

Community News

A weekly update of One Laptop per Child November 10, 2008

G1G1 has gone global. Nicholas announced to delegates at the World of Health IT conference in Copenhagen last week that all 27 EU member states would take part this year. More exact details will be in future Community News; as 2. below indicates, the details are non-trivial.

Technology

G1G1 Support:

1. This was the week to deliver final content for the new website, and to start getting approvals for the Amazon storefront. We aren't quite there, but we hope to have beta versions for both on Wednesday or Thursday of next week, and to go live on Friday. Christian Schmidt, Kim Quirk, Seth Woodworth, Stefan Unterhauser, Eben Eliaison, and SJ Klein are trying to pull together the loose ends to get to a beta version on Wednesday. C. Scott Ananian has also joined the effort. Henry Hardy, and Ed McNierney will help out with the server updates that need to be ready for November 17th.

2. The G1G1 team also has revisited the idea of an international Amazon site for order taking, with the hope of using Brightstar for delivery outside the US. Issues to be resolved include international banking, certifications for the laptop in various countries, recycling program for Europe, and fulfillment warehouses with the ability to ship to end users and to receive and process returns.

Testing:

3. The QA team is testing connectivity and collaboration among more than 50 laptops, simulating the environment of a school that lacks a server. The machines have been communicating over an access point. So far, results are mixed. Testing and investigation will continue.

4. Joe Feinstein and Frances Hopkins have run tests against the new firmware, q2e21, which is needed to support the new touchpad. A problem with restarting/shutting down some of the production laptops with new touchpads is under investigation. Reuben Caron has created a script to automate the process of de-registering a laptop from the school server, which is working well. Mel Chua is looking into dsh (<http://wiki.laptop.org/go/Dsh>) for remote access to the laptops. Thanks to Michael Stone for the idea.

5. Reuben Caron continued testing with XS 0.5 dev-7 and looks forward to testing the final release next week. He began exploring ways to attach multiple ejabberd services

to alternate IP addresses to avoid the overhead of fully virtualized servers. He also continued working with the QA team on automation and troubleshooting the XO backup to XS routine.

6. Mel reports that you can get full notes and logs of the community test meetings at http://wiki.laptop.org/go/Community_testing_meetings/2008-11-06 . Interested people are welcome to join! Greg DeKoenigsberg and Brian Jordan are trying out the process for "Testing an Activity" on Speak and Paint. Marco notes that Mel is a great meeting chair.

We have a (very ugly, please help fix!) portal page, http://wiki.laptop.org/go/Community_testing, and a meetings portal page, http://wiki.laptop.org/go/Community_testing_meetings.

Greg and Brian are trying out (on Speak and Paint respectively) our http://wiki.laptop.org/go/How_to_test_an_Activity instructions, which are under severe amounts of construction are there any volunteers here with exploratory test experience that can help write up this guide?

How can we encourage smart testers to take ownership of specific Activities and do "deep" testing on them, and come up with their own criteria for and metrics of quality? (As opposed to having community testers spending their time being/recruiting drones to run through scripts.) Greg quoted Patton: "Don't tell people how to do things. Tell them what needs to be done, and let the surprise you with their ingenuity." (Seriously, this was a great discussion - please do read the logs to get the full blast - it starts around 17:28:29.)

It was generally agreed that automation was a good idea for reducing drone-ness, which is boring. Ben and Mel will be dreaming up designs over the next week, and welcome help. Basically, "I'm a tester. I want to automate this boring thing. What is my ideal interface to do so / the most beautiful tool I could imagine for it?" One possible source of inspiration: Sugarbot.

Everybody likes Joe's design which was the basis of our current semantic-mediawiki-based test case management system (http://wiki.laptop.org/go/Test_cases_8.2.0).

