Community News

A weekly update of One Laptop per Child   October 14, 2008

Release 8.2.0 is ready! Congratulations to everyone who worked so hard to make this release happen. The new features and upgrade instructions are available at http://wiki.laptop.org/go/Release_Notes/8.2.0

A classroom in remote Bonsaso, Ghana, where XOs have been deployed since early this year.

Technology

G1G1:

1. Seth Woodworth collected graphic design resources (video, images, stories, text) from our design partners, deployment teams and community members. These resources will be available to the community so they can produce their own flyers,

banners, and mailings for the upcoming G1G1 program. We want to make it easy for people to see that we are getting laptops to children. Daniel and Brian's blogs postings also have been extremely helpful:
http://www.reactivated.net/weblog/archives/2008/10/olpc-ethiopia-updates/

Seth also made changes to the front of Laptop.org, adding an email sign-up list for people who want to be notified about G1G1. This form pushes email addresses out into our mailing list software, which we hope will scale to the 150k emails we plan on sending Nov 17th.

Additionally, the XO manual that is being shipped with 8.2 is now available at http://www.laptop.org/manual . A printed and bound version of the manual is also available for purchase at FLOSS Manual's Store: http://www.lulu.com/content/3865224

Website Search

Seth done a bit of research (via google webmaster tools) on how well Laptop.org is doing in search results (period, one week).

(# of raking) (search term)

1	olpc
1	one laptop per child
1	xo laptop
5	xo
6	per
6	lap top
7	portable
8	pc portable
9	laptop
9	home
10	laptops
10	ordinateur portable

Oddly enough, the term "friends" produces 11% of the traffic from google to our site (laptop.org), but we are only on the fifth page of results.

After last week's surge from Uruguay, this month's traffic has risen to over 1 million page views (1,005,628 Sept-9 Oct-9). The actual computers/ip's visiting our site in that amount of time (Absolute Unique Visitors) is 194,511. On average, each visitor viewed 5 pages, and around 2.27 pages per visit.

Some interesting characteristics:

We get more hits on the wiki from the UK than from India, and more hits from China than Mongolia.

2

The top ten languages of visitors to our wiki:

        10. Italian
        9. Spanish (Spain)
        8. German
        7. English (Great Briton)
        6. French
        5. Spanish
        4. English
        3. Portuguese (Brazil)
        2. English (USA)
        1. ... chrome://navigator/locale/navigator.properties

The last comes from XO's of build 650 and above having a bug in Browse.

2. Aaron Royer hosted another creative session with Nicholas and others this week to go over the TV, magazine and billboard ad campaigns for G1G1. Things are coming together well. There are still very large obstacles to the fulfillment of laptops to countries outside the U.S. Kim Quirk is investigating alternatives to an Amazon-only system, as well as working with Amazon to fully understand the limitations.

 Testing:

3. Joe Feinstein, Frances Hopkins, Mel Chua, Reuben Caron and Kim Quirk worked on system-level testing this week. Simulating the "real school" environment, they demonstrated 62 laptops connected to one access point, registered to the school server and "chatting." We will continue this testing to measure capacity and performance with different loads simulating the real field environment. We also updated the 8.2.0 Release Notes, and verified some known bugs/issues.

4. Mel (with input from Joe and others) has prepared a "user level" exploratory testing exercise to be conducted this Saturday at the MIT museum, where several XOs are on display. The goal is to observe how children (as well their parents) learn to operate XOs for the first time. Community groups who want to follow along are encouraged to try out this week's draft instructions at http://wiki.laptop.org/go/Talk:Review_squad#Current_draft and join the testing mailing list at http://lists.laptop.org/listinfo/testing .

5. With 8.2.0 testing about finished, we're beginning to look ahead to automation and configuration scripting. We also hope to stay on top of bugs and test cases for the next release cycle. Join the testing mailing list and discuss bugs, tools, tricks, test cases, and digital entomology with us! (http://lists.laptop.org/listinfo/testing .)

Systems Administration:

6. Henry Edward Hardy reports that the OLPC Volunteer Infrastructure Group (VIG) has held its seventh regular meeting. Ben Knowles (user Adric) laid out a nice overview of the issues facing the RT ticket system and outlined a way forward.

http://wiki.laptop.org/go/OLPC:Volunteer_Infrastructure_Group/RT
http://wiki.laptop.org/go/OLPC:Volunteer_Infrastructure_Group/RT/Strategy

7. Stefan Unterhauser (user Dogi) has taken on the role of VIG secretary and is contemplating a method of automating well-formatted meeting notes from the transcript of the IRC channel at irc.oftc.net:#olpc-admin.

