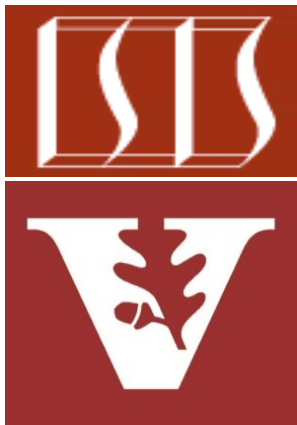# Android App Components:
Module Introduction

Douglas C. Schmidt
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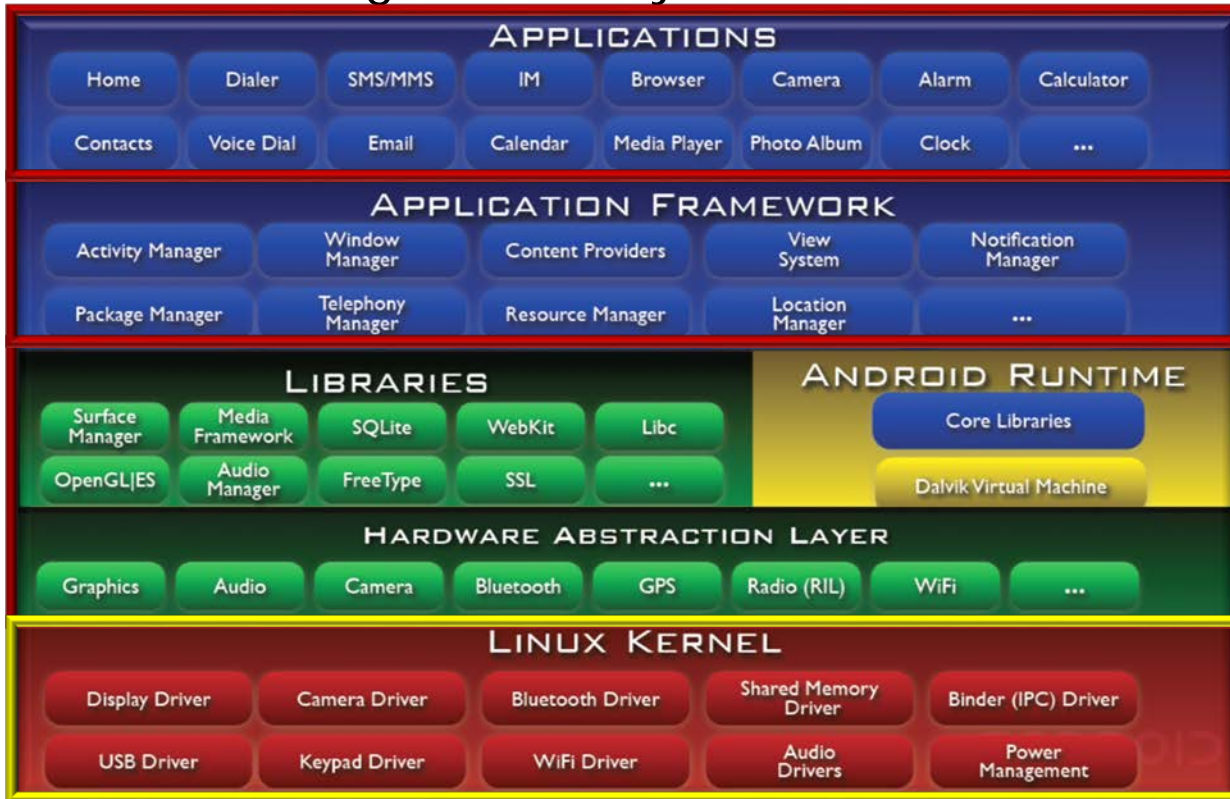**www.dre.vanderbilt.edu/~schmidt**

