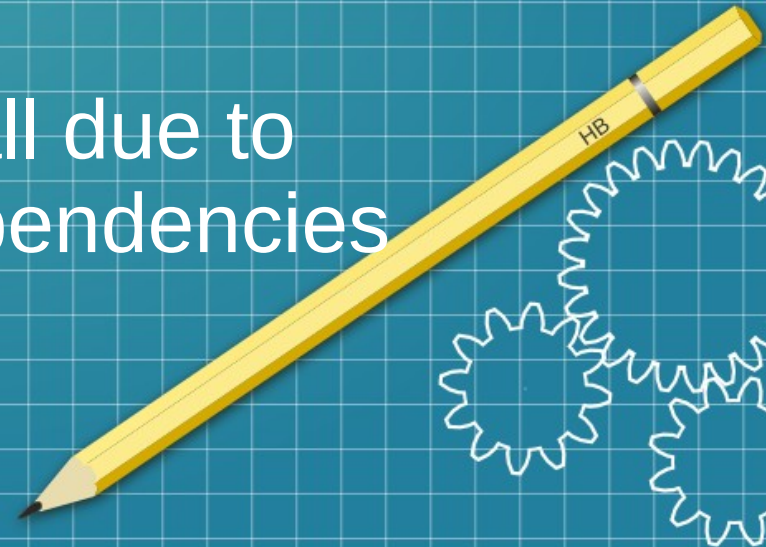# *Snap* you way **OUT** of Depencency Hell

Lee Lammert
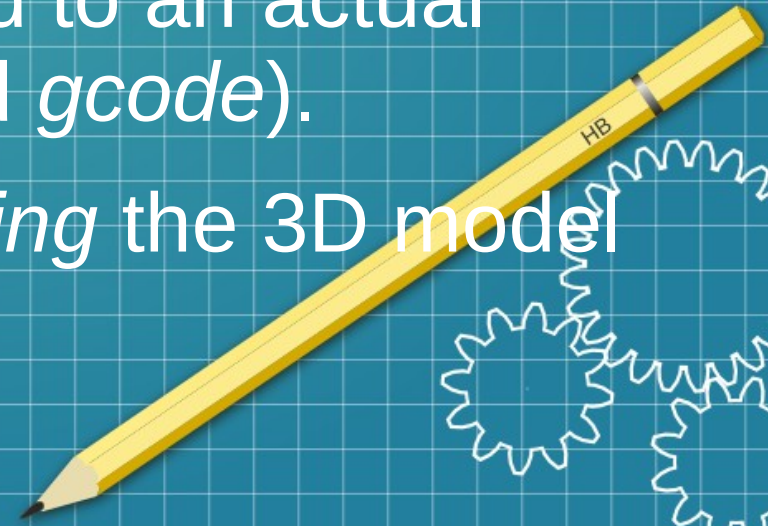## St. Louis Unix User's Group
13 October 2021

The Problem

- An application sometimes is not mainstream
- A non-mainstream application typically receives less attention from mainstream repository maintainers
- The result – impossible to install due to unresolved or uninstallable dependencies

Example: Prusa Slicer

- To create an object with a 3D Printer, a model is needed – created by a CAD program and then exported as an *.stl* file.

- The 3D view must be converted to an actual program for a 3D printer (called *gcode*).

- This *program* is created by *slicing* the 3D model into layers, ergo:
  a *slicer* is needed

Initial symptoms

- No package in normal repos
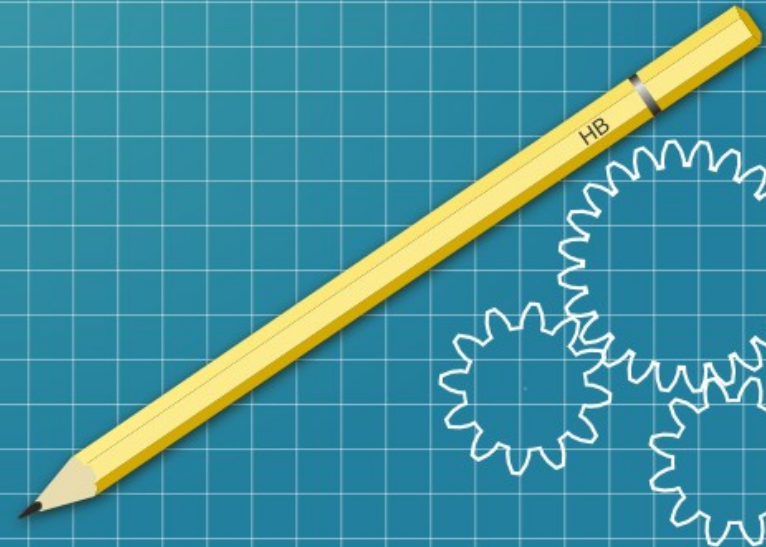
  $ zypper se prusa
  Loading repository data…
  Reading installed packags…
  No matching items found.

