**Android Terms,Slang & Definitions**  
  
Check out this vid,this is the reason for my thread...  
  
<http://youtu.be/RzpixaIOwSg>  
  
I figured i would post this thread to help all of the new members and experienced understand the Android slang,there are actually a few i did'nt know the meaning of until i made this thread.I have compiled most of the terms,definitions and slang i could dig up,if theres anything i missed,let me know and i will add it to the thread,otherwise i will update this thread as new slang,terms and definitions are presented to me.  
  
**Apps2SD:**A method of storing applications and cache on the device's microSD card.  
  
**ADB:**Android Debug Bridge (adb) is a versatile command line tool that lets you communicate with an emulator instance or connected Android-powered device. It is a client-server program that includes three components:  
  
•A client, which runs on your development machine. You can invoke a client from a shell by issuing an adb command. Other Android tools such as the ADT plugin and DDMS also create adb clients.   
•A server, which runs as a background process on your development machine. The server manages communication between the client and the adb daemon running on an emulator or device.   
•A daemon, which runs as a background process on each emulator or device instance.   
  
**Android:**A Linux-based operating system for mobile devices such as HTC EVO.Versions are alphabetically codenamed after snacks: Donut, Eclair, Froyo, Gingerbread, Honeycomb, Ice Cream Sandwich, Jelly Donut.  
  
**AMOLED:**Active Matrix Organic Light Emitting Diode. Basically, a very colorful, bright, display found in some smartphones.  
  
**APK:**Android application package file. Each Android application is compiled and packaged in a single file that includes all of the application's code (.dex files), resources, assets, and manifest file. The application package file can have any name but must use the .apk extension. For example: myExampleAppname.apk. For convenience, an application package file is often referred to as an ".apk".   
  
**Alpha:**The alpha phase of the release life cycle is the first phase to begin software testing (alpha is the first letter of the Greek alphabet, used as the number 1). In this phase, developers generally test the software using white box techniques. Additional validation is then performed using black box or gray box techniques, by another testing team. Moving to black box testing inside the organization is known as alpha release.[1]  
  
Alpha software can be unstable and could cause crashes or data loss. The exception to this is when the alpha is available publicly (such as a pre-order bonus), in which developers normally push for stability so that their testers can test properly. External availability of alpha software is uncommon in proprietary software. However, open source software, in particular, often have publicly available alpha versions, often distributed as the raw source code of the software.  
  
The alpha phase usually ends with a feature freeze, indicating that no more features will be added to the software. At this time, the software is said to be a feature complete.  
  
**Boot Animation:**Boot animation is a term for a graphical representation of the boot process of the operating system.  
  
Boot animation can be a simple visualisation of the scrolling boot messages in the console, but it can also present graphics or some combinations of both.  
  
Unlike splash screens, boot screen or boot animation is not necessarily designed for marketing purposes, but can be to enhance the experience of the user as eye candy, or provide the user with messages (with an added advantage of color coding facility) to diagnose the state of the system.  
  
**Bootloader:**This small program's only job is to load other data and programs which are then executed from RAM.Often, multiple-stage boot loaders are used, during which several programs of increasing complexity load one after the other in a process of chain loading.  
  
**Bootloop:**When your system recycles over and over without entering the main OS.  
  
**Beta:** is the software development phase following alpha. It generally begins when the software is feature complete. Software in the beta phase will generally have many more bugs in it than completed software, as well as speed/performance issues. The focus of beta testing is reducing impacts to users, often incorporating usability testing. The process of delivering a beta version to the users is called beta release and this is typically the first time that the software is available outside of the organization that developed it.  
  
The users of a beta version are called beta testers. They are usually customers or prospective customers of the organization that develops the software, willing to test the software without charge, often receiving the final software free of charge or for a reduced price.  
  
Beta version software is often useful for demonstrations and previews within an organization and to prospective customers. Some developers refer to this stage as a preview, prototype, technical preview (TP), or early access.  
  
Some software is kept in perpetual beta—where new features and functionality is continually added to the software without establishing a firm "final" release.  
  
**CPU:**It stands for Central Processing Unit and handles all the complex mathematical formulas necessary to do everyday things like surfing the Internet.  
  
**Custom:**Independent developers who like to customize their devices beyond the standard options provided often tend to release the fruits of their labor for the rest to enjoy, in form of custom ROMs.   
  
**Cache:**A component that transparently stores data so that future requests for that data can be served faster. The data that is stored within a cache might be values that have been computed earlier or duplicates of original values that are stored elsewhere. If requested data is contained in the cache (cache hit), this request can be served by simply reading the cache, which is comparatively faster. Otherwise (cache miss), the data has to be recomputed or fetched from its original storage location, which is comparatively slower. Hence, the greater the number of requests that can be served from the cache, the faster the overall system performance becomes.  
  
**CDMA:**Mobile phone standards called cdmaOne, CDMA2000 (the 3G evolution of cdmaOne) and WCDMA (the 3G standard used by GSM carriers), which are often referred to as simply CDMA, and use CDMA as an underlying channel access method.  
  
**CIQ:**Carrier IQ. A piece of preinstalled software that runs with elevated access in the background of portable devices by default and records everything. Potentially can be exploited to steal information.  
  
**Dual Core:**A dual core processor is a central processing unit (CPU) that has two separate cores on the same die, each with its own cache. It essentially is two microprocessors in one. This type of CPU is widely available from many manufacturers. Other types of multi-core processors also have been developed, including quad-core processors with four cores each, hexa-core processors with six, octa-core processors with eight and many-core processors with an even larger number of cores.   
  
**Dalvik:**The Android platform's virtual machine. The Dalvik VM is an interpreter-only virtual machine that executes files in the Dalvik Executable (.dex) format, a format that is optimized for efficient storage and memory-mappable execution.  
  
**Dalvik Cache:**Writable cache that contains the optimized bytecode of all apk files (apps) on your Android device. Having the information in it's own cache makes applications load faster and perform better.  
  
**EXT2:**The ext2 or second extended filesystem is a file system for the Linux kernel. It was initially designed by Rémy Card as a replacement for the extended file system (ext).  
ext2 was the default filesystem in several Linux distributions, including Debian and Red Hat Linux, until supplanted more recently by ext3, which is almost completely compatible with ext2 and is a journaling file system. ext2 is still the filesystem of choice for flash-based storage media (such as SD cards, and USB flash drives) since its lack of a journal minimizes the number of writes and flash devices have only a limited number of write cycles. Recent kernels, however, support a journal-less mode of ext4, which would offer the same benefit along with a number of ext4-specific benefits.  
  
**EXT3:**Third extended filesystem, is a journaled file system that is commonly used by the Linux kernel. It is the default file system for many popular Linux distributions, including Debian. Stephen Tweedie first revealed that he was working on extending ext2 in Journaling the Linux ext2fs Filesystem in a 1998 paper and later in a February 1999 kernel mailing list posting, and the filesystem was merged with the mainline Linux kernel in November 2001 from 2.4.15 onward.Its main advantage over ext2 is journaling, which improves reliability and eliminates the need to check the file system after an unclean shutdown. Its successor is ext4.  
  
**EXT4:**It was born as a series of backward compatible extensions to ext3, many of them originally developed by Cluster File Systems for the Lustre file system between 2003 and 2006, meant to extend storage limits and add other performance improvements.However, other Linux kernel developers opposed accepting extensions to ext3 for stability reasons,and proposed to fork the source code of ext3, rename it as ext4, and do all the development there, without affecting the current ext3 users. This proposal was accepted, and on 28 June 2006, Theodore Ts'o, the ext3 maintainer, announced the new plan of development for ext4.  
  
**FC/FC's:**Short for "force close," meaning an app that has crashed.  
  
**Fastboot:**A diagnostic protocol used primarily to modify the flash filesystem in Android smartphones from another computer over a USB connection. It is part of the Android Debug Bridge library.  
Utilizing the Fastboot protocol requires that the device be started in a boot loader or Second Program Loader mode in which only the most basic hardware initialization is performed. After enabling the protocol on the device itself it will accept any command sent to it over USB via a command line. Some of most commonly used fastboot commands include:  
  
•flash - Overwrites a partition in flash with a binary image stored on the host computer.  
•erase - Erases a partition in flash.  
•reboot - Reboots the device into the either the main operating system or the system recovery partition.  
•devices - Displays a list of all devices (with Serial #) connected to the host computer.  
  
**Flashing:**The ROM memory used in smartphones and tablets etc. is often same as flash memory found in SD cards and USB flash drives, simply optimized for better speed and performance while running the operating system.  
  
**Hotspot:**A spot that offers Internet access over a wireless local area network through the use of a router connected to a link to an Internet service provider. Hotspots typically use Wi-Fi technology.You can connect wifi campatible devices to it.  
  
