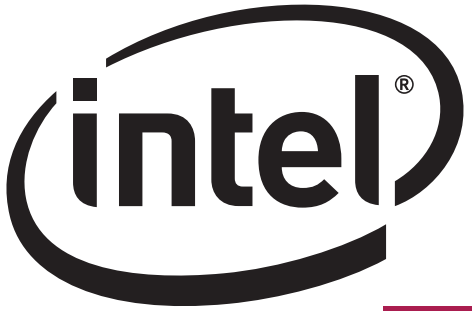

created in London

Hob 1.2 'Settings' dialogue

Designers
Belén Barros Pena

NOT A VISUAL REFERENCE

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Date	Page number	Description
2.02.12	n/a	Document created

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Set IMAGE_ROOTFS_SIZE and IMAGE_ROOTFS_EXTRA_SPACE 8
Exclude GPLv3 packages 9
Build external development toolchain 10
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BitBake and Make parallel threads 12
Download, shared state and mirror directories 13

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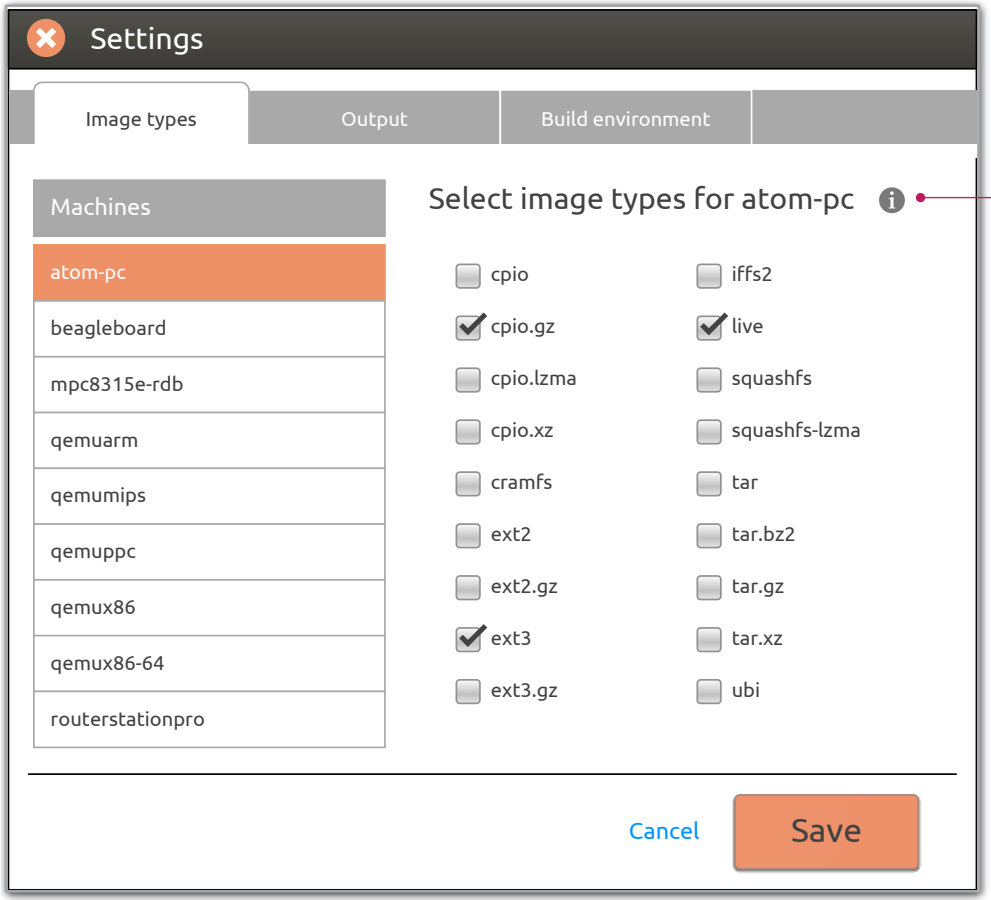

Click the information icon to display a 'bubble' with details about this 'Settings' option

I've organised settings into 3 groups:

- Image types
- Output
- Build environment

Each group is represented by a tab.

Each option in the Settings dialogue comes with an information bubble, represented by an information icon. On clicking the icon, the bubble displays a brief description of the option. The information is dismissed on clicking a close button in the bubble (note that, currently, the information bubbles work on hover, like tooltips).

This document includes the content of the information bubbles, which has been mainly sourced from the Yocto reference manual and the ref-variables.xml document. I would recommend get all content and labels in the Hob 1.2 design reviewed by the expert eye of Scott Rifenbark.

