NETWORK FORENSICS

Created By: Jonah McElfatrick
Digital Forensics 2

+Contents

Introduction

In this paper, an investigation has been carried out into four different packet capture files (PCAP) with different scenarios in relation to an international sporting competition. It is shown that there are possible cases of corruption and bribery taking place with officials and members by a person with the alias of "Kim Ill-Song", with the objective to host the Chess Boxing championship in North Korea, Pyongyang. Evidence was provided of these allegations along with files relating to the championship which were obscured using anti-forensic methods. Evidence is also provided that the person using the "Kim Ill-Song" alias may be using it to frame this individual. Evidence of another suspect "Ann Dercover" is planning to meet "Kim Ill-Song" on a specific date and location.

Tools Used

Following is a list of software and tools that were used in capturing the evidence provided:

Wireshark - (*Wireshark · Go Deep.*, no date)

Foremost - (*Foremost*, no date)

Binwalk - (*ReFirmLabs/binwalk*, 2020)

Tshark - (*tshark - The Wireshark Network Analyzer 3.4.2*, no date)

Ngrep - (*ngrep(8): network grep - Linux man page*, no date)

CyberChef - (*CyberChef*, no date)

HxD - (*HxD - Freeware Hex Editor and Disk Editor | mh-nexus*, 2020)

Mobisoftinfotech.com - (*MI Map Tools: GeoPlotter*, 2020)

SlS - (*sls-tool*, 2018)

Whois ip lookup - (*WHOIS IP Lookup Tool | UltraTools*, no date)

SilentEye - (*SilentEye - Steganography is yours*, no date)

Investigation of Capture 1.pcap

In this first capture, using Wireshark, navigating to the menu bar at the top and selecting, Statistics -> IPV4 - > Source and Destination Addresses. It can be seen that most traffic is sent to and from 172.29.1.23 and 172.29.1.20. Using the filter in Wireshark "ip.addr == 172.29.1.23 && ip.addr == 172.29.1.20", reveals the traffic that these two addresses are receiving and sending. I was noted that there was SMB traffic between these two ip addresses. The filter 'ip.addr == 172.29.1.23 && ip.addr == 172.29.1.20 && smb' can be used to see the smb traffic. Scrolling down the packets, as shown below, it can be seen that there are request and response packets.

23898 21:22:16.753210	172.29.1.20	172.29.1.23	SMB	193 NT Create AndX Response, FID: 0x4001
23899 21:22:16.755956	172.29.1.23	172.29.1.20	SMB	130 Trans2 Request, QUERY_FILE_INFO, FID: 0x4001, Query File Internal Info
23900 21:22:16.755964	172.29.1.20	172.29.1.23	SMB	126 Trans2 Response, FID: 0x4001, QUERY_FILE_INFO
23901 21:22:16.756956	172.29.1.23	172.29.1.20	SMB	117 Read AndX Request, FID: 0x4001, 129 bytes at offset 0
23902 21:22:16.756964	172.29.1.20	172.29.1.23	SMB	247 Read AndX Response, FID: 0x4001, 129 bytes
23903 21:22:16.777190	172.29.1.23	172.29.1.20	SMB	134 Trans2 Request, QUERY_PATH_INFO, Query File Basic Info, Path:
23904 21:22:16.777439	172.29.1.20	172.29.1.23	SMB	158 Trans2 Response, QUERY_PATH_INFO
23905 21:22:16.777691	172.29.1.23	172.29.1.20	SMB	134 Trans2 Request, QUERY_PATH_INFO, Query File Standard Info, Path:
23906 21:22:16.778938	172.29.1.20	172.29.1.23	SMB	142 Trans2 Response, QUERY_PATH_INFO
23907 21:22:16.809165	172.29.1.23	172.29.1.20	SMB	144 NT Create AndX Request, FID: 0x4002, Path:
23908 21:22:16.809416	172.29.1.20	172.29.1.23	SMB	193 NT Create AndX Response, FID: 0x4002
23909 21:22:16.809663	172.29.1.23	172.29.1.20	SMB	130 Trans2 Request, QUERY_FILE_INFO, FID: 0x4002, Query File Internal Info
23910 21:22:16.809913	172.29.1.20	172.29.1.23	SMB	126 Trans2 Response, FID: 0x4002, QUERY_FILE_INFO

Figure 1: SMB Packets

Following the TCP stream on these SMB packets reveals a SMB conversation where files have been transmitted. Files and directories can be seen in the format as seen below in figure 2.

Figure 2: Document Names

From here, selecting, File -> Export Objects -> SMB displays the list of files transferred over SMB. The list of files can be seen below in figure 3.
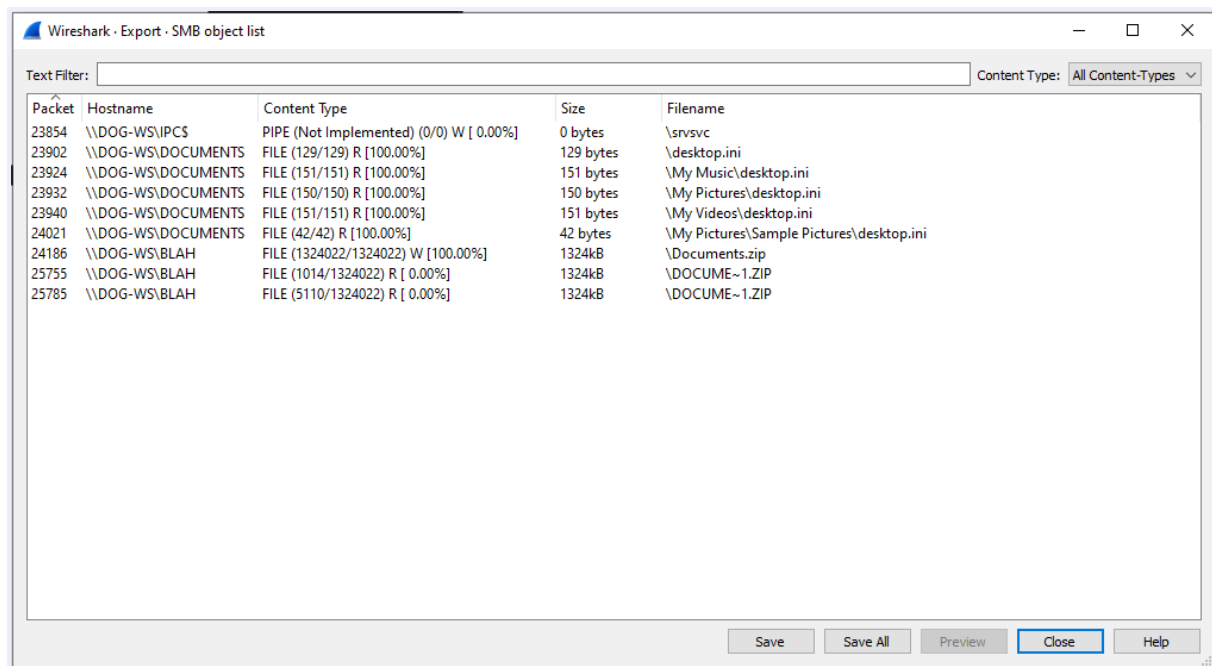
Figure 3: Exporting SMB

Saving the Documents.zip file and unzipping it reveals the folders as can be seen below in figure 4.

Figure 4: Exported Documents

In these folders it was found that there were two instances of a North Korean flag image. Running these through the tool 'binwalk', it was found that inside the NorthKorea.jpg image was a python script labelled 'broken.py'. This can be seen in figure 5 below.
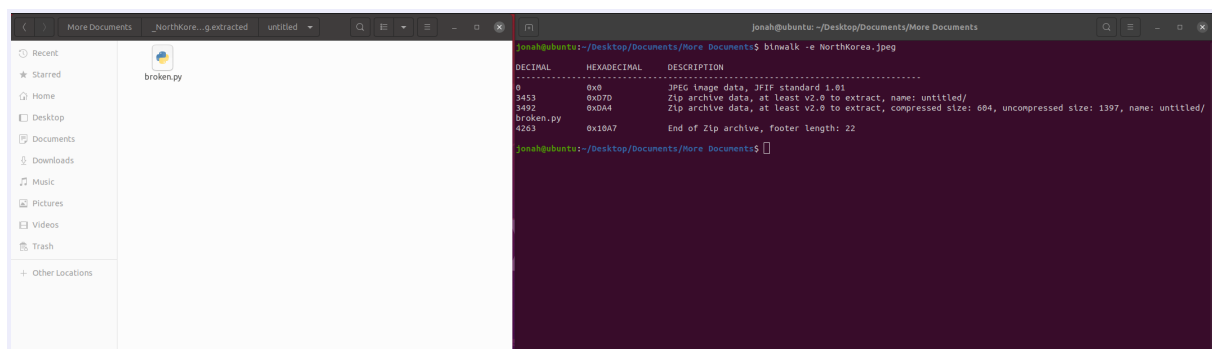
Figure 5: broken.py

This python script does not run when tested but can be fixed through debugging the code. The broken and restored scripts can be found in appendix B.

In one of the folders were nested 'untitled folder', once the bottom was reached a file named 'SilentEye' was found. Upon researching, this is a piece of software that can encode and decode messages from images using steganography. Each of the extracted images from the capture were tested with this software but resulted in no further evidence.

Most of the documents extracted were encoded in base-64. Decoding the contents of the documents reveals readable information. All original contents and decoded contents can be found in appendix B. One document, track6.docx, that is found in the 'Enter the WuTang' folder is the only file to contain a potential list of names/aliases from the chess competition. This can be seen below in figure 6.

