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CENTRAL DIST. OF CALIF.
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BY DV

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4

5 NAGUI MANKARUSE, IN PRO SE
6
7

8 **UNITED STATES FRDERAL DISTRICT COURT**
9 **CENTRAL DISTRICT OF CALIFORNIA – SOUTHERN DIVISION**
10

11 NAGUI MANKARUSE, an individual;
12 Plaintiff(s),
13

14 vs.
15

16 RAYTHEON COMPANY, a Delaware
corporation; TRS LLC US (FKA
17 THALES- RAYTHEON SYSTEMS
COMPANY LLC), a Delaware limited
liability company; DAVID EARL
18 STEPHENS, an individual; JOHN RYAN,
an individual JAMES LEROY
COTTERMAN, JR., an individual;
19 JAMES D. WEBER, an individual;
MARK P. HONTZ, an individual,
KIMBERLY R. KERRY (KIM KERRY,),
20 an individual; COLIN J.
SCHOTTLAENDER, an individual;
21 WILLIAM H. SWANSON, an individual;
THOMAS A. KENNEDY, an individual;
22 MATTHEW BREWER, an individual; F.
KINSEY HAFNER, an individual, KEITH
23 PEDEN, an individual; BRIAN
ARMSTRONG, an individual; RICHARD
24 ROCKE, an individual and DOES 1
through 10, inclusive,
25

26 Defendant(s).
27
28

) Case No.: 8:19-cv-1904-DOC-ADSx.

) **AMENDED COMPLAINT**
) **PURSUANT TO fed. R. civ. P.**
) **15(a)(1)(A) FOR:**

) **1. DIRECT PATENT**
) **INFRINGEMENT ON US PATENT**
) **TO Fed. R. Civ. P. 15(a)(1)(A)**
) **6,411,512 & CANADA PATENT**
) **2,389,458 INCLUDING WILFUL**
) **PATENT INFRINGEMENT ON US**
) **PATENT 6,411,512 & CANADA**
) **PATENT 2,389,458**

) **DATE: December 23, 2020**
) **TIME: 8:30 AM**
) **DEPT: 9D**

) Judge: The Honorable David O. Carter
) Dept: 9D
) Action Filed: October 3, 2019
) Trial Date: (Not Assigned)

) **(Attachment 1 through 5)**

) **Telephone Conference meeting on**
) **November 6, 2019 at 1:00 PM**

) **CHAMBERS COPY**

1 Plaintiff NAGUI MANKARUSE (hereinafter, "Mankaruse") (collectively, the
 2 "Plaintiff") alleges for his complaint as follows pursuant to Federal U.S. Code 35, 35
 3 U.S. Code 271, 271 (a), 271(b), 271(c), 35 U.S. Section 284 (2018) and 18 U.S. Code
 4 1832 and 35 U.S.C SECTION 284 (2018) See *Halo Elecs., Inc. v. Pulse Elecs., Inc.*,
 5 136 S. Ct. 1923, 1928 (2016) (citing Patent Act of 1793, Section 5, 1 Stat. 322; Patent
 6 Act of 1836, Section 14, 5 Stat. 123) and 18 U.S. Code 1832, Fed. R. Civ. P.
 7 15(a)1(A)

8 **This Amended Complaint and Attachments are responding to all the**
 9 **Actions raised by the defendants in their Motion to Dismiss and associated**
 10 **document filed as a response to the Plaintiff Complaint.**

11 SUMMARY OF THE ACTION

12 PARTIES

13 PLAINTIFF:

14 1. Nagui Mankaruse is a Pro Se plaintiff reside in Orange County, California.
 15 Nagui Mankaruse is an American degreed Professional Mechanical Engineer with
 16 Masters' of Science in Mechanical Engineering from the University Of Southern
 17 California (USC) in Los Angeles and licensed by the State of California as a
 18 Professional Engineer, he is a holder of prior Security Clearance from our
 19 Department of Defense (DoD). He has long Engineering career extended to more
 20 than fifty (50) years in the Aerospace and Military Industries. In addition, he was
 21 Adjunct Professor of Mechanical Engineering for twenty-five (25) years at the
 22 California State University, in its Los Angeles and Fullerton campuses. Plaintiff
 23 Nagui Mankaruse worked at Raytheon and TRS US in the Capacity of Principal
 24 System Engineer (lead) and Principal Mechanical Engineer (Lead) from May 10,
 25 2004 through April 17, 2012. Plaintiff Nagui Mankaruse is the current holder of the

1 US Patent 6,411,512, and CA Patent 2,389,438 and its Applications Trade Secrets
2 technologies and Intellectual Property among other Intellectual Property. He was
3 Wrongfully terminated after being Harassed, pushed out to leave his Job at Raytheon
4 or Retire from 2008 through his termination after Disclosing his Proposed Patented
5 technologies and its Applications Trade Secrets and Intellectual Property, he
6 proposed Solution technologies and Intellectual Property conceptual design of the
7 Fire Finder RMI and Sentinel Improved Radars Power Amplifier Modules on August
8 5, 2008. Plaintiff Nagui Mankaruse appeared in the four (4) minutes abc 10 News
9 investigative report Aired on November 6, 2013 in connection with the current
10 allegation of Patent Infringement, this can be viewed on the following You-Tube
11 Video Link: <https://youtu.be/br2239qT2Q4>.

12 **DEFENDANS:**

13 2. Raytheon Company (hereinafter, "Raytheon") was and is a Corporation
14 organized under the laws of the state of Delaware, and conducting business in Orange
15 County, California, among other USA and world-wide locations and was and is
16 involved in the Patents and Trade Secrets Infringements of the Fire Finder, RMI,
17 .Sentinel Improved Radars and THAAD Missile Defense Systems.

18 3. TRS US LLC (FKA Thales-Raytheon Systems LLC (hereinafter, "Thales-
19 Raytheon" or "TRS US")) was and is a limited liability company organized under the
20 laws of the State of Delaware, and conducting business in Orange County, California
21 and France and was and is involved in the 6,411,512, 2,389,458 Patents, its

1 Applications Trade Secrets Infringements and Intellectual Property of the Fire Finder
2 and Sentinel Improved Radars .
3

4 4. Plaintiff Nagui Mankaruse doesn't know until today IF Raytheon & TRS has
5 Used and Sold his Patents 6,411,512 and CA, Trade Secrets and Intellectual Property
6 in at least the accused Fire Finder RMI and Sentinel Improved Radars and THAAD
7 Missile Defense Systems.
8

9 5. David Earl Stephens (hereinafter, "Stephens"), is an individual residing in
10 Chino Hills, California. At all times relevant, Stephens was a Technical Director at
11 Raytheon and Thales-Raytheon including the Fire Finder RMI and Sentinel Improved
12 Radars and was and is involved in the Patents and Trade Secrets Infringements of the
13 Fire Finder RMI and Sentinel Improved Radars.
14
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16 6. John Ryan (hereinafter, "Ryan"), is an individual residing in Orange County,
17 California. At all times relevant, Rayan was a Vice President of TRS and Director of
18 the Ballfield Radar Group including the Fire Finder RMI and Sentinel Improved
19 Radars and was involved in the Patents and Trade Secrets Infringements.
20

21 7. James Daniel Weber (hereinafter, "Weber"), is an individual residing in
22 Fullerton, California. At all relevant times, Weber was Section Manager and
23 Mankaruse's supervisor since 2008 at Raytheon and TRS and was employed by
24 Thales-Raytheon and Raytheon and was involved in the Patents and Trade Secrets
25 Infringements of the Fire Finder RMI and Sentinel Improved Radars.
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1 8. James Leroy Cotterman, Jr. (hereinafter, "Cotterman"), is an individual
2 residing in Fullerton, California. At all relevant times, Cotterman was employed as
3 Hardware Center Manager by Thales-Raytheon and Raytheon and was Involved in
4 the Patents and Trade Secrets Infringements of the Fire Finder RMI and Sentinel
5 Improved Radars and was Weber's supervisor.
6

7
8 9. Mark Phillip Hontz (hereinafter, "Hontz"), is an individual residing in
9 Torrance, California. At all relevant times, Hontz was a mechanical engineer worked
10 in the analysis and testing of the Fire Finder RMI and Sentinel Improved Radars at
11 Raytheon and Thales Raytheon and was involved in the Patents and Trade Secrets
12 Infringements of the Fire Finder RMI and Sentinel Improved Radars and was
13 employed by Raytheon Space and Airborne Systems (hereinafter "Raytheon SAS").
14
15

16 10. Brian J. Armstrong (hereinafter "Armstrong") is an individual residing in,
17 Murrieta, California. At all relevant times, Armstrong was a mechanical engineer
18 working in the testing of the Power Amplifier Modules "PAMs" of the Fire Finder
19 RMI and Sentinel Improved Radars and was involved in the Patents and Trade
20 Secrets Infringement of the Fire Finder RMI and Sentinel Improved Radars and was
21 employed by Raytheon Space and Airborne Systems (hereinafter "Raytheon SAS").
22
23

24 11. Richard Rocke (hereinafter "Rocke") was and is an individual residing in
25 Orange County, California. At all relevant times, Rocke was a consultant mechanical
26 engineer working in the Fire Finder RMI and Sentinel Improved Radars and was
27 involved in the Patents and Trade Secrets Infringements of the Fire Finder and
28

1 Sentinel Improved Radars at Raytheon company and Thales Raytheon company in
2 Fullerton, California.

3
4 12. Kimberley R. Kelly or Kim Kerry ("Kerry") is an individual residing in
5 Orange County, California, and Whitefish, Montana. At all relevant times, Kerry was
6 a CEO at Thales-Raytheon Company ("TRS") in Fullerton, California and also, he
7 was employed as Vice President at Raytheon Corporation. Kerry was an executive
8 making decisions about major matters for TRS US and was involved in the Patents
9 and Trade Secrets Infringements of the Fire Finder RMI and Sentinel Improved
10 Radars.
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12

13 13. Colin John Schottlaender ("Schottlaender") is an individual residing in,
14 McKinney, Texas and Westcliff, Colorado. At all relevant times, Schottlaender was a
15 President of Raytheon Network Centric Systems ("Raytheon NCS") having facilities
16 in different States in the United States of America including Fullerton, California and
17 was employed as Vice President at Raytheon Corporation. Schottlaender was the top
18 executive of Raytheon NCS making decisions on all Raytheon NCS matters and was
19 involved in the Patents and Trade Secrets Infringements of the Fire Finder and
20 Sentinel Improved Radars.
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24 14. Matthew Brewer (hereinafter, "Brewer"), is an individual residing in
25 Orange County, California. At all relevant times, Brewer was a mechanical engineer
26 worked at Raytheon and Thales Raytheon "TRS" the Fire Finder RMI and Sentinel
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28

1 Improved Radars and was involved in the Patents and Trade Secrets Infringements of
2 Fire Finder and Sentinel Improved Radars.

