Community News

A weekly update of One Laptop per Child September 21, 2008

Learning

Rwanda: Preparations continue for the workshop to be held next week in Kigali. There is tremendous pride among Rwandans in hosting such an event. It is part of an effort to dramatically transform the nation into a knowledge-based society that pursues just and equitable social and economic development. OLPC plays a major role in this.

Mongolia: Elana Langer and David Cavallo held numerous meetings with government officials, NGOs, and grassroots organizations as Mongolia prepares for the distribution of the laptops for the new school year. There are some delays as the new government comes into place next week, but significant progress was made in addressing issues to date. After the new government takes shape, Elana will return to finalize the implementation plan and to help further develop the local staff and core team.

Haiti: The island has been hammered by four major storms. Unsurprisingly, there has been considerable damage and multiple disruptions. Progress continues, however. In addition to repairing the storm damage to infrastructure, Guy Serge Pomiplus, the government's laptop coordinator, has begun a new XO content development effort to help the children learn more about hurricanes and disaster prevention.

Cambridge: The learning team hosted the introductory workshop in Cambridge this week. Participants included representatives from Colombia, Palestine, Paraguay, Puerto Rico, the University of Wisconsin, the International Relief and Development Organization, the World Council of Churches, the Seed Foundation and the International Education Exchange. Participants worked on various learning activity projects including Turtle Art and group storytelling in Scratch. The week ended with discussion groups on real world OLPC implementation. Workshop feedback was positive. A partnership was formed between the University of Wisconsin student team and OLPC Paraguay. After the storytelling sessions one participant commented; "now we can see the true potential of the XO."

Technology

Release 8.2:

1. Greg Smith reports the release is approaching final readiness. We plan one more release candidate build, then will finish the documentation and make it available to production for Give One Get One, as well as promote it to the stable release. For a link to the latest release candidate and instructions on testing see: http://wiki.laptop.org/go/Friends_in_testing .

2. Release planning for 9.1 is ramping up. The rough target date for the release is the first half of 2009. Early thinking and a draft list of features are at: http://wiki.laptop.org/go/9.1.0 . The strategy section is new, so any comments or questions are welcome.

SW Development:

The software team's primary effort continued to be the completion of bug fixing and testing for the upcoming 8.2 release, with substantial contributions from virtually all members of the team.

3. Michael Stone prepared for 8.2-761. Pending creation, announcement,and testing, this will probably our first signed 8.2.0 candidate build.
In more detail Michael also:

- announced a Last Call for 8.2.0 changes.
- assisted with analyzing the conozco-uruguay launch failure and associated documentation issues
- updated the [[rainbow]] and [[security]] wiki pages
- wrote a release snapshot creation q&a
- developed triagebot to assist with IRC-based Trac ticket triage
- assisted with debugging #8532
- organized a bunch of memory-pressure work
- restored service to mock.l.o when it went down this weekend
- updated [[User:Mstone/Commentaries/Infrastructure_1]] based on feedback from previous reviewers
- explained olpc's olpc-update-based build-deployment technology; wiki pages pending
- explained olpc's theft-deterrence features and posted [[User:Mstone/Commentaries/Security_1]] discussing their security requirements
- substantially increased the quantity of information collected by olpc-log and released fixes for several small olpc-netutils bugs
- fixed or released fixes for several small rainbow bugs
- improved [[ECO/8.2.0/Checklist]] and got promises of signoffs for the firmware, EC code, kernel, and software licensing lines

- conducted regular triage- and release-related decision making
- discussed interprocess communication and jabber w/ Marco & Scott.

4. Paul Fox continued ad-hoc testing of the 8.2 stream, helping with power and sugar stability bugs. Paul prototyped a modified design for the arrow pad button, which seems to yield more predictable control.