VGhlIE15c3Rlcnkgb2YgQ2hlc3MgQm94aW5nOg0KKHVzZXJuYW1lcykNCg0KTXIuIE
1ldGhvZA0KDQpLaW0gSWxsLVNvbmcNCg0KTXIuIFJhem9yDQoNCk1yLiBHZW5pd
XMNCg0KTXIuIEcuIEtpbGxhaA0KDQpNYXR0IENhc3NlbA0KDQpNci4gSS4gRGVjaw
0KDQpNci4gTSBLaWxsYQ0KDQpNci4gTy5ELkIuDQoNCk1yLiBSYWVrd29uDQoNCk
1yLiBVLUdvZA0KDQpNci4gQ2FwcGFkb25uYSAocG9zc2libHkpDQoNCkpvaG4gV29
vPw0KDQpNci4gTmFzDQo=

Decoded
The Mystery of Chess Boxing:
(usernames)

Mr. Method

Kim Ill-Song

Mr. Razor

Mr. Genius

Mr. G. Killah

Matt Cassel

Mr. I. Deck

Mr. M Killa

Mr. O.D.B.

Mr. Raekwon

Mr. U-God

Mr. Cappadonna (possibly)

John Woo?

Mr. Nas

Figure 6: Aliases Document

It was also found that in the document track10.docx, some of the aliases seen in figure 6 above were mentioned. It is thought that these aliases were taken from the lyrics of a 'Enter the WuTang' song.

Investigation of Capture2.pcap

Using the filter 'irc', and following the tcp stream of the first packet, the following screen can be found.

Figure 7: IRC Information

Taking the values from the conversation being sent from malware@216.14.247.46, it can be seen that most of these messages end in '=' or '=='. This is a common trait of base-64 encoding. Using a base-64 decoder, on the test message

'NTc2NTZjNmMyMDc0Njg2NTIwNjQ2NTYzNjk3MzY5NmY2ZTIwNjk3MzIwNmU2Zjc0MjA2NjY5NmU2 MTZjMjA3OTY1NzQyZQ',

it produces the output

'57656c6c20746865206465636973696f6e206973206e6f742066696e616c207965742e'.

This string has the traits of hex encoding, entering this value into an online tool reveals the message 'Well the decision is not final yet.'. There are multiple different variations of encoding throughout the messages. Each message was decoded, and are shown below:

'Well the decision is not final yet.'

'I am a very busy man, but perhaps I could be persuaded to visit. See if Pyongyang is the right place for the World Title'

'Somewhere expensive, I hope.'

'$700,000 it is. Where can I meet you?'

'I see. Then we must meet, and I will see the validity of this claim.'

'No. Not here. Can I not go to you?'

'I am not sure who you are, but I have an idea. Either way, I am not interested.'

'Do not speak to me again.'

'Hot, as always. Who is this?'

'We will have to see how the bid turns out.'

'No! The great nation of Qatar would never be swayed so easily.'

'Nor would I. We do not take kindly to this pathetic notion of bribery'

'I have, but I won.t be bought so easily'

'I would need at least 20 million Rubles.'

Figure 8: Responders Conversations

Taking the encoded messages from Ill-Song, these messages use a different form of encoding from the others. These messages have been found to be using base-32 encoding. Using a base-32 decoder, it reveals the following messages:

Mr. Razor, I am excited about the prospect of the Chess Boxing world title coming to Pyongyang.

'Pyongyang is beautiful this time of year. Perhaps you would like to visit and experience what Best Korea has to offer.'

'Perhaps not. How about I send you a gift? Something to get you out of the City of Love and take your own vacation somewhere.'

'5'

'4'

'I will be in touch with the address.'

'As we discussed earlier, I believe I might be able to help you with your search.'

'I can be in c9fa5b8cb3b197ae5ce4baf8415a375b within the week.'

'I can be in Caracas within the week.'

'I am afraid that would be unwise. I will send you a message with the date and location through a more secure form of communication.'

'Mr. Method, I am excited about the prospect of the Chess Boxing world title coming to Pyongyang.'

'I am just hopeful. It would mean so much to have the Title here. Please consider it.'

'How is the weather in Qatar, Mr. Killah?'

'I am a fan of Chess Boxing. I would love to see the Title held in Korea.'

'Is there anything that I could do to help make your decision easier?'

'Mr. Raekwon, have you spoken with Mr. Razor?'

'Bought? Of course not. You are an official on the executive committee of the ICBA. I just want you to know that I am here to help make your decision as easy as possible.'

'Consider it done. I will send you the information for the drop-off point soon.'

Figure 9: 'Ill-Song' Messages

Putting the two found message streams together we can acquire the following conversations between members of the chess tournament and Ill-Song:

Mr. Razor, I am excited about the prospect of the Chess Boxing world title coming to Pyongyang.

Well the decision is not final yet.

Pyongyang is beautiful this time of year. Perhaps you would like to visit and experience what Best Korea has to offer.

I am a very busy man, but perhaps I could be persuaded to visit. See if Pyongyang is the right place for the World Title

Perhaps not. How about I send you a gift? Something to get you out of the City of Love and take your own vacation somewhere.

Somewhere expensive, I hope

$700,000 it is. Where can I meet you?

I will be in touch with the address.

Figure 10: Messages to Razor1 (Orange: Ill-Song, Green: Mr Razor)

As we discussed earlier, I believe I might be able to help you with your search.

I see. Then we must meet, and I will see the validity of this claim.

I can be in Caracas within the week.

No. Not here. Can I not go to you?

I am afraid that would be unwise. I will send you a message with the date and location through a more secure form of communication.

Figure 11: Messages to Genius1 (Orange: Ill-Song, Blue: Genius1)

Mr. Method, I am excited about the prospect of the Chess Boxing world title coming to Pyongyang.

I am not sure who you are, but I have an idea. Either way, I am not interested.

I am just hopeful. It would mean so much to have the Title here. Please consider it.

Do not speak to me again.

Figure 12: Messages to Method (Orange: Ill-Song, Red: Mr Method)

How is the weather in Qatar, Mr. Killah?

Hot, as always. Who is this?

I am a fan of Chess Boxing. I would love to see the Title held in Korea.

We will have to see how the bid turns out.

Is there anything that I could do to help make your decision easier?

No! The great nation of Qatar would never be swayed so easily.

Nor would I. We do not take kindly to this pathetic notion of bribery.

Figure 13: Messages to Killah (Orange: Ill-Song, Black: Mr Killah)

Mr. Raekwon, have you spoken with Mr. Razor?

I have, but I won.t be bought so easily

Bought? Of course not. You are an official on the executive committee of the ICBA. I just want you to know that I am here to help make your decision as easy as possible.

I would need at least 20 million Rubles.

Consider it done. I will send you the information for the drop-off point soon.

Figure 14: Messages to Raekwon (Orange: Ill-Song, Grey: Mr Raekwon)

The sender of the messages highlighted in orange in the conversations above has the alias 'Ill-Song', Analysing the packets that sent the messages in the chat, the ip address that is associated with the user of the alia 'Ill-song' can be seen. This is shown in figure 15 below.

```
∨ Internet Relay Chat
    ∨ Response [truncated]: :Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Raekwon
            Prefix: Ill_Song!~Ill_Song@216.14.247.46
        Command: PRIVMSG
    ∨ Command parameters
            Parameter: Raekwon
        Trailer [truncated]: SUpYWEtaM0lPUTdTQVQzR0VCUlc2NUxTT05TU0EzVFBOPUVhD
```

Figure 15: IRC Header

Using an online ip location tool and entering the found ip, it can be seen in figure 16 below that the device with that ip is located in Missoula in Montana and is a private residence.

Figure 16: WHOIS IP Lookup

The objective of this capture was to analyse who may be accepting bribes in this competition. As can be seen from the conversations above, Mr Killah and Mr Method reject the idea of bribery. Mr Raekwon, Genuis1 and Mr Razor accept the bribe and are told that a location will be sent to them following the conversation.

From the conversations above, locations of different the individuals can be determined. From the conversations of the individuals the following can be gathered:

Name	Location	Accepted Bribe?
Mr Razor	Paris (City of Love)	Yes
Mr Genius	Caracas	Possibly (Not Confirmed)
Mr Method	Pyongyang? (Unconfirmed)	No
Mr Killah	Qatar	No
Mr Raekwon	Russia (Rubles)	Yes

Figure 17: Gathered Information

Each of the individual TCP streams can be found in appendix C.

Investigation of Capture 3.pcap

As the traffic that has been captured is FTP traffic, using the filter 'ftp' displays all the ftp packets. Following the TCP stream of the top packet reveals the following.

Figure 18: Connection to Server

As can be seen above, the username and password for the ftp service is 'ILL_Song'. It can also be seen that what is returned is 'sandofwhich.zip' with the file size of 24792 bytes. In the same filter, there is 2 instances of a file being transferred. Analysing the later packets and following the tcp stream of packet 5938, indicates another zip file named 'ojd34.zip' being transferred. Double clicking on the 'RETR sandofwhich.zip' line gives an indication of where abouts the data will be sent in the packet capture file. Double clicking this indicates around packet number 5885.

Using the new filter of 'ftp-data', it can be seen that 2 zip files are being sent to the ip 172.29.1.23 from 172.29.1.21.

Figure 19: FTP Data

Right clicking on the first packet, 5892 the start of the data transmission for snadofwhich.zip, and following the tcp stream. Saving the output as a .raw file.

Name	Date modified	Type	Size
destroy.jpg	23/06/2014 12:09	JPG File	2 KB
for.jpg	23/06/2014 12:09	JPG File	2 KB
freedom.jpg	23/06/2014 12:09	JPG File	2 KB
good.jpg	23/06/2014 12:09	JPG File	2 KB
government.jpg	23/06/2014 12:09	JPG File	2 KB
l.jpg	10/12/2020 09:38	JPG File	14 KB
l.jpg.bak	23/06/2014 12:09	BAK File	2 KB
in.jpg	23/06/2014 12:09	JPG File	2 KB
NSA.jpg	23/06/2014 14:43	JPG File	6 KB
rights.jpg	23/06/2014 14:43	JPG File	6 KB
security.jpg	23/06/2014 14:43	JPG File	6 KB

Figure 20: sandofwhich.zip

The same method was carried out on packet 5938, the start of the data transmission for ojd34.zip, and following the tcp stream. Saving the output as a .raw file and unzipping the file to reveal the images.