3
4 15. F. Kinsey Haffner (hereinafter, "Haffner"), is an individual worked in
5 Raytheon Corporate. At all relevant times, Haffner was Corporate Vice President
6 Intellectual Property and Licensing at Raytheon and was involved in the Patents and
7 Trade Secrets Infringements of the Fire Finder RMI, Sentinel Improved Radars and
8 the THAAD Missile Defense Systems.

9
10 16. Keith Peden (hereinafter, "Peden"), is an individual worked in Raytheon
11 Corporate. At all relevant times, Peden was Corporate Senior Vice President at
12 Raytheon and was involved in the Patents and Trade Secrets Infringements of the Fire
13 Finder RMI, Sentinel Improved Radars and the THAAD Missile Defense Systems.

14
15 17. William Henry Swanson ("Swanson") is an individual residing in, Boston,
16 Massachusetts. At all relevant times, Swanson was Chairman and CEO of Raytheon
17 Company ("Raytheon") and the top executive of Raytheon Corporation making
18 decisions in all Raytheon matters and was involved in the Patents and Trade Secrets
19 Infringements of the Fire Finder RMI, Sentinel Improved Radars and the THAAD
20 Missile Defense Systems.

21
22 18. Thomas A. Kennedy ("Kennedy") is an individual residing in,
23 Massachusetts. At all relevant times, Kennedy was President of Raytheon Integrated
24 Defense Systems (Raytheon IDS) making all decisions on the IDS matters and was
25 and is involved in the Patents and Trade Secrets Infringements of the THAAD

1 Missile Defense Systems. Kennedy is the current Chairman and CEO of Raytheon
2 Corporation ("Raytheon") and currently the top executive of Raytheon Corporation,
3 makes decisions in all Raytheon matters including involved in the Patents and Trade
4 Secrets Infringements of the Fire Finder RMI, Sentinel Improved Radars and the
5 THAAD Missile Defense Systems.
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7
8 19. Plaintiff presently do not know the true names or capacities of DOES 1
9 through 10, inclusive pursuant to the U.S. Code Title 35 including 35 U.S.C. 271 &
10 U.S.C. 271(a), and 18 U.S. Code 1832 Theft of Trade Secrets and for that reason sues
11 said Defendants under fictitious names. Plaintiff will amend this Complaint to show
12 their true names and capacities when the same have been ascertained.
13

14 20. Plaintiff is informed and believe, and based thereon allege, that at all
15 times hereto, the Defendants including all the individuals listed here and each of them
16 as Engineers, Managers, Directors and Executives are representing themselves as
17 employees and Consultants to the entities Raytheon and TRS US, their Actions on
18 behalf of themselves representing the defendants, were the agents, servants, and
19 employees of one another and generating all policies and applying all the entities
20 rules, making and approving all the entities decisions,, and in doing the things
21 mentioned herein, were acting within the course and scope of such agency in which
22 they are the makers of such policies and with the knowledge, permission and consent
23 of each other. and each of them unlawfully conspired and acted in concert and
24 participated with one or more of the remaining Defendants in committing and
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1 performing the illegal misconduct fraudulent acts and conducts alleged and
2 committed the Direct Infringement and Willful Infringement on the US Patent
3 6,411,512 and CA Patent 2,389,458 technologies and its Applications Trade Secrets
4 and Intellectual Property.
5

6 JUDICATION AND VENUE

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8 21. This is a civil action in part under laws of the United States relating to
9 patents (U.S. Code 35, 35 U.S.C. § § 271,281,283, 284, 285)
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11 22. This Court has federal jurisdiction of such federal question claims pursuant
12 to 23 U.S.C § § 1331 and 1338 (a) and 1338 (b).
13

14 23. The acts and transactions complained of herein were conceived, carried out
15 and made effective and had effect within the State of California and within this
16 judicial district among other places, defendants designed, offer for sale, market,
17 advertise, sell, use and or make the infringing products in this judicial district and
18 selling among other United States Government Agencies and worldwide places.
19

20 24. Venue is proper under 28 U.S.C. § § 1391(b), 1391(c) and 1400(a).
21

22 25. Defendants have residence in the State of California, county of Orange
23 among other places, and have committed acts of infringements in this judicial district
24 and the Court has personal jurisdiction over all of the defendants.
25

26 26. This Court has personal and specific personal jurisdiction in this Matter
27 over all defendants.
28

STATEMENT OF FACTS

1
2 27. In or around the summer of 2008, Raytheon was developing several radar
3 systems designed to detect and track incoming enemy fire (hereinafter, the "Radars").
4 The Power Amplifier Modules ("PAMs") contained within the Fire Finder RMI
5 radars (hereinafter "Fire Finder RMI Systems") and Sentinel Improved radars
6 (hereinafter "Sentinel Systems" "however, were producing excessive heat inside
7 sensitive locations, which compromised the accuracy of information produced by the
8 Radars. To address this problem, Raytheon, Thales-Raytheon and its Battlefield
9 Radar (BFR) Director John Ryan and Technical Director David Stephens ordered
10 held a meeting with Raytheon/Thales-Raytheon engineers in the BFR Lab. On
11 August 5, 2008 and solicited solutions to the persisting over-heating Radars.
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16 28. Plaintiff Nagui Mankaruse is the current holder of all the Patents and
17 Patents Applications and associated Intellectual Property acquired from AIC and all
18 its predecessors ATI and Delta Engineers. The Patented technologies and the Trade
19 Secrets and associated Intellectual Property "High Performance Cooling of Radars
20 and Missile Defense Systems" (Attachment 1, 2 and 3 to be filed Under Seal) which
21 were disclosed to Raytheon Company and TRS US among other Trade Secrets
22 technologies and Intellectual Property that owned and invented by the Plaintiff Nagui
23 Mankaruse. These Patented technologies and its Applications Trade Secrets disclosed
24 to Raytheon and TRS were allowed Raytheon the analysis and testing of this
25 technologies for verification and validation of the technologies to be used in the
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1 solution of the Fire Finder RMI and Sentinel Improved Radar Systems and PAMs
2 overheating issues and the Conceptual Design of the THAAD Missile Defense
3 Systems were disclosed to the Missile Defense Agency (MDA) in and around January
4 2003 (Attachment 3). The BFR Team were invited to a meeting (including
5 Mankaruse) on August 5, 2008, wherein the Battlefield Radar Group (BFR) solicited
6 to find a way to lower the temperature of the Power Amplifier Modules (PAMs) High
7 Voltage Power Supply ("HVPS"), and the Traveling Wave Tube (TWT) Collector,
8 from the current 124.5 degrees Celsius to under 100 degrees Celsius. (Attachment 2)

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12 29. In response, later in the same morning on August 5, 2008, Mankaruse
13 informed Stephens and the BFR team via email about his Patented technologies and
14 its Application the Trade Secrets and associated Intellectual Property which
15 Mankaruse claimed would lower the temperature of the Power Amplifier Modules
16 PAM's HVPS and TWT Collector to between 80-85 degrees Celsius, which was well
17 under (100 degrees Celsius) the goals set by Stephens and the BFR Group.
18
19

20 30. Plaintiff is informed and believe, and based thereon allege that he
21 developed and invented solution for Cooling the THAAD Missile Defense Systems
22 Antenna's earlier in and before he started work at Raytheon and TRS US on May 10,
23 2004, he kept secure his Trade Secrets technologies to Cool and Isothermize Missile
24 Defense Systems' Antennas Cooling Systems and its Transmit Receive Integrated
25 Microwave Modules (TRIMMs) and earlier filed Technical Proposals to the US
26 Army Small Business Innovation Research (SBIR) on and around January - February
27
28

1 2003 and beyond (more than one year before starting work at Raytheon and TRS on
2 May 10, 2004 to the US Army Missile Defense Agency (MDA) (Attachment 3).
3
4 between August 2008 and the end of 2008, Raytheon attempted to find a solution to
5 the PAMs over-heating issues to the Fire Finder RMI and Sentinel Improved Radars
6 without using Plaintiff Mankaruse's US Patent 6,411,512 & Canada Patent
7 2,389,458 and its Applications the Trade Secrets technologies, and associated
8 Intellectual Property (Attachment 2 & 3 to be filed Under Seal due to its Confidential
9 Nature relating to our National Security).
10
11

