

# Github

Duane Strong Strong Engineering LLC duanes@strongenging.com

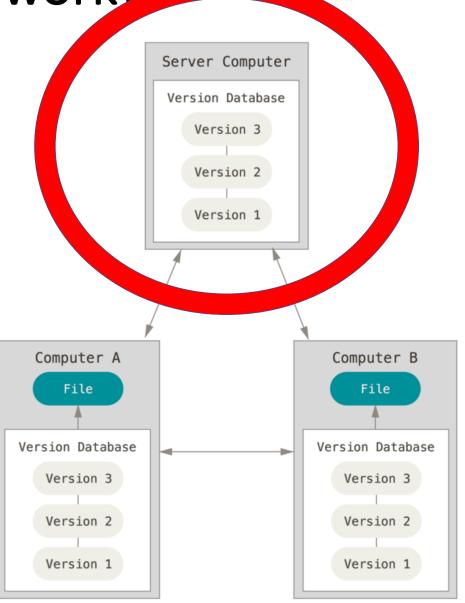


# What is it?

- Centralized git server
- User accounts
  - Authorizations
  - Repos granted access
- Web git interface
- Pull Requests / merge Requests
- Issue tracking
- Project Kanban board
- Wiki
- Releases
- Notifications
- CI/CD
- Others Gitlab, Atlasian Stash / Bitbucket / JIRA / Confluence

# Git – how does it work?

- Clone local copy of the repo (.git)
- Central server not required
- Not delta based
- Every change is an entire new copy



### Centralized git repos

- Backed up
- Secure = TFA, SSH, OAuth, Personal access tokens
- Public vs. private
- Organizations

# Web git interface

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# Web git interface UPDATE 6/21/20

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Branch: master 👻	New pull request		Create new file Upload files	Find file Clone o	or download 👻
duanestrong Add	ed pdf		Latest	commit 668a79c on (	Oct 27, 2017
docs		Added pdf		:	3 years ago
<> Code (!) Issues (139)	៉ៅ Pull requests 2 🕞 Act	ions 🛄 Projects 11 🔲 Wiki	Security <u>Y</u> Insights		
	양 Branch: master ╺		Go to file Add file -	⊻ Clone -	About
	ridefox-adiao committed 04	7e0f5 37 minutes ago 🛛 …	心 564 commits   ピ 35 bra	anches 🔿 6 tags	No description, website, or topi provided.
	IMU_sensor	Duane/Wang DI pt 1		last month	🛱 Readme

# Issue Tracking

- What is an Issue?
  - New features
  - Bugs
  - Resources
- What is in an issue?
  - Description / Notes
  - Labels
  - Assignees
  - Notifications
  - Links to projects / milestone

### Issue Tracking

Code ① Issues 84	Pull requests 1			<sup></sup> wiki wel #5	© Secu	rity o	Insights	New issue
duanestrong co	mmented 6 days ago				٢		Assignees	٥
间 📑 duanestr	rong created this issue f	rom a note in I	LIVE Central (To de	o) 6 days ago	)		Labels None yet	\$
	on commented 6 days a will this also work for E1-	•				•••	Projects	\$
duanestrong co	mmented 6 days ago			Au	thor 🙂		Milestone No milestone	¢
as one of the par wanted to suppo	neric BAS client, but we rameters in one of the Fe ort generic battery servic generic service and it wa	OX service me ce (BAS) but th	ssages. Way back I ne thinking at that t	put it out th	ere if we		Linked pull requests Successfully merging a may close this issue. None yet	¢
ridefox-epeters	<b>on</b> commented 6 days a	go			٢	••••	Notifications	Customize
Fair enough. Fox	air enough. Fox service is better for what we do with the app				You're receiving notification you were assigned.			
💶 📑 duanesti	rong self-assigned this 2	2 minutes ago					2 participants	

