Department of Justice

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FEDERAL CYBERSLEUTHERS ARMED WITH FIRST-EVER COMPUTER WIRERTAP ORDER NET INTERNATIONAL HACKER CHARGED WITH ILLEGALLY ENTERING HARVARD AND U.S MILITARY COMPUTERS

WASHINGTON, D.C. -- The first use of a court-ordered wiretap on a computer network led today to charges against an Argentine man accused of breaking into Harvard University's computers which he used as a staging point to crack into numerous computer sites including several belonging to the Department of Defense and NASA.

The wiretap, on the computer of Harvard's Faculty of ~~Arts~~ and Sciences during the last two months of 1995, resulted in the filing of a criminal complaint against 21-year-old Julio Cesar Ardita of Buenos Aires. An arrest warrant has been issued for Ardita.

Attorney General Janet Reno and United States Attorney Donald K. Stern of the District of Massachusetts said a wiretap order, typically employed to monitor telephone conversations of organized crime and drug suspects, was used to trace and identify the illegal intruder while preserving the confidentiality of legitimate communications.

The Attorney General said Ardita was believed to have illegally entered computer systems at additional U.S. universities, including Cal Tech, the University of Massachusetts, and Northeastern University, and sites in other countries such as Korea, Mexico, Taiwan, Chile and Brazil.

She said Ardita obtained access to computer systems containing important and sensitive information in government research files on satellites, radiation and energy related engineering. Ardita was not accused of obtaining classified information related to national security.

The intruder was identified by using a specially configured

(MORE)

monitoring computer that conducted the complex searches needed to isolate his activities.

Law enforcement agencies have done electronic surveillance on computer systems in the past with the consent of the users. Court authorization was deemed necessary in this case because the Harvard computer system does not post a banner informing users who log onto the system that their communications might be monitored.

"This is an example of how the Fourth Amendment and a court order can be used to protect rights while adapting to modern technology," said Attorney General Reno.

"This is doing it the right way," she said. "We are using a traditional court order and new technology to defeat a criminal, while protecting individual rights and Constitutional principles that are important to all Americans."

According to the complaint, the international hacker invaded the Harvard computer through a broadly accessible modem bank and the Internet, and there stole a series of accounts and passwords. Using these stolen accounts as his base, Ardita gained unauthorized access to computers at various U.S. military sites across the country, including the Navy Research Laboratory, NASA's Jet Propulsion Laboratory and Ames Research Center, the Los Alamos National Laboratory and the Naval Command Control and Ocean Surveillance Center. He also tried repeatedly but unsuccessfully to enter the Army Research Laboratory computer system.

On December 28, 1995, Ardita's computer files and equipment were seized at his home in Buenos Aires by authorities acting on information supplied by Telecom Argentina which U.S. authorities had contacted for assistance in tracking the intruder.

"This is a case of cyber-sleuthing, a glimpse of what computer crime fighting will look like in the coming years," said U.S. Attorney Donald K. Stern. "We have made enormous strides in developing the investigative tools to track down individuals who misuse these vital computer networks."

The investigation consisted of three phases:

First, in late August, 1995, the Naval Command Control and Ocean Surveillance Center detected an intrusion into its computer network, which contains sensitive, but not classified, Navy research files on such things as aircraft design, radar technology and satellite engineering. The intruder was discovered to have broken into other computer networks, as well,

from the Harvard Faculty of Arts and Sciences (FAS Harvard) host computer. Initially, it was impossible to identify the intruder or where he was coming from. The FAS Harvard computer is widely accessible to approximately 16,500 account holders through modems and through the Internet, and the intruder was stealing and then using many different Harvard account holders' passwords.

However, according to the government's complaint, analysis of the intruder's electronic habits revealed certain patterns. The Naval Criminal Investigative Service did a painstaking analysis of the intruder's activities. Investigators were able to identify words and phrases used by the intruder not commonly used in the same manner by legitimate users of Harvard's network. The patterns included signature programs he used to intercept passwords, pirated accounts he used as a basis for his criminal activity, and sets of overlapping computer systems he seemed to break into and work through.

"These patterns of behavior provided us with a general description of the intruder -- we knew his modus operandi, his hangouts, his patterns of computer speech, the computer tools he used for his break-ins, and his disguises," said Stern.

In the second phase of the investigation, the Naval Criminal Investigative Service and the FBI obtained court authorization from a federal judge in Boston to conduct electronic surveillance of the intruder's communications to and from the FAS Harvard host computer.

"We intercepted only those communications which fit the pattern," explained Stern. "Even when communications contained the identifying pattern of the intruder, we limited our initial examination to 80 characters around the tell-tale sign to further protect the privacy of innocent communications."

During the course of this electronic surveillance, the intruder was observed referring to himself by the moniker "griton," which is Spanish for "screamer." He also was repeatedly observed accessing the FAS Harvard host computer from four computer systems in Buenos Aires.

In the third phase of the investigation, the Department of Justice confirmed the real identity of "griton." Among other things, investigators discovered that defendant Ardita had used the name "griton" years before on a computer bulletin board. That old bulletin board had been posted publicly on the Internet by its creator, and so was accessible to investigators. Ardita advertised his own hacker bulletin board, "Scream!," in his posting and listed a telephone number at his residence where the Scream! bulletin board could be also accessed. Records in the

United States and Argentina were analyzed, which further confirmed Ardita's telephone line in Argentina was being used to unlawfully access the Harvard system.

In addition to facing U.S. felony charges, Ardita is under investigation in Argentina. The two governments have been exchanging information.

"We will work with our foreign counterparts to achieve justice," said the Attorney General. "International teamwork is being applied to international crimes," she said.

In the United States, the charges are: fraudulent possession of unauthorized computer passwords, user identification names, codes and other access devices; destructive activity in connection with computers; and illegal interception of electronic communications. These are contained in a criminal complaint issued by U.S. Magistrate Judge Marianne Bowler.

"This case demonstrates that the real threat to computer privacy comes from unscrupulous intruders, not government investigators," said Attorney General Reno. She complimented the agents who worked on the case for developing procedures that assured that monitoring would be focused on the intruder's unlawful activities.

This case was investigated by Naval Criminal Investigative Service and the Federal Bureau of Investigation. Stephen P. Heymann, Deputy Chief of the Criminal Division of the United States Attorney's Office for the District of Massachusetts, is prosecuting the case, and supervised the electronic surveillance with the assistance of Department of Justice Attorneys Marty Stansell-Gamm of the Criminal Division's Computer Crime Unit and Janet Webb of the Electronic Surveillance Unit of the Criminal Division's Office of Enforcement Operations.

In Boston, additional information can be obtained from Joy Fallon or Anne-Marie Kent, 617-223-9445.

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Intruder Investigation

PHASE 1

August - September, 1995

Multiple intrusions into military computer systems are noted by the Naval Criminal Investigative Service.

These are analyzed and linked to an unknown intruder using accounts on the Internet computer serving the Faculty of Arts and Sciences at Harvard University.

A profile is developed of the intruder, including the sites he has attacked, the accounts he has compromised, and the signature-like tools he has used to compromise the computer systems.

PHASE 2

October - December, 1995

The U.S. Attorney in Boston obtains authorization for the country's first court-authorized wiretap in the middle of a computer network.

To isolate the intruder's communications from those of the legitimate users of the Internet, a high speed computer is used to identify and record only those computer sessions which fit the intruder's profile.

After attacking a site in Taiwan through the Harvard computer network, the intruder is monitored while "chatting" on the Internet using the handle "griton." This and other attacks are traced back to a computer system in Buenos Aires, Argentina.

