Exhibit A

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19   UNITED STATES DISTRICT COURT

20   NORTHERN DISTRICT OF CALIFORNIA

21   SAN FRANCISCO DIVISION

22 ORACLE AMERICA, INC.	Case No. CV 10-03561 WHA
23 Plaintiff,	**PLAINTIFF'S RESPONSES AND OBJECTIONS TO DEFENDANT**
24 v.	**GOOGLE INC.'S FIRST SET OF INTERROGATORIES TO**
25 GOOGLE INC.	**PLAINTIFF ORACLE AMERICA, INC. (NOS. 1-10)**
26 Defendant.	
27	Dept.: Courtroom 9, 19th Floor Judge: Honorable William H. Alsup

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1 damages corresponding to Google's willful infringement—is in Google's possession, timely

2 production of information and documents relating to damages by Google will be necessary in

3 order for Oracle's experts to be able to provide detailed quantifications of Oracle's damages in

4 their initial reports.

5 **INTERROGATORY NO. 2:**

6   State in detail Oracle's factual bases for its claim of direct copyright infringement,

7 specifically including a comparison of each element of Java software, including without

8 limitation any class libraries, API packages, method names, class names, definitions,

9 organizational elements, parameters, structural elements, and documentation, to the

10 corresponding Android element, as Oracle did in Exhibit J to its Amended Complaint.

11 **RESPONSE TO INTERROGATORY NO. 2:**

12   Oracle owns many copyrights in the code, documentation, specifications, libraries, and

13 other materials that comprise the Java platform. As new versions of the Java platform were

14 developed and the materials revised, the copyrights were registered with the United States

15 Copyright Office, including TX0004416302; TX0004326014; TX0004616088; TX0005271787;

16 TX0005316757; TX0005316758; TX0005359984; TX0005359985; TX0005359986;

17 TX0005359987; TX0005392885; TX0006066538; TX0006143306; and TX0006196514. Google

18 has infringed Oracle's copyrights.

19   Android Application Programmer Interface (API) package specifications (whether or not

20 from the Apache Harmony project) that correspond to Oracle's Java API specifications are

21 unauthorized derivative work, and Google's unauthorized copying and distribution of them is

22 copyright infringement. A comparison of Android's API package specifications (available at

23 http://developer.android.com/reference/packages.html) with Oracle's copyrighted Java API

24 package specifications (for example, available at

25 http://download.oracle.com/javase/1.5.0/docs/api/,

26 http://download.oracle.com/javase/1.4.2/docs/api, and

27

28

http://download.oracle.com/javase/1.3/docs/api/)[8] demonstrates that the following Android

package specifications are derived from or substantially similar to Oracle's copyrighted Java API

package specifications:

1. java.awt.font
2. java.beans
3. java.io
4. java.lang
5. java.lang.annotation
6. java.lang.ref
7. java.lang.reflect
8. java.math
9. java.net
10. java.nio
11. java.nio.channels
12. java.nio.channels.spi
13. java.nio.charset
14. java.nio.charset.spi
15. java.security
16. java.security.acl
17. java.security.cert
18. java.security.interfaces
19. java.security.spec
20. java.sql
21. java.text
22. java.util

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[8] Oracle's copyright infringement claim applies to all versions of Oracle's Java API specifications and reference implementations from which Android derives, which include J2SE 1.2, J2SE 1.3, J2SE 1.4, and J2SE 5.0.

1	23. java.util.concurrent
2	24. java.util.concurrent.atomic
3	25. java.util.concurrent.locks
4	26. java.util.jar
5	27. java.util.logging
6	28. java.util.prefs
7	29. java.util.regex
8	30. java.util.zip
9	31. javax.crypto
10	32. javax.crypto.interfaces
11	33. javax.crypto.spec
12	34. javax.net
13	35. javax.net.ssl
14	36. javax.security.auth
15	37. javax.security.auth.callback
16	38. javax.security.auth.login
17	39. javax.security.auth.x500
18	40. javax.security.cert
19	41. javax.sql
20	42. javax.xml
21	43. javax.xml.datatype
22	44. javax.xml.namespace
23	45. javax.xml.parsers
24	46. javax.xml.transform
25	47. javax.xml.transform.dom
26	48. javax.xml.transform.sax
27	49. javax.xml.transform.stream
28	50. javax.xml.validation