Software Development:

8. No target will be set for release 8.2.1 until we identify the lead customers needing specific bug fixes. We will be focusing on future release work starting right away, aiming for a major technical planning discussion in mid-November for all interested technology contributors. Very preliminary rough draft goals and requirements definitions for future releases are coming together at http://wiki.laptop.org/go/9.1.0

9. Chris Ball worked on a JFFS2 patch[1] that allows us to avoid writing already-compressed data to NAND, which saves us the CPU time of having to uncompress it twice. The patch works at image creation time, and now needs to be modified to handle on-the-fly writes too.

Chris also researched systems for tracking software feature proposals ("blueprints"[2], in Launchpad) and plans to suggest the use of one to track and review proposed 9.1 features, and to measure progress as the features are implemented.

[1]: http://dev.laptop.org/~cjb/mkfs-compr-ratio.patch
[2]: https://blueprints.launchpad.net/ubuntu

XO OS Software:

10. While remaining alert for possible 8.2.0 bug fixes, the team began investigation and planning for future work. Chris Ball, C. Scott Ananian and Michael Stone attended the local GNOME UI Hackfest, where they got ideas from the attendees and demonstrated a mockup of Scott's next-generation Journal ideas. Scott will give a presentation and demo his work next week in Cambridge. Chris researched better tools for tracking software feature proposals for planning and monitoring progress. Erik Garrison spent the week discussing issues with the current Journal in hopes that a future rewrite can better reflect the expressed needs of users in the field. Paul Fox has started looking at EC firmware development again, having obtained a new copy of the Keil compiler we use. He has re-synced his EC code tree with Richard's on-going work, and has (partially) succeeded in doing an EC firmware build on Linux under Wine.

XS School Server Software:

11. Martin Langhoff has been working on Moodle infrastructure and participating in the Moodle conferences for Australia and New Zealand. Key Moodle developers in A/NZ now have XO laptops, including Martin Dougiamas, the lead developer and founder. Several discussions took place about the road ahead for Moodle on the XS as infrastructure administration tool and as educational tool. The mid-term focus is on offline Moodle using Google Gears, which Tony Anderson is pioneering, so Martin Langhoff participated in various presentations and discussions about it.

12. Douglas continued to examine ejabberd's memory use, providing valuable support for planned deployments in Birmingham and elsewhere, looked at packaging it in a more xs-config friendly way, fixed an idmgr regression, and made some headway with an OTP password package for the XS. He also helped the Wellington testing team update laptops to build 767. The team now meets of its own accord, without needing Martin around to pester them. Douglas also continued with final testing of the 8.2.0 release.

Sugar / Activity Software:

13. Tomeu Vizoso provided his DataStore rewrite, featuring improved reliability, better performance and an easier-to-maintain architecture. Also spent a considerable amount of time participating in interesting debates in the mailing lists, and was happy to notice the increased participation of teachers from Uruguay in the olpc-sur mailing list.

14. Marco Pesenti Gritti went forward with work on the 0.84 release of Sugar, including an update of the 0.84 release goals. The most invasive part of the Sugar shell refactoring is now complete, dividing it into several sub-modules. The core UI components now all reside in the same process, saving memory and improving performance. In addition to bug fixing for 8.2.0, Simon Schampijer neared completion of the transition to using gconf and was able to submit the Browse activity for Fedora package review. Pyxpcom has been enabled in the F10 xulrunner thanks to Cristopher Aillon. Marco has synced the xulrunner olpc3 package and fixed the hulahop package accordingly to these changes. Morgan Collett worked on development of Chat and Read and began looking into future collaboration feature goals.

15. Eben Eliason helped Seth with the new G1G1 subscription form on the main page of laptop.org, and otherwise worked with Greg Smith and the team to begin understanding the UI goals and strategies for future release planning. Apart from this more concrete task, he spent most of his week contemplating the next iteration of designs, which included a meeting with Greg Smith to discuss goals for the UI in the roadmap to 9.1, as well as a considerable amount of time in the mailing lists and IRC, observing and Apart from this more concrete task, he spent most of his week contemplating the next iteration of designs, which included a meeting with Greg Smith to discuss goals for the UI in the roadmap to 9.1, as well as a considerable amount of time in the mailing lists and IRC, observing and responding to feedback provided there.

On thoughtful recommendations from Michael Stone and Carol Lerche, Eben aims to refocus his efforts next week into creating some rough outlines indicating the aspects of posted designs which are complete, partially complete, scheduled, or still just ideas to provide useful reference in future mailing list discussions, to reduce the amount of reiteration needed, and to keep the conversations moving forward.

