# UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF FLORIDA

MOTOROLA MOBILITY, INC.,

Plaintiff,

JURY TRIAL DEMANDED

v.

APPLE INC.,

Consolidated Cases

Case No. 1:10-cv-23580-RNS Case No. 1:12-cv-20271-RNS

Defendant.

APPLE INC.,

Counterclaim Plaintiff

v.

MOTOROLA MOBILITY, INC., HTC CORPORATION, HTC AMERICA, INC., ONE & COMPANY DESIGN, INC., and HTC AMERICA INNOVATION INC.,

Counterclaim Defendants.

DECLARATION OF RAYMOND PAO IN SUPPORT OF HTC COUNTERCLAIM DEFENDANTS' REPLY TO MOTION TO SEVER

- I, Raymond Pao, declare and state as follows:
- 1. I am the Director, Software Project Manager for HTC Corporation, a defendant in this action. Unless otherwise stated, I have personal knowledge of the facts set forth in this declaration and if called as a witness, I could testify competently thereto.
- 2. As a Director, Software Project Manager at HTC, my responsibilities include managing software project and serving as Google technical contact window. As a result, I am familiar with technical matters related to HTC products sold in the United States.
- 3. I have reviewed a list of the HTC devices accused by Apple in its Counterclaims to Plaintiff Motorola Mobility, Inc.'s First Amended Complaint for Patent Infringement in the above-captioned matter (the "Accused Devices").
- 4. Most of the Accused Devices use software for providing word recommendations that does not originate from Android. This software controls aspects of the user interface for presenting word recommendations to users.
- 5. HTC has developed and deployed its own methods for managing or sending notifications about missed telephone calls that are not dictated by the Android system. In most of the Accused Devices, HTC has modified multiple user interfaces related to providing missed call notifications, including interfaces when the phone is unlocked.
- 6. HTC has developed its own code for displaying the volume control window that appears when volume is changed. HTC does not use Android Toast feature for this function.
- 7. Consistent with the open-source environment of Android, anyone can access Android source code by downloading it from the Android website following the steps described at <a href="http://source.android.com/source/downloading.html">http://source.android.com/source/downloading.html</a>. Often, HTC obtains the source code for the Android platform from the Android Open Source Project. In general, HTC engineers in

Taiwan receive this source code for HTC. To the best of my knowledge, HTC employees in the United States are not involved in obtaining code from the Android Open Source Project.

- 8. As part of my normal job responsibilities, I regularly interface with employees of Google on issues related to HTC's use of Android in its products. As a result of these job responsibilities, I am aware of HTC's participation in the Open Handset Alliance ("OHA") and I have an understanding of what that membership entails.
- 9. In addition to HTC, I understand that the OHA has approximately 83 member companies. This understanding is consistent with the information available on the OHA's website. Attached hereto as Exhibit A is a true and correct copy of the information available in the "Members" section of the OHA website as it appeared on June 7, 2012, available at URL <a href="http://www.openhandsetalliance.com/oha\_members.html">http://www.openhandsetalliance.com/oha\_members.html</a>.
- 10. It is my understanding that Google leads the OHA and is responsible for Android product management and the engineering process for the core framework and platform. It is also my understanding that Google works internally on the next version of the Android platform and framework. This understanding is consistent with the information available on the Android Open Source Project website. Attached hereto as Exhibit B is a true and correct copy of the information available on the "Philosophy and Goals" section of the Android Open Source Project website as it appeared on June 7, 2012, available at URL

http://source.android.com/about/philosophy.html.

- 11. Attached hereto as Exhibit C is a true and correct copy of the information available on the "People and Roles" section of the Android Open Source Project website as it appeared on June 7, 2012, available at URL <a href="http://source.android.com/source/roles.html">http://source.android.com/source/roles.html</a>.
  - 12. As far as I am aware, the OHA does not hold regular meetings of its membership.

- 13. As far as I am aware, the OHA has no formal mechanisms through which its members collaboratively work together to contribute to the Android platform.
- 14. It is my understanding that anyone, whether or not an OHA member, can submit to Google for consideration certain Android-related or Android-compatible code, such as software patches or other bug fixes, or applications that can run on Android operating system.