Marco brought up some great questions about the tester/developer relationship. We need to make sure that good bugs get filed when a test fails, and that developers know about the testing going on for the things they're working on (actually, this should be a "people are using my work, yay!" motivation.)

internal QA: We've been looking for a way to manage our large testbeds from a central machine, so Mel sat down and played with dsh (thanks to Michael Stone for the suggestion) this morning, and...

<http://wiki.laptop.org/go/Dsh>

Why is this cool? Well, say you wanted to run the ps command on all the machines in your /etc/dsh/machines file, which looks like this...

```
olpc@18.85.49.113
olpc@18.85.49.114
```

All you have to do is this:

```
mchua@tumentum-tree:~$ dsh -Ma ps
olpc@18.85.49.113:  PID TTY          TIME CMD
olpc@18.85.49.113: 1166 ?          00:00:00 startx
olpc@18.85.49.113: 1185 ?          00:00:00 xinit
olpc@18.85.49.113: 1211 ?          00:00:02 ck-xinit-sessio
olpc@18.85.49.113: 1240 ?          00:00:40 python
olpc@18.85.49.113: 1244 ?          00:00:00 dbus-launch
<...more entries from 18.85.49.113 go here>
olpc@18.85.49.114:  PID TTY          TIME CMD
olpc@18.85.49.114: 1549 ?          00:00:00 startx
olpc@18.85.49.114: 1566 ?          00:00:00 xinit
olpc@18.85.49.114: 1577 ?          00:01:31 python
olpc@18.85.49.114: 1585 ?          00:00:16 dbus-daemon
<...more entries from 18.85.49.114 go here>
```

Systems Administration:

7. Henry Edward Hardy reports that we have seen a significant increase in activity on wiki.laptop.org, which is causing slow performance and periods of limited access during weekdays that affect a number of critical services. The extreme load has also caused some emails to be temporarily delayed.

Country Support:

8. This week Reuben worked with the deployments in Perú, Paraguay, Mongolia and Lebanon. He is working with the international operations team on a visit to Lebanon to help with some tech support issues. We also hope that a visit to Birmingham in the near future will help us do some live testing with a large laptop and school server deployment.

Software Development:

9. Greg Smith is collecting all well-formed ideas for future development at: http://wiki.laptop.org/go/Feature_roadmap. Add your suggestions to that page. In the near future we will start prioritizing them and choosing the target set for inclusion in the next release, 9.1.0. The agenda for a technical conference in January is being set at http://wiki.laptop.org/go/XOcamp_2. The first review of all proposals should be done by next week. We then will create detailed materials and pick lead presenters for each session.

10. Eben spent this week scrambling to get everything needed for the website refresh together. This included copy-editing, updating the timeline, creating new screenshots for all 28 activities included in the G1G1(2) set, exporting activity icons, creating a google map which indicates quantity of laptops shipped, collecting photos for the people page, improving the loading logic for the dynamic slideshows, revising the software vision movie, and writing a narration script for that movie.

Eben also spent some time discussing plans for fleshing out a Sugar notification system, and planning some enhancements to the scalability of the zoom level views.

XO OS Software:

11. Michael and Chris Ball departed for a 10-day trip to Montevideo to better understand and support the deployment model and technology strategy being used in Uruguay.

12. C. Scott Ananian fixed a number of issues with Pippy localization, and wrote some proof-of-concept code using the new Pippy physics library. He also looked at libcanberra and PackageKit for possible use in 9.1 (and pyv8 for *far* future use). The latter half of his week was hijacked by infrastructure issues; he overhauled the squid reverse proxy in front of wiki.laptop.org to better match the configuration used by wikipedia.org, and began moving www.laptop.org off pedal.laptop.org, anticipating G1G1 loads.

13. Paul Fox worked on some bugs that may or may not be related to the new touchpad (#8901, #8887), implemented a new final powerdown LED flicker in the EC firmware (to remove ambiguity when forcing a poweroff by holding the power button in), and began writing up an EC firmware regression test plan.

