# Community News

A weekly update of One Laptop per Child   October 5, 2008

Rwanda officially launched of their laptop initiative last week. President Paul Kagame presided over the ceremony in conjunction with Education Minister Théoneste Mutsindashyaka. The event was attended by the Rwandan prime minister, the supreme court's chief justice, the entire cabinet, and leaders from civil society and the NGO community.  Five hundred students and their teachers from the first laptop schools also were on hand. President Kagame, Minister Mutsindashyaka, Nicholas and David Cavallo spoke to the gathering. Kagame committed his office to bringing laptops to every primary school child in the country.



Nicholas and President Kagame with the children.

A highlight for the children came when they lifted their XOs to take pictures of the president and discovered that they could also frame themselves into the shots, so that they would appear in the picture with Kagame.

Afterward, the Rwandan core team, along with Juliano Bittencourt, Brian Jordan and David, led a workshop. The students developed projects depicting their own visions for What Rwanda will be like in the year 2020. For the most part, they programmed in Scratch, using images they photographed, downloaded or drew. The adults were amazed by the kids' visions, and by how much they were able to construct in a very short period of time. The president's science and technology advisor was bowled over

by their prowess, imagination, and strong optimism for the future, including their own roles in it.


At a workshop.

The Rwandan core team and steering committee participated in a separate workshop. David and Juliano made presentations, as did Richard Niyonkuru, the Rwandan government OLPC coordinator, Guy Serge Pompilus, the Haitian government OLPC coordinator, Tony Earls and Maya Carlson of Harvard School of Public Health and Bruce Baitke of Green WiFi.

David and Juliano also spoke before a session of the East African Legislative Assembly, which was meeting in Kigali. They found tremendous enthusiasm among the parliament members. Several made strong commitments to bring OLPC to their countries. A few of them visited the Kakugu laptop school in Kigali the following day, which prompted further excitement.

A day later, under the headline, "EAC MPs Want OLPC Adopted in All States," the *New Times* of Kigali reported that delegates attending an East African Community inter-parliamentary relations seminar in the city called for adoption of the OLPC program by all five EAC members: Tanzania, Burundi, Kenya  and Uganda, as well as Rwanda. We applaud their excellent judgment.

**Technology**

Starting October 13, all G1G1v2 XOs will be manufactured with release 8.2. The image needs to pass the final Quanta tests next week. If no issues arise, the release is final. Congratulations and thanks to everyone who worked so hard to make this happen! Release party plans are in the works.

The entire software development team continues to focus on the completion of the 8.2 release effort.  The final work consists of significant testing, especially unstructured testing to identify potential problems in unexpected areas.  This testing does tend to set off some false alarms as the team revisits features that haven't been examined recently!

The team also began discussions on the structure and management of our future releases, especially the next minor release – 8.2.1 – that will focus on priority bug fixes, and the next major release – 9.1 – with important feature enhancements.  As part of those discussions we're trying to expand our release timeline to include additional releases so we can better coordinate the work we need to do with our twice-yearly major release plan.con

1. Greg Smith says we will spend the next week finalizing the documentation (e.g. http://wiki.laptop.org/go/Release_Notes/8.2.0 ), updating the wiki and preparing the release announcement. He has also kicked off release planning for 8.2.1. The current plan calls for a small maintenance release in November (subject to change). Targets for bug fixes and deployments are now being negotiated.

Release 9.1 planning is also picking up. The goal is to agree on target features and major areas of work by the end of October.

Testing:

2. Joe Feinstein, Frances Hopkins, Mel Chua, Reuben Caron and Kim Quirk as well as many community developers and volunteers tested the final candidate builds this week for Release 8.2. Tests included laptop-specific features, bug fix verification, and system level testing with 44 laptops connected and registered to a school server. The ECO and final paperwork are finished for approval this build. Next week, we will continue with documentation and larger system tests in parallel with manufacturing final test.

Support:

3. Reuben worked with the Birmingham deployment as they prepare for their upcoming distribution of 14,000 XOs to 37 schools. Among other tasks, he helped them troubleshoot a production XS.4 installation. Reuben also worked on reviving and updating Jabber.laptop.org which he hopes will be operational soon.

4. Adam Holt and Eben Eliason finalized changes for the stuffer sheets that have been updated for this year's G1G1 program. Adam and Mel are putting the finishing touches on how to upgrade to the latest 8.2 for the Release Notes.

5. Aaron Royer, Seth Woodworth, SJ Klein, and Kim Quirk are exploring ways to involve the community in creative banners, ads, blogs, and informal press releases to help get the G1G1 message out this year: *Give a laptop. Get a laptop. Change the world*. Seth is pulling down images and video from our creative partners (eleven) and media from our

deployments as well as our community (photographer Mike Lee and others). Soon most of this material will be made available to the community under open license (CC) to remix their own posters, flyers and other announcements about G1G1. See http://wiki.laptop.org/go/Community_media for more information and to see some of the work.