PHASE 3

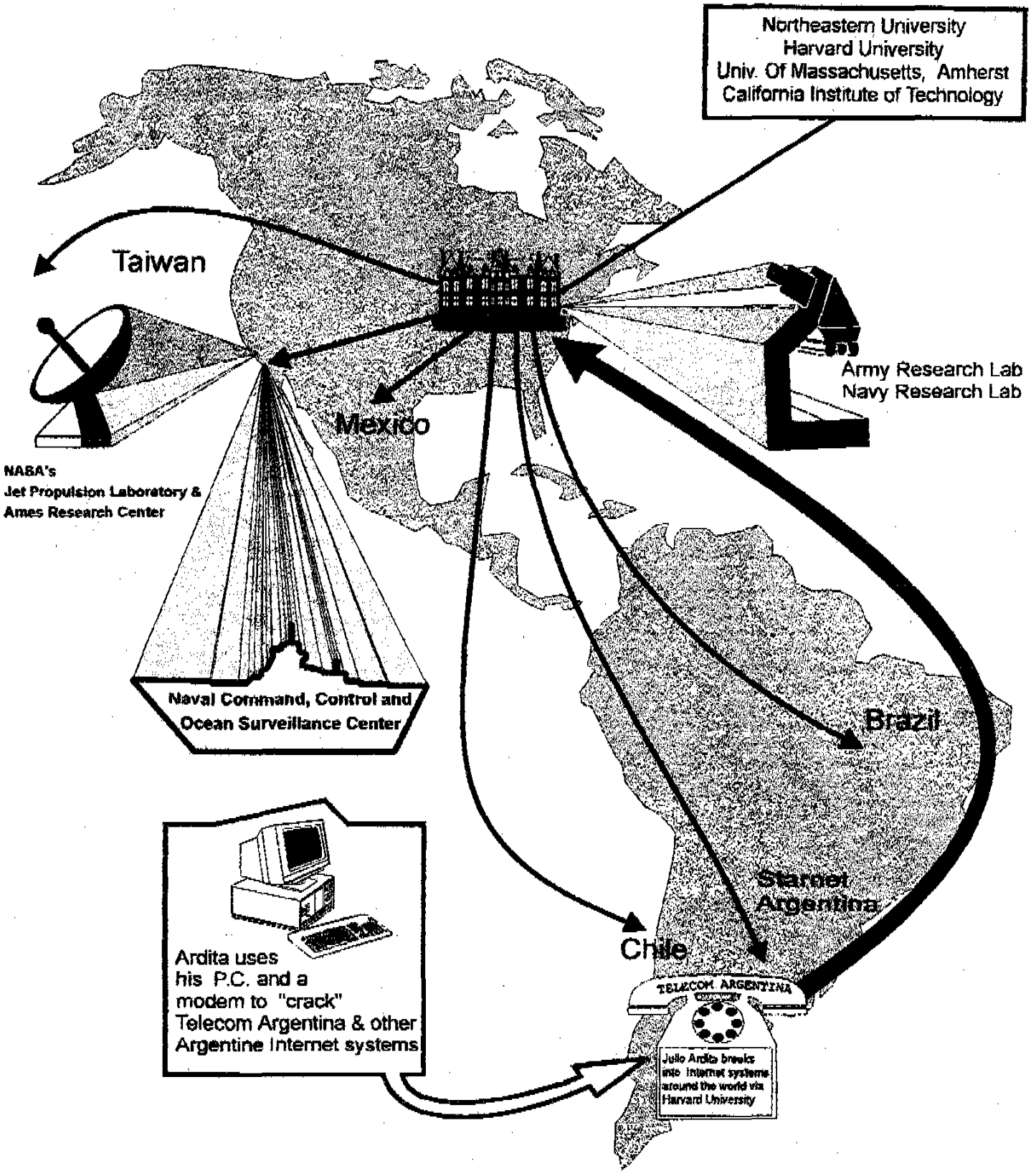
January - February, 1996

Multiple Internet archives are searched for other appearances of "griton."

"Griton" is found to have made a number of descriptive postings on a computer bulletin board frequented by hackers.

This information is correlated with information developed by the Argentine Federal Police and the Federal Bureau of Investigation.

"Griton" is identified as Julio Cesar Ardita, a system operator of a "pirate" computer bulletin board system which specialized in "hacking," "cracking" and "phone phreaking."


Northeastern University
Harvard University
Univ. Of Massachusetts, Amherst
California Institute of Technology
Taiwan
Army Research Lab
Navy Research Lab
Mexico
NASA's
Jet Propulsion Laboratory &
Ames Research Center
Naval Command, Control and
Ocean Surveillance Center
Brazil
Starnet
Argentina
Chile
Ardita uses
his P.C. and a
modem to "crack"
Telecom Argentina & other
Argentine Internet systems
TELECOM ARGENTINA
Julio Ardita breaks
into Internet systems
around the world via
Harvard University

AFFIDAVIT IN SUPPORT OF COMPLAINT

I, Peter Garza, having been duly sworn, hereby depose and state:

1. I am an "investigative or law enforcement officer of the United States" within the meaning of Title 18, United States Code, Section 2510(7), that is, I am an officer of the United States empowered to conduct investigations of offenses enumerated in Title 18, United States Code, Section 2516, under the circumstances provided herein. I am a Special Agent with the Naval Criminal Investigative Service (NCIS), assigned to the NCIS Field Office in Los Angeles, California. NCIS is empowered by law, among other things, to investigate all violations of federal law committed against the Department of Defense. I have been a Special Agent with NCIS for approximately 6 years. I am currently assigned as the Computer Crimes Coordinator for the NCIS Field Office in Los Angeles. During my employment as a special agent with NCIS I have worked on numerous criminal investigations involving the use and misuse of computers that required the application of my training and experience in computer forensics. My investigative training includes:

a. A computer forensics course conducted by the International Association of Computer Investigative Specialists (November, 1991);

b. Participation in the Telecommunications Fraud Training program conducted by the Federal Law Enforcement Training Center (August, 1992);

c. A course in computer evidence analysis conducted by

the Federal Law Enforcement Training Center (March, 1994); and,

d. A Novell Network Technologies course taught by Computer Focus of Oxnard, California (February, 1995).

2. I am familiar with, and have participated in, all of the traditional methods of investigations, including, but not limited to, electronic surveillance, visual surveillance, general questioning of witnesses, use of the grand jury, use of search warrants, use of confidential informants, use of pen register and trap and trace devices, and the use of undercover agents.

3. This affidavit is submitted in support of an application for a complaint against Julio Cesar Ardita ("Ardita"). As detailed below, there is probable cause to believe that Ardita has committed the following offenses:

a. Fraudulent possession of unauthorized computer passwords, user identification names, codes and other access devices[1], in violation of Title 18, United States Code, Section 1029 (a)(3);[2]

b. Fraudulent and destructive activity in connection with computers, in violation of Title 18, United States Code,

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[1] An "access device" is defined in Title 18, United States Code, Section 1029(e)(1) to include "any ...code, account number, or other means of account access that can be used, alone or in conjunction with another access device, to obtain money, goods, services or any thing of value..."

[2] Pursuant to Title 18, United States Code, Section 1029(a)(3), it is a felony to "knowingly and with intent to defraud possess[] fifteen or more devices which are . . . unauthorized access devices."

Section 1030(a)(5);[3] and

c. Illegal interception of electronic communications, in violation of Title 18, United States Code, Section 2511(1)(a).