**HDMI:**High-Definition Multimedia Interface) is a compact audio/video interface for transmitting encrypted uncompressed digital data.It is a digital alternative to consumer analog standards, such as radio frequency (RF) coaxial cable, composite video, S-Video, SCART, component video, D-Terminal, or VGA (also called D-sub or DE-15F). HDMI connects digital audio/video sources (such as set-top boxes, DVD players, HD DVD players, Blu-ray Disc players, AVCHD camcorders, personal computers (PCs), video game consoles (such as the PlayStation 3 and Xbox 360), AV receivers, tablet computers, and mobile phones) to compatible digital audio devices, computer monitors, video projectors, and digital televisions.  
  
**Hboot:**It’s mainly responsible for checking and initializing the hardware and starting the phone’s software. It can also be used for flashing official software releases, as well as a few other things. HBoot can be compared to the BIOS on a computer.  
  
**HAVS:**a control system that dynamically adjusts the voltage based on CPU load. This has proven to be a battery saver, but it can actually have the opposite effect when multiple control systems are operating (like setCPU).  
  
**JIT:**The Just-in-Time Compiler. Released with Android 2.2, it's a method of greatly speeding up apps in Android on the software side.  
  
**Kang:**Someone writes a code,someone else modifies the code to make their own release,its concidered a kang release.  
  
**Kernel:**A kernel is a layer of code that allows the OS and applications to interface with your phone's hardware. The degree in which you can access your phone's hardware features depends on the quality of code in the kernel. The homebrew (rooting) community for HTC has made several kernel code improvements that give us additional features from our hardware that the stock kernel does not. When you flash a custom ROM, you automatically get a kernel. But you can also flash a standalone kernel ROM on top of the existing one, effectively overwriting it. These days, the difference in custom kernels is less about new features and more about alternate configurations. Choosing a custom kernel is basically choosing one that works best with your ROM.   
  
**Launcher:**Collectively, the part of the Android user interface on home screens that lets you launch apps, make phone calls, etc. Is built in to Android, or can be purchased in the Android Market.  
  
**LCD Density:**Pixel density is a measurement of the resolution of devices in various contexts; typically computer displays, image scanners, and digital camera image sensors.  
  
First of all you need to understand that the Android User Interface uses something called a "display independent pixel" or a "dip" (yes, it's confusing because the density settings are in "dots per inch" or "dpi" which are considered the same as "ppi" or "pixels per inch" as well).  
  
The default LCD Density setting on Android is 160 dpi. As far as the operating system is concerned 1 dip @ 160 dpi = 1 screen pixel. It doesn't mean that's actually true, but you've gotta start somewhere. In my opinion it would have been a lot nicer if they'd chosen 100 dpi because then it would be an easy percentage thing, but they didn't so we're stuck with this formula.  
  
**Mod:**The act of modifying a piece of hardware or software or anything else for that matter, to perform a function not originally conceived or intended by the designer.  
  
**Nandroid:**To backup the current running rom.   
  
**Nightly:**A build that is performed at the end of each day of development. If you use a continuous integration server, it will generally be configured to build the code and run the unit tests on every check in. At the end of each day you may want to run more extensive tests, regression test and integration tests for example, which take too long to run on each check in and these would be triggered after the nightly build. If you have a full continuously delivery pipeline the nightly build may also be used to deploy the built code to environments for user testing.  
  
**Open GL:**An open source 3D graphics library used in many devices, including Android devices.  
  
**Open & Closed Beta:**Developers release either a closed beta or an open beta; closed beta versions are released to a select group of individuals for a user test and are invitation only, while open betas are from a larger group to the general public and anyone interested. The testers report any bugs that they find, and sometimes suggest additional features they think should be available in the final version.   
  
**Overclock:**To increase the speed of your CPU.  
  
**Partition:**The phone's internal memory (not the SD card) is solid-state (flash) memory, AKA NAND. It can be partitioned much like a normal hard drive can be partitioned. The bootloader exists in its own partition. Recovery is another partition; radio, system, cache, etc are all partitions.   
  
Here are the standard partitions on an Android phone:  
  
/misc - not sure what this is for.  
/boot - bootloader, kernel  
/recovery - holds the recovery program (either clockworkmod or RA recovery for a rooted Evo)  
/system - operating system goes here: Android, Sense, boot animation, Sprint crapware, busybox, etc  
/cache - cached data from OS usage  
/data - user applications, data, settings, etc.  
  
The below partitions are not android-specific. They are tied to the hardware of the phone, but the kernel may have code allowing Android to interact with said hardware.  
  
/radio - the phone's radio firmware, controls cellular, data, GPS, bluetooth.  
/wimax - firmware for Sprint's flavor of 4G, WiMax.  
  
**PRL:**The Preferred Roaming List, basically a way of telling your phone which towers to connect to first.  
  
**RUU:**a complete software package released by HTC, it can contain many things they are trying to update. Radio, ROM, bootloader, etc... Installing an ruu is like installing an image on a hard drive it wipes the phone and installs the image. It will wipe everything data and all so if you install one be prepared.  
  
**Recovery Mode:**A small separate operating mode you can boot your device into, used for device administration. Two popular custom recovery modes are Amon Ra and Clockwork.  
  
**Rom/Firmware:**Read-Only Memory and technically speaking, it refers to the internal storage of a device, which is supposed to contain the operating system instructions that needn’t be modified at all during the device’s normal operation.   
  
**Radios:**On the HTC side of things,the radios persist of:  
  
•WiFi, which operates at 2.4-5ghz depending on what channel it's running  
•Cellular/3G, which carries voice and data  
•4G/WiMAX, which only carries data  
•GPS, which is receive-only  
•Bluetooth, which talks to WiiMotes and headsets  
  
Flashing a radio means updating the code that controls the phones way of sending and recieving a signal.  
  
**Ram:**(Random Access Memory) A group of memory chips, typically of the dynamic RAM (DRAM) type, which function as the computer's primary workspace. When personal computers first came on the market in the late 1970s, 64KB (64 kilobytes) of RAM was the upper limit. Today, 64MB (64 megabytes) of SDRAM is entry level for a desktop computer, a thousand times as much (see SDRAM).  
  
The "random" in RAM means that the contents of each byte of storage in the chip can be directly accessed without regard to the bytes before or after it. This is also true of other types of memory chips, including ROMs and PROMs. However, unlike ROMs and PROMs, RAM chips require power to maintain their content, which is why you must save your data onto disk before you turn the computer off. To learn about the types of RAM chips and how to upgrade your memory, see memory module. To learn how memory is used to process data, see computer or memory. See also dynamic RAM and static RAM.  
  
**Recovery:**RecoverySystem contains methods for interacting with the Android recovery system (the separate partition that can be used to install system updates,wipe user data,etc).  
  
**Root:**The first level of a folder.  
  
**Rooting:**A process allowing users of mobile phones, tablet PCs, and other devices running the Android operating system to attain privileged control (known as "root access") within Android's subsystem. Rooting is often performed with the goal of overcoming limitations that carriers and hardware manufacturers put on some devices, resulting in the ability to alter or replace system applications and settings, run specialized apps that require administrator-level permissions, or perform other operations that are otherwise inaccessible to a normal Android user. Rooting is analogous to jailbreaking devices running the Apple iOS operating system or the Sony PlayStation 3. On Android, rooting can also facilitate the complete removal and replacement of the device's operating system.  
  
**SBC:**(the ability to charge your battery beyond the default safe limit). The concept is similar to overclocking a processor: you're overriding the safety limits established to achieve additional performance. The benefit here is that you may gain more use of your battery per charge. The drawback is that you can damage the battery and significantly reduce its longevity. Some kernels claim they are using a safe technique to prevent battery damage. Just be aware of the potential risks.  
  
**Sideloading:**It means installing applications without using the official Android Market.  
  
**Splash Screen:**A splash screen is an image that appears while android is loading.Splash screens cover the entire screen or simply a rectangle near the center of the screen. The splash screens of operating systems and some applications that expect to be run full-screen usually cover the entire screen.  
  
**Superuser/SU:**On many computer operating systems, the superuser is a special user account used for system administration. Depending on the operating system, the actual name of this account might be: root, administrator or supervisor.  
Normal work on such a system is done using ordinary user accounts, and because these do not have the ability to make system-wide changes any viruses and other malware - or simple user errors - do not have the ability to adversly affect a whole system. In organizations, administrative privileges are often reserved for authorized experienced individuals.  
  
**Script:**The Scripting Layer for Android (abridged as SL4A, and previously named Android Scripting Environment or ASE) is a library that allows the creation and running of scripts written in various scripting languages directly on Android devices. SL4A is designed for developers and is still alpha quality software.  
These scripts have access to many of the APIs available to normal Java Android applications, but with a simplified interface. Scripts can be run interactively in a terminal, in the background, or via Locale.  
  
**SDK:**(SDK or "devkit") is typically a set of software development tools that allows for the creation of applications for a certain software package, software framework, hardware platform, computer system, video game console, operating system, or similar platform.  
  
**Stock:**This is the operating system in its default form, without any modifications made to it except for any device-specific support required to run it on the particular device.  
  