# Markdown

- Text formatting
  - # headings
  - \* lists
  - 1. numbered lists
  - \*\*bold\*\* \*italic\*
- Links
  - [text](url)
- People
  - 'at' name
- Readme.md

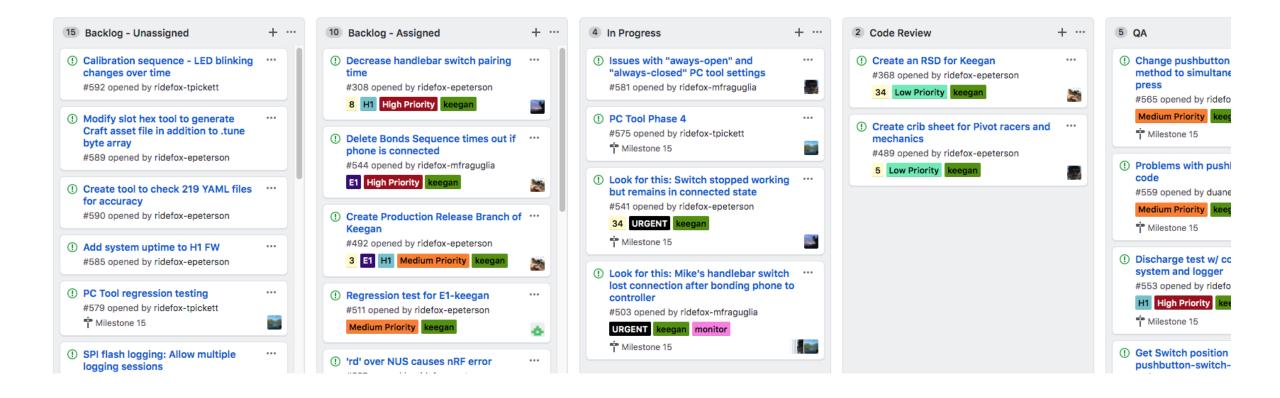
#### Issues

- Attachments
  - Drag & drop
- Cross References
  - #323 -> Issue or PR 323
  - popup text
  - Link backlinks
- Permanent thread record
  - Not email

# Projects

- Organizes Issues
- Kanban board
- Columns / Labels
- Automation
- Note vs. Issue
- Kanban flows
- An issue can appear in multiple Projects

# Projects



### **Project Column Automation**

Preset	Options
To Do	Move all newly added issues here Move all newly added pull requests here Move all reopened issues here Move all reopened pull requests here
In Progress	Move all newly opened pull requests here Move all reopened issues here Move all reopened pull requests here Move all pull requests that meet the base branch's minimum number of required reviews here Move all pull requests that no longer meet the base branch's minimum number of required reviews here
Done	Move all closed issues here Move all merged pull requests here Move all closed, unmerged pull requests here

### Milestones

- Organizes issues
- Seem like Projects but not really
  - Projects are visual
  - Milestones have time boxes
  - An issue can only be in one milestone

#### Milestones

🕆 15 Open 🗸 0 Closed	Sort -
Milestone 15	18% complete 9 open 2 closed
No due date ( Last updated about 11 hours ago	Edit Close Delete
Milestone 14	100% complete 0 open 2 closed
No due date ( ) Last updated 2 days ago	Edit Close Delete
Milestone 13	100% complete 0 open 4 closed
Past due by 13 days ① Last updated 8 days ago	Edit Close Delete
Milestone 12	100% complete 0 open 4 closed
A Past due by 20 days ( Last updated 14 days ago	Edit Close Delete
Milestone 11	

# Wiki

- A little history
  - Ward Cunningham wiki wiki web 1995
  - Other wiki sites, Wikipedia, mediawiki, twiki
- It's a repo too, keeps all history
- Markdown
- Sidebar, footer
- Differences between git repo and wiki
  - No branches
  - Navigation