4. I am familiar with all aspects of this investigation, and the circumstances surrounding the facts and the offenses described in this affidavit. I make this affidavit, in part, on personal knowledge based on my participation in this investigation and, in part, upon information and belief. I have personally interviewed personnel who manage or assist in the management of most of the computer systems discussed in this affidavit and reviewed records from their computer systems made available to me. In addition, I have received information through oral and written reports about this and other investigations from agents and computer experts employed by NCIS, the Federal Bureau of Investigation (in cooperation with which this investigation is being conducted) and NASA's Office of Inspector General. Since this affidavit is being submitted for the limited purpose of seeking a complaint against Julio Cesar Ardita, I have not set forth each and every fact

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[3] Pursuant to Title 18, United States Code, Section 1030(a)(5), it is unlawful for a person, "through means of a computer used in interstate commerce or communications, knowingly [to] cause the transmission of a program, information, code or command to a computer system if - (i) the person causing the transmission intends that such a transmission will - (I) damage, or cause damage to, a computer, computer system, network, information, data or program; [and] . . . (ii) the transmission of the harmful component of the program, information, code or command - (I) occurred without [] authorization . . . and (II) (aa) causes loss or damage to one or more other persons of value aggregating $1,000 or more during any 1-year period."

learned in the course of the investigation.

INTRODUCTION

Background

5. The investigation resulting in this criminal complaint had three phases which, for clarity, will be followed in this affidavit. During the initial phase, a then unknown intruder (referred to in this affidavit initially as "the Intruder") was discovered to be making unauthorized use of accounts on the computer system administered by the Faculty of Arts and Sciences at Harvard University, Cambridge, Massachusetts and using these accounts without authorization to access and to attempt to access other computer systems connected to Harvard's through the Internet. A computer, such as Harvard's, accessible by means of the Internet, is known as a "host computer." [4] Accordingly, the system administered by the Harvard Faculty of Arts and Sciences frequently will be referred to in this affidavit as the "FAS Harvard host."

6. Because the Intruder was accessing the FAS Harvard host through a widely known modem bank and other Internet hosts and because he was making unauthorized use of the accounts through which he was accessing the FAS Harvard host and other Internet hosts (effectively using the legitimate account holders' identities as his aliases or covers), it was not possible initially to determine the Intruder's true identity.

7. Nonetheless, it was possible to distinguish the Intruder

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[4] A glossary containing specialized terms used in this Affidavit is appended.

from other users of the FAS Harvard host and the Internet through his repetition of certain conduct when using the FAS Harvard host. This identifying behavior, detailed below, involved (1) use of programs with unique names, (2) to obtain account names and associated passwords through the unlawful interceptions of electronic communications, (3) on overlapping groups of host computer systems.

8. During the second phase of the investigation, the Naval Criminal Investigative Service and the Federal Bureau of Investigation obtained court authorization to conduct electronic surveillance of the Intruder's communications to and from the FAS Harvard host. These communications were identified and isolated by a monitoring computer which was triggered by the tell-tale use of accounts which the Intruder had compromised, communications from Internet host computers from which the Intruder was accessing the FAS Harvard host, communications to Internet host computers which the Intruder was attacking from the FAS Harvard host, and the use of unique files and programs which the Intruder utilized when engaged in his unlawful activities.

9. During the course of the electronic surveillance, the Intruder was monitored referring to himself by the moniker "griton," which is Spanish for "screamer." He also was repeatedly observed accessing the FAS Harvard host from four computer systems in Buenos Aires, Argentina.

10. During the third, and final phase, the Intruder - then located in Buenos Aires, Argentina, and known by his moniker

"griton" - was identified as Julio Cesar Ardita. As detailed in ¶¶ 71-76 below, this identification was accomplished primarily through the examination of previous activity of "griton" on a computer bulletin board, the contents of which were accessible on the Internet, and the analysis of records, in the United States and Argentina.

Offenses Committed by Ardita

11. While many computer systems allow guest privileges for certain functions, most, including those referred to in this affidavit, require an individual to have an authorized account on the system to have access to particular programs and files on that system. Insofar as they can be used alone or in conjunction with other access devices to obtain services, information and other things of value, the account names or numbers and associated passwords or codes are access devices within the definition of Title 18, United States Code, Section 1029(e)(1).

12. There is probable cause to believe, for reasons detailed below, that Ardita has obtained numerous account/password combinations on the FAS Harvard host without authorization and used those accounts to obtain and attempt to obtain without authorization account/password combinations on other systems connected to the FAS Harvard host through the Internet. The possession of fifteen or more unauthorized account/password combinations (access devices, as defined) knowingly, and with intent to defraud, is a violation of Title 18 U.S.C. § 1029(a)(3).

13. Ardita was able to obtain account password combinations

through "sniffer" programs which he transmitted to host computers at victim sites.[5] A sniffer program intercepts electronic communications over the system on which it is placed containing account/password combinations and stores them for later recovery. As each of the attacked host computers was connected to host computers in other states and countries through the Internet, and thus affected interstate and foreign commerce, there is probable cause to believe Ardita's unlawful interception of electronic communications through the planted sniffer programs violated Title 18, United States Code, Section 2511(1). Further, the transmission in conjunction with the sniffer programs of camouflaging programs, which destroyed records otherwise kept on the victim host computers, evidenced probable violations of Title 18, United States Code, Section 1030(a)(5). [6]

Harm Caused by the Intrusions

14. As described below, a number of the host computers to which the Intruder gained unauthorized access are affiliated with the Department of Defense. The Department of Defense network hosts which have been compromised by Ardita reside in networks which contain sensitive and proprietary, although not classified,

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[5] It has not been possible, so far, to determine whether Ardita downloaded any files from the victim computers.

[6] 1030(a)(5) requires as a jurisdictional prerequisite that the loss or damage to one or more persons aggregate $1000 or more during a one year period. One of the agencies into which Ardita gained unauthorized access and destroyed information and data to conceal that access, has estimated that it cost in excess of $100,000 to investigate the intrusions from the FAS Harvard host during the periods Ardita was active and to reconfigure its systems in response to those intrusions.

government information. These networks store information related to U.S. Department of the Navy and NASA research programs and contain files relating to research on state-of-the-art satellites, radiation and energy related engineering. Ardita's unauthorized access to the Department of Defense network hosts potentially gave him the ability to steal and transfer these results and files.[7]

15. Ardita's unauthorized access to these systems, and the use to which Ardita made of this access, put the violated network hosts, themselves, at risk of harm, as well. Ardita used programs to obtain broad and powerful access on network hosts he had broken into, known as "root" access. Root access allowed Ardita to alter programs to conceal his activity and could enable him to alter, erase or destroy files on the network. In addition, by gaining root access and running sniffer programs, Ardita could intentionally or accidently cause the network hosts to erase files or become inaccessible to the legitimate users of the network.

16. These actual and potential harms are not limited to the known, violated hosts described in this affidavit. Because the "sniffer" programs which Ardita installed on the targeted network hosts enabled Ardita to obtain additional user identifications and passwords and thus to gain access to additional network hosts, other as yet unidentified network hosts have been and will be equally at risk of theft of proprietary information and harm.

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[7] The cost of isolating an intrusion and reconfiguring a system to protect its files after an intrusion can readily cost tens of thousands of dollars in lost productivity of the system's administrators and users, and lost access to the system during the reconfiguration process.

Initial Identification of the Intruder Through His Pattern of Unlawful Activity

17. Host computers, i.e., computers accessible by means of the Internet, are identified by an electronic address, known as an internet host name. For example, the host computer administered by the Harvard Faculty of Arts and Sciences at Harvard is named fas.harvard.edu. The host's given name is "fas"; "harvard" identifies the location of the host; and "edu" identifies the owner of the system as an educational system.

18. All electronic communications transmitted across networks of computers are transmitted in "packets." The information to be communicated is broken down into small units. Each unit, or packet, contains the address of the sending computer, the address of the receiving computer, and some portion of the message or data being communicated. These packets are dispersed throughout the network, each finding its own way to the receiving computer. Upon arrival, the packets are reassembled into a coherent message or data file. Consequently, the host computer that sends an electronic communication usually can be identified by the receiver.

19. Beginning by approximately July 12, 1995, host computers in several states and in Mexico and the United Kingdom reported unauthorized attempts to intrude, and successful intrusions, originating from fas.harvard.edu, the FAS Harvard host.