12 31. In and around the first week of November of 2008, Stephens called
13 Mankaruse into a meeting in his office in Raytheon Fullerton and asked Mankaruse
14 how the Patented technologies and its Applications the Trade Secrets and associated
15 Intellectual Property work. Stephens offered, on behalf of Raytheon, to license the
16 Patents and its Application Trade Secrets and associated Intellectual Property from
17 Mankaruse and his Company ATI and to pay "what others pay Raytheon to use
18 Raytheon's Intellectual Properties and Patents", which consists of a standard
19 licensing fee of 6% of gross sales, IF: (a) the US Patent '512 and its Know-How
20 Trade Secrets technologies and associated Intellectual Property worked as
21 represented by Mankaruse; (b) Raytheon actually used the Patented technologies of
22 the US Patent 6,411,512 and CA Patent 2,389,458, and its Trade Secrets and
23 associated Intellectual Property of its Applications in any of its products; and (c)
24 Raytheon sold any such products.
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1 32. During this meeting and thereafter, Stephens reiterated that Raytheon
2 would pay Mankaruse and his company ATI the “standard royalty rate paid to
3 Raytheon when it licenses its Intellectual Properties to others”, which is the
4 aforementioned 6% of gross sales (Attachment 4). In reliance upon these
5 representations, Mankaruse provided Stephens with a detailed explanation about the
6 ‘512 Patent, the ‘458 Patent and its applications the Trade Secrets technologies and
7 associated Intellectual Property “the know-how” and implementing it into the Radars.
8 Mankaruse has provided crucial confidential and protected technical information
9 about how the Patented technologies and its Applications the Trade Secrets
10 technologies and associated Intellectual Property would work to solve the over-
11 heating problems of the PAMs. (Documented)

12 33. Raytheon can be liable to the Damages for all other used and sold Systems
13 including the THAAD Missile Defense Systems if it was determined in the Discovery
14 that Raytheon used the plaintiff’s Patented technologies and its Applications the
15 Trade Secrets and associated Intellectual Property in the cooling system of the
16 THAAD Antenna and the Transmit Receive Integrated Microwave Module
17 (TRIMMs) electronics and isothermize the electronics temperature within 5 degrees
18 Celsius for the THAAD Missile Defense Systems in order to function properly.

19 34. Plaintiff Mankaruse was thereafter excluded from Raytheon’s development
20 and testing of the PAMs and the aforementioned Radars after he started the disclosure
21 of his patented technologies and its Applications the Trade Secrets.

1 35. Plaintiff is alleging that Defendants Raytheon and Thales-Raytheon have,
2 without the knowledge and consent of the Plaintiff, utilized Plaintiff's Patented
3 technologies and its Applications the Trade Secrets and Intellectual Property in their
4 at least the Terminal High Altitude Area Defense Systems (hereinafter "THAAD"
5 Missile Defense System Cooling Systems and Transmit Receive Integrated
6 Microwave Module(s) (hereinafter "TRIMMs") cooling systems.
7

9 36. Plaintiff is further informed and believes that Plaintiff's Patented
10 technologies and Trade Secrets and associated Intellectual Property have been
11 utilized to isothermize the TRIMMs electronics temperatures within 5 degrees
12 Celsius and the cooling system of the TRIMMs within the THAAD Systems.
13

14 37. In or around October of 2009, Cotterman contacted Mankaruse and asked
15 him to contact his supervisor, Weber to discuss his US Patent 6,411,512 and its
16 Applications Trade Secrets technologies and associated Intellectual Property "in
17 order to protect the rights of both Raytheon and Mankaruse" (documented). At this
18 time, similar to the representations of Stephens, Weber represented to Mankaruse that
19 Raytheon would pay ATI and Mankaruse "what others pay Raytheon to use "ATI
20 Intellectual Properties and Patents", which consists of a standard royalty fee of 6% of
21 the gross sales if: (a) the Patented technologies and its Applications Trade Secrets
22 technologies and associated Intellectual Property worked as represented by
23 Mankaruse; (b) Raytheon actually used the Patented technologies and its Applications
24 Trade Secrets and associated Intellectual Property in any of its products; c) any of
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1 Raytheon products sold uses the Patented technologies and its Application Trade
2 Secrets and Intellectual Property.

3
4 38. Thereafter, Mankaruse met with Weber in his office and gave him a
5 detailed explanation about the Patented technologies and its Applications Trade
6 Secrets and associated Intellectual Property and showed Weber how the Patented
7 technologies and the Trade Secrets work "the know-how". Weber told Mankaruse
8 that he would look into it and then spoke with Raytheon's in-house attorney, Lori
9 Romero. Romero and Weber soon thereafter emailed and told Mankaruse that
10
11 "Raytheon was not interested" in utilizing the Intellectual Property and associated
12 Trade Secret technologies. (Documented)
13

14 39. Mankaruse communicated with Hontz via emails, telephone and in person
15 about the Patented technologies and its Applications the Trade Secrets and associated
16 technologies and Intellectual Property, Hontz at the beginning was not in favor of
17 using the heat pipes of the '512 Patent and the know-how the Trade Secrets and
18 associated Intellectual Property on the grounds that it might not work or might be
19 expensive or not easy to use, later he favored to use flat heat pipes or sometimes
20 known as Vapor Chambers or VC (flat heat pipe) which is also covered by the '512
21 Patent and the Trade Secrets and associated Intellectual Property but later plaintiff
22 Mankaruse run analysis and recommended the round heat pipes due to its high
23 reliability. Both the heat pipes and vapor chamber (VC) were covered by the US
24 Patent and its Trade Secrets and associated technologies and Intellectual Properties.
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1 40. Mankaruse communicated with Armstrong via emails and in person in
2 meetings, and separately in his temporary office at Raytheon NCS in Fullerton to
3 further release and discuss the Patented technologies and its Application the Trade
4 Secrets technologies and Intellectual Property, while the PAMs were under test to
5 verify and validate the Patented technologies and its Application the Trade Secrets
6 and associated Intellectual Property use in The Fire Finder RMI and Sentinel
7 Improved PAMs using the protected Patented technologies and its Application, the
8 Trade Secrets and associated Intellectual Properties. Armstrong has supervised and
9 performed testing of the PAMs with Installed Heat Pipes and Vapor Chambers (VC)
10 technologies for comparison, verification and validation after it was released to David
11 Stephens, Mark Hontz and the rest of the Battlefield radars team working on the
12 PAMs at that time. (Documented)

17 41. Hontz was one of Raytheon engineers assigned to perform analysis and
18 supervise tests of all options available to solve the PAMs over-heating issues due to
19 the fact that Raytheon SAS in El-Segundo, California have equipped laboratories can
20 be used in achieving tests and also have available thermal software can be easily
21 accessible to be utilized in favor of the PAMs solution verification and validation.
22 (Documented)

25 42. Defendant Kim Kerry, was the CEO of TRS and shared in making day to
26 day follow up on the progress of the developing, integrating, and testing and on the
27 final use of the Patented technologies and its Trade Secrets and associated Intellectual
28

1 Property in the development of the Fire Finder RMI and Sentinel Improved radars
2 and Particularly the Power Amplifier Modules (PAMs) over-heating issues that
3 prevented the two radars from functioning properly.
4

5 43. Raytheon Vice President of Intellectual Property and Licensing, F.
6 Kinsey Haffner informed the Investigator Mitch Blacher of abc10 News in 2013 that
7 Raytheon and TRS US didn't use the '512 Patented technologies and its Applications
8 the Trade Secrets technologies and Intellectual Property and that Raytheon respects
9 the Intellectual Property of others (Documented). This four (4) minutes investigative
10 report was aired on abc 10News on November 6, 2013. This Video can be viewed on
11 U-Tube by entering "Raytheon Stole Engineer; on U-Tube search and hit enter, then
12 press on the RAYTHEON App."
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16 44. Defendant Colin J. Schottlaender, as the President of Raytheon NCS at that
17 time was among the top executives that make decisions and allowed the testing of the
18 '512 Patented technologies and its applications the Trade Secrets technologies and
19 Intellectual Property in solving the PAM over-heating issues. the defendant Colin J.
20 Schottlaender was very much concerned about the progress of the company and
21 particularly the issues of the Power Amplifier Module ("PAM") of Fire Finder RMI,
22 and the Sentinel Improved radars, on which Raytheon NCS and Raytheon
23 Corporation can be affected financially positively from the success of the Fire Finder
24 RMI and Sentinel Improved radars sales.
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1 45. Defendant William H. Swanson ("Swanson") was the Chairman and CEO
2 top executive of Raytheon Company oversee the whole performance of development
3 of the three Systems; THAAD Missile Defense Systems, Fire Finder RMI and
4 Sentinel Improved Radars which its success is significantly affecting the success of
5 all Raytheon revenues since they represent major programs that make big share of
6 Raytheon products and revenues.
7

8
9 46. Defendant Thomas A. Kennedy, was the President of Raytheon IDS and
10 currently the Chairman and CEO of Raytheon Corporation and top executive
11 responsible then for all THAAD Systems from development, Marketing and now of
12 the success of all Raytheon all programs including the Fire Finder RMI, and the
13 Sentinel Improved and THAAD systems and make final and crucial decisions in
14 running Raytheon Corporation.
15

16
17 47. From time to time starting in or around October of 2009 and continuing
18 through the wrongful termination of Mankaruse's employment with Raytheon in
19 April 17, 2012, Mankaruse inquired from various individuals at Raytheon as to
20 whether Raytheon was using the Patented technologies and its Applications, the
21 Trade Secrets and associated Intellectual Property. Weber and others 10 witnesses
22 repeatedly stated Under Oath that Raytheon was not using the US Patented
23 technologies or its Trade Secrets technologies and Intellectual Property but used other
24 technologies. Raytheon to this day is reluctant to reveal any proven evidences that
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1 they actually used other technologies and didn't use the Mankaruse Patented
2 technologies and it Applications the know-how.