**S-On:**Security on,means no acces to the phones operating system.  
  
**S-Off:**Security was exploited,now have access to the operating system.  
  
**Tethering:**Means sharing the Internet connection of an Internet-capable mobile phone with other devices. This sharing can be offered over a wireless LAN (Wi-Fi), Bluetooth, or by physical connection using a cable. In the case of tethering over wireless LAN, the feature may be branded as a mobile hotspot.The Internet-connected mobile phone acts as a portable router when providing tethering services to others.  
  
**Userspace(Governor):**This governor, exceptionally rare for the world of mobile devices, allows any program executed by the user to set the CPU's operating frequency. This governor is more common amongst servers or desktop PCs where an application (like a power profile app) needs privileges to set the CPU clockspeed.  
  
**Underclock:**To reduce the speed of your CPU.   
  
**Undervolt:**Undervolting means taking some of the voltage from the CPU which in return gives a longer battery life and lower temperature during intensive use of the CPU.  
  
**USB:**Stands for Universal Serial Bus. Is a method of connecting devices to a computer. Most smartphones now use microUSB cables to charge and sync.  
  
**Updater Script:**When Android devices install updates via 'update.zip' files using recovery mode they have to perform a wide range of functions on files and permissions. Instead of using a minimal shell such as {b,d,c}sh the Android designers decided to create a small functional language that can be extended by device manufacturers if necessary. Since the Android "Donut" release (v1.6) the scripting language is called Edify and is defined primarily in the bootable/recovery/{edify,edifyscripting,updater} directories of the Android source-code tree.   
  
**Wireless N:**Wireless N technology increases wireless internet connection. Wireless 'N' routers also work with Wireless 'G' and 'B' wireless adapters.  
  
**WiiMax:**(Worldwide Interoperability for Microwave Access) is a communication technology for wirelessly delivering high-speed Internet service to large geographical areas.  
  
**YAFFS:**Yaffs1 is the first version of this file system and works on NAND chips that have 512 byte pages + 16 byte spare (OOB;Out-Of-Band) areas.[clarification needed] These older chips also generally allow 2 or 3 write cycles per page,which YAFFS takes advantage of - i.e. dirty pages are marked by writing to a specific spare area byte.  
  
Newer NAND flash chips have larger pages, 2048 bytes + 64 bytes spare areas, and stricter write requirements.Each page within an erase block (128 kilobytes) must be written to in sequential order, and each page must be written only once.YAFFS2 was designed to accommodate these newer chips.YAFFS2 is based on the YAFFS1 source code,with the major difference being that internal structures are not fixed to assume 512 byte sizing,and a block sequence number is placed on each written page. In this way older pages can be logically overwritten without violating the "write once" rule.[clarification needed]  
  
YAFFS is a robust log-structured file system that holds data integrity as a high priority.A secondary YAFFS goal is high performance.YAFFS will typically outperform most alternatives.It is also designed to be portable and has been used on Linux, WinCE, pSOS, eCos,ThreadX and various special-purpose OSes.A variant 'YAFFS/Direct' is used in situations where there is no OS, embedded OSes and bootloaders: it has the same core filesystem but simpler interfacing to the OS and NAND flash hardware.  
  
**Zipalign:** An archive alignment tool introduced first time with 1.6 Android SDK (software development kit). It optimizes the way an Android application package (APK) is packaged. Doing so enables the Android operating system to interact with the application more efficiently, and hence has the potential to make the application and overall the whole system much faster. Execution time is minimized for zipaligned applications, resulting is lesser amount of RAM consumption when running the APK.

**1.0:**Android 1.0, the first commercial version of the software, was released on 23 September 2008.The first Android device, the HTC Dream (G1), incorporated the following Android 1.0 features:  
  
•Android Market application download and updates through the Market app  
•Web browser to show, zoom and pan full HTML and XHTML web pages – multiple pages show as windows ("cards")  
•Camera support – however this version lacked the option to change the camera's resolution, white balance, quality, etc.  
•Folders allowing the grouping of a number of app icons into a single folder icon on the Home screen.  
•Access to web email servers, supporting POP3, IMAP4, and SMTP.  
•Gmail synchronization with the Gmail app  
•Google Contacts synchronization with the People app  
•Google Calendar synchronization with the Calendar app  
•Google Maps with Latitude and Street View to view maps and satellite imagery, as well as find local business and obtain driving directions using GPS  
•Google Sync, allowing management of over-the-air synchronization of Gmail, People, and Calendar  
•Google Search, allowing users to search the Internet and phone apps, contacts, calendar, etc  
•Google Talk instant messaging  
•Instant messaging, text messaging, and MMS  
•Media Player, enabling management, importing, and playback of media files – however, this version lacked video and stereo Bluetooth support  
•Notifications appear in the Status bar, with options to set ringtone, LED or vibration alerts  
•Voice Dialer allows dialing and placing of phone calls without typing a name or number  
•Wallpaper allows the user to set the background image or photo behind the Home screen icons and widgets  
•YouTube video player  
•Other apps include: Alarm Clock, Calculator, Dialer (Phone), Home screen (launcher), Pictures (Gallery), and Settings.  
•Wi-Fi and Bluetooth support  
  
**1.1:**On 9 February 2009, the Android 1.1 update was released, initially for the T-Mobile G1 only. The update resolved bugs, changed the API and added a number of other features:  
  
•Details and reviews available when a user searches for businesses on Maps  
•Longer in-call screen timeout default when using the speakerphone, plus ability to show/hide dialpad  
•Ability to save attachments in messages  
•Support added for marquee in system layouts  
  
**Cupcake:**On 30 April 2009, the Android 1.5 update, dubbed Cupcake, was released, based on Linux kernel 2.6.27.The update included several new features and UI amendments:  
  
•Support for third-party virtual keyboards with text prediction and user dictionary for custom words  
•Support for Widgets - miniature application views that can be embedded in other applications (such as the Home screen) and receive periodic updates  
•Video recording and playback in MPEG-4 and 3GP formats  
•Auto-pairing and stereo support for Bluetooth added (A2DP and AVRCP profiles)  
•Copy and paste features added to web browser  
•User pictures shown for Favorites in Contacts  
•Specific date/time stamp shown for events in call log, and one-touch access to a contact card from call log event  
•Animated screen transitions  
•Ability to upload videos to YouTube  
•Ability to upload photos to Picasa  
  
**Donut:**On 15 September 2009, the Android 1.6 SDK – dubbed Donut – was released, based on Linux kernel 2.6.29.Included in the update were numerous new features:  
  
•Voice and text entry search enhanced to include bookmark history, contacts, and the web  
•Ability for developers to include their content in search results  
•Multi-lingual speech synthesis engine to allow any Android application to "speak" a string of text  
•Easier searching and ability to view app screenshots in Android Market  
•Gallery, camera and camcorder more fully integrated, with faster camera access  
•Ability for users to select multiple photos for deletion  
•Updated technology support for CDMA/EVDO, 802.1x, VPNs, and a text-to-speech engine  
•Support for WVGA screen resolutions  
•Speed improvements in searching and camera applications  
•Expanded Gesture framework and new GestureBuilder development tool  
  
**Eclair:**On 26 October 2009, the Android 2.0 SDK – codenamed Eclair – was released, based on Linux kernel 2.6.29.Changes included:  
  
•Expanded Account sync, allowing users to add multiple accounts to a device for email- and contact-synchronization  
•Exchange email support, with combined inbox to browse email from multiple accounts in one page  
•Bluetooth 2.1 support  
•Ability to tap a Contacts photo and select to call, SMS, or email the person  
•Ability to search all saved SMS and MMS messages, with delete oldest messages in a conversation automatically deleted when a defined limit is reached  
•Numerous new camera features, including flash support, digital zoom, scene mode, white balance, color effect and macro focus  
•Improved typing speed on virtual keyboard, with smarter dictionary that learns from word usage and includes contact names as suggestions  
•Refreshed browser UI with bookmark thumbnails, double-tap zoom and support for HTML5  
•Calendar agenda view enhanced, showing attending status for each invitee, and ability to invite new guests to events  
•Optimized hardware speed and revamped UI  
•Support for more screen sizes and resolutions, with better contrast ratio  
•Improved Google Maps 3.1.2  
•MotionEvent class enhanced to track multi-touch events  
•Addition of live wallpapers, allowing the animation of home-screen background images to show movement  
  
**2.0.1:**The Android 2.0.1 SDK was released on 3 December 2009.It was a minor platform release deployable to Android-powered handsets, including minor API changes, bug fixes and framework behavioral changes  
  
**2.1:**The 2.1 SDK was released on 12 January 2010.It was a minor platform release deployable to Android-powered handsets, including minor amendments to the API and bug fixes.  
  