Institute for Software
Integrated Systems
Vanderbilt University
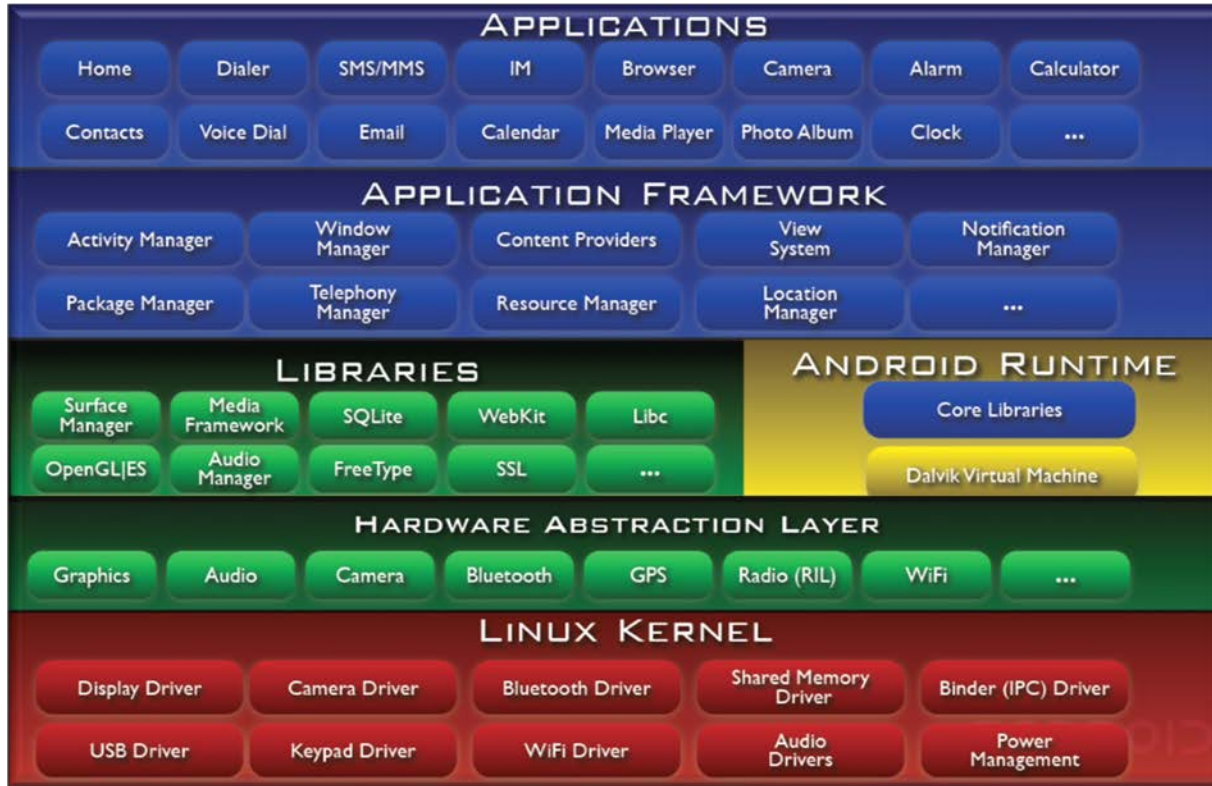**Nashville, Tennessee, USA**