Name	Date modified	Type	Size
allow.jpg	23/06/2014 12:09	JPG File	2 KB
and.jpg	23/06/2014 12:09	JPG File	2 KB
around.jpg	23/06/2014 12:09	JPG File	2 KB
basic.jpg	23/06/2014 12:09	JPG File	2 KB
building.jpg	23/06/2014 12:09	JPG File	2 KB
cant.jpg	23/06/2014 12:09	JPG File	2 KB
conscience.jpg	23/06/2014 12:09	JPG File	2 KB
terrorism.jpg	23/06/2014 14:43	JPG File	6 KB
Watergate.jpg	23/06/2014 14:43	JPG File	6 KB
web-based.jpg	23/06/2014 14:43	JPG File	6 KB

Figure 21: ojd34.zip

Opening these images reveals an empty image. Looking at the filenames and doing an online keyword search, it was found that a quote by Edward Snowden could be referenced. The quote reads 'I can't in good conscience allow the U.S. government to destroy privacy, internet freedom and basic liberties for people around the world with this massive surveillance machine they're secretly building.'. Cross referencing all the image file names and the quote it can be seen that there are a matching words. These can be seen highlighted in red in figure 22 below.

destroy

for

freedom

good

government

I

in

NSA

rights

security

allow

and

around

basic

building

can't

conscience

terrorism

Watergate

web-based

I can't in good conscience allow the U.S. government to destroy privacy, internet freedom and basic liberties for people around the world with this massive surveillance machine they're secretly building.

Figure 22: Found Quote

An attempt to reconstruct a file from the files of the matched words was carried out. This was carried out by opening the files in HxD and merging them into one file in the correct order. This produced part of an image as can be seen below in figure 23.
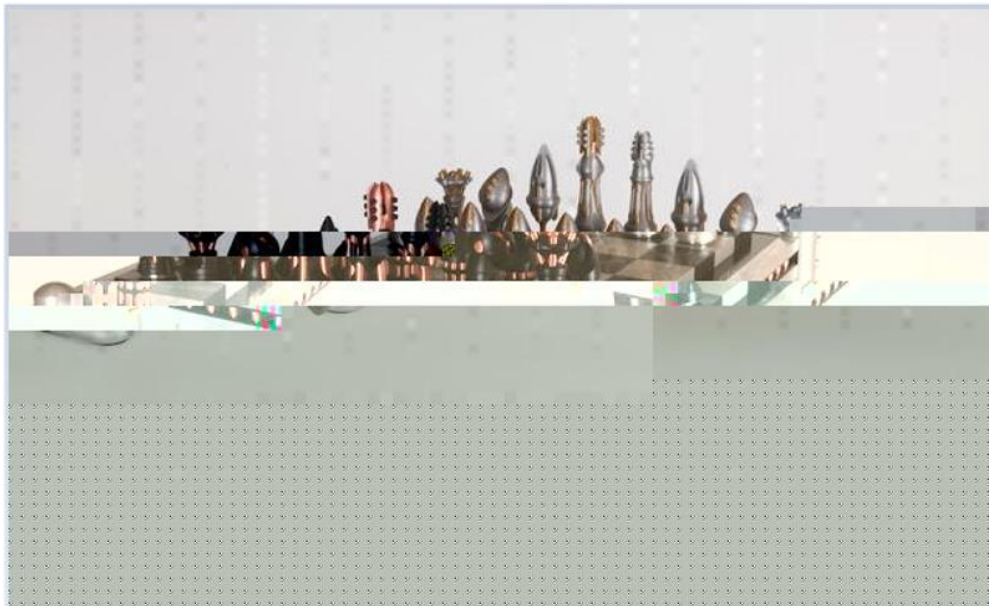
Figure 23: Partial Image

As can be seen, the construction of the image is not clear. Although there are matching words, there are still missing words from the quote. Using the filter 'tcp contains .zip', it uncovers a packet containing a file called 'breaking_bad_season_6.zip'. From here, using the filter 'http contains "zip"', and following the TCP stream of one of the packets returning an application/json as can be seen below in figure 24.

Figure 24: Json Return

This allows further zip files to be found. Filtering the stream by direction of traffic going from 172.29.1.21 to 64.12.132.39 and viewing the TCP stream in raw format and saving it in this format will allow for extraction of these files. Using the foremost tool, the command seen below extracts the missing zip files.

Figure 25: Foremost Cap3

Using these methods produce five different folders of .jpg files as can be seen below.

Figure 26: Obtained Folders

Piecing together these jpg files into one big jpg file by adding each jpg onto the end of the other using HxD, the following image can be found.

Figure 27: Reconstructed Image 1

The image above represents a chess board which relates to that of the competition that is being held and discussed in these packet captures.

Crafting this image does not use all the image files that were extracted. When viewing the image files in thumbnail view, it can be seen that there is the start of images from some of the files. As can be seen in figures 20 and 21 below, there are two other possible images that can be made.
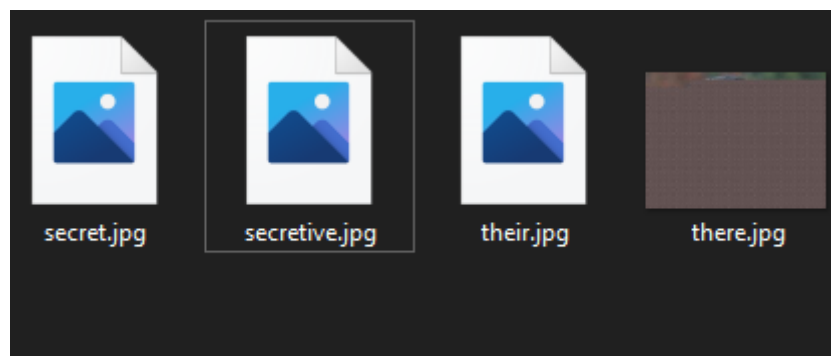
Figure 28: Second Image Found
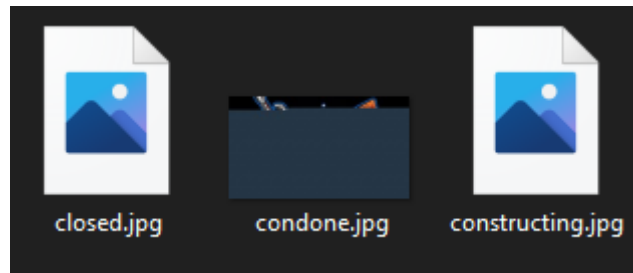
Figure 29: Third Image Found

Through trial and error, using the 'cat' commands as follows the two other images can be found:

'cat condone.jpg American.jpg web-based.jpg rights.jpg constructing.jpg security.jpg terrorism.jpg NSA.jpg Watergate.jpg corrupt.jpg human.jpg behind.jpg closed.jpg doors.jpg > reconstruction2.jpg'

'cat there.jpg their.jpg a.jpg it.jpg but.jpg communism.jpg nor.jpg because.jpg unconstitutional.jpg secretive.jpg secret.jpg > reconstruction3.jpg'

The found images can be seen below in figures 30 and 31.

Figure 30: Reconstruction2.jpg

Figure 31: Reconstruction3.jpg

The first extracted image is an image of a chess set, the second is of Kim Jong Un and the third of a transformer. The first image having a reference to the Chess Competition, the second having a link to North Korea. It is unsure what the reference of the third image holds.

Analysing these images in binwalk, no other data can be extracted.

Using the program found earlier in packet capture 1, SilentEye, it can be found that within reconstruction1.jpg that there is a hidden encoded message. This can be seen in figure 32 below.
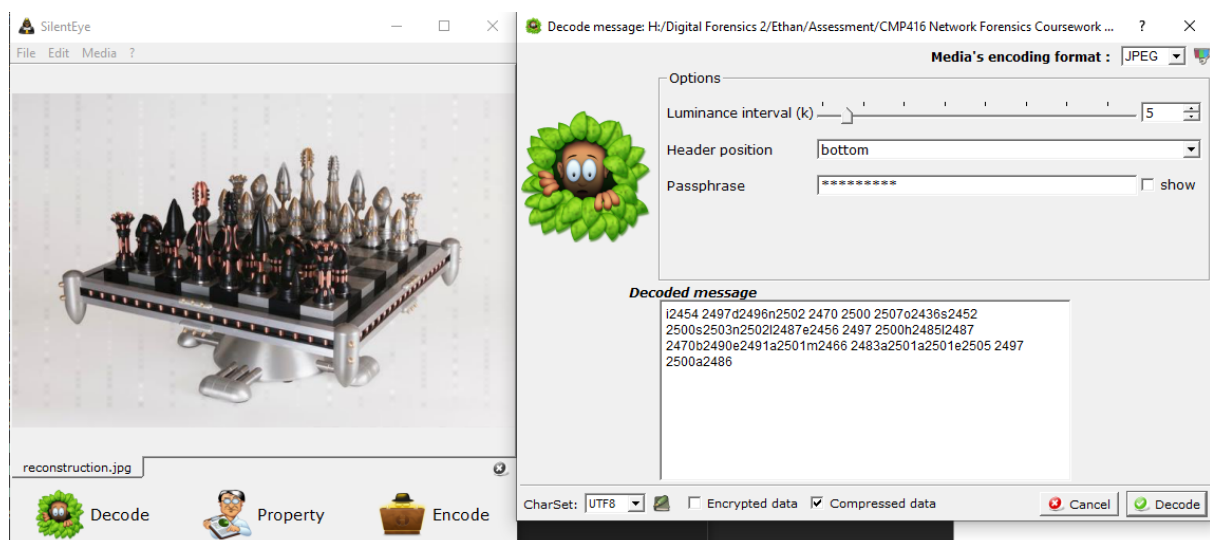
Figure 32: Decoded Steganography

Analysing the found message, it looks similar to a form of ASCII. This was found in the python script extracted in packet capture 1. Using this message as the message parameter and the 'BillOfRights' text file as the decoding key. The following message can be found:

```
Python 3.9.0 (tags/v3.9.0:9cf6752, Oct  5 2020, 15:34:40) [MSC v.1927 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: H:\Digital Forensics 2\Ethan\Assessment\CMP416 Network Forensics Cour
sework PCAPs\Capture 1\fixed.py
DontTry2BruteForceThisPassword
>>>
```

Figure 33: Python Script Output

Unfortunately, no further evidence was gathered from this finding.