16. C. Scott Ananian attended the GNOME hackfest with Chris Ball and Michael Stone, and demo'ed some next-generation Journal work and Olpcfs. A more complete report can be found in the thread at: http://lists.laptop.org/pipermail/devel/2008-October/020123.html

Scott spent most of his time this week prototyping a "next-generation" journal design for 9.1, based around desktop search. He will be giving a demo and talk next Wednesday at OLPC's Cambridge offices; it will be posted online shortly thereafter. More details: http://lists.laptop.org/pipermail/devel/2008-October/020097.html

Screenshots to whet an appetite:
  http://dev.laptop.org/~cscott/journal-ss.png
  http://dev.laptop.org/~cscott/journal-ss-2.png

Finally, Scott did his part to push the 9.1.0 planning meeting forward, formally inviting sugarlabs to collaborate. During the week of Nov 17 we will have technical presentations and chart our path towards 9.1.
  http://lists.laptop.org/pipermail/devel/2008-October/020137.html

17. Sayamindu Dasgupta uncovered the causes behind a few translation-related bugs found by the Italian translation team. In the interest of making localization progress smoothly, he also wrote an excellent list of "i18n best practices" for Sugar activity authors, at http://wiki.laptop.org/go/Localization/i18n_Best_Practices . Sayamindu is working on the next draft of the Khmer keyboard layout, based on valuable community feedback. He also contributed several tools for better PDF viewing support.

18. Faisal Anwar of Media Modifications updated the Sugar almanac with entries on how to best use Stream Tubes in your activity by answering the question "How do I set up a simple stream tube that can send data one-way between two instances of an activity?" Please read, review, and contribute your own best practices to http://wiki.laptop.org/go/Sugar.presence

19. Adam Holt working parttime from Munich & Vienna this week, staying with Christoph Derndorfer of OLPCnews.com etc. Next week his personal trip takes me to Prague to see Tomeu Visozo, Berlin to see Simon Schampijer, Hamburg to meet OLPC Germany folk if possible, Brussels to see Andriani Ferti and hopefully OLPC Europe -- and last but not least many fiercely dedicated OLPC/Sugar volunteers along the way.

Huge thanks to Sean Hooley who has (yet again) helped greatly this week efficiently dealing with the Never-Ending stream of 2007 G1G1 customer service issues.

20. Jim Gettys has built the X Window System from source in preparation for touchscreen development. He also spent time catching up on what has been going on in the UI field over the last three years. * On discover of unexpected uses of technology note, see http://www.cse.yorku.ca/~wolfgang/facades/ for something never anticipated.

Fedora Classic Desktop:

21. Greg DeKoenigsberg and James Laska did an outstanding job preparing 100 volunteers to receive XO laptops for Fedora testing, with assistance from SJ Klein. Machines have been arriving this week and testers are getting started. Jeremy Katz has made several important discoveries in his early testing, and a few releases with updates will be distributed around this weekend.

Hardware:

22. Richard worked on investigating a report of power regression between build [70*,71*] (Stable) and the 76* (8.2 series) release. He made several enhancements to olpc-pwr-log and process-pwr_log.py. Using these tools John Watlington and Richard were able to log lots of data. The new 8.2 series appear to draw .5 Watts of power more than our past builds. Where this .5W Watts is going is still unknown but from looking at the log files he sees things that he wants to investigate further. He will be further enhancing his log processing tools to produce some plots of various bits of the log files so that the trends in the data will be easier to see.

Richard would like to call for help from the G1G1 and developer community. Gathering large amount of data to establish a good power baseline is a very time consuming task. Repeated power runs tests take   around 6 hours to run. Richard would like to request that all the developers and G1G1 users that are active do a power testing run and send the resulting log file to Richard. If all of our developers and testers run 1 or 2 logs then Richard will have a wealth of data to process.

The steps: (Please follow these steps as close as possible so the data is apples to apples)

> 1) Download the latest olpc-pwr-log:
>> *wget http://dev.laptop.org/~rsmith/olpc-pwr-log*
> 2) Copy this into your XO where you can run it from a VT.
> 3) Fully charge the battery of your XO and leave the external power plugged in.
> 4) Switch to a VT and cd to where the olpc-pwr-log script is. Running from a VT is very important. The output on the VT console will prevent the system from going into idle-suspend if you have that enabled.
> 5) ./olpc-pwr-log
> 6) The moment you see the first line of log ouput ie. right after it says it found a battery and a series of numbers displays pull the external power.