14. Early in the week, Erik Garrison ported compcache 0.4 into the olpc-2.6 series (<http://code.google.com/p/compcache/>) kernel and tested that it didn't break builds. Then Erik built the development version of the awesome window manager (<http://awesome.naquadah.org/>) on an XO running debxo and has been testing configuration changes which make it work better in that environment.

15. Jim Gettys finished investigating OpenGL support in Gen-2 for one of our processor options, and then wrote a memo on the implementation options. This topic is much more complex than it would have been in the past, since the drivers for X11/OpenGL are in a major state of flux, to enable long term competitive performance relative to other platforms.

XS School Server Software:

16. Martin Langhoff and Douglas Bagnall focused on testing installations and upgrades so we can release XS-0.5. This revealed that the key importation process had unfinished aspects, so he worked on fixing that. Early in the week Douglas wrote up some ejabberd tests and resolved compilation problems with the pam_sotp rpm. To

support large installations and generally give better presence service, Martin and Douglas have mapped out a plan to make ejabberd show presence for users in the same group/course rather than everyone.

Sugar / Activity Software:

17. Sayamindu Dasgupta worked on SCIM integration and proposed a set of packages to be included into Joyride (#8934). He also resolved problems with the interaction between SCIM and Rainbow's activity isolation (due to isolation a separate scim daemon was being needed for each activity, which had serious memory and CPU usage implications, especially for complicated input mechanisms). He also worked on RTL (mirrored) icon support in Sugar, and in the process came up with support for specifying stock-ids for Sugar icons. He is preparing patches for review. In the localization department, Sayamindu acted as a go-between for the team at Mongolia and the developer community to integrate several translations done by Mongolian teachers from the field. He also helped Pablo Saratxaga get started with translations of Sugar into Walloon - many thanks to Pablo for the initiative.

18. Marco Pesenti Gritti started looking into activity startup performance. From the first measurements it looks like import time, if done more lazily could be pretty good. The feeling is that we are doing more slow/sync things at startup then importing modules. I also suspect the launcher animation is slowing things down a lot, but needs to verify. Marco added debug logging for activity startup time, should be helpful for the performance work. * Tried to split up better the distribution/release work the Sugar team is doing, to avoid too much costly focus switching. Tomeu is now our joyride master, while Simon keeps leading the release team. Marco spent quite a bit of time to think and discussing how to handle activity upstream releases better. Thanks to garycmartin and gregdek in particular for feedback and idea. Made also a bit of concrete progress with the Analyze release by Eduardo. Several people made progress on the sugarlabs.org reorg. Marco trimmed down the review queue, feel better now. Dear contributors, we will not suck so much in the future, please keep sending good stuff. Marco had more icon cache discussions with Tomeu and Benzea, made some progress but it's pretty difficult to measure conclusively the memory/graphics performance effects. Marco did lots of sugar 0.83 packaging/refining work, we are getting there but progress on joyride has been pretty slow. It would be nice if the whole team would contribute more actively, especially given we decided to port to F10. dsd is rocking as usual, no surprise there.

19. Tomeu Vizoso has been working this week in bringing the last Sugar code into the joyride builds, added a way for activities to override the default "View source" behavior, packaged and tested Benjamin Berg's proposal for a new icon cache, added a way for activities to request a notification to be shown in the shell and gave this capability to XoIRC and has started a port of a mind-mapping application: Labyrinth. He has also restarted to keep a TODO list in his wiki page and welcomes comments about it: <http://sugarlabs.org/go/User:Tomeu>

20. Simon Schampijer kept on working on the integration of NM 0.7 in Sugar. He finished the loading and saving of the connections. We still use the old profile format but will later probably switch to gconf and gnome-keyring, and the WPA part. Morgan Collett started documenting API changes in 8.2.0 at http://wiki.laptop.org/go/API_changes - please contribute. He worked on API improvements in Sugar and activities, including reduction in boilerplate code required for collaboration.