Investigation of Capture4.pcap

In this packet capture, a suspected alias has been noted. The alias "Kim Ill-Song" has been attempting to arrange a meeting with "Ann Dercover". With this information using the tool ngrep, and the command 'ngrep -I Capture4.pcap "Ill-Song"' in a windows terminal. It can be seen that packets are obtained from the pcap file that have a reference to "Ill-Song", a name that is present throughout the attacks.

Figure 34: ngrep output

It can be seen from the figure above that the returned result is in the form of a json file. Using the following filter: 'ip.addr == 192.168.1.5 && ip.addr == 199.87.160.87 && json' in Wireshark, packets using the "Textfree" application were found. These packets return json files that contain the messaging information between the users. Following the TCP stream on the fourth packet that appears (packet 2141). The screen shown in figure 35 below can be seen.

Wireshark · Follow TCP Stream (tcp.stream eq 57) · Capture 4.pcap   –   □   ×

POST /1.0/my HTTP/1.1
x-rest-method: GET
Content-Type: application/json
X-Install-Id: 6965eedb59a7b282f94dd58e7a451474
x-client: textfree-android,2.3.2
x-os: android,4.2.2
x-uid: 580781709
x-gid: 0
Authorization: OAuth realm="http://api.pinger.com", oauth_consumer_key="580781709%3Btextfree-android-332281036089711-1404333778292", oauth_signature_method="HMAC-SHA1", oauth_timestamp="1404340734", oauth_nonce="utovvnotqfgcfett",
oauth_signature="dEYvXnCzIsvEi2630XewT7s%2BOVQ%3D"
User-Agent: Dalvik/1.6.0 (Linux; U; Android 4.2.2; Nexus 7 Build/JDQ39E)
Host: api.pinger.com
Connection: Keep-Alive
Accept-Encoding: gzip
Content-Length: 0

HTTP/1.1 200 OK
Date: Wed, 02 Jul 2014 22:38:55 GMT
Server: Apache
X-Host: sj2-web02
Content-Length: 1121
Keep-Alive: timeout=10, max=9
Connection: Keep-Alive
Content-Type: application/json

{"success":"OK","result":{"userId":"580781709","fname":"Ann","lname":"Dercover","countryCode":"US","gender":"female","age":22,"zipCode":"59801","birthday":"1992-01-01","deviceEmail":"","showAds":"1","profilePicUrl":"","notifyTextFree":
0,"textfreeNotifEmail":"","textfreePendingNotifEmail":"ann_dercover@aol.com","textfreeIntercept":0,"textfreeInterceptPhone":"","textfreeInterceptPendingPhone":"","textfreeSignature":"-Sent from
Textfree","textfreeNotificationPrivacy":"0","autoAddTile":"0","msgStatusPrivacy":"0","notifyAPNSToken":"APA91bFhhBnWsrCE3WSEYZhwSgscpm_vs0pQg1oor0wa-YrCE9RGEicISS6LpktIq_ex27FovS1WVqeImPHtO-57TVEIZpymx6nk-EQTX_mFQTPbOCMXf4jIgKHv0Iv-
CnHA492_CL_qYJWvbwdJ-kUY19QN1363NQ","notifyAPNSStatus":1,"notifyAPNSBadgeNumber":"7","notificationToken":"APA91bFhhBnWsrCE3WSEYZhwSgscpm_vs0pQg1oor0wa-YrCE9RGEicISS6LpktIq_ex27FovS1WVqeImPHtO-57TVEIZpymx6nk-EQTX_mFQTPbOCMXf4jIgKHv0Iv-
CnHA492_CL_qYJWvbwdJ-kUY19QN1363NQ","notificationStatus":1,"notificationBadgeNumber":"7","forgotPasswordEmail":"ann_dercover@aol.com","language":"en-us","voicemail":"A","facebookId":"","facebookToken":"","networkDetails":[]}}

Figure 35: Textfree Header

This reveals the information of one of the individuals, Ann Dercover who is involved in the conversation. Using the filter 'http && ip.dst == 192.168.1.5 && json contains "messageText"', the following conversation can be found by inspecting the json elements returned.

Ann: this is a test

Kim: Good afternoon, Ann.

Ann: who is this?

Kim: Castling.

Ann: where are you?

Kim: I know I can't tell you that.

Ann: Do you know that there are people investigating Kim Ill-Song?

Kim: Of course. However, they will never know it is me behind the bribes.

Ann: still we should be careful. Pay attention. I want to meet in September at 5PM.

Kim: At our old meetup spot?

Ann: yes

Kim: What day?

Ann: I told you to pay attention.

Figure 36: Found Conversation

From the conversation above, it can be seen that

Using the following filter 'http && ip.dst == 192.168.1.5 && json', once past the conversation, traffic from an ip address 207.200.102.1 can be seen, this includes longitude and latitude data that can be seen in the json files being passed. Using the following commands, the location data can be extracted from the capture file:

'tshark -nr "Capture 4.pcap" -T json > cap4.json'

'sls '"json.key": "lat"' .\ cap4.json -Context 3,6 > ./locationData.json'

Taking the output file and clearing the titles away, the location data found in appendix F can be found. Plotting these points using Geoplotter, the following data can be found.
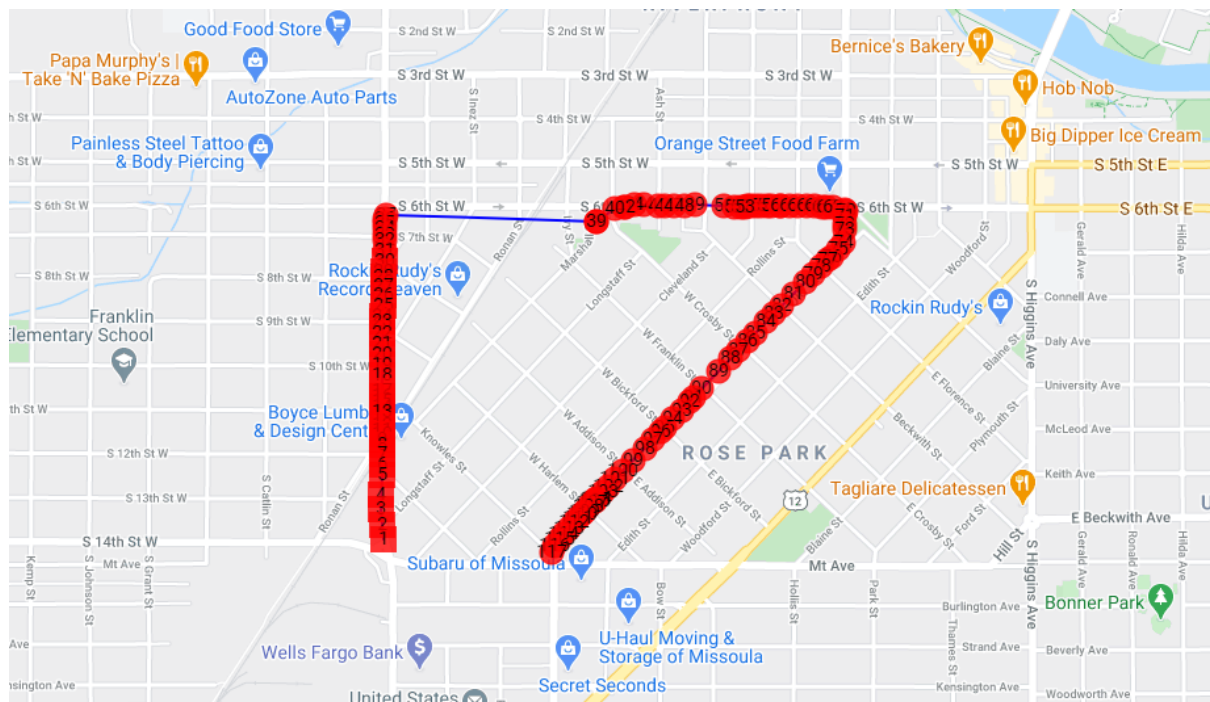
Figure 37: Plotted Data

From the image above it can be seen that in the coordinates extracted from the json files, that the number '17' has been pinned onto the map. This gives the indication that "Kim Ill-Song" and "Ann Dercover" may be planning to meet on 17th September at 5pm at their "usual" meeting spot.

Word Count = 2381 – 174 (captions) = 2207

References

CyberChef (no date). Available at: https://gchq.github.io/CyberChef/ (Accessed: 26 December 2020).

Foremost (no date). Available at: http://foremost.sourceforge.net/ (Accessed: 26 December 2020).

Hash Type Identifier - Identify unknown hashes (no date). Available at: https://hashes.com/en/tools/hash_identifier (Accessed: 26 December 2020).

HxD - Freeware Hex Editor and Disk Editor | mh-nexus (no date). Available at: https://mh-nexus.de/en/hxd/ (Accessed: 26 December 2020).

MI Map Tools: GeoPlotter (no date). Available at: https://mobisoftinfotech.com/tools/plot-multiple-points-on-map/ (Accessed: 26 December 2020).

ngrep(8): network grep - Linux man page (no date). Available at: https://linux.die.net/man/8/ngrep (Accessed: 26 December 2020).

ReFirmLabs/binwalk (2020). ReFirm Labs. Available at: https://github.com/ReFirmLabs/binwalk (Accessed: 26 December 2020).

sls-tool (no date) *npm*. Available at: https://www.npmjs.com/package/sls-tool (Accessed: 26 December 2020).

tshark - The Wireshark Network Analyzer 3.4.2 (no date). Available at: https://www.wireshark.org/docs/man-pages/tshark.html (Accessed: 26 December 2020).

