MAGISTRATE JUDGE MCSHAIN

AO 91 (Rev. 11/11) Criminal Complaint

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FILED
9/30/2020
THOMAS G. BRUTON
CLERK, U.S. DISTRICT COURT

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

UNITED STATES OF AMERICA

v.

GEE SIONG KOK, also known as "Guo Yixiang," YIH TZYE KOK, also known as "Guo Yijie," SAMUEL CHIA HAN SIONG, also known as "Xie Hanxiong," PHAIK EE OOI, also known as "Peiyi Huang," WONG KIAT HOE, also known as "Ken Wong," YU KOK HOONG, also known as "You Guoxiong," and CHUA SIEW WEI, also known as "Eunice Chua"

CASE NUMBER: 20CR688

UNDER SEAL

FILED
4/21/2022
THOMAS G. BRUTON
CLERK, U.S. DISTRICT COURT

CRIMINAL COMPLAINT

I, the complainant in this case, state that the following is true to the best of my knowledge and belief.

Beginning no later than on or about June 8, 2007 and continuing until at least on or about November 4, 2019, in the Northern District of Illinois, Eastern Division, and elsewhere, the defendants, GEE SIONG KOK, YIH TZYE KOK, SAMUEL CHIA HAN SIONG, PHAIK EE OOI, WONG KIAT HOE, YU KOK HOONG, and CHUA SIEW WEI violated:

Code Section	*Offense Description*
Title 18, United States Code, Section 1832(a)(5)	Conspiracy to steal trade secrets

This criminal complaint is based upon these facts:

X Continued on the attached sheet.

DAMIEN COLON
Special Agent, Federal Bureau of Investigation (FBI)

Pursuant to Fed. R. Crim. P. 4.1, this complaint is presented by reliable electronic means. The above-named agent provided a sworn statement attesting to the truth of the foregoing affidavit by telephone.

Date: September 30, 2020

Heather K. McShain
Judge's signature

City and state: Chicago, Illinois

HEATHER K. MCSHAIN, U.S. Magistrate Judge
Printed name and Title

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF ILLINOIS

AFFIDAVIT

I, DAMIEN COLON, being duly sworn, state as follows:

1. I am a Special Agent with the Federal Bureau of Investigation. I have been so employed since approximately May 2015. As part of my duties, I have investigated criminal violations relating to the theft of trade secrets and proprietary information from the United States through a variety of means.

2. This affidavit is submitted in support of a criminal complaint alleging that GEE SIONG KOK, also known as "Guo Yixiang," YIH TZYE KOK, also known as "Guo Yiie." SAMUEL CHIA HAN SIONG, also known as "Xie Hanxiong," PHAIK EE OOI, also known as "Peiyi Huang," WONG KIAT HOE, also known as "Ken Wong," YU KOK HOONG, also known as "You Guoxiong," and CHUA SIEW WEI, also known as "Eunice Chua," have violated Title 18, United States Code, Section 1832(a)(5).

3. Because this affidavit is being submitted for the limited purpose of establishing probable cause in support of a criminal complaint charging GEE SIONG KOK, YIH TZYE KOK, SAMUEL CHIA HAN SIONG, PHAIK EE OOI, WONG KIAT HOE, YU KOK HOONG, and CHUA SIEW WEI with conspiracy to steal trade secrets, I have not included each and every fact known to me concerning this investigation. I have set forth only the facts that I believe are necessary to establish

probable cause to believe that the defendants committed the offense alleged in the complaint.

4. This affidavit is based on my personal knowledge, information provided to me by other law enforcement agents, and evidence and records that I have reviewed.

I. SUMMARY

5. As detailed below, GEE SIONG KOK (G.S.), YIH TZYE KOK (Y.T), SAMUEL CHIA HAN SIONG (CHIA), PHAIK EE OOI, WONG KIAT HOE, YU KOK HOONG, and CHUA SIEW WEI (CHUA) conspired to steal trade secrets from their former employer, Company A (headquartered in the Northern District of Illinois), after they were recruited by Company B, a competitor headquartered in Shenzhen, China. The stolen trade secrets related to digital mobile radios (DMRs).

6. Beginning in 2007, Company B's CEO recruited G.S., who ultimately joined Company B in February 2008. As compensation, G.S. received a 78% raise and stock options ultimately worth more than 22 times his annual salary at Company A. G.S., in turn, successfully recruited Y.T., CHIA, WONG, HOONG, and CHUA (collectively with OOI, the "Recruited Employees") to join Company B in approximately June 2008. OOI joined Company B in February 2009. Each of the Recruited Employees received significant raises and stock options worth several times their final salaries at Company A. Before leaving, however, Company A database logs show that the Recruited Employees accessed thousands of Company A

documents, including trade secrets—despite having signed confidentiality and non-disclosure agreements relating to Company A's intellectual property.

7. Emails among the employees discussed taking Company A documents and source code for digital mobile radios (DMRs) in order to accelerate the development of DMRs at Company B. For example, Y.T. and CHIA emailed with G.S. about "trying to grab whatever we can," and reported copying "30GB" of information to their "hard drive." Similarly, Y.T. discussed his "shopping list" of Company A documents, and tasked OOI to "try to copy out whatever information you can" from Company A's document and source code databases. The recruited employees also discussed Company B's theft of Company A information ("this company [Company B] setup from purely copying"), and their awareness that their conduct was improper ("our lies may cause problems once [Company A] finds out").

8. Later, Company A sued Company B alleging trade secret theft and copyright infringement. In connection with that lawsuit, CHIA emailed Company B's CEO to discuss the "alignment" of "our stories," referring to CHIA, G.S., and Y.T. The subsequent civil litigation revealed thousands of Company A documents on Company B computers, emails among Company B engineers (who did not previously work at Company A) openly discussing Company A trade secret documents, and an entire folder on Company B's internal database named "[Company A]." In addition to documents, Company A source code files or file paths were found on CHIA and OOI's Company B work laptops, and hundreds of thousands of lines of copied Company A

source code were found in Company B source code for DMRs sold in the Northern District of Illinois and elsewhere through at least 2019.

II. FACTS SUPPORTING PROBABLE CAUSE

A. Background Information

i. Company A and Company B[1]

9. Company A is a telecommunications company headquartered in Chicago with offices worldwide. Among other products, Company A manufactures and sells DMRs[2] throughout the United States and internationally.

10. Company B is a telecommunications company headquartered in Shenzhen, China, that also manufactures and sells DMRs in China, the United States, and worldwide. Company B was founded in 1993 and served as a distributor of Company A products in China until approximately 2001. Company B is currently a competitor in the DMR market with Company A, and sells DMR products in the

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[1] The facts provided in this section are based on Company A and Company B's website, as well as filings by both companies in the civil litigation (discussed below).

[2] Below are examples of DMR handsets (colloquially referred to as "walkie-talkies") sold by a variety of companies:

United States, including in the Northern District of Illinois, through its wholly owned U.S. affiliate companies.

ii. Digital Mobile Radio (DMR) Technology

11. Both Company A and Company B previously sold mobile radios that relied on analog technology to transmit and receive communications. In approximately 2008, however, the U.S. Federal Communications Commission (FCC) announced that radio manufacturers would be required to transition away from the use of analog signals for DMR products, and instead use exclusively digital, or a mix of digital and analog technologies. The FCC set a deadline in 2013 by which radio products would need to operate on a narrow channel bandwidth of 12.5 kHz and announced that radio products would ultimately be required to operate within bandwidths of 6.25 kHz or less (previously it was 25kHz or less). This change effectively forced manufacturers to move to digital technology, which is better able to handle the narrow bandwidth requirement.[3]

12. According to a Company A Vice President ("Individual B"), Company A's development of products meeting the FCC standards began in approximately 2004. According to a Company A Principal Software Engineer ("Individual A"),[4] by approximately 2007, Company A was offering DMR products for sale to the public. Company A's DMR products were marketed and sold to clients like taxis, small police

[3] The facts in this paragraph are based on filings by both companies in the civil litigation (discussed below), as well as my review of documents on the FCC's website.

[4] Individual A wrote source code for Company A's DMR operating system software as well as its encryption software.

units, hotels, and airports. According to Company A, hundreds of employees worldwide spent years developing the hardware and software solutions to design, manufacture, market, and sell DMRs.

13. According to records from Company B, in 2008 and 2009 Company B was not offering any DMR products for sale. Company B's first DMR products came to market in approximately May 2010.

iii. The Former Company A Employees Recruited by Company B

14. As detailed below, the Recruited Employees, GEE SIONG KOK, YIH TZYE KOK, SAMUEL CHIA HAN SIONG, PHAIK EE OOI, WONG KIAT HOE, YU KOK HOONG, and CHUA SIEW WEI are former employees of Company A who worked on Company A's DMR products and were recruited to work for Company B between 2008 and 2009:

a. GEE SIONG KOK

15. According to Company A records, GEE SIONG KOK ("G.S.") began working for Company A on or about February 10, 2003. While employed by Company A, G.S. worked in Malaysia as a Senior Engineering Manager responsible for DMR products. G.S. submitted his resignation letter to Company A on December 31, 2007, and resigned effective February 11, 2008. According to his exit interview, G.S. told Company A that he was recruited by and planned to work for a "Local China company." (It appears that G.S. later told Company A that he planned to work for Company B.) Company A offered to increase G.S.'s salary, but could not match

Company B's offer.[5]

16. According to Company B correspondence and records, G.S. began working for Company B in Shenzhen, China as a Director of Research and Development (R&D) on or about February 1, 2008. According to a Company B organizational chart, G.S. headed Company B's DMR division and reported directly to Company B's CEO. By February 2010, G.S. was a member of the Board of Directors of Company B, and in 2013, G.S. was promoted to Senior Vice President. While at Company B, G.S. was sometimes referred to by the Chinese name "Guo Yixiang."

b. YIH TZYE KOK

17. According to Company A employment records, YIH TZYE KOK ("Y.T.") was hired as a software engineer for Company A in May 1997, resigned in November 2000, and was rehired by Company A in September 2002. He was later promoted to Senior Engineer and worked in Malaysia on DMR products. Beginning on June 4, 2008, Y.T. took a leave of absence from Company A. However, Y.T. did not officially resign from Company A until October 3, 2008. According to Company A records, Y.T. cited "a personal issue" as the reason for his resignation. When asked during his exit interview, "What situations or occurrences in [Company A] led you to start looking for another job?" Y.T. responded, "None that will trigger me to look for other job. It's totally my person family issues that I need to relocate myself." When asked what organization he would be working for after Company A, Y.T. responded, "MNC"

[5] According to Individual B, CHIA told Individual B that Company B also offered to pay for G.S.'s four or five children to attend schools in London.

(which is not an acronym for Company B). Lastly, when asked what his new job had to offer that could not be offered by Company A, Y.T. responded "nearer to home"[6] (even though Company B's office in Shenzhen was nearly 1,600 miles away from his family in Johor Bahru, Malaysia).

18. According to records from Company B, Y.T. began working for Company B in Shenzhen, China on June 10, 2008—during his leave of absence from Company A, and contrary to the statements he made during his exit interview. (Furthermore, based on access logs provided by Company A, Y.T. continued to access to Company A's technical document database from June 2008 until at least August 2008.) According to a Company B organizational chart, Y.T. reported directly to G.S and was the Assistant Director of the Central Research Department, which included Company B's DMR development team. While at Company B, Y.T. was sometimes referred to by the Chinese name "Guo Yijie," and was also identified as the "Chief Architect" of the DMR software department.

c. SAMUEL CHIA HAN SIONG

19. According to Company A employment records, SAMUEL CHIA HAN SIONG ("CHIA") was hired by Company A on or about August 23, 1999, and was later promoted to Engineering Section Manager. CHIA was the manager of a digital signal processing team in Malaysia for DMR products. CHIA notified Company A of his resignation on May 8, 2008, and resigned effective June 7, 2008. When asked during

[6] In the "Interviewer's Comments" section of Y.T.'s exit interview document, a Company A employee wrote, "Family issue. Spouse has to take care of her mum in Johore [Malaysia] & employee has been travelling between PEN & JB, very tiring."

his exit interview where he would work after Company A, CHIA falsely stated that he was "in the process of securing a job."

20. According to Company B records, CHIA began working for Company B in Shenzhen, China as the Director of Software Engineering on or about June 16, 2008, and was responsible for managing a digital signal processor software team for DMR products that reported directly to G.S. While at Company B, Y.T. was sometimes referred to by the Chinese name "Xie Hanxiong."

d. PHAIK EE OOI

21. According to Company A employment records, PHAIK EE OOI was hired by Company A on or about June 30, 2002, and worked in Malaysia as a software engineer for DMR products. (According to Company A records, Y.T. was OOI's manager while at Company A.) OOI notified Company A of her resignation on December 2, 2009, and her last day of service was January 31, 2009. According to her exit interview on January 9, 2009, OOI falsely identified her new employer as a medium sized company located in "KL" [Kuala Lumpur]. When asked to share her impression of Company A as an organization, OOI described Company A as "a very very good company that stress very much on ethics, listen to employee's voice . . . I really find that this is the company that promotes ethics everywhere that truly like it!"

22. According to email correspondence, OOI began employment with Company B in Shenzhen, China on or about February 6, 2009. According to deposition

testimony[7] of multiple Company B engineers, OOI was responsible for providing updates to radio architecture source code libraries for Company B's DMR products. While at Company B, OOI was sometimes referred to by the Chinese name "Peiyi Huang."

e. WONG KIAT HOE

23. According to Company A employment records, WONG KIAT HOE was hired by Company A on or about January 2, 2003, and worked as a Senior Electronics Engineer in Malaysia for DMR products. (According to Company A correspondence, WONG was often referred to as "Ken WONG.") WONG submitted his resignation letter to Company A on or about May 7, 2008, and his last day of service at Company A was approximately June 23, 2008. During his exit interview, when asked to identify his prospective employer, WONG falsely claimed he would be working for his father's company because WONG's father required assistance. When asked what his new position had to offer that could not be offered by Company A, WONG identified the challenge posed by running a family business.

24. According to email correspondence with G.S. (discussed in detail below), WONG (along with several of the other Recruited Employees) was slated to begin employment with Company B in Shenzhen, China on or about June 16, 2008. WONG's position with Company B was "Technical Staff" within the hardware group of Company B's DMR division.

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[7] Throughout this affidavit, references to "depositions" or "civil litigation" refer to documents from ongoing civil litigation between Company A and B.

f. YU KOK HOONG

25. According to Company A employment records, YU KOK HOONG was hired by Company A on or about April 28, 2003, and worked as a Senior Electrical Design Engineer in Malaysia relating to DMR products. On or about May 8, 2008, HOONG notified Company A of his resignation, and his last day of service was on or about June 7, 2008. According to HOONG's exit interview, his stated reason for leaving was going back to his hometown due to "Family matters." HOONG did not identify his future employer during his Company A exit interview.

26. According to email correspondence (discussed below), HOONG began employment with Company B in Shenzhen, China on or about June 16, 2008. WONG's position with Company B was "Technical Staff" within the hardware group of Company B's DMR division. While at Company B, HOONG was sometimes referred to by the Chinese name "You Guoxiong."

g. CHUA SIEW WEI

27. According to Company A employment records, CHUA SIEW WEI was hired by Company A on or about April 1, 2003, and worked as a Senior Electronics Engineer in Malaysia for DMR products. On or about May 14, 2008, CHUA resigned from Company A, with her last day of service on June 13, 2008. During her exit interview, CHUA falsely identified "PnC" as her new employer and indicated that her decision to leave was motivated by a desire to move back to her hometown (which does not appear to be Shenzhen, China). When asked what her new job had to offer that could not be found at Company A, CHUA responded, "salary."

28. According to email correspondence with other Recruited Employees, CHUA began employment with Company B in Shenzhen, China on or about June 16, 2008. According to an internal organizational chart, CHUA's position with Company B was "Technical Staff" within the hardware group of Company B's DMR division. While at Company B, CHUA was sometimes referred to by the Chinese name "Cai Xiuhui."

iv. Confidentiality and Non-Disclosure Agreements Signed by the Former Company A Employees

29. According to Company A records, as part of the hiring process, Company A employees were required to sign confidentiality agreements which required, among other things, that they "not disclose to others, either during or subsequent to [their] employment by [Company A], any confidential information of [Company A]," and "upon termination of [their] employment by [Company A], to promptly deliver to a designated [Company A] representative all documents and other records which relate to the business activities of [Company A] or any other materials which belong to [Company A]." According to Company A records, G.S., Y.T., CHIA, OOI, WONG, HOONG, and CHUA all signed these confidentiality agreements when they were hired. Employees also received annual refresher training on these topics, including the appropriate use of computer resources.

30. Additionally, upon termination of employment with Company A, Company A employees signed non-disclosure agreements in which they acknowledged their continuing obligations under the confidentiality agreements described above, and acknowledged their return of all Company A "property and

confidential information . . . in whatever form or media, from your possession to [Company A] Management." According to Company A records, G.S., Y.T., CHIA, OOI, WONG, HOONG, and CHUA all signed these non-disclosure agreements when they resigned. Furthermore, Company A conducted exit interviews with each of the Recruited Employees. According to Company A records, during exit interviews or other discussions, only G.S. disclosed to Company A that he had been hired by Company B.

v. ***Company A's Computer Network and Protective Measures***

31. During the time period discussed in this affidavit, Company A maintained an internal document database. According to Individual B, in order to access documents in Company A's internal database, users needed to be granted access by their supervisor based on the user's job responsibilities. To access the database, employees first had to login to the company network with a username and password, and then separately log into the document repository with a username and password. This database held Company A's technical, business, and marketing documents. In 2008, Company A's Database documented whether a file was accessed, but not if it was downloaded or saved to external or removable media. According to Individual A, once an employee obtained access to Company A's Database, documents within Company A's Database were restricted by a document owner, who had the option of restricting access by document or by document directory location. Also according to Individual A, once a Company A employee was granted access to a document, he retained access as long as he could log into Company A's network and

Company A's Database.

32. Furthermore, according to Individual B, in order to access these documents on the Company A network in Malaysia, before even accessing Company A computers at its secondary facility in Penang (for software development), an employee would need to access Company A's building by scanning an identification badge to access elevators for Company A's floors, passing by twenty-four hour a day security guards, and then scanning an identification badge again to enter compartmentalized project spaces, which were restricted to employees who worked on that particular team.

33. At Company A's primary facility in Penang (for hardware development), to reach Company A's R&D department computers, an employee would be required to swipe his identification badge at three separate access points: the parking lot, the facility's exterior glass door entrance, and an entrance separating the main facility's atrium from its work areas. According to Individual B, there were scanners positioned at the facility's entrances and security guards who checked bags upon entry and exit.

34. According to Individual B, to obtain VPN access to Company A's network, an employee would have needed supervisory approval, a Company A laptop, and a security token, in addition to the logon and password requirements discussed above. Typically senior employees who were given take home laptops were allowed to have VPN access to Company A's network.

35. According to Company A's Chief Information Security Officer, in 2008 and 2009, Company A's Database servers were located in Connecticut and Delaware.

Furthermore, based on the design of Company A's network, a request for a document on the Company A database from Malaysia would be first routed through a Company A server in the Northern District of Illinois before accessing the information on the servers in Connecticut or Delaware. If the Company A database were accessed via secure remote access (*i.e.* a virtual private network (VPN) connection), the network traffic was also "extremely likely" to have been routed through the Company A server in the Northern District of Illinois. Although previously accessed documents on the Company A database were locally cached on Company A's computers in Malaysia, the network would still perform a "checksum" function to ensure that the document was actually the most recent version. This checksum would involve routing data through a Company A server in the Northern District of Illinois.

B. Company B's CEO Recruited G.S. to Lead Company B's DMR Division

36. According to corporate emails produced by Company B, beginning on or about June 8, 2007, while still employed by Company A, G.S. used a personal email account to communicate with Company B's CEO about the CEO's recruitment of G.S., G.S.'s recruitment of other Company A employees, and an accelerated product development cycle for Company B's DMR technology.