3
4 **PATENTS SUIT**

5 **US PATENT 6,411,512, CANADIAN PATENT 2,389,458**

6 48. The US Patent 6,411,512 and the Canadian Patent 2,389,458 are patenting
7 High Performance Cold Plate technologies, which is strategic patented technologies
8 (today the '512 Patent referenced by 73 other US Patents used in different major
9 industrial applications as prior art issued by the UPTO), in general and now the '512
10 Patent technologies have Applications to the cooling in several systems in variety of
11 major industries and products for electronics and various process industries. The
12 '512 US Patent and the '458 CA Patent are umbrella to many Applications Trade
13 Secrets technologies and Intellectual Property using two-phase cooling to cool
14 electronics or heat source with high heat dissipation in many different applications
15 and industries and is available to view to the public but protected by the US Patent
16 Laws 35 U.S.C. 271 and also Canada Patent Laws.

17
18 49. In this Action the plaintiff alleged upon proof by documented and martial
19 evidences that the defendants have infringed on the US. Patent 6,411,512 and the
20 Canadian Patent 2,389,458 and its Applications the Trade Secrets with the help of
21 Raytheon and TRS US with the direct help of the remaining individual defendants in
22 at least the Fire Finder RMI, The Sentinel Improved radars and the THAAD Missile
23 Defense Systems Cooling technology without permission from its owners.
24
25
26
27
28

THE TESTED '512 US PATENTS, TRADE SECRETS & TECHNOLOGIES

50. The '512 US Patent and the '458 CA Patent technologies and its Applications, the Trade Secrets and Intellectual Property were properly conveyed and Disclosed to the Defendants. (Attachment 1, 2 & 3) In this Action between Plaintiff Mankaruse on behalf of ATI, the '512 US Patent '458 CA Patent and Delta Engineers and its Trade Secrets technologies and Intellectual Property, the holder of the Intellectual Property at that time except of when excused from attending meeting and working on the detailed drawings and the Defendants representatives. Until today the Defendants are defiant of fulfilling its contractual agreements and getting into any kind of any Discovery phases, in order to prove either way that they have used and using the Patented and Trade Secrets technopoles, they have a bill to pay, and if not there are no need to prolong this Action for no reason. Plaintiff doesn't know why defendants are avoiding any disclosure of Discoveries questions until today and since July 7, 2014. That can conclude all disputes one way or the other.

51. Several individuals representing Raytheon witnesses including Executives and high level employees of authorities claimed in occasions under Oath that the Plaintiff has provided to the Defendants Patented technologies and Applications Trade Secrets and Intellectual Property to solve the underlying overheating and cooling of the PAMs of the radars; Fire Finder RMI and Sentinel Improved systems, but Raytheon and Thales Raytheon rather used different technologies in its products.

52. The use of the '512 Patented technologies and its Application the Trade

1 Secrets and Intellectual Property used in the THAAD Missile Defense Cooling
2 Systems of the Antenna in addition to improve cooling efficiency of each TRIMM
3 including the high heat dissipation of the eight Transmit Receive Electronic Packages
4 mounted on each TRIMM, it also isothermize the eight T/R packages in each
5 TRIMMs within five degrees Celsius as the X-Band radar specification requirements
6 in order for the Missile Defense Systems to function.
7
8

9 53. On and around August 5, 2008 and continued through the end of 2009 until
10 all experimental verifications and validations completed and proved that the '512
11 Patented technologies and its Applications Trade Secrets and Intellectual Property
12 can work and achieve the desired results of the solicited requests by the Defendants to
13 find solutions to the overheating problems of the Fire Finder RMI and the Sentinel
14 Improved radars PAMs. (Attachments 1, and 2)
15
16

17 54. The '512 Patented technologies and its Applications Trade Secrets and
18 associated Intellectual Property alleged that used in the THAAD Antenna Cooling
19 Systems and isothermize the TRIMMs is completely un-known to the Plaintiff until
20 today due to the denials of witnesses and top executives of Raytheon under Oath and
21 in writing, This can be discovered through the litigation process of this Action. The
22 Plaintiff until today has no knowledge whether the Defendants used and sold any of
23 its products and Systems that has the '512 US Patented technologies and CA '458
24 Patent and its Applications Trade Secrets and Intellectual Property without expressed
25
26
27
28

1 consent from its holder can be and are Direct Infringement on these Patents and its
2 Applications Trade Secrets and associated Intellectual Property.

3
4 55. Defendants have solicited a solution through the Battlefield Radar Group
5 (BFR) from Plaintiff ATI. In and around August 5, 2008 in a stand-up meeting in the
6 BFR Lab from 9:00 AM to 10:00 AM where the over-heating problem was presented
7 to the Group by the Lab. Manager Denis Sharp asking for quick solution, Plaintiff
8 Mankaruse has sent an email to the BFR team within the hour suggesting a solution
9 using the Trade Secrets technologies and Intellectual Property owned by ATI (at that
10 time) and the conceptual design Applications of said Trade Secrets and Intellectual
11 Property during an introductory one hour meeting in the BFR Lab.
12
13

14 PRIOR CASES

15
16 55. The plaintiff has filed two Actions in September 30, 2016; case number
17 30-2016-00878349-CU-IP-CJC "the 2016 Case" and July 31, 2017, Case number 30-
18 2017-00934-796-CU-IP-CJC "the 2017 Case". The two cases are different in both of
19 each Case Defendants and Causes of Actions are deferent. Both Cases were litigated
20 actively simaltaniously in the same Court and the same Judicial Officer "The Hon.
21 James L. Crandall" from the time of filing of the 2017 Action "July 31, 2017 through
22 February 27,2018 and then the Court Ordered stayed the 2017 Action until the
23 conclusion of the 2016 Action on the December 26, 2018 Judgment of Dismissal on
24 December 26, 2018 and the 2017 Action then Continued until October 31, 2019
25 where it was dismissed "Both Actions Orders were in ERROR NOT IN MERTS".
26
27
28

VEXATIOUS LITIGANT

56. The plaintiff was accused by the defendants and some-how was able to get the plaintiff declared to be Vexatious Litigant in ERROR by the Superior Court of California on and around July 12, 2018. The defendants in Addition requested \$10,000.00 Security Bond to be deposited in order for the litigation in the case to be Continued. The plaintiff has no money even to support his day to day life with his family, he had to continue begging funds until he was able to complete the Bond amount just before the deadline otherwise the Court can dismiss the case. The defendants played this game again in 2019 few months ago this year to stop the litigation and avoid proceeding into Discovery in five years in litigation by filing a new Motion to Declare the plaintiff Vexatious litigant again and this time requested \$50,000.00 Bond, again to stop the 2017 Action this time and putting thr impossibility the plaintiff can get the Bond amount since the Defendants and their 4,600 Attorneys Law Firm are monitoring the plaintiff and his family's life all the time in every facet, from income, health, and much more to include other issues that can be illegal or criminal if investigated. The defendants and their Councils were making sure that no justice to be realized to this plaintiff. The same State Court last time DENIED the Defendants Motion on August 1, 2019 and relieved the plaintiff's and he is NOT VEXATIOUS Litigant. (Attachment 5). The defendants through their Councils now are **planting the seeds** to file this Vexatious Litigant thing for the third time in a little more than one year again with this the plaintiff respectfully request this Honorable

1 Court to stop this Unjust and Unconstitutional. This plaintiff needs to get JUSTICE
 2 this time in this Court no more. This plaintiff has been humiliated cleaning “labs,
 3 moving heavy equipment in the labs,...” for almost all of 2010 to be pushed out of
 4 his job at Raytheon after he Disclosed his Patented technology that can solve the
 5 persisting technical issues at many Raytheon Systems in years.

6
 7
 8 **FIRST CLAIM**
 9 **(Against All Defendants)**

10 **DIRECT INFRINGEMENT 35 U.S.C.271 & 271(a) and**
 11 **(Raytheon Direct Infringement on all Clams “Claims 1 through 10” of the US**
 12 **Patent 6,411,512 and Canada Patent 2,389,458 Technologies in Cooling the Fire**
 13 **Finder RM, Sentinel Improved Radars and the THAAD Antenna Cooling**
 14 **System including the TRIMMs), 35 U.S.C. 271 & U.S.C. 271(a). 35 U.S.C**
 15 **SECTION 284 (2018) See Halo Elecs., Inc. v. Pulse Elecs., Inc., 136 S. Ct. 1923,**
 16 **1928 (2016) (citing Patent Act of 1793, Section 5, 1 Stat. 322; Patent Act of 1836,**
 17 **Section 14, 5 Stat. 123) and 18 U.S. Code 1832**

18 57. Plaintiff Mankaruse alleges and incorporate by reference paragraphs 1
 19 through 57 as fully set forth here.

20 58. Plaintiff Nagui Mankaruse is the current holder of all the Patents and
 21 Patents Applications the Trade Secrets and Intellectual Property acquired from AIC
 22 and all its predecessors ATI and Delta Engineers. The US Patent 6,411,512 and CA
 23 Patent 2,389,458 and its Trade Secrets technologies and associated Intellectual
 24 Property “High Performance Cooling of Radars and Missile Defense Systems” which
 25 were disclosed to Raytheon Company and Thales Raytheon LLC and filed in this
 26 Honorable Court in this Case among other Trade Secrets technologies and Intellectual
 27 Property that owned and invented by the Plaintiff Nagui Mankaruse. These Patents
 28

1 and its Applications the Trade Secrets disclosed to Raytheon and TRS US including
 2 drawings, conceptual design, prototype, calculations and graphs. and allowed the
 3 analysis and testing for verifications and validations of the technologies to be used in
 4 the solution of the Fire Finder RMI and Sentinel Improved Radar Systems and its
 5 PAMs overheating issues and the THAAD Missile Defense systems. (Attach. 1 & 2)

6
 7
 8 59. Plaintiff Nagui Mankaruse alleges that Raytheon Company, TRS US LLP
 9 and all the individual defendants have Infringed and continued to infringe on the US
 10 Patent 6,411,512 and CA Patent 2,389,458 technologies and Its Applications the
 11 Trade Secrets and Associated Intellectual in at least their products the Fire Finder
 12 RMI, Sentinel Improved Radars and the THAAD Missile Defense Systems.

