

Projects on the Move



Midwives battling bureaucracy, parties fighting against the general public's lack of interest, and users needing to synchronize their data – here are three open source tools that attempt to solve the problems of the world.

By Mela Eckenfels and Heike Jurzik

TinyHeb [1] is billing software developed for midwives in the German healthcare system. The GPL'd software provides a free alternative to many commercial programs and was first released back in 2003; the latest release (version 1.5.0) became available in August of this year.

According to the developer and his wife, who is a midwife, the tool is easy to use. In fact, the web-based software interface is almost spartan. The CSS file supplied with the program, which customizes the look and feel of tinyHeb, contains just six lines of code and defines the text color and the preferred font. So, there is some room for improvement here.

Pre- and Post-Natal Care

tinyHeb runs on an Apache server with the current version designed for use on a local web server. A MySQL database provides the back end. To host the software on a publicly accessible server, access control mechanisms would need to be

added. However, it would also seem to make sense to protect the health data on the LAN with `mod_auth` and `mod_ssl`.

A prebuilt package is available for Debian; according to the documentation, it should be possible to install it on Ubuntu, too. The front end comprises a collection of Perl scripts. tinyHeb thus requires a number of Perl packages, including `Date::Calc`, `File::stat`, `Tk`, `Mail::Sender`, and `PostScript::Simple`. None of these is likely to be preinstalled on a standard Linux system, so you will need to do this. The billing software also requires Open SSL and Ghostscript, plus MozPluggger for the optional browser-based preview.

The tinyHeb developer has set up a mailing list of questions, requests, and discussions. This extremely direct support and the comprehensive manual help compensate for the teething trouble the program still suffers from.

Liquid Democracy

Modern democracy is the ability to take part in a general election every four years and – depending on where you live – to vote on something by plebiscite. Democracy is not so important in a work environment, where decisions are made by a (hopefully qualified) superior. Direct involvement in decisions is logistically difficult for organizations over a certain size, and discussions are only useful if they are restricted to small groups. Enter Liquid Feedback [2], an

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online system that promises to support democratic decision-making processes and takes up the good cause where LimeSurvey [3] and Doodle [4] reach their limits. This tool by Public Software Group e.V. has an ambitious goal of placing direct democracy on a technically solid foundation.

The name says it all: Liquid Feedback implements the concept of “liquid democracy,” a kind of community decision-making process that takes a path somewhere between direct and representative democracy. In this delegate system, participants can either vote themselves or give their votes to a proxy.

A preference voting system is also implemented. This supports votes beyond simply yeas and nays. Instead, voters can arrange lists to suit their preferences; that is, their preferred option is given a vote of 1, the next a vote of 2, and so on.

Politics for Everyone

Everyone can propose motions on the online system for a majority to approve.

To propose a motion, you need to create an initiative – either on a new topic or to compete with another. The initiative then collects supporting votes. Members have the opportunity to propose changes to the draft proposal and to make their cooperation dependent on these changes.

It is up to the initiators to work these changes into their concepts or to refuse them. All topics and their initiatives go through the following phases: New, Under discussion, Frozen, Voting, and Completed. A test system on the project homepage is available if you would like to try this out.

Liquid Feedback is implemented in PL/pgSQL and stores all actions in a PostgreSQL database. The only front end available right now uses the Lua [5] scripting language and a web application framework based on it called Web MCP [6] – a proprietary development that is licensed under the MIT/X11 license just like the Liquid Feedback core.

A quick inspection of the changelog shows that the development of Liquid

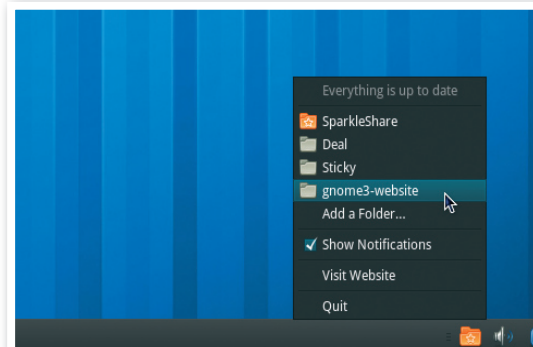


Figure 1: From the system tray, you can get the status of your files.

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Employee	Salary	Node
1 Jan	500	F1
2 Geert	400	F1
3 Michel	500	F1
4 Jgarine	900	F1
5 Greet	100	F1
6 Michelle	400	F2
7 Jackie	100	F2
8 Samuel	500	F2

The diagram shows two data nodes, F1 and F2, each with a corresponding ndbd instance (ndbd 1 and ndbd 2). Arrows indicate data flow between the nodes and the ndbd instances. The nodes are grouped together as 'Node Group 1'.