5. C. Scott Ananian added content bundle support to the software update control panel this week (trac #8106), fixing some other bugs in the process (trac #8415, #8502, #8532). He also fixed a long-standing issue with our .pyc files which ought to speed up python startup (trac #8520), shepherded fixes for sugar activities which want to use serial ports (trac #8434), got to the bottom of a bug with the Geode's hardware random number generator (trac #8089) and with OFW's DHCP client (trac #8450), and finally got yum working correctly with joyride and stable builds (trac #8395, etc). Near the end of the week, he worked on alternative sugar favorites views (trac #7685) and network connection feedback. He also continued work on activity and content bundle licensing (trac #4265), including documenting a new 'license' field for activities and content (http://wiki.laptop.org/go/Activity_bundles#.info_File_Format and http://wiki.laptop.org/go/Sample_library.info_file).

6. Martin Langhoff has built a base Moodle auto-tuning configuration, and is now working full steam on customizing a Moodle 1.9 to fit our needs.

7. Eben setup a DesignTeam on Sugarlabs. He organized, publicized, and hosted the first biweekly open design meeting (on IRC), to great success. Further details can be found at http://sugarlabs.org/go/DesignTeam/Meetings .

He also worked on refining some specifications for upcoming 9.1 improvements, including touchpad handling with respect to screen rotation (#8482) and a more complete visual clipboard, for which a new comprehensive goals page has been created (http://sugarlabs.org/go/DevelopmentTeam/0.84/Clipboard). The clipboard API, as well as a design for the new devices model, was discussed in detail with the rest of the Sugar team.

Finally, Eben spent some time making some last minute icon revisions to improve comprehension and eliminate some confusion reported in testing with the latest builds. Changes include the settings (control panel) icon, the details icon in the Journal, and the new spiral view.

8. Marco Pesenti Gritti continued to work on memory pressure for 8.2. At startup time we are now back to Update.1 level (a little better actually) and we fixed several big leaks. Some of these are short time workarounds, but we have a good understanding of the root causes and we will address them early in the next release cycle. Blockers fixing and testing continues, but we are more or less at the bottom of it. We made a lot of progress in the last few days with the Sucrose

0.84 roadmap. We are hoping to get the community involved both in the planning and in some of the tasks.

9. Sayamindu Dasgupta isolated and provided the fix for an issue in Rainbow which was causing regressions with internationalization support (#8127). He also found a couple of problems with inputting non English text in Etoys and provided a fix for one of them (#8530, #8531). Following up on the recent merge of the Journal into the Sugar shell in the master git branch, Sayamindu migrated all existing Journal translations into Sugar. He also drafted a proposal and started off a discussion on how the Enhanced Window Manager Hints (EWMH) standard can be best extended for Sugar and other similar graphical environments.
To aid community testing efforts (especially by those who do not possess a XO), Sayamindu packaged the latest SVN Qemu into RPM files for Fedora 9 and 8, which can be downloaded from http://dev.laptop.org/~sayamindu/qemu/. This should solve the problems of Qemu users who have been facing the "kernel needs 3dnow" message issue. Please note that the qemu binaries from these RPMs need to be run with the "-cpu athlon" option in order to work properly.

From the localization team, Yama Ploskonka has been coordinating a Sugar translation sprint for Aymara, called "Trasnoche de Traducción Aymará" in Bolivia. Many thanks to him and the rest of the team for their amazing efforts. Their work has already started to appear in our Pootle server.

Trasnoche de Traducción Aymará

10. Tomeu Vizoso decreased Sugar's memory usage by removing memory leaks for 8.2 and merging components into the Sugar shell to substantially reduce memory usage in future releases.

11. Simon Schampijer did land #8148 which adds a scrolled window to the control panel main view. Thanks to Andres Ambrois for his patch. The sugar team settled down on a long term solution for this issue. Simon spent most of the rest of the week on planning for the 0.84 release.

12. Jim Gettys tutored Ed McNierney on the major technology themes and issues in XO development, and attended the Linux Plumber's Conference, where Jim investigated file system technology development. Jim also ordered a multitouch screen based laptop (the Dell Latitude XT) to begin work on the touch software for Gen-2.