13
 14 60. The defendants Raytheon Corporation and TRS US LLC, were authorized
 15 to test, and evaluate the US Patent 6,411,512 and the CA Patent 2,389,458 to verify
 16 the plaintiff's claims of solving the Defendants Systems overheating problems using
 17 the Patented '512 Patent and '458 technologies and its Applications "Trade Secrets "
 18 to solve the overheating of the Raytheon and TRS US products in at least Cooling
 19 systems of the Fire Finder RMI, the Sentinel Improved Radars and the THAAD
 20 Missile Defense Cooling Systems including the Antenna TRIMMs (Documented and
 21 Confidential must be filed under seal). (Attachments 1 and 1, 2 & 3)

22
 23
 24 61. The defendants has infringed and continue to infringe and authorized the
 25 infringements on the US Patent 6,411,512 and CA 2,389,458 Patent on its all Ten its
 26 Claims (Claims 1 through 10). The infringements on all Claims are in at least the

1 accused above mentioned Products (Fire Finder RMI, Sentinel Improved Radars and
2 the THAAD Missile Defense Systems) upon proof and if any other unknown
3 Raytheon Systems must be included. (Attachments # 1, 2, and 3)

4
5 62. The US Patent 6,411,512 and the CA Patent 2,389,458 technologies and
6 Applications of its Trade Secrets (the Know-How have been scrutinized by analysis
7 and tested by the Defendants for the viability and validity in solving the overheating
8 and isothermize of the accused Systems and the test results have been proven to be
9 viable to solve the overheating and isothermize the accused products and have been
10 documented and available at the Defendant. The Plaintiff has a copy of the final test
11 Report and results (Attachment #2). All data cannot be filed until the Court Order to
12 be filed Under Seal due to its nature and its relation to our National Security.
13
14

15
16 63. Direct infringement has long been understood to require no more than the
17 unauthorized solving the overheating of use of the patented inventions. See *Aro Mfg.*
18 *Co. v. Convertible Top Replacement Co.*, 377 U. S. 476, 484 (1964); 3 A. Deller,
19 Walker on Patents §453, p. 1684 (1937) (hereinafter Deller). Thus, a Direct
20 Infringer's knowledge or intent is irrelevant.
21

22
23 64. The THAAD Antenna Cooling system including the TRIMMs, the Fire
24 Finder RMI, and Sentinel Improved Radars are alleged for Directly Infringe and
25 continues to Directly Infringe literally and willfully or under the doctrine of
26 equivalents on all the claims of the US Patent 6,411,512 and the CA Patent 2,348,458
27 in violation of 35 U.S.C. 271 and §271(a) by making, using offering to sell, selling
28

1 (directly or through intermediaries) the at least the above mentioned Systems, the Fire
2 Finder RMI, the Sentinel Improved Radars and THAAD Missile Defense Systems.

3
4 65. The 6,411,512 and CA Patent 2,389,458 Patenting the Cold Plate
5 technologies literately to cool a high heat dissipating object or electronic
6 component(s) on a circuit board assembly using forced fluid coolant through heat
7 exchanger(s). The heat pipe assembly has within circulating first fluid in a closed
8 loop inside the heat pipe and thermally connected to the heat exchanger(s) circulating
9 second fluid in an open or closed loop that can be liquid or gas in one assembly.
10
11

12 66. Plaintiff Nagui Mankaruse has the documented and material evidences of
13 the Raytheon Test Report (Attachment #2) that confirm the viability and validity of
14 the US Patent 6,411,512 and the CA Patent 2,389,458 and its Applications the Trade
15 Secrets and associated Intellectual Property to solve the overheating and isothermize
16 the Fire Finder RMI, Sentinel Improved Radars and the Conceptual design of the
17 TRIMMs and Antenna Cooling System to the Missile Defense Agency (MDA) in the
18 SBIR technical Proposal on and around January – February 2003 (Attachment 3). The
19 Fire Finder RMI and the Sentinel Improved Power Amplifier Module (PAMs)
20 technologies were co-invented by Nagui Mankaruse on prior time earlier to been
21 employed by the defendants on May 10, 2004. While the defendants maneuvered and
22 rejected any request to provide documentation and Discoveries in prior litigations in
23 State Court Actions which constitute Obstruction of Justice, Several of its employees,
24 engineers, managers, directors and executives Under Oath and in writing Denied that
25
26
27
28

1 Raytheon used the US Patent 6,411,512 and Canada Patent 2,389,458 technologies
2 and its Applications Trade Secrets and Intellectual Property.

3
4 67. Raytheon and TRS US LLP and all the other individual defendants
5 “Willfully and intentionally and knew and ignored facts and circumstances known to
6 them, which would have led to [actual] knowledge”) defining “knowledge of the
7 existence of a particular fact” to include a situation in which “Raytheon and the
8 remaining defendants are aware of actual knowledge of [the fact’s] existence, unless
9 Raytheon actually believes it used different technologies.”
10

11
12 68. Deliberate indifference to a known risk that the Infringed Patents exists
13 does not satisfy the knowledge required by the Rule §284 (2018). Nevertheless,
14 because the evidence in this case was plainly sufficient to support a finding of
15 Raytheon knowledge under the doctrine of willful blindness.
16

17 (a) The doctrine of willful blindness is well established in criminal law. Many
18 criminal statutes require proof that a defendant acted knowingly or willfully, and
19 courts applying the doctrine have held that defendants cannot escape the reach of
20 these statutes by deliberately shielding themselves from clear evidence of critical
21 facts that are strongly suggested by the circumstances. The traditional rationale for
22 the doctrine is that defendants who behave in this manner are just as culpable as those
23 who have actual knowledge. This Court endorsed a concept similar to willful
24 blindness over a century ago in *Spurr v. United States*, 174 U. S. 728, 735, and every
25 Federal Court of Appeals but one has fully embraced willful blindness. Given the
26
27
28

1 doctrine's long history and wide acceptance in the Federal Judiciary, there is no
2 reason why the doctrine should not apply in civil lawsuits for direct patent
3 infringement under §284 (2018). Raytheon by Obstructing Justice and the remaining
4 defendants has wilfully infringed and continue to willfully infringe the US Patent
5 6,411,512 and the Canadian Patent 2,389,458 and its Applications the Trade Secrets
6 and associated Intellectual Property.
7
8

9 **PRAYER AND REQUEST FOR RELIEF**

10 69. WHEREFORE, Plaintiff prays for judgment against Defendants, and each
11 of them, as follows:
12

13 *1. For economic and non-economic damages for Direct Infringement and*
14 *Willful Infringement by Raytheon et al for every use and sold product and Systems*
15 *includes the Patented technologies of the US Patent 6,411,512 and CA Patent*
16 *2,389,458 and their Applications Trade Secrets, (the Know-How) and Intellectual*
17 *Property in all its used and sold Products including but not limited to the Fire Finder*
18 *RMI, Sentinel Improved Radars and THAAD Missile Defense Systems.*
19

20 *2. Licensing fees with punitive damages of the Patented technologies and*
21 *Intellectual Property and all other damages according to Raytheon Internal Rules of*
22 *Licensing its Intellectual Property to others including Interest due to Raytheon et al*
23 *Direct Infringement and Willful Infringement on the US Patent 6,411,512 and CA*
24 *Patent 2,389,458 and its Trade Secrets (The Know -How) and Intellectual Property.*
25
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1 3. For contractual damages, including, but not limited to Raytheon et al internal
2 rules (6% of gross sales) of all used and sold products and Systems used/using,
3 sold/selling the Infringed upon Intellectual Property in Order to function properly;
4

5 4. For Unjust Enrichment.

6 5. For punitive damages including Willful Infringement according to proof
7

8 6. For costs of this suit

9 7. For prejudgment interest;

10 8. For exemplary damages against all Defendants; and
11

12 9. For such other relief as this Court deems just and proper.

13 10. Restitution for Lost Income.

14 11. This is applicable to all Sold Systems to the United States Government and
15 all other Countries all around the world. Worldwide sales must be Sold to the United
16
17 Stes Government first, then exported to the Forien Country.

18 Respectfully submitted,

19 Date: November 22, 2019

20 
21 NAGUI MANKARUSE
22 Plaintiff In Pro Se
23
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PROOF OF SERVICE

I, Magda Mankaruse, declare:

I am and was at the time of the service mentioned in this declaration; reside in the County of Orange, California. I am over the age of 18 years and not a party to the within action. My residence address is 19081, Carp Circle, Huntington Beach, California 92646.

On November 22, 2019 I served a copy(ies) of the following document(s) **AMMENDED COMPLAINT FOR:**

1.DIRECT PATENT INFRINGEMENT ON US PATENT 6,411,512 & CANADA PATENT 2,389,458 AND ITS APPLICATIONS THE TRADE SECRETS INCLUDING WILLFUL INFRINGEMENTS

on the parties to this action by placing them in a sealed envelope(s) addressed as follows:

| Party(ies) Serviced | Name of Party | Method of Service |
|---|--|-------------------|
| Andrew P. Valentine DLA PIPER LLP (US) 2000 University Avenue East Palo Alto, CA 94303-2215 Andrew.valentine@dlapiper.com Telephone: (650) 833-2000 Facsimile : (650) 833-2001 | All Defendants of the Case Nagui Mankaruse v. Raytheon Company et al | By US MAIL |

X [BY MAIL] I placed the sealed envelope(s) for collection and mailing with postage fully prepaid is deposited with the United States Postal Service the same day as it is placed for collection.