# Wiki

#### Live Central Commands

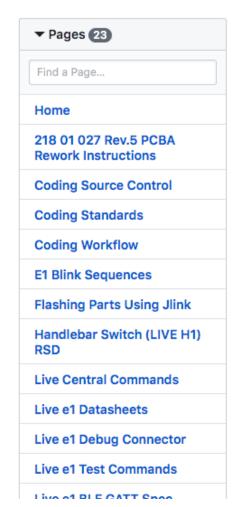
Duane Strong edited this page 13 days ago · 9 revisions

Live Central is a firmmware application that runs on a Nordic nRF52 evaluation board or Bluefruit Feather board that acts as a BLE central device for Live BLE peripherals. It accepts a set of two letter commands from the serial port and reports activity back over the serial port to a host computer. The serial port should be set to 115200 baud 8,n,1. Logged messages are tagged with the type of message. For example

CON: NUS service discovered

Is a connection log message.

- vr Print Live Central version number
- vr,n Set debug level to n
- sn, name Set the name of the device to limit connections to
- pa,nn,nn,nn,nn,nn Set the 6 byte peer address to limit connections to
- cf Connect to a device that is advertising the Fox service
- dc Disconnect from device
- db Delete any bonded keys in flash
- lc,on/off Log connect messages (default on)



Edit New Page

# Wiki

- Since it is a repo
  - You can edit offline
  - You can add attachment files
- Team should never have to hunt for documentation
- Might be better to just put markdown docs with the codee it goes with
  - GitHub renders it in the web view
  - Easier to find and edit than being in the wiki
  - Perhaps that should be your readme.md?

#### Releases

- Tags
- Automatically archives a source zip and tar
- Attach large binaries

#### Releases

Releases	Tags		
•	st release © 1.1.00 ► 58d77db Verified mpare ▼	<ul> <li>191018 Production Release</li> <li>ridefox-mfraguglia released this on Oct 18, 2019</li> <li>Remove Z-hack from pitch detection algorithm</li> <li>Improve Pitch averaging</li> <li>Fix I2C Test Command "TF"</li> <li>Add ADXL read Test command "TK"</li> </ul>	
		▼ Assets 4	
		19-00-003_REVA.hex	119 KB
		1 v1.1.0.hex	111 KB
		Source code (zip)	
		Source code (tar.gz)	
	© 1.0.03 ⊦4d9eceb	<b>190109 Production Release</b> <b>ridefox-mfraguglia</b> released this on Jan 9, 2019 · 13 commits to master since this release	

Compare 🕶

'TJ' command added to be called by tester to check for R-VBUS digital high.

This addresses failures where some controllers could not detect USB power, thus did not ignore button

#### Notifications

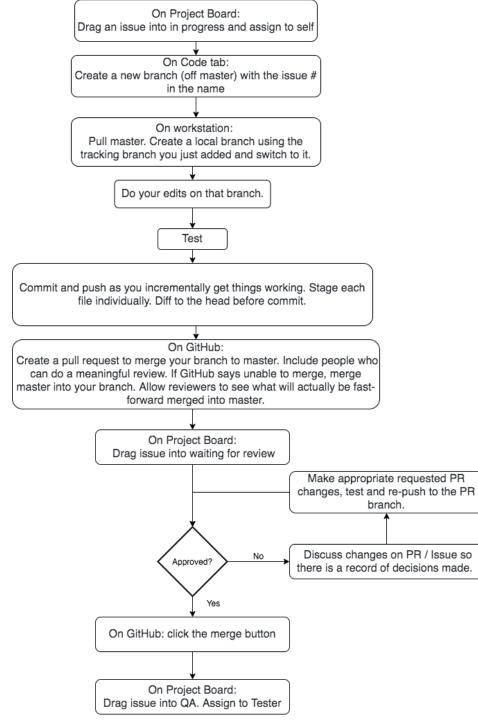
- Markdown ats @
- Assigned to
- PRs
- Merges

