

git collaborative

Using git to collaborate on documents, like code

git collaborative

also, how git is like a blockchain

Hi, I'm Ryan Wold

I work as an Innovation Specialist in the Data Analytics Portfolio, within the GSA's Technology Transformation Services division.

I primarily support **Customer Experience** and am the product lead for **Touchpoints**, a tool to help federal agencies deliver better services through the collection, reporting, and synthesis of customer feedback data.

I am not using DLTs at work. I am using git (and developing software with) blockchain technologies, as research. I have consulted on DLT projects prior to the GSA (2017).

Related to DLTs and blockchain, I'm particularly interested in: triple-entry accounting, state machines, and digital identity.



Using git to collaborate





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[Resources](#)

[Communities](#)

[Tools](#)

[← All Resources](#)

An Introduction to GitHub

How to use GitHub in easy, practical steps to create, manage and publish website content.



In this page

[What is GitHub?](#)

[How Can GitHub Help My Team and Me?](#)

[How Do I Speak GitHub?](#)

[How Do I Use GitHub?](#)

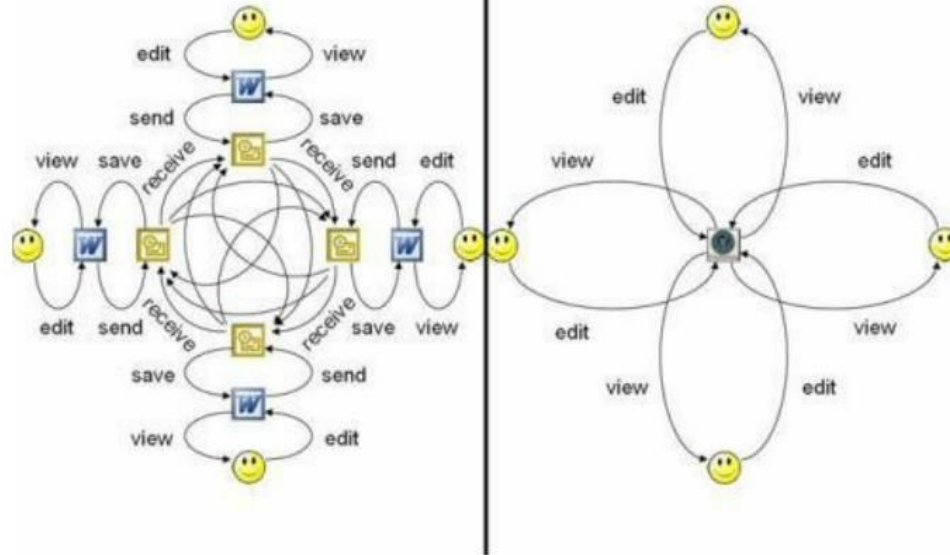
Wikis Vs Email



Email Collaboration



Wiki Collaboration

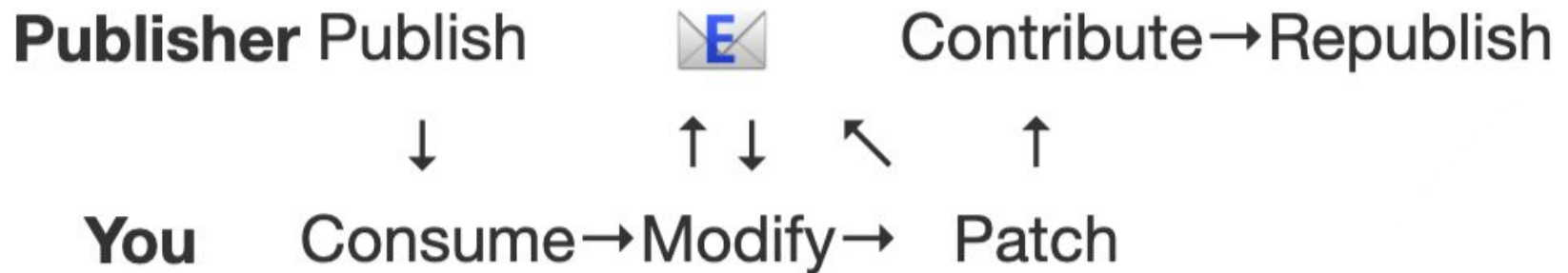


Source: <http://www.wikinomics.com/blog/index.php/2008/03/26/wiki-collaboration-leads-to-happiness/>

Benefits of working in the open

- Provides an affordance for feedback.
- Provides a way to accept contributions.
- Provides a place to have conversations. This implies some level of community management.
- Provides an audit-trail.
- Provides credit.
- Provides ability to undo.