  Google in turn evaluates and decides whether to incorporate or reject (or otherwise modify) such code. I do not know of any special opportunities for OHA members to contribute code to Android by virtue of their membership in the OHA.
- 15. In general, HTC does not contribute to the core Android framework. For example, for the current version of Android, 4.0 or "ice cream sandwich," there have been over 1000 patches contributed by others, but only 1 contributed by HTC. Other than using Google's Android source code as a starting point, none of the coding contributions by HTC was done in collaboration with any other commercial hardware or software developer, including Motorola.
- 16. It is my understanding that anyone, whether or not an OHA member, can access the current release of the Android platform through the Android Open Source Project website. I do not know of any means by which an OHA member can obtain access to Android code that is unavailable to the general public by virtue of their membership in the OHA.
- 17. Occasionally, a device manufacturer like HTC will partner with Google to create a flagship device to that is released in connection with the next version of Android. In these instances, the device manufacturer may have some increased access to Android code. However, it is my understanding that the device manufacturer's increased access to Android code in these circumstances is the result of its partnership with Google, and not directly connected to membership in the OHA.

18. I have reviewed exhibits 31 and 38 submitted by Apple. The author listed on that exhibit, Vladimir Chtchetkine, is not an HTC employee.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct. Executed this 8th day of June, 2012, in Taiper, Taiwan.

Raymond (Yung-Che) Pao

# **EXHIBIT A**

Mobile Operators

Handset Manufacturers

Semiconductor Companies

Software Companies

Commercialization Companies

#### **Mobile Operators**

# Bouygues Telecom



www.bouyguestelecom.fr

Created in 1994, Bouygues Telecom provides mobile, fixed, TV and internet communications services to the French customers.



**China Mobile Communications Corporation** 

www.chinamobile.com/en



#### **China Telecommunications Corporation**

en.chinatelecom.com.cn

China Telecommunications Corporation (China Telecom) is an extra -large State-owned telecom operator in China. China Telecom mainly provides the integrated information services including the fixed-line telephone, mobile service, satellite communications services, Internet connection and applications services, etc.



#### **China United Network Communications**

www.chinaunicom.com

China Unicom is the only Chinese telecom operator listed on the stock exchanges in New York, Hong Kong and Shanghai. On 7 January 2009, China Unicom was granted a WCDMA license.



#### **KDDI CORPORATION**

www.kddi.com

KDDI is a telecommunication operator that provides wide-ranging services from mobile to fixed in Japan.



#### NTT DOCOMO, INC.



www.nttdocomo.com

NTT DOCOMO is the world's leading mobile communications operator, with 53 million customers, of which 40 million use the 3G/FOMA service based on W-CDMA technology.



#### SOFTBANK MOBILE Corp.

mb.softbank.jp/mb/en

SOFTBANK MOBILE Corp. is a leading mobile operator in Japan with over 19 million customers and a member of the SOFTBANK Group. (as of 31 October 2008)



#### **Sprint Nextel**

www2.sprint.com/mr/aboutsprint.do

Sprint Nextel offers a comprehensive range of wireless and wireline communications services including the fastest and largest national mobile broadband network, a broad portfolio of devices and an wide array of applications, which enable customers to do the things that matter the most to them instantly and on the go – at SprintSpeed  $^{TM}$ .

#### T-Mobile



#### www.t-mobile.net

Serving more than 112 million mobile customers in Europe and the U.S., T-Mobile is one of the world's leading companies in mobile communications, and the mobile telecommunications subsidiary of Deutsche Telekom AG (NYSE: DT)

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#### Telecom Italia



# www.telecomitalia.it

Supplying 34.3 mobile lines, around 23 million landlines and 7.3 million broadband clients, Telecom Italia is a Italy's leading ICT enterprise with a significant international presence in Europe and South America. The Group trades through pre-eminent brands Telecom Italia, Alice, TIM, La7, MTV Italia, APCom and Olivetti in fixed-line and mobile telecommunications, Internet and media, office & system solutions.



