A Quick Guide to Sugar on a Stick, OLPC's Learning Environment for Children

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Abstract

This article describes Sugar, a learning environment for children. This guide was designed to be read by the Linux newbie. It incorporates information about the Home screen and its views; the Group screen; the Neighborhood screen; the Frame; the Journal; and My Settings (activities should be self-explanatory after this is read).

Contents

1 An Introduction to Sugar

The Sugar learning environment was designed with the child in mind. It relies on Python, PyGTK, the GIMP Toolkit[1] (GTK+), and the Advanced Linux Sound Architecture (ALSA). It does away with most traditional elements of a graphical user interface (GUI).

Linux (or *GNU/Linux*[2], as the author prefers to call it[3]) is the operating system that Sugar was initially written for. GNU/Linux is commonly downloaded in the form of a *distribution*, which adds the components necessary to make a complete operating system.[4]

Linux (as a kernel) was initially written by Helsinki graduate student Linus Torvalds in 1991 as a replacement kernel for MINIX computers. Today, it works as the kernel of a standalone operating system.

The specific distribution referred to in this document is Sugar on a Stick (to learn more about it, visit `http://spins.fedoraproject.org/soas/`). It is maintained by the nonprofit Software Freedom Conservancy member Sugar Labs[5] with help from the Fedora Project. Sugar was initially developed for the OLPC XO, but has since been

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[1]This name is outdated.

[2]In this name, the slash is *not* silent, and so is the "G" in "GNU" ("GNU" for "GNU's Not UNIX!").

[3]The author prefers not to use the "GNU/Linux" name to describe Linux distributions without any GNU components (Android being an example), or to describe Linux as a kernel.

[4]You may also download a bare Linux kernel from `http://www.kernel.org`.

[5]Sugar Labs spun off from One Laptop Per Child, which is also a nonprofit organization.

ported to other computers as a result of the existence of this distri-
bution.

2 Getting to Know Sugar

When you first start Sugar, you will be greeted with a prompt for
your name. Type your name (your real name is preferred), then click
"Next". Select your color (click on the icon to change it) and click
"Next" again. Then select your gender (the possible choices are male
and female), click "Next", select your age (the possible choices are
"0–3", "4–5", "6–7", "8–9", "10–11", and "Adult"), and then click "Done".
You will now end up on the *Home screen*.

2.1 The Home Screen

The Home screen can be arranged into two views: the *Favorites view*
and the *List view*. The keyboard shortcut for the Home screen is F3.
    Applications for Sugar (or *activities*, as Sugar calls them) are found
in icon form on this screen and may be launched by clicking their icons
once.
    To search for a particular item, type in the search bar at the top.

2.1.1 Favorites View

Figure 1: The Favorites view

The Favorites view presents you with a neat arrangement of all your selected favorite activities. (To select or deselect a favorite, use the List view, which will be described later.)

To enter the Favorites view, click the left icon on the top right of the screen. (It will be recognized herein as the *Favorites icon* from now on.)

In the center of the Favorites view is an "X" with a circle on top of it. This icon is called the *Learner icon* or *XO icon*. Hover over it and you will see the name you selected earlier. Right-click the icon and you will be presented with several options: to shut down the system, to restart the system, to open My Settings, or to register this computer with a school's server.

Below the Learner icon is an icon you can click to open the Journal, which will be described later.

You can choose from different modes of arrangement by hovering over the Favorites icon.