I declare under penalty of perjury under the laws of the United States that the above is true and correct, and that this declaration was executed on November 22, 2019, at Huntington Beach, California.

Magda Mankaruse

Magda Mankaruse

**ATTACHEMENT TO RAYTHEON ET AL
AMENDED COMPLAINT**

ATTACHMENTS INDEX

Attachment #1

Patents Infringement Analysis of Raytheon Products. (To Be Filed Under Seal)

Attachment #2

Infringement Documents and Trade Secrets Disclosed to the Defendants. To Be Filed Under Seal.

Attachment #3

THAAD Conceptual Design Proposal to the Missile Defense Agency (MDA). To Be Filed Under Seal

Attachment #4

Raytheon Intellectual Property Licensing Rules.

Attachment #5

Vexatious Litigant State Court Order (Plaintiff is NOT Vexatious Litigant (August 1, 2019)).

Attachment #1

**Patents Infringement Analysis of Raytheon Products.
(To Be Filed Under Seal)**

Attachment #2

**Infringement Documents and Trade Secrets Disclosed
to the Defendants. (To Be Filed Under Seal)**

Attachment #3

**THAAD Conceptual Design Proposal to the Missal
Defense Agency (MDA). (To Be Filed Under Seal)**

Attachment #4

Raytheon Intellectual Property Licensing Rules.

000193

Document Number: 000000016-RP

Company Policy

Effective Date: October 24, 2002

Function: Finance

Title: Product Line Transfers; Royalty Payments

Authorized By: Vice President – Corporate Controller

1. Status

- 1.1 Supersedes Raytheon Policy 10-3003-110, Product Line Transfers, Royalty Payments, dated March 27, 1990.
- 1.2 Policy revised for general updating and to reflect current Company organization and functions.

2. Purpose

- 2.1 Royalty payments within the meaning of this policy are those paid by a Foreign Subsidiary Company for the right to manufacture a product that would otherwise be manufactured by another organizational unit of Raytheon. The purposes of this policy and procedure are to:
 - 2.1.1 Prescribe realistic "arms length" royalties to be paid under intra-Company licenses for manufacturing of Raytheon-developed products;
 - 2.1.2 Provide an equitable return on development investment;
 - 2.1.3 Avoid adverse tax consequences that may result if a reasonable "arms length" royalty is not paid in connection with a transfer of technology (know-how, secret processes, patent rights, etc.) from a Raytheon Business to a foreign Subsidiary Company (e.g., Raytheon may be charged with an additional U.S. income tax on an imputed royalty amount in a manner that jeopardizes the use of foreign tax credits).

3. Applicability

- 3.1 This Policy applies to all organizations within Raytheon Company.

4. Policy

- 4.1 Where the license to manufacture and sell is granted to a Subsidiary, the arrangement is regarded by Management as a product transfer to the jurisdiction of the licensee. All such arrangements should provide for a license fee and/or royalty payment (or other comparable compensation) equivalent to the amount that would be charged in an "arms length" transaction between two unrelated parties.
- 4.2 Negotiations authorizing the manufacture and sale of products in accordance with this policy are conducted directly between the Businesses and Subsidiary Companies concerned.
- 4.3 The royalty payments are intended to provide an appropriate return on development investment while maintaining incentive for the manufacturer of the product. A royalty rate of 6% on sales prices or products is to be charged. Prior approval of the Vice President - Tax Affairs is required for any other negotiated rate or any other arrangement.
- 4.4 Reciprocal arrangements for the manufacture of the Subsidiaries' products by a U.S.A. Business are subject to similar conditions.

000194

-
- 4.6 When the Business transferring the technology purchases the licensed products from the Subsidiary, such purchases are not subject to royalty payment.
 - 4.7 Where it is known that U.S. Government funds are used in whole or in part to procure the product or product line, the royalties described in this policy and procedure are not to be included in the price of any product sold to U.S. Government or end-use customers.
 - 4.8 Agreements relating to negotiations conducted within the subject matter of this policy are drafted by the Director-Licensing who coordinates with Legal Counsel for the Business and Subsidiary Company involved. Such agreements require review by the Vice President - Tax Affairs before they are finalized.
 - 4.9 The Department of State must approve the license document authorizing the transfer to a foreign country of any technology (whether technical data or manufacturing know-how) for any system, subassembly and component or part of a system included on the Munitions List of the International Traffic in Arms Regulations (ITAR) where this approval is required. This approval is required prior to the transfer of any such technology (see Raytheon Policy 13-9001-110, Export Control Regulations for Commodities and Classified and Unclassified Technical Data). Where the technology does not fall within the jurisdiction of the Department of State, approval must be obtained from the Department of Commerce.

5. Responsibilities

- 5.1 The Vice President-Tax Affairs is responsible for reviewing license agreements before they are finalized to assure "arms length" royalties are stipulated.
 - 5.2 The Director-Licensing, in conjunction with Business and Subsidiary Company Counsel, is responsible for drafting license agreements.
 - 5.3 The Director-Licensing is responsible for maintaining this document.
-

**5- ORDER STATE COURT RELIEF VAXATIOUS
LITIGANT ORDER**

FOR PLAINTIFF NAGUIMANKARUSE

**SUPERIOR COURT OF CALIFORNIA,
COUNTY OF ORANGE
CENTRAL JUSTICE CENTER**

MINUTE ORDER

DATE: 08/01/2019

TIME: 01:30:00 PM

DEPT: C33

JUDICIAL OFFICER PRESIDING: James Crandall

CLERK: P. Rief

REPORTER/ERM: Candace Khorouzan

BAILIFF/COURT ATTENDANT: Julie Carney

CASE NO: 30-2017-00934796-CU-IP-CJC CASE INIT.DATE: 07/31/2017

CASE TITLE: Mankaruse vs. Raytheon Company

CASE CATEGORY: Civil - Unlimited CASE TYPE: Intellectual Property

EVENT ID/DOCUMENT ID: 73089883

EVENT TYPE: Motion - Other

MOVING PARTY: Mark P Hontz, Raytheon Company, James Leroy Cotterman, Jr, Kinsey Haffner, David Earl Stephens, James D Weber, William H Swanson, Colin J Schottlaender, Matthew Brewer, Thomas A Kennedy, Kimberly R Kerry, Brian J. Armstrong, TRS LLC US, Keith Peden

CAUSAL DOCUMENT/DATE FILED: Motion - Other for an Order, 07/19/2019

APPEARANCES

Nagui Mankaruse, self represented Plaintiff, present.

Andrew P. Valentine, Esq., from DLA Piper LLP, present for Defendant(s).

MOTION BY DEFENDANTS RAYTHEON COMPANY AND TRS LLC US FOR AN ORDER CONFIRMING/DECLARING PLAINTIFF A VEXATIOUS LITIGANT, IMPOSING A PRE-FILING ORDER AND REQUIRING PLAINTIFF TO FURNISH A SECURITY BOND

Tentative Ruling posted on the Internet.

The court hears oral argument. The court, having fully considered the arguments of the parties, both written and oral, rules as follows: The Tentative Ruling will become the final ruling of the court.

Defendants RAYTHEON CO. and TRS LLC US ask the court to declare Plaintiff NAGUI MANKARUSE, on three separate grounds under CCP 391 (b)(1), (b)(2), and (b)(3).

The court DENIES the motion, for the reasons set forth below.

A. Legal Standards

CCP 391 (b)(1) – (3) provide as follows:

"(b) 'Vexatious litigant' means a person who does any of the following:"

"(1) In the immediately preceding seven-year period has commenced, prosecuted, or maintained in propria persona at least five litigations other than in a small claims court that have been (i) finally

CASE TITLE: Mankaruse vs. Raytheon Company

CASE NO: 30-2017-00034796-CU-IP-CJC

determined adversely to the person or (ii) unjustifiably permitted to remain pending at least two years without having been brought to trial or hearing."

"(2) After a litigation has been finally determined against the person, repeatedly relitigates or attempts to relitigate, in propria persona, either (i) the validity of the determination against the same defendant or defendants as to whom the litigation was finally determined or (ii) the cause of action, claim, controversy, or any of the issues of fact or law, determined or concluded by the final determination against the same defendant or defendants as to whom the litigation was finally determined."

"(3) In any litigation while acting in propria persona, repeatedly files unmeritorious motions, pleadings, or other papers, conducts unnecessary discovery, or engages in other tactics that are frivolous or solely intended to cause unnecessary delay."

The question of whether a party is a vexatious litigant is within the trial court's discretion. The trial court's ruling will be upheld on appeal if it is supported by substantial evidence. (*Holcomb v. US Bank National Ass'n* (2005) 129 Cal.App.4th 1494, 1498-1499.)

B. Notice of Motion Defective

The notice of motion is defective, because the notice only cites CCP 391, which is a definition section. As noted in *Holcomb*, the proper statutory sections are CCP 391.1, 391.3, and 391.7.

"The vexatious litigant statutes, section 391 et seq., provide two remedies against vexatious litigants. The first is an order to furnish security, as described in section 391.3. This remedy is obtained by bringing a motion under section 391.1, which requires a determination that the plaintiff is a vexatious litigant, and that "there is not a reasonable probability that he will prevail [on the merits]." If an order to furnish security is issued, the action is automatically stayed from the time the motion was filed until 10 days after the plaintiff posts the required security. (§ 391.6. If the security is not posted, the action "shall be dismissed as to the defendant for whose benefit it was ordered furnished." (§ 391.4.)" (*Id.* at p. 1499.)

