

1. My name is Ximena Solano Suarez. I am an attorney at Sheppard Mullin Richter and Hampton LLP, counsel for HTC Corporation and HTC America, Inc. If called as a witness, I could and would competently testify to all facts within my personal knowledge except where stated upon information and belief.
2. On or about July 27, 2018, I determined that the Dissertation of Willibrordus Johannes van Gils, entitled Design of Error-Control Coding Schemes for Three Problems of Noisy Information Transmission, Storage and Processing (herein “Gils Dissertation”), Ex. 1010, was available at TU/e Technische Universiteit, or in English, Eindhoven University of Technology (herein “TU/e”), located at 5612 AZ, Eindhoven, Netherlands, as can be seen at <https://research.tue.nl/en/publications/design-of-error-control-coding-schemes-for-three-problems-of-nois>, last visited on August 21, 2018.
3. On or about July 27, 2018, I also determined that the Gils Dissertation was listed on WorldCat Online Library Catalog database, found at www.worldcat.org.
4. Exhibit 1025 is a true and correct copy of the WorldCat database at http://www.worldcat.org/search?qt=worldcat_org_all&q=Design+of+error-control+coding+schemes+for+three+problems+of+noisy+information+transmission%2C+storage+and+processing, last visited on August 18, 2018.
5. WorldCat Library indicated the Gils Dissertation is available at least at the following Libraries:
 - University of New South Wales, Canberra Campus (herein “UNSW”), located at Northcott Dr, Campbell ACT 2600, Australia, *id.* at 5;
 - Technische Informationsbibliothek, or in English, TIB – Leibniz Information Centre for Science and Technology and University Library, or otherwise known as

the German National Library of Science and Technology (herein “TIB”), located at
located at Welfengarten 1B, 30167, Hannover, Germany, *id.* at 4;

- Karlsruher Institut für Technologie, or in English Karlsruher Institute of
Technology (herein “KIT”), located at Strasse am Forum 2, Geb. 30.50/30.51,
76131, Karlsruhe, Germany, *id.*;
- Technische Universität Hamburg, Universitätsbibliothek, or in English, Hamburg
University of Technology (herein “TUHH”), located at Denickestraße 22, 21073,
Hamburg, Germany, *id.* at 3;
- Sächsische Landesbibliothek - Staats- und Universitätsbibliothek Dresden, or in
English Saxon State and University Library Dresden (herein “SLUB”), located at
Zellescher Weg 18, 01069, Dresden, Germany, *id.* at 5; and
- Tilburg University, located at Warandelaan 2, 5037 AB Tilburg, Netherlands, *id.* at
3.

University of New South Wales

6. Between the dates of July 29, 2018 and August 7, 2018, I corresponded with Mr. Michael
Lemmer, Liaison Librarian for UNSW, at the email address askus@unsw-
adfa.libanswers.com, and by phone number +61 (2) 6268 8475, in New South Wales,
Australia, regarding the Gils Dissertation.
7. Exhibit 1026 is a true and correct copy of the correspondence with UNSW. *Id.* at 1-5.
8. On July 29, 2018, I initially contacted UNSW, located in Canberra, Australia, at the e-
mail address listed above, inquiring as to when the Gils Dissertation was publicly
available for viewing. *Id.* at 3.

9. On August 1, 2018, Mr. Lemmer confirmed that the hardcopy of the Gils Dissertation included a “record of purchase on the back cover of the thesis. [Mr. Lemmer] confirm[ed] it was added to [UNSW’s] collection on May 22, 1990.” *Id.* at 2.
10. On August 7, 2018, Mr. Lemmer sent me a copy of the front and last page of the Gils Dissertation, wherein the last page showed the acquisition record: “QA 268 .654 1988[,] Design of error-control coding schemes for three problems . . .[,] Gils, Willibrodus Johannes va[,] BARCODE 235541[,] BRN 193921[,] ADFA Library[,] 22 May 1990.” *Id.* at 4-5.

