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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ALASKA

UNITED STATES OF AMERICA,)	No. 3:17-cr-00164-TMB
)	
Plaintiff,)	
)	PLEA AGREEMENT
vs.)	
)	
PARAS JHA,)	
)	
Defendant.)	

Unless the parties jointly inform the Court in writing of any additional agreements, this document in its entirety contains the terms of the plea agreement between the defendant and the Prosecuting Offices (the United States Attorney's Office for the District of Alaska and the

Computer Crime and Intellectual Property Section); it does not bind other federal, state, or local prosecuting authorities.

I. SUMMARY OF AGREEMENT, FEDERAL RULE OF CRIMINAL PROCEDURE 11

A. Summary of Agreement

The defendant agrees to plead guilty to the sole count of the Information in this case: conspiracy to violate 18 U.S.C. § 1030(a)(5) in violation of 18 U.S.C. § 371. The Prosecuting Offices agree not to prosecute the defendant further for any other offense related to the events that resulted in the charge contained in the Information.

The defendant will waive all rights to appeal the conviction and sentence imposed under this agreement. The defendant will also waive all rights to collaterally attack the conviction and sentence, except on the grounds of ineffective assistance of counsel or the voluntariness of the plea.

B. Federal Rule of Criminal Procedure 11

Unless the parties otherwise inform the Court in writing, Federal Rule of Criminal Procedure 11(c)(1)(A) and (B) will control this plea agreement. Thus, the defendant may not withdraw from this agreement or the guilty plea if the Court rejects the parties' sentencing recommendations at the sentencing hearing.

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II. CHARGES, ELEMENTS, FACTUAL BASIS, STATUTORY PENALTIES AND OTHER MATTERS AFFECTING SENTENCE, FORFEITURE, RESTITUTION

A. Charges

The defendant agrees to plead guilty to the sole count of the Information:

- 1. Conspiracy to violate 18 U.S.C. § 1030(a)(5)(A) in violation of 18 U.S.C. § 371;**

B. Elements

The elements of the charges to which the defendant is pleading guilty are as follows:

- 1. An agreement between the defendant and at least one other person to commit a violation of 18 U.S.C. 1030(a)(5)(A) (causing intentional damage to a protected computer, to wit knowingly causing the transmission of a program, code, or command to a computer with the intention of impairing without authorization the integrity or availability of data, a program, system, or information; and the computer was used in or affected interstate or foreign commerce or communication);**
- 2. The defendant became a member of the conspiracy knowing of at least one of its objects and intending to help accomplish it; and**
- 3. One of the members of the conspiracy performed at least one overt act for the purpose of carrying out the conspiracy.**

C. Factual Basis

The defendant admits the truth of the allegations in the sole count of Information and the truth of the following statement, and the parties stipulate that the Court may rely upon this statement to support the factual basis for the guilty plea and for the imposition of the sentence:

Beginning in August 2016, Paras Jha agreed to work together with identified persons to create a botnet – a collection of computers infected with malicious software and controlled as a group without the knowledge or permission of the computers' owners. Jha and his co-conspirators built the botnet comprised primarily of hijacked internet-connected home computing devices in order to: (1) initiate powerful distributed denial of service attacks against business competitors and others against whom Jha and his co-conspirators held grudges; and (2) provide a source of revenue to Jha and his co-conspirators, who could (a) rent the botnet to third-parties in exchange for payment; and (b) use the botnet to extort hosting companies and others into paying protection money in order to avoid being targeted by denial of service attacks.

Working together, Jha and his co-conspirators successfully infected hundreds of thousands of internet-connected computing devices, including computers in Alaska and other states, with malicious software known as Mirai and enlisted these devices into a large botnet, known as the Mirai botnet.

Jha and his co-conspirators would scan the internet for vulnerable devices and, without authorization, attempt to gain administrative access to those devices through the use of credentials that they were not authorized to employ. Jha and his co-conspirators

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attempted to discover both known and previously undisclosed vulnerabilities that would allow them to surreptitiously attain administrative or high-level access to victim devices for the purpose of forcing the devices to participate in the Mirai botnet. Utilizing undisclosed vulnerabilities meant that Jha and his co-conspirators would not have to compete with other criminal actors seeking to develop illicit botnets for access to these devices. Devices with such vulnerabilities were compromised by Jha and his co-conspirators without authorization of the owner of the affected devices.