37. More specifically, on or about June 18, 2007, G.S. sent an email to the personal assistant of Company B's CEO, who forwarded the email to the CEO, with a request that it be translated.[8] In the email, G.S. wrote, "[o]n the RND [research

[8] G.S.'s emails to the CEO were written in English. On many of their emails, another Company B employee was copied in order to translate between English and Mandarin.

and development][9] side probably need to look at the new generation of 2 way business. The old analogue world is shrinking fast, so the longer [Company B] stays here, the bigger the exposure and time is ticking away." Based on the content and context of this message and my review of other materials in this investigation, I believe that G.S. was describing Company B's need to increase its research and development of the two-way radio business and to move from an analog to digital model.[10] In the email, G.S. further asked, "So what's your plan on Penang [Malaysia] visit? Hope I'm here when you come over."

38. Approximately one week later, on or about June 27, 2007, G.S. emailed Company B's CEO and the CEO's assistant. In the email, G.S. described his work developing DMR technology for Company A and provided a two-year timeline for developing the same technology for Company B. G.S. noted that the FCC was mandating changes to radio technology and provided details regarding the length of Company A's DMR product development cycle: "It took my team of nearly 400

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[9] Throughout this affidavit, names of companies and individuals have been replaced with bracketed terms such as "[Company A]." Unless otherwise noted, where Company A or Company B are included in bracketed language, the actual name or abbreviation of the company was used in the original. Additionally, at some points, I have included bracketed language indicating my understanding of the meaning of terms in quotations. This understanding is based on my training and experience, the context of the specific quote, and the broader context of this investigation, including my review of emails and depositions of former Company A employees. Typographical errors have been left as they appear in the original text. Lastly, certain trade secret information has been redacted and replaced with bracketed language.

[10] In an earlier email to Company B's CEO, on or about June 8, 2007, G.S. discussed the upcoming FCC deadline for reduced bandwidth usage by 2011: "Remember the 6.25 [kHz] ruling is not so distance a future as 2011 is only 3.5 years out so after that Europe and US market will close."

engineers globally: Chicago, Florida, China, Penang, 4 years to realize [the newly mandated changes by the FCC]". Based on the content and context of this message, I believe that G.S. was referring to the team of engineers he supervised at Company A and the length of time it took them to develop DMR technology used by Company A.

39. Also in his June 27, 2007 email, G.S. wrote, "I estimate that it will take us 2 years with the right team to develop a portable and mobile platform." Based on the content and context of this message, I believe that G.S. was informing the CEO that the same technology could be developed for Company B in two years "with the right team," which I understand to be a reference to members of G.S.'s DMR staff at Company A. G.S. further stated that he "see[s] a big future," and "I'm afraid if [Company B] don't jump on the bandwagon you will be left far behind."

40. Several months later, on or about September 9, 2007, G.S. emailed Company B's CEO that he was "glad to hear" the CEO would be visiting Penang and "looked forward to spending the evening together." G.S. further wrote, "But before the meeting perhaps you can let me know my Role and mission in [Company B]! This is crucial to our partnership as I feel that if we want to have a lasting and fruitful partnership, the chief have to make the vision clear, so that we can make the venture a successful and worthy one." Based on the content and context of this message, I believe that G.S. was asking the CEO to provide more information about G.S.'s prospective employment at Company B.

41. Two days later, on or about September 11, 2007, G.S. received an email from a Company B employee with the subject line "letter from [Company B's CEO]"

signed with the CEO's name. The email was addressed "Dear GS Kok" and stated, "So glad to receive your email! I'm looking forward to making further communication with you. Since you have referred the hotel matter, could you please introduce some place convenient for both of us? By the way, the hotel you recommend had better not [be] the gathering place for people from [Company A] because it feels like a little bit strange." Based on the content and context of this message and my review of other materials in this investigation, I believe that the CEO wanted to meet G.S. in a place where other employees from Company A would not be nearby.

42. Additionally, in the September 11, 2007 email, Company B's CEO offered G.S. a position "in Shenzhen for 2-3 years." The CEO identified G.S.'s prospective position as "the chief head of DMR group." The CEO further wrote, "China nowadays, even the whole world pays more and more attention to [DMR] technology, and I am planning to invest more people and money to it. I myself have high expectation on this! Meanwhile, if it is proper I would consider setting up an R&D center in Malaysia after 2 or 3 years which won't be very big, but contains about 10-30 people to do some research work, because I don't want to have direct competition with [Company A] at present. This could be discussed later."

43. The next day, on or about September 12, 2007, G.S. responded to Company B's CEO regarding Company A employees at their meeting location. G.S. wrote that he would reserve a room at a five star hotel that "is a more isolated hotel where most guests are form Europe." G.S. also wrote, "I need to understand from you, the captain of the ship, your vision for [Company B] and the plans for the future. I

would like to discuss your products roadmap and what role I'll play as the head of the DMR team. How much flexibility do I have, the resources that will be helping me to achieve [Company B] goals. The budget allocated for this venture and the time frame allowed? I know I mentioned 2 years earlier, but that was under the assumption that I have my team here...We still need to pull some critical resources that will help with achieving our plans. The DMR radio that was recently release took us [Company A] 5.5 years to develop and had more than 400 engineers working on the project. I do not think we will need this scale this level of resource investment, as a lot of things that was unknown have been resolved." Based on the content and context of this message I believe that G.S. was referring to the time that Company A invested to develop its DMR radio technology.

44. Several weeks later, on or about September 27, 2007, G.S. emailed Company B's CEO to negotiate his prospective compensation package at Company B, noting that the offer he received from the CEO fell "short of expectation." According to the email, Company B's proposal included a "Hiring Bonus of 500,000 [Company B] shares 6 months vesting period," a "Design Center Option to employ 4-8 expatriate to help out in EE [electronic engineering] and SW [software], subject matter experts to help energize the [Company B] DMR Team," and a "position of Senior Vice President of DMR Design Center."

45. G.S.'s negotiations with Company B's CEO continued over the next few months by email. On or about December 7, 2007, G.S. emailed Company B's CEO and requested additional information regarding benefits and compensation that could

be offered to other Company A employees during recruitment: "What about the few experts that I wish to bring over with me to [Company B]? It will be much easier for me to talk to them and lop them to joint our family if [the CEO] would offer them stocks . . . Can we allocate 100,000 stocks each for these experts?" G.S. continued, "I hope for your quick approval, for it is easier for me to convince them to joint us while I'm still here to discuss with them the plan. Once I leave, then it will be much harder. These are the people with more then 20 years design experience. If I want to lead the DMR team, I will need them badly in my team." (G.S. similarly discussed the need to bring over other employees from Company A in an email to Company B's CEO on February 26, 2008: "The [Company B] team will need injection of Subject Matter Expert; (SME) from [Company A] Penang and [Company A] Chengdu. This will be most important if we want to leap frog onto the DMR business.")

46. On or about December 10, 2007, Company B's CEO emailed G.S. and discussed stock options for the "experts you are going to bring."[11] He further requested G.S.'s help to "recommend some senior engineers with experience on [Company A product] technology and DMR infrastructure." G.S. informed the CEO that one of the experts G.S. planned to recruit was familiar with a specific Company A technology and another was the DMR architect. G.S. added that he planned to arrange for the Company A engineers to travel to Company B's factory.

47. Approximately two weeks later, on or about December 26, 2007, G.S. emailed Company B's CEO to acknowledge receipt of Company B's employment

[11] Stock options and salaries for the Recruited Employees are discussed below in Section M.

contract. On or about January 7, 2008, G.S. emailed Company B's CEO to accept the employment offer and discuss his starting date in Shenzhen.

C. Before Resigning from Company A, G.S. Began Recruiting Y.T., CHIA, HOONG, and CHUA to Join Company B

48. In a January 17, 2008 email from G.S. to Company B's CEO and other Company B employees, G.S. outlined his plan to recruit in Penang from February 1, 2008 through February 12, 2008: "I will be working in Penang from 1st February to 12th February 2008 recruiting for the [Company B] DMR design center." As discussed above, the Recruited Employees all worked at Company A's facility in Penang, Malaysia. Notably, G.S. began work at Company B on February 1, 2008, though his resignation from Company A was not effective until February 11, 2008—nearly identical to the dates of G.S.'s "recruiting" in Penang.

49. According to records from Company B, on or about February 29, 2008, a Company B email was sent to multiple individuals with subject line "Penang Visitors." The email contained an attachment with a visit schedule that identified CHIA, Y.T., HOONG, and CHUA as visitors and G.S. as responsible for a "[Company B acronym] Introduction Tour" and a "DMR Organization Review & Schematic Review." Based on the context of these emails, it appears that G.S. recruited CHIA, Y.T, HOONG, and CHUA while in Penang in early February 2008, and that they visited Company B on February 29, 2008 in connection with their recruitment.

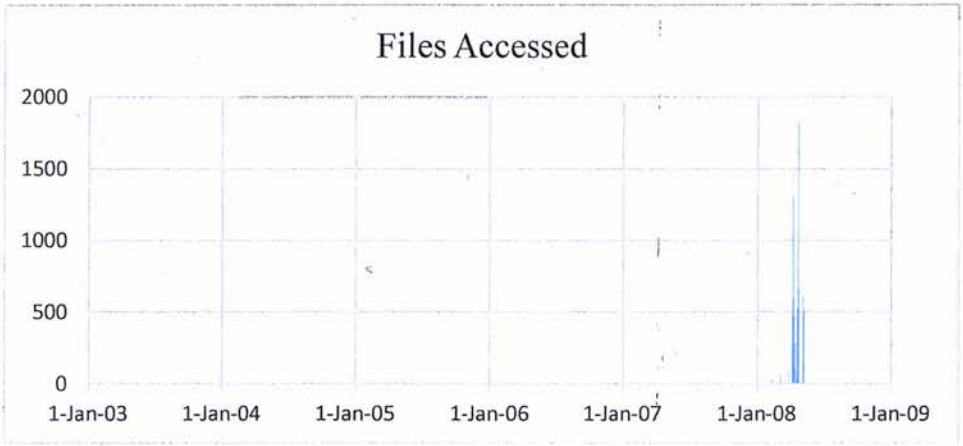
D. Y.T., CHIA, and WONG's Access to Company A Documents Increased Dramatically Following G.S.'s Recruitment Trip to Penang

50. According to records from Company A's internal document database,

after G.S.'s recruitment trip to Penang, Y.T. began accessing substantially more Company A documents than he had in the past. For example, on February 27, 2008—two days before his recruiting trip to China for Company B—Y.T.'s Company A user ID accessed approximately 68 files in Company A's Database. By comparison, in the prior three months combined, there were only 43 access events for Y.T. Further, according to Company A's access logs, 59 of the 68 file access events were identified as files accessed by Y.T. for the first time. Furthermore, 60 of these documents were designated "[Company A] Confidential Restricted."

51. Similarly, according to records from a Company A Database, from January 2008 through February 11, 2008, CHIA's user ID only had ten file access events. However, CHIA's file access increased on February 12 and 13, 2008—immediately after G.S.'s recruitment trip to Penang, Malaysia. Specifically, on February 12, 2008, CHIA's user ID had 38 document access events. The next day, February 13, 2008, CHIA's user ID accessed 28 documents. In March 2008, CHIA accessed approximately 310 files—approximately 200 of which were accessed by CHIA for the first time. By April 2008, CHIA's rate of access spiked significantly, to approximately 11,058 files—some accessed only seconds apart. On a single day, April 23, 2008, CHIA accessed approximately 1,822 files. At least 1,855 of the documents accessed by CHIA in April 2008 had titles or filenames referencing Company A project names for DMR or the term DMR itself. Further, of these 1,855 files, approximately 1,466 were designated "[Company A] Confidential Restricted." As depicted below, CHIA's rate of access to Company A's Database in April 2018 dwarfed his usage for

the prior five years:



Furthermore, approximately six months before leaving Company A, CHIA was transferred from Company A's DMR division to work on a different technology. In his deposition, CHIA conceded that his new assignment "did not" overlap in any way with his prior work on DMRs.

52. Likewise, from November 2007 through January 2008, WONG accessed only four documents in the Company A Database. However, according to Company A logs, in March 2008—after Y.T., CHIA, and HOONG's interviews with Company B in Shenzhen—WONG's access events to Company A's document repository increased to 261. On three days alone (March 17, March 20, and March 23, 2008), there were 207 access events associated with WONG's Company A User ID—approximately 142 of which were accessed by WONG for the first time. For example, on March 23, 2008, WONG accessed approximately 86 documents from approximately 7:18 p.m. to 8:05 p.m. Further, eleven of the documents were designated as "[Company A] Confidential Restricted."

53. According to Company A database records, in total, there were

approximately 14,385 access events associated with Y.T., CHIA, and WONG's User IDs between February 11, 2008 and August 5, 2008 (the months following G.S.'s recruitment). Of the 14,385 files accessed, 9,577 were marked within Company A's document repository as "[Company A] Confidential Restricted."

E. "*We are trying to grab whatever we can*": G.S., CHIA, and Y.T. Discussed Downloading 30 Gigabytes of Company A Documents Before CHIA and Y.T.'s Departure for Company B, Including Trade Secret Information

54. According to email search warrant results from Google and Yahoo, during the same period in early 2008, while CHIA and Y.T. were still working at Company A, G.S. (using email address gskok@hotmail.com), who was already employed at Company B, tasked CHIA (using email address samuel_c@yahoo.com) and Y.T. (using email address yihtzye@gmail.com) with obtaining Company A trade secret information to use in Company B's DMR products.

55. More specifically, on or about February 21, 2008, CHIA emailed G.S. and Y.T., in response to questions from G.S. CHIA wrote, "6) Are we going to 'reuse' as much as possible or we need to develop most of them from scratch to avoid patent infringement." CHIA added, "If want it to be fast and reuse as much as possible from the existing [Company A] product, then we may need less headcount. YT and I will discuss about this."

56. That same day, G.S. responded to CHIA and Y.T., writing: "Sam, Good questions...6] Yes to be fast will need re-use strategy, but not very comfortable I think I had already written on that." Based on the context of these emails, I believe that G.S. was telling CHIA and Y.T. that they would need to use Company A information

to develop Company B's product, but that he was "not very comfortable" discussing it via email.

57. In another email exchange on February 21, 2008, G.S. wrote the following to CHIA and Y.T.:

> Sam/YT,
> Will need you to help find out what is exactly being done by the software during RSSI tuning for squelch in analog and digital mode....Please try to dig information on your side [at Company A]. GS.

58. On February 22, 2008, CHIA responded, stating that using Company A's algorithm—which had taken nearly five years to develop—was the solution:

> GS, I think that is where the beauty of the Squelch Algorithm comes in. The Squelch works on the audio samples to detect the noise level and then only squelch up...This Squelch algorithm took [Company A] almost 5 years to make it this good.

59. According to a senior Company A engineer ("Individual C"), Squelch was a feature used by some of Company A's DMR products in analog mode to suppress noise on a channel not generated by a subscriber transmission. The squelch feature was therefore important for voice clarity. Also according to Individual C, the squelch function was measurable, achieved through an algorithm developed by Company A, and was considered by Company A to be part of a trade secret.[12]

60. Later that day on February 22, 2008, G.S. emailed CHIA and Y.T. and asked CHIA: "In any case do you have the 5 year old squelch algorithm?" Shortly afterwards CHIA responded: "All algorithm copied in our hard drive." Based on the

[12] According to Company A, the squelch feature is part of a trade secret in its digital two-way DMR radio systems, including in its source code (Trade Secret D).

context of this email, it appears that CHIA was telling GS that he and Y.T. had copied all related Company A algorithms to a personal hard drive.

61. That same day, on February 22, 2008, CHIA emailed G.S. and Y.T. attaching a Microsoft Word document with the filename "Squlech.Doc."[13] Page "i" of Squelch.Doc identified the document as a Company A document and its title as "FM Carrier Squelch System." Each page of Squelch.Doc was marked "[Company A] CONFIDENTIAL PROPRIETARY." In the body of CHIA's email attaching Squelch.Doc, CHIA wrote, "GS, I found it. This will likely have the answers those guys are looking for. Tell then that we can implement it for them once we get on board."

62. That same day, on February 22, 2008 G.S. responded to CHIA's email containing the Squelch.Doc file, writing: "Sam, You had this all this while? Man you really got me worried. But this is good stuff. So please make sure the stuff is all backed-up! Best regards, GS."

63. Later that day, CHIA replied to G.S.:

> GS, YT and I have been working very hard in backing up all the information. We are trying to grab whatever we can. We will surely need some of them when we are there. I think we have a total of 30G [gigabytes of data] now. Do you have anything in mind that you need while we are still here? Maybe something in [Company A Database].
>
> :-)
>
> Sam.

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[13] According to search warrant results for Subject Account 7, on or about November 28, 2016, G.S. forwarded this email with the Squelch.doc attachment to two other email accounts used by G.S. (geesiongkok@gmail.com and samcoe88@yahoo.com).

64. Based on my training and experience and the context of these emails, I believe that "30G" in the quote above is a reference to 30 gigabytes of data, and that "backing up all the information" refers to Y.T. and CHIA copying as many Company A documents relating to DMR as possible in order to bring them to Company B.

65. That same day, on February 22, 2008, Y.T. emailed G.S. and CHIA, offering to obtain any software or hardware related information for Company B from Company A's Database: "GS, What we can grab for now is all sw [software] related information and trying to get from [Company A's Database] for general project related information. Any hw [hardware] information you need in particular? we can try to grab from hw as well . . ."

66. Y.T. and CHIA continued to email each other about copying specific Company A DMR technology. For example, five days later, on or about February 27, 2008, CHIA emailed Y.T. with the subject: "Information to be downloaded." The body of the email read:

> This is just a reminder on the following which is still needed.
> R1.0 Vobs [Company A source code repository]
> Cypher Vobs
> 56600 Ast Vobs
> As for the [Company A Database] links, please send it to me and I will download it.

67. According to Company A, "VOB" refers to Company A's source code[14] repository.[15] "R1.0" refers to the software/firmware Release V1.0 of Company A's

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[14] Source code is a text listing of human-readable commands to be compiled or assembled into a machine-readable executable computer program.

[15] To access a VOB (versioned object base) for Company A's DMR source code, developers were required to log into Company A's internal network directly or through a virtual private

DMR products. Company A considers this source code to be part of a trade secret.[16] Therefore, based on the context of the email above, I believe that CHIA and Y.T. were discussing their need to download all of Company A's source code for Release 1.0.

68. In addition to Y.T., and CHIA, G.S. also tasked the other Recruited Employees to obtain information about Company A's DMR products for use at Company B. For example, on or about March 23, 2008, G.S. emailed CHIA, Y.T., HOONG, WONG, and CHUA, with the subject, "Query on Application Development." In the email, G.S. relayed questions posed by Company B engineers regarding application development and tasked them to "find out as much as possible" from Company A:

> Sam/YT, There's a lot of question from the team here [at Company B] on app development I enclosed below:
>
> [Company A DMR project name] have so many application development(The 2nd development), such as SMS/GPS/ARS functions, please review the attached file. There are no detail information we have gotten from overseas sales and dealers, can you provide some more detail information (Protocol/Guide/Application) to us, so we can define our DMR radio's application development easily, thank you!
>
> They are referring to Table in section 6. Please find out as much as possible about application development.

69. Similarly, on or about April 10, 2008, CHIA emailed G.S., Y.T., WONG, HOONG, and CHUA, and attached a file named "Trunk.zip." That zip file contained

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network using their username and password, and then log into Company A's source code repository using their username and password. Users could only access a VOB to which they had been previously granted access by Company A management.

[16] Company A identified this source code release as part of Trade Secret B, relating to its design and implementation of software for its DMR radio systems. Company A considers its non-public DMR source code overall to be a trade secret (Trade Secret A).

several Company A documents. In the email, CHIA wrote, in part:

> GS, Here are some trunking material I found on [Company A Database] which will be relevant to the information you need. . . .
> I had to wait till I am at home to send it as it will not go through the [Company A abbreviation] Proxy and thus the delay in getting you this info.

Based on the context of this email, CHIA appears to state that he accessed these documents from Company A's document repository, but had to send them from a home internet connection in order to circumvent Company A's security measures.

70. Contained in the attachment "Trunk.zip" was a PowerPoint presentation named "Draft [redacted] SubscriberArchitectureOverview.ppt," each page of which was marked "[Company A] Confidential Restricted," which was the highest document classification at Company A at that time. According to Company A document database records, CHIA accessed a document named "[redacted]" on April 9, 2008—one day before this email was sent.[17] According to Individual G, the Company A senior engineer who wrote this document, the document contains trade secret information,[18] including a block level diagram of Company A's software architecture for a DMR feature known as trunking,[19] which would assist any competitor in designing similar DMR software, and would be invaluable to a competitor who also possessed stolen Company A source code. The presentation also

[17] According to Company A calendar records, Individual G presented this PowerPoint in Malaysia to several Company A engineers—including Y.T.—in November 2007.