German National Library of Science and Technology

11. TIB’s website <https://www.tib.eu/en/tib/profile/> states:

[a]cting in the capacity of the German National Library of Science and Technology, as well as architecture, chemistry, computer science, mathematics and physics, the TIB – Leibniz Information Centre for Science and Technology and University Library provides academia, research and business with literature and information. Its remit is to preserve recorded knowledge and to provide the latest information, both now and in the future, irrespective of the time and the place. TIB is actively engaged in promoting Open Access and thus supports unrestricted, free access to scientific information. In its capacity as a University Library, TIB ensures that all faculties of Leibniz Universität Hannover are supplied with information.
12. Exhibit 1027 is a true and correct copy of the “Profile” from TIB’s website.
13. Between the dates of July 30, 2018 and July 31, 2018, I corresponded with TIB, located in Hannover, Germany, regarding the Gils Dissertation.
14. Exhibit 1028 is a true and correct copy of the correspondence with TIB.
15. On July 30, 2018, I contacted TIB at the e-mail address of customerservice@tib.eu regarding the Gils Dissertation. *Id.* at 3-4.

16. On the same day I received a reply from Petra Gugat, customer service, from the email address customerservice@tib.eu, stating that an accession certificate could be issue by TIB. *Id.* at 3.
17. On July 31, 2018, I received an email from kundenservice@tib.edu enclosing the accession certificate from TIB, signed by Ursula Krys, of the Teamleitung Hochschulschriften, Geschenke Abteilung Bestandsentwicklung und Metadaten Welfengarten 1 B // 30167 Hannover. *Id.* at 1-2. This Certificate states that the Gils Dissertation “was incorporated at our establishment on July 18th, 1988, under the shelf mark DR 1111.” *Id.* at 2.

Karlsruher Institute of Technology

18. Between the dates of July 28, 2018 and July 31, 2018, I corresponded with KIT, located in Karlsruhe, Germany, regarding the Gils Dissertation.
19. Exhibit 1029 is a true and correct copy of the correspondence with KIT.
20. On July 28, 2018, I initially contacted KIT, at the email address info@bibliothek.kit.edu, regarding the Gils Dissertation. *Id.* at 2.
21. On July 30, 2018, I received a response from Ms. Heidi Young Farmer, Information Desk, stating the Gils Dissertation “got a shelfmark from the year 1988 (88 DA 3742).” On the same day, I sent a follow up email to Ms. Farmer. *Id.* at 1-2.
22. On July 31, 2018, I received a response from Ms. Karin Bühler, with the Department of Acquisition and Cataloguing from the KIT library, from the email address karin.buehler@kit.edu, stating that the request had been forwarded to her by Ms. Farmer.

Ms. Bühler further stated that the Gils Dissertation was cataloged by KIT on June 28, 1989. *Id.* at 1.

Hamburg University of Technology

23. Between the dates of July 28, 2018 and July 30, 2018, I corresponded with TUHH, located in Hamburg, Germany, regarding the Gils Dissertation.
24. Exhibit 1030 is a true and correct copy of the correspondence with TUHH.
25. On July 28, 2018, I contacted the TUHH, located in Hamburg, Germany, via online contact form at <https://www.tub.tuhh.de/service/beratung/>, regarding the Gils Dissertation.
26. On July 30, 2018, Ms. Karin Lass responded, from the email address bibliothek@tuhh.de, stating that the Gils Dissertation had been available at TUHH since April 4, 1988. *Id.*

Saxon State and University Library Dresden

27. Between the dates of July 28, 2018 and August 13, 2018, I corresponded with SLUB, located in Dresden, Germany, regarding the Gils Dissertation.
28. Exhibit 1031 is a true and correct copy of the correspondence with SLUB.
29. On July 28, 2018, I contacted SLUB via online contact form at <https://www.slub-dresden.de/kontaktformular/>, regarding the Gils Dissertation. *Id.*
30. On August 13, 2018, Ms. Katharina Meyer responded, from the email address auskunft@slub-dresden.de, stating the Gils Dissertation was available “maybe in the years 1992 or 93. From this date on the item could be viewed or checked out.” *Id.* at 3