<u>The Beginning of the Intrusion Investigation</u>

20. This investigation began after an intrusion was detected into a computer network operated by the Naval Command, Control and Ocean Surveillance Center ("NCCOSC"). NCCOSC is a unit of the

United States Navy located in, among other places, San Diego, California. NCCOSC maintains several computer networks which, in order to communicate with each other and with other computer networks around the world, are accessible by means of the Internet.

21. I have spoken with Ronald Broersma, Corporate Network Administrator, NCCOSC San Diego, and with Lieutenant Commander (LCDR) Dean Rich, assigned to the Fleet Information Warfare Center, Norfolk, Virginia. LCDR Rich is a recognized expert in information security. His academic background includes a Master in Science degree in Computer Science from the Naval Postgraduate School, Monterey, California. The corporate network administrator, LCDR Rich and I each reviewed the victim computer networks at NCCOSC and the audit logs associated with these computers. These discussions and reviews revealed the following.

22. On August 25, 1995, an individual using the user identification "chult" accessed the NCCOSC computer host named mindy.nosc.mil. "Chult"[8] accessed mindy.nosc.mil from the FAS Harvard host. "Chult" installed several files onto mindy.nosc.mil.[9] Included in the files installed by "chult" was a program referred to in the industry as a "sniffer" program, a program used frequently by computer intruders to capture packets containing user

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[8] Most Internet computers use the UNIX operating system, which is case sensitive. The case sensitivity will be respected throughout this affidavit except at the beginning of sentences, where the first letter will be capitalized to conform with normal grammatical form.

[9] A directory of network hosts referred to in this Affidavit is appended.

identification and associated passwords for network access. The sniffer program actually intercepts electronic communications as they are transmitted over the network and then stores a selected portion of each communication. In this case, the sniffer program installed by "chult" was designed to store the first 256 bytes of the communications, which often include the user's account name and password. "Chult" named this program "sni256."

23. The "sni256" program installed by "chult" created a file named "test." This file served as the repository for the illegally intercepted user names and passwords. "Chult" also installed a program named "zap." Most Internet host computers use the UNIX operating system. UNIX, in turn, has a utility program named "who" which is used to identify other users currently logged into the network. Information pertaining to users on a UNIX host, used by the "who" utility, is stored on the UNIX host and a continuously-updated log is created. The "zap" program installed by "chult" deleted references to his access in the "who" log. "Chult" also installed a program named "pinga" which, upon review, has been confirmed to obtain "root," or unlimited, access on the compromised network host. With "root" access, the user has the authority to view, alter and install files anywhere on the network host. Such access generally is limited to system administrators.

24. "Chult" was a legitimate user identification which actually belongs to a NCCOSC system administrator. However, this NCCOSC system administrator did not install the programs on August 25 and did not direct or authorize anyone to use his account to do

so.

25. The Intruder from FAS Harvard host repeatedly accessed mindy.nosc.mil using the user name "chult" on August 25, 1995. During one session, the Intruder used mindy.nosc.mil to access another network host named dax.nosc.mil which is the network host for another NCCOSC computer system located in Arlington, Virginia. While accessing dax.nosc.mil, the Intruder installed his "sni256," "test" and "zap" programs and files.

26. The placement of unauthorized files and programs on mindy.nosc.mil was discovered by a NCCOSC system administrator on August 28, 1995. On August 29, 1995, a more comprehensive audit program was activated on mindy.nosc.mil.

27. On August 29, 1995, the Intruder logged into mindy.nosc.mil as "chult" from FAS Harvard host. Specifically, Broersma related that computer records for the NCCOSC network indicate a connection was established by an intruder from FAS Harvard host on August 29, 1995. These records show that an intruder from FAS Harvard host logged into a user account called "chult" on the NCCOSC host known as mindy.nosc.mil. Broersma said the Intruder executed commands to determine who was on the network and then executed the "zap" program to remove records concerning his own access. The Intruder then copied the contents of his "test" file, containing illegally obtained user names and passwords, to his terminal. The Intruder then deleted the contents of the "test" file and restarted the illegal wiretap program, "sni256."

28. Broersma also related that he had detected no intrusion into the NCCOSC network from FAS Harvard host before the intrusion into the host known as irc.nosc.mil, which occurred on or about August 24, 1995. This host also contained the signature "sni256," "test" and "zap" programs and files which had been installed on August 24, 1995. According to Broersma's records, the original connection to mindy.nosc.mil at NCCOSC appears to have occurred via the "chult" user account on irc.nosc.mil, on or before August 25, 1995.

29. On September 4, 1995, the Intruder also used his mindy.nosc.mil connection to access another NCCOSC network host, at the Naval Command Control and Ocean Surveillance Center at San Diego, California, named fountainhead.nosc.mil. Because the Intruder accessed a user name other than "chult" after using "chult" to access the results of the sniffer file installed on mindy.nosc.mil, it is my opinion, based upon my training and experience, that the Intruder used a new account name obtained from his sniffer file on mindy.nosc.mil to give him access to fountainhead.nosc.mil.

30. On September 19, 1995, I spoke with Special Agent Deborah Rocco of the Naval Criminal Investigative Service, who informed me of an interview which she had conducted earlier that day with Darryl Cleveland, the System Manager of the Army Research Lab ("ARL") in Edgewood, Maryland. Darryl Cleveland informed Special Agent Rocco that an intruder from FAS Harvard host had attempted to gain unauthorized access to one of the host computers on ARL's

computer network on or about August 12, 1995, between 4:16 p.m. and 4:19 p.m. Darryl Cleveland related that the attempt appeared to have been unsuccessful. Darryl Cleveland could not pinpoint the user account on FAS Harvard host from which the intrusions had originated.

31. On September 20, 1995, I spoke with Special Agent Gary Walker of the Navy Criminal Investigative Service, who informed me of an interview which he had conducted on September 19, 1995 with the system manager of the Army Research Lab in Aberdeen, Maryland. The system manager informed Agent Walker that an intruder from FAS Harvard host had made approximately ninety attempts to gain unauthorized access to different branches of the ARL's computer network, at different locations throughout the United States. According to the system manager, these attempts took place from August 12, 1995 until August 16, 1995 and appeared to have been unsuccessful. The system manager could not pinpoint the user account on FAS Harvard host from which the intrusions had originated.

32. On October 11, 1995, I spoke with the systems manager for the Electrical Engineering Department of the California Institute of Technology in Pasadena, California ("Caltech"). He explained that on October 4, 1995, he discovered a "sniffer" program called "sni256" was running on a Caltech network host computer known as scrooge.systems.caltech.edu. It was located in a hidden subdirectory called "..." which also contained files called "test" and "zap". As described in this affidavit, "sni256," "test" and

"zap" are signature files used by the Intruder. The systems manager also stated that on the following day, October 5, 1995, the Caltech network host was probed unsuccessfully twice from FAS Harvard host.

Efforts to Identify and Localize the Intruder Within the FAS Harvard host

33. During the latter part of August, September and October, extensive efforts were undertaken to localize and identify the Intruder. Those efforts evidenced defining behaviors including:

(a) The Intruder was accessing and attempting to access without authorization an overlapping set of government and education network hosts from several different accounts at FAS Harvard host; and

(b) The Intruder, once he had obtained unauthorized access to other network hosts, had created files and implanted programs with unique names in a number of those hosts.