[18] Trade Secret B, relating to software architecture.

[19] According to Individual G, trunking allows a radio system to switch frequencies with over the air programming, allowing for more flexibility and more users.

contained trade secret information relating to processor architecture, improving radio performance, and supporting multiple displays.

71. Also contained in the "Trunk.zip" attachment was the file "F2TrunkingCAIAPCOProtocol.pdf," which was titled "Two-Slot [Company A project name] Air Interface" (the "Two-Slot Document"). According to a Company A Systems Design Engineer ("Individual D"), the Two-Slot Document contained proprietary information that was not found in Company A's public submissions for DMR standards.[20] Each page of the Two-Slot Document, beginning on page "i," was marked "[Company A] Confidential Restricted."[21]

72. G.S. also forwarded specific questions from Company B engineers that explicitly asked for information about how Company A DMRs functioned, such as in this May 12, 2008 email to CHIA and Y.T.:

> Sam/YT,See if you are able to answer questions below?
> Dear Mr.Kok, There are three things need your help: 1. Are there [Company A DMR Product Name]'s test items and method of white-box test? Up to now, we are building our test system, and then apply them to test potocol stack and MMI,but they didn't know if it is enough or corrcet. 2. Are there [Company A DMR Product Name]'s test items and method of tunning mode? for analog function, we have experience enough to do this; for DMR tunning mode,we have some ideas and prepare to act according to this, but we didn't know exactly. 3.Are there source code for IP driver over USB? Thanks you very much!Best regards, [Employee LZ].

73. That same day, on or about May 12, 2008, CHIA responded to G.S. and

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[20] Certain aspects of the DMR protocol were necessarily public to allow for interoperability between radio brands. However, according to Company A, how those protocols were implemented and tested—including the source code written for the software to actually run the DMRs—was proprietary and non-public.

[21] The cover page of the document did not contain this marking, but was instead marked as "Draft."

Y.T., copying WONG, HOONG, and CHUA, and provided answers to the Company B engineer's questions:

> 3.Are there source code for IP driver over USB? (SAM) Yes, we use the IP driver for the USB and we have the source codes. However giving source code is a problem because if these guys [at Company B] leak it out we will get in trouble and not them. This is something we really need to be careful.

Based on the context of this email, it appears that before beginning work at Company B, CHIA did not wish to give Company A source code directly to Company B engineers. However, as discussed beginning at paragraph 163 below, by no later than 2009, OOI and others sent library files that were compiled from Company A source code to several Company B engineers who had not previously worked at Company A.

74. According to search warrant results for Y.T.'s email account, Y.T. also communicated with CHIA about taking Company A information via the messaging service Google Talk. More specifically, on or about May 21, 2008, Y.T. and CHIA appear to discuss stealing Company A radios in order to use them in designing Company B products:

> **samchia75**: maybe just the [circuit] borads [boards] will be fine
> **samchia75**: and also you will need to bring it there
> **samchia75**: excellent
> **samchia75**: dont need to have it implemented on the [Company B acronym] radio
> **[Y.T.]**: I will try to just curi [carry] two out [of Company A's facility]
> **samchia75**: we are going to use that like a comm analyzer
> **[Y.T.]**: But the radio is simply any radio with release sw [software]
> **[Y.T.]**: I need to get another radio
> **[Y.T.]**: Radio is not mine
> **[Y.T.]**: port it over to [Company B acronym] radio willbe another effort
> **samchia75**: we need that
> **samchia75**: get that radio out and keep it safe
> **[Y.T.]**: as long as we have source code
> **[Y.T.]**: but I think these can be resolve
> **[Y.T.]**: not sure will have any other prob
> **[Y.T.]**: and run in another machine

[Y.T.]: if I rebuild by removing authentication
samchia75: excellent

75. On or about June 2, 2008, G.S. emailed CHIA with the subject: "[Company A DMR product] Documents." The body of the email contained a sentence in Mandarin, which translates[22] to, "at present need [Company A] to provide the relative reference documents detailed as follows." (Notably, when discussing his work at Company B, G.S. stated in an email, "I speak bad mandarin." Therefore, it is likely that the list of requests came from other Company B employees who did not previously work for Company A.) After the sentence in Mandarin was the following list of 21 Company A documents:

1. [Company A DMR project name] ADK Overview
2. [Company A DMR project name] Option Board ADK Guide
3. [Company A DMR project name] Option Board ADK PROIS Cross-reference
4. [Company A DMR project name] XCMP / XNL Development Specification
5. [Company A DMR project name] XCMP / XNL Development Guide
6. [Company A DMR project name] XCMP-Based IP Capable Peripheral ADK Guide
7. [Company A DMR project name] USB Configuration Guide
8. [Company A DMR project name] Data Services Overview
9. [Company A DMR project name] Packet Data Services Specification
10. [Company A DMR project name] Telemetry ADK Specification
11. [Company A DMR project name] Telemetry ADK Guide
12. [Company A DMR project name] Location Data ADK Specification
13. [Company A DMR project name] Location Data ADK Guide
14. [Company A] Binary XML Encoding Specification
15. [Company A DMR project name]™ Text Messaging ADK Guide
16. [Company A DMR project name]™ Text Messaging Protocol Specification
17. [Company A DMR project name]™ Automatic Registration Service (ARS) ADK Guide
18. [Company A DMR project name]™ ARS Protocol Specification
19. Presence Notifier User's Guide

[22] Unless otherwise noted, all translations quoted in this affidavit are draft translations and were performed by a qualified FBI linguist fluent in Mandarin.

> 20. Presence Notifier-to-Watcher Interface Specification
> 21. [Company A DMR project name] LRRP Specification
> If you do can you send it over?

76. That same day, on June 2, 2008, CHIA responded to G.S., and attached a document named "Spec Files.zip.001." The .zip file contained approximately sixteen password-encrypted PDF documents.[23] Based on their file names, several documents appear responsive to items 4, 5, and 6 on the list above, relating to XCMP. Company A considers some features of XCMP to be part of a trade secret.[24] In addition to the attachment, CHIA wrote in the body of the email:

> Here are the documents I found. Please be careful in giving them [Company B engineers] the documents which are [acronym for "[Company A] Confidential Proprietary"] or something they should not have. Maybe just printing it for them rather than giving soft copy may be a little safer. I only see the LRRP one having the [acronym for "[Company A] Confidential Proprietary". Giving them documents which can implicate us may put us in hot soup with you know who.

Here again, from the context of the email, it appears that CHIA was worried about sharing electronic copies of Company A documents directly with Company B engineers, but was willing to give them paper copies because it was "a little safer." However, as discussed below, by later in 2008, Company B engineers who had never worked for Company A were overtly discussing Company A documents with the

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[23] The next day, June 3, 2008, G.S. replied: "Sam, Please Skype the password over. Can't remember which one we were using. Best regards, GS."

[24] Company A considers its design and implementation of Extended Control and Management Protocol (XCMP) in its digital two-way DMR radio systems for radio control, security, authentication, and management functionalities as part of Trade Secret I. According to Company A, it required at least fifteen people and expended 720 staff months (*i.e.*, the work completed by a single engineer within an average month) to develop the technologies associated with this trade secret.

Recruited Employees and Company B's internal document database for its DMR project had an entire folder labelled "[Company A]."

F. G.S. Also Recruited WONG and HOONG and Tasked Them With Obtaining Company A Information for Company B

77. According to email search warrant results, G.S. also began recruiting WONG to join Company B in approximately January 2008. More specifically, on January 27, 2008, WONG (using ken2wkh@gmail.com) emailed G.S. (at gskok@hotmail.com) and wrote: "Hi GS, After heard of your plan, I try to think of the difficulties we may face, and also think of possible candidates."

78. On May 13, 2008, WONG emailed G.S. to notify G.S. of his resignation from Company A and identify WONG's anticipated date of arrival in Shenzhen, China. WONG also stated that other Company A employees did not believe his false reason for leaving Company A:

> How is the progress of the program thus far? I have tendered my resignation letter to [a Company A employee] last week and my last working day is on the 23rd June 08. Solo was very helpful but not for the case with [another Company A employee]. [The other Company A employee] talk to me and he don't really believe that I'm going off for business, anyway I have told him my intention to try out or otherwise I will regret one day as my father has done all the footwork for me and the story goes . . . GS I'm planning to arrive on the 14th June 07 [sic] with Eunice [CHUA] and Yu [HOONG], as I'm in the process of selling my apartment . . .

79. Similarly, according to email search warrant results, beginning in February 2008 G.S. also began recruiting HOONG to join Company B. More specifically, HOONG (using strange1my@yahoo.com.sg) emailed G.S. (at gskok@hotmail.com) on February 15, 2008 to ask about compensation and other benefits:

> Thanks for contacting me last week during the Chinese New Year in Malaysia. I am considering the offer and need more information on the challenges that I will be expecting working in China . . . What would be the remuneration packages, benefits and compensation that the company will be providing to me and whom I will be reporting to?

80. During this recruitment period—approximately January 2008 to June 2008—G.S. forwarded technical questions from Company B engineers not only to CHIA and Y.T. (as discussed above) but also to WONG, HOONG, and CHUA.

81. For example, on March 6, 2008, G.S. emailed Y.T., CHIA, WONG, HOONG, and CHUA with the subject: "DMR Receivers Questions." In the email, G.S. listed questions in Mandarin "being asked by the DMR team here [at Company B]" including:

> 6. Regarding TDMAUnder pattern, [Company A acronym] How tests each target?
> 7. [Company A acronym] Why has to design two radio frequency port pattern? standard or remote?
> 9. [Company A acronym] Why in the system does the voltage all select the [description of voltage value], moreover the voltage value so is also precise?
> [Company A acronym] How targets and so on do error rate, sensitivity, neighbour selectivity are test, based on any type test platform.

82. On March 16, 2008, WONG responded to G.S.'s March 6, 2008 email and provided detailed technical answers to the questions posed by Company B's engineers:

> In TMDA mode, how does [Company A acronym] test each specification? . . . In RX testing, a special [equipment] and [value] test signal (as per ETSI standard) are required and as the signal is in discontinuity, [reason and explanation for method of testing].
> . . .
> How does [Company A acronym] realized bit synchronization of digital baseband signal? Burst structure is in a format of [detailed format listed]. There are [number] of these bursts with [description of burst structure].

83. In his email (redacted above), WONG provided information pertaining

to Company A's testing, bit-error rate,[25] and synchronization. According to Individual D, Company A developed its own proprietary method of testing bit error rate because there was no third party equipment to do so. Company A considers this testing to be part of a trade secret.[26]

84. Also on March 6, 2008, G.S. emailed WONG with the subject, "'FPGA Block Diagram," and wrote, "Enclosed the FPGA Block diagram that we had requested...KH Wong, can you forward the [Company A project name] schematic to me? Best regards, GS."

85. The same day, on March 6, 2008, WONG replied to G.S. and attached a file titled, "DMR_Sch.zip." In the email, WONG wrote:

> Apologize on the delay in my responses. Here is the schematic that you requested. I have encrypted it, the password: dmr to open the file. At a glance on your sent schematic it's pretty messy. I think it should be organised by sections as what we normally do and also with a general block diagram for easy understand and troubleshooting.

DMR_Sch.zip contained a twenty-two page PDF document named "8486716Z07_F" (the "Spec Document"). The Spec Document contains a collection of highly detailed circuit specifications, and each page after page two is labeled "[Company A] Internal Use Only." According to Company A, although these diagrams are included in service

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[25] According to Individual C, bit error rate (BER) measures and compares digital signal input and output to assess what fraction of digital information sent was received incorrectly. According to Individual C, although the DMR protocol contained specifications for BER, development of Company A's proprietary solution for testing BER required approximately three to four Company A staff months.

[26] According to Company A, its "testing and benchmarking strategies, methods, and results for digital and radio frequencies in its digital two-way DMR radio systems" are encompassed by a trade secret it identified as Trade Secret C.

manuals for Company A's DMRs, the notes accompanying the diagrams were internal to Company A only, and contained valuable information about changes Company A made to the circuits over time.

86. Following the receipt of G.S.'s email requesting Company A technical information, HOONG's access to Company A's database increased. According to Company A's document database, on March 6th and 7th, 2008, HOONG accessed two documents marked "[Company A] Confidential Restricted," which appear to be related to G.S.'s questions. Notably, HOONG had never before accessed these documents. Overall, between March 6 and June 6, 2008, HOONG accessed approximately seventy documents (nearly as many as in the previous 30 months), including 21 documents on June 5th—his second to last day at Company A—all but one of which he had never previously accessed.

87. The following week, on March 13, 2008, G.S. emailed WONG, HOONG, and CHUA with the subject: "Some Hardware Questions." Attached to the email was a Word document with the filename, "Some Questions about DMR.doc." In the body of the email, G.S. wrote:

> Team, I did not get any response from the email last week, i hope I'm in better luck this week. I had got the document translated by our technical professional translator. Please review and feedback as soon as possible...Eunice/Wong, I need answer from both of you on some of the questions. Yu [HOONG] try to answer the AGC [automatic gain control] question. Best regards, GS.

The attached document contained questions relayed by G.S. from Company B's engineers about Company A's DMR product functionality or technical issues solved by Company A during DMR development. The questions included:

> How is the squelch function realized?
> When VCO of [Company A] DMP products locks quickly, how does the software control?
> How does [Company A] DMR realize bit synchronization of digital baseband signal?
> How does [Company A] DMR realize accurate control of modulation deviation for audio and signaling?[27]

88. Similarly, on or about April 10, 2008, G.S. emailed WONG asking: "KH [Ken WONG], Do you have the [Company A DMR project name] full digital test and measurements methods document? If yes please forward me a copy..." That same day, WONG replied to G.S., writing, "GS, Here is the info you requested . . . password:dmr to open." Attached to the email was a .zip file, inside of which was the file "[Company A DMR product line] Conformance Testing for Radio Hardware V0_60" (the "Testing Document"). Company A considers this document to be part of a trade secret.[28]

89. Between March and May 2008, G.S. tasked HOONG, WONG, and CHUA with providing information on Company A DMR development. In addition to attaching Company A documents, the Recruited Employees also shared Company A trade secret information in the body of their emails. For example, on May 15, 2008, G.S. emailed HOONG, WONG, and CHUA with the subject line, "Special [Company

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[27] Regarding the last question, CHIA wrote on March 16, 2008: "There is a modulation Limiting algorithm that controls the deviation accurately. Again, this took many years to be perfected." As detailed above, CHIA stated he had copied Company A's noise suppression algorithm (known as "squelch") as part of 30GB of information downloaded to a hard drive. Company A considers this technology part of Trade Secret D.

[28] As referenced above, Trade Secret C encompassed Company A's testing and benchmarking strategies, methods, and results related to its digital two-way radio systems. In total, Company A estimated that development of Trade Secret C took at least 12 people 720 staff months, or 5 years, total.

A DMR project name] requirements." In the body of the email, G.S. described certain Company A-specific performance thresholds, writing:

> Wong/Eunice/Yu,
> I need you to urgently summarize for me the special requirements needed for [Company A DMR project name]. Please also include detail explanation why this is needed. For example: 1] [redacted] need to be +/- [decibel value] dB reason?
> 2] [redacted] needs to be <[millisecond value] msec reason?
> 3] [redacted] to [percentage]% rated power <[millisecond value] reason?
> Please include all the items that you know it's needed for [Company A DMR project name]. i need to compile a chart for the difference between this and other systems. Sorry for the short notice, but this should be a piece of cake for all of you right?

90. On May 16, 2008, WONG answered the questions posed in G.S.'s May 15, 2008 email, including highly-technical information about Company A's reverse channel feature (which allows the interruption of a currently transmitting voice transmission for an emergency transmission). Company A considers this feature to be part of a trade secret.[29] According to a Company A representative, five of the six responses that WONG wrote contained trade secret information about Company A's DMR products.

G. CHUA Gave G.S. Company A Trade Secret Information

91. As discussed above, after leaving for Company B, G.S. sent numerous emails to CHUA and the other Recruited Employees—who were still working at Company A—seeking Company A documents. Many of these emails appear to include questions from Company B engineers discussing internal Company A DMR documents.

[29] Trade Secret C, discussed above.

92. For example, on or about March 26, 2008, G.S. emailed CHUA, asking, "Hope you are not too busy to help me answer the question enclosed. Appreciate the prompt response." Attached was a PowerPoint presentation with the question below, followed by a diagram of what appears to be a phase lock loop system (PLL):

> I want to know what is the PLL IC phase detector frequence for [Company A] portable digital radio. In the way, I will be advantageous to optimize the two point modulation for DMR.

Below the diagram in G.S.'s email was a signature block for a Company B employee. According to Company A, this individual did not previously work for Company A.

93. The next day, on March 27, 2008, G.S. forwarded an email to CHUA and HOONG containing a similar question about phase detector frequency from the same Company B employee, asking: "what is the Synthesizer phase detector compare frequence about [Company A] portable DMR in the digital mode?" The email also contained simulations comparing the performance of Company A and Company B radio filters "from PLL Section for [Company A] portable DMR."

94. That day, on March 27, 2008, CHUA answered the questions from G.S.'s emails, writing, "Hi GS, Sorry for the delay. I am doing night support these days…1) the phase detector [redacted]. 2) I think the value of the phase detector [redacted] is not the correct one."

95. Similarly, on or about April 23, 2008, G.S. emailed Y.T., CHIA, WONG, HOONG, and CHUA asking for help with "some hardware questions," and included a list of questions, excerpted below in part:

> 1、4FSK Two-point modulation question to [Company A] engineers:
> 1. [Company B acronym]'s transmitters can have [redacted] as good as [decibel value] dB, while [Company A] has a [redacted] of [decibel value] dB. As our tests show, standard [symbol value] K/[symbol value] K SYMBOL transmitted by [Company B acronym] radios, could be successfully decoded by both [Company B acronym] receivers and [COMPANY A DMR project name]. I would like to know whether a [redacted] of [Company A's decibel value] dB is a must, and whether it shall affect receiving of weak signals and sensitivity.
>
> 2. ETSI standard has defined a [redacted]. As our tests show, [COMPANY A DMR project name] radio can [redacted] I would like to know what's the [redacted] specified by [Company A].
>
> 3. I would like to know what method and equipment [Company A] use to test and observe [redacted], during adjustment or mass production. Does [Company A] use any special instrument, such as sweep generator?

G.S. also included a second question, which he had marked as "DONE," and a third that he marked as "GS KOK." The third question was a request to "Pls help us to obtain the TETRA [European radio standard] portable and mobile's latest schematic diagram ,so we can make some reference,thank you!" This item appears to be marked complete by G.S. because he received a responsive document several weeks earlier from WONG. More specifically, on April 9, 2008, WONG emailed G.S., HOONG, and CHUA and attached a spreadsheet "[Company A DMR project names]_ Layer_Construction.xls." In the email, WONG wrote: "GS, I think this is what you requested....but I don't have the details for [Company A DMR project name] stackup." The attached document was a schematic diagram of a circuit board for a Company A DMR product, which Company A considers to be part of a trade secret.[30]

96. Later that week, on or about April 27, 2008, G.S. emailed CHUA,

[30] Trade Secret F.

WONG, HOONG, CHIA, and Y.T., writing:

> Eunice [CHUA],
> Please see below for follow-up questions from [Company B acronym].
> Best regards,
> GS

The body of the email contained the list of questions above from G.S.'s April 23, 2008 email in black, as well as new comments in red (from "GSKok") and in green (addressed "To Eunice"), which appear to be the "follow-up questions" from Company B engineers that G.S. was referencing.