"Another remedy is found in section 391.7, which authorizes the court to 'enter a prefilling order which prohibits a vexatious litigant from filing any new litigation in the courts of this state in propria persona without first obtaining leave of the presiding judge of the court where the litigation is proposed to be filed.' (§ 391.7, subd. (a).) The presiding judge may allow the filing of the new litigation "only if it appears that the litigation has merit and has not been filed for the purposes of harassment or delay. The presiding judge may condition the filing of the litigation upon the furnishing of security for the benefit of the defendants as provided in Section 391.3." (§ 391.7, subd. (b).) The Judicial Council maintains a record of all vexatious litigants in the state and distributes a list to the clerks of the courts annually. (§ 391.7, subd. (a).) The remedy provided in section 391.7 is in addition to the other remedies provided by the vexatious litigant statutes. (§ 391.7, subd. (a).)" (*Id.* at pp. 1499-1500.)

Since Defendants have failed to give proper notice under those sections, the motion is summarily DENIED on the procedural ground that the notice of motion is defective and has not properly put Plaintiff on notice of the legal basis for the motion.

C. Analysis of Grounds Under CCP 391

Even assuming that the court were required to consider the substance of the motion (which it is not), the court would still DENY the motion on the merits.

CASE TITLE: Mankaruse vs. Raytheon Company

CASE NO: 30-2017-00934796-CU-IP-CJC

1. Five Litigations Determined Adversely In Preceding 7 Years

DENIED on this ground.

Defendants argue that Plaintiff Mankaruse is a vexatious litigant under CCP 391 (b)(1), because within the past 7 years, 8 cases that he maintained in propria persona have been determined adversely to him. (Motion at pp. 3-4.) The statute only requires that 5 cases must have been determined adversely to the vexatious litigant.

Of those 8 cases, four were voluntary dismissals. But under *Tokerud v. Capitolbank Sacramento* (1995) 38 Cal.App.4th 775, 780 at fn. 3, "Voluntary dismissal is only prima facie proof the litigation was 'determined adversely' to the plaintiff. Plaintiff may rebut this showing by contrary proof. For example, voluntary dismissal of a complaint for unlawful detainer after the tenant has voluntarily vacated does not constitute a determination of that litigation adverse to the plaintiff because plaintiff has accomplished the object of the litigation. In any event defendant, as moving party, bears the ultimate burden of persuasion." (emphasis added.)

For purposes of this analysis, the court focuses only on the four voluntary dismissals and makes no formal ruling as to the remaining four cases. Even assuming for the sake of argument that the remaining four cases were decided adversely to Plaintiff, if the four voluntary dismissals were not determined adversely to him, then Defendants cannot meet their burden to show that at least 5 cases were determined adversely to Plaintiff.

After considering all of the evidence and all of the arguments in the parties moving and supporting papers on this motion and on the prior motion to declare Plaintiff a vexatious litigant, the court exercises its discretion to find that the four voluntary dismissals should not be counted against Plaintiff. The court finds that there is insufficient evidence to establish that the four cases were determined adversely to Plaintiff. (Cf. Motion at p. 6.)

There is insufficient evidence to support a finding that Plaintiff dismissed his action because he was conceding that it was baseless or lacked merit. On the contrary, Plaintiff has testified that he was having difficulty finding an experienced attorney who would take his case and that he was having difficulty managing the proceedings because of his lack of legal training. These are reasons unrelated to the veracity or validity of his underlying claims.

Furthermore, the various cases involved different claims for different alleged violations – a labor and employment dispute on the one hand, and an intellectual property case on the other. So the court finds that under the circumstances of this case, it would be unfair to count all of the voluntary dismissals against Plaintiff.

In their Reply, Defendants argue that a fifth case recently became final on appeal on 4/29/19. (Reply at pp. 2-3.) Plaintiff failed to timely petition the Supreme Court for review and the remittitur issued on 7/1/19. But this is late evidence introduced for the first time in the Reply brief. And as a matter of procedure, Plaintiff has not had an opportunity to review or address the new argument. Therefore, the court will not consider the new evidence.

Furthermore, regarding the case of *Mankaruse v. Intel Corp.* (2016-884058), Ex. 21 does not include the actual opinion from the Fourth District Court of Appeal, so the court cannot determine from the RJN

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whether the appeal did involve the underlying case 2016-884058. The docket sheet is insufficient to prove up the nature of the case and the reasons for the Fourth District's ruling. So Defendants have not presented sufficient evidence that five cases were determined adversely to Plaintiff.

Finally, the statute does not provide that if five actions have been determined adversely against a party that he is automatically a vexatious litigant. The ultimate question is still left to the trial court. So even if five actions have been determined adversely against a party, a reasonable court may still find, under the appropriate circumstances, that a party was not vexatious, depending on the circumstances.

Here the fact that Plaintiff was seeking to vindicate different rights (employment vs. trade secrets) is a factor in his favor. The court finds no evidence that Plaintiff's conduct in bringing the actions was frivolous or intended to harass. And there is no evidence that his underlying claims lack merit. The court finds that Plaintiff's lack of success was attributable to his lack of legal sophistication and not to intentional misconduct or lack of merit in his underlying claims.

2. Repeatedly Relitigates Claims

DENIED on this ground.

Defendants argue that the court should declare Plaintiff a vexatious litigant under CCP 391 (b)(2), because while acting in propria persona, he has repeatedly relitigated matters finally determined against the same Defendants. (Motion at p. 7.) While Defendants have presented some examples of this conduct, the court exercises its discretion to find that Plaintiff's conduct has not yet risen to the level which would merit labelling him a vexatious litigant, particularly given that many of the claims were voluntarily dismissed.

The mere fact that a litigant makes two attempts to relitigate is not sufficient to satisfy the requirement that a party has "repeatedly" relitigated the same matter. (*Holcomb v. US Bank National Ass'n* (2005) 129 Cal.App.4th 1494, 1499.)

Not all failed motions can support a vexatious litigant designation. Repeated motions must be so devoid of merit and be so frivolous that they can be described as flagrant abuses of the system, having no reasonable probability of success, lacking reasonable or probable cause of excuse, and clearly meant to abuse the process of the courts and to harass the adverse party. (*Morton v. Wagner* (2007) 156 Cal.App.4th 963.)

"Unlike Code of Civil Procedure section 391 subdivisions (b)(1), subdivision (b)(3) does not specify either a time frame or quantity of actions necessary to support a vexatious litigant finding under that section. Subdivision (b)(1) requires that a litigant file at least five meritless actions in a seven year period; while subdivision (b)(3) requires only that a litigant "repeatedly file[] unmeritorious motions, pleadings, or other papers, conduct[] unnecessary discovery, or engage[] in other tactics that are frivolous or solely intended to cause unnecessary delay." (Code Civ. Proc., § 391, subd. (b)(3), emphasis added.) What constitutes 'repeatedly' and 'unmeritorious' under subdivision (b)(3), in any given case, is left to the sound discretion of the trial court." (*Ibid.*)

3. Unmeritorious Filings Have Caused Undue Delay

DENIED on this ground.

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Defendants argue that the court should declare Plaintiff a vexatious litigant under CCP 391 (b)(3), because he has repeatedly filed unmeritorious motions, or engaged in tactics intended to cause unnecessary delay.

However, the court finds that there is insufficient evidence in the record to show that Plaintiff intended to file frivolous motions or intended to cause undue delay. On the contrary, the evidence suggests that Plaintiff is sincere in his belief that he does have meritorious claims, but has had difficulty presenting and articulating those claims. The court also finds that there is insufficient evidence that Plaintiff's underlying claims lack merit.

D. Reasonable Probability of Prevailing

Because the notice of motion is defective, the court need not determine whether Plaintiff has a reasonable probability of prevailing. But even assuming this court were required to decide the substance of the motion, the issue would still be moot, because Defendants have failed to show that Plaintiff qualifies as a vexatious litigant within the meaning of CCP 391 (b)(1) – (b)(3).

E. Request for Judicial Notice

The court GRANTS Defendants' request to take judicial notice that Exhibits 1-21 are relevant documents filed in this action and other related actions before this court. But the court declines to take judicial notice of the truth of any facts alleged therein, to the extent those facts may be reasonably subject to dispute.

"A court may take judicial notice of the fact of a document's recordation, the date the document was recorded and executed, the parties to the transaction reflected in a recorded document, and the document's legally operative language, assuming there is no genuine dispute regarding the document's authenticity. From this, the court may deduce and rely upon the legal effect of the recorded document, when that effect is clear from its face." (*Fontenot v. Wells Fargo Bank N.A.* (2011) 198 Cal.App.4th 256, 265.)

But a court may not take judicial notice of the truth of factual representations, made in the recorded document, that are reasonably open to dispute. (*Ibid.*)

F. Conclusion

Therefore, the court DENIES Defendants' motion to declare Plaintiff a vexatious litigant for purposes of this action.

Notice is waived.

I hereby certify the foregoing instrument consisting of 1 page(s)
is a true and correct copy of the original on file in this court.

EW 25 2019

ATTEST: (DATE) Jan 29 1979
DAVID H. YAMASAKI, EXECUTIVE OFFICER AND CLERK OF THE
SUPERIOR COURT OF CALIFORNIA, COUNTY OF ORANGE



BY _____, DEPUTY

ERNIE BALDERAS

NAGUI MANKARUSE, P.E. PROFESSIONAL ENGINEER

Email: mankaruse@alumni.usc.edu.

Address: PO Box 1215, Sunset Bach, CA 90742

Tele: 714/840-9673, Mobile -: 714/580-3777 – Email: mankaruse@aol.com

OBJECTIVES

Professional Mechanical Engineer & Inventor

SKILLS

MSME/PE, US Citizen, prior secret clearance; accomplished engineer, innovator and inventor with proven record of revenue enhancement achieved by designing and developing cost-effective, manufacturable products. Problem solving and management of tasks and projects.