34. As summarized herein, the Intruder repeatedly had used changing accounts of the FAS Harvard host to gain unauthorized access to an overlapping group of victim networks. Once on many of the victim networks, the Intruder had installed similar files with identical names, performing similar functions. These files were peculiar to the performance of unauthorized functions associated with "hackers,"[10] in that they enabled the Intruder to gain unauthorized access to accounts on the victim computers and to

[10] A "hacker" is a slang term frequently used to refer to a person who breaks into computer systems with wrongful intent.

conceal the intrusions themselves from system managers who might otherwise detect the intrusions through routine audits of the computer logs. The unique names of the files utilized by the Intruder included "sni256," "test,"[11] "zap," "pinga," "ropt," "roption," "HotterThanMojaveInMyHeart," and "InfamousAngel."[12] Searches of the archives on the Internet have not revealed files performing the same unauthorized functions to have been published on the Internet under the names "sni256," "test," "zap," or "pinga." Further, a check with Special Agent Jolene Smith Jameson at the National Computer Crime Squad, FBI Washington Metropolitan Field Office, Washington, D.C., has revealed that none of these file names have been associated with other groups or individuals involved with "hacker" activity.[13]

35. On September 8, 1995, I spoke with Ron Holland, Networking and Computer Security Group with NASA's Jet Propulsion Laboratory, Pasadena, California. Holland related that he found files similar to those which had been described as being installed by the Intruder at the NCCOSC network. Holland checked a subdirectory called "/bin" on merlin.jpl.nasa.gov and found the file called "pinga". Mr. Holland said systems administrators

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[11] As his unlawful activity continued, "sni256" would be abbreviated as "sni" and "test" would be abbreviated as "tst."

[12] The Intruder created for his files and programs a subdirectory with a unique name, as well, "...".

[13] The file names "ropt," "roption," "HotterThanMojaveIn MyHeart," and "InfamousAngel" have been found to be used by at least one other group, which has made them publicly available over the Internet.

examined this file and it was found to be written to exploit system vulnerabilities and obtain "root" privileges on this host computer. Holland also found a hidden subdirectory named "..." (that is, three dots) which contained files named "sni256," "test" and "zap." Holland confirmed that the "sni256" file was a program that first intercepted users' identification and password commands to the host computer and then [illegible] the intercepted information to another file called "test." Holland said the file called "zap" had been examined and was found to delete records used by the UNIX "who" program on this host computer; the" zap" file on the JPL/NASA hosts was similar to the "zap" program installed on the NCCOSC network host computers, specifically mindy.nosc.mil and dax.nosc.mil.

36. On September 14, 1995, I spoke with Special Agent Thomas Gilchrist, NCIS Los Angeles Field Office, who related that he had re-interviewed Holland, who provided additional information regarding the Intruder's activity. Review of information provided by Mr. Holland confirmed a FAS Harvard host user identified as "margolin" obtained unauthorized access to the "debabani" account on the JPL/NASA network host called merlin.jpl.nasa.gov on or about September 8th. Before or during that session, the file "sni256" had been installed on the system. This unauthorized connection to merlin.jpl.nasa.gov originated from FAS Harvard host.

37. During subsequent discussions and electronic mail communications with Ed Chan, who is the Ames Network Security Manager responsible for ssa1.arc.nasa.gov, I learned that on September 8, 1995, a user from FAS Harvard host connected to an

account with a user identification of "yuen" on an Ames network host known as ssa1.arc.nasa.gov. Mr. Chan told me that he had contacted the authorized user of the account, and the authorized user had reported finding an unfamiliar file named "ropt" in his home directory.[14] Mr. Chan related that examination of the "ropt" file revealed that when executed, it attempted to exploit a known vulnerability in the UNIX operating system to obtain root privileges on the host computer. Root privileges enable a user to control the host computer, allowing the user to run programs such as the sniffer programs found on previous compromised hosts.

38. Mr. Chan's review of the "ropt" file indicated that the file executed commands contained in two files named "HotterThanMojaveInMyHeart" and "InfamousAngel." The script file looked for these files in a subdirectory called "/tmp." The "/tmp" subdirectory is a standard subdirectory in UNIX for temporary files which are deleted if the UNIX computer is restarted. Mr. Chan related the records which were available for the sa1.arc.nasa.gov host indicate that the "ropt" script file and the "HotterThanMojaveInMyHeart" and "InfamousAngel" files in the "/tmp" subdirectory were used in the attempt to gain root privileges with a technique that exploits a known vulnerability in UNIX systems.

39. On September 20, 1995, I spoke with Special Agent Gary Walker, NCIS, Dahlgren, Virginia, who related the following

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[14] A home directory is a user's assigned work space on the host computer and enables the user to store his own computer files and programs.

information he received from Randy Taylor, Network Engineer, Naval Research Laboratory (NRL), Washington, DC.

40. On August 6, 1995, a user from FAS Harvard host successfully gained access to an account named "guest" on a host called i7140rr.itd.nrl.navy.mil and later logged in again on this host to a user account named "wang." Taylor related the account named "shuang" was being used at FAS Harvard host to access the NRL network. Once the "shuang" user from FAS Harvard host gained access to a valid account on i7140rr.itd.nrl.navy.mil, the 42 other network host computers on this network would allow connections using the "wang" account. A search of the computer hosts on this network revealed the file called "pinga" on the hosts known as i7140rr.itd.nrl.navy.mil and abyss.itd.nrl.navy.mil at NRL. This file was used by the "shuang" intruder to obtain root access to i7140rr.itd.nrl.navy.mil on August 7, 1995 and to obtain root access on abyss.itd.nrl.navy.mil on September 11, 1995. In addition the "shuang" intruder created a subdirectory called "..." in the "/usr/etc/" subdirectory, where he installed a file called iss13.jue. This iss13.jue file is a publicly available computer security scanning program which scans a UNIX computer for security vulnerabilities.

41. During my earlier discussions with Broersma he had related a similar file called "pinga," used to obtain root access, was found on mindy.nosc.mil and dax.nosc.mil. Broersma had also described the use of a subdirectory called "..." on mindy.nosc.mil and dax.nosc.mil, where the Intruder attempted to hide files he had

installed on the compromised systems.

42. On September 18, 1995, I contacted a system administrator at the Centro de Computo Academico, Departamento de Fisica, Universidad de Sonora (Academic Computing Center, Physics Department, University of Sonora), Hermosillo, Sonora, Mexico. The system administrator related that on August 25, 1995, computer logs for network host fisica.uson.mx at the University of Sonora Mexico showed that, earlier that day, an unauthorized user had logged into a user account named "garibay" from FAS Harvard host. The system administrator related that the Intruder from FAS Harvard host installed a script file called "roption" in the "garibay" user's home directory on fisica.uson.mx. The "roption" file contained instructions to use the files "HotterThanMojaveInMyHeart" and "InfamousAngel," located in a subdirectory called "/tmp," to gain root access on fisica.uson.mx using the above described vulnerability.

43. In my conversations with the administrators for the network hosts which have been compromised, I have been told that there are no legitimate users which are known to use a host at Harvard University. None of the people responsible for compromised hosts at the arc.nasa.gov, jpl.nasa.gov, and the nosc.mil domains have reported that there are users who would have had legitimate connections from FAS Harvard host.

44. On October 16, 1995, I interviewed the systems manager, Mathematics and Statistics Department, University of Massachusetts ("UMASS"), Amherst, Massachusetts ("the UMASS system manager"),

regarding computer intrusions into the UMASS network host known as comet.phast.umass.edu. The UMASS systems manager related he had been informed by NASA's Ames Research Center ("ARC"), Moffett Field, California on September 18, 1995 that an account named "yuen," on the ARC host named ssal.arc.nasa.gov, had been accessed by an unknown intruder. The UMASS systems manager was informed that the UMASS network may have been compromised because Yuen also had an account on a UMASS network host computer and the Ames Research Center's network had been probed from UMASS.

45. The UMASS systems manager said that his computer logs reflected that someone had gained unauthorized access to comet.phast.umass.edu. and had installed the files "pinga," "sni256," and "zap" on August 29, 1995 at approximately 23:40. The logs further showed that the "sni256" sniffer file was activated on October 10, 1995, when the unauthorized user gained access to the computer after establishing a telnet connection from an internet network host in Texas. This file again was activated on October 12, 1995, at approximately 00:58, when the intruder used the telnet protocol to connect to comet.phast.umass.edu from the FAS Harvard host, where the intruder was logged in under the user account called "margolin."