NOTES:

- Shane Wang has mentioned they'd like to add proxy settings to the Settings dialogue. I'll follow up with him to understand what information is required.
- I've removed the existing "Add your own variables" option. If the team considers this functionality necessary, I would recommend to include a list of the variables that can be set as part of the control.

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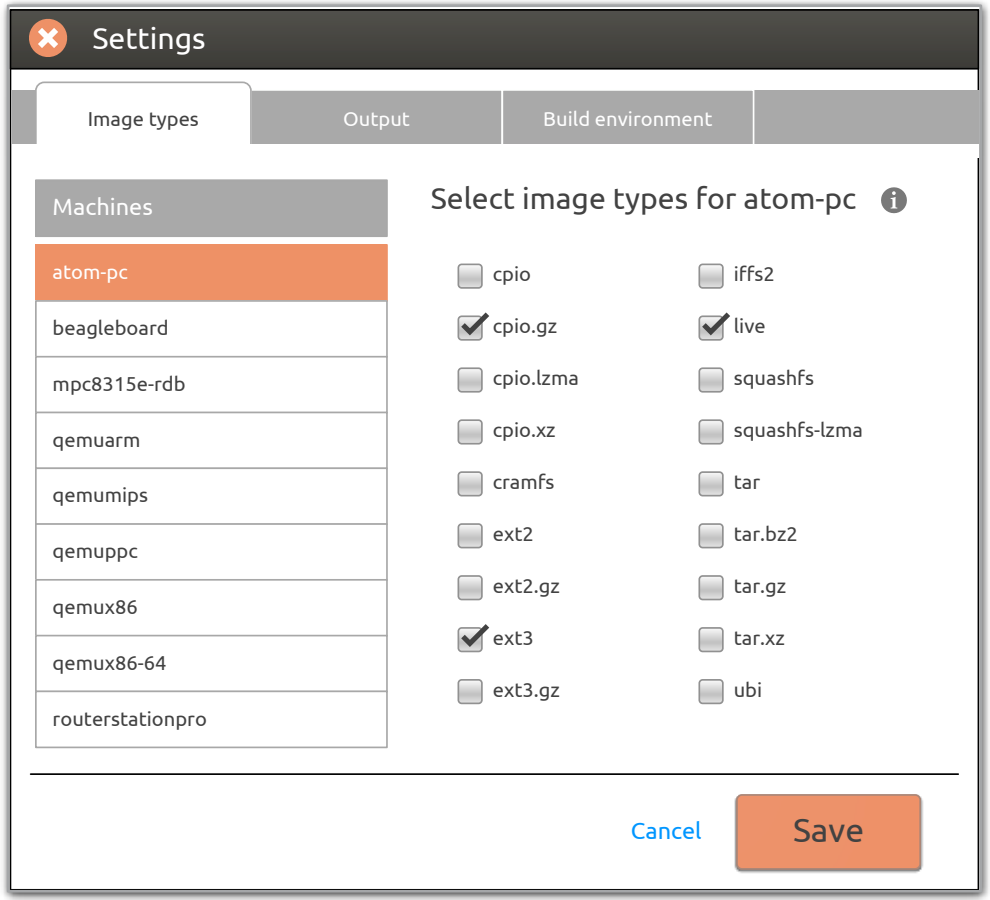
Hob 1.2 'Settings' dialogue
'Image types' tab



It appears to be some relationship between machines and image types, i.e. some image types do not make sense when applied to certain machines. For example, no live image will be generated for a qemu machine.

What this means for the interface is that image types must be set for each different machine listed within the 'Select a machine' combo box in the 'Image configuration' screen. Setting of image types takes place in the 'Image types' tab of the 'Settings' dialogue.

Each machine is represented by a vertical tab. Each image type is represented by a checkbox. For each machine, only "sensible" image types will be listed (e.g. the 'live' checkbox will not display for the qemu machines).

By default, selected image types for each machine will match the IMAGE_FSTYPES values specified in the machine.conf file.

