

# Community News

A weekly update of One Laptop per Child September 28, 2008

## Technology

### Release:

1. Michael Stone and Greg Smith report that Release 8.2 is in final regression test now. It is scheduled to go to Quanta for manufacturing as early as the end of next week. Please test the hell out of it and watch for updates. We've got one minor problem, #7932, scheduled for 8.2-766, along with some small activity updates [Record, Help, ...].) More announcement mail will follow shortly.

In parallel, we're also experimenting with some riskier memory-related changes in hopes of finding something that we could ship as an OS update six weeks or so hence.

8.2 features major enhancements, including:

- A flexible Home view and Journal with several options for searching and organizing activities.
- An enhanced Frame for accessing other XOs and peripherals, and for switching among running activities.
- A Graphical Control Panel for setting language, network, power and other defaults.
- An automated Software Update tool which finds the latest version of activities and updates them over the Internet.
- The capability to backup XOs to a school server and to restore files to the Journal as needed.
- A new manual shipped with the XO as an activity.
- Many other bug fixes and enhancements.

For more details, see the final draft of the Release Notes at: [http://wiki.laptop.org/go/Release\\_notes/8.2.0](http://wiki.laptop.org/go/Release_notes/8.2.0) .

A lot of people have worked very hard for many months to make this release happen. We are working on a way to acknowledge and recognize these contributions.

### Community:

2. SJ Klein has led discussions about upcoming events on the grassroots mailing list, including the Game Jam Peru in late October and a joint OLPC/Fedora

conference in December or January (co-organized with Fedora's FUDCon11). An additional 1-2 days around the community-focused event will address specific technical goals and brainstorming for 9.1.

Library : Seth and SJ updated and reviewed the help activity and all book and image collections for format, licenses, and presentation in the latest build; and drafted a thank-you email to the many contributors who collaborated on those works.

Music : Natalia Tsarkova of i-concerts.com is preparing a set of music video bundles from African musicians, with help and contributions from Youssou N'Dour, the superstar Senegalese singer, to be available for download to XOs by November.

Our wiki continues to get over a third of its traffic from XOs in Uruguay, with the rest split between the US and the rest of the world. We should recognize the CEIBAL project for what it is – a radical transformation of education in a networked country -- and find ways to acknowledge that prominently and often.

Sayamindu and SJ are working on setting up a spanish-language wiki this weekend (connected by interwiki links). This would provide a more comfortable atmosphere for Spanish children and communities to contribute, along with a fully spanish-language recentchanges and community portal. OLPC Paraguay has developed their own wiki, with much good information which they are considering merging into such a site : <http://wiki-olpc.uca.edu.py/index.php/Portada>

3. This week Seth Woodworth released several revisions of the Help activity / Manual for release 8.2.0 (g1g1) The Help activity is in a fairly stable position but will require several documentation improvements as well as updating several images that have changed os760 > os765.

In Marketing Seth registered for Google AdWord Grants, and is working with Adam Sj and Aaron on a PR/Ad gang for community created media. The slides from all of the Cambridge Learning Workshop are now at the OLPC account at <http://Slideshare.net/onelaptopperchild>. And lastly the Flickr stream now has photos from the newly formed OLPC Jamaica, and Daniel Drake's travels in Ethiopia (Brian Jordan's from Rwanda are coming this weekend).

On a more personal note: Seth is also starting a part-time internship at Harvards Berkman Center, researching Peer-production and Networked collaboration. The results of the reseach should, in time, have positive effect on our own peer-production volunteering and should help us engage children directly, such as the 8,000 children from Uraguay who visit our wiki each day.

**Support:**

4. Reuben Caron confirmed the save-nand copy-nand process works on activated write protect machines on both 8.1 and 8.2 builds. He setup a school server with SSID OLPCOFW and confirmed that reflash over wireless and wired works from OFW, albeit slowly. Reuben spent some time with Elana who just returned from Mongolia and discussed the status of the deployment and made recommendations on how they can proceed. Reuben Caron also had discussions and provided support to deployments and potential deployments in Ethiopia, Rwanda, Birmingham, Paraguay, and Puerto Rico.

5. Kim Quirk provided updates to the country agreements to help set expectations on software support such as security features, language, keyboard, Activity and content requirements, and software updates. She is prepping manufacturing for the new software release and stuffer sheets to go with the G1G1 laptops.

6. Henry Hardy and Seth made several small improvements to the laptop.org site, including updates to the People page. They added a Give One Get One banner, removed several ancient pages from 2006, and now are working with Sayamindu to refresh translations.

7. Adam Holt is leading the effort with our volunteer repair centers - Ian Daniher (OLPCinci), Luke Faraone (DC Repair), and Neal Scogin (TX) - helping them to find sustainable models and to increase their presence for the next G1G1 program.