#### Telefónica

#### www.telefonica.es

Telefónica is one of the largest telecommunication companies in the world, providing communication, information and entertainment solutions, with presence in Europe, Africa and Latin America and with more than 212 million clients of fixed and mobile services.



#### **TELUS**

#### www.telus.com

TELUS is a leading national telecommunications company in Canada, providing a wide range of communications products and services including data, Internet protocol (IP), voice, entertainment and video.



#### Vodafone

#### www.vodafone.com

Vodafone is the world's leading international mobile communications group with approximately 280 million proportionate customers as of 30 September 2008. Vodafone currently has equity interests in 27 countries across five continents and over 40 partner networks worldwide. For more information, please visit www.vodafone.com.

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#### **Handset Manufacturers**



#### Acer Inc.



#### www.acer-group.com

Acer ranks as the world's No. 3 vendor for total PCs and No. 2 for notebooks, with the fastest growth among the top-five players. Revenues in 2008 reached US\$16.65 billion.

# ALCATEL V

#### Alcatel mobile phones

#### www.alcatel-mobilephones.com

Alcatel mobile phones offer eye-catching handsets, with unique designs at competitive prices. ALCATEL handsets are managed by TCT Mobile, who is part of TCL Communication listed on the Hong Kong Stock Exchange (HKSE: 2618).



#### **ASUSTeK Computer Inc.**

#### www.asus.com

ASUS is a leading company in the new digital era for IT and communication products. The company's turnover for 2007 was 6.9 billion U.S. dollars.



#### CCI

#### www.compalcomm.com

Innovated, 1st tier qualified and fast track for smartphone design and integration, mass production in competitive cost and completely cover WCDMA/CDMA/TD-SCDMA wireless technologies.



#### Dell

#### www.dell.com

Dell listens to customers and uses that insight to make technology simpler, reliable, and deliver long-term value.



#### **Foxconn International Holdings Limited**

www.fih-foxconn.com/home/default.aspx

FIH is the global leader in the handset and wireless communications manufacturing and service.



#### **FUJITSU LIMITED**

# www.fujitsu.com

Manufacturing and sales of telecommunication systems, information processing systems and electronic devices, and providing services related to these systems.



#### Garmin International, Inc.

#### www.garmin.com

Garmin is the global leader in satellite navigation and has built millions of products that serve the automotive, wireless, OEM, fitness, aviation and marine markets.



#### Haier Telecom (Qingdao) Co., Ltd.

#### mobile.haier.com

Haier Mobile is one of leading provider in handset design, manufacturing and service in China.



#### **HTC Corporation**

#### www.htc.com

HTC Corporation focuses on driving cutting-edge innovation into a wide variety of mobile devices to create the perfect match for individuals. The company is listed on the Taiwan Stock Exchange under ticker 2498.



#### **Huawei Technologies**

## www.huawei.com

Huawei Technologies is a leader in providing next generation telecommunications network solutions for operators around the world.



# **₡**KY0CERa

#### www.kyocera.com

Kyocera is a 50 year old, \$13 billion company with 190 businesses worldwide, all working to develop products that improve customers' lives. Kyocera's wireless devices --found worldwide from Japan to the US - utilize the latest technology advancements to provide great value.



#### Lenovo Mobile Communication Technology Ltd.

#### www.lenovomobile.com

Lenovo Mobile Communications is one of the leading integrated mobile communication and information service providers in China.



# LG Electronics, Inc.

#### www.lge.com

LG, the brand that is Delightfully Smart, is a global leader and technology innovator in consumer electronics, home appliances and mobile communications. LG's vision is to supply top-of-the-range innovative digital products and services and ensure customer satisfaction.



# Motorola, Inc.

# www.motorola.com

Motorola is known around the world for innovation and leadership in wireless and broadband communications.



# **NEC Corporation**

# www.nec.com

NEC Corporation is one of the world's leading providers of networking, mobile communications and information technology.



#### Pantech

www.pantech.com

Pantech is a worldwide mobile company, leading the global mobile market by offering new values for customers with innovated technologies.

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Samsung Electronics

SAMSUNG

www.samsung.com

A leading innovator and provider of mobile phones and telecom systems.

