
Field System Status and New Features

Ed Himwich, Dave Horsley,
Jonathan Quick, John Gipson

TOG, April 29, 2021, Video Meeting

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(?)
- ⊕ Availability TBD

FS 10.0.0 – Current release - I

- ◆ Released Feb 28
- ◆ 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
- ◆ Patch release *10.0.1* is in development
 - Allow more than 20 detectors in *gnplt*
 - Other minor fixes, improvements

FS 10.0.0 – Current release - II

- ◆ Source 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 at:
 - <https://github.com/nvi-inc/fs/issues>

DBBC3 Support – in development - I

◆ Finished:

- ⊕ *fivpt*, *onoff*, *pdplt*, and *gnplt* support
- ⊕ *bbcnnn* commands, *nnn* : 001-128
- ⊕ *ifx* commands, *x* : a-h
- ⊕ *iftpx* commands, *x* : a-h
- ⊕ Logging of multi-cast Tsys and other data
- ⊕ *core3h_moden*, commands, *n* : 0-8
- ⊕ Tsys display window
 - Cycles through all active IFs, showing BBC sidebands
 - Can be locked to a single IF for troubleshooting
- ⊕ *mcast_time* command for display/logging for Core3H board time
- ⊕ *setcl* supports setting FS time from DBBC3 if NTP is not available
- ⊕ *drudg* support

DBBC3 Support – in development - II

- ◆ To do:
 - ⊕ Final testing
- ◆ 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 set the configuration beforehand
- ◆ Supports
 - ⊕ DDC_U v125
 - ⊕ DDC_V v124
- ◆ Expected to be release as *10.1.0*

drudg Changes in DBBC3 Version - I

◆ DBBC3 specific changes

⊕ Setup procedure

- Normally only checks the Core3H board setup
 - Schedule and manual usage: `setup01`
- Core3H board setup
 - Manual usage: `setup01=force`
 - Manual re-sync required
 - Start data transmission: `core3h_mode0=end,force`

⊕ Mode support

- *.vex* schedules: up to eight IFs, 256 channels
- *.skd* schedules: up to two IFs, 32 channels

drudg Changes in DBBC3 Version - II

- ◆ General features:
 - ⊕ Uses `fb_mode` command for FlexBuff recorders
 - Synonym for `mk5c_mode` command
 - ⊕ New setup sub-procedure: `threadXX`
 - Select single VDIF thread per file in *jive5ab*
 - Controlled from *skedf.ctl*: `yes`, `no`, `prompt`
 - ⊕ New setup sub-procedure: `jive5ab_cfg`
 - Local procedure to support *jive5ab* tuning
 - Occurs after `mk5c/fb_mode` and `threadXX`
 - Allows local override
 - ⊕ `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`

VEX2 Status

- ◆ Public comment period is complete
- ◆ Committee needs to formulate respond to comments
- ◆ Announce standard, 2Q 2021?
- ◆ Begin implementation and testing