Information bubble content

"Set the root file system formats you want to create during the build process"

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Hob 1.2 'Settings' dialogue
'Output' tab

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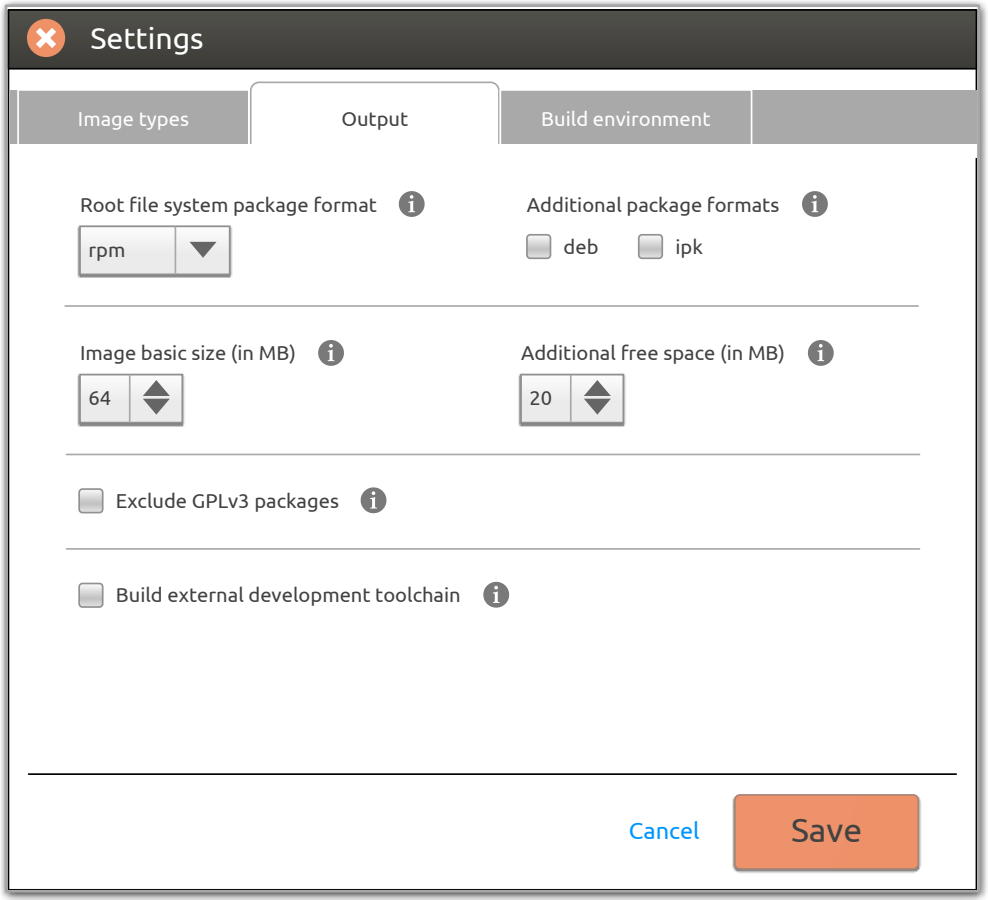

The 'Output' tab includes the following options:

- Select package formats
- Set IMAGE_ROOTFS_SIZE and IMAGE-ROOTFS_EXTRA_SPACE
- Exclude GPLv3 packages
- Build external development toolchain

See next pages for a detailed description of each option.

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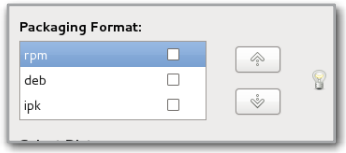

The existing settings controls let me deselect all packaging formats, which causes errors.

1 Default state: rpm selected for root file system

Root file system package format

rpm

Additional package formats

deb ipk

2 Combo box elements

Root file system package format

rpm
deb
ipk

ge formats

deb ipk

3 deb selected for root file system

Root file system package format

deb

Additional package formats

rpm ipk

4 ipk selected for root file system

Root file system package format

ipk

Additional package formats

rpm deb

The PACKAGE_CLASSES variable takes "one or more arguments with the first argument being the package manager used to create images". The existing controls allow users to set no arguments by deselecting all packaging formats, which causes errors. Also, the fact that the order of packages determines the format used to create the image is not explained.

The interface must ensure that:

- the PACKAGE_CLASSES variable is always set to one or more valid arguments
- users can explicitly indicate which packaging format they want to use to create the image

In order to do so, I've split up the package format selection into 2 steps:

Step 1 - Select the package format for the root file system. This step uses a combo box with 3 elements: rpm, deb and ipk, with rpm as default value.

Step 2 - Select additional package formats. This step uses 2 checkboxes, each of them set to the 2 package formats not selected in the combo box. This means the checkbox labels change depending on the value selected in the root file system combo box. Default state is both checkboxes not selected, with labels 'deb' and 'ipk'.