13. Morgan Collett addressed an important 8.2 blocking bug in Write. Morgan ran an OLPC stand for the Open Source day of International Science, Innovation and Technology Exhibition (INSITE) in Johannesburg, South Africa. Local volunteers Neo Masilo, Sipho Dladla (one of the youth from Kliptown) and Lungi Siqebengu did countless demos.

14. Ed, with assistance from Jeremy Katz, worked on the Fedora desktop project, and continued project planning with Kim Quirk and the Red Hat team. He also gave a software presentation to the Cambridge Learning Workshop group, and otherwise continued working up to speed on OLPC technologies, as well as getting to know the development team.

15. Deepak Saxena has been attending the Linux Plumber's Conference in Portland, OR. Deepak and Chris Ball are presenting a talk on "OLPC Power Management Challenges" to get feedback and ideas on how to implement our goals. At the conference, there were extensive discussions of UBIFS with its developers. He will be testing UBIFS very soon. The Linux USB stack currently dominates our resume time. At the session on power management we learned of a patch that may remove most of this delay and Deepak will also test it as soon as possible.

16. Seth Woodworth continued working on the XO/Sugar manual and Help activity to be released along with 8.2. Seth started his half time work this week as a part-time sysadmin, worked on familiarizing himself with the infrastructure of the OLPC network and did some initial work in diagramming internal and external services. And Thursday he participated in Sloan's Convocation where he demonstrated the XO as an example of MIT innovation in sustainabile technology.

Collaboration

17. Sjoerd Simons worked on fixing Telepathy-Salut bug #8441, which is a release blocker for 8.2.0. Guillaume Desmottes reviewed the patch, backported it to the OLPC package, tested it on Collabora's XO testbed and released Salut 0.3.5. He also tried to reproduce #7972 but wasn't able with the new patched Salut. A fixed Salut package is now available in Joyride. We hope it will move to the 8.2.0 builds soon.

18. Guillaume also worked on the last two collaboration bug blockers for 8.2. He can't reproduce #7972 with the new patched Salut. He wrote a new tool for OLPC-Netutils called Sugar-TP (#8507), which can be used to debug presence bugs. He proposed a workaround for eJabberd shared roster issues (#8444). Finally, Guillaume started to audit Presence-Service in order to investigate possible alternatives to this component.

19. Robert McQueen has gone back to Process1 and asked them to address the stability problems with the eJabberd server, which is the component used in the collaboration stack. The main issues that need to be addressed are the continued crashes (#5313) and presence issues (#6884)

Testing:

20. Mel joined the team full-time as a Support/QA engineer on Monday and tries to keep a daily log at http://blog.melchua.com/category/olpc/. This week was spent catching up and testing 8.2-760, mostly with connectivity and verifying that upgrading from builds out in the field (656, 703, 708) doesn't break things in horrible ways.

Currently Mel is working on verifying/closing fixed blockers in http://dev.laptop.org/report/33, making a procedure to test memory leaks, and finding a way to easily get test case coverage/completion/pass stats as we work with Kim's new test case management/results reporting system.

21. Upgrade testing from 703 and 708 to 8.2-760 went smoothly, though upgrading from 656 to 760 presented some issues related to updated activities. Collaboration between laptops connected to a school server (25-laptop testbed) worked problem-free for many hours, but on a mesh generally we started seeing problems after only two hours. We have not moved to the new test facility with low RF noise, so we are not able to isolate the RF-related problems yet.

22. The QA team got a valuable addition this week - Mel Chua, who started on Monday. The team's (Joe Feinstein, Frances Hopkins and Mel Chua) main task of the week has been to test the build 8.2-760 that probably is just one build (future 761) shy from becoming a real release candidate.

An upgrade from 8.2-759, as well as from 703 and 708 to 8.2-760 went smoothly, though upgrading from 656 to 760 presented some issue related to updated activities.

Collaboration between laptops connected to a school server (25-laptop testbed) worked without a problem for a long while (more than 24 hours). Collaboration between laptops over the mesh network (10-laptop testbed) worked smoothly for up to two hours. Then some of the laptops eventually stopped collaborating with others, the Write activity stopped working, and the Record activity running in some of the machines presented problems, resulting in inability to reboot the machines in the "normal" way.