# **Sharp Corporation**

SHARP

sharp-world.com

Sharp Corporation is a worldwide developer of innovative products and core technologies that play a key role in shaping the future of electronics. In the mobile phone business, in 2000 Sharp became the first company in the industry to introduce a camera-equipped mobile phone that enables users to instantly e-mail photos taken with the built-in camera.



## Sony Ericsson

www.sonyericsson.com

Sony Ericsson is a top global mobile phone manufacturer with sales of over 100 million phones in 2007. With operations in over 80 countries, Sony Ericsson was established as a 50:50 joint venture by Sony and Ericsson in October 2001. For more information about Sony Ericsson, please visit www.sonyericsson.com.

# **Toshiba Corporation**

**TOSHIBA** 

www.toshiba.com

Toshiba is a world leader and innovator in pioneering high technology, a diversified manufacturer and marketer of advanced electronic and electrical products spanning information & communications equipment and systems.



## **ZTE Corporation**

www.zte.com.cn

ZTE is a leading global provider of telecommunications equipment and network solutions. It has the widest and most complete product range in the world – covering virtually every sector of the wireline, wireless, service and terminals markets.

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# **Semiconductor Companies**



#### **AKM Semiconductor Inc**

# www.akm.com

AKM Semiconductor is a leading supplier of mixed-signal ICs for consumer and communications applications. Devices for mobile phones include audio products and electronic compass ICs.

#### **Audience**



#### www.audience.com

Audience is a voice processor company that enables clear communications anywhere with noise suppression technology based on the intelligence of the human hearing system.

# **ARM**

#### ARM

#### www.arm.com

ARM designs the technology that lies at the heart of advanced digital products, from wireless, networking and consumer entertainment solutions to imaging, automotive and storage devices.



#### **Atheros Communications**

#### www.atheros.com

Atheros Communications is a leading developer of wireless system solutions for communications products. The company's technology is used by leading PC, networking equipment and CE device manufacturers.



#### **Broadcom Corporation**

#### www.broadcom.com

Broadcom Corporation is a major technology innovator and global leader in semiconductors for wired and wireless communications, providing products that enable the delivery of voice, video, data and multimedia to and throughout the home, the office and the mobile environment.



#### CSR Plc.

# www.csr.com

CSR is the leading provider of GPS enabled location platforms for mainstream markets with focus on wireless, automotive, consumer electronic and mobile compute devices.



#### **Cypress Semiconductor Corporation**

#### www.cypress.com

Cypress's programmable solutions add power, style, and performance to multimedia handsets. Offerings include PSoC®-based touch -sensing solutions, USB and memories.



#### Freescale Semiconductor

www.freescale.com

Freescale Semiconductor is a global leader in the design and manufacture of embedded semiconductors and a leading provider of ICs for smart mobile devices.

# gemalto

#### Gemalto

#### www.gemalto.com

Gemalto, the leader in digital security, provides solutions designed to make personal digital interactions more convenient, secure and enjoyable.



#### Intel Corporation

#### www.intel.com/products/mid

Intel, the world leader in silicon innovation, develops technologies, products and initiatives to continually advance how people work and live.



#### Marvell Semiconductor, Inc.

#### www.marvell.com

Marvell is a leader in development of storage, communications, and consumer silicon solutions with a diverse product portfolio that powers the entire communications infrastructure from enterprise solutions to mobile consumer devices.

# MEDI/ITEK

#### MediaTek, Inc.

#### www.mediatek.com

MediaTek Inc. is a leading fabless semiconductor company for wireless communications and digital multimedia solutions, also a pioneer in cutting-edge SOC system solutions for wireless communications, high-definition TV, optical storage, DVD and Bluray products.



# MIPS Technologies, Inc.

#### www.mips.com

MIPS Technologies is a leading provider of industry-standard processor architectures and cores that power some of the world's most popular products for the home entertainment, communications, networking and portable multimedia markets.



### **NVIDIA** Corporation

# www.nvidia.com/page/handheld

NVIDIA is the worldwide leader in visual computing technologies. Its Tegra family of computers-on-a-chip deliver rich multimedia features including 3D graphics and high definition video for next generation mobile devices including smartphones and personal media players.



