EXHIBIT 14

Initializing a Build Environment

The "Getting Started" section describes how to set up your local work environment, how to use Repo to get the Android files, and how to build the files on your machine. To build the Android source files, you will need to use Linux or Mac OS. Building under Windows is not currently supported.

Note: The source is approximately 2.6GB in size. You will need 10GB free to complete the build.

For an overview of the entire code-review and code-update process, see Life of a Patch.

To see snapshots and histories of the files available in the public Android repositories, visit the GitWeb web interface.

Setting up a Linux build environment

The Android build is routinely tested in house on recent versions of Ubuntu (10.04 and later), but most distributions should have the required build tools available. Reports of successes or failures on other distributions are welcome.

Note. It is also possible to build Android in a virtual machine. If you are running Linux in a virtual machine, you will need at least 8GB of RAM/swap and 12GB or more of disk space in order to build the Android tree.

In general you will need:

Python 2.4 -- 2.7, which you can download from python.org.

JDK 6 if you wish to build Gingerbread or newer, JDK 5 for Froyo or older. You can download both from java.sun.com.

- Git 1.5.4 or newer. You can find it at git-scm.com.
- (optional) Valgrind, a tool that will help you find memory leaks, stack corruption, array bounds overflows, etc Download from valgrind.org.

Detailed instructions for Ubuntu 10.04+ follow.

Installing the JDK

The Sun JDK is no longer in Ubuntu's main package repository. In order to download it, you need to add the appropriate repository and indicate to the system which JDK should be used.

Java 6: for Gingerbread and newer

```
$ sudo add-apt-repository "deb http://archive.canonical.com/ lucid partner"
$ sudo add-apt-repository "deb-src http://archive.canonical.com/ubuntu lucid partner"
$ sudo apt-get update
$ sudo apt-get install sun-java6-jdk
```

Java 5: for Froyo and older

```
$ sudo add-apt-repository "deb http://archive.ubuntu.com/ubuntu dapper main multiverse"
$ sudo add-apt-repository "deb http://archive.ubuntu.com/ubuntu dapper-updates main multiverse"
$ sudo apt-get update
$ sudo apt-get install sun-java5-jdk
```

Installing required packages

To set up your development environment, install the following required packages:

```
$ sudo apt-get install git-core gnupg flex bison gperf build-essential \
  zip curl zlib1g-dev libc6-dev lib32ncurses5-dev ia32-libs \
  x11proto-core-dev libx11-dev lib32readline5-dev lib32z-dev \
  libgl1-mesa-dev g++-multilib mingw32 tofrodos
```

Configuring USB Access

Under GNU/linux systems (and specifically under Ubuntu systems), regular users can't directly access USB devices by default. The system needs to be configured to allow such access.

The recommended approach is to create a file `/etc/udev/rules.d/51-android.rules` (as the root user) and to copy the following lines in it. must be replaced by the actual username of the user who is authorized to access the phones over USB.

EXHIBIT 491
WIT: Landau
DATE: 4/14/11
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