1985 - now (in practice)



Open Source Today



A common, proven pattern for
distributed work



Smaller batch sizes



Discrete, testable changes



Will you accept my contribution?



“

Reduce coordination costs

”

[main ▾](#) [98 branches](#) [0 tags](#)[Go to file](#)[Add file ▾](#)[Code ▾](#)

Update ttsjobs.md (#3003) ...

	.circleci	run JS tests in CI
	.github	Automatically mark pull requests
	_data	Update navigation.yml (#2809)
	_includes	Update 'Most visited' links (#2809)
	_layouts	Roll back last_modified_at
	_pages	Update ttsjobs.md (#3003) 2 days ago

Clone

HTTPS SSH GitHub CLI

Use a password-protected SSH key.


Open with GitHub Desktop







Download ZIP


Fork somebody else's repository


Now you have your own copy of the code.




Collaborator Modifies


 [GitHub, Inc. \[US\]](#) <https://github.com/WhiteHouse/petitions/pull/3>

  This repository [Explore](#) [Gist](#) [Blog](#) [Help](#)  benbalter   





 [WhiteHouse](#) / [petitions](#) [Watch](#) 154 [Star](#) 711 [Fork](#) 126



Closed pborrell wants to merge 8 commits into [WhiteHouse:7.x-1.x](#) from [pborrell:typos](#) 74  #3


 Discussion  Commits  Files Changed 15


 pborrell opened this pull request a year ago
Fixed few typos
No one is assigned No milestone
No description given.


Closed
+37 additions
-37 deletions


4 participants    


  pborrell added some commits a year ago


 pborrell Removed duplicated array key 6b6d748


 pborrell Removed useless assignment df42192


 pborrell Removed old param in PHPDoc 045d9c7

 pborrell Added missing param in PHPDoc ad350b5


 pborrell Fixed typo in definition of variable 7189255

 pborrell Fixed typo in key name a6cd8e8

 pborrell Fixed typo in variable name 20a087e


 christiangenco commented a year ago


Community Discusses




christiangenco commented on `df42192` a year ago

Hah.




I  **pborrell** referenced this pull request a year ago


Pull Request #7: **Fixed typo in method (BC BREAK)** Closed





greggles commented a year ago

The changes to govdelivery should be provided as a patch to <http://drupal.org/project/govdelivery>




 **pborrell** added a commit a year ago

 **pborrell** Fixed typo `***` [d9ae688](#)



pborrell commented a year ago

@**greggles** thanks, i removed all the changes related to govdelivery.



lheyman commented a year ago

Thanks @**pborrell**

We cherry-picked your typo commits: [ad350b5](#) , [df42192](#) , [a6cd8e8](#) .

As @**greggles** mentioned, the govdelivery updates should be contributed on the [govdelivery project page](#). We had to fork our own module a little, but we will take your commits under advisement when we update the module on drupal.org

[EDIT: changed commit SHA]