Information bubbles content

Information bubble content for 'Root file system package format': "Sets the package manager used to create your images"

Information bubble content for 'Additional package formats': "Sets which other package formats are generated as build output"

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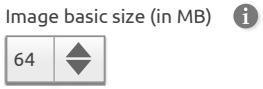
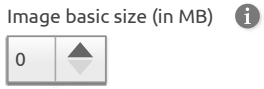
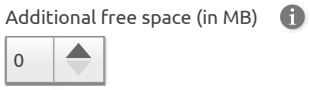
1 IMAGE_ROOTFS_SIZE default state



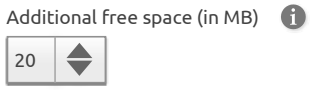
2 IMAGE_ROOTFS_SIZE set to 0



3 IMAGE_ROOTFS_EXTRA_SPACE default state



4 IMAGE_ROOTFS_EXTRA_SPACE value > 0



UI control: both settings use the GTK spin button.

Valid input: numeric only. If invalid input is entered, the controls should revert to their default values.

Maximum values: do we need a maximum value for these settings?

Minimum values: '0' for both settings. When the value is set to '0', the down arrow of the spin button become inactive.

Default values:

- '0' for IMAGE_ROOTFS_EXTRA_SPACE.
- I am not sure what the default value should be for IMAGE_ROOTFS_SIZE (in the last version of Hob 1.2 it seems to be '64')

Information bubbles content

Information bubble content for 'Image basic size (in MB)': "Sets your requested size for images. It's taken into account by the build system when determining the image size"

Information bubble content for 'Additional free space (in MB)': "Sets how much free disk space will be added to the image size determined by the build system"

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Just a checkbox set to not selected as default.

Information bubble content

"If you check this box, packages with a GPLv3 license will not be included in your images"

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1 Default state

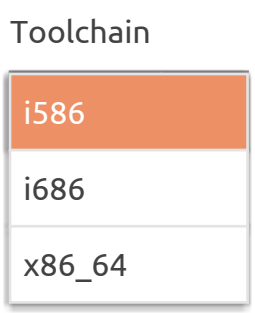
A checkbox set to not selected as default. When selected, a combo box displays for toolchain selection. The combo box has as items 'i586', 'i686' and 'x86_64'. The default value of the combo box is determined by tcmode-default.inc

Information bubble content

"Check this box to select a external toolchain to build"

2 Selecting the checkbox displays the 'Toolchain' combo box

3 'Toolchain' combo box items



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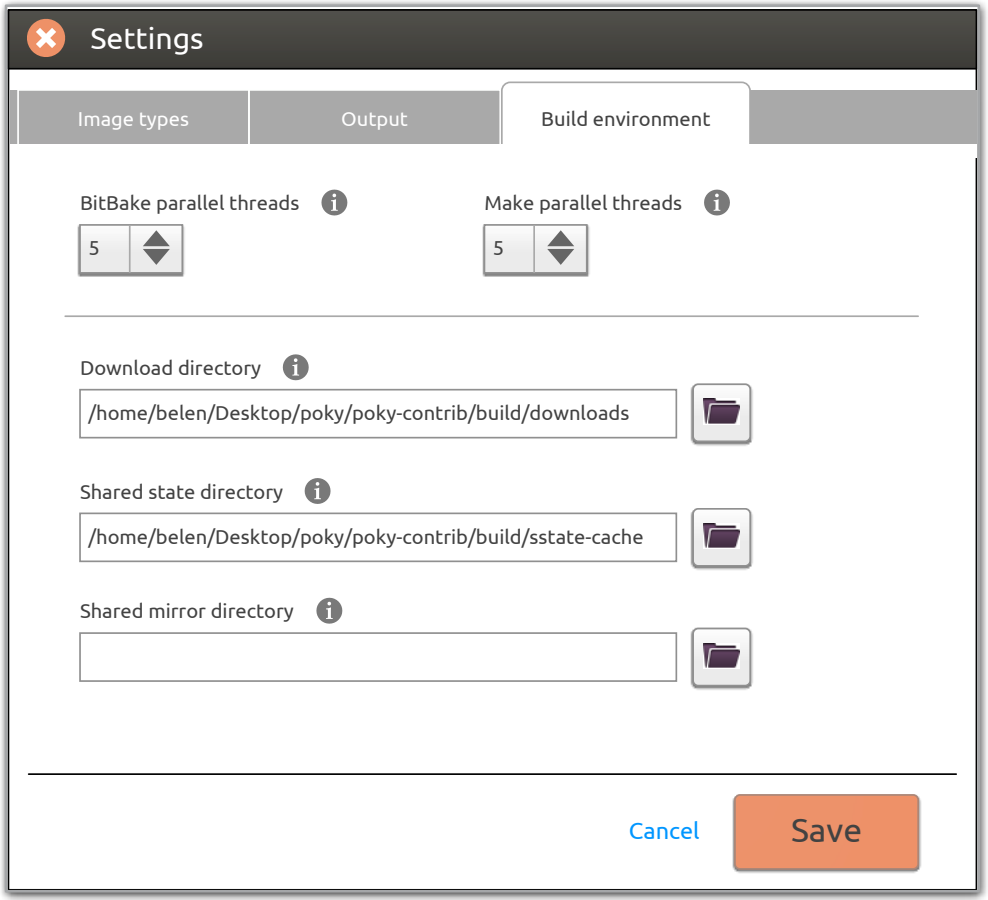
Hob 1.2 'Settings' dialogue
'Build environment' tab