Introduction to Android

- Android is designed as a layered architecture

Introduction to Android

- Understanding these layers makes you a more effective "full stack" developer

Introduction to Android
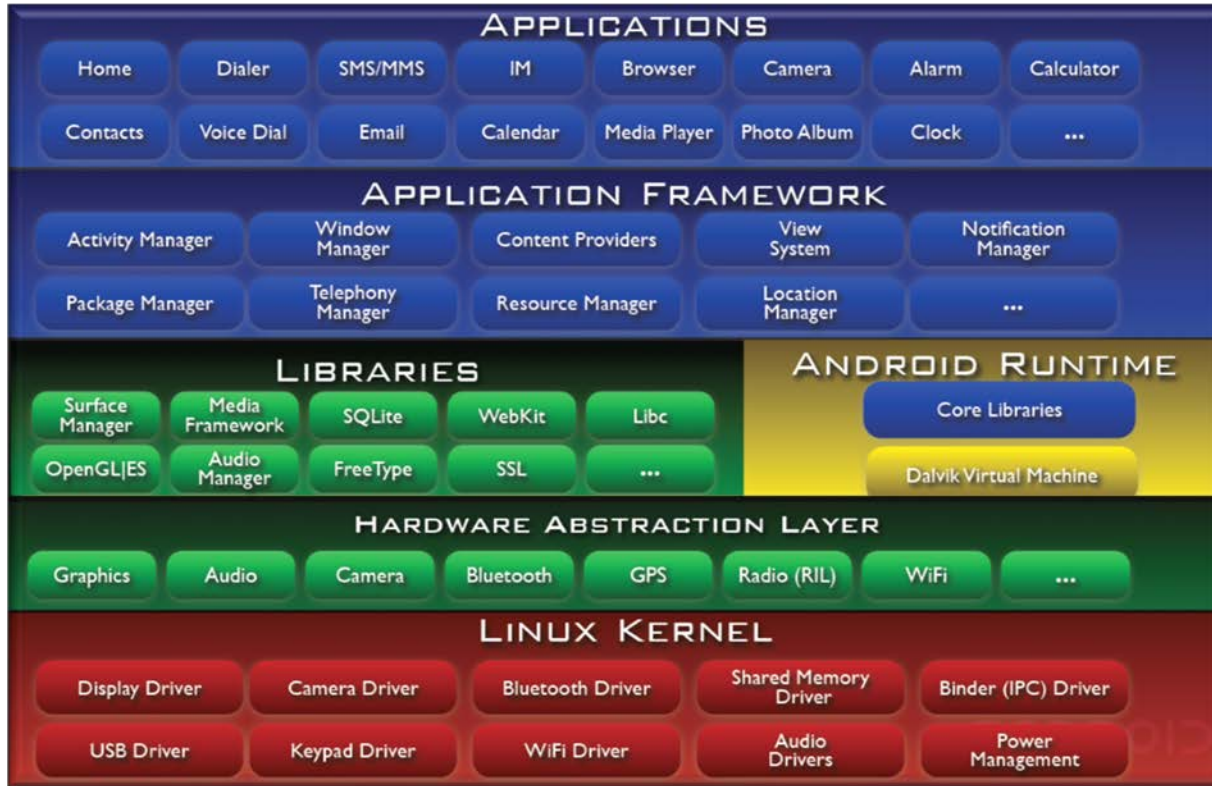
- Android has 1,000's of classes, so it's important to have a "bird's eye" view!
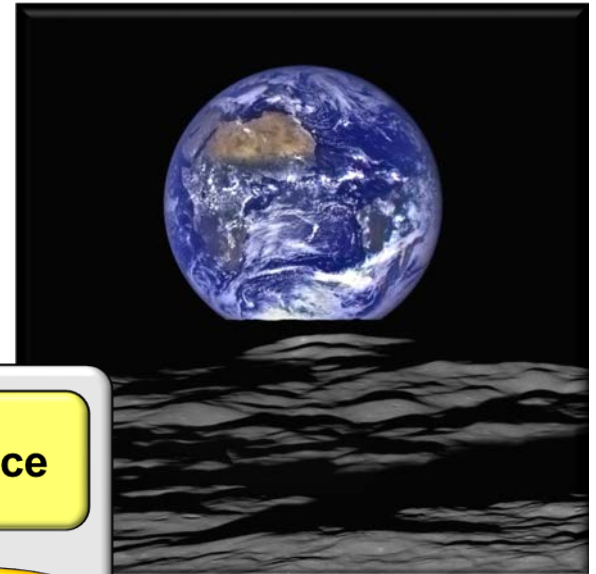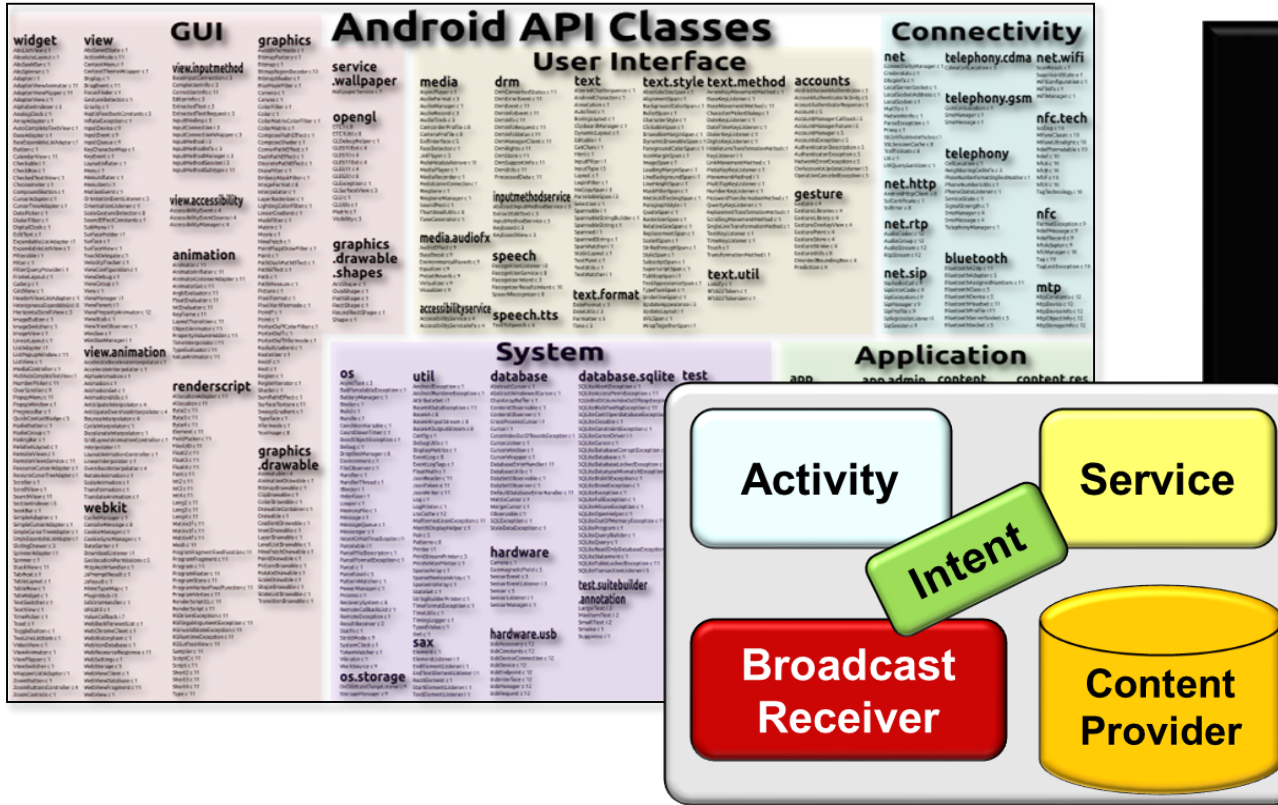
See www.makelinux.net/android/classes