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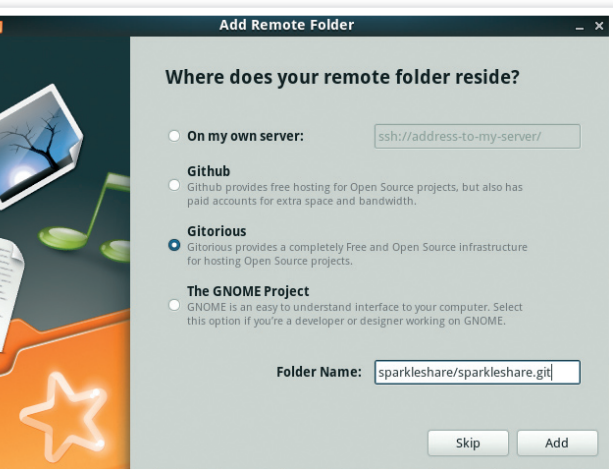


Figure 2: After launching the SparkleShare service, the user can choose a Git repository.

Feedback is making rapid progress. This is probably because of the current political and public interest in voting platforms. The student parliament at Potsdam University has already successfully deployed Liquid Feedback. Other interested groups include the Enquete Commission Internet and Digital Society of the German Bundestag.

Liquid Feedback has potential applications outside of politics, too. For example, companies that discuss common standards with their suppliers or competitors could use the voting software.

In Perfect Sync

Dropbox [7] is well ahead of most data storage and sharing service providers with respect to user friendliness, stability, and feature scope. Clients are available for all major operating systems and for Smartphones. Also, the web interface excels, thanks to its high degree of usability. Users can access their data from virtually anywhere, and local copies can bridge times when no Internet connection is available.

An integrated versioning system protects users against accidental deletion and mutual overwriting of changes; users can exchange files with their team or family with just a couple of clicks. Dropbox automatically synchronizes every changed file immediately, which helps users avoid discovering at home that they forgot to trigger synchronization before they left the office.

Users outside the US might not relish the idea of entrusting their data to external providers in the US, so in April of this year, Dutchman Hylke Bons and his team set out to provide a solution. SparkleShare [8] is the open source copy that tries to be just as convenient and user-friendly as Dropbox. The project is still at an early stage of development, but the 0.2 alpha version released in August gives you a sneak preview of this new star of the synchronization scene.

Sparkly, Shiny

Whereas Dropbox stores its user data in the Amazon S3 Cloud [9] and uses HTTP(S) to transfer the data, SparkleShare uses a Git repository [10] and a se-

crete SSH connection. The decision to use Git kills several birds with one stone – the distributed version control system provides versioning and sharing out of the box. This means that SparkleShare programmers can concentrate on the development of clients that open up Git capabilities to non-experts.

The current alpha version is available for a variety of Linux systems, and the installation involves just a couple of steps. The `sparkleshare start` command tells the service to start working; it comes up with a GUI and an orange-colored icon in the system tray (Figure 1).

After entering your name and an email address, select the Git repository. The options include a Git server run by the project, as well as the GitHub [11] and Gitorious [12] providers (Figure 2). The last configuration step is not well documented: When you first set up a connection to the Git server, SparkleShare asks you for a password but doesn't say which password it means. To complete the initial configuration, enter your own email address as the password.

After completing the setup, the program uploads all the files from the local SparkleShare folder to the Git server without any user intervention. The program clearly shows its alpha status, because data synchronization is very much an on/off affair: Sometimes it works; sometimes it doesn't.

SparkleShare uses a separate dialog to tell the user when files have changed. This more or less exhausts the functions that are accessible to non-technical users. Only developers or admins are likely to be able to set up a connection to a Git server without technical support right now. Version 0.2 Alpha is a good start, but it's not mature enough for production use.

SparkleShare is licensed under the GPLv3 and was written in C#. The software also requires Git, GTK-2-Sharp, Mono and MonoDevelop, Python-Nutilus, and ndesk-dbus. Just like with Dropbox, the Linux client is an extension of the Gnome file manager Nautilus. Windows and Mac OS X clients are planned but haven't reached testing as yet. Currently, SparkleShare is just a glimmer on the horizon, but that could change fast. A quick glance at the Gitorious repository [13] shows that work is proceeding rapidly. ■■■

INFO

- [1] tinyHeb: http://tinyheb.sourceforge.net/?id=start_en
- [2] Liquid Feedback: http://www.public-software-group.org/liquid_feedback
- [3] LimeSurvey: <http://www.limesurvey.org>
- [4] Doodle: <http://www.doodle.com>
- [5] Lua scripting language: <http://www.lua.org>
- [6] Web MCP: <http://www.public-software-group.org/webmcp>
- [7] Dropbox: <http://www.dropbox.com>
- [8] SparkleShare: <http://www.sparkleshare.org>
- [9] Amazon S3: <http://aws.amazon.com/s3>
- [10] Git: <http://git-scm.com>
- [11] GitHub: <https://github.com>
- [12] Gitorious: <http://gitorious.org>
- [13] SparkleShare Gitorious repository: <http://gitorious.org/sparkleshare>