Closed

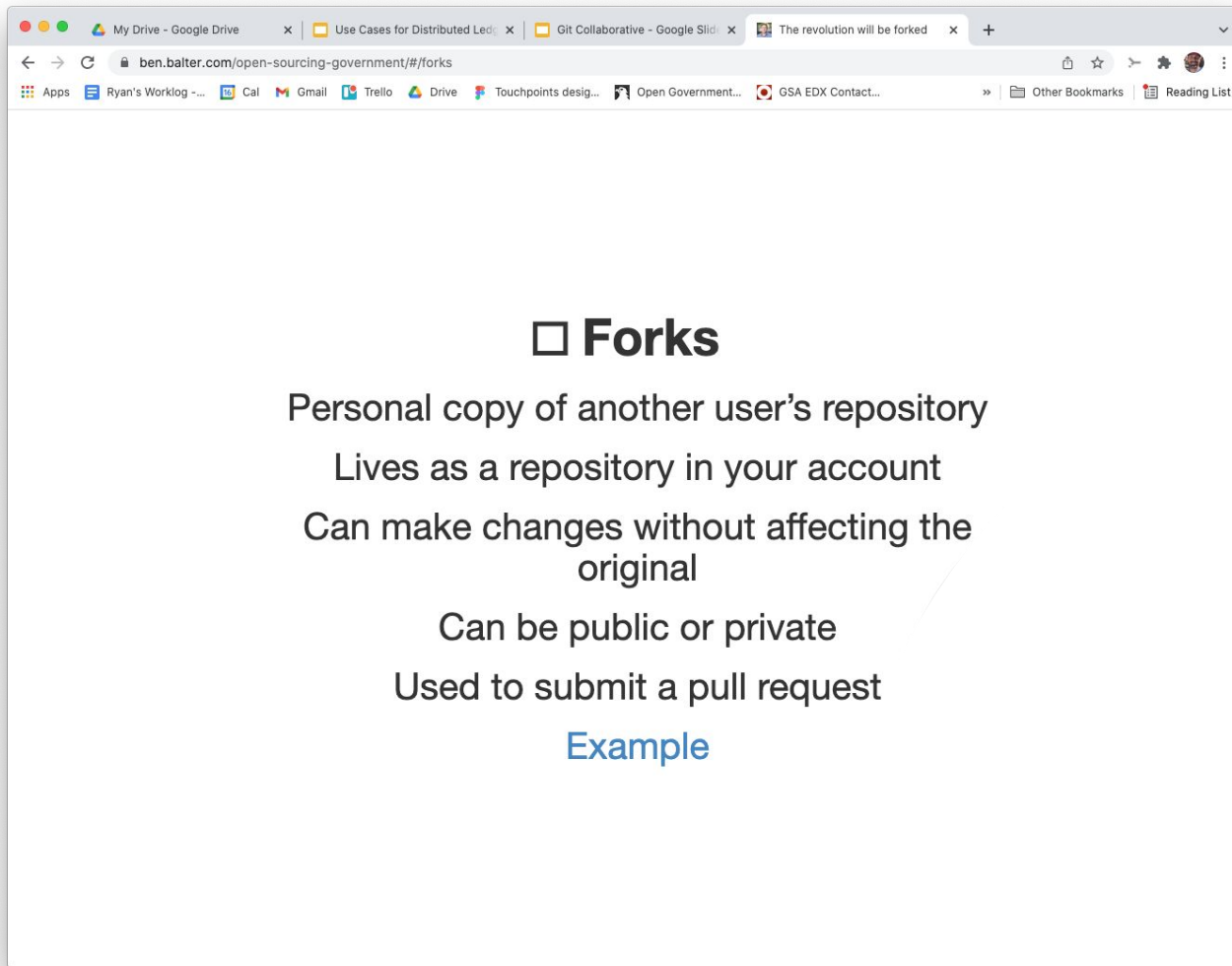


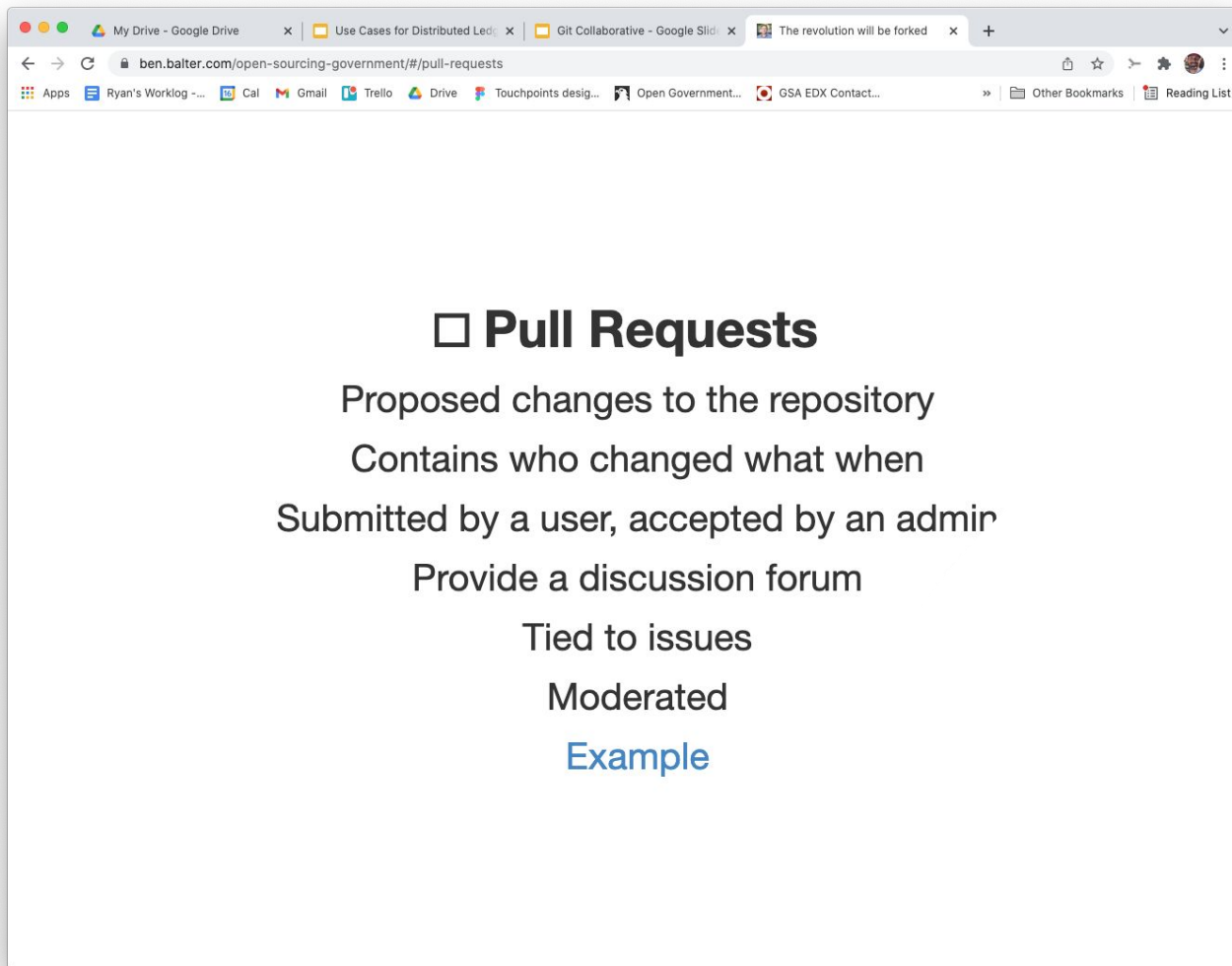
lheyman closed the pull request a year ago