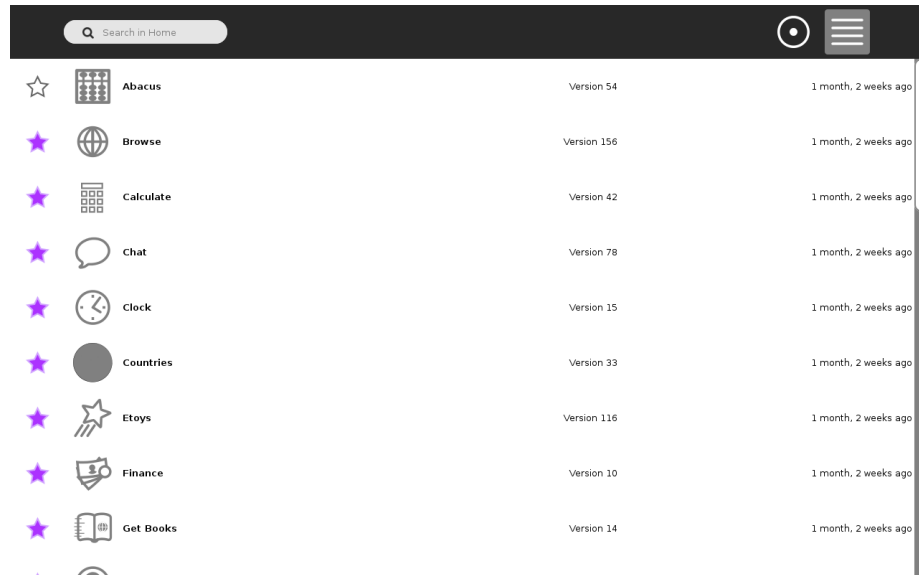The keyboard shortcut for this view is Ctrl+1.

2.1.2   List View

Figure 2: The List view

The List view presents you with an alphabetical list of all the activities you have installed, as well as their version numbers, whether they are in the Favorites view, and the last times they were updated.

To enter the List view, click the right icon on the top right of the screen. (The author will call that the *List icon* from now on.)

There is only one mode of arrangement for this view. `Ctrl+2` is its keyboard shortcut.
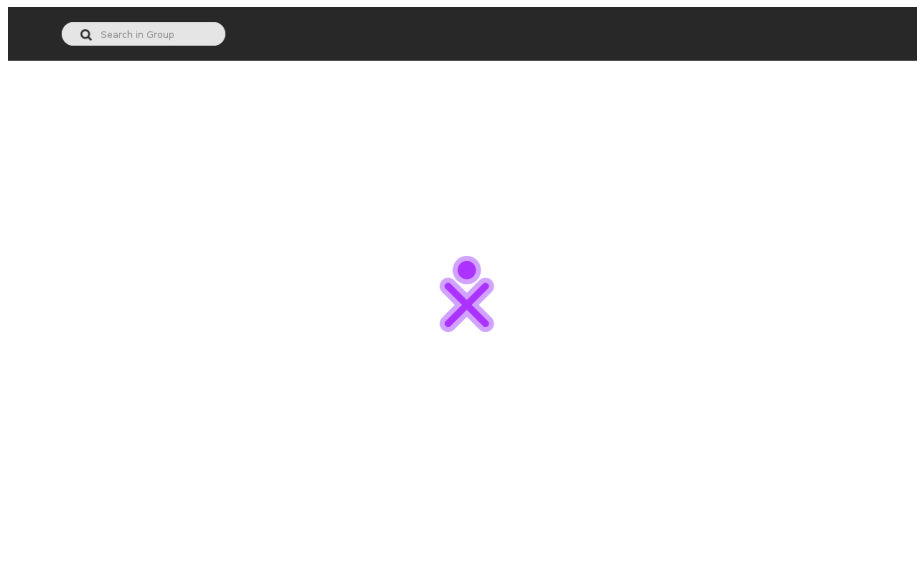
2.2   The Group Screen

Figure 3: The Group screen

The *Group screen* displays the icons for all the people you're friends with. Its keyboard shortcut is F2.

To search, type in the search bar at the top, just like you would on the Home screen.

2.3   The Mesh Screen

The *Mesh screen* displays the icons for all the people with XOs near you, as well as for all Wi-Fi™ [6] and ad-hoc networks. Its keyboard shortcut is F1.