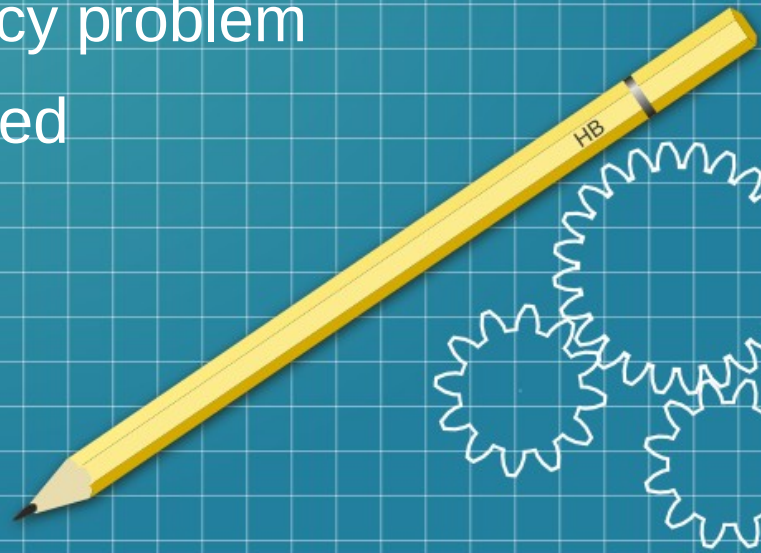- No repo available with an installable version!

Manual Installation

- Attempt 1:
  - Manual install using Factory package
  - Multiple dependencies unmet
  - Some can be solved, some cannot
    See Log

- Attempt 2:
  - Grab a copy from rpmfind
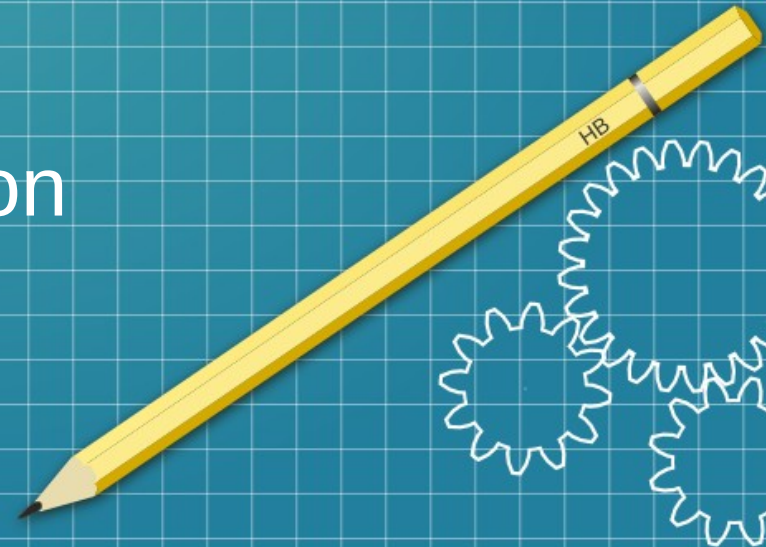 - Other dependencies fail

Conclusion

- It may not be possible to install a package if it is not mainstream for the distro!

- Other options
  - Find another source, same dependency problem
  - Build from source, long and complicated
  - Is there another option?

Yes - a *__static__* application!

- Install as a complete binary *package*
  - Including all libraries
  - Does not have to install at the system level (except for the daemon)
  - Users can all have different apps

- One system install – the daemon

- snap[1]

- Snaps are self-contained applications running in a sandbox with mediated access to the host system.

- The snap file format is a single compressed filesystem using the SquashFS format with the extension .snap.