**Froyo:**On 20 May 2010, the Android 2.2 (Froyo) SDK was released, based on Linux kernel 2.6.32.Its features included:  
  
•Speed, memory, and performance optimizations  
•Additional application speed improvements, implemented through JIT compilation  
•Integration of Chrome's V8 JavaScript engine into the Browser application  
•Support for the Android Cloud to Device Messaging (C2DM) service, enabling push notifications  
•Improved Microsoft Exchange support, including security policies, auto-discovery, GAL look-up, calendar synchronization and remote wipe  
•Improved application launcher with shortcuts to Phone and Browser applications  
•USB tethering and Wi-Fi hotspot functionality  
•Added an option to disable data access over mobile network  
•Updated Market application with batch and automatic update features  
•Quick switching between multiple keyboard languages and their dictionaries  
•Voice dialing and contact sharing over Bluetooth  
•Support for Bluetooth-enabled car and desk docks  
•Support for numeric and alphanumeric passwords  
•Support for file upload fields in the Browser application  
•Support for installing applications to the expandable memory  
•Adobe Flash support  
•Support for extra-high-PPI screens (320 ppi), such as 4" 720p  
•Gallery allows users to view picture stacks using a zoom gesture  
  
**2.2.1:**The Android 2.2.1 update was released on 18 January 2011, and included a number of bug fixes, security updates, and performance improvements.  
  
**2.2.2:**The Android 2.2.2 update was released on 22 January 2011, and fixed minor bugs, including SMS routing issues that affected the Nexus One.  
  
**2.2.3:**The Android 2.2.3 update was released on 21 November 2011, and consisted of two security patches.  
  
**Gingerbread:**On 6 December 2010, the Android 2.3 (Gingerbread) SDK was released, based on Linux kernel 2.6.35.Changes included:  
  
•Updated user interface design with increased simplicity and speed  
•Support for extra-large screen sizes and resolutions (WXGA and higher)  
•Native support for SIP VoIP internet telephony  
•Faster, more intuitive text input in virtual keyboard, with improved accuracy,better suggested text and voice input mode  
•Enhanced copy/paste functionality, allowing users to select a word by press-hold, copy, and paste  
•Support for Near Field Communication (NFC), allowing the user to read an NFC tag embedded in a poster, sticker, or advertisement  
•New audio effects such as reverb, equalization, headphone virtualization, and bass boost  
•New Download Manager, giving users easy access to any file downloaded from the browser, email, or another application  
•Support for multiple cameras on the device, including a front-facing camera, if available  
•Support for WebM/VP8 video playback, and AAC audio encoding  
•Improved power management with a more active role in managing apps that are keeping the device awake for too long  
•Enhanced support for native code development  
•Switched from YAFFS to ext4 on newer devices  
•Audio, graphical, and input enhancements for game developers  
•Concurrent garbage collection for increased performance  
•Native support for more sensors (such as gyroscopes and barometers)  
  
**2.2.3:**Released on 9 February 2011, Android 2.3.3 included several improvements and API fixes  
  
**2.3.4:**Version 2.3.4 introduced support for voice or video chat using Google Talk.  
  
**2.3.5:**Released on 25 July 2011, Android 2.3.5 included a number of system enhancements:  
  
•Improved network performance for the Nexus S 4G, among other fixes and improvements  
•Fixed Bluetooth bug on Samsung Galaxy S  
•Improved Gmail application  
•Shadow animations for list scrolling  
•Camera software enhancements  
•Improved battery efficiency  
  
**2.3.6:**Released on 2 September 2011, this version fixed a voice search bug. The 2.3.6 update had the side-effect of impairing the Wi-Fi hotspot functionality of many Canadian Nexus S phones. Google acknowledged this problem and fixed it in late September.  
  
**2.3.7:**Android 2.3.7 introduced Google Wallet support for the Nexus S 4G.  
  
**Honeycomb:**On 22 February 2011, the Android 3.0 (Honeycomb) SDK – the first tablet-only Android update – was released, based on Linux kernel 2.6.36.The first device featuring this version, the Motorola Xoom tablet, was released on 24 February 2011.Changes included:  
  
•Optimized tablet support with a new virtual and “holographic” user interface  
•Added System Bar, featuring quick access to notifications, status, and soft navigation buttons, available at the bottom of the screen  
•Added Action Bar, giving access to contextual options, navigation, widgets, or other types of content at the top of the screen  
•Simplified multitasking – tapping Recent Apps in the System Bar allows users to see snapshots of the tasks underway and quickly jump from one app to another  
•Redesigned keyboard, making typing fast, efficient and accurate on larger screen sizes  
•Simplified, more intuitive copy/paste interface  
•Multiple browser tabs replacing browser windows, plus form auto-fill and a new “incognito” mode allowing anonymous browsing  
•Quick access to camera exposure, focus, flash, zoom, front-facing camera, time-lapse, and more  
•Ability to view albums and other collections in full-screen mode in Gallery, with easy access to thumbnails for other photos  
•New two-pane Contacts UI and Fast Scroll to let users easily organize and locate contacts  
•New two-pane Email UI to make viewing and organizing messages more efficient, allowing users to select one or more messages  
•Support for video chat using Google Talk  
•Hardware acceleration  
•Support for multi-core processors  
•Ability to encrypt all user data  
  
**3.1:**The 3.1 SDK was released on 10 May 2011.Changes included:  
  
•UI refinements  
•Connectivity for USB accessories  
•Expanded Recent Apps list  
•Resizable Home screen widgets  
•Support for external keyboards and pointing devices  
•Support for joysticks and gamepads  
•Support for FLAC audio playback  
•High-performance Wi-Fi lock, maintaining high-performance Wi-Fi connections when device screen is off  
•Support for HTTP proxy for each connected Wi-Fi access point  
  
**3.2:**The 3.2 SDK was released on 15 July 2011,first appearing on Huawei's MediaPad tablet.Changes included:  
  
•Improved hardware support, including optimizations for a wider range of tablets  
•Increased ability of apps to access files on the SD card, e.g. for synchronization  
•Compatibility display mode for apps that have not been optimized for tablet screen resolutions  
•New display support functions, giving developers more control over display appearance on different Android devices  
  
**3.2.1:**The Android 3.2.1 update was released on 20 September 2011, and included a number of amendments:  
  
•Bug fixes and minor security, stability and Wi-Fi improvements  
•Update to Android Market with automatic updates and easier-to-read Terms and Condition text  
•Update to Google Books  
•Improved Adobe Flash support in browser  
•Improved Chinese handwriting prediction  
  
**3.2.2:**The 3.2.2 update was released on 30 August 2011, and included bug fixes and other minor improvements for the Motorola Xoom 4G.  
  
**Ice Cream Sandwhich:**Android 4.0 – codenamed Ice Cream Sandwich, and based on Linux kernel 3.0.1– was previewed at the May 2011 Google I/O event,and officially launched at the Galaxy Nexus and Ice Cream Sandwich release event on 19 October 2011.  
  
•Enhanced speed and performance  
•Virtual buttons in the UI, in place of capacitive or physical buttons  
•Separation of widgets in a new tab, listed in a similar manner to apps  
•Easier-to-create folders, with a drag-and-drop style  
•A customizable launcher  
•Improved visual voicemail with the ability to speed up or slow down voicemail messages  
•Pinch-to-zoom functionality in the calendar  
•Offline search, a two-line preview, and new action bar at the bottom of the Gmail app  
•Ability to swipe left or right to switch between Gmail conversations  
•Integrated screenshot capture (accomplished by holding down the Power and Volume-Down buttons)  
•Improved error correction on the keyboard  
•Ability to access apps directly from lock screen (similar to HTC Sense 3.x)  
•Improved copy and paste functionality  
•Better voice integration and continuous, real-time speech to text dictation  
•Face Unlock, a feature that allows users to unlock handsets using facial recognition software  
•New tabbed web browser, allowing up to 16 tabs  
•Automatic syncing of browser with users' Chrome bookmarks  
•A new typeface family for the UI, Roboto  
•Data Usage section in settings that lets users set warnings when they approach a certain usage limit, and disable data use when the limit is exceeded  
•Ability to shut down apps that are using data in the background  
•Improved camera app with zero shutter lag, time lapse settings, panorama mode, and the ability to zoom while recording  
•Built-in photo editor  
•New gallery layout, organized by location and person  
•Refreshed "People" app with social network integration, status updates and hi-res images  
•Android Beam, a near-field communication feature allowing the rapid short-range exchange of web bookmarks, contact info, directions, YouTube videos and other data  
•Hardware acceleration of the UI  
•Resizeable widgets – already part of Android 3.1 for tablets, but new for cellphones  
•Wi-Fi Direct  
•1080p video recording for stock Android devices  
  
**4.0.2:**The Android 4.0.2 update was released on 28 November 2011,and fixed minor bugs on the Verizon Galaxy Nexus,the US launch of which was later delayed until December 2011.  
  
**4.0.3:**The Android 4.0.3 update was first released on 16 December 2011.It included a number of bug fixes and optimizations, and offered improvements to graphics, databases, spell-checking and Bluetooth functionality,along with new APIs for developers,including a social stream API in the Contacts provider. Other features included Calendar provider enhancements, new camera apps enhancing video stabilization and QVGA resolution, and accessibility refinements such as improved content access for screen readers.  
  
**Jelly Bean:**The report also mentions some interesting features that originally planned in the presence of ice Cream Sandwich is likely to be postponed and will be displayed on the jelly bean.  
  