#### Qualcomm Inc.

#### www.qualcomm.com

Qualcomm Incorporated is a leader in developing and delivering innovative digital wireless communications products for advanced devices around the world.



#### **Renesas Electronics Corporation**

www.renesas.com



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Renesas Technology is the world's No.1 supplier of microcontrollers, as well as a leading provider of Power MOSFETs, System-on-Chip (SoC), and more.

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#### ST-Ericsson

#### www.stericsson.com

ST-Ericsson is an industry leader in design, development and creation of mobile platforms and wireless semiconductors. Through cutting-edge innovation backed by a complete portfolio and a dedicated partnership approach towards customers, ST-Ericsson is a key supplier to four of the industry's top five handset manufacturers.

# Synaptics, Inc.



#### www.synaptics.com

Synaptics, Inc., providing easy-to-use interface solutions for mobile phones, personal media players, notebooks and PC peripherals, supplies a variety of user input solutions for mobile devices that make accessing digital content easy and fun.



#### **Texas Instruments Incorporated**

#### www.ti.com/wirelessresources

TI is a leading manufacturer of wireless semiconductors, delivering the heart of today's wireless technology and building solutions for tomorrow.



#### Via Telecom

#### www.via-telecom.com

VIA Telecom is one of two CDMA baseband chipset providers worldwide, offering comprehensive chipset solutions including software packages and mature turn-key designs. Its innovative solutions for CDMA have been adopted by many handset companies, including Nokia and Samsung, and successfully commercialized on the networks of principal CDMA carriers.

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#### **Software Companies**



#### Ándago Ingeniería S.L.

#### www.andago.com

Andago provides fully interoperable ecosystems based on Open Source and PaaS technologies for mHealth, eGovernment, eTourism, and Smart Energy Systems.



#### ACCESS CO., LTD.

#### www.access-company.com

ACCESS is a global company providing leading technology, software products and platforms for Web browsing, mobile phones, digital TVs and other networked devices.



#### Ascender Corp.

## www.ascendercorp.com/oha.html

Ascender Corp. is a leading provider of advanced font products and innovative applications for mobile devices.



# Cooliris, Inc.

#### www.cooliris.com

Cooliris creates products that transform the browsing experience across screens, making discovering and enjoying media more exciting, efficient, and personal.



#### eBay Inc.

www.ebay.com



#### Google Inc.

# www.google.com

Our mission is to organize all the world's information and make it universally accessible and useful.



#### LivingImage LTD.



# www.livingimage.jp

A unique company that consists of renowned engineering, marketing and creative experts in the audio visual arena.



#### Myriad

#### vriad <u>www.myriadgroup.com</u>

Myriad is a leading provider of multi-media solutions and end-to-end integration services that accelerate time-to-market and reduce operational costs for OEMs and Operators.





www.motoya.co.jp

MOTOYA is leading company for Japanese digital fonts. Our products are outline fonts (TrueType, OpenType, etc.) and bitmap fonts.



#### Nuance Communications, Inc.

#### www.nuance.com

Nuance Communications (NASDAQ: NUAN) is a leading provider of speech and imaging solutions for businesses and consumers around the world.



#### **NXP Software**

#### www.software.nxp.com

NXP Software is the market leader in innovative multimedia solutions, its LifeVibes software is used in over 650M mobile devices today.

# OMRON

#### **OMRON SOFTWARE Co. Ltd.**

#### www.omronsoft.co.jp

OMRON SOFTWARE, a leading embedded device software company, provides innovative / universal language and image processing technologies for mobile devices.



# PacketVideo (PV)

#### www.pv.com

PacketVideo (PV) is a multimedia software company whose software powers the world's leading mobile entertainment services, including Verizon Wireless' VCAST music and video services, NTT DoCoMo's 3-G FOMA service and Orange World by Orange.



# SkyPop

#### www.skypop.com

Next generation services for mobile devices.



#### **SONIVOX**

#### www.sonivoxrocks.com

SONiVOX is a premier developer of audio technologies and solutions that empower consumers to create Sound That Rocks.





#### www.svox.com

SVOX, a leading supplier of embedded speech solutions, drives adoption of speech user interfaces in automotive and mobile device industries.