97. That same day, on or about April 27, 2008, CHUA replied to G.S.'s email, writing: "Hi GS, Please see my reply in BLUE below." CHUA provided highly technical information in her response, which Company A considers to be part of a trade secret.[31] CHUA's reply (in blue and red) is excerpted below:

> 1、4FSK Two-point modulation question to [Company A] engineers:
> 1. [Company B acronym]'s transmitters can have [redacted] as good as [decibel value] dB, while [Company A] has a [redacted] of [decibel value] dB. As our tests show, standard [symbol value]K/[symbol value]K SYMBOL transmitted by [Company B acronym] radios, could be successfully decoded by both [Company B acronym] receivers and [COMPANY A DMR project name]. I would like to know whether a [redacted] of [Company A's decibel value]dB is a must, and whether it shall affect receiving of weak signals and sensitivity.
> The [decibel value]dB and [decibel value]dB [redacted] at room and extreme temperature respectively is mainly to have [trade secret reason for this engineering decision].
> 2. ETSI standard has defined a frequency error of 10%. As our tests show, [Company A DMR project name] radio can decode successfully at a frequency error of [error rate]%. I would like to know what's the frequency error specified by [Company A]. We tune the radio with frequency error of [hertz value]Hz in factory. We set it [redacted] is to [trade secret reason given].
> To Eunice:Thanks for your reply,in this question,the frequency error is about the TX freq deviation.[Company A DMR project name] radio can decode successfully at a frequency error of [error rate]%(standard symbol freq deviation is [symbol value]K/[symbol value]K),but the ETSI standard has defined a frequency deviation error of 10%,so we want to know [Company A]'s

[31] Trade Secret C, discussed above.

specificaiton,thanks! GSKok: [Company A] internal specification for BEER is <[bit error rate]%. This is put in to ensure [trade secret reason given]!

98. Throughout this period, G.S. sent numerous emails to the entire group of Recruited Employees posing technical questions, and even compiled their responses into master documents, containing Company A trade secret information, that G.S. emailed to the entire group. For example, on or about March 17, 2008, G.S. emailed Y.T., CHIA, WONG, HOONG, and CHUA and attached a file named, "Some Questions about DMR_17Mar2008.doc." In the body of the email, G.S. wrote: "Thanks Team, Here is the compiled response from you guys. Best regards, GS KOk." The attached document contained responses to 23 different technical questions about Company A DMR products, which appear to include answers to G.S.'s March 13, 2008 email and attachment discussed above ("Some Questions about DMR.doc"). Company A considers some of the information contained in that document to be part of its trade secrets for several aspects of its DMR technology.

99. More specifically, CHUA answered questions 21 and 23 in Some Questions about DMR.doc, and provided engineering reasons for the design decisions made by Company A. According to a Company A Senior Director of Engineering (Individual F), Company A considers the technical information CHUA provided in her responses to be part of a trade secret.[32]

100. During this time, CHUA's access to Company A's document database spiked. As a comparison, in all of 2006 and 2007 combined, CHUA accessed 309

[32] Trade Secret C, as discussed above.

documents. However, according to records from Company A, on or about May 12, 2008—after her recruiting trip to Shenzhen, and just two days before she submitted a resignation letter to Company A—CHUA's user ID accessed 473 files on Company A's document database in the span of only 72 minutes. Notably, 456 of the 473 files were accessed by CHUA for the first time. At least four of the documents were designated "[Company A] Confidential Restricted," while the remainder were all labelled "[Company A] Internal."

H. Y.T. Downloaded Company A Information While Working for Company B

101. As discussed above, Y.T. began work with Company B in June 2008, while still employed by Company A. More specifically, Y.T. told Company A that he was taking a leave of absence, but during that time, Y.T. retained access to Company A's document repository for several months, until his official resignation date on October 3, 2008. During the time period where Y.T. was on "leave" from Company A, but actually working for Company B, Y.T. accessed Company A's document database in a manner consistent with downloading documents for use at Company B.

102. More specifically, according to internal email correspondence produced by Company B, on June 23, 2008, a Company B engineer associated with DMR research and development—who had not previously worked at Company A—emailed CHIA at CHIA's Company B internal email address. The Company B engineer welcomed CHIA to Company B and told CHIA: "Our group has been engaged in protocol development for a period of time and met many problems which troubled us for a long time, so if you can help us solve these problems we will feel very happy and

excited . . ." The Company B engineer's email then posed certain technical questions about DMR protocol to CHIA—including cutting and pasting an excerpt from a Company A technical document, as seen below:

> 2. What the main function of call hangtime and channel hangtime and how to realize these in [Company A]?
> 3. Would you please tell us the processing details of digital emergency signaling in direct mode?
> 4. Whether [Company A] can support FNS service?
> 5. Why the value in Answer Response field filled by [Company A] is different from protocol definition in section 7.2.2 of 102 361-2? DMR definition is "proceed = 0x20, deny=0x21", but [Company A] fill "proceed = [Company A value], deny =[Company A value].
>
> **7.2.2 Answer Response**
>
> The Answer Response information element has a length of 8 bits and is shown in table 7.11.
>
> **Table 7.11: Answer Response**
>
Information element	Length	Value	Remark
Answer Response	[redacted]	[redacted]	Proceed
			Deny
>
> 7. Would you please tell us the processing details of IP service? How did [Company A] realize related IP service?
> 9. How can [Company A] realize single frequency repeater at present? or can't realize it at all?
> 11. How much memory occupied by the code section and what section separately of DMR protocol stack in [Company A]? Which part must run in internal memory and which part can run in external memory, Can you give some suggestions about code arrangement in memory.

103. In the email above, the Company B engineer—who did not previously work at Company A—asked CHIA how Company A accomplished numerous, highly-technical features in Company A's DMR products. Furthermore, the Company B engineer cut and pasted a table from a Company A document ("7.2.2 Answer Response") into the body of the email.

104. The same day, on June 23, 2008, CHIA forwarded the Company B engineer's email to Y.T.'s Company B email address. In the forwarded email, CHIA instructed Y.T. to direct his attention to questions that called for Company A's

method of resolving certain technical issues in its DMR products. In the body of the forwarded email, CHIA wrote, "Please focus on 2, 3, 4, 5, and 7."

105. Company A records show that Y.T. accessed information in Company A's database in response to CHIA's tasking. According to Company A Database access logs, between June 23 and June 29, 2008—which is after Y.T. began work for Company B—Y.T. accessed approximately 316 Company A files on the Company A Database. Of those files, approximately 207 were accessed by Y.T. for the first time. Some of the documents Y.T. accessed included:

a. A PowerPoint presentation titled "Scan Architecture" authored by a Company A engineer in approximately June 2008: According to information provided by Individual A, this document appeared responsive to question "2" in the Company B engineer's email, namely "What's the main function of call hangtime and channel hangtime and how to realize these in [Company A acronym]?"[33] According to Individual A, "Scan Architecture" described Company A's implementation of the scan feature and channel hangtime: "scan" permitted a user to hear communications on other channels when active, and "channel hangtime" was the term used to describe the amount of time a radio in scan mode listened on a keyed channel before continuing scan functionality. According to Individual A, the scan feature was a very complicated process and documents related to scan had deep revision histories, which reflected the number of engineering hours dedicated to solving technical issues

[33] In a June 23, 2008 reply email, CHIA provided descriptions of these features and detailed technical information pertaining to their implementation.

associated with the feature. Further, certain vendors did not have all the scan features offered by Company A. Company A considers its implementation of these features to be part of a trade secret.[34]

b. A Market Requirements Document titled "[Company A Project Name] (Reverse_Channel/Transmit Interrupt/Burst Dropping) Version 1.02 and dated July 24, 2007 ("Interrupt MRD")[35]: According to Individual D, the Interrupt MRD's descriptions of a feature named "emergency override," appeared responsive to question "3" from the Company B engineer ("Would you please tell us the processing details of digital emergency signaling in direct mode?"). Each page after the title page was marked "[Company A] Confidential Proprietary" and the following caveat appeared on the title page:

> The information contained in this document is classified COMPANY CONFIDENTIAL. The use and divulgence of any part of this information can seriously affect the welfare and financial security of the company. The distribution of information to any individual not employed by [Company A] or to any organization is strictly prohibited. Any [Company A] employee receiving this document will be held strictly accountable for the discretion and judgment with the use of this information.

According to Individual D, the Interrupt MRD described a proprietary process that entailed [redacted] on DMR products. The Interrupt MRD also described the key

[34] Company A described its design and implementation of the signaling layer architecture in its digital two-way DMR radio systems, also referred to as common layer, as encompassed by its Trade Secret G.

[35] Company A document database records indicate Y.T. accessed Interrupt MRD with filename "Reverse_Channel_MRD.doc" on June 23, 2008.

requirements for reverse channel, which included emergency override, a feature that allowed an emergency communication to interrupt a currently transmitting data or voice transmission. According to Individual D, the Interrupt MRD would not be shared with outside entities. Company A considers this document to be part of a trade secret.[36]

106. Notably, Y.T. accessed only 26 documents in the entire month of May—his last month working at Company A—but accessed 245 documents between June 23 and June 29, 2008—while working for Company B in China.

I. "*Try to copy out whatever information you can*": Y.T. Recruited OOI and Tasked Her to Obtain Company A Trade Secrets for Use by Company B

107. According to search warrant results described below, after beginning employment with Company B, Y.T. recruited OOI from Company A and asked her to obtain Company A trade secret information in 2008 and 2009.

108. More specifically, on October 19, 2008 Y.T. (using YIHTZYE@gmail.com) and OOI (using Subject Account 12) discussed Y.T.'s facilitation of OOI's hiring by Company B, including requesting her resume, via Google Talk:

> **[Y.T.]:** I work out for your [compensation] packages
> **[Y.T.]:** send me your CV...
> **[Y.T.]:** the step will be like this:
> **Ooi:** okok
>
> **Ooi:** also, when is the need date there?
> **Ooi:** so need sent you resume?
> **Ooi:** okie

[36] Company A described materials relating to its design and implementation of analog features in its digital two-way DMR radios as encompassed by Trade Secret H.

Ooi: so maybe can prepare a bit
[Y.T.]: ok.... You need to prepare me your CV

109. During the same Gtalk session on October 19, 2008, Y.T. also indicated that Company B was in need of a DMR product to complete its radio portfolio, and that Company A's technical information was needed by Company B:

[Y.T.]: entire China is no digital radio yet.
[Y.T.]: [Company B acronym] need to have a digital product to have a full product portfolio
[Y.T.]: As I told you before.
Ooi: haha...
[Y.T.]: Technical and non-technical info
[Y.T.]: we will need all these information [from Company A]
[Y.T.]: try to copy out whatever information you can when you are free ....
Ooi: aha?
[Y.T.]: another thing....
Ooi: okie..

[Y.T.]: investor won't have confident to list the company in share market
Ooi: aha
[Y.T.]: if not able to do digital radios
Ooi: okie

110. Based on my training and experience, and the content and context of the above Gtalk messages, Y.T. appeared to be tasking OOI with the removal of documents containing Company A trade secret information ("try to copy out whatever information you can") for use at Company B.

111. In the same Gtalk session on October 19, 2008, Y.T. and OOI appear to discuss instructions from Company B leadership on how Company A source code would be handled:

Ooi: you need to get a strong techncials from [Company A acronym] ro [to] help you
[Y.T.]: because they never do big project before
[Y.T.]: even with simple design
Ooi: so need more technicals :-

[Y.T.]: they really don't know what to do one...
Ooi: haha
[Y.T.]: because now we need to do all components, not just Platform or low level
[Y.T.]: we keep the source code for our own references
[Y.T.]: [Company B acronym] boss also asked us don't give [Company A] source code.
[Y.T.]: just that we can't give [Company A] source code to [Company B acronym]
[Y.T.]: once you look at their work.... you will know that their standard is still way way below [Company A]

Based on the context of this conversation, it appears that Y.T. is telling OOI that a "[Company B] boss" instructed Y.T. and others ("us") not to give Company A source code directly to Company B employees. Notably, however, Y.T. does not discuss any prohibition on using library files compiled from Company A source code or other technical documents. As discussed above, Company B engineers who never worked for Company A sent requests to G.S. for specific Company A documents by name. Furthermore, by 2009, compiled Company A source code files were shared directly with Company B engineers who had never worked for Company A, as detailed in paragraph 163 below.

112. In initial conversations, OOI expressed concerns about Y.T.'s requests for Company A documents. For example, in a Gtalk conversation on October 20, 2008, OOI asked Y.T., "it is still consider not ethics...Do you agree?" In response, Y.T. wrote:

[Y.T.]: but all code are written by them
[Y.T.]: you can see the shadow of [Company A] design
[Y.T.]: I never do copy and paste here

After this reply, the conversation continued:

Ooi: haha
Ooi: now in the principles to copy code and reuse and customized

[Y.T.]: won't happen one la
Ooi: no too much copy and paste i am also okie...hehe
Ooi: and doing follow my principles :p.

However, as discussed below, by 2009 OOI sent Company A information, including header files for Company A source code, to Company B employees. Furthermore, and as described below, Company B source code contained thousands of lines of copied Company A source code—far more than a mere "shadow" of Company A's design.[37]

113. Y.T. also tasked OOI to obtain Company A trade secret information for specific project names or DMR functions. For example, in a Gtalk conversation on November 19, 2008, Y.T. tasked OOI with obtaining technical information pertaining to "not just [Company A project name 1]," but "[redacted] [Company A DMR trunking protocol] also." OOI replied:

Ooi: okie
Ooi: really a spy this time...:p

114. Similarly, in a November 23, 2008 Gtalk conversation between Y.T. and OOI, Y.T. appears to ask OOI for additional documents relating to Company A DMR products, and tells her to "copy all the information you need first" before resigning from Company A:

[Y.T.]: [Company A project name]
Ooi: our repeater?
[Y.T.]: [redacted]
Ooi: oooo...
[Y.T.]: base station
[Y.T.]: especially, repeater information
Ooi: i need pick up mroe techncial during this periods

[37] Indeed, by the very next day, October 21, 2008, OOI appears to have relaxed her standards in another Gtalk conversation with Y.T., in which she asked: "what is the things you want? Documents also okie, unless too confidential." Later in the conversation, OOI thanked Y.T. for the opportunity: "honestly , i really appreciate the chances you give me :-)"

Ooi: agree
[Y.T.]: because we still have a lot of things to learn
[Y.T.]: those info is very useful for you and us for our own references.

[Y.T.]: When I said prepare for resignation, I mean copy all the information you need first.
Ooi: woops...seems i need a lot of study from now on...haha
[Y.T.]: [Company A document database] site
[Y.T.]: not mean that u have to do, but prepare info will help us one day
Ooi: that one need xome XCMP-XNL architecture...haha
Ooi: oo..ya, the auto test :p
[Y.T.]: auto-test
[Y.T.]: DMR repeater
[Y.T.]: control head
Ooi: DMR repeater? or [redacted]?

115. According to Company A Database records, approximately two weeks after this conversation, OOI accessed two Company A documents relating to XCMP. Company A considers these documents to be part of a trade secret.[38]

116. Additionally, on or about November 27, 2008, Y.T. sent the following Gtalk message to OOI:

Ooi: wow..how you copy chypher code huh?
[Y.T.]: cypher we have also...
[Y.T.]: not 1.4
[Y.T.]: for 1.3
[Y.T.]: [Company A DMR project name] source code..... doc.... we have quite complete already."
. . .
Ooi: send me alit of info that you think needed...haha
Ooi: if can
Ooi: okie
[Y.T.]: copy those we don't have
[Y.T.]: that's why.... try copy whatever doc info you can
. . .
[Y.T.]: those doc/info that we have already copied...you no need to spend time on it.

Based on the context of this conversation, it appears that Y.T. is informing OOI that

[38] Trade Secret I.

he already had large sections of Company A source code for several DMR products, but asks her to "copy those we don't have." Company A considers information relating to "Cypher" to be part of a trade secret.[39]

117. On that same day, OOI expressed surprise that Y.T. had Company A source code in his possession at Company B. During their Gtalk conversation, Y.T. confirmed the various areas of Company A source code he had:

> **OOI:** how you gte CPS [Company A] source code ar?
> **Y.T.:** source code...only missing is flashzap...yes, CPS, Labtools, Tuner,...that why I said [Company A DMR project name] related staff ....I have quite complete already.

118. In addition to source code, in a December 1, 2008 Gtalk conversation, Y.T. tasked OOI with obtaining specific non-public information about testing protocols for Company A's DMR products:

> **[Y.T.]:** the whole system test & tune architecture
> **Ooi:** haha
> **Ooi:** when is your need date?
> **Ooi:** okie...
> **[Y.T.]:** both
> **[Y.T.]:** thanks
> **[Y.T.]:** please
> **Ooi:** you want the architecture in ARM-c55 for Test and Tune?

119. Approximately nine of the documents accessed by OOI between December 1, 2008 and January 23, 2009 contained the words "test" or "tune" in their name, including the Testing Document (discussed above). Each page of the Testing

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[39] According to Company A documents, information pertaining to Company A's design and implementation of the physical layer, ARM, and DSP frameworks, and radio signaling architecture in Company A's digital two-way DMR repeaters, referred to as Cypher, is encompassed by Trade Secret J.

Document was marked "[Company A] Confidential Proprietary." Company A considers this document to be part of a trade secret.[40] (As discussed below, the Testing Document—or a modified version in which Company A's logo was removed and replaced with Company B's—was also found on CHIA and HOONG's Company B laptops in 2017.)

120. Additionally, on or about December 7, 2008, OOI emailed Y.T. a document named "[Company A project name] Test & Tune High Level Architecture.doc." This document, sent six days after the Gtalk conversation excerpted above, appears to be responsive to Y.T.'s request for "the whole system test & tune architecture." Company A considers this document—which is marked "[Company A] Confidential Proprietary"—to be part of a trade secret.[41]

121. Y.T. and OOI also communicated by email about obtaining Company A documents during this time period. For example, on or about December 5, 2008, Y.T. emailed OOI, writing:

> PE, Here are some info needed about [redacted]. Please try to get this info for us:
> 1. HSI doc for [redacted]
> 2. [redacted] TRD
> 3. Also, try to copy all [redacted] related information, code, doc.

122. Two days later, on or about December 7, 2008, OOI emailed Y.T. and attached "Test Manager Hardware Manager Design and Implementation.doc." This

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[40] Trade Secret C, discussed above.

[41] This document largely pertains to Company A's RCMP Command and Control, which, according to Company A, is used to configure, tune, and control the subscriber device via a connected computing device application, enabling streamlined subscriber device software development, factoring testing, and manufacturing (part of Trade Secret E and C).

file was marked "[COMPANY A] Confidential Proprietary." Company A considers this document part of a trade secret.[42] This document appears to relate to Y.T.'s request on December 1, 2008 (quoted above) for "the whole system test & tune architecture." That same day, Y.T. replied, "Yes. . . this is much better."

123. In a December 10, 2008 Gtalk conversation, Y.T. tasked OOI with obtaining additional non-public information about Company A source code and a Company A feature known as "Enhanced Privacy":

[Y.T.]: EP [Enhanced Privacy, a Company A DMR feature]
Ooi: you want EP? Or BP [Basic Privacy]?
[Y.T.]: supposed to be in vob [Company A source code storage location]
[Y.T.]: EP requirement doc also can
Ooi: okok
Ooi: what is EP?
[Y.T.]: yes
[Y.T.]: introductory doc...
Ooi: enhance privacy?

124. According to Company A access logs, the following day, on December 11, 2008, OOI accessed the following documents on Company A's Database: "Enhanced Privacy," "Enhanced Privacy Ported Task Design Document.doc.," "Subscriber_Enhanced_Privacy_Architecture_Document_21-Feb-2008.doc.," and "FR33564 Enhanced Privacy (Scope)." According to Individual A, Subscriber Enhanced Privacy Architecture (SEPA) detailed how to encrypt data traffic over DMR protocols and represented Company A's proprietary implementation of a standard encryption algorithm, which it named "Advanced Digital Processing" (ADP). Individual A estimated that it would take three Company A engineers approximately

[42] Trade Secret C, discussed above.

one year to develop the code component described in SEPA. According to Individual D, SEPA was not shared outside of Company A.

125. In a January 6, 2009 Gtalk conversation, Y.T. again asked OOI to obtain Company A source code and information about specific Company A DMR projects, and also discussed the smuggling of Company A radios and hardware:

Ooi: back from meeting :p
Ooi: yes?
[Y.T.]: dua dua pun mau [want both of them[43]]
Ooi: or document first?
Ooi: code also?
Ooi: then I save first :p
Ooi: code for [redacted] i not yet save....but if you guys need this weekends
[Y.T.]: everything
[Y.T.]: yes
[Y.T.]: if possible get some info on base station / repeater....
Ooi: you want code?
Ooi: i got save all trunking documenty
[Y.T.]: [redacted]
Ooi: means certain info..
Ooi: anything you want me to bring over in this trip?
Ooi: yes..
Ooi: then I will spent my time doing my stuff d:p

[Y.T.]: when do u going back to KL [Kuala Lumpur, Malaysia]?
[Y.T.]: with Oun's help
[Y.T.]: I smuggle out four radios.....last time
[Y.T.]: get LK [initials of a Company A employee] approved....:)
[Y.T.]: :)
[Y.T.]: no....material pass
Ooi: :p
Ooi: means smuggle out?
Ooi: Sam [CHIA] got ask me bring radio...
[Y.T.]: and Darwin new version
Ooi: onething...
Ooi: ooo...okok
[Y.T.]: I asked him copy

[43] This phrase was translated from the Malay language using an open source translation tool. The translation is a draft translation.