Reportedly,this is because these features are not ready until it came time to release the ice cream sandwiches.Google itself has not confirmed anything regarding this information.  
  
**MIUI**  
  
(pronounced "Me You I", a play on the common abbreviation of the words user interface as UI),developed by Xiaomi Tech, is an aftermarket firmware for cell phones based on the open-source Android operating system. It features a heavily-modified user interface that does away with the Android app drawer and has drawn comparisons with Apple's iOS.It includes additional functionality not found in stock Android, including toggles on the notification pull-down, new music, gallery, and camera apps, and an altered phone dialer that displays matching contacts as a user enters a number.  
  
MIUI is based on Android 2.3.7 and CyanogenMod 7.1 sources, and was initially developed in the Chinese language by Chinese startup Xiaomi.Xiaomi added a number of apps to enhance the basic framework; those include MITalk (a Blackberry Messenger clone),MINotes,MIBackup,MIMusic,and MIGallery.MIUI is made up of two parts, MI and UI, where UI stands for User Interface and MI, as stated by Xiaomi CEO Lei Jun, stands for Mobile Internet and Mission Impossible.  
  
The modified operating system has been criticized for being similar to iOS.Due to the fact that MIUI is developed in China, some features that are not relevant to the Chinese market, such as WiMax support, are unavailable on MIUI, and without access to the source code, it is not possible for 3rd parties to easily add this support.  
  
**AOSP**  
  
The Android Open Source Project (AOSP) is led by Google, and is tasked with the maintenance and development of Android.According to the project "The goal of the Android Open Source Project is to create a successful real-world product that improves the mobile experience for end users."AOSP also maintains the Android Compatibility Program, defining an "Android compatible" device "as one that can run any application written by third-party developers using the Android SDK and NDK", to prevent incompatible Android implementations.The compatibility program is also optional and free of charge, with the Compatibility Test Suite also free and open-source.  
  
**Sense**  
HTC Sense is a graphical user interface developed by HTC Corporation for mobile devices running Android, Brew and Windows Mobile.Based on the TouchFLO 3D design,HTC has referred to HTC Sense as both a user interface in itself and also as a user experience layer on top of TouchFLO 3D.Announced June 24, 2009, the first phone running Android to feature HTC Sense was the HTC Hero,and the first Windows Phone to feature HTC Sense (an updated TouchFLO) was the HTC HD2,announced October 6, 2009.  
  
At the Mobile World Congress 2010, HTC showed their new updated HTC Sense UI to debut on the HTC Desire and HTC Legend, with an upgrade available for the Hero and Magic. The new version is based upon Android 2.1 and has new interface features such as the Friend Stream widget (which aggregates all Twitter, Facebook and Flickr information) and Leap, which allows access to all the home screens at once.  
  
Smartphones including the HTC EVO 3D and the HTC Sensation feature HTC Sense 3.0, which has major visual and functional changes to HTC Sense, including a new lock screen which allows users to access their favorite applications directly. Only HTC Sensation and later devices will run HTC Sense 3.0, but older devices will still get some of the new features from HTC Sense 3.0 via an over-the-air update.[citation needed]  
  
While the Windows Mobile version of Sense is the successor to TouchFLO 3D, with information featured on separate tabs, the Android version presents information through Android desktop widgets and applications, and includes launcher, app drawer, and lock screen replacements.

**Brazilianwax(Governor):**Similar to smartassV2. More aggressive ramping, so more performance, less battery  
  
**BFS:**Brain Fxck Scheduler for Linux was created by veteran kernel programmer Con Kolivas and has been reported to improve responsiveness on light-NUMA (non-uniform memory access) Linux mobile devices and desktop computers with fewer than 16 cores.  
  
**Bloatware:**Software or 'apps' that you don't need, but come preinstalled to a device's /system partition, meaning that you cannot remove them unless the device has been rooted. Usually, these are apps are sponsored by a company and included by a carrier for profit. For example, the Photobucket app included on the G2 by TMobile.  
  
**Compile:**It translates (a android program)from a high-level language into another language, usually machine language.  
  
**Conservative(Governor):**This biases the phone to prefer the lowest possible clockspeed as often as possible. In other words, a larger and more persistent load must be placed on the CPU before the conservative governor will be prompted to raise the CPU clockspeed. Depending on how the developer has implemented this governor, and the minimum clockspeed chosen by the user, the conservative governor can introduce choppy performance. On the other hand, it can be good for battery life.  
  
The Conservative Governor is also frequently described as a "slow OnDemand," if that helps to give you a more complete picture of its functionality.  
  
**Decompile:**To convert executable (ready-to-run) program code (sometimes called object code ) into some form of higher-level programming language so that it can be read by a human.  
  
**Deodex:**Deodexing is basically repackaging of these APKs in a certain way, such that they are reassembled into classes.dex files. By doing that, all pieces of an application package are put together back in one place, thus eliminating the worry of a modified APK conflicting with some separate odexed parts.  
  
**GNU:**A recursive acronym for “GNU's Not Unix!”; it is pronounced g-noo, as one syllable with no vowel sound between the g and the n. The GNU Project was launched in 1984 to develop a complete Unix-like operating system which is free software: the GNU system. “Free software” is a matter of liberty, not price. To understand the concept, you should think of “free” as in “free speech”, not as in “free beer”.  
  
**Governor**:It controls the speed of the CPU.  
  
**Hotplug(Governor):**The Hotplug governor performs very similarly to the OnDemand governor, with the added benefit of being more precise about how it steps down through the kernel's frequency table as the governor measures the user's CPU load. However, the Hotplug governor's defining feature is its ability to turn unused CPU cores off during periods of low CPU utilization. This is known as "hotplugging."  
  
**Intellidemand(Governor)**:Intellidemand aka Intelligent Ondemand from Faux is yet another governor that's based on ondemand. Unlike what some users believe, this governor is not the replacement for OC Daemon (Having different governors for sleep and awake). The original intellidemand behaves differently according to GPU usage. When GPU is really busy (gaming, maps, benchmarking, etc) intellidemand behaves like ondemand. When GPU is 'idling' (or moderately busy), intellidemand limits max frequency to a step depending on frequencies available in your device/kernel for saving battery. This is called browsing mode. We can see some 'traces' of interactive governor here. Frequency scale-up decision is made based on idling time of CPU. Lower idling time (<20%) causes CPU to scale-up from current frequency. Frequency scale-down happens at steps=5% of max frequency. (This parameter is tunable only in conservative, among the popular governors)  
To sum up, this is an intelligent ondemand that enters browsing mode to limit max frequency when GPU is idling, and (exits browsing mode) behaves like ondemand when GPU is busy; to deliver performance for gaming and such. Intellidemand does not jump to highest frequency when screen is off.  
  
**Interactive(Governor):**Much like the OnDemand governor, the Interactive governor dynamically scales CPU clockspeed in response to the workload placed on the CPU by the user. This is where the similarities end. Interactive is significantly more responsive than OnDemand, because it's faster at scaling to maximum frequency.  
Unlike OnDemand, which you'll recall scales clockspeed in the context of a work queue, Interactive scales the clockspeed over the course of a timer set arbitrarily by the kernel developer. In other words, if an application demands a ramp to maximum clockspeed (by placing 100% load on the CPU), a user can execute another task before the governor starts reducing CPU frequency. This can eliminate the frequency bouncing discussed in the OnDemand section. Because of this timer, Interactive is also better prepared to utilize intermediate clockspeeds that fall between the minimum and maximum CPU frequencies. This is another pro-battery life benefit of Interactive.  
  
However, because Interactive is permitted to spend more time at maximum frequency than OnDemand (for device performance reasons), the battery-saving benefits discussed above are effectively negated. Long story short, Interactive offers better performance than OnDemand (some say the best performance of any governor) and negligibly different battery life.  
  
Interactive also makes the assumption that a user turning the screen on will shortly be followed by the user interacting with some application on their device. Because of this, screen on triggers a ramp to maximum clockspeed, followed by the timer behavior described above.  
  
**InteractiveX(Governor):**Created by kernel developer "Imoseyon," the InteractiveX governor is based heavily on the Interactive governor, enhanced with tuned timer parameters to better balance battery vs. performance. The InteractiveX governor's defining feature, however, is that it locks the CPU frequency to the user's lowest defined speed when the screen is off.  
  
**Lionheart(Governor):**Lionheart is a conservative-based governor which is based on samsung's update3 source.  
The tunables (such as the thresholds and sampling rate) were changed so the governor behaves more like the performance one, at the cost of battery as the scaling is very aggressive.  
  
**LionheartX(Governor):**LionheartX is based on Lionheart but has a few changes on the tunables and features a suspend profile based on Smartass governor.  
  
**Lazy(Governor):**This governor from Ezekeel is basically an ondemand with an additional parameter min\_time\_state to specify the minimum time CPU stays on a frequency before scaling up/down. The Idea here is to eliminate any instabilities caused by fast frequency switching by ondemand. Lazy governor polls more often than ondemand, but changes frequency only after completing min\_time\_state on a step overriding sampling interval. Lazy also has a screenoff\_maxfreq parameter which when enabled will cause the governor to always select the maximum frequency while the screen is off.  
  