1   51. javax.xml.xpath

2   Some Android package API specifications are substantially similar to selected portions of some

3   of the Oracle Java API package specifications (*e.g.*, java.awt.font, java.beans) while other

4   Android package API specifications are substantially similar to complete portions of other Oracle

5   Java API package specifications (*e.g.*, java.io, java.lang, java.net, java.nio, java.security, java.sql,

6   java.text). Exhibits A-E are illustrative examples.[9]

7   The Android source and object code (whether or not from the Apache Harmony project)

8   that purports to implement Oracle's Java API specifications is unauthorized derivative work, and

9   Google's unauthorized copying and distribution of it is copyright infringement. *See, e.g.*, "What

10 is Android?" (available at http://developer.android.com/guide/basics/what-is-android.html

11 ("Android includes a set of core libraries that provides most of the functionality available in the

12 core libraries of the Java programming language.")); Package Index (available at

13 http://developer.android.com/reference/packages.html), including those API packages listed

14 above, and subsidiary webpages; and source code and documentation files available in:[10]

15   • libcore\security\src\main\java\java\security;

16   • libcore\security\src\main\java\javax\security\cert;

17   • libcore\security\src\main\java\org\apache\harmony\security;

18   • libcore\math\src\main\java\java\math;

19   • libcore\math\src\main\java\org\apache\harmony\math;

20   • libcore\luni\src\main\java\java;

21   • libcore\luni\src\main\java\org\apache\harmony\luni;

22   • libcore\luni-kernel\src\main\java\java\lang;

23 ─────────────
    [9] The illustrative examples are taken from http://download.oracle.com/javase/1.5.0/docs/api/ and
    http://developer.android.com/reference/packages html.

24

25 [10] It appears that Google has recently modified the source code currently available through
    http://android.git kernel.org. Such changes are subject to the discovery Oracle has propounded on Google. In any
    event, the cited source code examples are taken from http://android.git.kernel.org/. The citations are shortened and

26 mirror the file paths shown in http://android.git.kernel.org/. For example, "dalvik\vm\native\InternalNative.c" maps
    to "[platform/dalvik.git] / vm / native / InternalNative.c" (accessible at

27 http://android.git kernel.org/?p=platform/dalvik.git;a=blob;f=vm/native/InternalNative.c) before modification by
    Google.

28

1   •   libcore\luni-kernel\src\main\java\org\apache\harmony\kernel;

2   •   libcore\luni-kernel\src\main\java\org\apache\harmony\lang;

3   •   libcore\nio\src\main\java\java.

4 Google has created and distributed infringing works written in native code, in addition to Java

5 code, that derive from Oracle's copyrighted works. For example, Google makes and distributes

6 dalvik\vm\native\java_lang_Class.c, which is based on Oracle's java.lang.Class specification.

7 Other examples include:

8   •   dalvik\vm\native\java_lang_Object.c

9   •   dalvik\vm\native\java_lang_reflect_AccessibleObject.c;

10   •   dalvik\vm\native\java_lang_reflect_Array.c;

11   •   dalvik\vm\native\java_lang_reflect_Constructor.c;

12   •   dalvik\vm\native\java_lang_reflect_Field.c;

13   •   dalvik\vm\native\java_lang_reflect_Method.c;

14   •   dalvik\vm\native\java_lang_reflect_Proxy.c;

15   •   dalvik\vm\native\java_lang_Runtime.c;

16   •   dalvik\vm\native\java_lang_String.c;

17   •   dalvik\vm\native\java_lang_System.c;

18   •   dalvik\vm\native\java_lang_Throwable.c;

19   •   dalvik\vm\native\java_lang_VMClassLoader.c;

20   •   dalvik\vm\native\java_lang_VMThread.c;

21   •   dalvik\vm\native\java_security_AccessController.c;

22   •   dalvik\vm\native\java_util_concurrent_atomic_AtomicLong.c; and

23   •   dalvik\vm\native\sun_misc_Unsafe.c.

24 *See also, e.g.*, source code files in libcore\luni\src\main\native; libcore\luni-

25 kernel\src\main\native.