In August and September 2016, during the course of the conspiracy, Jha and his co-conspirators used the Mirai botnet they created to initiate denial of service attacks against a number of U.S.-based hosting companies and other targets. Distributed denial of service (“DDOS”) attacks occur when criminal actors use multiple devices acting in unison to flood the victim’s Internet connection. The overwhelming amount of traffic generated by such an attack, results in the target computer being unable to send, receive or respond to commands. DDOS attacks are often directed at servers that host websites, with the intent of rendering those websites unavailable to the public. In addition to the damage inflicted on the intended target, DDOS attacks can result in significant collateral consequences for upstream providers as well. The DDOS attacks conducted by Jha and his co-conspirators caused loss during a one-year period aggregating at least \$5,000 in value and caused damage affecting 10 or more protected computers during a 1-year period.

In addition, during the same period, Jha and his co-conspirators granted access to their Mirai botnet to other criminals in exchange for payment. With the approval of Jha and his co-conspirators, these customers used the Mirai botnet to conduct distributed denial

of service attacks that caused loss during a one-year period aggregating at least \$5,000 in value and caused damage affecting 10 or more protected computers during a 1-year period.

Jha personally performed a number of acts in furtherance of the conspiracy, including, but not limited to:

- (1) In or about July 2016, Jha wrote and implemented computer code with his co-conspirators that enabled them to control and direct devices infected with the Mirai malware. Over 300,000 devices ultimately became part of the Mirai botnet and were used by Jha and others to unlawfully participate in DDOS attacks and other criminal activity. Some of these devices were located in the District of Alaska.
- (2) From August to September 30, 2016, Jha conspired to conduct DDOS attacks against websites and web hosting companies located in the United States and Abroad.
- (3) In August 2016, while directing a DDOS attack against a U.S. company, Jha contacted the company and demanded payment in exchange for halting the attack.
- (4) From September to October 2016, Jha publicly promoted Mirai on a variety of forums. Using monikers such as “ogmemes” and “Anna Senpai,” Jha advertised the botnet and discussed its capabilities on discussion boards frequented by cyber criminals. Jha and his co-conspirators actively solicited criminal clients for Mirai, serving as a point of contact for individuals

interested in leasing the botnet and negotiating with prospective customers in order to generate illicit proceeds.

- (5) From August to September 2016, Jha set up and maintained technical infrastructure essential to the operation of Mirai. Jha ran Mirai on virtual machines running on his own hardware, which he stored and maintained at his family residence.
- (6) From August to September 2016, Jha conspired to set up and maintain technical infrastructure relating to the command and control of the Mirai botnet at hosting providers and web optimization services, essential to the operation of Mirai.
- (7) In August 2016, Jha engaged in a feud with rival DDOS botnet operators, during which period Jha generated and sent fraudulent abuse complaints to hosting providers associated with the rival group. Jha also conspired to conduct DDOS attacks against Internet architecture associated with this group. Jha further participated in a Border Gateway Protocol (BGP) hijacking scheme in which Jha and his co-conspirators fraudulently gained control over IP addresses that were in legitimate use by third parties.
- (8) In or about September and October 2017, Jha took steps to destroy or conceal evidence from law enforcement, in furtherance of the conspiracy. Jha securely erased the virtual machine used to run Mirai on his device. Jha posted the Mirai code online, in order to create plausible deniability if law

enforcement found the code on computers controlled by Jha or his co-conspirators.

D. Statutory Penalties and Other Matters Affecting Sentence

1. Statutory Penalties

The maximum statutory penalties applicable to the charge to which the defendant is pleading guilty, based on the facts to which the defendant will admit in support of the guilty plea, are as follows:

Count 1: Conspiracy to violate 18 U.S.C. § 1030(a)(5)(A)

- 1) Imprisonment: Five years
- 2) Fine: \$250,000 or twice the pecuniary gain or loss of the offense
- 3) Supervised Release: Three years
- 4) Special Assessment: \$100