**Lagfree(Governor):**Lagfree is similar to ondemand. Main difference is it's optimization to become more battery friendly. Frequency is gracefully decreased and increased, unlike ondemand which jumps to 100% too often. Lagfree does not skip any frequency step while scaling up or down. Remember that if there's a requirement for sudden burst of power, lagfree can not satisfy that since it has to raise cpu through each higher frequency step from current. Some users report that video playback using lagfree stutters a little.  
  
**Min Max(Governor Speeds):**Well this governor makes use of only min & maximum frequency based on workload... no intermediate frequencies are used.  
  
**Odex:**In Android file system, applications come in packages with the extension .apk. These application packages, or APKs contain certain .odex files whose supposed function is to save space. These ‘odex’ files are actually collections of parts of an application that are optimized before booting. Doing so speeds up the boot process, as it preloads part of an application. On the other hand, it also makes hacking those applications difficult because a part of the coding has already been extracted to another location before execution.  
  
**OnDemand(Governor):**This governor has a hair trigger for boosting clockspeed to the maximum speed set by the user. If the CPU load placed by the user abates, the OnDemand governor will slowly step back down through the kernel's frequency steppings until it settles at the lowest possible frequency, or the user executes another task to demand a ramp.OnDemand has excellent interface fluidity because of its high-frequency bias, but it can also have a relatively negative effect on battery life versus other governors. OnDemand is commonly chosen by smartphone manufacturers because it is well-tested, reliable, and virtually guarantees the smoothest possible performance for the phone. This is so because users are vastly more likely to bitch about performance than they are the few hours of extra battery life another governor could have granted them.  
  
This final fact is important to know before you read about the Interactive governor: OnDemand scales its clockspeed in a work queue context. In other words, once the task that triggered the clockspeed ramp is finished, OnDemand will attempt to move the clockspeed back to minimum. If the user executes another task that triggers OnDemand's ramp, the clockspeed will bounce from minimum to maximum. This can happen especially frequently if the user is multi-tasking. This, too, has negative implications for battery life.  
  
**OndemandX(Governor):**Basically an ondemand with suspend/wake profiles. This governor is supposed to be a battery friendly ondemand. When screen is off, max frequency is capped at 500 mhz. Even though ondemand is the default governor in many kernel and is considered safe/stable, the support for ondemand/ondemandX depends on CPU capability to do fast frequency switching which are very low latency frequency transitions. I have read somewhere that the performance of ondemand/ondemandx were significantly varying for different i/o schedulers. This is not true for most of the other governors. I personally feel ondemand/ondemandx goes best with SIO I/O scheduler.  
  
**Open Source:**Open-source refers to software with publicly available source code. In the context of Android, Open-source refers to the approach to the design, development, and distribution of software. This offers accessibility to a software's source code for modification, improvement, bug-fixing, and security-enhancement. CyanogenMod is based on this principle.  
  
**Performance(Governor):**This locks the phone's CPU at maximum frequency. While this may sound like an ugly idea, there is growing evidence to suggest that running a phone at its maximum frequency at all times will allow a faster race-to-idle. Race-to-idle is the process by which a phone completes a given task, such as syncing email, and returns the CPU to the extremely efficient low-power state. This still requires extensive testing, and a kernel that properly implements a given CPU's C-states (low power states).  
  
**Port:**To Take a rom or app from one phone and program it to work on a different one.  
  
**Powersave(Governor):**The opposite of the Performance governor, the Powersave governor locks the CPU frequency at the lowest frequency set by the user.  
  
**Smoothass(Governor):**The same as the Smartass “governor” But MUCH more aggressive & across the board this one has a better battery life that is about a third better than stock KERNEL  
  
**SavagedZen(Governor):**Another smartassV2 based governor. Achieves good balance between performance & battery as compared to brazilianwax.  
  
**Smartass(Governor):**Its based on the concept of the interactive governor.  
I have always agreed that in theory the way interactive works – by taking over the idle loop – is very attractive. I have never managed to tweak it so it would behave decently in real life. Smartass is a complete rewrite of the code plus more. I think its a success. Performance is on par with the “old” minmax and I think smartass is a bit more responsive. Battery life is hard to quantify precisely but it does spend much more time at the lower frequencies.  
Smartass will also cap the max frequency when sleeping to 352Mhz (or if your min frequency is higher than 352 – why?! – it will cap it to your min frequency). Lets take for example the 528/176 kernel, it will sleep at 352/176. No need for sleep profiles any more!"  
  
**SmartassV2(Governor):**Version 2 of the original smartass governor from Erasmux. Another favorite for many a people. The governor aim for an "ideal frequency", and ramp up more aggressively towards this freq and less aggressive after. It uses different ideal frequencies for screen on and screen off, namely awake\_ideal\_freq and sleep\_ideal\_freq. This governor scales down CPU very fast (to hit sleep\_ideal\_freq soon) while screen is off and scales up rapidly to awake\_ideal\_freq (500 mhz for GS2 by default) when screen is on. There's no upper limit for frequency while screen is off (unlike Smartass). So the entire frequency range is available for the governor to use during screen-on and screen-off state. The motto of this governor is a balance between performance and battery.  
  
**Scary(Governor):**A new governor wrote based on conservative with some smartass features, it scales accordingly to conservatives laws. So it will start from the bottom, take a load sample, if it's above the upthreshold, ramp up only one speed at a time, and ramp down one at a time. It will automatically cap the off screen speeds to 245Mhz, and if your min freq is higher than 245mhz, it will reset the min to 120mhz while screen is off and restore it upon screen awakening, and still scale accordingly to conservatives laws. So it spends most of its time at lower frequencies. The goal of this is to get the best battery life with decent performance. It will give the same performance as conservative right now, it will get tweaked over time.

**XDA and Android Terms and Acronyms**

Hopefully this will address a few questions, and help anyone new to the forum. I've assembled a list of terms and acronyms used on the forum below. Terms with links go to sources or threads with additional information. An item in all caps in a definition is one that I've defined elsewhere.  
  
Use CTRL+F to find a specific term.  
  
**FORUM RELATED:**  
**SEARCH**: The button just above the title of the forum or thread you are in. This should be your first resort when trying to find information. See button screenshot below.  
[**GENERAL**](http://forum.xda-developers.com/showpost.php?p=10085359&postcount=1): This is the place for posting anything general. These include tips, ideas, comments, etc.  
[**Q/A**](http://forum.xda-developers.com/showpost.php?p=10085359&postcount=1): This is the place for posting any questions. If you have a bug to report in a program or ROM (and have the minimum of 10 posts), post it in the appropriate thread in the ANDROID DEVELOPMENT subforum.  
[**ACCESSORIES**](http://forum.xda-developers.com/showpost.php?p=10085359&postcount=1): This forum is for any items that attach to the physical hardware of the Android device.  
[**ANDROID DEVELOPMENT**](http://forum.xda-developers.com/showpost.php?p=10085359&postcount=1): This is the place for posting Hacks/Mods/ROMs/Modems/Kernels. Generally reserved for developers, there is a 10-post minimum before a user can post here. This is the place to inform developers of bugs or software issues - ask questions in the Q&A subforum.  
[**THEMES AND APPS**](http://forum.xda-developers.com/showpost.php?p=10085359&postcount=1): This is the place for posting themes as well as programs. Many applications can be interchangeable with Android Development, so use your best judgement.  
**FWIW**: Short for "For what it's worth"  
**OP**: Short for Original Poster, or the person who originally started the thread.  
**PM**: Short for Private Message. Allows users of XDA to send and receive non-public messages. Accessed from USER CP.  
**THREAD**: An individual issue page on the forum. This thing you're reading is a thread.  
**THREAD TOOLS**: A button that allows users to subscribe and unsubscribe from THREADs. Subscriptions can be accessed from USER CP. See button screenshot below.  
**USER CP**: Short for User Control Panel. This button near the top of the XDA page allows users to update their avatar, personal information, and signature. PMs and subscribed threads can also be checked in this location. See button screenshot below.  
**YMMW**: Short for "Your mileage may vary".  
  