[Y.T.]: I ask my brother[44] pass u the Millinium control head[45]
Ooi: ooo...i need ask [Company A employee LT]
Ooi: as she have a bunch of friends tehre and work in Darwin
[Y.T.]: mackinaw spec doc....protocol

126. According to Company A document database logs, between January 9 and 13, 2009, OOI accessed at least ten Company A documents containing "[redacted]" in their title or filename. Additionally, between January 6, 2009 (the date of the Gtalk conversation above) and January 25, 2009, OOI accessed the following Company A documents, among others: "Darwin_Application_Development_Handbook.doc," "Darwin_Platform_User_Manual.pdf," and "Understanding Darwin Core.ppt."[46] Company A considers this information related to Darwin to be a trade secret.[47] Additionally, according to Company A access logs, OOI accessed at least three documents that contained the word "Trunking" in their filenames or titles on January 25, 2009, all of which were first time access events. As seen in the Gtalk conversation above, Y.T. instructed OOI to obtain documents relating to Darwin as well as "trunking document[s]."

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[44] According to Company A records, Y.T.'s brother was also employed by Company A. Similarly, according to an internal Company B "Task Tracking" document, under a line item for "check for newer DMR roadmap," the corresponding "Comments" column states: "Not found. YT is to try and get it from his brother."

[45] According to Company A, "millennium control head" is a hardware component incorporated in its DMR portable product base stations.

[46] As discussed below, a document relating to Darwin was found on OOI's Company B laptop in 2017.

[47] According to Company A, technical documents, software components, and source code relating to its design and implementation of radio software architecture in its DMR radio systems, comprised of Company A's ergonomic platform, known as the "ergo platform" or "Darwin," among other components, were part of Trade Secret B.

J. *"My shopping list"*: CHIA Tasked OOI With Obtaining Company A Trade Secrets for Use by Company B.

127. While most of OOI's correspondence appears to have been with Y.T. during her recruitment, on January 6, 2009, CHIA also emailed OOI. In the email, CHIA discussed already having two Company A DMRs with him, and then asked OOI to steal a specific Company A tuner[48] and radio:

> Phaik Ee [OOI],
> I have two version of the softwares with me in two radio.
> 1) R01.00.01. This is the R1.0 release.
> 2) D01.45.34. This is probably the R1.4 release.
> I would like the lab Tuner that works for both these version of the software. Yes, it is the exe which is suppose to be installed on the PC. As for the radio, if you can bring a version of the radio that works with the tuner, it would make sure that I have a working BER [bit error rate] tester. If you cannot get a radio, then maybe the next time you come. When you are here, we can talk more on my shopping list.....I hope this is not your last week at work. Sam.

128. OOI responded to CHIA that same day:

> Sam,
> Okie! I try whether i cna bring a radio first this round...WIll try to flash with R1.4 + tuner working.
> Yes, maybe we can discuss what is needed on my last week. After my SZ [Shenzhen] stay for roughly a week, when i come back, it will be my last week in [Company A abbreviation].
> So still have sometimes to copy data you guys needed.
> Thks and rgds,
> PE.

Based on the context of this email, it appears that OOI is telling CHIA that she is traveling to Shenzhen (where Company B is located) for a week, before returning to Company A for her last week of work, when she would "still have sometimes to copy data you guys needed." Additionally, OOI appears to tell CHIA that she will install

[48] Based on the context of CHIA's email, and conversations with Company A employees, I understand that the tuner described here is software used to perform testing on DMR radios to measure and calibrate performance.

("flash") executables compiled using version 1.4 ("R1.4") of Company A's DMR software code onto a stolen Company A radio to bring to Shenzhen.

129. CHIA wrote several more emails to OOI on January 6, 2009, first telling her, "On second thought, don't try to bring any radios now as I am afraid that you may get into trouble with customs...When I go back for CNY [Chinese New Year], I will bring along radios with me." Shortly later, CHIA sent another email requesting documents to be sent to him via an online file share service, instead of smuggled through customs:

> PE, Another request, please also get hold of CPS that will work with D01.45.34. If possible, can you please upload those PC tools (Tuner and CPS) for me to get it soon. You can use www.rapidshare.com to upload the tool and provide me the link to download it...Sam.

130. OOI responded to CHIA two days later, on or about January 8, 2009, telling him, "I have grab hold of the CPS and lab mode tuner to bring over tomorrow." OOI also wrote, "I will bring over my notebook [from Company A]...so in case anything..i can still use my notebook." Company A Database logs from that day show that OOI accessed several files relating to DMR tuners.[49]

131. Lastly, according to Company A access logs, on January 25, 2009—just days before her departure for Company B—OOI's Company A Database User ID accessed 202 documents within approximately eighty-five minutes. Approximately

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[49] "TUNER_BUILD48," "TUNER_BUILD49," "TUNER_BUILD50," and "TUNER_BUILD52." Each one of these files was marked within Company A's document database as "[Company A] Confidential Restricted."

133 of these 202 documents were first-time access events. Approximately 146 of those documents were designated as "[Company A] Confidential Restricted."

K. *"Penang have to research and develop. Here's it's like copy and modify right?"*: G.S., CHIA, and Y.T. Disguised Their Use of Company A Trade Secret Information in Company B's DMR Products

132. According to records produced by Company B, on or about June 23, 2008, shortly after CHIA joined Company B, he emailed G.S. and other Company B employees a PowerPoint presentation titled "FPGA Analysis" in which CHIA assessed the pros and cons of transitioning Company B's DMR development efforts to mirror Company A's hardware and software architecture.[50] In the PowerPoint presentation, CHIA wrote, "If FGPA is removed...this will also result in using a lot of [Company A abbreviation] code and is a concern. [Company A abbreviation] will realize this and wander how can they realize all those algorithms in software. Also, the performance in Squelch, Mod Limited, BER [Bit Error Rate] can be measured and be seen to have the same performance of [Company A]."[51]

133. On June 25, 2008, G.S. responded to CHIA's email and PowerPoint presentation. G.S. described re-writing Company B software to look different from

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[50] In the 2008 to 2009 timeframe, Company A's DMR products contained a digital signal processor (DSP) known as "OMAP," which consisted of a general purpose processor (ARM) and a specialized co-processor (C55), as discussed above. According to Company B records, until 2008, Company B was designing its DMR products to use a FPGA (Field Programmable Gate Array) processor. According to Company A engineers, because of the different designs of DSP and FPGA processors, Company A DMR software could not have been used in Company B products with FPGAs.

[51] According to Individual A and Individual D, a different company could achieve the same functionality in its DMR product through independent development, but having an identical bit error rate to Company A's DMR products would be practically impossible, unless the product were copied from Company A.

Company A's and the need to protect Company B from lawsuits: "Interesting! I understand where you are coming from and this is going to be a tough decission to make. either way will means a lot of work for the team, but the important one is to protect the company from impending law suits! I need a cost estimation of how much additional hardware is needed to make the software version works plus the resource effort, man months, to re-write softwares to look different from [Company A]."

134. CHIA memorialized this decision on how to proceed with software development by Company B in a spreadsheet. More specifically, according to documents produced by Company B, CHIA's Company B computer contained a file named "TaskTracking.xls." The document lists many tasks related to Company B's DMR development, many of which overtly reference Company A documents. The spreadsheet lists Company A documents as being available in a "folder" on Company B's internal network—that was actually named "[Company A]"—the existence of which Company B has admitted.[52] For example, row 92 of the spreadsheet lists: "Investigate Ramp profile implementation and get someone to work on it. There is a [Company A technology name] ramp profile in the [Company A acronym] folder."[53] In row 38 of the spreadsheet, CHIA listed "Determine how to create [software]

[52] During a February 8, 2018 deposition of a Company B Deputy General Manager and corporate designee (ZHENG Xiaohua), the Company B representative confirmed that there was a "[Company A acronym] folder" on Company B's internal document system in which Company A documents were stored.

[53] According to Individual D, ramp profiles show how radios adjust transmit power during operation in order to remain in compliance with FCC parameters. Individual D estimated that Company A tested fifty different DMR power ramp profiles during product development.

libraries" and provided three options:

> 1) Reuse entire [acronym with one typo for Company A's source code library] subscriber library. Requires all components to use the connection interface.
> 2) Extract only required component[54] and change interface to own interface.
> 3) Convert required library to C [computer language].

According to the "Comments" section for this row of the spreadsheet, Y.T. and CHIA chose option two as the "best one due to the fact that the effort to migrate is lowest among the 3. It also has a lowest chance of detection if the code was disassembled by [Company A acronym]."

135. The rewriting of Company A source code and the integration of Company A's software into Company B's software architecture was also referenced in Gtalk messages between Y.T. and OOI. Specifically, in a November 6, 2008 chat between Y.T. and OOI, Y.T. discussed rewriting Company A code:

> **[Y.T.]:** so,need to study a lot by myself
> **[Y.T.]:** want them to rewrite a lot of code
> **[Y.T.]:** because source code can not give to them

136. Additionally, on or about November 27, 2008, Y.T. sent the following Gtalk message to OOI:

> **[Y.T.]:** ok ok
> **[Y.T.]:** try build myself
> **[Y.T.]:** and copy
> **[Y.T.]:** set config spec.
> **[Y.T.]:** vobs [Company A source code]
> **[Y.T.]:** look from the release note
> **[Y.T.]:** but may not be complete
> **Ooi**: haha
> **[Y.T.]:** for certain critical thing like L1timer, I port myself to [Company B] platform. build as a library
> . . .

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[54] According to Company A, its developers used the term "component" as a term of art to refer to source code that governed certain functionality.

[Y.T.]: all provided as library
[Y.T.]: only L1 timer is provided at the moment and some DSP algorithm
[Y.T.]: but can not provide sooiceurce code.... no ch

137. Based on the context of the conversation above, Y.T. appears to have told OOI that he would rewrite ("port") Company A source code to Company B's format, and then compile it into library files for Company B, as opposed to directly giving Company A source code to Company B engineers.

138. Y.T. also discussed this rewriting of Company A source code in a January 6, 2009 Gtalk conversation with OOI:

[Y.T.]: and Darwin new version
Ooi: means copy their architecture?
Ooi: We pan to resue Darwin Core?[55]
Ooi: see u
Ooi: i go for a FTR first
Ooi: okok
Ooi: okie
[Y.T.]: but not yet all Darwin is using at the moment
[Y.T.]: yes
Ooi: haha
Ooi: ooo....okok
[Y.T.]: all in library form
Ooi: same as the L1 timer and the DSP
[Y.T.]: yes
Ooi: and then release to the engineer to use?
Ooi: will we build theirs as lib
Ooi: okok.

139. Based on my training and experience, and the content and context of the above-referenced Gtalk messages, I believe Y.T. was referencing Company B

[55] Company A considers the "Darwin Core" to be part of Trade Secret B, which permitted updates and fixes to specific components without requiring material changes to other components within its architecture. Notably, in an email from OOI's personal account (phaikee@gmail.com) to a former Company A co-worker on February 11, 2009, OOI stated she had a copy of a Darwin Core manual after beginning employment with Company B in Shenzhen, writing: "I read the darwin core manual till feel sleepy...help ~~~."

engineers' rewriting of Company A source code in Y.T.'s possession at Company B.

140. The reuse of Company A source code to develop Company B's DMR products was also discussed among the Recruited Employees prior to beginning employment with Company B, as seen in this March 11, 2008 email from G.S. to CHIA, Y.T., HOONG, WONG, and CHUA:

> Sam, Yes I understand. But looking at the software team, it's as big as the penang team! Penang have to research and develop. Here's it's like copy and modify right? Probably not so easy, but at last a lot better then when we started. Best regards, GS.

Based on the context of this message, G.S. appears to state that DMR development at Company B would require fewer personnel than at Company A, because Company B ("here") would "copy and modify" Company A's work, instead of having to "research and develop" it like Company A ("Penang"). (As discussed below, Company A source code was later found in Company B DMR products.)

L. "*Afterward prosecution?*" and "*Our lies may cause problems once [Company A] finds out*": The Recruited Employees Knew Their Conduct was Illegal

i. <u>The Recruited Employees Discussed the Consequences of their Actions</u>

141. In numerous emails during the conspiracy, the Recruited Employees discussed the risks of their actions.

142. For example, on or about May 23, 2008, CHIA emailed G.S., Y.T., WONG, HOONG, and CHUA to discuss his departure from Company A and discussions with former colleagues. In the email, CHIA wrote:

> It is going to cause a lot of problem as we are technical people and bring along a lot of knowledge. We have/will signed the NDA [non-disclosure agreement] and some of our lies may cause problems once [Company A] finds out.

143. Similarly, on or about May 14, 2008, CHIA and Y.T. had a Gtalk conversation about the risk of Company A checking their internal Company A messages:

samchia75: I am afraid that our messages will be checked
samchia75: now
samchia75: I am not afraid that our messages will be checked
[Y.T.]: all of them know?
[Y.T.]: yes
samchia75: damm...should have used this from the start
[Y.T.]: yes
samchia75: this one is much better
samchia75: if you do something wrong, they will have proof
[Y.T.]: she said.... don't discuss here
samchia75: and can be used if needed
samchia75: all IM messages [at Company A] are saved
[Y.T.]: I IM her just now....
samchia75: in Agilent [an electronics company in Malaysia], they do that
samchia75: it is true
samchia75: they will track it

144. The following month, on or about June 2, 2008, CHIA emailed G.S. to discuss the danger of giving Company A documents to Company B engineers. CHIA concluded that, "Giving them documents which can implicate us may put us in hot soup with you know who [Company A]."

145. Likewise, on or about October 19, 2008, Y.T. and OOI had a Gtalk conversation about taking "confidential info" from Company A:

Ooi: copy some confidential info and leave [abbreviation for Company A] seems a serious offend...?
Ooi: haha
Ooi: as the work is very spy and high chance get me into trouble :-
Ooi: offer
Ooi: for the oofer
Ooi: i am a little scared now
...
[Y.T.]: We just applying our knowledge in new company.

Based on the context of this conversation above, OOI appears to consider copying Company A's "confidential info" to be a "serious offen[se]," akin to being a "spy," with a "high chance [to] get me into trouble." Notably, although Y.T. here responds, "We just applying our knowledge in new company," in other communications with OOI and the Recruited Employees, Y.T. explicitly requests Company A code and documents for use at Company B.

146. On or about October 19, 2008, Y.T. and OOI had a Gtalk conversation in which they discussed litigation between Company A and Company B. As seen in the excerpt below, OOI and Y.T. discuss whether they could be "in trouble," and refer to their roles as "like a spy" and "a little of 'betray'.... :-":

[Y.T.]: [Company B acronym] and [Company A] are in pattent war now
Ooi: we work like a spy? haha
Ooi: hmm...
[Y.T.]: and if we are not success, our shares also not good
[Y.T.]: they will take action on protecting their business.
[Y.T.]: if they know exactly how many [former Company A employees] are in [Company B acronym],
Ooi: okok
[Y.T.]: sue us is no benefit to [Company A]
Ooi: i heard some HW [hardware] engineer in [Company A abbreviation] in [Company B abbreviation] also..hehe
[Y.T.]: [Company A] won't sue us, but the company [Company B].
Ooi: okok..

[Y.T.]: this will be handled by the company [Company B]
[Y.T.]: don't worry about this
[Y.T.]: no....
Ooi: will that make us in trouble also?
Ooi: haha...a little of "betray".... :-

147. Relatedly, in October 20, 2008 Google Talk messages between Y.T. and OOI, Y.T. said Company A's non-disclosure agreements had no effect in China, writing, "not valid in the country...the rule is not apply here...you are moving to

China, different country." In response, OOI wrote, "It is still consider not ethics...Do you agree?" OOI also appeared to state that she was okay with copying and reusing Company A code, as long as it was "no[t] too much": "now in the principles to copy code and reuse and customized...no too much copy and paste [referencing Company A's source code] I am also okie.hehe..."

148. HOONG's personal emails also show that he was aware that his actions were illegal. In October 2015, HOONG emailed himself a spreadsheet titled, "Benefits.xlsx," which appears to contain HOONG's list of the pros and cons of leaving Company B in 2015 to return to accept a new job with Company A in Malaysia. In his notes on the spreadsheet, HOONG wrote, "Just if continue at pirate ship, can sapu some additional buffering." Based on the context of this quote, "pirate ship" appears to be a reference to Company B. Additionally, on the last tab of the spreadsheet, HOONG lists a "Reform package" with management goals at Company B. In the last line of that section, HOONG wrote: "Afterward prosecution? Any possibility?"

ii. The Recruited Employees Took Steps To Evade Detection by Company A

149. The Recruited Employees took numerous measures to evade Company A's security measures. For example, on or about February 20, 2018, G.S. emailed CHIA and Y.T.—while they were still employed by Company A—and discussed Company A's automated systems for detecting outgoing files. In the email G.S. wrote: "Sam [CHIA], I saw it only after I pressed send. So you guys have to watch out and hope that it did not get caught in the [Company A] email filtering system!" Similarly,

on or about February 22, 2008, CHIA emailed G.S. and Y.T. and attached "Squelch.doc," which Company A considers to be part of a trade secret (as discussed above), and wrote in the body of his email:

[redacted] Never too sure what [Company A] has in terns of detecting outgoing files.

Based on the context of this email, it appears that CHIA was telling G.S. and Y.T. that because of [redacted] he was able to bypass certain Company A information technology security measures.

150. CHIA and G.S. also changed Company A document file names in order to conceal their contents and evade Company A's information security systems. For example, on or about April 14, 2008, CHIA emailed G.S., writing: "Remember to do the same thing on this file like you did yesterday." Attached to the email was a file named, "MyPhotos.jpg," which has the ".jpg" file extension commonly used for picture files. However, opening this file with a .ZIP file utility (as opposed to its default picture viewing application) revealed that MyPhotos.jpg was actually a .zip file containing three Company A documents: "Commercial_terms_proposal.ppt," "Example_DMR_licensing_terms_for_[Company A]_IPR.ppt," and "M3.R4.C1.Patents.xls." Each of the documents was password-protected. According to Company A document database records, CHIA accessed a document named "M3.R4.C1 – Patents" on April 20, 2008, which was designated "[Company A] Confidential Restricted."

151. According to Company B records, on or about September 26, 2008, G.S.

used his Company B email account to email Y.T., CHIA, HOONG, and several Company B engineers who had not previously worked at Company A. In the email, with the subject, "HK [Hong Kong] Electronics Fair (Autumn) 2008," G.S. instructed them not to appear on behalf of Company B at the event because Company A employees were likely to attend:

> Please register to attend the Hong Kong exhibition but I would appreciate caution on your side during the exhibition. Please to not offer to participate in any [Company B acronym] promotion of maning of the boot. In addition please only provide [Company B acronym] identification at the door and once in the exhibition only use the provided visitor pass and reframe from using [Company B acronym] linkages through the exhibition. I am expecting some [Company A employees] to be present for this exhibition as they are station in Shenzhen.