6. Over the last two weeks, Media Modifications updated the Sugar Almanac (http://wiki.laptop.org/go/Sugar_Almanac) with working code examples on the use of Gstreamer for audio and video playback, how to track the mouse, and how to register your activity to open different mime types. Faisal Anwar continues to document best practices for using the presence service. He answered developers' questions such as: How do I setup a D-Bus Tube? How is data shared between activities through a D-Bus tube? He is preparing entries about Stream Tubes based on working code developed and tested on XOs. Please continue to contribute to the Almanac, a resource which shows how to put the right pieces together to build great sugar activities!

SysAdmin:

7. Henry Hardy reports that we had 22,000 unique visitors to wiki.laptop.org on the 28th and 29th of September. This, and a bug in a newly installed wiki extension, caused serious performance issues on the wiki and affected other services such as web servers and email hosted on pedal.laptop.org. Access from the largest bloc of Uruguay addresses was temporarily shut off in consultation with Emiliano and his team while we worked on a solution.

Full service was restored on Thursday, October 2. C. Scott Ananian built a squid reverse proxy server on weka.laptop.org which has led to greater efficiency in handling wiki requests. Scot, along with Michael Stone, Erik Garrison and Chris Ball also devoted substantial efforts to testing, organization, diagnosis, and bug-fixing work for the 8.2 release. Some individual investigations were done into post-8.2 release work.

XS School Server Software:

8. Martin Langhoff continued work on installation and configuration of Moodle on the XS school server. Douglas Bagnall continued work on characterizing the performance and capacity of the Ejabberd component, an important step for planning larger school deployments.

Sugar / Activity Software:

9. Sayamindu Dasgupta spent a significant part of this week isolating and fixing a few bugs in the language pack builder. Thanks to the members of the localization team for the testing they have been doing with the packs. A new effort to translate Sugar into Swedish has started. Thanks to Mattias Ohlsson for taking the initiative. Sayamindu also worked on the Khmer keyboard layout, trying to understand its special features, and figuring out the changes that are needed in the various OLPC packages in order to

support the layout completely. He also added the Moon and PlayGo activities in Pootle so that they can be translated by our translations team. During the weekend, Sayamindu worked on an Image Viewer activity with basic zoom/rotate capabilities. The first release of the activity is available at http://dev.laptop.org/~sayamindu/bundles/imageviewer/ImageViewer-1.xo He also helped Kushal Das, a volunteer from Pune, India get started in Sugar actvity development. Kushal has expressed interest in maintaining the Jukebox activity in his blog post (http://kushaldas.in/2008/10/03/want-to-play-your-favourite-songmovie-on-olpc/).

10. Simon Schampijer worked on the move to gconf to store Sugar settings. Memory consumption on the XO looks good from a first glance. The old profile will be converted on update and the old profile API will be kept around during the transition phase.

[1] http://www.gnome.org/projects/gconf/

11. Marco Pesenti Gritti started to work on the sugar shell refactoring for 0.84. Lots of code cleanups and some fixes. The buildbot is being very useful for this work, as it keeps complaining about the things as we go. Marco also met with Benjamin and Riccardo about the icon caching strategy, we are considering several approaches, which has potential to consistently improve Sugar graphics performance. He started reviewing Tomeu simple datastore and had several conversations around Journal design. In parallel he kept an eye on 8.2 release blockers, in particular he fixed a CPU "leak" for each activity that was opened and then closed. Finally he continued to debug Browse memory usage and found that there is no regression compared to Update.1, which is a start.

12. Tomeu continued work on the datastore replacement, basing on good feedback from Benjamin Schwartz and Marco Pesenti Gritti. The design has been further simplified, contributing greatly to increased robustness. Some discussion has started about the convenience of adding the notion of versions to the Journal for the next release and the different ways of doing so.

13. Eben Eliason spent Monday working with Adam Holt et al. to finalize the design and copy for the instructional insert and letter, and produced final drafts of the documents ready for print.  He then participated in meetings regarding the consolidation of the OLPC websites and their re-envisioning as both highly visual and dynamic spaces designed to attract the attention of casual browsers and potential G1G1 participants.

Eben also continued to refine goals and designs looking forward to 9.1, including in depth discussions of the Journal and Datastore, particularly with regard to versioning and tagging. He hosted another open design meeting which delved into the current ideas for the bulletin board activity and overlay activity chat, in attempts to determine what possibilities may exist for early implementations of these features.