  
  
  
**ANDROID DEVICE RELATED:**  
  
**ADB**: Short for Android Debug Bridge. Part of the Android Software Development Kit (SDK), it allows for ROOT-level access to the Android device from a computer.  
[**AOSP**](http://source.android.com/): Short for Android Open Source Project. The open-sourced code from which individuals can build new distributions of Android.  
**APK**: An Android executable file, similar to the .exe file in Windows. Most programs will install with a .apk file.  
[**AUDIENCE CHIP**](http://www.audience.com/processors/a1026.php): A voice processing chip installed on the I897/Captivate that provides noise suppression and voice quality enhancement for phone functions.   
**BACKLIGHT NOTIFICATION**: A program that turns the LEDs behind the Menu/Home/Back/Search buttons on to indicate system events (e.g. new voicemail, etc).  
**BLN**: Short for Backlight Notification. See BACKLIGHT NOTIFICATION.  
[**BOOTLOADER**](http://forum.xda-developers.com/showthread.php?t=1049294): There are two of these that can be flashed, the primary and secondary bootloaders. These programs tell the Android device how to start up, and are critical to its functionality.  
[**BML**](http://algo2.iti.kit.edu/dementiev/stxxl/report/node3.html): Short for Block Management Layer. Provides a programming interface simulating the parallel disk model.   
**BRICK**: An Android device that is completely non-responsive, i.e. nothing lights up, the screen does nothing, no combination of button presses cause any reaction. Can only be restored by JTAG, UNBRICKABLE MOD, or warranty service.  
**BUILD.PROP**: A plain text file which contains environmental variables for the system to use during operation. Can be hacked to fake a different model for increased functionality, among many other operations.  
**BUSYBOX**: An application that contains many standard Unix tools. Commonly used with TITANIUM BACKUP.  
**BUTTON COMBO**: The act of pressing several buttons at the same time to produce a desired result (e.g. pushing volume up, volume down, and the power button for 10 seconds on FROYO will reboot into the RECOVERY menu). 3-Button Combo is a common example. May also be referred to as a "Chord".  
**CLAY**: An Android device that is not fully functional, but shows signs of functionality. Unlike a BRICK, the clay can be recovered without using JTAG. See also SOFT BRICK, BRICK.  
**CLOCKWORKMOD RECOVERY MENU**: This is a program that allows you to install custom ROMS as well as do many other low-level customizations. Often referred to as the "RECOVERY MENU". See also "ROM MANAGER"  
**CM**: Short for CyanogenMod. CyanogenMod is an Android build built from the Android Open Source Project, and its builds are usable on multiple different Android Devices.  
**CWM**: Short for ClockWorkMod Recovery Menu. See CLOCKWORKMOD RECOVERY MENU.  
**DALVIK CACHE**: The collection of program information stored for use by the DALVIK program. This can be cleared from the RECOVERY menu to resolve issues with the Android OS.  
[**DALVIK**](http://www.learncomputer.com/what-is-dalvik/): The Android operating system's memory management tool. This program handles which other programs are running and assigns memory to them  
**DEODEXED**: Removing the .odex files from an APK file. The .odex files contain a list of dependencies for the associated file, and if something changes, the .odex (and similarly, the associated file) not longer function correctly.  
**DOWNLOAD**: The download menu is the lowest-level interface to the Android device. Allows for full access to all flashable items on the device via the ODIN/HEIMDALL tool.  
**ECLAIR**: The Android OS version 2.1.x. See also STOCK.  
**EFS**: The directory /efs on the Android device's internal storage. Contains files with the Android device's IMEI, wireless devices MAC addresses, product code, and other information..  
[**EMMC**](http://en.wikipedia.org/wiki/EMMC#eMMC): Short for Embedded MultiMediaCard. A chip architecture consisting of an embedded storage solution with MMC interface, flash memory and controller, all in a small ball grid array package.  
**EXT4**: A journaling file system (e.g. NTFS, FAT32 are file systems) often used by Linux distributions. Can be used with Android.  
**EXTERNAL SD**: A micro SD card that has been inserted in the micro SD slot in the Android device. Can be removed.  
**FACTORY RESET**: This will remove all user customizations in the Android OS, returning it to a factory state. Note: This will not wipe the Internal SD card.  
**FC**: Short for FORCE CLOSE. See FORCE CLOSE.  
**FLASHING**: The act of writing code to the Android device. ROMs, MODEMs, KERNELs, and BOOTLOADERs can all be flashed. Independent from, and having nothing to do with, Adobe's Flash product.  
**FORCE CLOSE**: When a program on the Android device becomes unstable, the DALVIK program will force it to terminate to prevent further system instability.   
**FREEZE**: Specific to TITANIUM BACKUP. Using the TITANIUM BACKUP tool, the user changes a program into a non-functional, but still installed, state. Useful for identifying problem and FCs.  
**FROYO**: The Android OS version 2.2.x. This version of Android OS was released via AT&T to the captivate as an update over KIES MINI.  
**GB**: Short for Gingerbread, the Android OS version 2.3.x.  
**GOVERNOR**: A program that interacts with the device hardware to increase or decrease the processor's clock speed (e.g. at low usage, it will set the processor speed to 400 MHz, but as usage increases, it would scale up to 1000 MHz).  
**HEIMDALL**: An open-source program by Benjamin Dobell that allows the Android device to be flashed back to stock or with custom software. See also ODIN.  
[**HEIMDALL ONE-CLICK**](http://forum.xda-developers.com/showthread.php?t=1191924): An open-source, cross-platform, auto-dependency-installing, Linux, Windows and Mac one-click ROM deployment system based on the Open-Source project Heimdall, with multiple adminsitrative, technical and engineering controls making it much less likely to "brick" a phone then ODIN. Heimdall One-Click was created by Recognized Developer Adam Outler.  
**HSUPA/HSDPA**: Short for High Speed (Up/Down) Packet Access. This is 3G+, and is the Android device's internet speed level between 3G and 4G.  
**I9000**: The Samsung Galaxy international model. SImilar to the Captivate, Fascinate, Vibrant, and Mesmerize.  
**ICS**: Short for Ice Cream Sandwich, the Android OS version 4.0.x.  
[**IMEI**](http://en.wikipedia.org/wiki/IMEI): Short for International Mobile Equipment Identity. A unique number to identify GSM, WCDMA, and iDEN phones. Used by GSM networks to identify valid devices.  
**INTERNAL SD**: The internal storage memory of the Android device. Not a physical SD card that can be removed.  
**JIG**: A piece of hardware that makes a physical connection between pins 4 and 5 of the USB slot to force the Android device into DOWNLOAD mode.  
**JTAG**: A process of connecting directly to the main board of the Android device to rewrite corrupted BOOTLOADERS.  
[**KANG**](http://www.urbandictionary.com/define.php?term=kang): Originally used to refer to stolen or leaked code. In CyanogenMod builds, a KANG build is one that is an unofficial branch from the main CyanogenMod development. These builds usually contain custom modifications that did not make the official CyanogenMod builds.  
**KERNEL**: The collection of software drivers and more "nuts and bolts" programs that allow the basic functionality of the device.  
**KIES MINI**: A Samsung-proprietary program that allows flashing of official updates to the Android OS.  
**LAGFIX**: Changing the file system used by the Android OS (ususally to EXT4) to reduce the perceived lag in the operation of the Android device.  
**LAUNCHER**: A program that launches programs in Android. Examples are Touchwiz (Samsung), Launcher Pro, ADW Launcher, and Go Launcher.  
[**MD5 CHECKSUM**](http://en.wikipedia.org/wiki/MD5): A 32-digit (128-bit) hash number generated by a cryptographic program to ensure that a downloaded file matches the original file. The original file is run through the MD5 generator program, which creates the 32-bit number. This number is checked against the md5 number created with the file the end user receives to ensure file integrity.  
**MODEM**: The software that interfaces with the phone's radio hardware to connect to cell phone towers.   
**MTD**: Short for Memory Technology Device. A type of device file in the Linux structure that interacts with flash memory. Provides an abstraction layer between applications and hardware-specific device drivers.  
[**MODEM DANCE**](http://forum.xda-developers.com/showpost.php?p=12156313&postcount=438): A combination of key presses, MODEM flashes, and reboots required to force some Android devices to restrict the band use to the 850 MHz WCDMA band.   
**NANDROID BACKUP**: A complete system image backup of the Android device except for the MODEM and KERNEL. Can be accessed from CWM.  
**NO-WIPE PACKAGE**: A rom update package that leaves the user's market apps intact while still performing the updates to the system files. Restoring from backup is not necessary. See also WIPE PACKAGE.  
**NV\_DATA.BIN**: An encrypted file in the /EFS directory that contains the Android device's IMEI number and product code. See also EFS.  
**OC**: Short for Overclocking. See OVERCLOCKING.  
**OCLF**: One Click Lag Fix - a outdated method of using the EXT2 file system to reduce perceived lag in the Android OS. See also LAGFIX.  
**ODEX**: A file that is associated with an APK file, containing a list of the dependencies for the program. See also DEODEXED.  
**ODIN**: A Samsung proprietary program that allows the Android device to be flashed back to stock or with custom software. See also HEIMDALL.  
[**ODIN ONE-CLICK**](http://forum.xda-developers.com/showthread.php?t=731989): A version/package of the ODIN program that contains and will preload the necessary files to flash back to STOCK (usually ECLAIR).   
**ODIN THREE BUTTON**: A version/package of the ODIN program that will FLASH the necessary files to restore the three-BUTTON COMBO used to get a FROYO ROM into the RECOVERY MENU. Only needs to be used if the user's Android device is missing the files necessary. ODIN ONE-CLICK must be flashed prior to using this package to avoid CLAY/BRICK status.  
[**ONECLICK UNBRICK**](http://forum.xda-developers.com/showthread.php?t=1153310): A program developed by recognized developer Adam Outler that will release the locks on an Android device that are holding it in a CLAY state.  
**OVERCLOCKING**: Setting the processor's clock speed to run faster than its default setting, i.e. 1200 MHz (1.2 GHz) vs 1000 MHz (1.0 GHz).  
**PIT FILE**: Short for Partition Information Table file. One of the possible file types used while flashing with ODIN or HEIMDALL.  
[**PRIMARY BOOTLOADER**](http://forum.xda-developers.com/showthread.php?t=1049294): Also known as First Stage Bootloader. The first bootloader run at boot time, this bootloader finds RAM for the Android device, and hands the boot sequence off to the SECONDARY BOOTLOADER. File name is "boot.bin". See also BOOTLOADER, SECONDARY BOOTLOADER.   
[**RAT**](http://forum.xda-developers.com/showpost.php?p=14942067&postcount=50): Short for Radio Access Technology. This determines how the network decides the QoS (quality of service) on the connection between the Android device and the carrier's data towers.  
**RECOVERY**: The menu that allows a user to do many low-level operations on the Android Device. This menu can either be the stock Samsung menu, or the CLOCKWORKMOD RECOVERY MENU (CWM). See also CWM.  
**REORIENTED**: Changing the code of a KERNEL from one device (e.g. Samsung Galaxy S) so that it will function on another device (e.g. Samsung Captivate).  
**RFS**: A Samsung-proprietary file system (e.g. NTFS, FAT32 are file systems) used on STOCK Android. Stands for Robust File System.  
**ROM**: The collection of programs, themes, and settings that create the general look-and-feel of your Android device. This is what most users will initially be wanting to change.  
**ROM MANAGER**: The Android OS front end program for the CLOCKWORKMOD RECOVERY MENU (or CWM). Allows use of many of the CWM features from inside the Android OS. See also CWM.  
[**SECONDARY BOOTLOADER**](http://forum.xda-developers.com/showthread.php?t=1049294): Also known as Second Stage Bootloader. The second bootloader run at boot time, this bootloader handles the processes required to allow the Android device to boot the main kernel, such as file systems, memory, and MODEM. File name is sbl.bin. See also BOOTLOADER, PRIMARY BOOTLOADER.  
**ROOT**: Changing the permission level of the Android system to its most powerful level, the root user, allowing full access to the file system.  
[**SILVER SPEAKER**](http://forum.xda-developers.com/showthread.php?t=873276): One of the most powerful and dangerous modifications to the Android device available. Can cause a variety of results, from improved signal to radioactive cats in boxes. Should not be used by the infirm or those with faulty [gluons](http://en.wikipedia.org/wiki/Gluon).  
**SOFT BRICK**: This does not exist. A misnomer for a device that is not functioning correctly, but still shows some signs of operation. See CLAY.  
**STOCK**: The Android software version that comes installed on new devices, prior to sale to the user. On the original Captivate, it was Eclair 2.1. Can also be used to refer to the Android software issued from Samsung or the carrier.  
**TETHER**: Connecting the Android device to a computer via a wired or wireless connection to allow the transfer of data through the Android device's internet connection. Commonly used to provide internet access to a laptop or desktop computer when other methods are not desired or available.  
**THEME**: A collection of images, backgrounds, colors, font types, and other visual items to change the Android device's look and feel. Separate from LAUNCHER, and is usually FLASHed in CWM.  
**TIBU**: Short for Titanium Backup. See TITANIUM BACKUP.  
**TITANIUM BACKUP**: A backup utility available in the Android Market that allows users to back up their applications, the saved data for the applications, and system settings.  
[**UNBRICKABLE MOD**](http://forum.xda-developers.com/showthread.php?t=1206216): A hardware modification that removes a resistor and reconnects another resistor to the removed resistor's active pad, permanently allowing the Android device to reach a development board state. This allows reloading of bootloaders that have previously been corrupted or incorrectly installed, along with preventing the Android device from ever reaching a true "hard brick" state. Originally developed by Recognized Developer Adam Outler.  
**UNDERVOLTING**: Setting the voltage levels drawn by the Android device to a lower level to reduce overall battery usage.  
**UV**: Short for Undervolting. See UNDERVOLTING.  
[**VOODOO LAGFIX**](http://forum.xda-developers.com/showpost.php?p=9772022&postcount=1): Converts /system, /cache, /dbdata and /data to Ext4 with optimized parameters for speed but also guaranteeing data integrity. Also configures the write behavior of Linux to prevent lag from happening, plus applies some memory management providing a better balance than stock settings.  
**VOODOO COLOR**: A series of improvements to the visual elements of the Android OS. Enhances clarity, offers color adjustments, and other visual tweaks.  
**VOODOO SOUND**: A series of improvements to the audio elements of the Android OS. Enhances audio clarity, allows for more powerful adjustment to overall sound levels, plus additional tweaks.  
[**WCDMA**](http://en.wikipedia.org/wiki/WCDMA): Short for Wideband Code Division Multiple Access. An air interface standard in 3G mobile communications networks that allows higher speeds and more users.  
**WIPE PACKAGE**: A rom package that will format the portions of the Android device where the user's market apps are stored, in addition to any updates to the system folders. After a wipe package is installed, the user will have to restore apps from a backup or redownload them from the Android Market. See also NO-WIPE PACKAGE.  
**ZIPALIGNED**: An archive alignment tool that provides important optimization to APK files. The purpose is to ensure that all uncompressed data starts with a particular alignment relative to the start of the file. Reduces RAM consumption.  
  