M. Company B Dramatically Increased The Recruited Employees Compensation

152. Based on a comparison of records from Company A and Company B, all seven of the Recruited Employees substantially increased their salaries and other compensation by moving to Company B. Below is a table summarizing the final wages of each employee at Company A, their starting salaries (including bonuses and other recurring allowances) at Company B, and the value of Company B stock options they received. The figures in this table are based on records from Company A and Company B, as well as email correspondence for the Recruited Employees, including G.S.'s salary negotiations with Company B's CEO (described above) and the formal employment terms from Company B that G.S. sent to the other Recruited Employees via their personal email accounts.[56]

[56] Regarding the figures in this table:

Employee	Company A final salary + bonus	Company B starting salary + bonus + allowances	Salary increase	Company B stock options & price	Company B stock options peak value vs. Company A salary
G.S.	$90,952 USD	$162,117 USD	78.24%	600,000 @ 0 RMB	$2,015,090 USD 2216% of final salary
Y.T.	$35,152 USD	$71,990 USD	104.80%	80,000 @ 1 RMB 20,000 @ 3 RMB	$314,754 USD 895% of final salary
CHIA	$31,636 USD	$74,275 USD	134.78%	80,000 @ 1 RMB 20,000 @ 3 RMB	$314,754 USD 995% of final salary
OOI	$24,214 USD	$26,923 USD*	11.19%	80,000 @ 1 RMB 20,000 @ 3 RMB	$306,012 USD* 1264% of final salary
WONG	$28,524 USD	$42,111 USD	47.63%	50,000 @ 1 RMB 20,000 @ 3 RMB	$218,521 USD 766% of final salary
HOONG	$16,402 USD	$48,000 USD	192.65%	40,000 @ 1 RMB 20,000 @ 3 RMB	$186,443 USD 1137% of final salary
CHUA	$22,412 USD	$54,277 USD	142.18%	40,000 @ 1 RMB 20,000 @ 3 RMB	$186,443 USD 832% of final salary

(1) All figures are listed in U.S. Dollars and have been converted from the original amounts in Malaysian Ringgits or Chinese Yuan. Unless otherwise noted, the exchange rate used is the rate in effect on the date of the record or email used to calculate the figure. All figures are rounded to the nearest dollar.

(2) Each employee also received one-time relocation allowances ranging from approximately $4,285 USD (for WONG and HOONG) to $13,509 (for G.S.). Because these are one-time payments for the cost of moving, they are not included in the table. Based on open source internet cost of living calculators, it appears that Shenzhen, China is approximately 35 – 40% more expensive than Penang, Malaysia.

(3) Company A could not locate a record of CHIA's final salary. However, they produced his pay range based on his position at Company A. As such, CHIA's salary in the table above is the maximum possible salary he could have earned in his final year at Company A.

(4) OOI's salary is based on interrogatory responses from Company B in the civil litigation. As discussed below, these figures were uniformly lower than the salaries the Recruited Employees discussed in their personal email accounts. Additionally, the stock sale price listed for OOI is the actual sale price (noted with an asterisk in the chart), according to a chart that OOI sent from her personal email account to her Company B account, listing a sale on May 18, 2011 at 19.9 CNY per share, for a total of 1,990,000 CNY, or $306,012. This price was slightly lower than the peak value of Company B stock.

(5) Based on offer emails received by Y.T., CHIA, and CHUA, it appears that WONG would have also been entitled to a monthly housing allowance of 6000 Chinese Yuan, or $857 U.S. Dollars, which is included in the table.

(6) HOONG's Company B salary is based on his deposition testimony, in which he agreed his monthly salary and allowances offer at Company B was about 28,000 CNY, which was "more or less" about "four times as much" as his Company A final salary.

153. Based on the Recruited Employees' email correspondence, making more money was critical to their decision to join Company B. For example, in an email dated November 30, 2007, G.S. confirmed his prospective stock bonus offer with Company B's CEO:

> Thank you for your phone call on Wednesday 28th Nov 2007, to clarify your offer. I will write this down and if it is what you also understand then we can proceed to document this into the employment contract. 1) [Company B] will immediately give me, on my employment 300,000 [Company B] shares. 2) [Company B] will recall this shares if I terminate my employment with [Company B]. 3) If [Company B] is listed onto the Shenzhen stock exchange, these stock will be mine to keep.

G.S. also wrote: "nothing else [less than the 300,000 shares] will not entice me to move over to [Company B] and risk the security of my family." According to an earlier email to G.S. from Company B's CEO, it appears that the 300,000 shares were per year for the first two years, giving him a total of 600,000 shares of Company B stock. Company B's CEO concluded his email by telling G.S., "You don't need to worry too much after that and just enjoy comfortable life."[57]

154. CHIA also discussed the importance of salary increases with G.S. In an email from CHIA to G.S. dated April 8, 2008, after receiving Company B's proposed compensation packages, CHIA indicated he had met with Y.T, HOONG, WONG, and CHUA, and they agreed that the salary offered by Company B was "very low." CHIA

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[57] In contrast to the other Recruited Employees, it appears that G.S. did not have to pay even a nominal amount for his shares, but rather received them after a specific vesting period. According to records later produced by Company B, G.S. ultimately received 600,000 shares of Company B stock options after joining the company, which would have doubled his profit to $2,015,090, or 2216% of his final salary at Company A. According to his email correspondence with Company B's CEO, G.S. also received fringe benefits including home cleaning services, a "Transport Chauffer & Car," and air travel for his family to visit Malaysia annually.

then provided a "guideline for you [G.S.] to re-negotiate the package." Included in CHIA's guideline was the following term, "KH Yew, Eunice, Wong – Expected to have an increases of 75% from the Annual income." In his reply to CHIA, G.S. wrote: "your [CHIA's] package even with the higher RM10k pay is still a 47% gain package wise for per annum basis [over his Company A salary]."

155. Similarly, OOI appears to have been swayed by Company B's offer of stock options, which were predicted to dramatically increase in value once Company B became publicly listed. During her recruitment, OOI received an email from Y.T., in which Y.T. described going to work for Company B as "one of the rare opportunity to get rich by employment. We need to ensure the new product come out to the market and build up the confident of the company to get listed [on the stock exchange], then we will be rewarded." These gains appear to have been realized by at least some of the Recruited Employees, including OOI, who sold her shares for a profit of over $306,000,[58] and HOONG, who testified in his deposition to earning "in the region of 1 million to 2 million RMB [Chinese Yuan]." (Based on the conversion rate of Chinese Yuan to U.S. dollars on the date of HOONG's deposition (6.7477 Yuan to 1 Dollar), 1 to 2 million Chinese Yuan was worth $148,198 to $296,397 U.S. Dollars.) Other emails show that being offered these stock options was rare at Company B. In an April 8, 2008 email from G.S. to CHUA, he wrote: "Exchange rule that the company can only have 200 share holders prior to listing. You guys are lucky to be allowed to hold [Company B] share . . ."

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[58] *See supra* footnote 56.

156. Other documents show that the Recruited Employees' salaries continued to increase after Company B released its first DMRs. For example, according to a document found in WONG's personal email account, WONG's net salary at Company B had more than tripled by 2011, the year after Company B released its first DMR product:

Annual After Tax Income

Year	Net Amount (RMB)	Tax Payable (RMB)	Net Amount (RMB)
2009	200, 890. 05	22, 783. 01	178, 107. 04
2010	247, 052. 86	32, 860. 34	214, 192. 52
2011	633, 657. 70	126, 572. 30	507, 085. 40
2012	316, 828. 85	73, 130. 80	243, 698. 05

157. WONG's 2011 salary (presumably including a bonus) was over a 250% increase from his final salary at Company A. Similarly, according to a Company B income certification for HOONG, attached to an August 4, 2015 email, HOONG's 2015 gross annual salary at Company B was approximately $86,585 U.S. Dollars—over a 500% increase from his 2008 salary at Company A.

158. Notably, the figures discussed above are higher than the salaries that Company B disclosed in interrogatory responses during the civil litigation. For example, according to Company B's interrogatory response, G.S. was allegedly paid only 240,000 CNY ($34,285 USD) in 2008—which would have been over a 50% pay cut from his salary at Company A ($77,959 USD). By contrast, according to emails recovered during a search of G.S.'s personal email account, in an email dated December 3, 2007 with subject line "[Chinese-language characters]: FW: Offer

Discussion," Company B's CEO agreed to pay G.S. an annual salary of 1,020,000 Chinese Yuan, or $137,800 U.S. Dollars. Similar salary discrepancies were seen in Company B's interrogatory responses for the other Recruited Employees, as well as for their stock options. For example, Company B's interrogatory responses do not disclose any stock options for WONG, HOONG, or CHUA, while their personal emails discuss stock options of 60,000 to 70,000 shares each.

N. Existing Company B Employees Discussed Stolen Company A Information with the Recruited Employees

159. Despite early discussions about keeping information from Company B engineers, by the time Y.T., CHIA, and other Recruited Employees began work at Company B, they were freely sharing Company A documents with Company B employees who never worked for Company A.

160. For example, according to records produced by Company B, a September 18, 2008 meeting memo titled, "DMR Repeater Baseband Architecture Meeting Memo," listed as attendees Y.T., CHIA, and three Company B employees who never worked at Company A. According to the memo, the meeting topic was "Propose practical baseband architecture for DMR repeater prototype model." The memo discussed three potential DMR architectures, the second of which was comprised of "two OMAPs, as [Company A], without FPGA." The advantages and disadvantages of each design were listed on page 2 of the DMR Memo. Notably, the first advantage listed for the Company A design was "Reduce software development." Based on the context of this memo, I believe "reduce software development" is a reference to reusing Company A code in Company B DMR products, and that this was discussed

during the meeting with existing Company B engineers who had never worked at Company A.

161. Similarly, in a November 4, 2008 internal Company B email to CHIA, Employee RL, a Company B engineer who was later promoted to Senior Vice Director (who also attended the September 18, 2008 meeting discussed above), wrote: "Sam, I saw this in the document of '[Company A] DMR conformance testing of radio hardware.' . . ." Employee RL went on to ask a technical question about the "the 4FSK max deviation" and pasted the following image (redacted here) into his email:

5.1.2 Transmit 4FSK maximum deviation

This test measures the maximum frequency deviation.

Spec: highest deviation shall not exceed +/[redacted]Khz (room) +/[redacted]Khz (temp)

162. According to the metadata produced by Company B along with this file, one of the contributors to this document was Individual D, a Company A employee. According to Company A, the image above is part of a Company A DMR manual, which Company A stated was a trade secret.[59] Furthermore, Employee RL's reference to a "conformance testing" document, appears to be the same document that WONG emailed to G.S. in April 2008, as discussed above.

163. OOI also shared Company A information with Company B employees who had never worked at Company A. For example, according to Company B internal emails, on or about April 20, 2009, OOI emailed two Company B engineers and attached two software library and header files named "rfhal_c55.lib" and

[59] Trade Secret C, discussed above.

"framer_api.h." In the body of her email, OOI wrote, "Pls try this library out." In response, a Company B engineer wrote, "Hi Phaik Ee [OOI], That there is no function in the header file, do you miss something?" Notably, when opened, the top of the header file named "framer_api.h" explicitly referenced Company A: "This is the framer API used to wrap and encapsulate [Company A] HPD Framer library."

164. The sharing of stolen Company A documents within Company B continued for years. For example, according to internal Company B emails, on October 27, 2010, OOI emailed four Company B engineers (who did not previously work at Company A) about the overt reuse of Company A technical documents. In the body of her email, OOI wrote:

> For your information of reading on some of [Company A] multi-site stuff...
> The draft below is a breif one from [Employee QJ, a Company B Software Requirements Team Engineer] and change some name from [Company A] to [Company B]. The whole documents contents still from [Company A] and we will update it soon to [Company B] one.[60]

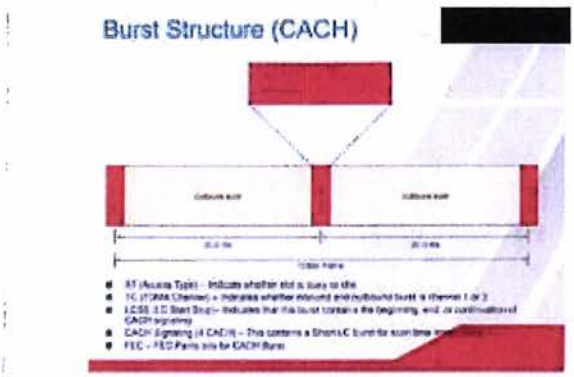
165. Similarly, according to internal Company B emails, on or about July 28, 2011, OOI emailed what appears to be a task list with assignments to several Company B engineers. The first assignment on the list read:

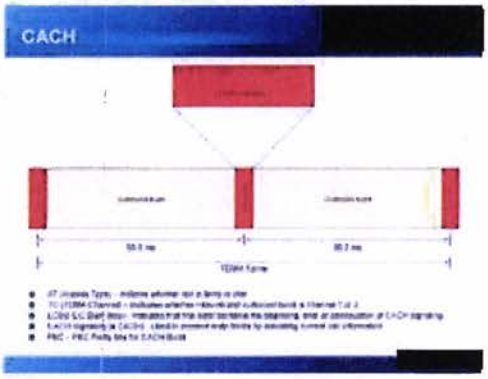
> 1. The operating principle, specific working mode of the DMR system.
> PE [OOI]: [Employee QJ] will send [Company A] training slides on repeater to you. Pls get the explanation from him and then selected out the necessary info for you to rebrand to [Company B].

166. "Rebrand[ing]" of Company A documents appears to have been widespread at Company B. For example, a Company B presentation authored by

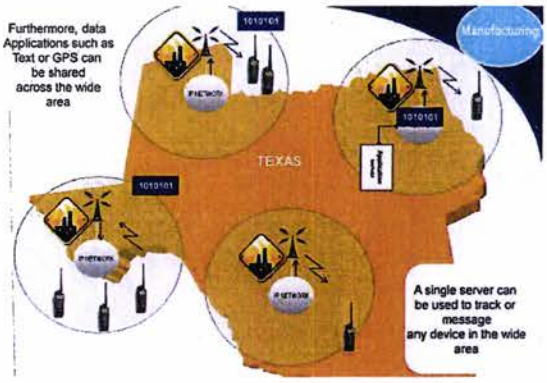
[60] Company A considers information pertaining to use cases for multi-site repeater configurations as encompassed by its Trade Secret K.

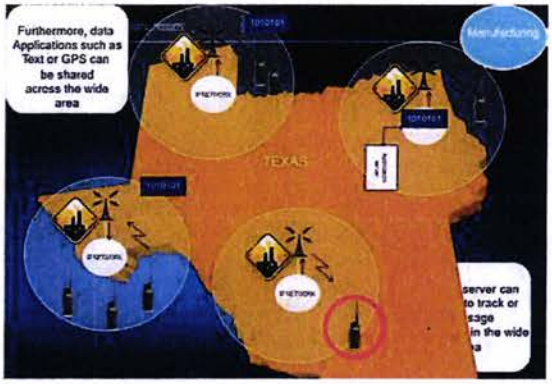
CHIA (below left) was nearly identical to a Company A document (below right), except for the background:





In another example, Company B copied and reused the entirety of a Company A PowerPoint presentation on a specific DMR feature. The image below on the left is from a Company A DMR presentation, while the image below on the right is from Company B materials. As seen below, the documents are identical except for the background color:



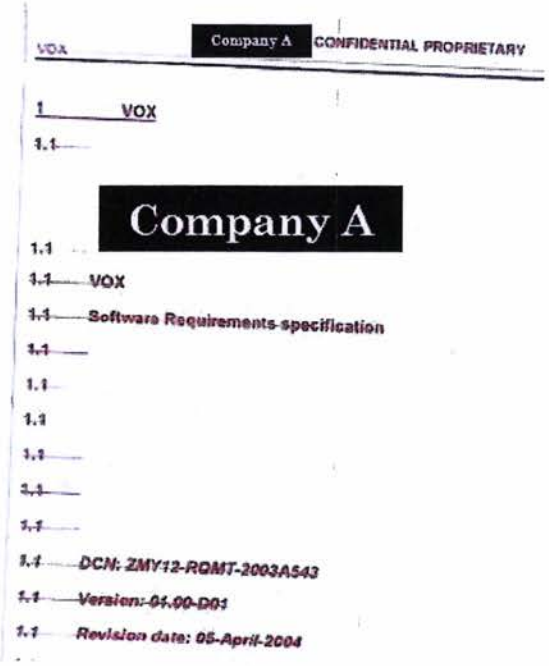


Remarkably, in the Company B document, the image of a DMR radio circled in red, when enlarged, is actually a picture of a Company A DMR with Company A's name listed on the product.

167. According to Company B documents, numerous Company A documents

were found on the computers of Company B engineers as of at least 2017. For example, in a September 11, 2008 internal Company B email, a former Company B engineer requested an "SRS [software requirements specification] template" from Y.T. In response, Y.T. sent a document with filename VOX.DOC to the requesting engineer and copied one other Company B engineer. VOX.DOC was forwarded that day to another Company B software engineer, Employee ZD.[61] (Notably, CHIA had accessed this document in Company A's database, on February 12, 2008, the last day of G.S.'s recruiting trip to Penang.) When opened, however, the document showed that Microsoft Word track changes had been enabled, and that someone had attempted to delete Company A markings. The track change markings and Company A's name, however, were still visible in the file produced by Company B:

[61] In his deposition, when asked about another Company A document ("Neo_12m_p21 [Chinese characters].doc" found on his Company B computer, which was marked as [Company A] "Internal Use Only," Employee ZD responded: "Yes, I see that [Internal Use Only]. But I also want to say, to having that written on it, it does not mean that it is truly the case. For instance, if I write on my forehead, 'I am the king,' that does not mean I am the king."


VOX Company A CONFIDENTIAL PROPRIETARY

1 VOX

1.1

Company A

1.1

1.1 VOX

1.1 Software Requirements specification

1.1

1.1

1.1

1.1

1.1

1.1

1.1 DCN: ZMY12-RQMT-2003A543

1.1 Version: 01.00-D01

1.1 Revision date: 05-April-2004

168. Furthermore, according to documents produced by Company B, an internal Company B DMR development status spreadsheet (authored by CHIA, and excerpted below) referenced this document ("Vox.doc") with a note that, "There is a [Company A] Research Doc," and even included a link to it in a folder named "[Company A]" on Company B's internal document database (seen in the right-hand column):

			Defined in different Normative Doc.	
VOX [Internal Radio and Accy. Algo in DSP]			Part Defined in Normative Doc, But There is [redacted] Research Doc.	http://sw-server/src/Product_Standardization/5.[illegible]/5.03 [illegible]/02 [redacted] 04.VOX [illegible]/VOX.doc http://sw-server/src/Product_Standardization/2.[illegible]/2.01 [illegible]/01.[illegible]/05.[illegible]-[illegible]-0005.doc
RX Frequency				

Company A considers its VOX technology to be part of a trade secret,[62] which allows a radio user to start a transmission through voice, providing hands-free operation for

[62] Trade Secret L.

the convenience and safety of users. As discussed below, this same file, VOX.doc, was later found saved on a Company B engineer's laptop, and was marked "[Company A] Confidential Proprietary." According to another internal tracking chart produced by Company B, the following entry appeared for VOX: "The plan is to reuse [Company A's VOX]. Do not start any work on this item until Sam [CHIA] provides confirmation to start."

169. Other emails openly discussing Company A documents were sent among Company B engineers who had not previously worked for Company A. For example, according to Company B internal emails, on May 21, 2008, Company B engineer Employee ZG emailed Employee QJ—neither of whom had previously worked for Company A. The subject of the email was "[Company A] DMR Production Debugging Document, FYI," and the email began: "The attachment is the [Company A] DMR production debugging document." Attached to the email was a confidential Company A document relating to DMR.

170. Similarly, according to Company B internal emails, on July 4, 2011, Employee HN, a Company B software engineer, sent an email to another Company B engineer with the subject "lib [library]." (Notably, there is no record of either engineer previously working for Company A.) The email contained an attachment with the file name "DMRLib.rar." In the email, Employee HN wrote:

> Dear [Employee HH], This is the library provided by Sam [CHIA]. Please keep confidential. It is exclusive for the designated personnel among us.

171. When asked about the meaning of this email in a deposition, Employee HN responded:

> Things related to DSP [digital signal processor][63] would all need to be kept confidential. This instruction that DSP matters need to be kept conferral is from the company's leadership. So anything -- so DSP matters should be kept confidential. This is all that I have to say. I apologize. I have said too much.

Based on the context of this statement, it appears that the Company B engineer was "apologiz[ing]" to Company B for having "said too much." When asked to identify the "leadership," Employee HN responded:

> Well, actually I cannot remember why, but wait. Well, DSP—well, how should I put it? Well, I think you can understand this to be Sam's [CHIA's] requirement.

In response to follow up questions in the deposition, Employee HN answered:

> Well, one day he [CHIA] told me that things related to DSP should not be known to more people. And it should actually just be within just a few of us. And he said if more people knew – well, if fewer people knew, the control would be better. And our code is also not supposed to be uploaded to [Company B's database]; say, information relating to physical layer should be kept on the local drive and not uploaded to [Company B's database]. And can only be kept confidential on the local drive. If I upload this to the [Company B's database], somebody may download it and steal it. Because it had already happened before, that someone stole the codes and sold them for money.

