



One Laptop per Child Software Development

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Software Technologies

- Many technologies in one laptop:
 - Power Management
 - Mesh Networking/Collaboration
 - Sugar User Interface
 - Datastore and Journal
 - Security
- Infrastructure Support
 - School Server
 - WiFi



Power Management

- Available today:
 - Hardware ready for suspend/resume
 - Support for sleep on lid close or button
 - First level support for more aggressive suspend
 - About 4 hours of battery life during normal use
 - >14 hours of battery life in sleep mode
- Future:
 - Enhanced management for suspend/resume
 - eBook mode to >10 hours
 - Aggressive CPU suspend

Mesh and Collaboration

- Available today:
 - 802.11b/g via infrastructure access point
 - Small groups of simple mesh, WiFi school server
 - Collaboration in small groups
- Future:
 - Track 802.11s evolution, enhanced scaling, develop robust middleware/APIs
 - Corner cases - many students start up at once
 - Better sharing at Activity level

User Interface

- Available today:
 - Views: Home, Group, Neighborhood, Activity
 - Frame: People, Places, Objects, Actions
 - Emphasize collaboration and simplicity
 - Invite or share activities with others
- Future:
 - Continued performance improvements
 - Flesh out the concept of Groups or Friends
 - Support for other desktops (KDE, Gnome, Windows)

Datastore / Journal

- Available today:
 - How docs are created; by whom
 - Easy use; auto save
 - Chronological list of activities/objects
 - XO to XS backup for disaster recovery
- Future:
 - Scaling, integration with standard file views
 - Bulk file transfers, transfers outside of the Journal
 - Versioning, XO to XS backup general case

Security

- Available today:
 - Anti-theft of the delivery chain (one time activation)
 - Signed software (both OFW and OS)
 - Activities isolated from filesystem
- Future:
 - Activation lease management (time-limited)
 - Activity isolation from network
 - Activity signing, Identity authentication

XS School Server Software

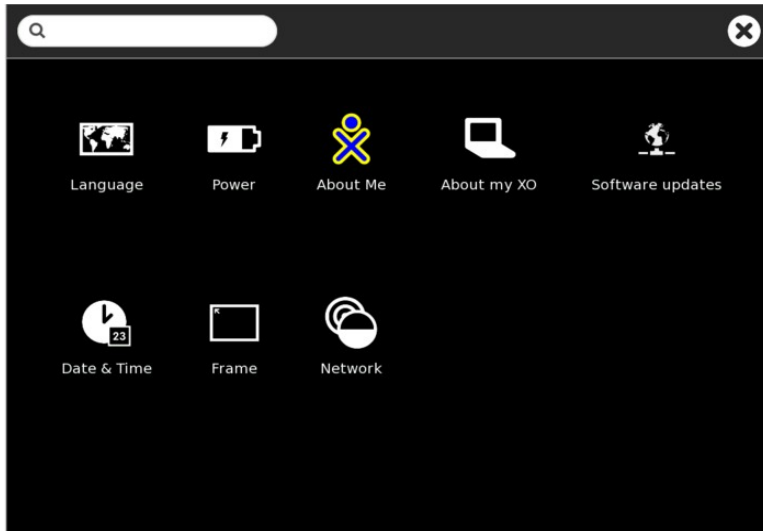
- Available today:
 - Fedora-based OS; standard services (DHCP, DNS, Apache, uplink)
 - Web cache, local content and upgrades for XOs
 - Presence server for collaboration
 - Registration and backup for XOs
- Future:
 - UI for XO backup/restore to XS
 - Moodle support
 - Remote management of XS
 - Filtering, Scalability

Broader OS Support

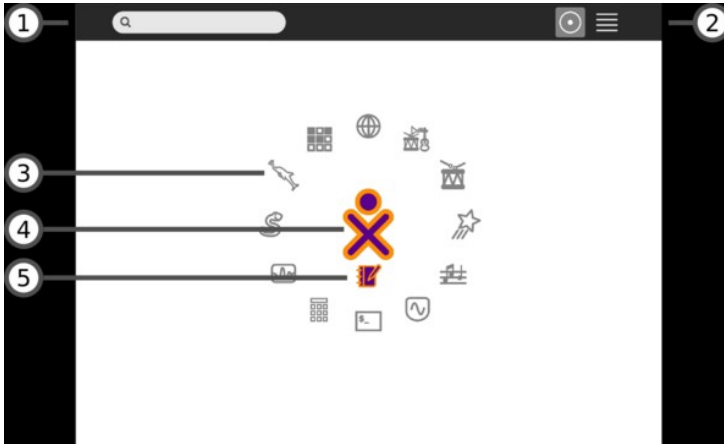
- Boot Sugar or alternative operating system
- SD card or USB boot support built in
- Provide users OS options beyond standard Sugar
- Two current OLPC activities
 - Fedora standard desktop support
 - Windows XP support on future hardware
- Community members working on Ubuntu, Debian, and other systems
- Reinforces XO position as general-purpose, versatile hardware platform

Top New Features in 8.2.0

Graphical Control Panel



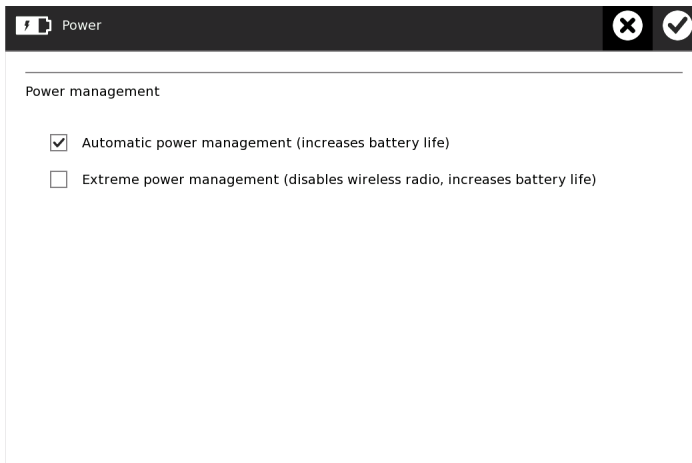
New Home View



1. Search for activities
2. Change view modes
3. Launch Activity and add or delete from favorites
4. XO icon brings up control panel
5. Activity with the focus

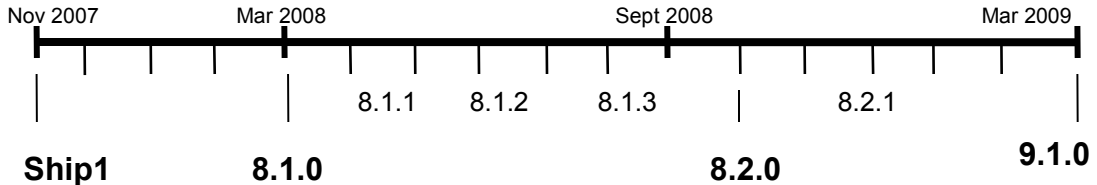
Longer Battery Life

Two power saving modes



1. Sleep mode dims screen and slows CPU on idle
2. Extreme mode does the same and shuts off wireless radio

Software Releases



- 8.2.0 – New languages, Activity updater, Backup to XS, Longer battery life
(Fedora standard desktop to complement this release)
 - Fedora desktop available this fall
- 9.1.0 – Focus on Reliability, Deployability and Collaboration
(Windows XP dual-boot to complement this release)

* Dates and feature sets of future releases subject to change