The 'Build environment' tab includes the following options:

- BitBake threads
- Make threads
- Download directory
- Shared state directory
- Shared mirror directory

See next pages for a detailed description of each option.

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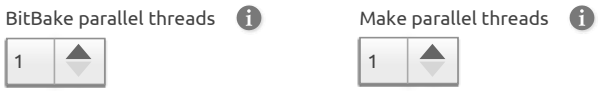
1 Default state

2 Minimum value



3 Maximum value

UI control: both settings use the GTK spin button.

Valid input: 2 digits only (the controls should not allow typing more than 2 characters). If invalid input is entered, the controls should revert to their minimum values. This approach should avoid problems when building in less powerful hosts.

Maximum value: 32. When the value is set to 32, the up arrow of the spin button becomes inactive.

Minimum value: 1. When the value is set to 1, the down arrow of the spin button becomes inactive.

Default values: it seems to be 2 in the existing version of Hob 1.2

Information bubbles content

Information bubble content for 'BitBake parallel threads': "Sets the maximum number of parallel threads BitBake can run"

Information bubble content for 'Make parallel threads': "Sets the maximum number of parallel threads make can run"

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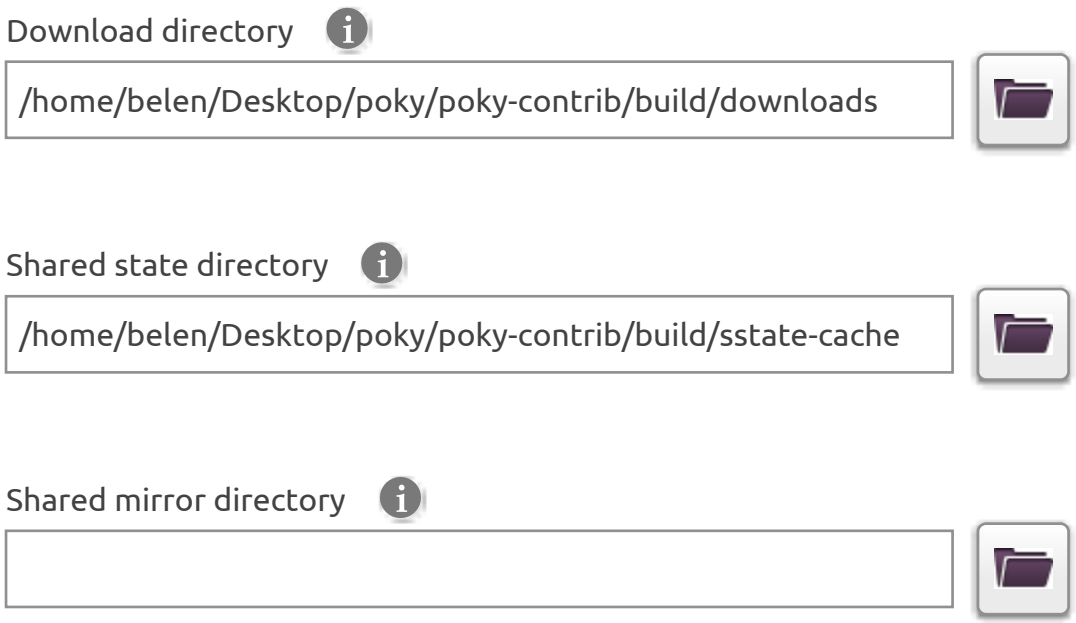
1 Default states



UI control: text field plus a file chooser button. The file chooser opened by this button should default to the Yocto root directory.

Default values:

- The download directory is set to 'downloads'
- The shared state directory is set to 'sstate-cache'
- The shared mirror directory is blank

Information bubbles content

Information bubble content for 'Download directory': "Sets the folder where all fetched sources will be stored"

Information bubble content for 'Shared state directory': "Sets the folder used for the shared state cache"

Information bubble content for 'Shared mirror directory': "Sets a prebuilt mirror for faster build speed. Enter the path to a local directory or a URI for a remote location "

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