Eindhoven University of Technology

31. Between the dates of July 28, 2018 and July 29, 2018, I corresponded with TU/e, located in Eindhoven, Netherlands, regarding the Gils Dissertation.
32. Exhibit 1032 is a true and correct copy of the correspondence with TU/e.
33. On July 28, 2018, I contacted Eindhoven, located in Eindhoven, Netherlands, via online contact form at <https://www.tue.nl/en/university/library/practical-information/ask-a-question-problem-report/ask-a-question-problem-report-librarysearch/>, regarding the Gils Dissertation. *Id.*
34. On July 29, 2018, I received a response from John G. Engles, of the Library Search Helpdesk, from the email address iec.librarysearch@tue.nl. Mr. Engles stated “[t]he promotion date is 5 January 1988, and the day after the promotion, a hard copy was available in the library.” *Id.*

Tilburg University

35. Between the dates of July 28, 2018 and July 30, 2018, I corresponded with Tilburg University, located in Tilburg, Netherlands, regarding the Gils Dissertation.
36. Exhibit 1033 is a true and correct copy of the correspondence with Tilburg University.
37. On July 28, 2018, I contacted Tilburg University, at the email address library@tilburguniversity.edu, regarding the Gils Dissertation. *Id.* at 2.
38. On July 30, 2018, I received a response from Emmy Golstein, from the email address listed above, stating that Tilburg University’s metadata showed that the Gils Dissertation was available as of April 26, 1998. *Id.* at 1.

The Philips Technical Review

39. On August 14, 2018, I became aware that the Gils Dissertation was mentioned as scientific publication on Philips Technical Review, volume 44, no. 2, p. 60, April 1988 (“Philips Tech. Rev.”). The Philips Tech. Rev. is a well-established publication dating back to 1936, as it can be seen at http://www.extra.research.philips.com/hera/people/aarts/_Philips%20Bound%20Archive/PTechReview/, where the Philips Tech. Rev. can be downloaded.
40. Exhibit 1034 is a true and correct copy of the Philips Tech. Rev. found at http://www.extra.research.philips.com/hera/people/aarts/_Philips%20Bound%20Archive/PTechReview/, last visited August 20, 2018.
41. On the same day, I performed a search for the Philips Tech. Rev. on the Stanford University Library website at <http://library.stanford.edu/>. I found the Philips Tech. Rev. at <https://searchworks.stanford.edu/view/373810>. I clicked on “Librarian View” at the bottom right of this page to view the cataloging details for the publication. According to Stanford University Library’s website, the Philips Tech. Rev. was cataloged on November 30, 1990.
42. Exhibit 1035 is a true and correct copy of a screenshot of Stanford’s Librarian View for the Philips Tech. Rev, with the relevant portions highlighted, showing the date that it was cataloged.

The Philips Journal of Research

43. On August 4, 2018, I became aware that the constructions of optimal binary linear unequal error protection codes A at p. 57, E at p. 59, G at p.60 , and K at p 62 of the Appendix; and table I at pp. 25-27 of the Gils Dissertation appeared in Philips Journal of Research, vol. 39, no.6, 1984 (“Philips Journal”) in pp. 297, 299, 300, 295-296, respectively. On the same day, I searched for the Philips Journal online and found a copy at
- [http://www.extra.research.philips.com/hera/people/aarts/ Philips%20Bound%20Archive/Binders/PJR-38_39-1983_84_B.pdf](http://www.extra.research.philips.com/hera/people/aarts/Philips%20Bound%20Archive/Binders/PJR-38_39-1983_84_B.pdf).
44. Exhibit 1023 is a true and correct copy of the Philips Journal.
45. On August 14, 2018, I performed a search for the Philips Journal on the Stanford Library website, as listed above on ¶ 41, and clicked on “Librarian View” at the bottom right of <https://searchworks.stanford.edu/view/366857> to view the cataloging details for the publication. According to Stanford University Library’s website, the Philips Journal was cataloged on December 20, 1993.
46. Exhibit 1036 is a true and correct copy of a screenshot of the Librarian View for the Philips Journal, with the relevant portions highlighted, showing the date that it was cataloged.

I declare under the penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Ximena Solano

Ximena Solano Suarez

Executed on August 22, 2018 in San Diego, California.