  
**ACRONYMS SPECIFIC TO MODEMS, KERNELS, AND ROMS:**  
  
[MODEMS:](http://forum.xda-developers.com/showthread.php?t=876391):  
*Note: most modems are referred to by the last three letters - e.g. JP3, JK3, JK4.*  
*Note 2: Kernels starting with a "J" are usually I9000-based, kernels starting with a "K" are usually I897-based.*  
  
  
**DTJP3**: FROYO (I9000 KERNEL ONLY)  
**AOJP3**: FROYO (I9000 KERNEL ONLY)   
**BVJP3**: FROYO (I9000 KERNEL ONLY)   
**UGJK3**: FROYO (I9000 KERNEL ONLY)   
**UGJK4**: FROYO (I9000 KERNEL ONLY)   
**TLJL3**: FROYO (I9000 KERNEL ONLY)   
**BVJJPD**: FROYO (I9000 KERNEL ONLY)   
**XXJPY**: FROYO (I9000 KERNEL ONLY)   
**UGJL2**: FROYO (I9000 KERNEL ONLY)   
**BUJS1**: FROYO (I9000 KERNEL ONLY)   
**ZNKP1**: FROYO (I9000 KERNEL ONLY)   
**VJJPG**: FROYO (I9000 KERNEL ONLY)   
**UBJP9**: FROYO (I9000 KERNEL ONLY)   
**ZSJPG**: FROYO (I9000 KERNEL ONLY)   
**TDVJP9**: FROYO (I9000 KERNEL ONLY)   
**XXJVE**: FROYO (I9000 KERNEL ONLY)   
**XXJQ1**: FROYO (I9000 KERNEL ONLY)   
**UGKC1**: FROYO (I9000 KERNEL ONLY)   
**XXJVK**: GINGERBREAD (I9000 KERNEL ONLY)  
**BUJV3**: GINGERBREAD (WCDMA 1900 KERNEL ONLY)  
**UBJV6**: GINGERBREAD (I9000 KERNEL ONLY)  
**XXJVO**: GINGERBREAD (I9000 KERNEL ONLY)  
**UGKG3**: GINGERBREAD (I9000 KERNEL ONLY)  
**UCKB1**: FROYO (CAPTIVATE KERNEL ONLY)  
  
  
KERNELS:  
**JVB**: GINGERBREAD  
**JVH**: GINGERBREAD  
**JVO**: GINGERBREAD  
**JVP**: GINGERBREAD  
**JVQ**: GINGERBREAD  
**JVR**: GINGERBREAD  
**JVS**: GINGERBREAD  
**JVT**: GINGERBREAD  
**KF1**: GINGERBREAD  
**KH3**: GINGERBREAD  
**KJ1**: GINGERBREAD  
**KJ2**: GINGERBREAD  
**KJ3**: GINGERBREAD  
**KK1**: GINGERBREAD  
**KK2**: GINGERBREAD  
**KK3**: GINGERBREAD  
**KK4**: GINGERBREAD  
**KB1**: FROYO  
**KB2**: FROYO  
**JI6**: FROYO  
**JPX**: FROYO  
**JS8**: FROYO  
**JF6**: ECLAIR  
  
  
ROMS:  
*Note: These are only ROM names that use acronyms, not a complete ROM listing*  
**CM**: CyanogenMod. See "CM" in Android Device Related section.  
**MIUI**: A Chinese built-from-source ROM. Short for "Mobile Internet User Interface". Also can refer to the MIUI music player, which has been included in other ROMs.