WHOIS IP Lookup Tool | UltraTools (no date). Available at: https://www.ultratools.com/tools/ipWhoisLookup (Accessed: 26 December 2020).

Wireshark · Go Deep. (no date). Available at: https://www.wireshark.org/ (Accessed: 26 December 2020).

Appendix A – Decoded Documents

GoT Spoilers.docx

Sm9uIFNub3cgYnVybnMgZG93biBXaW50ZXJmZWxsIChhZ2FpbikgYW5kIHRoZSBXYWxsLg0KDQpIb2Rv
ciBraWxscyBUaGVvbi4NCg0KRGFlbnVyeXMgZ2V0cyBlYXRlbiBieSBhIGRyYWdvbi4NCg0KU3Rhbm5pcy
BmYWxscyBpbiBsb3ZlIHdpdGggVHlyaW9uLiANCg0KDQo=

Decoded

Jon Snow burns down Winterfell (again) and the Wall.

Hodor kills Theon.

Daenerys gets eaten by a dragon.

Stannis falls in love with Tyrion.

NorthKorea.docx

0JTQu9GPINC60L7Qs9C+INGN0YLQviDQvNC+0LbQtdGCINC60LDRgdCw0YLRjNGB0Y86IA0KDQrQryD
QsdGL0Lsg0YHQstC40LTQtdGC0LXQu9C10LwsINGH0YLQviDQmtC40Lwg0KfQtdC9INCj0L0g0Lgg0L/Rg
NCw0LLQuNGC0LXQu9GM0YHRgtCy0L4g0KHQtdCy0L7RgNC90L7Qu SDQmtC+0YDQtdC4INGA0LDQt9
GA0LDQsdC+0YLQsNC70Lgg0L/RgNC+0LPRgNCw0LzQvNGDLCDQutC+0YLQvtGA0LDRjyDQv9C+0LfQst
C+0LvRj9C10YIg0LjQvCDQv9GD0YLQtdGI0LXRgdGC0LLQvtCy0LDRgtGMINCy0L4g0LLRgNC10LzQtdC90
LguINChINC40YHQv9C+0LvRjNC30L7QstCw0L3QuNC10Lwg0Y3RgtC+0Lkg0YLQtdGF0L3QvtC70L7Qs9
C40LgsINGPINGB0YfQuNGC0YfRgtC+INC+0L3QuCDQvdCw0LzQtdGA0LXQvdGLINC00LLQuNC
z0LDRgtGM0YHRjyDQstC/0LXRgNC10LQg0Lgg0LjQt9C80LXQvdC40YLRjCDQgNC10LfRg9C70YzRgtCw0
YLRiyDQstC+0LnQvdGLINCyINCa0L7RgNC10LUuIA0KDQrQn9C+0LbQsNC70YPQudGB0YLQsCwg0J7Qs
dC4LdCS0LDQvSwg0YLRiyDQvNC+0Y8g0LXQtNC40L3RgdGC0LLQtdC90L3QsNGPINC90LDQtNC10LbQt
NCwLg0KDQo=

Decoded

Для кого это может касаться:

Я был свидетелем, что Ким Чен Ун и правительство Северной Кореи разработали программу, которая позволяет им путешествовать во времени. С использованием этой технологии, я считаю, что они намерены двигаться вперед и изменить результаты войны в Корее.

Пожалуйста, Оби-Ван, ты моя единственная надежда.

Translated from Russian

For whom it may concern: I have witnessed Kim Jong-un and the North Korean government develop a program that allows them to travel in time. By using this technology, I believe they intend to move forward and change the outcome of the Korean War. Please, Obi-Wan, you are my only hope.

PiD.docx

RGVhciBFZCwNCg0KWWVhaCBJIHRvdGFsbHkgdG9vayBvdmVyIGZvciBQYXVsIGFmdGVyIGhlIGRpZWQgaW4g4oCZNjYuIFlvdSBnb3QgbWUuIEFzIHlvdSBjYW4gc2VlLCB3ZSBkb27igJl0IGV2ZW4gbG9vayB0aGF0IG11Y2ggYWxpa2U6DQo=

Before(Paul)   After(Me)

IAkgCQ0KQmVmb3JlKFBhdWwpIAkJCQkJQWZ0ZXIoTWUpDQoNCldlIGFyZW7igJl0IGV2ZW4gdGhlIHNhbWUgaGVpZ2h0ISBXaGF0IGNhbiBJIHNheSwgcGVvcGxlIGFyZSBzdHVwaWQuDQoNCg0KVGhhbmtzIGZvciB0aGUgaW5xdWlyeSwNCg0KV2lsbGlhbSBDYW1wYmVsbA0KKFBhdWwgTWNDYXJ0bmV5KQ0K

Decoded

Dear Ed,

Yeah I totally took over for Paul after he died in '66. You got me. As you can see, we don't even look that much alike:

Before(Paul)   After(Me)

We aren't even the same height! What can I say, people are stupid.

Thanks for the inquiry,

William Campbell

(Paul McCartney)

NK.jpg

Converted to NK.png

Rules 1.docx

MS4gICBTVU1NQVJZIE9GIFJVTEVTLiAgTUFJTiBQT0lOVFMuDQpUT1VDSCBNT1ZFIHJ1bGUgc3RyaWN0
bHkgYXBwbGllcy4NCuKAoglJZiBhIHBpZWNlIGlzIHRvdWNoZWQsIHRoZW4gaXQgbXVzdCBiZSBtb3ZlZC
AoaWYgYSBsZWdhbCBtb3ZlIGlzIGF2YWlsYWJsZSkNCuKAoglJZiBhbi0bvcHBvbnVudOKAmXMgcGllY2Ug
aXMgdG91Y2hlZCwgaXQgbXVzdCBiZSB0YWtlbiAoaWYgbGVnYWwpLg0KQ09VTlRED1dOIElGIFNUQUx
MSU5HIEZPUiBUSU1FLkluIGdlbmVyYWwgYSBwbGF5ZXIgbWFuYWdlcyBob3cgbXVjaCB2aXRsaXR0bGU
gdGltZSB0byB0YWtlIGZvciBlYWNoIG1vdmUsIGFuZCB0aGlzIGlzIGZpbmUuICBIb3dldmVyLCBpZiBhIHBs
YXllciBjbGVhcmx5IHBsYXlzIGZhciB0b28gc2xvdy5IZGZvciB0aGUgc3BlY2lmaWMgcG9zaXRpb24sIGZvci
BleGFtcGxlIHdoZW4gaXQgaXMgZmFjaW5nIHVuYXZvaWRhYmxlIGNoZWNrbWF0ZSwgdGhlIGFyYml0Z
XIgd2lsbCBkbyBhIGNvdW50ZG93bi4gIEhlIHdpbGwgcG9pbnQgYXQgdGhlIGJvYXJkLCBhbmQgd2FybiB0
aGUgcGxheWVyIGJ5IGNvdW50aW5nIHRvIDEwIHdpdGggaGlzIGhhbmRzIChqdXN0IGxpa2UgYSBib3hp
bmcgcmVmZXJlZSkuICBJZiB0aGUgcGxheWVyIGhhcyBub3QgbW92ZWQgYnkgdGhlIGNvdW50IG9mID
EwLCBoZSBsb3NlcyB0aGUgZ2FtZSBhbmQgdGhlIG1hdGNoLiBPb3RlIHRoZXJlIGlzIG5vIG1pbml0dW0gdG
ltZSB0byBtYWtlIGEgbW92ZSgQWxzbywgZXZlbiBpZiB0aGVyZSBpcyBvbmx5IDEgbGVnYWwgbW92ZS
wgdGhlIHBhYWllcisaG91bGQgYmUgYWxsb3dlZCCzb21lIHRpbWUgdG8gcHN5Y2hvbG9naWNhbGx5IG
NvbXBvc2UgdGhlbXNlbHZlcy4gIEl0IHNob3VsZCBiZSBjb25zaWRlcmVkIHRoYXQgYS3ZWFrIHBsYXllciBt
YXkgbm90IHJlYWxpc2UgaGUgb25seSBoYXMgMSBsZWdhbCBtb3ZlLg0KQ0hFU1MgQ0xPQ0sgUFJJVE9
DT0wuICBUaGUgY2hlc3MgY2xvY2sgaXVzdCBiZSBwcmVzc2VkIHdpdGggdGhlIFNBTUUgSEFORCB0aGF
0IG1vdmVzIHRoZSBwaWVjZS4NClBRVNTU5IENIRUNLIENMT0NLLiAgSXQgaXMgdGhlIHBsYXllci4KA
mXMgcmVzcG9uc2liaWxpdHkgdG8gcHJlc3MgaXMgb2IgdGhlciBjbG9jayBiZXR0ZWVuIGNoZXNzIG1vdm
VzLiBUaGUgY29tcGV0aXRvcnMgbWF5IGFscG3gdGhlIGFyaml0ZXIg
dG8gaXNzdWUgcmVtaW5kZXJzOOKAkyBlc3BlY2lhbGx5IGlmIGJvdGggZmlnaHRlcnMgYXJlIG5ydy0byBj
aGVzcy4NClBJRU5FUyBLTk9DS0VEIERPV04gT1IgT0UFFBST1BFUkxxIE9OIEEgU1VFQUJFLiAgS
WYgYSBwbGF5ZXIga25vY2tzIGRvd24gYSBwaWVjZSB3aGlsc3QgbWFraW5nIGEgbW92ZSBvciBkb2VzIG