To search, type in the search bar at the top, just like you would on the Home screen.
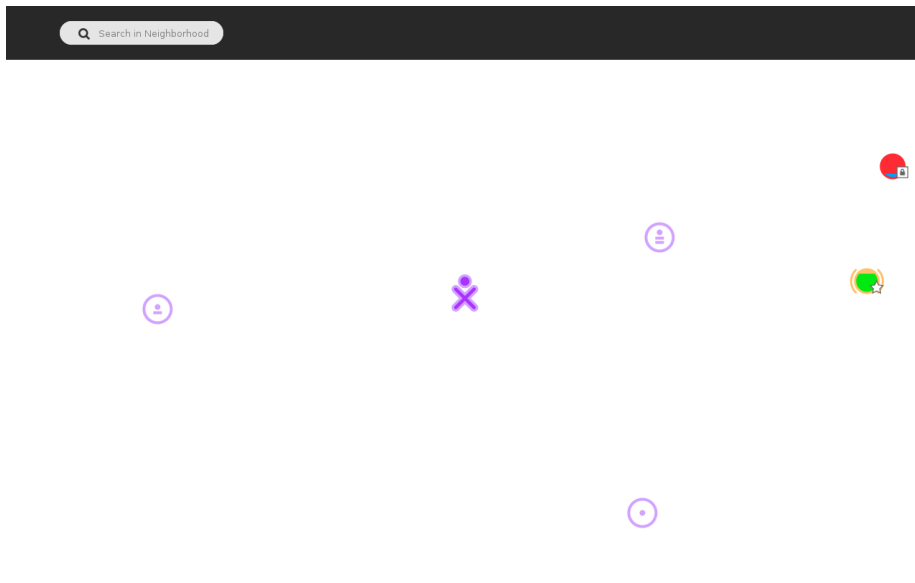
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[6]For "wireless fidelity".

Figure 4: The Mesh screen
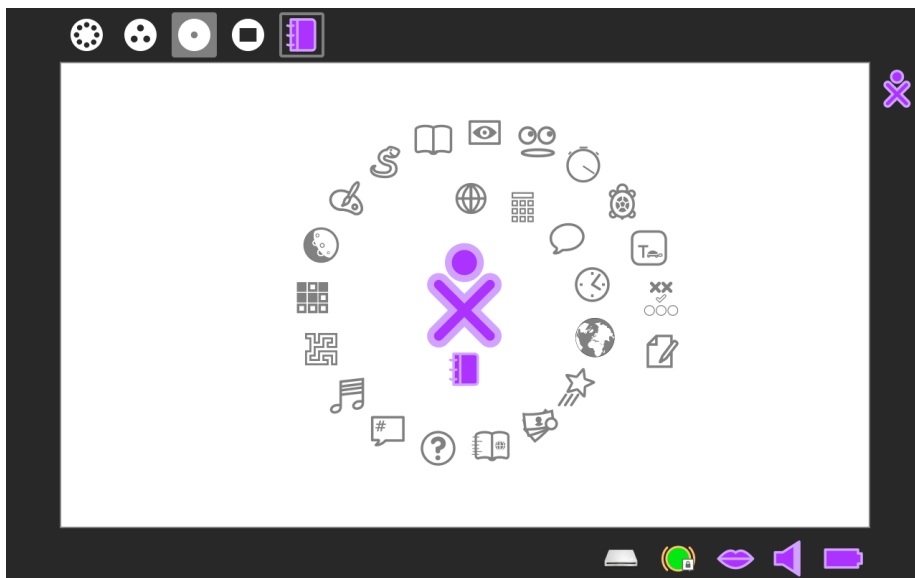
2.4   The Frame

Figure 5: The Frame

The *Frame* displays system status and Wi-Fi network signal range

as well as icons for you, the Neighborhood, Group and Home screens, and the Journal and all running activities. To access the Frame, move your mouse pointer to any edge or corner of the screen, or press F6.