### **Give One Get One:**

8. Kim Quirk, Adam Holt, Aaron Royer and SJ met with Alisson Walsh and Laurie Petrycki of O'Reilly's Missing Manuals to discuss creation of a freely-licensed Missing Manual for the XO over the coming year, working with the community of editors that produced our current manual. We are thinking about a pocket guide that could be available in time for G1G1 donors. Kim is also working with third parties to find a partner who can provide SD cards with Fedora desktop to interested donors.

9. We've had good discussions with Amazon and Brightstar on G1G1 production, delivery, costs, databases, refunds and returns. Adam is working with the support gang on strategies for support and repairs as well as for providing help on the stuffer sheets and communications to the community. Seth registered for Google AdWord Grants, and is working with Adam, SJ, and Aaron on a PR/Ad gang for community created media.

### **XO OS Software:**

10. Paul Fox, C. Scott Ananian, Michael Stone, Erik Garrison and Chris Ball devoted substantial efforts to testing, organization, diagnosis, and bug-fixing

work for the 8.2 release. At this point the need to maintain a stable release with careful bug fixes demands substantial discussion and attention to detail on each new bug and fix. Considerable time and effort was spent in that regard, led by Michael as Release Manager. Scott also reports substantial improvements in addressing licensing issues to improve our level of GPL license compliance in the 8.2 release.

11. Michael Stone reviewed and approved the changes taking us from 8.2-760 to 8.2-765. Particular thanks are due to cscott, cjb, and marcopg for efforts above and beyond the call of duty; see [http://dev.laptop.org/~cjb/76x\\_changelog](http://dev.laptop.org/~cjb/76x_changelog) for an awe-inspiring (to me) depiction of what we have achieved. Michael assisted with several fixes, most notably #8307, for gnu & wadeb., got the kernel team involved in the thrashing/OOM diagnosis problem and for kicks, pushed olpc-update a bit on fedora-devel-list@. Michael wrote up <http://wiki.laptop.org/go/User:Mstone/Tricks> to describe some of the programming idioms I have found helpful in recent months. (Perhaps you have tricks to share as well?). Michael started thinking about how to teach programmers associated w/ OLPC more about graphics programming, systems programming, computer architecture, and programming idioms in hopes of training them to write better code.

12. This week C. Scott Ananian shepherded 8.2 builds 761, 762, 763, 764, and 765 (our best yet!). He also fixed a number of blockers and polish bugs for these releases, and beat up on his friends until they fixed the rest. Great progress was made on licensing issues, to increase our "letter of the law" compliance with the GPL and other licenses in our next shipping release (trac #4265, #8411). He also dabbled with next-gen Journal design; see [http://wiki.laptop.org/go/Experiments\\_with\\_unordered\\_paths](http://wiki.laptop.org/go/Experiments_with_unordered_paths) and the mailing list links therein.

13. Erik Garrison tested X composition for Sugar and discussed Sugar navigation design options. He additionally worked on polish issues for the 8.2 release, and helped diagnose and fix a bug with Record which his screenshot patches uncovered on the newest 8.2 release candidates.

14. Jim Gettys met with Mike Bove to discuss novel input devices, to explore the input design space further. and attempted to install Linux on the Latitude XT, having spent time to make the Vista environment usable to be able to experiment with the existing vendor software. It is an interesting device, supporting both a pen (with buttons \*and\* proximity) and touch. The touch support on Windows Vista has a long way to go to be interesting and usable. Of course, this is just as/ more true for Linux; but it is easier for us to make changes where they will be needed.

15. The entire software development team was focused on the completion of the 8.2 release effort. The majority of the software effort this week consisted of

testing, evaluating bugs, investigating fixes, and evaluating the impact of proposed fixes. At the end of any software release cycle there is considerable risk of regression as things that used to work break again. With that in mind, the team is moving carefully toward a complete and stable release. The brevity of this week's report reflects the very large amount of time the team spent working on finding and fixing bugs. Everyone is eagerly looking forward to the 8.2 release and the G1G1 launch.

### **XS School Server Software:**

16. Martin Langhoff continued work on installation and configuration of Moodle on the XS School Server.

- SoftwareFreedomDay last Saturday had a was a big event for the Wellington Test team - we could not do much focused testing, however, we have lots of new recruits.
- SFD was followed by NZ Open Source Awards last night in which several OLPC-related efforts were celebrated. Douglas Bagnall's Te Tihu game was nominated for Best Education Project, Brenda Wallace (one of our testers/organisers) was nominated for Fantastic Open Source Contributor, and the FOSSManuals project won an award for Open Source in Community Organizations.