5vdCBwdXQgaXQgcHJvcGVybHkgb24gYSBzcXVhcmUsIGhlIHNob3VsZCBwcm9wZXJseSByZS1wb3Npd
GlvbiBvciByZS1jZW50cmUgdGhlIHBpZWNlIGluIEhUyBPV04gY2xvY2sgdGltZS4gIEFuIG9mZmVuY2Ugd
GhhdCBwdXRzIG9mIB0aGUgb3Bwb25lbnQgY291bGQgYmUgcHVuaXNoZWQgYnkgYWRkaW5nIHRpb
WUgdG8gdGhlIG9wcG9uZW504oCZcyBjbG9jay4NCiANCk9USEVSIFJVTEVTIHRvIE5PVEUNCuAoqkgU
mVzaWduYXRpb24gcHJvdG9jb2wuIEBvIIgdGhlIGJlbmVmaXQgb2YgdGhlIGF1ZGllbmNlLCBwbGF5ZXJ
zIGFyZSBzdHJvbmdseSBlbmNvdXJhZ2VkIHRvIHBsYXkgdW50aWwgY2hlY2ttYXRlLiBJZiB5b3Ugd2FudCB
0byByZXNpZ24gKHN1Ym1pdCkgcHJpb3IgdG8gY2hlY2ttYXRlLCBkbyB0aGlzIGJ5IGtub2NraW5nIG92ZXI
geW91ciBraW5nIGFzIG9mZmVucmSaBghhbmRzaGFrZS4NCuAoglJbGVnYWwgIG1vdmUuIEBBbiBpb
GxlZ2FsIG1vdmUgbXVzdCBiZSByZXRyYWN0ZWQuIBUaGUgYXJiaXRlciBoYXMgdGhlIGRpc2NyZXRpb2
4gdG8gcHVuaXNoIHdpdGggYSB0aW1lIHBlbmFsdHksIG9yIGRpc3F1YWxpZnkgYWZ0ZXIgMyBpbGxlZ2F
sIG1vdmVzLiAgRXh0cmEgYWxsb3dhbmNlcyBjYW4gYmUgbWFkZSBmb3Igbm92aWNlIHBsYXllcnMuD
QrigKJU3BlYWtpbmcgdG8gdGhlIGFyYml0ZXIuICBZiBhIHBsYXllciBuZWVkcyB0byBzcGVhayB0byB0aG
UgYXJiaXRlciBkdXJpbmcgdGhlIGNoZXNzIGdhbWUsIGhlIHNob3VsZCByZWVkdW0gaGlzIGhlYWRwaG9
uZXMuICBUaGUgYXJiaXRlciB3aWxsIHRoZW4gc3RvcCB0aGUgY2xvY2sgdG8gbGlzdGVuLg0K4oCiCVBsYX
lpbmcgdG8gd2luIG9uIHRpbWUuICBZiBhIHBvc2l0aW9uIGlzIEg29tcGxldGVseSBrcm93biwgYW5kIHBvc2l0
lvbiwgYW5kIHRoZSBhcnRpdGVyIGJlbGlldmVzIEgcGxheWVyIGlzIHF1aWNrbHkgbW92aW5nIHBpZW
NlcyBvbmx5IHRvIHdpbiBvbiB0aW1lLCB0aGVuIHRoZSBhcnRpdGVyIGNhbiBkZWNsYXJlIHRoZSBnYW1l
IGgZHJhdy4NCuAoglhdGVycyBEcmF3LiAgQSBjaGVzcyBkcmF3IHdpbGwgYmUgZm9sbG93ZWQgYnkg
b25lIGJveeluZyByb3VuZCAodW5sZXNzIHRoZSBtYXhpbXUtIG51bWJlciBvZiBib3hpbmcgcm91bmRzIGh
hcyBhbHJlYWR5IGhhcHBlbmVkKS4gVGhlIGNoZXNzYm94aW5nIGJvdXQgd2lsbCB0aGVyZWZvcmUgYm
Ugd29uIGJ5IHdob2V2ZXIgaGFzIGFtYXNzZWQgdGhlI1vc3QgYm94aW5nIHBvaW50cyDgJManVkZ2V
kIGJyIHB1bmNoZXMgdGhyb3duIGFuZCBvdmVyYWxsIGFzZ3Jlc3Npb24uDQrigKJRHJpbmtzIBGaWdo
dGVycyBhcmUgYWxsb3dlZCByBicmluZW3YXRlciB0byB0aGUgY2hlc3MgdGFibGUuDQrigKJRQ3V0cy
BJbiBtb3N0IGNhc2VzLCBleGNlcHQgZm9yIHRoZSBtb3N0IHN1cGVyZmljaWFsIGV4YW1wbGVzLCBhIGN
1dCB3aWxsIGxlYWQgdG8gdGhlIGZpZ2h0IGJlaW5nIHN0b3BwZWQgYW5kIGEgVEtPIGRlY2xhcmVkLg0
K4oCiCUdlbmVyYWwgQWR2aWNlIENvbXBldGl0b3JzIGFyZSByZW1pbmRlZCB0aGF0IHRoZXkgZG8gbm
90IG5lZWQgdG8gbW92ZSBxdWlja2x5LCBldmVuIGlmIHRoZWlyIG9wcG9uZW50IG1vdmVzIHF1aWNrb
HkuIEFkcmVuYWxpbmUgZHJhc3RpY2FsbHkgY2hhbmdlcyB5b3VyIHNlbnNlIG9mIHRpbWUuICBFeHBl
cmllbmNlIHNob3dzIHRoYXQgYSBwbGF5ZXIgaXMgT0sgdW50aWwgaGUgaGFzIDIgbWludXRlcyBvZiB0a
W1lIHJlbWFpbmluZyBvbiB0aGUgY2xvY2ssIHdoZW4gbW92ZXMgc2hvdWxkIGJlIHNwZWVkZWQgdXAu
DQo=

Decoded

1. SUMMARY OF RULES. MAIN POINTS.

TOUCH MOVE rule strictly applies.

• If a piece is touched, then it must be moved (if a legal move is available)

• If an opponent's piece is touched, it must be taken (if legal).

COUNTDOWN IF STALLING FOR TIME.In general a player manages how much or little time to take for each move, and this is fine! However, if a player clearly plays far too slowly for the specific position, for example when he is facing unavoidable checkmate, the arbiter will do a countdown. He will point at the board, and warn the player by counting to 10 with his hands (just like a boxing referee). If the player has not moved by the count of 10, he loses the game and the match. Note there is no minimum time to make a move! Also, even if there is only 1 legal move, the player should be allowed some time to psychologically compose

themselves. It should be considered that a weak player may not realise he only has 1 legal move.

CHESS CLOCK PROTOCOL. The chess clock must be pressed with the SAME HAND that moves the piece.

PRESSING CHECK CLOCK. It is the player's responsibility to press his or her clock between chess moves. The competitors may agree in advance to allow the arbiter to issue reminders – especially if both fighters are new to chessboxing.

PIECES KNOCKED DOWN OR NOT PROPERLY ON A SQUARE. If a player knocks down a piece whilst making a move or does not put it properly on a square, he should properly re-position or re-centre the piece in HIS OWN clock time. An offence that puts off the opponent could be punished by adding time to the opponent's clock.

OTHER RULES to NOTE

•   Resignation protocol.   For the benefit of the audience, players are strongly encouraged to play until checkmate. If you want to resign (submit) prior to checkmate, do this by knocking over your king and offering a handshake.

•   Illegal move. An illegal move must be retracted. The arbiter has the discretion to punish with a time penalty, or disqualify after 3 illegal moves. Extra allowances can be made for novice players.

•   Speaking to the arbiter. If a player needs to speak to the arbiter during the chess game, he should remove his headphones. The arbiter will then stop the clock to listen.

•   Playing to win on time. If a position is a completely drawn position, and the arbiter believes a player is quickly moving pieces only to win on time, then the arbiter can declare the game a draw.

•   Chess Draw.   A chess draw will be followed by one boxing round (unless the maximum number of boxing rounds has already happened). The chessboxing bout will therefore be won by whoever has amassed the most boxing points – judged by punches thrown and overall aggression.

•   Drinks Fighters are allowed to bring water to the chess table.

•   Cuts In most cases, except for the most superficial examples, a cut will lead to the fight being stopped and a TKO declared.

•   General Advice Competitors are reminded that they do not need to move quickly, even if their opponent moves quickly. Adrenaline drastically changes your sense of time. Experience shows that a player is OK until he has 2 minutes of time remaining on the clock, when moves should be speeded up.

Rules 2.docx

IDIuICAgRU5GT1JDRU1FTlQgT0YgQ0hFU1MgUlVMRVMNCiBJbiB0aGUgZXZlbnQgb2YgYSBicmVhY2gg
b2YgdGhlIHJ1bGVzIGEgcGVuYWx0eSBjYW4gYmUgaW1wb3NlZCBhdCB0aGUgYXJiaXRlcuKAmXMgZGlz
Y3JldGlvbi4NCiANCg0K

Decoded

2. ENFORCEMENT OF CHESS RULES

 In the event of a breach of the rules a penalty can be imposed at the arbiter's discretion.

Rules 3.docx

My4gIFBFTkFMVElFUyBGT1IgUlVMRSBCUkVBQ0hFUw0KQSBjaGVzcyBwZW5hbHR5IGNvdWxkIHRha2UgdGhlIG
Zvcm0gb2Y6DQrigKIJVGhlIG9mZmVuY2Ugd2lsbCBhY3QgYXMgYSB0aWUtYnJlYWsgaWYgYm90aCB0aGUgYm94a
W5nIGFuZCBjaGVzcyBhcmUgZHJhd24uICBUaGlzIGlzIHRoZSBtaW5pbXVtIChkZWZhdWx0KSBwZW5hbHR5IGFuZ
CBhcHBsaWVzIGlmIHRoZXJlIGlzIG5vIG90aGVyIHBlbmFsdHkuDQrigKIJMzAgc2Vjb25kcyBpcyBzdWJ0cmFjdGVkIG
Zyb20gdGhlIG9mZmVuZGVy4oCZcyBjbG9jay4NCuKAoglGb3JmZWl0IG9mIHRoZSBib3V0LiBUaGlzIGNvdWxkIG9j
Y3VyIGZvciBhIHNlcmlvdXMgZGlzY2lwbGluYXJ5IG9mZmVuY2UsIGRlbGliZXJhdGUgZm91bCBwbGF5IG9yIGEgcmV
wZWF0ZWQgYnJlYWNoIChlLmcuIGEgdG90YWwgb2YgMyBpbGxlZ2FsIG1vdmVzKS4NCg==

Decoded

3. PENALTIES FOR RULE BREACHES

A chess penalty could take the form of:

•   The offence will act as a tie-break if both the boxing and chess are drawn. This is the minimum (default) penalty and applies if there is no other penalty.