# VisualOn Inc.

# www.visualon.com

VisualOn's multimedia framework and optimized codecs are compatible with Android to enable the best multimedia experience for Android devices.

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#### **Commercialization Companies**



#### **Accenture**

#### www.accenture.com

Accenture is a global management consulting, technology services and outsourcing company, with approximately 211,000 people serving clients in more than 120 countries.



#### **Aplix Corporation**

#### www.aplixcorp.com

Aplix Corporation enables mobile handset manufacturers to have a faster, lower development cost and lower risk route to deploy wireless Java solutions



#### **Borqs**

#### www.borgs.com

Borqs provides best-in-class operator-centric mobile handset operating system (OS) software products and mobile internet service platforms and solutions.



#### **Intrinsyc Software International**

#### www.intrinsyc.com

Intrinsyc provides hardware, software, and service solutions that enable companies to build next-generation mobile and embedded products.



#### **L&T Infotech**

# www.Intinfotech.com

A leading software services provider, L&T Infotech offers its comprehensive suite of Product Engineering Services to the Telecom industry globally.



# Noser Engineering Inc.

#### www.noser.com/oha

Noser Engineering Inc. - core contributor of the Android Platform is your integrator and customization partner.



#### Sasken Communication Technologies Limited

# www.sasken.com

Sasken works with Handset OEMs and Semiconductor companies to enable differentiated devices and user experiences. We offer an unique combination of R&D Consultancy, Wireless Software Products, Software and Hardware Services.



#### SQLStar International Inc.

# www.sqlstar.com

Embinux Group of SQLStar provides system integration, customer engineering services and custom apps. for Android and embedded-Linux on MSM & OMAP platforms.



# TAT - The Astonishing Tribe AB

#### www.tat.se

TAT - The Astonishing Tribe - a specialist in mobile user interfaces, recognized for its design capabilities and for its software solutions that enable richer user experiences on any platform, to date embedded in more than 140 million devices.

#### Teleca AB

Teleca

# www.teleca.com

Teleca is a global supplier of innovative software and solutions to mobile communications companies. Teleca has about 2,000 employees in Asia, Europe and North America.

## Wind River

WIND RIVER

#### www.windriver.com/oha

Wind River enables companies to develop, run, and manage device software faster, better, at lower cost and more reliably.



# Wipro Technologies

#### www.wipro.com/services/pes

A leading Software Services Company and #1 provider of integrated business, technology and process solutions, globally

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# **EXHIBIT B**

Android.com

# open source project

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# **Philosophy and Goals**

Android is an open-source software stack for mobile phones and other devices.

# **Origin and Goal**

Android was originated by a group of companies known as the Open Handset Alliance, led by Google. Today, many companies -- both original members of the OHA and others -- have invested heavily in Android, typically in the form of allocating significant engineering resources to improve Android and bring Android devices to Market.

We created Android in response to our own experiences launching mobile apps. We wanted to make sure that there would always be an open platform available for carriers, OEMs, and developers to use to make their innovative ideas a reality. We wanted to make sure that there was no central point of failure, where one industry player could restrict or control the innovations of any other. The solution we chose was an open and open-source platform.

The goal of the Android Open Source Project is to create a successful real-world product that improves the mobile experience for end users.

# **Governance Philosophy**

The companies that have invested in Android have done so on its merits, because we believe that an open platform is necessary. Android is intentionally and explicitly an open-source -- as opposed to free software -- effort: a group of organizations with shared needs has pooled resources to collaborate on a single implementation of a shared product. The Android philosophy is pragmatic, first and foremost. The objective is a shared product that each contributor can tailor and customize.

Uncontrolled customization can, of course, lead to incompatible implementations. To prevent this, the AOSP also maintains the Android Compatibility Program, which spells out what it means to be "Android compatible", and what is required of device builders to achieve that status. Anyone can (and will!) use the Android source code for any purpose, and we welcome all such uses. However, in order to take part in the shared ecosystem of applications that we are building around Android, device builders must participate in the Compatibility Program.

