Building meta-intel-iot-devkit on the CLI using SSTATE or git

Introduction

Building a full yocto image does not have to be difficult or take long, as we provide SSTATE packages which serve as a kind of "cache." This means you should be able to rebuild the image (maybe with a few of your own tweaks or packages) in a much shorter time. Obviously, any existing packages you change, along with any dependencies, will have to be rebuilt as well, but the SSTATE packages will cut down significantly on build times.

First to get the source distribution:

```
$ wget http://iotdk.intel.com/src/iotdk_src_140220.tar.gz
$ tar xf iotdk_src_140220.tar.gz
$ cd iotdk_src_140220/
```

Cloning the git repo (full source builds):

```
$ git clone git://git.yoctoproject.org/meta-intel-iot-devkit
$ cd meta-intel-iot-devkit/
```

If you build from the devkit-mwc branch in git, you will have to remove the "-locked" prefix to the distro name in your build/conf/local.conf source to enable the env vars to do the build:

```
$ source iot-devkit-init-build-env
```

Now you are in the build directory and can proceed with doing the build:

```
$ bitbake iot-devkit-prof-dev-image
```

If you do not want to resize your partition, you can extend the default "/" size here: scripts/lib/image/canned-wks/iot-devkit.wks

NOTE: Default images are for 8GB uSD cards which can be resized to as small as 1GB.

To create the full image:

```
$ wic create iot-devkit -e iot-devkit-prof-dev-image
```

Using the URL given by the "info" comment, write the image:

```
$ sudo dd if=/var/tmp/wic/build/iot-devkit-201403121112-mmcblk0.direct of=/dev/mmcblk0 bs=8M conv=fsync
```
Remove the uSD card (the right sync was done by the command above) and boot your **galileo** with this uSD card. Make sure you are using **Firmware 0.7.5+** and you should boot without any problem.
Using the Repository with IOTDK Builds
You can use the iotdk.intel.com package repository with your image. It behaves like a normal Linux* package manager but uses the opkg lightweight package manager originally made for OpenWrt. The packages themselves are .ipk packages and are very similar to debian packages. ipk packages are generated using bitbake. You can check all of the sources for the packages generated in the repository at http://iotdk.intel.com/src/iotdk_world_src_1.0.tar.gz. The packages available are a "bitbake world" build of our git repository.

To enable this feed, run the following as root on the device to create /etc/opkg/iotdk.conf:

```bash
$ for arch in all i586 clanton; do echo src/gz $arch http://iotdk.intel.com/ipk/$arch >> /etc/opkg/iotdk.conf; done
```

Then tell opkg (the package manager used in the DevKit) to update the available packages from the feeds:

```bash
$ opkg update
```

Now you can list all available packages:

```bash
$ opkg list
```

Upgrade installed packages:

```bash
$ opkg upgrade
```

Or install new packages:

```bash
$ opkg install eglibc-binary-localedata-en-gb
```

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