Field System
Status and New Features

Ed Himwich, Dave Horsley, Jonathan Quick, John Gipson

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FS Linux Distribution

- ◆ FSL10
  - ⊕ Current standard
  - ⊕ Based on Debian *Stretch*
    - • LTS expected until June 2022
  - ⊕ 64-bit architecture
    - • 32-bit also available
  - ⊕ *https://nvi-inc.github.io/fsl10/*

- ◆ FSL11
  - ⊕ Next standard
  - ⊕ Based on Debian *Bullseye*
    - • LTS expected until June 2026
  - ⊕ Development is expected to start next month

FS *10.0.0* – Current release

- Released Feb 28, 2021
- Thanks to several EVN testers and contributors
- Unification of main and VGOS branches
- Runs on both 32- and 64-bit systems
  - Works for FSL8, FSL9, and FSL10

FS Distribution

- Source code is managed with *git*

- Distributed via *github*

- Update notes on web

    - *https://nvi-inc.github.io/fs/releases/10/0/10.0.0.html*

- Sign-up for release announcements at:

    - *https://github.com/nvi-inc/fs*

    - Sign into *github* and select `Watch`, `Custom`, `Releases`

- Report bugs, make feature requests, ask questions, have discussions at:

    - *https://github.com/nvi-inc/fs/issues*

    - *https://github.com/nvi-inc/fs/discussions*

FS *10.1.0* – Next release

- Currently in Alpha testing
- Expect a beta candidate next month
- DBBC3 Support
  - Thanks to:
    - The EVN for funding
    - Onsala for providing a test system
    - John for *drudg* support
    - Sven, Uwe, Marjolein, and Jon for information and advice
    - Eskil and Jon for testing and feedback
- Many bug fixes and other improvements
- You must install FS 10.0.0 before upgrading

FS DBBC3 Support – I

- *fivpt*, *onoff*, *pdplt*, and *gnplt* support
- `bbcnnn` commands, *nnn* : `001`-`128`
- `ifx` commands, *x* : `a`-`h`
- `iftpx` commands, *x* : `a`-`h`
- Logging of multicast TPI counts, $T_{sys,}$ and time
- `core3h_mode` command
- T_{sys} display window (*monit7*)
  - Cycles through all active IFs, showing BBC sidebands
  - Can be locked to a singe IF for troubleshooting
  - Other options are available: update period, channels, etc.
  - Continuous calibration only
- `mcast_time` command for display/logging for Core3H board time
- *setcl* supports setting FS time from DBBC3 if no NTP
- `dbbc3=...` and `core3h=...` direct device communication

FS DBBC3 Support - II

- ◆ To do:
  - ✛ Clean-up
  - ✛ Fringe test, not expected before 10.1.0 release
- ◆ Currently only one mode per schedule
  - ✛ Mode change requires a `timesync`
    - • Problematic to automate
  - ✛ Schedules will only check mode configuration
    - • A command is provided to help set the configuration beforehand
- ◆ Supports
  - ✛ DDC_U v125
  - ✛ DDC_V v124

FS *10.1.0* – Other new features

- Improved *jive5ab* configuration depending on data rate
- *gnplt* fixes:
  - Stop putting extra comments in *.rxg* files
  - Fixed some T_{sys}/T_{cal} plotting issues
- `setup_proc` command
  - Used to limit setup procedure use to mode changes
- `mk5init` to reread *mk5ad.ctl* for a new recorder
  - Experimental
- FlexBuff synonyms for Mark 5C commands
  - For example `fb_mode` in place of `mk5c_mode`
  - Also `checkfb` in place of `checkmk5`
- Better error messages for reading *.rxg* files
- And others, as will be described in the update notes

drudg DBBC3 support

- ◆ **Setup procedure**
  - ⊕ Normally only checks the Core3H board setup
    - ● Schedule and manual usage: `setup01`
  - ⊕ Core3H board setup
    - ● Manual usage: `setup01=force`
    - ● Manual resync required
    - ● Start data transmission: `core3h_mode=end,force`
- ◆ **Mode support**
  - ⊕ *.vex* schedules: up to eight IFs, 256 channels
  - ⊕ *.skd* schedules: up to two IFs, 32 channels

Other *drudg* changes

- Uses FlexBuff synonyms for Mark 5C commands
  - For example `fb_mode` in place of `mk5c_mode`
  - Also `checkfb` in place of `checkmk5`
- New setup sub-procedure: `threadXX`
  - Select single VDIF thread per file in *jive5ab*
  - Controlled from *skedf.ctl*: `yes`, `no`, `prompt`
- New setup sub-procedure for *jive5ab* tuning:
  - `mk5c_config` or `fb_config`
  - Local procedure
  - Occurs after `mk5c_mode`/`fb_mode` and `threadXX`
- `setup_proc` command in *.snp*
  - For example: `setup_proc=setup01`
  - Only apply setup at start and if there is mode change
  - Controlled from *skedf.ctl*: `yes`, `no`, `prompt`
- New *skedf.ctl* option `e-vlbi_override`, which if activated:
  - And if the `target_correlator` parameter includes the string `e-vlbi` (case insensitive), when *drudg* reads in a .vex file, it automatically changes:
    - The recorder to `none`
    - A `DBBC_*/FiLa10G` rack to `DBBC_*`

VEX2 Status

- Announced August 1, 2021
- Begin implementation and testing