46. The UMASS systems manager discovered and terminated the "sni256" file on October 12, 1995. The UMASS systems manager then copied the file called "test" which had been created by the "sni256" program and removed the "test" file from comet.phast.umass.edu. On October 14, 1995, the intruder connected

from the "margolin" account on the FAS Harvard host and ran the "pinga" program and logged out.

47. The UMASS system manager stated that the computer system logs for comet.phast.umass.edu also evidenced that an unauthorized user logged into the "rmillang" account from the "margolin" account on the FAS Harvard host. After discovering this, the UMASS systems manager reviewed the ".history" file information for the user "rmillang" The UNIX operating system creates a file called ".history" (the word history preceded by a dot) in a user's home directory which maintains a running log of a certain number of commands issued by a user. The UMASS systems manager stated that his review of the ".history" file information for the user account called "rmillang" shows the intruder logged in, ran the identifying program "pinga," and then logged out.

48. The UMASS systems manager explained the legitimate user of the "rmillang" account is a first year graduate student in the UMASS Mathematics and Statistics department. He regularly accesses his account during the day, and is not known to access his account during the late night hours. The UMASS systems manager's review of the comet.phast.umass.edu system's logs, which record all logins, did not reveal any record of a login to the "rmillang" account during the times the Intruder connected with comet.phast.umass.edu from the FAS Harvard host, or, in fact, from June 10, 1995 to October 1995. The UMASS systems manager stated that he knows the legitimate "rmillang" user did regularly access his account on comet.phast.umass.edu during that period. The UMASS systems

manager opined that the Intruder used the "zap" program which deleted not only the Intruder's sessions, but all sessions when the "rmillang" account was accessed from the computer system's records up through October 1995.

Real-Time Monitoring of the Intruder's Activities in November and December, 1995

49. Based on the probable cause established in the initial phase of the investigation, the United States applied for and obtained court authorization to conduct electronic surveillance of the Intruder's electronic communications to and from the FAS Harvard host. The orders further directed Harvard University to furnish the FBI and NCIS with the information, facilities and technical assistance necessary to accomplish the interceptions unobtrusively and with a minimum of interference to the persons whose communications might be intercepted. As a result of these court authorized interceptions, the government was able to locate the city from which the Intruder appeared to be accessing the Internet and to partially identify the Intruder through a unique moniker he had given himself. The Intruder - "griton" - was accessing the Internet initially from Buenos Aires, Argentina.

50. A network monitoring program was obtained from the Automated Systems Security Incident Support Team (ASSIST), Defense Information Systems Agency, Washington, DC, and was used to aid in the interceptions and to minimize the interception of electronic communications other than those evidencing the Intruder's criminal activity. The network monitoring program was designed to monitor packets of information transmitted across a network and can be

configured to store selected, captured packets for later review. Once stored, the captured data can be searched for particular words, phrases or other information (called "text-strings") and the packets containing these strings can be reassembled to reconstruct the network sessions in which they were created. These reconstructed sessions can then be replayed to a computer monitor to depict the timing and combination of "keystrokes" typed during the selected session, or the captured session can be copied to a text file.

51. The network monitoring program was installed on a computer located on the network connection between the FAS Harvard host and the router at the Harvard University Faculty of Arts and Sciences Computer Center ("the FAS Harvard router"). It was configured to monitor all transmissions between the FAS Harvard host and FAS Harvard router, searching for one of a limited set of file and account names and computer addresses typed by the user and associated with the Intruder. The file and account names and computer addresses which the network monitoring program was set up to detect included the names of accounts and addresses of Internet hosts which the Intruder was believed to have compromised, as well as certain commands he was believed to have executed and the names of files he was believed to have installed at sites to which he had gained unauthorized access from FAS Harvard host.

52. Communications across the network link between the FAS Harvard host and FAS Harvard router are transmitted at up to ten megabits per second, that is 10,000,000 ones or zeroes which form

pieces of information, per second. While the monitoring program executed its detection function, communications flowed continuously through the computer's RAM, or short-term, memory. The network monitoring program did not capture, display or permanently store the communications which it monitored.

53. Once the network monitoring program detected an occurrence of one of the targeted file names and words, it displayed and recorded a text-string (particular words, phrases or other information) of up to approximately eighty characters identifying the context in which the target word or command was intercepted. At the same time, it isolated and recorded the computer session of the user who typed in the text-string until the user terminated his connection to the FAS Harvard host.

54. The government initially sought to distinguish, and thus avoid review of, any session by anyone other than the Intruder by examining the logged text-string context of the triggering file name, which was automatically recorded as discussed above. The only sessions examined by law enforcement agents were those sessions where the displayed text-string or a secondary scan by computer utility programs for key words strongly indicated evidence of unlawful activity by the Intruder.

55. On November 20, 1995, the text string "/usr/bin/pinga" was detected by the network monitoring program. This text string indicated that the "pinga" program used by the Intruder was executed via the FAS network. Accordingly, I extracted this and related data streams (electronic communications one direction or

the other between the FAS Harvard host and FAS Harvard router) which made up communications believed to be the Intruder's into a readable text form. Review of the transcript of these data streams revealed that the Intruder established a connection to the FAS Harvard host from the Internet host with the Internet protocol address of 200.3.40.17, which belongs to an Internet host known as clirisc.telecom.com.ar registered to Telecom Argentina, Buenos Aires, Argentina, and then established a connection from the FAS Harvard host during this session to the Internet protocol address of 134.75.138.3. This address is registered to the System Engineering Research Institute ("SERI"), Seoul, Republic of Korea. When the Intruder connected to the FAS Harvard host from Telecom Argentina and accessed SERI in Seoul, the Intruder executed programs known to have been used by the Intruder on several computer systems described earlier in the affidavit. While logged into SERI in Seoul the Intruder executed the "pinga" program to obtain control of the computer system, ran "zap" to conceal that he was logged in under the account name of "wgchoe," and copied the "test" file, which contained the results of a previously installed sniffer program, named "sni", which captured, among other information, user identifications and passwords.[15] The sniffer program believed to be used by the Intruder in past intrusions was called "sni256"; it appears that the Intruder chose to shorten the name of the program to "sni."

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[15] On this occasion, the Intruder copied approximately 31 user identification and password combinations which had been intercepted by the sniffer program.

56. Ten data streams[16] believed to be associated with the Intruder were intercepted on November 22, 1995. The word which triggered interception of each of these ten data streams was again "pinga" embedded in the text string "/usr/bin/pinga." The text string indicated that the "pinga" program, described earlier in my affidavit as a program known to be used by the Intruder, was executed via the FAS Harvard host. Accordingly, I extracted these data streams into readable text form.

57. The transcript of the November 22, 1995 data streams revealed that the Intruder again established a connection to the FAS Harvard host from the Internet protocol address of 200.3.40.17, which belongs to an Internet network host known as clirisc.telecom.com.ar, registered to Telecom Argentina in Buenos Aires, Argentina. During this session into the FAS Harvard host, the Intruder established connections to the Internet network hosts known as venus.fisica.unlp.edu.ar, which is registered to Universidad de La Plata, La Plata, Argentina; splinter.coe.neu.edu, which is registered to Northeastern University, in Boston, Massachusetts; and orac.wes.army.mil, which is registered to the

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[16] The number of data streams intercepted is very likely to overstate the number of computer sessions which were intercepted because of the manner in which the triggering mechanism of the network monitoring software works. For example, when the Intruder, as described below, sent an electronic communication from one Internet host through the FAS Harvard host to a third Internet host, the network monitoring software saw this as up to four electronic data streams or communications - one from the Intruder into the FAS Harvard host, one from the FAS Harvard host out to the third Internet host, and two complementary streams if the third host responded through the FAS Harvard host to the Intruder - rather than a single computer session.