Though Android consists of multiple sub-projects, this is strictly a project-management technique. We view and manage Android as a single, holistic software product, not a "distribution", specification, or collection of replaceable parts. Our intent is that device builders port Android to a device; they don't implement a specification or curate a distribution.

# **How We Work**

We know that quality does not come without hard work. Along with many partners, Google has contributed full-time engineers, product managers, UI designers, Quality Assurance, and all the other roles required to bring modern devices to market. We roll the open source administration and maintenance into the larger product development cycle.

 At any given moment, there is a current latest release of the Android platform. This typically takes the form of a branch in the tree.

- Device builders and Contributors work with the current latest release, fixing bugs, launching new devices, experimenting with new features, and so on.
- In parallel, Google works internally on the next version of the Android platform and framework, working
  according to the product's needs and goals. We develop the next version of Android by working with a
  device partner on a flagship device whose specifications are chosen to push Android in the direction we
  believe it should go.
- When the "n+1"th version is ready, it will be published to the public source tree, and become the new latest release.

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# **EXHIBIT C**

Android.com

CIOFCUD

# open source project

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#### **Getting Started**

Initializing the Build Environment Downloading the Source Building and Running Building for Devices Building Kernels Known Issues

#### **Navigating the Source**

Platform Overview Branches & Releases Build Numbers

#### Contributing

Life of a Patch Submitting Patches View Patches Life of a Bug Reporting Bugs

#### Reference

**Version Control** 

Repo Commands
Git Resources

Using Eclipse Code Style Guidelines FAQs

# **People and Roles**

The Android Open Source Project (AOSP) includes individuals working in a variety of roles. As noted in <u>Our Philosophy</u>, Google is responsible for Android product management and the engineering process for the core framework and platform; however, the project considers contributions from any source, not just Google. This page describes the kinds of roles that interested parties can take on.

Anyone who is interested in exploring and contributing to Android can use the Android Open Source Project resources. Anyone can join the mailing lists, ask questions, contribute patches, report bugs, look at submitted patches, and use the tools. To get started with the Android code, see <u>Get Involved</u>.

#### Contributor

A "Contributor" is anyone making contributions to the AOSP source code, including both employees of Google or other companies, as well as external developers who are contributing to Android on their own behalf. There is no distinction between Contributors who are employed by Google, and those who are not: all engineers use the same tools (git, repo, and gerrit), follow the same code review process, and are subject to the same requirements on code style and so on.

## Developer

A "Developer" is an engineer writing applications that run on Android devices. There is, of course, no difference in skillset between a "Developer" and a "Contributor", but AOSP uses "Developer" to distinguish between engineers using the platform and those contributing to it. Developers are (along with end users) the "customers" of the platform that the Contributors create. As such, we talk about Developers a lot, though this isn't technically a separate role in the AOSP per se.

### Verifier

"Verifiers" are responsible for testing change requests. After individuals have submitted a significant amount of high-quality code to the project, the Project Leads might invite them to become Verifiers. *Note: at this time, generally Verifiers are the same as Approvers.* 

#### Approver

"Approvers" are experienced members of the project who have demonstrated their design skills and have made significant technical contributions to the project. In the code-review process, an Approver decides whether to include or exclude a change. Project Leads (who are typically employed by Google) choose the Approvers, sometimes promoting to this position Verifiers who have demonstrated their expertise within a specific project.

# **Project Leads**

Android consists of a number of sub-projects; you can see these in the git repository, as individual .git files. Tech Leads are senior Contributors who oversee the engineering for individual Android projects. Typically these tech leads will be Google employees. A Project Lead for an individual project is responsible for the following:

- Lead all technical aspects of the project; for example, the project roadmap, development, release cycles, versioning, and QA.
- Ensure that the project is QA-ed in time for scheduled Android platform releases.
- Designate Verifiers and Approvers for submitted patches.
- Be fair and unbiased while reviewing changes. Accept or reject patches based on technical merit and alignment with the Android strategy.
- Review changes in a timely manner and make best efforts to communicate when changes are not accepted.
- Optionally maintain a web site for the project for information and documents specific to the project.
- Act as a facilitator in resolving technical conflicts.
- Be a public face for the project and the go-to person for questions related to the project.

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