Douglas Bagnall spent quite a bit of the week trying to work out what resources ejabberd uses in various circumstances. He fixed some remaining issues related to the leap from Fedoras 7 to 9, and in spare moments he worked on bug #8610 ("Theme music for the XS") which might be opened as a competition once 8.2 is out of the way. On Friday he helped the Wellington testers update the XO pool to build 764, which had handily been announced just a few minutes before.

### **Sugar / Activity Software:**

17. Sayamindu continued his work with SCIM and now SCIM can make use of the "switch layout" key on the XO keyboard to switch layouts. He also made some changes in the XKB data to SCIM table migration tool, which is much faster as a result. One of the major problems that Sayamindu was facing with SCIM was the generation of third level symbols (the characters generated with the Alt-Gr key), and he found a partial fix to resolve it this week. In the localization department, Sayamindu helped the super active Turkish team test their translations. The Turkish team has achieved 100% coverage in `_all_` the project in Pootle, including Etoys and Scratch - congratulations to all the members of the team for the feat.

Sayamindu also helped find the cause of #8636, where the Journal was not picking up any translations in newer builds. He also resolved a few long standing issues in Pootle where a translators were being unable to commit their work for a few modules.

In the Sugar department, Sayamindu did some work on making the activity list in the frame show the correct icons for desktop applications like Gedit and Firefox (#8661). A screenshot is available at [http://dev.laptop.org/~sayamindu/standard\\_icons.png](http://dev.laptop.org/~sayamindu/standard_icons.png)

18. Morgan Collett assisted Greg Smith in contacting authors of activities which were candidates for G1G1 inclusion, to check on the status of their activities and get the license field included. He made releases of Ruler (for G1G1), Poll Builder, Slider Puzzle and Jigsaw Puzzle (for the library) with the license and GPL headers added. He released Write-60 with Guillaume Desmottes' fix for a crash. He assisted several authors with testing and other issues.

Morgan also used the new pydocweb tool to work on docstrings for sugar.network and sugar.presence.

19. Simon Schampijer worked on control panel startup performance and localization support, as well as setting up a more organized QA effort for Sugarlabs.

20. Tomeu Vizoso and Marco Pesenti Gritti assisted with the 8.2 release effort with bug fixes and testing, and in investigating alternative data storage designs. Marco's efforts for the G1G1 release were especially appreciated. Marco fixed the crashes in the activities updater, tracked down the Record crash on exit, helped tracking down the pygame sound issues, reviewed and landed several Sugar patches for 8.2. He also started investigating xulrunner memory usage issues and probably found a solution for the BadAlloc crashes. On the next release front, he revised the Sugar 0.84 planning according to Gregorio feedback and started nailing down implementation plans for the higher priority and more invasive items.

21. Tomeu Vizoso presented this week an alternative to the current DataStore, the data storage component underlying to the Journal. The main goals of this alternative implementation are improvements in reliability, performance and maintainability. More details at <http://sugarlabs.org/go/DevelopmentTeam/DatastoreRewrite>.

### **Testing:**

22. The QA team (Joe Feinstein, Frances Hopkins and Mel Chua) has tested builds 8.2-762 and 8.2-763, and is now moving to start testing 8.2-765 -hopefully our last build in the course of the 8.2.0 effort.

The builds 762 and 763 introduced some new bugs, causing overlapping icons in the Neighborhood view, as well as the periodically changing "network picture" in the same view (Kim named this a "Christmas Tree" view, due to quickly appearing/disappearing icons on the screen).

Joe, Frances and S.J. Klein ventured outside 1cc with 10+ laptops to experiment with the mesh network behavior in the different RF environment. We set up a "testing shop" on two tables in the square in front of the Marriott hotel nearby, and spent several hours doing our testing. The RF environment was indeed different (from 1cc), but that didn't seriously affect test result, comparing to what we usually observe in 1cc.

Our appearance outside the Marriott attracted a lot of people to our tables; some of them were as far as from Finland; many of them knew about "those laptops for children" and were asking about the ways to acquire the laptops (we even got questions: are you selling the machines?). So, in addition to conducting our scheduled testing, we also served as "unofficial" OLPC marketing representatives, steering people to the Nov 17 opening of the G1G1 event through amazon.com. The time we were outside wasn't even the peak lunch time for people to fill that square; just imagine the level of attention, if we were there at the lunch time!

23. Mel Chua worked with developers to write test cases for remaining blockers and has started reaching out to community members to aid ongoing testing efforts at 1cc. In support of this, a number of test procedure/tool tutorials have been written or expanded so that volunteers can tackle even complex tests in the absence of developer guidance. Thanks to Frances, Matt Jadud, and Yifan Sun for being part of the first wave of test-case-testers! Stay tuned for more news about QA volunteer recruitment next week as conversations, infrastructures, and tools from this week begin rolling out.