Employee HN's answer in the deposition is consistent with emails she sent years earlier while working on DMR development at Company B: "This data can only be shared between you and me. No one else can obtain the [source] code and data . . . unless I authorize. When implemented, only .lib and .h [library and header files compiled from the source code] can be uploaded. The [source] code can only be saved [locally] on your and my computers."

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[63] As discussed above, the use of a DSP as opposed to an FPGA in DMR development was one of the key engineering decisions that Company B made shortly after the arrival of the Recruited Employees. According to internal Company B documents quoted above, one of the advantages of DSP was to "reduce software development."

O. "*It will eventually kill us trying to make shit into GOLD*," and "*This company setup from purely copying*": Company B Needed to Steal Company A's Trade Secrets to Compete in the DMR Market

172. According to other emails from G.S. during the recruitment period, the direction to take Company A DMR information came from top leadership of Company B. More specifically, on March 4, 2008, G.S. emailed Y.T., CHIA, WONG, HOONG, and CHUA, writing:

> Sam [CHIA],
> That's ok not an issue. Still pretty good rate [exchange rate]! By the way I just talked to President yesterday, he wants the whole DMR. We need to talk about this when you guys are here.
> Best regards,
> GS.

Based on the context of this email, as well as other emails in this timeframe (described above) in which CHIA reported, "We are trying to grab whatever we can," it appears that G.S. is telling CHIA and the other Recruited Employees that the "President" of Company B told G.S. that Company B wanted "the whole DMR," namely all of Company A's DMR technology. Notably, while GS was willing to email overtly to request Company A documents, discussing Company A's "President . . . want[ing] the whole DMR," was something he would only talk about in person "while you are here [in Shenzhen]." According to Company A's website, at the time, Company A's CEO (who personally recruited G.S.) was also its President.

173. Additionally, according to Company B meeting minutes, Company B's CEO expressed a desire to overtake Company A in the lower end DMR market by finding a "shortcut." More specifically, the minutes kept by Company B for a October 2007 budget meeting reflect Company B's CEO stating that, "[t]he current low cost

DMR design doesn't meet [his] expectations" and that he "want[ed] a shortcut to override [Company A abbreviation] in the lower end market." The CEO reiterated his desire to leapfrog Company A's DMR development in a 2007 Company B PowerPoint presentation which contained a section titled "Declaration of Manager [CEO] on the DMR project." In the presentation, the CEO stressed that DMR development was critical to the future of Company B: "The DMR project is a new opportunity and entry point for our entry into professional wireless communication middle and high-end market. The project is characterized by a tense schedule, a high degree of importance and a wide range and is critical to the future development of the company. [Company A] has launched the first generation of DMR products. We need to directly develop the second generation of products . . . The success of DMR will mean defeating [Company A] in the middle and high-end market."

174. G.S. also discussed Company B's prior struggles with DMR technology with CHUA. On April 1, 2008, approximately two months after G.S. began working for Company B, G.S. emailed CHUA to thank her for her responses to Company B engineers' requests for Company A information (as quoted above) and discuss Company B's previous failure in DMR development: "Anyway I really need your input as I don't want to have the same problem in the new product we are designing . . . But the team here [at Company B] had wasted 3 years so the pressure is on to get the product out ASAP." G.S. shared similar concerns directly with Company B's CEO, writing in a 2008 email that he was "shocked to find out that the [Company B DMR] radio part count was > 1,100 parts," and "surprise[d] to find out that we do not have

a proto-type radio after 3 years [of DMR development by Company B before the arrival of Company A employees]."

175. In emails with CHIA and Y.T., G.S. was even more blunt in criticizing Company B's technology. Specifically, in a February 20, 2008 email to CHIA and Y.T. about whether any existing Company B technology for a related radio product (TETRA[64]) could be reused for DMR development, G.S. wrote:

> Sam, I am not comfortable with their current Tetra platform that they have. I don't know if you tested them during our visit to [a trade show]. It was very slow. In addition they are using separate ARM's and DSP processors. We just managed to convince them to go for OMAP[65] dual processors...Please try not to use their Tetra platform, it's not on solid ground!

Later that day, G.S. again emailed Y.T. and CHIA:

> Sam, I am not disagreeing with you for reuse, but my big concern is that the Tetra [related Company B DMR project] platform they have is rubbish and if you pick up old rubbish it's as good as picking up shit and you will get it all over you and it will eventually kill us trying to make shit into GOLD! As far as I know they are only just starting to work on new generation Tetra with better platform...

176. Based on the context of this email, I believe that G.S. was telling CHIA and Y.T. that using Company B's existing technology would be "as good as picking up shit," and could not be made into a profitable product ("GOLD!"). Later that day, Y.T. emailed G.S. and CHIA, writing, "I still agree on reuse ours [*i.e.*, Company A

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[64] TETRA related to public safety and government clients, while DMR targeted smaller and lower-cost audiences.

[65] In a February 20, 2008 email from CHIA to G.S. and Y.T., CHIA was already contemplating the reuse of Company A's code written specifically for Texas Instrument's OMAP or digital signal processor (DSP): "Going to TI with either an OMAP or a TI DSP processor is a good choice as we already have codes for them. Do you know if the TETRA platform uses the TI processor. BTW: If we can re-use the codes from the [Company A DMR project name] demodulation, then it would be more comfortable for us to go with software demodulation approach."

DMR technology] as much as possible." In that email, Y.T. also referred to Company B's prior work on DMR as an "uncertain platform."

177. Y.T. also viewed Company B's prior work on DMR products as severely lacking. According to a presentation produced by Company B, Y.T. referred to Company B's prior DMR code development efforts as a "Monolithic, Spaghetti System," which he described as "a big fat system that [was] very difficult to isolate the component and reuse." Instead, Y.T. proposed a 'new' software architecture called CPA—however, as discussed below, CPA was actually copied from Company A's DMR software architecture.

178. The Recruited Employees also commented on the lack of technical advancement at Company B, and discussed Company B's need to "copy." For example, on or about October 1, 2009, OOI emailed a three former Company A colleagues about Company B:

> In terma of technical competency:- they are really BEHIND [Company A] :-) They are good in analog radio design....but for digital, they are too new ...i realy think how can they be competitor for [Company A]? Their knowldge is too much behind [Company A] for digital...
> . . .
> This company setup from purely copying one..haha...buy otehr ppl radio can copy earlier :p

179. G.S. even publicly discussed Company B's copying of "competitors." In approximately 2010, G.S. was interviewed for an article titled "Digits from the East" in an industry publication named "Land Mobile." In a June 2010 article, G.S. was quoted as saying:

> Our competitors say we used to copy their designs. I'm not ashamed to say that, yes, that's how we learned. But I think we have matured and come to the point

> where we are able to develop our own protocol software. We're doing our own scrambling, our own encryption, we're doing our own features.

When asked in his deposition to explain what he meant in this statement, G.S. responded, "I don't remember."

180. Because Company B needed to copy Company A's technology, it appears that the Recruited Employees were held in high regard—"like god in the company"—upon their arrival at Company B. For example, in a Gtalk conversation on March 19, 2009 between Y.T. and a former Company A co-worker, OOI wrote:

> **[Y.T.]:** they will let go and get the room for meeting
> **[Y.T.]:** they just have to say this meeting room is requested by anyone of us,
> **[Y.T.]:** when they want to book the meeting room and meeting room is full.
> **[Y.T.]:** even the engineer told me.
> **[Y.T.]:** we have all the decision power today
> **[Y.T.]:** we are like god in the company
> **[Former Co-worker]**: all of u become god
> **[Y.T.]:** yes.
> **[Former Co-worker]**: So GS become god

181. Company B's pattern of stealing information from Company A was not limited to the Recruited Employees in 2008. According to a 2010 Company B internal email chain between several Company B managers and engineers—none of whom previously worked at Company A—the Company B employees reported that fellow Company B engineers had obtained Company A software and manuals: "After some struggle, colleague [Employee ZM, a Company B engineer] has obtained the [Company A acronym] RDAC software . . . ." According to Company A, RDAC software was not released publicly.

182. Upon receiving this email, Company B Employee RL (discussed above) instructed a Company B secretary to assist Employee ZM with submitting a

"motivation bonus" based on his acquisition of the Company A software. According to a Company B internal email, in support of the bonus, Employee RL wrote: "Repeater diagnostics and control (RDAC) is a must have in the DMR repeater feature list," and that, "Having the RDAC software from [Company A] will greatly facilitate the repeater software team to define and document the software requirements for our own design."

183. Company B internal correspondence also revealed the difficulty that the Recruited Employees and Company B engineers faced in DMR development when they were no longer able to copy Company A designs. For example, on September 7, 2012, CHIA emailed WONG using their Company B accounts, writing:

> Hi Wong.
> I now have no idea how to make new products. I am really having sleepless nights worrying about what direction we should take as if this is wrong, it may kill me.

184. Similarly, several years later, G.S. and CHIA discussed the difficulties Company B was then facing in developing new products when it was no longer able to copy from Company A.[66] More specifically, on or about August 26, 2015, CHIA forwarded OOI (at phaikee@gmail.com) an email between G.S. and CHIA dated August 24, 2015. In the email exchange, CHIA described the difficulties his software development team was encountering in developing a next generation DMR product:

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[66] The need for such new products appears to have been referenced in G.S.'s Company B employee records, which lists G.S.'s number one objective for 2015 as: "Improve quality control, complete cost down and customized project to ensure that DMR and TETRA continue to be the 'Cash Cow' for the company."

"the team needs to be able to re-invent ourself in order to cope with a totally new goal which we dont have much to copy from." G.S. responded to CHIA's concern:

> I agree with your assessments. Till today many of these [Company B] engineers are still only good followers and we do not have that many that really provides great ideas for us to ponder over or even embrace to work on. They are still putting their hands out waiting for the food to be given to them and then they will just eat it and come back with their hands reaching out again tomorrow...

P. CHIA Emailed Company B's CEO in 2017 to Discuss "Alignment" of "Our Stories"

185. On or about March 14, 2017, Company A filed a civil complaint against Company B in a U.S. federal court for trade secret theft and other related claims.

186. According to Company B internal emails, approximately two months after the filing of the civil lawsuit, on or about May 22, 2017, CHIA sent a message using his internal Company B email account to Company B's CEO with the subject line, "Summary of my dissapointments (Private)." Regarding the trade secret litigation, CHIA wrote, "There is also no alignment done between all 3 [G.S., Y.T., and CHIA] of us although I had approached GS 3 times requesting to align our stories. Bottom line is that there is no alignment and guidance, it is surely bound to screwed up." CHIA further wrote, "I fear I can be personally implicated once that trial starts . . . I currently feel that the risk to reward when deciding to join this company was not properly balance and it is now impacting many aspects of my life." CHIA also wrote, "As I am a key witness, I am feeling a lot of pressure doing and saying the right thing . . . Before meeting the external lawyers, I was told to tell the truth of all events that happened. However, after this has happened, I was told that I should to

have said too much." CHIA also included a list of "Key items that are troubling me," including, "Knowing that there is a risk in going to jail."

187. Based on my training and experience, and the context of this investigation, I believe that in the May 22, 2017 email, CHIA is discussing "align[ing]" his story with other subjects of this affidavit, namely G.S. and Y.T., and being told by Company B that he was too candid in his statements about Company B's practices in connection with the trade secret civil litigation between Company A and Company B.

188. Lastly, according to Company B records, when G.S., Y.T. and CHIA were ultimately fired by Company B on October 23, 2018, for "gross misconduct against the Employer for failure to cooperate with requests for information" in Company B's investigation, they nonetheless received generous severance packages: G.S. received $82,772 as part of his "non-compete agreement" (the basis of which was "gross misconduct"), and Y.T. and CHIA each received $75,811[67] pursuant to termination agreements—along with a non-disclosure provision related to the civil litigation between Company A and Company B. In addition to these severance payments, according to Company B's interrogatory responses in the civil litigation, the three fired employees received other compensation following their termination: an additional $117,748 for G.S., $57,925 for CHIA, and $28,097 for Y.T.

Q. Stolen Company A Documents, Including Trade Secret Information, Were Found on the Recruited Employees' Company B Laptops in 2018

[67] These figures have been converted from British Pounds (for G.S.) and Chinese Yuan (for Y.T. and CHIA).

189. Company B has produced Company A documents that were found on multiple Company B employee laptops, including the laptops of Y.T., CHIA, HOONG, and OOI. In total, in court filings in the civil litigation, Company B conceded that that at least 1,550 Company A documents were found on Company B employee computers. Below are a sample of some of those documents.

i. CHIA's Company B Laptop

190. Among numerous Company A documents found stored on CHIA's Company B laptop was a document titled "[Company A project name] Conformance Testing for Radio Hardware Portable & Mobile" (the "Testing Document"). (Notably, according to Company A's document database, a document titled "[Company A project name] Conformance Testing for Radio" was accessed by CHIA on April 9, 2008—among 592 other documents he accessed that day.[68]) Each page of the Testing Document was marked "[Company A] Confidential Proprietary." According to Individual A, this document contained trade secret information pertaining to Company A's implementation of the DMR protocol adopted in Europe. According to Individual D, the Testing Document would not be shared with outside organizations.

191. Additionally, a PowerPoint document titled "Digital RF Testing" (the "RF Document") was found stored on CHIA's Company B laptop. Slide 1 of the RF Document read: "[Company A Project Name] Digital RF Test 26-Apr-06.ppt, Rev. 0.01." (According to Company A's document database, CHIA accessed "13_[Company

[68] Company A database records show that OOI also accessed the Testing Document on January 19, 2009, days before her resignation.

A Project Name] Digital RF Test 26-Apr06_udpate" on April 8, 2008—among 1310 file access events that day.) According to a Company A engineer, a competitor in possession of the RF document who was using similar hardware would gain valuable non-public information about bit-error rate and power ramp profiles.

ii. HOONG's Company B Laptop

192. Company B also admitted there were Company A documents on HOONG's Company B work laptop. One of the documents recovered from HOONG's laptop ("Rescued Document 2.txt") was a technical specification titled, "PCR FGU 800/900MHz Trident IC Design Considerations Detailed Technical Specification" (the "Trident Document"), dated February 10, 2008. The Trident Document referenced two Company A project names, identified its author as a Company A employee, and contained the text "[Company A] CONFIDENTIAL PROPRIETARY" on page one.

193. According to Company A's access logs, HOONG accessed a similarly titled document,"PCRFGU800_900MHZ.doc," on April 8, 2008, which was during his recruitment by Company B. Company A considers the Trident Document part of a trade secret relating to, among other things, its "proprietary and confidential frequency generation, transmitter and circuit design techniques."[69]

194. Additionally, according to Company B records, HOONG's laptop also had a document titled, "[Company A acronym] DMR Conformance Testing for Radio

[69] Trade Secret F. According to the findings of a Company A expert, Trade Secret F was the result of the work of approximately 75 people expending 2700 staff months.

Hardware V0_60.doc" (the "Testing Document").[70] As discussed above, this document was also found on CHIA's laptop, and in WONG and G.S.'s personal email accounts. Company A considers this document part of a trade secret.[71]

iii. OOI's Company B Laptops

195. Company B also identified numerous Company A documents saved to two of OOI's Company B work laptops. For example, one of OOI's Company B laptops contained a software requirements document named "VOX_DSP_SRS.doc." As described above, VOX is the same Company A technology that CHIA emailed to Company B engineers in 2008. Company A considers VOX technology to be part of a trade secret.[72]

196. Additionally, OOI's Company B laptop had documents that discussed moving Company A technology to a Company B format. More specifically, several documents found on OOI's laptop discussed "Porting Darwin to CPA platform," and, "Porting Darwin EMT to CPA." (According to a PowerPoint presentation authored by Y.T. and emailed to Company B employees on July 4, 2008, "CPA" was an acronym for "Common Platform Architecture," a term used by Y.T. to refer to Company B's prospective DMR code architecture.) Notably, and as discussed above, shortly before leaving Company A in 2009, OOI accessed several documents relating to "Darwin" (a

[70] As detailed above, on April 10, 2008, G.S. emailed WONG asking him to "forward a copy" of a "[Company A DMR project name] full digital and measurements method document." That same day, WONG replied to G.S. and attached the Testing Document.

[71] Trade Secret C, as discussed above.

[72] Trade Secret L, discussed above.

Company A DMR project name) after Y.T. tasked her to do so. Based on my training and experience and the context of these files names in this investigation, the term "porting" appears to be a reference to moving Company A's source code for Company A DMR software into Company B's DMR software.

197. Furthermore, Company A source code, compiled code, and links to Company A source code files were also found on OOI's Company B laptops, as discussed below in Section R.

iv. Y.T.'s Company B Laptop

198. Lastly, Company B also admitted that Company A documents were saved to Y.T.'s Company B work laptop. Among other documents, a forensic examination revealed a Company A document named "Two-Slot [Company A DMR project name] Air Interface Draft Version 0.5 dated January 30, 2007" (the "Two-Slot Document" referenced in paragraph 71) was saved to Y.T.'s Company B laptop.[73] (Based on my comparison, this document appears to be an earlier version of the document CHIA emailed to G.S., Y.T., WONG, and CHUA on April 10, 2008, as discussed above.) Each page of the Two-Slot Document after page "i" was marked "[Company A] Confidential Restricted."[74] While some parts of the Two-Slot Document were contained in the DMR standard, Company A considers aspects of this

[73] A forensic examination by Company B revealed that the Two-Slot Document was also saved to one of OOI's Company B laptops.

[74] The cover page of the document did not contain this marking, but was instead marked as "Draft."

document to be part of its proprietary implementation of "trunking" for DMRs, as detailed above.

199. According to Company A database logs, Y.T. accessed the Two-Slot Document[75] on June 28, 2008, approximately 18 days after Y.T. began employment with Company B. This document was among approximately 58 Company A document database access events associated with Y.T.'s User ID on that date, of which 38 occurred in a span of only five minutes.

R. Company A Source Code Was Found on Company B Computers

200. In addition to Company A technical documents containing trade secret information, Company B also found Company A source code on the Company B computers of several of the Recruited Employees, namely OOI and CHIA, as described below.[76]

a. <u>OOI's Company B Laptops</u>

201. Company B identified certain source code, header, and library files on several of OOI's Company B laptops that matched the names of Company A code files. One laptop contained over 1,450 actual Company A source code files, while another Company B laptop assigned to OOI contained recovered file names for an additional 1,600 files that matched Company A source code file names. According to Company B's forensic review, those source code files on OOI's laptop were deleted in 2013. More

[75] According to Company A's document database logs, the filename matched the title and version number of the document saved to Y.T.'s Company B laptop.

[76] A corporate representative for Company B admitted in deposition testimony that Company A source code was in the possession of Company B employees.

specifically, according to Company B's records, and the deposition testimony of its corporate representative, approximately eight months *after* the civil litigation was filed, OOI's second laptop, which was not initially collected for the litigation—despite being assigned to her since 2009—was "filed for recycling." Several months later, a third laptop assigned to OOI was reformatted by Company B for use by another employee, leaving only the file names forensically recoverable.[77]

202. For example, among the actual Company A source code files found on OOI's Company B laptops were two header files named "cor_emt_task.h" and "cor_emt_app.defines.h." According to Company A, these header files are part of its proprietary source code implementation of "ergonomics management" for DMRs, which it considers part of a trade secret.[78] Additionally, four library files ("hal_dsp.lib," "hal_arm9.lib," "hal.c55.lib," and "hal_host.lib") were recovered from one of OOI's Company B laptops. Company A identified these library files as part of its source code implementation of the "hardware abstraction layer", which it considers part of a trade secret.[79]

203. Among the file names that were forensically recovered from OOI's Company B laptops were l1timer.h, finel1timer.cpp, framer_api.h, and framer.h.

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[77] Notably, OOI herself approved the reassignment of her prior laptop to another Company B employee in 2018, after the civil litigation—and accompanying litigation hold notices—were served.

[78] Trade Secret B, discussed above. "Ergonomics management" refers to the user interface, namely what happens when a user presses a button on the DMR, and what corresponding information appears on a DMR's screen.

[79] Trade Secret M. According to Company A, the "hardware abstraction layer" allows hardware and software components of the radio to communicate with each other.