U.S. Army Engineer Waterways Experimentation Stations, in Vicksburg, Mississippi.

58. The transcript of these connections revealed that the Intruder executed the same programs for illegally intercepting computer passwords and for disguising his presence which he had previously used in other computer networks, as detailed earlier in my affidavit. Specifically, the Intruder executed the "pinga" program to obtain control of each of the computer systems which he accessed from the FAS Harvard host. He also executed a command to list the contents of a subdirectory named "..." (three dots), which contained the files "sni," "test," and "zap." While logged into compromised accounts on each of the three target sites, the Intruder searched the "test" file, which contained the passwords and user identifications captured by the previously installed sniffer program named "sni." After searching the contents of the "test" file, the Intruder copied the contents to his terminal. The Intruder then re-started the sniffer program to capture further user identifications and passwords. Before logging off, the Intruder ran "zap" to conceal the account names he was using on each of the targeted systems.[17]

59. Review of the data streams for the Intruder's session on November 22, 1995, confirmed the Intruder retrieved user

[17] The captured data streams nonetheless enabled us to identify the accounts he was using on each of the targeted systems. On venus.fisica.unlp.edu.ar the Intruder accessed an account named "torres." On splinter.coe.neu.edu the Intruder accessed the account "arambel." On orac.wes.army.mil the Intruder accessed an account named "lichvar."

identification and passwords which had been intercepted on venus.fisica.unlp.edu.ar, splinter.coe.neu.edu, and orac.wes.army.mil by the sniffer programs planted in them. On the Internet host known as venus.fisica.unlp.edu.ar the Intruder copied approximately fourteen user account and password combinations which had been intercepted and stored in the "test" file. On the Internet host named splinter.coe.neu.edu the Intruder copied the output of the "test" file which contained approximately fourteen user identification and password combinations, in addition to the user account he used to access splinter.coe.neu.edu. While connected to the Internet host known as orac.wes.army.mil the Intruder copied approximately nine user identification and passwords which had been intercepted by the sniffer program and stored in a file called "test."

60. Computer logs containing connection information for the Intruder on the FAS Harvard host revealed that on November 20 and November 22, 1995, the Intruder accessed an account named "qrr2" on the FAS Harvard host from the Internet host with the Internet protocol address of 200.3.40.17 (clirisc.telecom.com.ar registered to Telecom Argentina). Comparison of the intercepted data streams with this login information indicated that the Intruder used this "qrr2" account during the sessions intercepted by the network monitoring software on those dates.[18]

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[18] Computer logs containing connection information for the Intruder on the FAS Harvard host revealed the Intruder logged into the FAS Harvard host under the user account "qrr2" on December 19, 1995, as well, during a period when the monitoring system had been shut down temporarily. During this session the

200.9.112.137, which is registered under the name tapera.bf.epm.br and is also at the Escola Pualistade Medicina, was listed by the iss program as using an older version of electronic mail software which has known, but correctable, vulnerabilities.

65. On December 6, 1995, the Intruder executed the program named "ropt," which exploits a vulnerability in some versions of the UNIX operating system to obtain access to an Internet host as a "root" user. Network monitoring software triggered on the target word "roption" which is embedded in the "ropt" program and captured a series of data streams which indicated that the Intruder logged into the FAS Harvard host from an Internet network host named ts1-e0.starnet.net.ar with the IP address of 200.26.3.18. While logged into the FAS Harvard host from the ts1-e0.starnet.net.ar host, the Intruder had established a connection to an Internet network host with the IP address of 200.9.151.173 under the account name of "operador." This host is registered with the host name of chiloe.chilepac.com which is on a network operated by a company known as Chilepac S.A. in Santiago, Chile.

66. While the Intruder was logged into the chiloe.chilepac.com host the Intruder viewed the file containing the computer program called "ropt." I saw that the instructions in this program referred to program files called "HotterThanMojaveInMyHeart" and "InfamousAngel" which were to be written to a subdirectory called "/tmp." This "/tmp" sub-directory is a standard area where certain versions of the UNIX operating system store temporary files which are deleted if the system is re-

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started. Both "HotterThanMojaveInMyHeart" and "Infamous Angel" have been associated with the Intruder in the past, as detailed earlier in my affidavit. The Intruder executed the "ropt" program in an unsuccessful attempt to gain access to a host with the IP address of 151.10.81.10, using the user name "NoIInParticular." The Intruder then executed the "ropt" program, unsuccessfully targeting a host named ciro.chilepac.com, again using user name "NoIInParticular." The Intruder continued attempts to gain access to the following Internet hosts with the "ropt" program under the user name of "NoIInParticular:" palborno.chilepac.com, with the IP address of 200.9.151.131; aklenner.chilepac.com, with the IP address of 200.9.151.171; ealbornoz.chilepac.com, with the IP address of 200.9.151.144 and a host with the IP address of 140.115.45.105 on a network registered to the Ministry of Education Computer Center Taipei, Taiwan, Republic of China. In reviewing the Intruder's activity on chiloe.chilepac.com, I saw that he viewed, installed and edited a program called "mailscript." As he was editing "mailscript," the program displayed an explanation that it exploits a flaw in a particular version of sendmail software on computers using the UNIX operating system in order to obtain root access. The Intruder also appeared to have installed the files called "sni" and "zap," with which he has been associated repeatedly in the past.

67. While logged into the chiloe.chilepac.com host the Intruder also established a telnet connection to an Internet host with the IP address of 200.9.151.160, with the host name of

gte.chilepac.com, and logged in under the user name of "operador". While on gte.chilepac.com, the Intruder viewed the contents of the password file for this host and a file which lists all hosts on its network. The Intruder then disconnected from gte.chilepac.com and listed the contents of a subdirectory called "..." (three dots) on the chiloe.chilepac.com hosts. This "..." subdirectory contained the files called "sni," "tst" and "zap." Just as the Intruder appears to have shortened the name of his sniffer file from "sni256" to "sni," he appears to have shortened the name of his output file from "test" to "tst." The Intruder viewed the contents of the "tst," which contained portions of sessions intercepted by the "sni" program on chiloe.chilepac.com.

68. Later in the same session, the Intruder used the telnet protocol to connect from the FAS Harvard host to the host with the IP address of 140.115.45.105 at the Ministry of Education Computer Center, Taipei, Taiwan, R.O.C, where he logged into the account named "sm5002." There, the Intruder executed the program called "pinga," to obtain root privileges, and ran the program called "zap," to conceal the account name he was using. The Intruder viewed the contents of the subdirectory called "..." and viewed the path for the current working directory, which was "/home1/5002/..."

69. Another set of data streams intercepted on December 6, 1995, documented a session when the Intruder logged into Internet Relay Chat ("IRC") under the nick-name of "griton" and joined a channel called "#hack.br." IRC allows users to engage in communications over the Internet in the interactive nature of a

conversation, rather than sending stored communications such as electronic mail to each other. It is the practice on IRC to assign yourself a nickname when you log onto an IRC server (an Internet host computer which is linked to a worldwide network of IRC servers to facilitate the "chat" sessions). Communications take place over channels which are either public - for all to see and join in if they wish - or private - open only to invited participants. Based on my training and experience, I am aware that computer intruders, commonly referred to as "hackers," use public IRC channels to "advertise" that they are active and then invoke the "private" message facility in IRC to exchange interactive messages directly. During those interactive messages, users can communicate and also transfer files.

70. Later in the evening of December 6, 1995, an additional session for the Intruder was intercepted by the monitoring computer. Data streams for this session indicate the Intruder logged into the FAS Harvard host from the IP address of 200.3.40.17, which is a host on a network operated by Telecom Argentina, Buenos Aires, Argentina. While logged into the FAS Harvard host the Intruder established a connection to a host with the IP address of 200.9.151.173, which is chiloe.chilepac.com. While on chiloe.chilepac.com, the Intruder executed the "pinga" program and then changed to a sub-directory called "...," where he executed the "zap" program to conceal that he was logged into the account named "operador." The Intruder then accessed IRC and joined a channel called "#argentina" under the nick-name of

"griton."