5

12. Guillaume Desmottes tracked and fix memory leaks in Gabble's OLPC source code. The Gadget branch was finally merged to master. He discussed with Eben and Simon how Gadget should be integrated into Sugar. One of the missing feature of the current API was the ability to perform activity searches based on properties and participants at the same time. After some discussions with others Collaborans we agreed to refactor the Gadget/View API to use the recently merged Requests interface (aka the Requestotron). This should make the API more coherent with the rest of the Telepathy API and really more extensible for future features. He also made some improvements in Gadget and the sugar integration layer.

Walter Bender's Sugar Digest can be found at:
http://lists.sugarlabs.org/archive/iaep/2008-October/001950.html.

14. Erik Garrison spent the week researching post-8.2 work projects.  These include UBIFS testing, libertas thin-firmware based mesh networking, X composite, grab key functionality, and datastore and Journal issues.

Fedora Classic Desktop:

15. Jeremy Katz released an updated test build of the Fedora/XO image, based on integration with the F10 beta release.  This was a good step forward, but it also identified new and substantial issues. We're preparing for the launch of 100 or so volunteer testers next week to help accelerate the testing and development work on this project.

Open Firmware:

16. Mitch Bradley got multicast NAND updating to work directly from OFW (no need to boot a special kernel). This permits a deployment to simultaneously update a large number of laptops with minimal effort.  There's still a fair amount of work to do before it will be ready for prime time. Outstanding issues include performance, security, and the user interface.

New Touchpad:

17. Richard worked on support for the new keyboard controller, which was changed at the same time as the touchpad.  At first he believed that the EC was not going to be able to communicate with the keyboard controller while the main CPU was off.  This seemed to mean that to determine which keyboard controller was present required either Open Firmware modifications or more invasive EC code modifications.

However, at the end of the week Richard discovered while talking to John Watlington that some missed EC configurations were preventing the communication while the host CPU was off. No system firmware modifications will be necessary.

In the meantime, Mitch has released a new firmware (Q2E19) which will be used in the laptop prototype pre-build this coming week. We hope to have laptops with the new touchpads at 1CC in just over a week.

NAND Testing:

18. Testing of alternative solutions for increasing the storage on the laptops continues. This week John added four more laptops testing the Sandisk SD cards. These are so fast that they have already overtaken all other devices under test in the amount of data written to the device in an attempt to wear it out/generate errors. Console logs are being obtained from a kernel crash which has been occurring on laptops running JFFS2 (both build 8.2-760 and 656), to aid in debugging.

Networking:

19. Ricardo and Ashish debugged association issues that are manifesting in saturated spectrum conditions. They are currently testing potential improvements and the potential trade-offs involved with operation in normal spectrum conditions. Ricardo also worked on updating driver and firmware documentation on the wiki, and setting up his wireless test bed at UFF in Rio so that he engage the students there in XO projects. * Worked on diagnosis and tested possible fixes for current wireless issues: wpa, scanning and resets of the wireless system (#7825, #8666 and #8667).Ricardo updated some pages in the wiki regarding the wireless subsystem and projected a testbed for sparse network that is being installed at a University in Brazil (UFF)

Though we are convinced that the key installation time was the root cause for some of the association problems to WPA access points (#7825), there are still other less severe problems in associating. Currently, we're testing fixes for a scenario where that the scanning routine is failing (#8667) and investigating what may cause the wireless subsystem may fail under hostile spectrum conditions (#8666).

The UFF network testbed will study the (1) feasibility of a mesh network in connecting people in their houses and offices, (2) the effects of mobility, (3) validate connectivity models as the gateway mechanisms, like MPP or MAP, designed to connect XOs to a wired network and (4) will support a lot of student projects at the University.

20. Deepak Saxena attended an Embedded Linux Developers' Conference and gave a keynote on "Linux Power Management Challenges for the XO and Beyond."
http://dev.laptop.org/~dsaxena/conference_slides/mvista_vision2008_power_challenges.pdf

**And in Other News…**

Nikos Passalis, a senior at Neapolis High School in Thessaloniki, Greece, won the special EIROforum CERN award in the 20th European Union Contest for Young Scientists, which was held this year in Copenhagen. Passalis's winning entry was a

program that utilizes XOs to form distributed systems. According to the official contest site, the program's "most important features are: the remote control of the laptop's projects, its fully automated operations without involving the user, the great fault tolerance combined with self-fix features if a problem is detected and the smart energy management. The modifications to the computer's software are very few, so it is easy to use and functionalities are untouched. Also, this makes its application easier. Moreover, features like virtual partitions in Ram memory, buffering techniques, temperature monitoring, etc. were implemented in order to reduce the computer's hardware load to minimum and not affect its expected lifetime. Finally, the program was optimized in order to minimize the computer's load during its operation. "

Congratulations, Nikos.

More at http://www.eurocontest.dk/

Brian Berry sent a link to an early evaluation of the OLPC project in Nepal http://blog.olenepal.org/index.php/archives/321.