According to Company A, these files match the names for Company A's DMR code files for the L1 Timer and Framer, which Company A considers part of a trade secret. These files included instructions for transmitting and receiving using time-division multiple access, which is part of Company A's implementation of the DMR standard.[80] (Notably, during the October 20, 2008 Gtalk conversation between OOI and Y.T. discussed above, OOI wrote, "you move the whole L1 timer to [Company B]...haha.")

204. Furthermore, the Company A source code files discussed above (relating to the L1 Timer and Framer) were all recovered from a directory on OOI's computer named "\personal\L1\backup\rfhal_sent_to_[Employee HN's name misspelled]_withusToTickConvert." Based on the naming of this directory, it appears that OOI created a (misspelled) folder on her Company B laptop to identify which Company A source code files she "sent to" Employee HN (discussed above in paragraph 163) so that she could "convert" them, presumably to Company B names.

205. The existence of this directory, however, is not the only evidence of OOI sharing Company A source code with Company B engineers who did not previously work at Company A. According to an internal Company B email between OOI and Employee WF, a Company B software engineer on April 20, 2009, OOI attached a file named framer_api.h—the same file name saved to her Company B laptop. At the top of framer_api.h was the comment, "This is the implementation of the framer API that is used to wrap and encapsulates [Company A] HPD framer library."

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[80] Trade Secret N.

206. Similarly, in a September 17, 2009 Company B internal email, OOI sent a library file with filename "raf_arm9.lib" to Employee ZD and another Company B engineer, Employee LG, neither of whom previously worked at Company A. In the body of the email, OOI wrote, "Hi, Pls try..." According to Company A, Raf_arm9.lib contained source code implementing Company A's design and implementation of radio architecture in its DMRs. In an internal Company B email sent to Y.T. on September 6, 2011, Employee WJT, another Company B engineer, appeared to acknowledge the presence of Company A code in RAF code: "RAF will not be applied to DPDMR products due to the following reasons: A, due to the sensitive nature between RAF and [Company A], the distribution and application scope of RAF shall be minimized." Based on the context of this email. "the sensitive nature between RAF and [Company A]" appears to be a reference to Company B's copying of Company A's RAF source code.

207. Company B's attempts to hide the copying of Company A's RAF source code are also shown by the manner in which these files were saved. According to the December 15, 2018 deposition of a Company B corporate representative, Company B was able to find RAF library files on its internal document database, but could not locate their constituent source code files—ostensibly for its own DMR radio products. When asked if this was unusual, the Company B representative responded, "So my understanding is that all the documents used during the compilation [from source code to library files] would be stored on the [Company B internal document database]."

208. Further confirmation of this unusual arrangement of storing critical source code locally, instead of on the Company B network, is contained in an August 30, 2011 internal Company B email. In that email, Employee WJT indicated that because OOI was in possession of the RAF source code, he and other Company B engineers (who had not previously worked at Company A) would have to wait until she returned to work to compile the RAF library: "PE [OOI's initials] is on leave currently and you don't have the RAF source code."

b. CHIA's Company B Laptop

209. File names for Company A source code were also found on one of CHIA's Company B laptops.[81] According to Company B's forensic review, CHIA's Company B laptop had at least two directories named for Company A's DMR software: "D:\[Company A]\[Company A DMR project name]\1.3\[Company A source code library name]_subscriber" and "D:\[Company A]\[Company A DMR project name]\1.3\gcp." Although the forensic review could not recover the actual files, the folders within these directories contained Company A trade secret information for several aspects of DMR technology, including Company A's proprietary radio operating software. CHIA's Company B laptop also contained references to seven library files that implemented Company A's source code for its DMR radio architecture. According to Company A's expert, this directory structure confirmed that Company B had access to Company A's source code (on CHIA's Company B

[81] Notably, according to deposition testimony of a Company B corporate representative, CHIA previously had another Company B laptop assigned to him, but claimed that he lost it. CHIA, however, did not report the laptop as lost until the date of his firing.

computer), and was actively using it to compile their own code.

210. Among the source code file names were "NoiseSuppressor.cpp," and "NoiseSuppressor.h."[82] According to Company A, these source code files control its proprietary noise suppression management—also known as "squelch"—for its DMR products. (As discussed above, in a February 22, 2008 email, CHIA told G.S. that he had copied Company A's squelch algorithm, noting "This Squelch algorithm took [Company A] almost 5 years to make it this good.") Company A considers this source code to be part of a trade secret.[83]

211. Also among the files referenced in a document found on CHIA's Company B laptop was "DMR_DSP_lib.lib." According to Company A, this is a Company A source code library filename. According to Individual C—who was one of the authors of DMR_DSP_lib.lib—that library contained all of Company A's DMR source code files relating to the C55 microprocessor. According to Individual C, without this source code library, the DMR protocol could not run on Company A's DMR radios. Company A considers this to be part of a trade secret.[84]

S. Company B DMR Products Contained Code Compiled from Stolen Company A Source Code

212. Company A source code was not only found on the Company B computers of several of the Recruited Employees, but also in Company B's own source

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[82] Contained in the library file "LE_TIC55xx_CCS_lib."

[83] Trade Secret D, discussed above.

[84] Trade Secret B, discussed above.

code contained in DMR radios it continues to sell. According to an expert retained by Company A,[85] a comparison of Company A and Company B's source code for DMRs[86] showed *hundreds of thousands* of lines of Company A code were copied by Company B and remained in Company B DMR products for sale through at least 2019. Numerous pieces of evidence support this conclusion.

213. First, after decompiling[87] Company B DMR library files, Company A's expert found Company A filenames and file paths, as well as references to Company A's code names for its DMR products. The presence of Company A filenames in Company B software library files indicates that Company B's files were compiled from Company A source code. Additionally, CHIA's Company B username was found in some of the decompiled file paths. Based on my training and experience, the inclusion of CHIA's username in a file path string indicates that the underlying source code files were accessed from a file directory created or used by CHIA.

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[85] According to a resume submitted in the civil litigation, Company A's expert is a professor of electrical and computer engineering at a prestigious U.S. research university. He/she holds a Ph.D. in electrical engineering and has worked and consulted for a variety of telecommunication companies. He/she has written several books and approximately 250 papers on digital communication systems and networks, and is also a named inventor on six patents. According to his/her report, Company A's expert was compensated at $700 per hour. According to Company A's expert report, payment was not contingent on his/her opinion or the outcome of the civil litigation.

[86] For this comparison, Company B produced Version 7.6 of its DMR subscriber source code, which it stated was currently used in its DMR products.

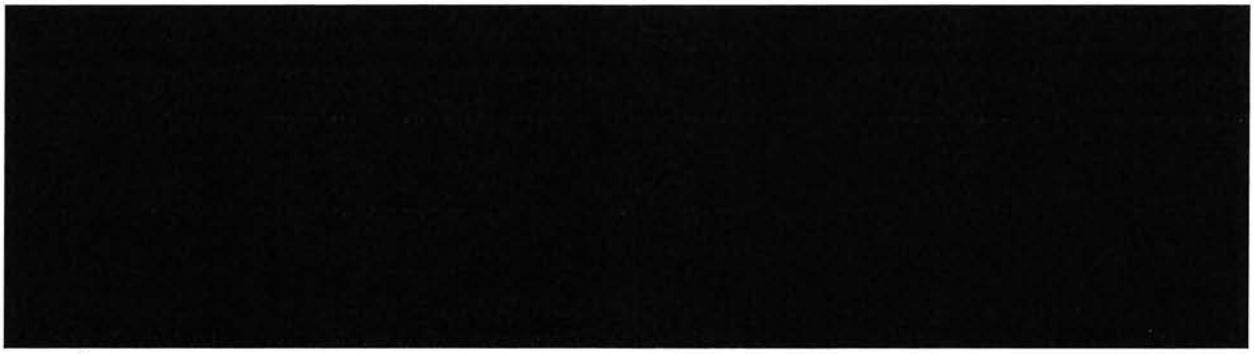
[87] Based on my training and experience, "decompiling" involves converting machine executable program code (like a library file) into some form of higher-level programming language that can be read by a human. In this case, a Company A expert viewed the Company B library files in ASCII format (a universal computer standard for displaying text). While most of the code commands were still indecipherable in ASCII, file names and directories were viewable.

214. Second, internal Company B documents indicate that Company B converted Company A source code for use in its products. More specifically, a document named "Raf_Cor_UI" (dated December 9, 2008), which was authored by a Company B engineer who did not previously work at Company A, referenced code files that matched software component names used in Company A DMR products. Furthermore, the Company B specification notes, "[o]riginal code change file c to CPP [C++ programming language]." Based on my training and experience and its context, this note appears to state that the code was originally written in the C programming language (used by Company A for the code copied here) and converted to C++. According to the deposition testimony of a Company B corporate representative, she was not aware of any Company B code written in C, and did not know of "any reason why the RAF files would be converted to C to C++ other than if they were being converted from code that was not [Company B's]."

215. Third, Company B source code documents authored by Y.T. show Company B's reuse of Company A source code. For example, a Company B header file named "cpa_def.h" (listing "Y.T. KOK" as the author) contained at least 102 lines copied from Company A source code files, including Company A's programming comments. (Based on my training and experience, such programming comments have no effect on the code's functionality, and merely assist with future maintenance of code or explain how it functions.) Another header file named "raf_app.h" (listing

"guoyijie [Y.T.]" as the author) also contained multiple lines of code copied from a Company A source code file named "cor_emt_user_defines.h."[88]

216. Finally, as part of the civil litigation, Company B was ordered to produce version 7.6 of its DMR subscriber source code for comparison. According to Company A's expert's analysis of Company B's source code, Company B's DMR code contained hundreds of thousands of lines of copied code from multiple Company A DMR source code and library files, which were either identical or similar. Furthermore, the copied source code was not isolated to a single area, but spanned numerous critical DMR functions across the range of its DMR products. For example, one function related to RAF ("RAF_LogEntryInAppMsgQueue") appears approximately 1310 times in 120 different files of Company B's source code. Company B's copying (below left) of Company A's source code (below right) was so extensive that it included not only the code and comments, but even typos, as highlighted in the example below:



[88] According to Individual A, cor_emt_user_defines.h contained basic definitions for Company A's ergonomic management task, or EMT. According to Company A, EMT was the control engine of the ergonomic layer, also known as the Darwin layer, a high level component of Company A's software architecture that drives applications and features in its DMR radios. The design and implementation of Company A's ergonomics platform was identified as part of Trade Secret B.

217. According to Individual A and Company A's expert, it would be nearly impossible for two individuals working independently to author identical header language and impossible for two individuals to write identical source code. Therefore, according to the expert's conclusion, the only plausible explanation for the presence of hundreds of thousands of lines of Company A source code in Company B code files is copying.

T. Company B Products Containing Stolen Company A Source Code Were Sold in the Northern District of Illinois

218. According to documents produced by Company B, version 7.6 of its subscriber source code (which was used in the expert source code comparison discussed above) was present in numerous Company B DMR products, including Company B DMR 1 and Company B DMR 2. Furthermore, according to Company B, DMRs containing version 7.6 of its code were offered for sale worldwide through at least 2019. Therefore, based on the expert source code comparison discussed above, Company A source code was present in Company B radios sold internationally.[89]

219. Company B DMRs containing stolen Company A source code were also offered for sale in the United States—and in the Northern District of Illinois—through at least 2019. More specifically, on or about September 25, 2019, FBI agents in Chicago purchased two Company B handheld DMRs (namely Company B DMR 1 and Company B DMR 2) from Company B authorized online resellers located in

[89] As one example, according to Company A's expert, Company B source code copied a Company A source code function called "NoiseSup()" which Company A considers part of a trade secret (Trade Secret O) related to noise suppression. According to Company B's records, this function has been included in every Company B DMR released through at least 2019.

Wisconsin and South Carolina. On or about September 30, 2019 and October 7, 2019, the radios were delivered to an FBI office in Chicago.

U. Company A Trade Secret Documents Remained in the Personal Email Accounts of the Recruited Employees as of 2019

220. As discussed above, numerous Company A documents containing trade secret information were found pursuant to federal search warrants in the personal email accounts (hosted at U.S. service providers) of several of the Recruited Employees. Although these documents were emailed in 2008 and 2009, they remained in the Recruited Employees accounts through the execution of the search warrants in 2019. Furthermore, other emails in those accounts show that the respective Recruited Employees continued to use these accounts through 2019. These documents or email chains containing Company A trade secret information (all of which are discussed above) and the employees who possessed them in their email accounts as of 2019,[90] are summarized in the table[91] below:

Document Title	Document Markings	Date Sent	Trade Secret	Recipient & Date Still Possessed By	
[Company A project name] F2 Conformance Testing for Radio Hardware Portable &	Confidential Proprietary	4/10/2008	C	G.S. WONG CHIA HOONG	8/6/2019 11/4/2019 3/14/2017* 3/14/2017*

[90] In several instances, while one of the Recruited Employees received the email originally, it was no longer present when the search warrant was executed. However, in some cases—noted in the table below with an asterisk, the document was found on their Company B work laptop. In those instances, the date of possession is the filing date of the civil litigation, March 14, 2017.

[91] The "Trade Secret" column in this table refers to the primary—but not exclusive—area of the trade secrets contained in each document.

Mobile Feb 10th 2007 Version 0.6					
Squelch.doc	Confidential Proprietary	2/22/2008	D	G.S. CHIA Y.T.	8/6/2019 11/4/2019 6/25/2019
[Company A project name] Test & Tune High Level Architecture	Confidential Proprietary	12/7/2008	C E	OOI Y.T.	9/17/2019 n/a
Test Manager Hardware Manager Design and Implementation.doc	Confidential Proprietary	12/7/2008	C	OOI Y.T.	9/17/2019 n/a
Draft [redacted] SubscriberArchitecture Overview.ppt	Confidential Restricted	4/10/2008	B	GS CHIA YT WONG CHUA HOONG	8/16/2019 7/22/2019 3/14/2017* 11/4/2019 3/4/2020 10/29/2019
[Company A DMR project names]_Layer_ Construction.xls	None	4/9/2008	F	GS HOONG CHUA	8/6/2019 11/4/2019 3/4/2020
Email reply beginning "4FSK Two-point modulation question to [Company A] engineers"	n/a	4/27/2008	C	G.S. CHUA WONG HOONG	8/6/2019 3/4/2020 11/4/2019 10/29/2019
Email chain: "Special F2 requirements"	n/a	5/16/2008	C	WONG CHUA GS HOONG	11/4/2019 3/4/2020 8/6/2019 10/29/2019
Email with attachment: Some Questions about DMR_17Mar2008.doc	n/a	3/16/2008	C	WONG CHUA Y.T. CHIA GS HOONG	11/4/2019 3/4/2020 n/a 7/22/2019 8/6/2019 10/29/2019

221. According to Company A, the documents listed in the table above were not distributed outside of Company A, and continue to have significant economic value to Company A's DMR products. Furthermore, all of these documents were originally stored in either Company A's document database or source code repository, which were protected by the physical and electronic security measures discussed above.

V. *"I am sticking my neck out if you forward this email out I am fucking dead!"* Company B Conceals G.S.'s Continued Employment Following His Supposed Termination

222. Although Company B claimed to have fired G.S. in October 2018 for "gross misconduct," email search warrant results show that G.S. secretly continued to work for Company B as a contract employee through at least June 2019. Company B hid this fact during testimony in the civil litigation and in its representations to the government during this investigation.

223. More specifically, and as discussed above, Company B corporate representatives testified during the civil litigation that G.S. was fired in the fall of 2018 for refusing to cooperate with Company B's internal investigation: "At that time they [G.S., Y.T., and CHIA] even would not answer any of our questions . . . Though we had no way, but to fire them." This understanding was memorialized in the termination agreement signed by G.S. on October 23, 2018, which stated that Company B, "initiated disciplinary proceedings for gross misconduct against the employee [G.S.] alleging failure to cooperate with requests for information." Counsel for Company B similarly told the Department of Justice and FBI in a December 2018

meeting that G.S., Y.T., and CHIA were all terminated in October 2018. And in the trial of the civil lawsuit, Company B counsel referred to G.S., Y.T., and CHIA as the "three villains" and the "bad apples," and told the jury that they "were terminated from [Company B]" because they "stopped cooperating."

224. Contrary to Company B's representations, G.S. continued to work as a contract employee for Company B after his purported "termination" in October 2018. According to search warrant results for gskok@hotmail.com, beginning on November 14, 2018—barely three weeks after the "termination agreement" was signed—G.S. used his personal email account to conduct Company B business with a Denmark-based communications equipment distribution company ("Denmark Company"), including managing sales contract negotiations between Company B and at least one of its customers.

225. For example, in an email from G.S. (using gskok@hotmail.com) to a Denmark Company employee on November 14, 2018, G.S. wrote, "This is my personal email address. Please acknowledge this as I camnot write on company email. I will fill you in once you acknowledge this email." In a subsequent email that day to the same Denmark Company employee, G.S. wrote, "Good please understand I am sticking my neck out if you forward this email out I am fucking dead! I have been I contact with the gentlemen we discussed and I am trying to arrange a meeting in London or Denmark this month or early next month!"

226. In November and December 2018, G.S. continued to email multiple Denmark Company representatives using his personal email account regarding a

prospective sale of Company B TETRA radios to a Danish energy company. For example, on December 12, 2018, G.S. sent this email emailed multiple Denmark Company representatives and a Company B Deputy Overseas General Manager (Employee MK) at his official Company B email account:

> First of all thank you so much for changing all your schedules to accommodate [Company B] Dubai visit! My apologise again for [Employee] MK early departure. But I hope we can mae this up later. Please find enclose the materials that were shared with the team and also a rough RRP quote that was provided for the meeting...[Denmark Company representative] contacted me this evening and I proposed bring forward the [Company B mobile device management solution] training to Monday and Tuesday 17th & 18th Dec 2018. After which we can introduce our [Company B] China employee . . . Sorry for the short notice. But I just want to show that we are serious in supporting [Denmark Company] the best way we can.

227. After exchanging multiple emails with the Denmark Company and Company B, G.S. received an email from a Denmark Company representative on December 13, 2018, in which the representative indicated the Denmark-based energy company would be available for a meeting in Denmark on December 20, 2018. Later that day, G.S. received an email booking confirmation for a British Airways flight to Billund, Denmark three days later.

228. G.S.'s subsequent emails to Denmark Company representatives show that G.S. remained in communication with Company B regarding its customers. In G.S.'s December 19, 2018 email to a Denmark Company representative, G.S. wrote, "Shenzhen [Company B's headquarters city] informed me that they will only be able to send the offer tomorrow as its already 9:45pm there and the Administrator office that approve and Stamp the offer had already left." The next day, G.S. emailed a

Denmark Company representative and attached a Company B purchase order listing its Shenzhen headquarters location.

229. On January 4, 2019, following G.S.'s travel to Denmark, G.S. emailed three Company B employees at their official Company B email addresses, including the Deputy Overseas General Manager and a Vice General Manager. The email, with the subject "Trip Receipt," listed expenses from G.S.'s travel to Billund, Denmark.

230. As of at least June 18, 2019 (the date of the search warrant), G.S. continued to service Company B's customers, even acting as the intermediary regarding technical issues encountered by the Denmark Company during attempted software downloads. For example, in a June 18, 2019 email from G.S. to a Denmark Company representative, G.S. identified the Internet protocol address of a download server for the mobile device management solution software, writing, "Please see below latest update from China . . ."

III. CONCLUSION

231. Based on the above information, I respectfully submit that there is probable cause to believe beginning no later than on or about June 8, 2007 and continuing until at least on or about November 4, 2019, in the Northern District of Illinois, Eastern Division, and elsewhere, the defendants, GEE SIONG KOK, YIH TZYE KOK, SAMUEL CHIA HAN SIONG, PHAIK EE OOI, WONG KIAT HOE, YU KOK HOONG, and CHUA SIEW WEI conspired with each other and with others, known and unknown, to knowingly steal, or without authorization appropriate, take, carry away or conceal a trade secret that is related to or included in a product that is

produced or placed in interstate or foreign commerce, for the economic benefit of anyone other than the owner of the trade secret, intending or knowing that the offense will injure any owner of that trade secret, in violation of Title 18, United States Code, Section 1832(a)(5).

FURTHER AFFIANT SAYETH NOT.

DAMIEN COLON
Special Agent, Federal Bureau of Investigation

SUBSCRIBED AND SWORN to before me
telephonically on September 30, 2020.

Heather K. McShain

HEATHER K. MCSHAIN
United States Magistrate Judge