# Pull Requests (Merge Request)

- A type of issue
  - Notes Markdown
  - Attachments
  - Notifications
- In browser code reviews
- Reviewers
- Side by side compare / diff
- Annotations
- Approval / rejection

# Pull Requests

5 Interface-module/README.md 🚉	♦ Viewed ····
@@ -0,0 +1,5 @@	
	<pre>1 + # interface-module 2 + This contains firmware for Interface Module BLE/CAN interface board 3 + 4 + In order to build this project the Nordic SDK 12.2.0 must be installed at the same directory level as the repository. 5 +</pre>
5 spi_master/spi_master.c	□ Viewed ····
@@ −17,7 +17,8 @@ static const nrf_drv_spi_t spi = NRF_DRV_SPI_INSTANCE(SPI_INSTANCE); /**< SPI i	
<pre>static volatile bool spi_xfer_done; /**&lt; Flag used to indicate that SPI instance completed the transfer. */</pre>	<pre>17 static volatile bool spi_xfer_done; /**&lt; Flag used to indicate that SPI instance completed the     transfer. */ 18 19</pre>
<pre>- static void spi_event_handler(nrf_drv_spi_evt_t const * p_event)</pre>	<pre>20 + static void spi_event_handler(nrf_drv_spi_evt_t const * p_event, 21 + void *p_context)</pre>
<pre>{     spi_xfer_done = true; }</pre>	<pre>22 { 23 spi_xfer_done = true; 24 }</pre>
<pre>@@ -38,7 +39,7 @@ uint32_t spi_master_init()     spi_config.ss_pin = SPIM0_SS_PIN;     spi_config.frequency = NRF_DRV_SPI_FREQ_8M;     spi_config.mode = NRF_DRV_SPI_MODE_0; - err_code = nrf_drv_spi_init(&amp;spi, &amp;spi_config, spi_event_handler);     if( err_code )     {         return err_code;     } }</pre>	<pre>39 spi_config.ss_pin = SPIM0_SS_PIN; 40 spi_config.frequency = NRF_DRV_SPI_FREQ_8M; 41 spi_config.mode = NRF_DRV_SPI_MODE_0; 42 + err_code = nrf_drv_spi_init(&amp;spi, &amp;spi_config, spi_event_handler, NULL); 43 if( err_code ) 44 { 45 return err_code;</pre>
	<pre>@@ -0,0 +1,5 @@  @@ -0,0 +1,5 @@  5 ***** spi_master/spi_master.c @  @@ -17,7 +17,8 @@ static const nrf_drv_spi_t spi = NRF_DRV_SPI_INSTANCE(SPI_INSTANCE); /***&lt; SPI i static volatile bool spi_xfer_done; /***&lt; Flag used to indicate that SPI instance completed the transfer. */  - static void spi_event_handler(nrf_drv_spi_evt_t const * p_event)  {     spi_xfer_done = true;     }  @@ -38,7 +39,7 @@ uint32_t spi_master_init()     spi_config.ss_pin = SPIM@_S5_PIN;     spi_config.ss_pin = SPIM@_S5_PIN;     spi_config.ss_pin = SPIM@_S5_PIN;     spi_config.onde = NRF_DRV_SPI_FRE0_8M;     spi_config.onde = NRF_DRV_SPI_FRE0_8M;     spi_config.mode = NRF_DRV_SPI_FRE0_8M;     spi_config.mode = NRF_DRV_SPI_MODE_0; - err_code = nrf_drv_spi_init(&amp;spi_config, spi_event_handler);     if( err_code )     {         </pre>



# Forks

- A GitHub thing not a git thing
- Used when the intent is to totally or partially 'disconnect' from the original repo
- Like a clone, but creates a totally new GitHub repo in your account
- Collaboration is still possible via pull requests
- Users don't need write access to your repo to collaborate
- Full development history of the fork is not put into original
- Merge is done on behalf of someone else