2. Other Matters Affecting Sentence

a. Conditions Affecting the Defendant's Sentence

The following conditions may also apply and affect the defendant's sentence: 1) pursuant to Comment 7 of U.S.S.G. § 5E1.2, the Court may impose an additional fine to pay the costs to the government of any imprisonment and supervised release term; 2) pursuant to 18 U.S.C. § 3612(f), unless otherwise ordered, if the Court imposes a fine of more than \$2,500, interest will be charged on the balance not paid within 15 days after the judgment date; 3) upon violating any condition of supervised release, a further term of imprisonment equal to the period of the supervised release may be imposed, with no credit for the time already spent on supervised release; 4) the Court may order the defendant to

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pay restitution pursuant to the 18 U.S.C. § 3663 and U.S.S.G. § 5E1.1 ; and if 18 U.S.C. § 3663A (mandatory restitution for certain crimes) applies, the Court shall order the defendant to pay restitution.

b. Payment of Special Assessment

The defendant agrees to pay the entire special assessment in this case on the day the Court imposes the sentence. All payments will be by check or money order, and are to be delivered to the Clerk of Court, United States District Court, 222 W. 7th Ave. Box 4, Rm. 229, Anchorage, AK 99513-7564.

c. Consequences of Felony Conviction

Any person convicted of a federal felony offense may lose or be denied federal benefits including any grants, loans, licenses, food stamps, welfare or other forms of public assistance, as well as the right to own or possess any firearms, the right to vote, the right to hold public office, and the right to sit on a jury. If applicable, any defendant who is not a United States citizen may be subject to deportation from the United States following conviction for a criminal offense and will not be permitted to return unless the defendant specifically receives the prior approval of the United States Attorney General.

E. Restitution

The parties agree that the proper restitution amount will be determined at sentencing.

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III. ADVISORY UNITED STATES SENTENCING GUIDELINES, GUIDELINE APPLICATION AGREEMENTS, SENTENCING RECOMMENDATIONS

A. Advisory United States Sentencing Guidelines

The Court must consult the advisory United States Sentencing Commission Guidelines [U.S.S.G.] as well as the factors set forth in 18 U.S.C. § 3553(a) when considering the sentence to impose. The U.S.S.G. do not establish the statutory maximum or minimum sentence applicable to the offense to which the defendant is pleading guilty. The U.S.S.G. are not mandatory and the Court is not bound to impose a sentence recommended by the U.S.S.G.

B. Guideline Application Agreements

Pursuant to Federal Rule of Criminal Procedure 11(c)(1)(B), and to assist the Court in determining the appropriate sentence, the parties stipulate that the Offense Level under the U.S.S.G is not less than:

18 U.S.C. § 371

§ 2B1.1(a)	Base Offense Level	6
§ 2B1.1(b)(2)	Victims (10 or more)	+2
§ 2B1.1(b)(10)	Sophisticated means	+2

The parties have not reached an agreement on the amount of loss, which will be determined at sentencing.

1. Acceptance of Responsibility

If the United States concludes that the defendant has satisfied the criteria set out in U.S.S.G. § 3E1.1 and the applicable application notes, the United States agrees to

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recommend the defendant for a two level downward adjustment for acceptance of responsibility and, if U.S.S.G. § 3E1.1(b) applies, to move for the additional one level adjustment for acceptance of responsibility. If, at any time prior to imposition of the sentence, the United States concludes that the defendant has failed to fully satisfy the criteria set out in U.S.S.G. § 3E1.1, or has acted in a manner inconsistent with acceptance of responsibility, the United States will not make or, if already made, will withdraw this recommendation and motion.

C. Sentencing Recommendations

The United States Probation Office will prepare the defendant's pre-sentence report in which it will include a recommended calculation of the defendant's sentence range under the U.S.S.G. Both the United States and the defendant will have the opportunity to argue in support of or in opposition to the guideline sentence range calculation the U.S.P.O. recommends, as well as present evidence in support of their respective sentencing arguments.

The parties are free to recommend to the Court their respective positions on the appropriate sentence to be imposed in this case based on the stipulated facts set forth in Section II.C., any additional facts established at the imposition of sentence hearing, the applicable statutory penalty sections, the advisory U.S.S.G., and the sentencing factors set forth in 18 U.S.C. § 3553.