Author Reviews

```
modules/custom/wh_petition_reporting/wh_petition_reporting.hourly.inc View file @ d9ae688

... @@ -21,7 +21,7 @@ class HourlyReportManager {
21 21 *
22 22 * Checks time of last build and sets indicator if new build is needed
23 23 *
24 - * @todo: figure out what the default variable should be
24 + * @todo: figure out what the default variable should be
25 25 */
26 26 function __construct($debug = FALSE) {
27 27 $this->debug = $debug;
... @@ -140,7 +140,7 @@ class HourlyReportManager {
140 140 }
141 141
142 142 /**
143 - * update the Drupal var and class attribute marking the last hour for which this ran
143 + * update the Drupal var and class attribute marking the last hour for which this ran
144 144 */
145 145 private function updateLastRun($lastRunTS) {
146 146 variable_set('wh_petition_reporting_hourly_last_run_hour', $lastRunTS);
... @@ -148,7 +148,7 @@ class HourlyReportManager {
148 148 }
149 149
150 150 /**
151 - * Wrapper to handle retrieving data for an hour and writing it to the mongo table
151 + * Wrapper to handle retrieving data for an hour and writing it to the mongo table
152 152 */
153 153 public function processHourRecord($hour_start_timestamp, $hour_end_timestamp) {
154 154 HourlyReportManager::writeHourRecord(HourlyReportManager::getHourRecord($hour_start_timestamp, $hour_end_timestamp));
... @@ -162,7 +162,7 @@ class HourlyReportManager {
162 162 * @param $hour_end_timestamp int
163 163 * Unix timestamp for when the hour to get should end
164 164 * @param $delta_only boolean
165 - * Indicator of whether to get the total values or just the new records in that hour
165 + * Indicator of whether to get the total values or just the new records in that hour
166 166 *
167 167 * @return array
168 168 */
```





Commits

Make your own changes. And make one or more commits.

Then, create a Pull Request;
requesting your changes be merged (pulled) into the upstream
branch (called `main` or `master`).

How git is like blockchain



Commit

Each commit is hashed and that hash is hashed with the existing hash to create another hash.

This results in a chain of commits, any one's history cannot be tampered with.

However, given Git is local, it is trivial to “rebase” a large number of commits,

And this is one method that could be re-used to write large amounts of history.

Ways that git is like a blockchain

- Has a genesis block, using **git init**
- Holds discrete transactions in batches called **branches**, like blocks.
- Those transactions are called **commits**
- Branches are considered for acceptance via Pull Requests (insert your Proof of X here). This also creates a **block header**
- Distribute the **block** via an open network

Blockchain Transaction

Blockchain transactions that leverage a timestamp server and proof of work can help prevent re-writing transaction history.

A Word Of Caution

The technology's the easy part

Change can be hard (but *awesome*)

Start small (like really small)



Consume, Publish, Collaborate

Code, Data, Text

Thank you

ryan.wold@gsa.gov



WHAT'S ON YOUR MIND?

Questions