21. Richard Smith worked with Henry Hardy to install a new virtual machine on weka for firmware builds. Toward the end of the configuration and setup he discovered he had installed a 64-bit copy of the OS, which causes a few build issues. Henry will re-install and replace it with a 32-bit OS.

Laptop Power:

22: Richard dug ever deeper into the power measurements. He previously reported that newer builds used .5W more power than the previous builds, but based on the data he has acquired since then that claim is under suspicion. The variability of the data is enough that .5W difference is in noise. Further data are needed to pinpoint all the variables.

Firmware:

23. Mitch Bradley released Q2E22 firmware with some bug fixes, solid firmware support for the new touchpads, and an enhanced diagnostic for the old touchpads. He also released q2e22a, a developer test build with XO-to-XO multicast NAND update support and much-improved USB performance. The NAND update feature lets you "clone" one XO's NAND OS image onto any number of other XOs at the same time, without needing an access point. The performance exceeds the original goal. In a recent test, Mitch cloned a 368 MB OS image in fewer than seven minutes. The network throughput for this tool exceeds the highest XO wireless rate that has ever been measured using Linux.

Deployment Workbook:

24. With the help of the learning team, Richard, John Watlington, Reuben, Carla Gómez Monroy and Joshua Seals continued to refine the deployment workbook to better understand the costs of deploying the laptop. They are achieving important insights, especially in areas such as the power adapter where it appears that a slight increase in the cost of the laptop might greatly reduce the deployment expense.

Wireless:

25. Deepak Saxena primarily worked on understanding some odd behaviour with the new Touchpad (#8901, #8894, #8942, #8491). Deepak also moved the OLPC kernel moved forward to 2.6.27.4 and rolled up a new UBIFS test image with the latest bugfixes.

26. Marvell released wireless firmware version 5.110.22.p22, which rearranges some internal buffers to deal with marginal cases discovered during WPA association testing, adds a diagnostic debug event for those cases, addresses WOL filter input issues and provides an API to get/set the probe response retry limit. Ricardo Carrano continued tests with the new driver implementation of the signature based wake-on-lan filter, that fixed minor issues observed last week, and started tests with latest wireless firmware release 5.110.22.p22 which fixes some wpa related issues (#8666 and #8667) and corrects some minor controls over management traffic and the wol filter.

27. Javier and Colin at Cozybit identified the root causes of WPA association failures. Colin has written a Network Manager patch that resolves some of the failures and Javier is working on a driver patch to work around wpa_supplicant's tendency to set the BSSID to all zeros prior to any association request (a very loose interpretation of the standard, since an all-zeros BSSID is a valid address - the 00:00:00 prefix is assigned to Xerox Corp.)

Links of the week:

28. User link of the week (Spanish): <http://ceibalflorida.blogspot.com/search/label/etoys> Shows eToys presentations built in Uruguay. See also the "Blogósfera" link on the right. Blog posts by XOs in Uruguay have taken off again in the last month!

29. User link of the week (English): <http://blog.olenepal.org/index.php/archives/321> US University-style evaluation of the XO deployment in Nepal.

30. Walter Bender's Sugar Digests:: <http://lists.sugarlabs.org/archive/iaep/2008-November/002459.html> and <http://lists.laptop.org/pipermail/sugar/2008-November/009727.html>

Development

Ghana: The country has signed an agreement with OLPC to purchase 10,000 XOs, scheduled for delivery in five shipments through June 2009. The ten member Ghana core team will be in Cambridge the week of November 17 for a technical and learning workshop. The team is currently pulling together detailed information on the first-phase launch schools. We anticipate a significant need for infrastructure accessories, including solar panels, servers and access points. Power will again be a vital concern, as it is throughout sub-Saharan Africa. Also, schools in Ghana generally are not large – the average size is about 300 students – which will mean increased on-the-ground deployment effort and expense.

The big news in Colombia was the symbolically important delivery of 650 laptops to La Macarena in central Colombia, a former FARC stronghold, where the children were enchanted with their new machines.



La Macarena: The XOs arrive, and the kids approve.