Key competencies include:

- System Design & Development
- Fluid Systems & Thermal Analysis
- Shock & Vibration Analysis & Testing
- Environmental Testing & Requirements
- Management and Execution of Projects
- Leadership and Team Building Skills
- Proposals, and Presentations
- Military & Commercial Systems

ACCOMPLISHMENTS

PATENTS AND APPLICATIONS

- Waste Heat Recovery and Optimized Systems Performance
- Highly Manufacturable Cold Plate
- High Performance Cold Plate “Mankaruse; et al”
- High Performance Cooling Systems
- High Performance Portable Computer Cooling

EXPERIENCE

AMERICAN INNOVATION CORPORATION | HUNTINGTON BEACH, CALIFORNIA

President & Engineering Lead 2011 – Present

Research and development of innovative methods in waste heat recovery technology, applications in several industries experience between 20 to 50 percent of raw energy input as waste heat in the form of hot exhaust gases, hot cooling water and lost heat from hot equipment surfaces including heated products. Efforts to improve systems energy efficiency, recovering waste heat losses provide attractive opportunities for reduced emission and less costly energy resources.

- Issued the US Patent “*Waste Heat Recovery and Optimized Systems Performance*” *Continued efforts to improve systems energy efficiencies, in turn reduces systems energy consumption and operating costs in Refrigeration and Air Conditioning Systems and other Systems.*

Nagui Mankaruse, Resume,
(mankaruse@alumni.usc.edu),

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- Perform management leadership and following up on **Raytheon Company** use of the AIC technology application in the *Fire Finder RMI, the Sentinel Improved, radars and THAAD missile defense systems.*
- Perform management leadership in the contribution of AIC technology and application developing the CPU Cooler and **INTEL Company** developing high speed, high heat dissipation CPUs for Desk Top Computer, Work Stations, Servers and Super Computers Using AIC technology for higher speeds and higher heat dissipation technology for **development of higher speeds computer CPU's** to the current speeds and beyond *using the CPU cooler* technology worldwide.
- Provide consulting Engineering in several Projects in different facets in Mechanical Engineering.

RAYTHEON, THALES RAYTHEON SYSTEMS | FULLERTON, CALIFORNIA

Principal Mechanical engineer (Lead) & Principal Systems Engineer (Lead) 2004 – 2012

Perform systems engineering activities for IRAD and development of Fire Finder and Modified Sentinel radars including conceptual design, Command & Control Systems, Communication Equipment's, structures, mechanisms, thermal systems solution that *won production programs of multi \$Billion TPQ-37 RMI and MPQ-64 Radar (Sentinel Improved Radar Programs) using "Mankaruse et, al " Patented Technology.* Participate in several proposals, conceptual design, analysis and program design phases. Control budget, schedule, and program planning. Generate Engineering Processes. *US Patent by "Mankaruse et, al" is used in Raytheon, Lockheed \$23.8M for high energy laser weapon development program awarded in 2010, and completed in 2016. It is also used by Raytheon in the 45 month Thermal Ground Plane development program for DARPA ending on 4th quarter 2011. Used extensively by Raytheon in the Anti-Ballistic Missile Defense THAAD Systems. Work in Military Aircraft Landing Gear Program.* Wrote Technical Proposals and Performed project management and technical presentations at the Raytheon annual Mechanical Material and Structure Symposium. Member Raytheon Thermal Community of Practice. Six Sigma (6 σ) Specialist.

DELTA ENGINEERS | HUNTINGTON BEACH, CALIFORNIA

Engineering Manager – Mechanical Engineer Engineer (Lead) 2000 – 2004

Military / Aerospace and Commercial Industries projects and systems, including air refueling systems. Submitted multiple SBIR proposals for topics of different DoD agencies Including Air Force, Navy, Army and Missile Defense Agency (MDA). Developed and patented *High Performance Cold Plate* using two-phase heat transfer concept, and *High-Performance Cooling Systems* using air, liquid and radiation cooling. Applications of ground, sea, avionic, space, radars, laser, medical equipment, and internet switches cooling. High heat-flux electronics cooling with heat density up to 1,000 watts/cm² including heat pipe applications. *Developed and patented Computer CPU/GPU two-phase liquid/air cooling systems are in use now for Computers/Workstations and Servers all around the world.* Internet Data Center Liquid and Air Cooling Technology. Worked as Consultant Professional Mechanical Engineer through CDI Corporation for Boeing Aerial Refueling System of Transferring Boeing 767 Aircraft to an Air Refueling Tanker. Designed the Aerial Refueling System including Stress Analysis, Thermal Design and analysis and Dynamics Design (Shock and Vibration Analysis).

NAGUI MANKARUSE

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(mankaruse@alumni.usc.edu),

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ITT INDUSTRY | VAN NUYS, CALIFORNIA

Member of Technical Staff 2001 – 2002

Directed the design and development of mechanical systems of mobile radar systems including conceptual design, hydraulic systems, shock & vibration, thermal and HVAC for air and liquid cooled MACS and SPS-48E radar systems. Establishing and maintaining schedules budgets and Status for assigned programs and risk analysis, contributing to proposal activities & technical presentations.

TERADYNE INC | AGOURA HILLS, CALIFORNIA

Mechanical Engineer 1997 – 2001

Directed the development of high-density electronic packaging for Automatic Test Equipment including thermal analysis of air & liquid cooling. Manage mechanical engineering group for the design & development of projects. Experience in system innovation to solve complex problems.

- Saved \$30 million, through Six Sigma (6 σ), by inventing a patented cold plate design for liquid cooling of electronic circuit boards for the J-973 and MSO projects, used in J-2 (ATE).
- Performed systems thermal analysis of electronic modules including printed circuit boards packaged in card cages and racks using Flowtherm software versions 1.4, 2.0, and 2.1.

LITTON DATA SYSTEMS | VAN NUYS & MOORE PARK, CALIFORNIA

Technical Manager / Product Manager - Mechanical Engineer 1988 – 1997

Managed TAOC MCE - P³I (Tactical Air Operation Center) product development programs. Provided technical direction, budget, schedule control, and status reporting for the functional disciplines of product development. Designed and developed mechanical engineering projects, Rapid Deployment System. HTU, and THAAD, OMNIBUS JTIDS for the Air Force and the Marines. Performed system C. G. analysis, Shock & Vibration, Stress Analysis, Risk Management and Environmental Testing. Wrote Proposals, and Technical Presentations. analysis, Shock & Vibration, Stress Analysis, Risk Management and Environmental Testing. Wrote Proposals, and Technical Presentations.

CALIFORNIA STATE UNIVERSITY | LOS ANGELES & FULLERTON, CALIFORNIA

Adjunct Professor Mechanical Engineering 1997 – 2003

Taught senior and graduate level Mechanical Engineering courses and Labs. Including: Heat Transfer, Thermodynamics, Energy Systems, Air Conditioning, Internal Combustion Engines, Fluid Dynamics and Hydraulics, Mechanical Design, Strength of Materials, Engineering Measurements, and Mechanical Vibrations, Piping Design and Applications, and Gas Dynamics.

INTERSTATE ELECTRONICS CORPORATION | ANAHEIM, CALIFORNIA

Staff Mechanical Engineer 1986 – 1988

Directed Mechanical Engineers and Designers in design and development of a Global Positioning System/Range Application Program (GPS-RAP) for the F-16 Fighters.

NAGUI MANKARUSE

Nagui Mankaruse, Resume,
(mankaruse@alumni.usc.edu),

Resume, page 4
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Designed from concept airborne, sea and land based instrumentation systems. Developed requirement, planned and scheduled project / proposal Activities. Responsible for budget analysis and hands-on design and development including Thermal analysis, Shock and Vibration/Stress Analysis, and Weight Analysis.

BABCOCK ELECTROMECHANICAL | ORANGE, CALIFORNIA

Manager Mechanical Engineering Department 1984 – 1986

Directed staff of 65 employees in the design and development of power supplies for fixed wing and rotary aircraft and satellite space applications (Milstar Satellite) including risk management.

EDUCATION

MSME, University of Southern California (USC), Los Angeles

BSME, Ain Shams University, Cairo

TECHNICAL PAPERS

- Penta Chart “High Performance Radar Product Line for Fullerton”, Raytheon NCS Fullerton, CA Innovation Challenge Program, May 14, 2010
- Penta Chart “Two-Phase Cooling of Electronics & Laser Modules”, Innovation Challenge, Raytheon NCS IDEA Program Submission, February 15, 2010
- “Two-Phase Cooling of Electronics and Applications”, Raytheon MMSTN Symposium, Tucson, AZ, October 19 – 22, 2009
- “Computer CPU Two Phase Cooling”, International Microelectronics And Packaging Society (IMAPS), Palo Alto, CA October 23 – 26, 2005
- “Cooling High Heat Flux Electronics & Systems”, International Microelectronics And Packaging Society (IMAPS), Palo Alto, CA October 22 – 24, 2003

ACKNOWLEDGEMENTS

PhD degrees Awarded Testing Different Applications of US Patent “Mankaruse; et al.”

1-Dissertation title “Design and experimental validation of Micro-Nano Structured Thermal Ground Plane for High-g Environment” By Hendrik Pieter Jacobus de Bock University of Cincinnati 4-4-2013

2-Dissertation title “Characterization and Cooling Capacity Enhancement of Porous Ceramic Wick Based Cold Plate” by Maurice Adrian Salinas, University of Texas at Arlington; Dec. 2008

PROFESSIONAL

Licensed Professional Engineer (PE) Mechanical Engineering, by the State of California

NAGUI MANKARUSE