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# Field System Future Plans

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# FS Linux Distribution

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- ◆ FSL9
  - ⊕ Current standard (still, but ...)
  - ⊕ Based on Debian `wheezy`
  - ⊕ Has some minor serial issues, but so far we have solutions
- ◆ FSL10
  - ⊕ Next standard
  - ⊕ Based on Debian `stretch`
  - ⊕ Beginning of FS 64-bit architecture support
    - 32-bit FS will still be available
      - FS source will be unified 32/64-bit
  - ⊕ Availability TBD, hopefully this summer

# Current Release – FS 9.13.0

- ◆ Includes FS display server, strongly recommended
  - ⊕ Allows simultaneous remote displays
  - ⊕ Killing the FS accidentally is much less likely
- ◆ *Ad hoc* support for `sched` “staggered start” mode
- ◆ Full support for dual VSI outputs for DBBC2 with FiLa10G, also:
  - ⊕ VSI1 support for `geo2` mode
  - ⊕ VSI2 support for `wastro2` and `geo2` modes
- ◆ Full support for all allowed bit rates for VDIF recording with `jive5ab`
- ◆ NTP, if available, is now the recommended way to manage FS PC time
  - ⊕ Use `computer time` model in `time.ctl`
  - ⊕ Formatter time is still monitored.
  - ⊕ Recommendations for reliable NTP configuration are in
    - `/usr2/fs/misc/ntp.txt`
- ◆ Many other improvements and bug fixes, for full details see:
  - ⊕ `/usr2/fs/misc/fs9130up.txt`

# Soon to be released – FS 9.13.1

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- ◆ Finished:
  - ⊕ Support for DBBC2 DDC v107
    - Includes 32 MHz channels
    - DBBC2 `vsi_clk` rate setting and checking
- ◆ Possible:
  - ⊕ Logging of active `.rxg` file data.
  - ⊕ Met. sensor height information logging.
- ◆ Other small improvements

# VGOS Branch – FS 9.12.12

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- ◆ Includes FS display server
- ◆ DBBC3 support
  - ⊕ Radiometry: `fivpt`, `onoff`, and `Tsys`
    - Continuous and non-continuous calibration supported
  - ⊕ `bbcnnn` commands, `nnn` from 001 to 128
  - ⊕ `ifx` commands, `x` from a to h
  - ⊕ `iftpx` commands, `x` from a to h
  - ⊕ Not yet:
    - DBBC3 `drudg` support
      - Expected with merge into main branch
    - DBBC3 Time setting/monitoring

# Summer Development Plans

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- ◆ Unify into one version:
  - ⊕ Main branch, FS 9.13
  - ⊕ VGOS branch, FS 9.12
  - ⊕ Add `drudg` DBBC3 support
- ◆ Make source 32/64-bit compliant
- ◆ We need testing help for the new versions.

# Other features that are coming ...

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- ◆ `git` version control
- ◆ TUI (Text User Interface)
- ◆ Web FS clients
- ◆ Periodic Satellite Commands in Az-El and RA-Dec
- ◆ More mature RDBE-G, Mark 6, UDC, and VGOS observing support
- ◆ VEX2 support
- ◆ Ethernet/serial converter support
- ◆ Ethernet/GPIB converter support

# Also coming ...

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- ◆ 30 minute periodic `beob` procedure in place of `midtp` for periodic monitoring functions
- ◆ Improved rack type `none` set-up comments
- ◆ Source scanning on the fly
  - ⊕ Improvement in `fi_vpt` for antennas that can scan in rate
- ◆ Band switching



# Conclusion

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- ◆ It would be very helpful to have:
  - ⊕ Feedback on bugs that are occurring in the field
  - ⊕ Input on what features are still needed or need to be changed for DBBC support
  - ⊕ Any other requests ...