nicolas Dechesne
<table>
<thead>
<tr>
<th>Software Developer</th>
<th>Director, Linaro</th>
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</thead>
<tbody>
<tr>
<td>Embedded Systems &amp;</td>
<td>Developer Services &amp;</td>
</tr>
<tr>
<td>Yocto Project</td>
<td>Yocto Project</td>
</tr>
<tr>
<td>Ambassador</td>
<td>Community Manager</td>
</tr>
</tbody>
</table>

**Company Logos:**
- LF Live
- R-S-I
- INDUSTRIELEKTRONIK
- Linaro
Yocto Project has put Linux in orbit around Mars

Test image of Overo IronStorm-Y driven Caspa VL running Yocto Project

Mars Insight NASA mission in 2018
The Yocto Project™ is an open source collaboration project that helps developers create custom Linux-based systems regardless of the hardware architecture.

IT'S NOT AN EMBEDDED LINUX DISTRIBUTION, IT CREATES A CUSTOM ONE FOR YOU.
● An open source, collaborative project
  ○ Hosted by the Linux Foundation since 2010
  ○ Vibrant developers community with 1000+ devs, 130+ organizations
  ○ OpenEmbedded and Bitbake

● Support all major architectures: ARM, x86, PPC, MIPS, with initial RISC-V in OpenEmbedded

● Yocto Project Organization
  ○ Platinum, Gold and Silver member organizations (Governing Board)
  ○ Contribute financially to its infrastructure and stability.
  ○ Technical Steering Committee (TSC)
- Yocto Project website
- Yocto Project mailing list
- Yocto Project documentation
Live Show

- Building and booting from source a custom Linux system for RISC-V
- Stunts performed by trained professionals, don’t try at home!
Live Show

- Building and booting from source a custom Linux system for RISC-V
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- Building and booting from source a custom Linux system for RISC-V
- Stunts performed by trained professionals, don’t try at home!
Next slides have a transcript of the commands used during the live demo.
$ git clone git://git.yoctoproject.org/poky.git
$ source poky/oe-init-build-env
$ env
$ MACHINE=qemuriscv64 bitbake core-image-minimal
$ MACHINE=qemuriscv64 runqemu nographic slirp
$ vim conf/local.conf
$ time bitbake bc
$ mc
$ bitbake-layers create-layer meta-lfm
$ bitbake-layers add-layer meta-lfm
$ mkdir -p meta-lfm/recipes-lfm/images
$ cd meta-lfm/recipes-lfm/images/
$ cp
  ../../../poky/meta/recipes-core/images/core-image-minimal-dev.bb lfm-image.bb
$ vim lfm-image.bb
$ cd ..
$ time bitbake lfm-image
$ runqemu nographic slirp
We hope it will be helpful in your journey to learning more about effective and productive participation in open source projects. We will leave you with a few additional resources for your continued learning:

- The **LF Mentoring Program** is designed to help new developers with necessary skills and resources to experiment, learn and contribute effectively to open source communities.
- The **Outreachy remote internships program** supports diversity in open source and free software.
- **Linux Foundation Training** offers a wide range of free courses, webinars, tutorials and publications to help you explore the open source technology landscape.
- **Linux Foundation Events** also provide educational content across a range of skill levels and topics, as well as the chance to meet others in the community, to collaborate, exchange ideas, expand job opportunities and more. You can find all events at [events.linuxfoundation.org](http://events.linuxfoundation.org).