- Snap supports any class of Linux application including desktop

snapcraft.io

- ## Docs / Installing Snap /OpenSuSE

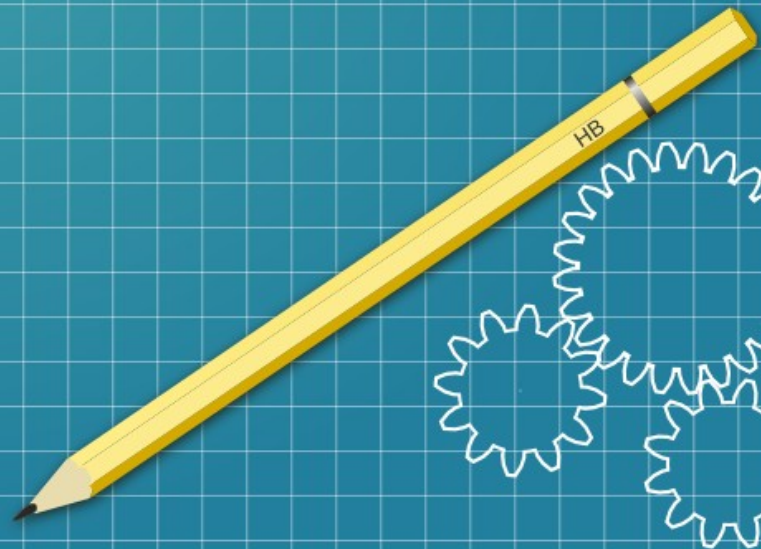- ## Add Repo

  $ sudo zypper addrepo --refresh
  https://download.opensuse.org/repositories/system:/snappy/openSUSE_Leap_15.2 snappy

- ## Import key

  zypper --pg-auto-import-keys refresh

- ## Install Daemon
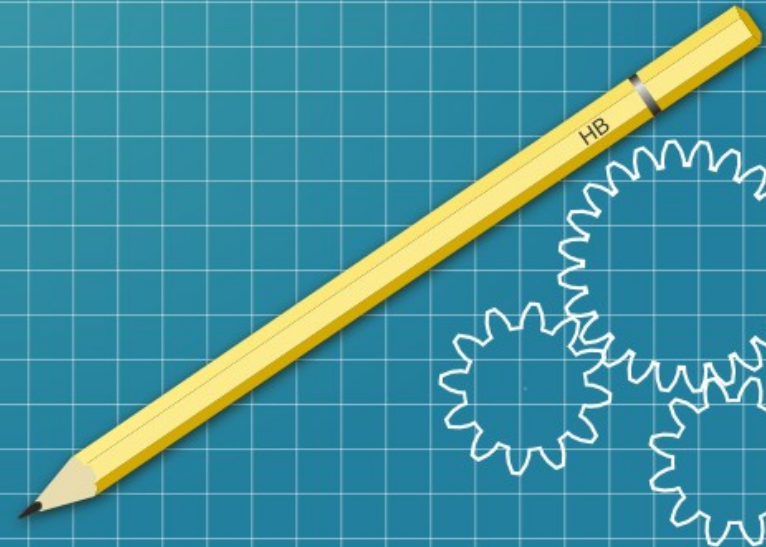 zypper install snapd

Installing Prusa

- Enable and start the daemon

- Source /etc/profile to get new path

- Prusa Slicer?

```
$ snap find prusa

Name          Version      Publisher       Notes  Summary

prusa-slicer  2.3.3+snap2  ivo-cavalcante  -      PrusaSlicer converts
    3D models into instructions for 3D printers.
```
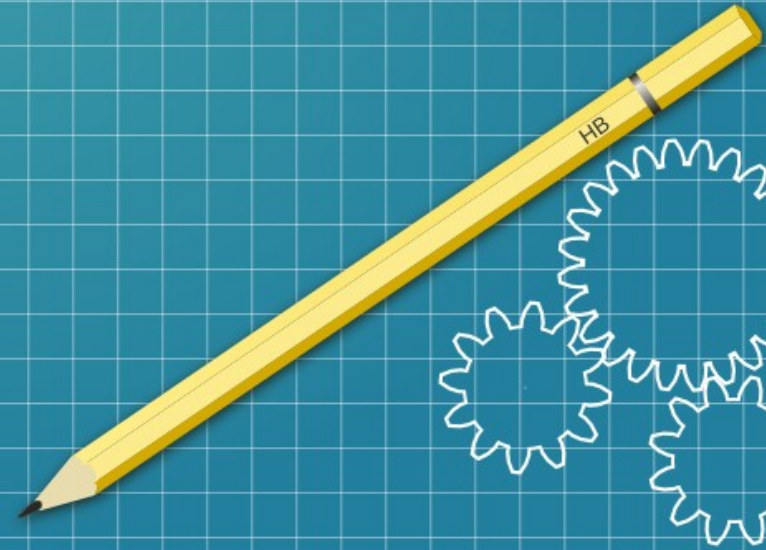
Prusa Demo

- Relogin to captuer new path
- Prusa available in Activities, all search methods
- Launches Seamlessly
- Dependency Hell avoided!

References

1. https://en.wikipedia.org/wiki/Snapcraft

Thank you!

OMNITEC *Corporation*

Lee Lammert

lvl@omnitec.net