We also timed the "battery life", while discharging batteries for Richard Smith to test a multi-battery charger.

And, as usual, we have been regression testing fixed bugs and closing (or reopening) tickets.

Support/Sysadmin

23. Reuben Caron worked with the Learning Team to help prepare things for the Learning Workshop this week, including: setting up a school server

for them, registering ~25 XOs on the School Server and tested collaboration, and providing them with recommendations for a customized key. He worked with Kim Quirk and Greg Smith to modify several presentations and create a presentation entitled "Country Technical Support" and presented it at the Learning Workshop. Reuben also helped troubleshoot an issue with an XO in Ethiopia and met with a Learning Team member in Rwanda and attended a meeting regarding Nigeria to discuss deployment plans.

24. Henry Hardy reports that the OLPC Volunteer Infrastructure Group meets weekly and is working on recruiting for help with our RT system, Trac, and the build systems. Transcripts and discussion can be found at: http://wiki.laptop.org/go/OLPC:Volunteer_Infrastructure_Group

The machine mock.laptop.org was down Saturday, Sept 13, 2008 from approximately 04:00 to 19:30 EDT. Cause is unknown, but it is believed to be possibly power-related. There is no apparent loss of data or security exposure. http://rt.laptop.org/Ticket/Display.html?id=20643 All other monitored systems report 100% uptime.

25. Adam Holt reported on the Weekly Community Call, Sunday 4PM: http://wiki.laptop.org/go/Support_meetings, where Erik Garrison reported on Peru & Uruguay's deployments & challenges and SJ Klein helped us begin a potential ground-up redesign of the struggling Contributors Program

Adam also worked on G1G1 Past: escalated customer service; closing out universal RMA policy confusion, refunds, loud donors; Canadian customs errors, etc; and some actual Tech Support too! G1G1 Future: RT overhaul to begin w/ Adric & Henry); post-USA G1G1 countries prep; discussions w/ OLPC France, considering Canada & Europe fulfillment; manuals pre-prep, PR pre-prep, etc

Adam Hold also worked on repair Coordination, facilitating shipment & financials w/ iLoveMyXO.com, community repair escalations after laptops lost, serial adapter shipments to .MT.US & .NL and Canadian repair center transhipments

26. Richard, Paul, Ed and John Watlington worked on prioritizing EC software feature work for releases beyond 8.2. A list with priorities was produced and will be added to the 9.1 wiki list soon. A few EC diagnostic OFW changes will also be proposed for inclusion into 8.2.1 firmware, so that loading batman.fth in the field for battery diagnostics will not be necessary.

27. RCAL did several drop tests with the prototype units, looking for ways to keep the power supply PCB from cracking and breaking when subjected to large shocks. Eventually they found a series of modifications and added supports that they believe will allow the power supplies shipped inside the unit to survive most impacts. RCAL has shipped two units to OLPC. One unit had a power supply

inside with the shipping modifications. Two more power supplies were shipped separately in extra packing.

28. Richard spent most of the week playing with the two multi-battery test units. Unfortunately, only one of the power supplies survived shipping. The working unit will be available for general purpose use just outside John's office at 1CC, starting next week. There will be a box for empty batteries and one for full batteries. When you deplete a battery, come get a fresh one. When the second unit is fixed it will be used for further firmware development.

29. The power supply vendor had their mechanical team look at the breakage problems and they introduced a series of changes that they feel should solve the problems. A test power supply has been built and is undergoing drop and vibration testing at the Taiwan design center.

Shipping Lithium Batteries:

30. On October 1 new DOT regulations and restrictions on shipping lithium batteries take effect. Richard reviewed the new regulations. He does not as yet have the exact specification from BYD on the amount of lithium used in our battery. But based on the calculations used in the new regs, it appears that the XO LiFePO4 battery will not be restricted from air travel, as long as you don't carry a bunch of them. Eight grams of Lithium is the limit.