IV. ADDITIONAL AGREEMENTS BY UNITED STATES

In exchange for the defendant's guilty plea and the Court's acceptance of the defendant's plea and the terms of this agreement, the United States agrees that it will not

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prosecute the defendant further for any other offense – now known – arising out of the subject of the investigation related to the charges brought in the Information in this case and the defendant’s admissions set forth in Section II.C.

Provided, however, if the defendant’s guilty plea or sentence is/are rejected, withdrawn, vacated, reversed, set aside, or modified, at any time, in any proceeding, for any reason, the United States will be free to prosecute the defendant on all charges arising out of the investigation of this case including any charges dismissed pursuant to the terms of this agreement, which charges will be automatically reinstated as well as for perjury and false statements. The defendant hereby agrees that he waives any defense that the statute of limitations bars the prosecution of such a reinstated charge.

V. WAIVER OF TRIAL RIGHTS, APPELLATE RIGHTS, COLLATERAL ATTACK RIGHTS, CLAIM FOR ATTORNEY FEES AND COSTS, AND RULE 410

A. Trial Rights

Being aware of the following, the defendant waives these trial rights:

- the right to have the charges presented to the grand jury prior to entering the guilty plea;
- The right to a speedy and public trial by jury on the factual issues establishing guilt or any fact affecting the mandatory minimum and statutory penalties, and any issue affecting any interest in any assets subject to forfeiture;
- The right to object to the composition of the grand or trial jury;

- The right to plead not guilty or to persist in that plea if it has already been made;
- The right to be presumed innocent and not to suffer any criminal penalty unless and until the defendant's guilt is established beyond a reasonable doubt;
- The right to be represented by counsel at trial and if necessary to have a counsel appointed at public expense to represent the defendant at trial – the defendant is not waiving the right to have counsel continue to represent the defendant during the sentencing phase of this case;
- The right to confront and cross examine witnesses against the defendant, and the right to subpoena witnesses to appear in the defendant's behalf;
- The right to remain silent at trial, with such silence not to be used against the defendant, and the right to testify in the defendant's own behalf; and
- The right to contest the validity of any searches conducted on the defendant's property or person.

B. Appellate Rights

The defendant waives the right to appeal the conviction resulting from the entry of guilty plea to the charge set forth in this agreement. The defendant further agrees that if the Court imposes a sentence that does not exceed the statutory maximum penalties – as set forth in Section II.D. above in this agreement, the defendant waives without exception the right to appeal on all grounds contained in 18 U.S.C. § 3742 the sentence the Court

imposes – including forfeiture (if applicable) or terms or conditions of probation (if applicable) or supervised release, any fines or restitution.

By waiving these rights, the defendant understands that the conviction and sentence the Court imposes will be final. No other court will conduct appellate review of the conviction or the sentence.

The defendant agrees that the appellate and collateral attack waivers contained within this agreement will apply to any U.S.C. § 3582(c) modifications, as well as the district court's decision to deny any such modification.

Should the defendant file a notice of appeal in violation in this agreement, it will constitute a material breach of the agreement. The government is free to reinstate any dismissed charges, and withdraw any motions for downward departures, or sentences below the mandatory minimum made pursuant to 18 U.S.C. § 3553(e).

C. Collateral Attack Rights

The defendant agrees to waive all rights to collaterally attack the resulting conviction and/or sentence – including forfeiture (if applicable) or terms or conditions of probation (if applicable) or supervised release, and any fines or restitution – the Court imposes. The only exceptions to this collateral attack waiver are as follows: 1) any challenge to the conviction or sentence alleging ineffective assistance of counsel – based on information not now known to the defendant and which, in the exercise of reasonable diligence, could not be known by the defendant at the time the Court imposes sentence; and 2) a challenge to the voluntariness of the defendant's guilty plea.

D. Claim for Attorney Fees and Costs

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Because this is a negotiated resolution of the case, the parties waive any claim for the award of attorney fees and costs from the other party.

E. Evidence Rule 410 and Fed. R. Crim. P. 11(f)

By signing this agreement, the defendant admits the truth of the facts in the Factual Basis portion of this agreement set forth in Section II.C. The defendant agrees that the statements made by him in signing this agreement shall be deemed usable and admissible against the defendant as stipulations in any hearing, trial or sentencing that may follow, even if the defendant fails to enter a guilty plea pursuant to this agreement. The foregoing provision acts as a modification, and express waiver, of Federal Rule of Evidence 410 and Federal Rule of Criminal Procedure 11(f).