Identification of "Griton," the Intruder, in Buenos Aires, Argentina

71. "Griton" has now been identified as Julio Cesar Ardita through two independent means. First, "griton" made several descriptive postings on a computer bulletin board known as "yabbs," including an open invitation to visit his own computer bulletin board in Buenos Aires. The location of griton's computer bulletin board has been traced by the Argentine Federal Police to Ardita's residence in Buenos Aires. Second, Telecom Argentina has confirmed that the Intruder into the FAS Harvard host from their computer system, in turn, had broken into their system from a telephone number located at Ardita's residence.

72. A search of files accessible to the public through the Internet disclosed that "griton" previously had posted a number of communications on a computer bulletin board known as "yabbs." On a computer bulletin board, a user can post messages accessible to all other users of the bulletin board service, just as an individual might tack a note to a cork bulletin board in a common club room. On August 23, 1993, Griton invited readers of the yabbs bulletin board to contact the "Scream!" bulletin board service of which he was the "sysop" (systems operator) at a telephone number in Buenos Aires, Argentina. In pertinent part, at 00:10:34 on that day he posted:

> Call to:
>
> Scream! BBS
> +54.[0]1.72.6305
> 24-8 east time.

h/p, Pc Music, Cracks, VGA Stuff, friends...

To C001 Axes:
Name: INTER
pw: NET
Your sysop...

El Griton

Based on my training and experience, the first paragraph of this posting lists the time and telephone number at which the Scream! bulletin board service ("BBS") can be reached. The second paragraph gives a brief description of the types of information exchanged on the board. "H/p" is an abbreviation for "hacking" and "phreaking;" "cracks," a reference to "cracking." "Hacking" and "cracking" are slang terms for identifying and using systems' vulnerabilities to crack the security of computer systems and obtain unauthorized access to them. "Phreaking" refers to "phone phreaking," which is the practice of breaking into and misusing telephone systems. Phone phreaking includes obtaining unauthorized access to telephone exchanges which can be used to access computer networks and make long distance telephone calls without charge.[19]

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[19] On February 22, 1996, FBI Special Agent James Hegarty and I contacted Carlos E. Maldonado, who is the Business Electronic Security Coordinator based in the United States for E.I. DuPont de Nemours and Company, Wilmington, Delaware with responsibility for coordinating electronic information security for DuPont in countries including Argentina. Maldonado confirmed he had contacted Harvard University regarding phone calls made from a DuPont Company telephone PBX (a private telephone switching system) into the FAS Harvard modem pool. DuPont has been conducting an internal investigation of the compromise and misuse of a PBX which services a DuPont Company plant in Mercedes, Argentina. Maldonado related that Jarvas V. Torres, a DuPont Company Manager located in Brazil responsible for Argentina, has reviewed telephone records for their PBX in Argentina and has determined that an unknown intruder obtained access to their PBX from outside the company and had made

The final paragraph gives an account name ("name") and password ("pw") through which a reader of the bulletin board posting on yabbs can access the Scream! bulletin board service.

73. In subsequent postings on the yabbs bulletin board in November, 1993, griton[20] sought information on how to "hack" into (break into) a particular kind of computer system, and described himself as a computer science student in his first year of study, and, in an aside, stated what a nice city he thought Chicago was.

74. The Federal Police of Argentina have determined that telephone number 72 6305, the number given by "griton" for his Scream! bulletin board, was in service in August, 1993, at the residence of Julio Rafael Ardita, his wife, their 21 year old son, Julio Cesar Ardita, and three minor children.[21] The Federal Police also have confirmed that Julio Cesar Ardita was more recently a student in applied sciences, a discipline which includes the computer sciences.

75. Julio Cesar Ardita and Julio Rafael Ardita both applied for United States visas in January, 1995. On that occasion, Julio Rafael Ardita listed his date of birth as July 9, 1946 and his

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numerous telephone calls from Argentina to the FAS Harvard modem pool number at (617) 495-0635, to a residence in Chicago, Illinois and to other telephone exchanges in at least April and May, 1995.

[20] Ardita referred to himself both as "griton" and "El Griton." The return address line on the bulletin board postings read "griton@yabbs;" when the postings were signed, they were signed "El Griton."

[21] The oldest of these minor children, now 16, would have been approximately 14 at the time of the yabbs bulletin board postings.

occupation as retired military, consultant to Argentine Congress. On the same occasion, Julio Cesar Ardita listed his date of birth as March 28, 1974 and his occupation as student. Records of the Immigration and Naturalization Service indicate that only Julio Cesar Ardita travelled to the United States at that time and he listed his U.S. address during his stay as Chicago, Illinois.

76. Telecom Argentina has confirmed that someone broke into their computer network and from there accessed the FAS Harvard host during late 1995. While on the Telecom Argentina network, the Intruder installed files including the identifying "InfamousAngel" and "HotterThanMohaveInMyHeart," among others.

77. Telecom Argentina has determined that the intrusions into their host computer originated in Buenos Aires from a telephone number located in the apartment residence of Julio Cesar Ardita and his family. The telephone line from which the intrusions originated - 832 6305 - is the same as that on which the Scream!

bulletin board service had been operated earlier - 72 6305. The exchange was changed to 832 from 72 after August, 1993, during a restructuring of telephone service in Argentina.

Peter Garza
Special Agent
Naval Criminal Investigative Service

Subscribed and sworn before me this
_____ day of March, 1996.

MARIANNE B. BOWLER
UNITED STATES MAGISTRATE JUDGE

GLOSSARY

Computer Bulletin Board

A computer service which, among other things, allows users to post messages accessible to all other users of the service, just as an individual might tack a note to a cork bulletin board in a common club room.

Data Stream

An electronic communication within or between computers, e.g., in this case, one direction or the other between the FAS Harvard host and FAS Harvard router.

Hacker

A "hacker" is a slang term frequently used to refer to a person who breaks into computer systems with wrongful intent.

Host computer

A computer connected to a network of computers, which maintains established user accounts for access to the network.

Internet

A global network of computer networks which allows for electronic communications between host computers belonging to different networks.

Keystroking

A means of monitoring the electronic communications so as to reconstruct and document the actual keystrokes which were typed at the user's computer terminal to transmit the electronic communications.

Modem

A piece of electronic equipment which converts the digital signal from a computer to an analog signal which can be transmitted across standard telephone lines. Modems are devices which make it possible to use a telephone to gain access to a computer system from the caller's personal computer.

Operating system

A computer's main program which controls the computer's resources and interprets commands by any other programs on the system.

Packet

A unit of information used to transmit electronic communications across networks. Information to be communicated across networks is broken down into small units, each of which is called a packet. Each packet contains the address of the sending computer, the address of the receiving computer, and some portion of the message or data being communicated. These packets are dispersed throughout the network, each finding its own way to the receiving computer. Upon arrival, the packets are reassembled into a coherent message or data file which identifies the host computer from which the message or data file was sent.

Pinga

A program used by the Intruder to obtain "root," or unlimited, access on a compromised network host.

Root access

Complete control over a UNIX computer system, through an account called "root," which allows access to all user accounts and all programs and files on the system. With "root" access, the user is able to view, alter and install files anywhere on the network host. Normally only the system administrator possesses root access.

Router

A device on a computer network which directs communications between different network segments.

Sniffer program

A program which intercepts electronic communications over the system on which it is placed. Specifically, it intercepts account/password combinations as the legitimate user transmits these combinations over the system in the form of commands. The program used by the Intruder ("sni256") stores the intercepted account/password combinations in a separate file ("test") for recovery later.