•   30 seconds is subtracted from the offender's clock.

•   Forfeit of the bout. This could occur for a serious disciplinary offence, deliberate foul play or a repeated breach (e.g. a total of 3 illegal moves).

Rules 4.docx

NC4gICBDSEVTUyBDTE9DSyBNQUxGVU5DVElPTg0KSW4gdGhlIHVubGlrZWx5IGV2ZW50IHRoZSBlbGVj
dHJvbmljIGNoZXNzIGNsb2NrIGNlYXNlcy0byBvcGVyYXRlIGR1cmluZyBhIGNoZXNzIHJvdW5kLC0aGU
gYXJiaXRlciB3aWxsIGRvIG9uZSBvZiBmb2xsb3dpbmcsIGRlcGVuZGluZyBvbiB0aGUgZXN0aW1hdGVkIG
Rpc3J1cHRpb24gdG8gdGhlIHBsYXllcnMgYW5kIHNwZWN0YXRvcnM6DQrigKIJU3RvcCB0aGUgY2xvY2
sgYW5kIHJlc29sdmUgdGhlIHByb2JsZW0uDQrigKIJU3RvcCB0aGUgY2xvY2sgYW5kIHJlcGxhY2UgaXQgd2
l0aCBhIG5ldyBjbG9jay4gIFRoaXMgYWN0aW9uIGlzIG1vc3QgbGlrZWx5IGlmIHRoZXJlIGlzIGEgcmVwZW
F0ZWQgbWFsZnVuY3Rpb24sIG9yIGl04oCZcyBvbmUgb2YgdGhlIGxhdGVyIGNoZXNzIHJvdW5kcyB3aG
VyZSBhIHBsYXllciBpcyBzaG9ydCBvZiB0aW1lLg0KDQoNCg==

Decoded

4. CHESS CLOCK MALFUNCTION

In the unlikely event the electronic chess clock ceases to operate during a chess round, the arbiter will do one of following, depending on the estimated disruption to the players and spectators:

• Stop the clock and resolve the problem.

• Stop the clock and replace it with a new clock. This action is most likely if there is a repeated malfunction, or it's one of the later chess rounds where a player is short of time.

Rules 5.docx

- NS4gICBXQ0JBIENIRVNTIFJVTEVTIEZPUiBDSEVTU0JPWElORw0KQ2hlc3MgdG91cm5hbWVudCBydWxlcyBoYXZlIGxlZ2FsIHBvaW50cyB0aGF0IGNhc3VhbCBwbGF5ZXJzIG1heSBiZSB1bmZhbWlsaWFyIHdpdGguICBUaGUgb2ZmaWNpYWwgbGF3cyBvZiBjaGVzcyBhcmUgb24gdGhlIHdlYnNpdGUgb2YgdGhlIERSSwgdGhlIGNoZXNzIGdvdmVybmluZ yBib2R5IGh0dHA6Ly93d3cuZmlkZS5jb20vY29tcG9uZW50L2hhbmRib29rLz9pZD0zMmFnZHZpZXc9Y2F0ZWdvcnkuDQpaWdobGlnaHRlZCBiZWxvdyBhcmUgdGhlIGVnYWwgcG9pbnRzIHRoYXQgY2F1c2UgbW9zdCBkaXNwdXRlcyBp biB0b3VybmFtZW50IGNoZXNzIHNpdHVhdGlvbnMuDQpbiBhZGRpdGlvbiwgc29tZSBjaGVzc2JvZGluZyBsYXdzIGR pZmZlciBmcm9tIEZJREUgcnVsZXMgaW4gb3JkZXIgdG8gGkuSBlbnN1cmUgdGhlIHBheWluZyBwdWJsaWMgaX MgZW50ZXJ0YWluZWQsIChpaS4pIGtlZXAgdGhlIGdhbWUgZmxvd2luZyB3aXRoIG1pbmltYWwgZGlzcnVwdGlvbi wgYW5kIChpaWkuKSBtaW5pbWlzZSB2ZXJiYWwgY29tbXVuaWNhdGlvbiB3aXRoIHRoZSBjb21wZXRpdG9ycy4gV Ghlc2UgZGlmZmVyZW5jZXMgYXJlIGhpZ2hsaWdodGVkIHdoZXJlIHRoZXkgb2NjdXIuDQogDQpUb3VjaCB3a3ZlDQr igKIJT25jZSBhIHBwZWNlIGlzIHRvdWNoZWQgaXQgTVVTVCBiZSB0ZlCwgdW5sZXNzIOKAnErigJlhZG91YmigJ0 gaXMgaW5kaWNhdGVkIGJlZm9yZSB0b3VjaGluZyB0aGUgcGllY2UuICBZiBubyBwZWdhbCBtb3ZlIGlzIGFkbWlzc2li bGUsIHRoZW4gYW55IG90aGVyIHBpZWNlIGNhbiBiZSB0ZlCB3aXRob3V0IHB1bmlzaG1lbnQuDQrigKIJT25jZSB hbiBvcHBvbmVudOKAmXMgcGllY2UgaXMgdG91Y2hlZCBpdCBtdXN0IGJlIGNhcHR1cmVkIGlmIHRoZXJlIGlzIHN1Y 2ggYSBsZWdhbCBtb3ZlLiAgSWYgaXQgY2Fubm90IGJlIGNhcHR1cmVkIHRoZSBvZmZlbmRlciByZWNaXZlcyBubyB wZW5hbHR5IGFuZCBpcyBmcmVlIHRvIG1vdmUgd2l0aG91dCByZXN0cmljdGlvbi4NCiANCkNhc3RsaW5nIHRvdW NoIG1vdmUNCldoZW4gY2FzdGxpbmcgeW91IE1VU1QgdG91Y2ggdGhlIGtpbmcgZmlyc3QuICBJZiB5b3UgdG91Y 2ggdGhlIHJvb2sgZmlyc3QsIHRoZW4geW91IGNhbm5vdCBjYXN0bGUsIGJ1dCB5b3UgbXVzdCB0ZlIHRoZSByb29 rIGJlY2F1c2Ugb2YgdGhlIHRvdWNoLW1vdmUgcnVsZS4NCiANCkhhbmQgaXMgdGFrZW4gb2ZmIEgcGllY2UNCld oZW4gYSBwaWVjZSBpcyB0ZlZCBhbmQgdGhlIGhhbmQgdGFrZW4gb2YgdGhlIHBpZWNlIGlzIG1vdmUg Y2Fubm90IGJlIHJldHJhY3RlZCДigJMgdGhlIHBpZWNlIGNhbm5vdCBiZSB0ZlZCB0byBhIGRpZmZlcmVudCBzcXVh cmUuDQogDQpJbGxlZ2FsIG1vdmUgChRoZSBhcnJpdGVyIHdpbGwgcG9pbnQgb3V0IHRoZSBpbGxlZ2FsIG1vdmU gaWYaXQgZ29lcyB1bm5vdGljZWQuICBTaW5jZSB0aGUgcHVuaXNobWVudCBmb3IgYW4gaWxsZWdhbCBtb3ZlI GlzIG5vdCBhcyBzZXZlcmUgaW4gY2hlc3Nib3hpbmcgYXMgaW4gRklERSBiaGl0ZiBjaGVzcyBYXdzLCB0aGUgYXJia XRlciB3aWxsIG5vdCBhbGxvdyB0aGUgcG9zc2liaWxpdHkgb2YgYW4gaWxsZWdhbCBtb3ZlIGdvaW5nIHVuY29ycm VjdGVkLg0KIA0K4oCsSuKAmUFkb3ViZeKAnSBydWxlLg0KTm9ybWFsIENoZXNzIFJ1bGVzDQrigKIJSWYgYSBwaWVj ZSBpcyBvZmYgY2VudHJlIIGFuZCBpcyBhbnneWluZyB5b3UsIHN0YXRllOKAnErigJlhZG91YmigJ0gb3Ig4oCcSBh ZGp1c3Rig0gQkVGT1JFIGFkanVzdGluZyBpdHMgcG9zaXRpb24gb24gdGhlIHNxdWFyZS4gIE9uZSB0aGVzZSB waHJhc2VzIHob3VsZCBiZSB1c2VkIHJlZ2FyZGxlc3Mgb2YgdGhlIHBsYXllci4gIXMgY29tZSBsYW5ndWFnZS4gDQ rigKIJSWYgeW91IHN0YXRlIOKAnErigJlhZG91YmigJ0gYW0ZXIgb3IgZHVyaW5nIHRoZSBwaWVjZSBhZGp1c3Rtz W50LCB0aGVulGl0IGNvdW50cyBhcyBhIHRvdWNoIG1vdmUuDQrigKIJWW91IHNob3VsZCBvbmx5IGFkanVzdCB waWVjZXMgd2hpbHN0IHlvdXIgY2xvY2sgaXMgcnVubmluZy4gQWRqdXN0aW5nIGR1cmluZyB5b3VyIG9wcG9uZ W504oCZcyB0aW1lIGlzIGZvcmJpZGRlbiBhcyBpdCBpcyBhIGRpc3RyYWN0aW9uLg0KQ2hlc3Nib3hpbmcgUnVsZX MgKGFYXB0ZWQgYmNYVzSib3RoIHBsYXllcnMgaGF2ZSBoZWFkcGhvbmVzKQ0K4oCiCVdpdGggaGVhZHBob b25lcyBvbiBpdCBpcyBzaW1wbGVyIGZvciBhIHBsYXllciBzaW1wbHkgdG8gcGxheSBzIGRvbuKAnXQgdHJ5IHRvIE rigJlhZG91YmUuIICBQaWVjZXMgd2lsbCBieSB0aGUgYXJiaXRlciBiZXR3ZWVuIGVhY2ggY2hlc3Mgcm91bmQuICBIb3d ldmVyLCBpZiB0aGUgdXJnZSB0byBK4oCZYWRvdWJlIGlzIG92ZXJ3aGVsbWluZyAtIXJZXNpc3RpYmxlLCBmb2xsb3cgdGhlIGJlbG 93IHByb2NlZHVyZeKApg0K4oCiCUNsZWFybHkgdHVybiB0byB0aGUgYXJiaXRlciBhbmQgbW91dGgg4oCsSuKAm