VI. ADEQUACY OF THE AGREEMENT

Pursuant to Local Criminal Rule 11.2 (d)(7) and (8), this plea agreement is appropriate in that it conforms with the sentencing goals that would otherwise be applicable to the defendant's case if the defendant had gone to trial and had been convicted on all counts in the charging instrument.

VII. THE DEFENDANT'S ACCEPTANCE OF THE TERMS OF THIS PLEA AGREEMENT

I, Paras Jha, the defendant, affirm this document contains all of the agreements made between me – with the assistance of my attorney – and the United States regarding my plea. There are no other promises, assurances, or agreements the United States has made or entered into with me that have affected my decision to enter any plea of guilty or to enter

into this agreement. If there are any additional promises, assurances, or agreements, I and the United States will jointly inform the Court in writing before I enter my guilty plea.

I understand that no one, including my attorney, can guarantee the outcome of my case or what sentence the Court may impose if I plead guilty. If anyone, including my attorney, has done or said anything other than what is contained in this agreement, I will inform the Court when I stand before it to enter my plea. If there were, I would so inform the Court.

I enter into this agreement understanding and agreeing that the conditions set forth herein are obligatory and material to this agreement and that any failure on my part to fulfill these obligations will constitute a material breach of this agreement. If I breach this agreement, I agree the United States, in its sole discretion, may withdraw from this agreement and may reinstate prosecution against me on any charges arising out of the investigation in this matter. If my compliance with the terms of this plea agreement becomes an issue, at an appropriate hearing, during which I agree any of my disclosures will be admissible, the Court will determine whether or not I have violated the terms of this agreement. I understand the government's burden to prove a breach will be by a preponderance of the evidence.

I understand the Court will ask me under an oath to answer questions about the offense to which I am pleading guilty and my understanding of this plea agreement. I understand that I may be prosecuted if I make false statements or give false answers and may suffer other consequences set forth in this agreement.

I have read this plea agreement carefully and understand it thoroughly. I know of no reason why the Court should find me incompetent to enter into this agreement or to enter my plea. I enter into this agreement knowingly and voluntarily. I understand that anything that I discuss with my attorney is privileged and confidential, and cannot be revealed without my permission. Knowing this, I agree that this document will be filed with the Court.

I am fully satisfied with the representation given me by my attorney and am prepared to repeat this statement at the time I stand before the Court and enter my guilty plea. My attorney and I have discussed all possible defenses to the charges to which I am pleading guilty. My attorney has investigated my case and followed up on any information and issues I have raised to my satisfaction. My attorney has taken the time to fully explain the legal and factual issues involved in my case to my satisfaction. We have discussed the statutes applicable to my offense and sentence as well as the possible effect the U.S.S.G. may have on my sentence.

Based on my complete understanding of this plea agreement, I therefore admit that I am guilty of the sole count of the Information.

DATED: 11/28/17



Paras Jha
Defendant

As counsel for the defendant, I have conveyed all written plea offers and I have discussed the terms of this plea agreement with the defendant, have fully explained the charge to which the defendant is pleading guilty and the necessary elements, all possible defenses, and the consequences of a guilty plea to a felony. Based on these discussions, I have no reason to doubt that the defendant is knowingly and voluntarily entering into this agreement and entering a plea of guilty. I know of no reason to question the defendant's

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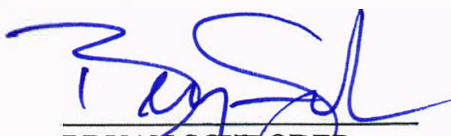
competency to make these decisions. If, prior to the imposition of sentence, I become aware of any reason to question the defendant's competency to enter into this plea agreement or to enter a plea of guilty, I will immediately inform the court.

DATED: 11/28/17 _____

Robert Stahl
Attorney for Paras Jha

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On behalf of the United States, I accept the defendant's offer to plead guilty under the terms of this plea agreement.

DATED: 11/28/17 _____

BRYAN SCHRODER
United States of America
United States Attorney