Using the metric, Richard estimates our batteries at about 1g. While most oft his is just a logistics issue for Quanta and Brightstar, some repair centers were concerned about sending and receiving bulk shipments of Li-based batteries. Shipments of more than 12 batteries in a single box do fall under the new regulations and must be specially-labeled to show they are restricted from air travel. Bulk shipments of batteries may also require the shipper to set up a hazardous materials agreement with the shipping company.

Firmware:

31. It was discovered last week that Open Firmware 2 (used in the current q2e series of firmware releases) did not support our pre-production B2 laptops, and will "brick" them. Please do not install recent software builds on these machines until firmware Q2E18 or later has passed testing.

32. Mitch and Richard were busy with several incremental firmware releases made to fix bugs found in wider testing of the Q2E1x firmware. The end result was Q2E17 which is in 8.1.3. The inclusion into the stable release of 8.1.x was due to the need for a released firmware that can properly detect a C3 PCB when they start coming off the manufacturing line. Mitch released Q2E18 to testing this week.

Gen 1.5:

33. The desire for more non-volatile storage in future versions of the XO has OLPC pushing the limits of NAND Flash technology. For reasons discussed in earlier Community News, we are looking at devices that transparently perform a number of the functions currently provided by software running on the main processor. There are serious questions about the suitability of these devices for the XO, as they are generally designed for uses (such as storing large amounts of multimedia) with different access characteristics and tolerance to errors than the primary storage for a laptop.

34. Mitch has been working on support for one of these devices, Toshiba's LBA-NAND, in both OFW and Linux. John has laptops with a 4GB version of this device in Cambridge, and worked with Mitch on test setups for LBA-NAND testing. There are two such test setups: one is a complete OLPC OS installation that runs from LBA-NAND, and the other a stripped-down Linux (kernel + "busybox") that runs entirely from RAM, letting you access the LBA-NAND as a mounted volume. Samples of similar devices (eMMC) from three other vendors should arrive in the next week, and will undergo the same testing. We hope to qualify at least one vendor as acceptable for our future hardware.

Wireless:

35: Ricardo and Javier worked on testing the WPA fix (#7825) and on ironing out remaining issues with debugging information and association retries. The current fix increased the probability of a successful WPA-PSK association dramatically.

36. Ricardo worked on revising our ring transfer test setup to incorporate multiple access points. (A ring of XOs, where each XO transfers large files from and too its neighbors using both Infra and Mesh interfaces concurrently).

37. Walter Bender's Sugar digest is available at
http://lists.sugarlabs.org/archive/iaep/2008-September/001594.html

From the Field

Lebanon: Matt Keller attended a moving ceremony in South Beirut commemorating the September 17, 1982, slaughter of a thousand or more Palestinian refugees, many of them children, at the Sabra and Shatila camps. Local leaders this year brightened the otherwise somber remembrance by also passing out 400 XOs, all donated by OLPC, to children living in the camps. They attend a school operated by the United Nations Relief and Works Agency (UNRWA). The deployment is being managed by an NGO called the Sabra-Shatila Memorial Scholarship Fund, which is scheduled to buy an additional 800 laptops. Matt's report:

“OLPC was the star of the event. Roughly 3000 people attended, including many members of the press, local politicians, and UN officials. Among them was the mayor of South Beirut, with whom I spoke. ‘The American government sends bombs to kill the innocent,’ he said, ‘and the American people send us computers for our children. We are very grateful to OLPC. This means opening up the world to our children.’ It was a fairly intense moment.

Unpacking the XOs.

“The children themselves were simply ecstatic. The thought that they were getting these laptops was almost too much for them to grasp. In fact, it came close to actually being too much. People began grabbing and pushing. Some adults tried to make off with laptops. But order was restored by security, and the would-be thieves were stopped at the gate.

“I also met with Dr. Ghinwa Jalloul, one of only six women in the Lebanese parliament, and chair of its IT committee. After two hours of discussion, we decided to work together to bring the XO to the children of Lebanon. The question, as always, will be funding. But this marks the beginning of what could be an excellent partnership.”