26 Google's Android videos directly reference inclusion of Java libraries in Android, *e.g.*:

27   •   Google Presentation, entitled "Android: Securing a Mobile Platform from the Ground

28   Up," presented by Rich Cannings (Google's Android Team) at the Usenix 18th

1   Security Symposium (Aug. 12, 2010), available at

2   http://www.usenix.org/events/sec09/tech/.

3   • Google I/O 2010 Video, entitled "A JIT Compiler for Android's Dalvik VM,"

4   presented by Ben Cheng and Bill Buzbee (Google's Android Team), available at

5   http://developer.android.com/videos/index.html#v=Ls0tM-c4Vfo.

6   • Google I/O 2008 Video, entitled "Dalvik Virtual Machine Internals," presented by

7   Dan Bornstein (Google Android Project), available at

8   http://developer.android.com/videos/index.html#v=ptjedOZEXPM.

9   Moreover, Google admits that Android incorporates a subset of Apache Harmony, which

10   it asserts is "an implementation of Sun's Java." (*See, e.g.*, Google's Amended Counterclaims

11   ¶¶ 6-7, 13.)

12   Google distributes by way of Android and Android-related websites source and object

13   code derived from or substantially similar to Oracle's source code or to decompiled Oracle object

14   code, including:

15   • /dalvik/libcore/support/src/test/java/org/apache/harmony/security/tests/support/acl/

16   AclEntryImpl.java

17   • /dalvik/libcore/support/src/test/java/org/apache/harmony/security/tests/support/acl/

18   AclImpl.java

19   • /dalvik/libcore/support/src/test/java/org/apache/harmony/security/tests/support/acl/

20   GroupImpl.java

21   • /dalvik/libcore/support/src/test/java/org/apache/harmony/security/tests/support/acl/

22   OwnerImpl.java

23   • /dalvik/libcore/support/src/test/java/org/apache/harmony/security/tests/support/acl/

24   PermissionImpl.java

25   • /dalvik/libcore/support/src/test/java/org/apache/harmony/security/tests/support/acl/

26   PrincipalImpl.java

27   • /dalvik/libcore/support/src/test/java/org/apache/harmony/security/tests/support/cert

28   /PolicyNodeImpl.java

- /dalvik/libcore/support/src/test/java/org/apache/harmony/security/tests/support/acl/ AclEnumerator.java (which was obtained by decompiling Oracle's /sun/security/acl/AclEnumerator.class)

- /dalvik/libcore/luni/src/main/java/java/util/TimSort.java contains code copied from Oracle's java/util/Arrays.java

- /dalvik/libcore/luni/src/main/java/java/util/ComparableTimSort.java contains code copied from Oracle's java/util/Arrays.java

- /dalvik/libcore/security/src/test/java/org/apache/harmony/security/tests/java/security/CodeSourceTest.java contains comments copied from Oracle's /java/security/CodeSource.java

- /dalvik/libcore/security/src/test/java/tests/security/cert/CollectionCertStoreParametersTest.java contains comments copied from Oracle's /java/security/cert/CollectionCertStoreParameters.java

Additional supporting evidence of Google's copyright infringement can be found at, *e.g.*, GOOGLE-00248372; GOOGLE-00296156-75; GOOGLE-00296453-60; GOOGLE-00296959-61; GOOGLE-00296500-03; GOOGLE-00296507; GOOGLE-00297265; GOOGLE-00297033-38, GOOGLE-00297252-57, GOOGLE-00297361-65 and similar questionnaires signed by other developers; GOOGLE-00296203-07; GOOGLE-00296498-99; GOOGLE-00296523-24; GOOGLE-00296525-26; GOOGLE-00297075-76.

Discovery is ongoing, and Oracle has not yet completed its investigation of the documents and facts relevant to the claims and defenses asserted in this action. Accordingly, Oracle's responses are based on the information reasonably available at this time and Oracle will supplement this response as appropriate under the Federal Rules of Civil Procedure.

INTERROGATORY NO. 3:

State in detail Oracle's factual bases for each element of indirect copyright infringement, specifically including an identification of any direct infringement and a description of the acts of the alleged indirect infringer that contribute to or are inducing that direct infringement.