2.5   Moving Between Activities

You may move between activities using the Frame or the keyboard shortcut Alt+Tab. You can return to the currently running activity using F4.
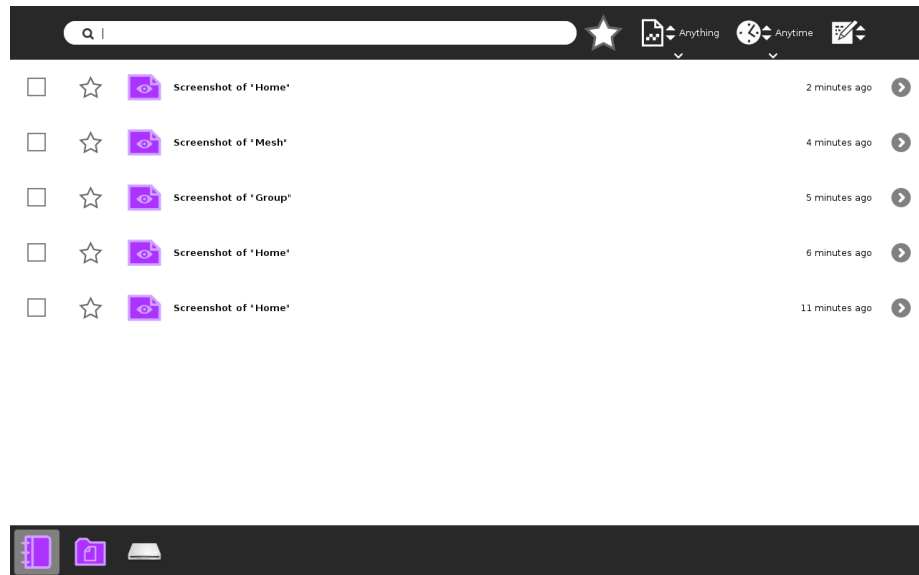
2.6   The Journal

Figure 6: The Journal

The *Journal* displays all the documents you have downloaded as well as the activities you recently ran. Its keyboard shortcut is F5.

To search, type in the search bar at the top, just like you would on the Home screen; you can also filter activities that are your favorites, as well as types of entries and times they were recorded, and you can also sort entries by the date they were modified, the date they were created, or their size.

2.7   My Settings

The *My Settings pane* is the control panel for Sugar. From it, you can access information about your screen name and color, your Home
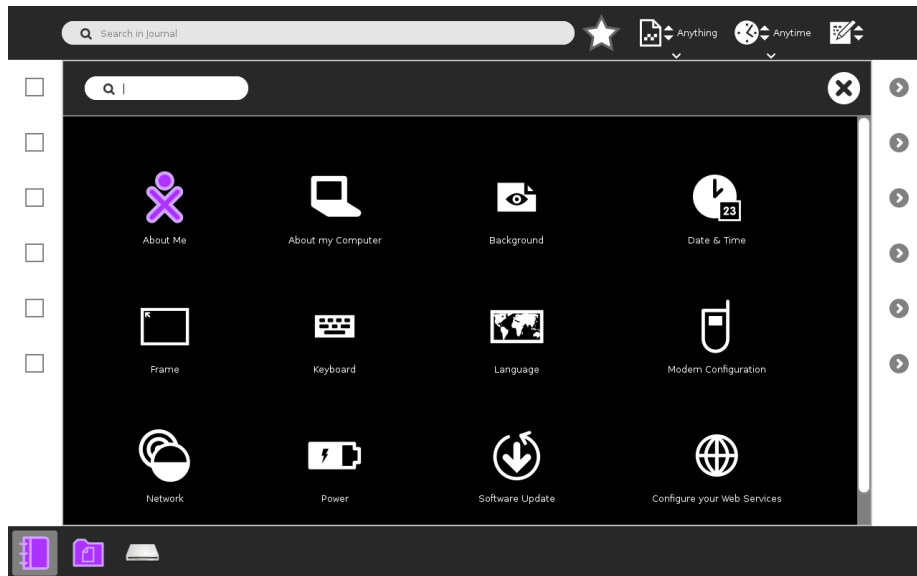
Figure 7: My Settings

screen background, your computer, the date and time, the Frame, your keyboard, the language, the modem[7] configuration, the network, activity versions, and your installed Web services.

3 Resources for Further Information

For information about	Visit this Web site
One Laptop Per Child	http://one.laptop.org
Sugar Labs	http://sugarlabs.org
The Fedora Project	http://fedoraproject.org
Sugar on a Stick	http://spins.fedoraproject.org/soas/

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[7]For "modulator–demodulator".