7) Let the system run untouched until it dies. Do not switch back into sugar. If you go back into sugar the DPMS power saving will kick in in 20 minutes and turn off the dcon.

8) Mail the logs or any questions you have to richard@laptop.org

23. The NAND testing continues, with the Sandisk Extreme III SD cards approaching 1.5 TB written, the LBA-NAND devices passing 600 GB, and the JFFS2 filesystems around 300 GB. We have started seeing data errors in the SD cards, but at least some of them are transient read errors, implicating the SD bus and not the NAND device. We have also seen one error in the LBA-NAND parts. The JFFS2 machines struggle not to kernel crash every 24 - 48 hours. Deepak Saxena succeeded in providing a UbiFS kernel and image, and John has started a few laptops running the same tests, but the driver doesn't appear stable enough to obtain results yet. Up to date performance numbers, both per machine and aggregate, are available at: http://dev.laptop.org/~wad/nand/

24. Mitch Bradley continued working on the multicast NAND FLASH updater for Open Firmware, achieving a net 3x performance gain for multicast update and a doubling of OFW's NAND FLASH write speed, which will speed up other update operations.

25. John worked with Quanta trying to figure out why a problem we fixed last year cropped up again in a 1000-laptop batch. The machines refuse to resume from a suspend in Linux using the RTC alarm (#5128) if the date is later than October 1, 2008. Testing with OFW confirms that the hardware is functional. The Quanta laptop production team has changed recently, losing a lot of valuable knowledge which now must be relearned.

26. Deepak, with help from Erik and Mitch, got the 8.2.0 release running on top of the UBIFS filesystem, so we can understand how to build images and start initial testing.

Networking:

27. Ricardo started qualification testing for wireless firmware release 5.110.22.p20. There are new features introduced in this release - a new wakeup on WLAN traffic (wol) filter and the API to enable/disable the contention window adaptation that requires driver support. Cozybit is working on this. He also worked together with Marvell and Cozybit on WPA association issues. More timing issues were identified and are being worked on (#8799) along with continued updating wireless subsystem related pages in the wiki.

28. In cooperation with the students at Universidad Federale Fluminense (UFF) in Niteroi, Brazil, a mesh wireless test bed was set up at UFF's engineering building where the department of telecommunications is housed. The test bed currently incorporates 12 XOs spread among 3 floors and resembles operating conditions encountered in large apartment buildings.

29. Michail and Javier set up specifications and requirements for the wireless driver changes required to support the 8682 wireless chip. These changes are mandated by

new firmware API required to take advantage of the additional capabilities of the 8682 compared to the current 8388 (per frame transmission power setting, modular plugin architecture and SDK for complex functionality).

30. Guillaume Desmottes implemented the new Gadget API in Gabble. This more modular API will enable us to perform more flexible searches as requested by the Sugar team. He also made some modifications in the Gadget XMPP view protocol, ran tests of the new release of the VideoChat activity and investigated OLPC bug blockers (#8804, #6342, #8322.

From the Field

An Iraqi student discusses her new XO with a reporter.

Iraq: On October 7th, the Provincial Reconstruction Team (PRT) for the province of Muthanna celebrated their second XO distribution. Muthanna is a remote, agricultural province on Iraq's Saudi Arabian border, very poor and sparsely-populated. Nevertheless, Dick Torborg of the PRT reports that the second deployment – which brings the total number of XOs in the province to 200 – attracted an impressively large gathering, including provincial leaders and local media. Torborg says the kids and school community were in high spirits. There are plans to locally distribute a minimum of 200 additional machines by the end of the year.

The OLPC team in Iraq consists of Torborg, together with representatives of Iraq's Director of General Education and members of the Yakthah Institute, a local NGO. The U.S. embassy in Baghdad will soon be posting an Internet article on the event.

Iraq is a priority country for OLPC, so it is gratifying to see our program take hold and gather strength there. Darah Tappitake, Robert and Matt will continue working with the PRTs and other potential partners, such as International Relief & Development (IRD), to bring XOs to children throughout the country.

And in other news…

As of this issue of Weekend, XOs have been deployed - or soon will be - in 31 countries. They are: Afghanistan, Brazil, Cambodia, Colombia, Ethiopia, Ghana, Haiti, India, Iraq, Kazakhstan, Lebanon, Mali, Mexico, Mongolia, Mozambique, Nepal, Nigeria, Niue, Pakistan, Palestine, Papua New Guinea, Paraguay, Peru, Russia, Rwanda, Senegal, Solomon Islands, South Africa, Thailand, United States and Uruguay.