24. The local test team took a trip outside of the 1CC offices to get some testing done in a "clean" RF environment. This didn't seriously affect the test results but drew a lot of attention from the people in the street! We'll have to provide a sign that says, "Give One, Get One, Change the World, coming Nov. 17," as many people wanted to know how to get an XO.

### **Fedora Classic Desktop:**

25. Jeremy Katz integrated his XO boot changes into the Fedora 10 mainline, and we expect to see them appear in a beta release next week. The entire Fedora-XO team worked on updating the XO software strategy to communicate our goals for this release. The development team also worked with the testing and support team to prepare for widespread testing from the Fedora community when we are ready for it.

26. Greg DeKoenigsberg rallied the Fedora group to help find and fix bugs with the Fedora desktop on XO. In less than 24 hours he had signed up nearly 100 people to help test!

### **Firmware:**

27. For 8.2.1, Open Firmware is being extended in order to support the rapid update of a large number of machines, such as in a warehouse before distribution. Mitch Bradley ported David Woodhouse's multicast OS updater program to run in the Open Firmware environment this week, and is starting to test it.

### **Touchpad Change:**

28. As the touchpad changes, the keyboard controller board (hidden under the touchpad) will no longer be produced by ALPS, and now uses a more standard ENE keyboard controller. Quanta manufactured prototypes of the new board, which arrived at 1CC this week. Richard Smith has them hooked up to a test XO and is working on the EC code modifications to support the new keyboard controller. We expect to release test EC firmware to Quanta by the end of next week, and should receive pre-production laptops for testing about two weeks later, or in mid-October.

### **Gen 1.5 Hardware:**

29. John Watlington reports that with Mitch Bradley's help the NAND device testing is running well, but we are still waiting on more devices/alternatives to add to the test bed (such as UBIFS, the most promising contender to replace the JFFS2 filesystem currently used.) Eight laptops with Toshiba's LBA-NAND are running continuously, and each one has had more than 120 GB of writes performed so far, with no errors. Five laptops are running JFFS2 for comparison. They quickly triggered a kernel crash (Trac #8615). Most are now running a debugging kernel and are harnessed up to have their serial consoles logged. Ongoing information about the tests is available at: [http://www.laptop.org/teamwiki/index.php/Tech:NAND\\_Testing](http://www.laptop.org/teamwiki/index.php/Tech:NAND_Testing) .

### **Multi-Battery Charger:**

30. Richard continued to work with Lilian Walter on the firmware for the multi-battery charger. There's still one outstanding issue where the over-voltage condition occurs. Richard thinks this is not specifically a software issue. He believes that tweaking one of the voltage set points on the charger board might fix the problem.

### **Wireless:**

31. Ricardo and Javier spent time this week in further testing WPA access point associations. At this juncture, WPA works (often after a few retries) with every Access Point that we have tested.



We are still experiencing some general (non WPA-specific) association failures that become more noticeable in challenging wireless environments like OLPC's office (or a school with several hundred XOs). After a lot of digging, we have pinpointed one culprit in excessive scan requests generated by WPA\_supplicant (the userspace daemon that handles associations on command from Network Manager). We are also looking into ways to decouple firmware response times to time-critical association requests from wireless traffic volumes, something that has also reportedly caused association failures.

32. Deepak Saxena started looking at UBIFS as a possible replacement to JFFS2 as the file system to use on gen1.x devices. Deepak also spent some time trying to build proper kernel packages for use by developers. Deepak also looked at the issue of system sluggishness in low memory conditions.

33. Guillaume Desmottes investigated Write issues and wrote a simple fix for #8492. He also audited and cleaned Write sharing code [#8680]. It should result to a smaller and more robust code.

He started to design the integration of journal objects transfer and how that could be implemented using the current file transfer Telepathy specification.

In order to be able to stress test ejabberd, he found and debugged some nasty Gabble issues making it aborting when used too long using hyperactivity.

Finally, he synced Gabble's Gadget with current master and started to fix Daf's review complaints. Hopefully, the (huge) Gadget branch should be merged to master pretty soon.

## **From the Field**

Daniel Drake has sent his first photos of the 5,000-XO deployment in Ethiopia. "This week," Daniel writes, "we completed teacher training at two schools and launched our first deployment at one of them, the Mulosayoo School. About 400 laptops have been handed out, and there is plenty of excitement in the air. Next week, we plan to train teachers at another local school and deploy 800 laptops to the children."

Daniel also managed to fit in some team training, including translations and language packs, plus an introduction to the 8.2 software update. More photos: <http://flickr.com/photos/olpc/sets/72157607436386087/>