- This module focuses on concepts, not code


```java
public void downloadAndDisplay(final DownloadContext downloadContext) {
    // Create an AsyncTask to download an image in the background
    // and display it to the user in the UI Thread.
    mDownloader =
        new AsyncTask<String, Void, Bitmap>() {
        /**
         * Called by the AsyncTask framework in the UI Thread to
         * perform initialization
         */
        protected           doExecute() {
            //          e toast before starting the download i
                       ground Thread.
                   nloadContext.showToast("downloading via AsyncTas

              **
                     load a bitmap image in a background thread.

             * @para
             *          The           ap image
             *
             @ @return The Bitmap rep          of the downloaded image.
             */
            protected Bitmap doInBackground(String
                // Download the image, which can block sin
                // a background thread.
                return downloadContext.downloadBitmap(urls[0]);
            }

                     led after an operation executing in the background
             *          tes to set the bitmap image to an image v
             * dis          progress dialog.
             *
             * @param imag
             *          The bitmap image
             */
            protected void onPostExecute(Bitmap image) {
                // Display the downloaded image to the user.
                downloadContext.displayBitmap(image);
            }
        }.execute(downloadContext.getUrl());
    }
```

Introduction to Android

- This module focuses on concepts, not code
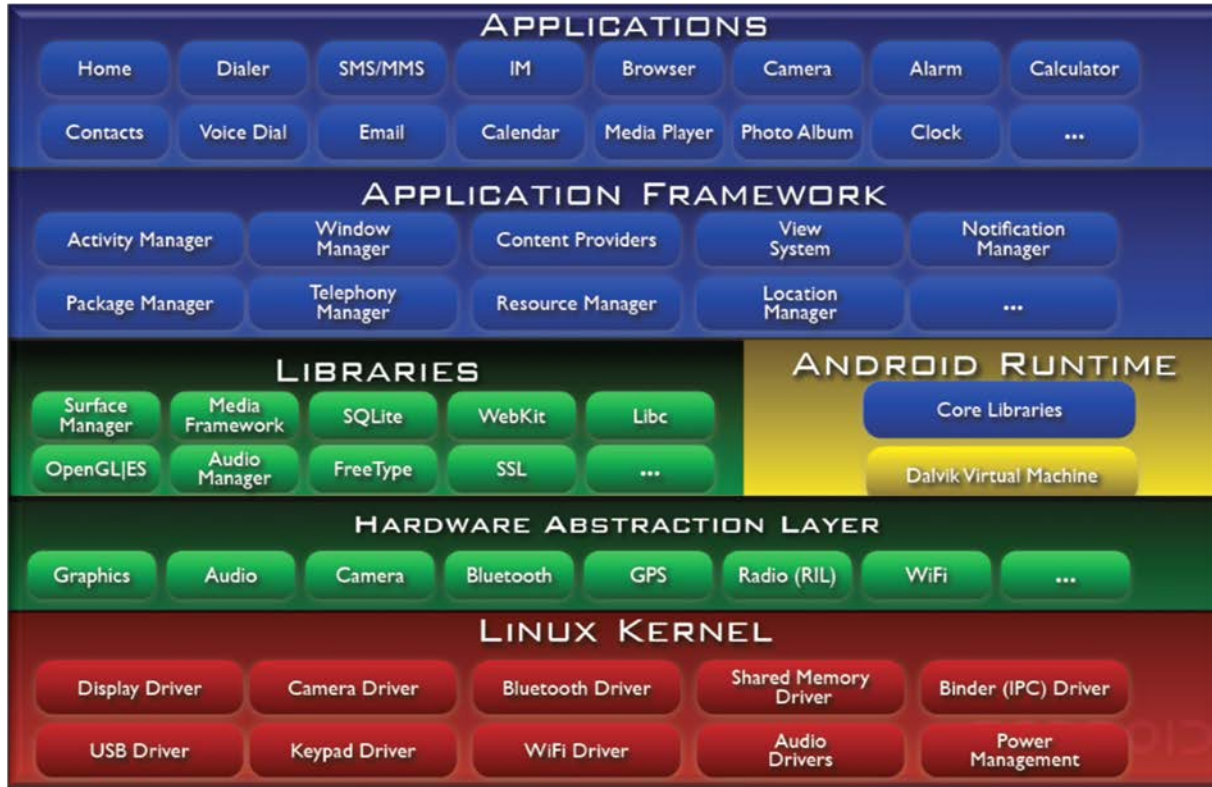
You needn't know all these details to write Android apps!

End of Module Introduction