WFkb3ViZeKAnSBBTkQgZ2l2ZSB0aGUgSuKAmWFkb3ViZSBoYW5kIHNpZ25hbCBzcGVjaWFsbHkgZGV2ZWxvcGV
kIGZvciBjaGVsc2VvbG4zY4gIHRoZXggYWRqdXN0IHRoZSBwaWVjZSBhcyBpbiBhIG5vcm1hbCBjaGVzcyBnYW1lLg
0K4oCiCVRoZSBq4oCZYWRvdWJlIGhhbmQgc2lnbmFsIGlzIHRoZSDigJhS+KAmSBoYW5kIGdlc3R1cmUsIGNyYWF
0aW5nIGEgY2lyY2xlIHdpdGggdGhlIH0dW1iIGFuZCBmaXJzdCBmaW5nZXIuDQogDQpQYXduIHByb21vdGlvbg0K
QSBrZXkgZGlmZmVyZW5jZSBiZXR3ZWVuIGNhc3VhbCBjaGVzcyBhbmQgdG91cm5hbWVudCBydWxlcy4gIFdoZZ
4gcHJvbW90aW5nIGEgcGF3biB0byBhIHNlY29uZCBxdWVlbiwgZG8gTk9UIHVzZSBhbiB1cHNpZGUtZG93biByb29
IChhcbGFydGVbuKAnSBhcB5b3UgZG8gc28sIGl0IGlzIHN0aWxsIGEgcm9vayEgIFRoZSBjaGVzcyBjbG9ja4Bhc
mJpdGVyIGlubGwgbm90IHJlY29nbmlzZSBpdCukICBvdmUgImIHlvdSBz
aG91dCDigJxxdWVlbuKAnSBhcyB5b3UgZG8gc28sIGl0IGlzIHN0aWxsIGEgcm9vayEgIFRoZSBjaGVzcyBjbG9ja
mJpdGVyIGlubGwgbm90IGZvbmsgZXc3cGhhcmUucGVyZXg4aXMgb24gdGhlIHRhYmxlIGZvciB5b3UgdG8gdXNlLg0KIA0
KQ2xvY2NuCUAogUSUgY2xvY2sgTVVTVCBiZSBwcmVzc2VkIHdpdGggdGhlIHNhbWUgaGFuZCB0aGF0IG1ha2V
zIHRoZSBtb3ZlDQrigKIJUnVubmluZyBvdXQgb2YgdGltZS4gIEltIGEgcGxheWVyIGhhcyBubyB0aW1lIHJlbWFpbmlu
ZywgdGhlbiBoZSBpcyBsb3N0IGlmIGhpcyBvcHBvbmVudCBjYW4gY2llY2ttYXRlIGhpbSBhc3N1bWluZyB0aGUgbW
9zdCB1bnNraWxsZWQgcGxheSBob3RoZXJ3aXNlIHRoZSBnYW1lIGlzIGEgZHJhdy4gIEZvciBleGFtcGxlLCBpZiBQbGF
5ZXIgQSBoYXMgdGhyZWUgcXVlZW5zIGFuZCBBbGtpbnMsIGFuZCBQbGF5ZXIgQiBoYXMgb25lIEhbhd24gYW5kIGE
ga2luZywgdGhlbiBBIGF3bnMgIFllYXIlIEBIHJ1bmcgb3V0IG9mIHRpbWUuDQrigKIJQSBwbGF5ZXI
gc2hvdWxkIG5vdCBzdGFydCBvciBtYWtlIHRoeSBvZlHVudGlzIHRoZSBvcHBvbmVudCBoYXMgch5c2ljYWxseS
BwcmVzc2VkIHRoZSBjbG9jay4NCuKAoglSU1lIHNjcmFtYmxlOKAkyBkaXNwdXRlcyBjYW4gYXJpc2Ugd2hlbiAxIG
9yIGJvdGggcGxheWVyeSBhcmUgc2hvcnQgb2YgdGltZSBhbmQgbW92aW5nIG4dHJlbWVseSBxdWlja2xlOg0Kb
wlBIHBhYWxlciBzaG91bGQgbm90IHN0YXJ0IHRvIG1ha2UgdGhlIG1vdmUgdW50aWwgdGhlIG9wcG9uZW50IGhhcy
BwaHlzaWNhbGx5IHByZXNzZWQgaGlzIGNsb2NrLiBpLiUuIHlvdSBzaG91bGQgbm90IHJ1c2ggdG8gbW92ZSBhIH
BpZWNlIGluIHRoZSBicmllZiB0aW1lIGJldHdlZW4geW91ciBvcHBvbmVudCBtb3ZpbmcgaXMgcGVlY2UgYW5ZCBwc
mVzc2luZyBoaXMgY2xvc2suDQpvCUlmIGEgcGxheWVyIG1vbnRseSBkd3duIHBpZWNlcyBkdXJpbmcgYSB0b3ZlLC
BoZSBzaG91bGQgcmVzZXQgdGhlbSBpbiBoaXMgb3duIHRpbWUgYmVmb3JlIHByZXNzaW5nIGhpcyBjbG9jay4gIEl
mIGhlIHBlcmNlcyBpcyBjbG9ja4IHdpdGhvdXQgcmVzdGF0aW5nIHRoZSBwaWVjZXMgb24gdGhlaXIgc3F1YXJl
cywgdGhlbiB0aGUgb3Bwb25lbnQgY2FuIGltbWVkaWF0ZWx5IGvdW5jZSB0aGUgY2xvY2sgYmFjayBwaXRob3V0I
G1ha2luZyBhIG1vdmUsIHdoaWxlIHBvaW50aW5nIHRvIHRoZSBvZmZlbmRpbmcgcGllY2UuIHRoYXQgaG
F2ZSBiZWVuIGtub2NrZWQgZG93bi4gVGhlIGZpcnN0IHBsYXllciBzaG91bGQgdGhlbiBwcm9wZXJseSByZXNldCB0a
GUgcGllY2VzIGluIGhpcyBvd24gdGltZS4gW1RoaXMgY29tcGxldGVseSBkaWZmZXJzIGZyb20gRklERSBsYXdzLCB3a
GVyZSB0aGUgaW5ub2NlbnQgcGFydHkgc2hvdWxkIHN0b3AgdGhlIGNsb2NrcyBhbmQgaW5mb3JtIHRoZSBhcmJ
pdGVyL4gIFRoZSBzYW1lIGFjdGlvbiBjYW4gYmUgdGVyZm9ybWVkIGlmIGEgcGGhIXMgbm90IGNzZWFyaHkg
b24gYSBzcXVhcmUgYnV0IHNpZ25pZmljYW50bHkgb3Zlcmxhc3MgYW5vdGhlciBzcXVhcmUgc3ViCB0aGF0IGl0c
yBwb3NpdGlvbiBpcyBhbWJpZ3VvdXMuICBUaGUgYXJiaXRlciBjYW4gc3RvcCB0aGUgY2xvY2tzIGlmIHRoZXJlIGlzIG
Egmx1cnJ5IG9mIHBvb3JseSBwbGFjZWQgcGllY2VzLCBhbmQgaW50ZXJ2ZW5lIHRvIHJlc2V0IHRoZSBib2FyZC4gIF
RoZSBhcmJpdGVyIGNhbiBwZW5hbGlzZSB0aGUgb2ZmZWRlciDQpvCURyYXduIHBvc2l0aW9uIOKAkyBwbGF5
aW5nIHRvIHdpbiBvbiB0aW1lDQrigKIJSWYgdGhlIGFyYml0ZXIganVkZ2VzIHRoZSBwb3NpdGlvbiBpcyBhIGRyYWQg
ZHJhdAoZS5nLiBvcHBvc2l0ZSBjb2xvdXIgYmlzaG9wIGVuZGluZywb3IUitLHZzIFIrSyksIHRoZXggdGhlIGFyYml0
ZXIgY2FuGludGVydmVuZSBhbmQgZGVjbGFyZSBhIDRyYXcgaWYgcGxheWVyIGFmIGNsdGGbHkgRryeWluZ0by
B3aW4gb24gdGltZSBhbmQgbm90IG1ha2luZyBjb25jcmV0ZSBlZmZvcnQgdG8gd2luIHRoZSBnYW1lLiAgVGhl
IGRlZmVuZGVyIGRvZXMgbm90IG5lZWQgdG8gcmVxdWVzdCB0aGUgYXJiaXRlciB0byBtYWtlIHN5Y2ggYSBqdWRn
ZW1lbnQ7IHRoZSBhcmJpdGVyIHdpbGwgYXNzdW1lIHRoZSByZXF1ZXN0IGV4aXN0cyBhcyBlbGxhcmlzGhhcmsL
ZXlyIGhhcsbGVzIHRoYXggMiBtaW51dGVzIHJlbWFpbmluZy4gIFRoaXMgaXMgRpZmZlcmSnaGZviBsB0aGUgRklERSB
sYXdzLCB3aGljaCByZXF1aXJlcyB0aGUgZGVmZW5kZXIgdG8gc3RvcCB0aGUgY2xvY2tzIEFFRCk5RSBoZSBnZXRzIGlu
dG8gY3JpdGljYWwgdGltZS4gIGFuZCBhc2sgdGhlIGFyYml0ZXIgdG9ic3VydmUgdGhlaGRlciB0aG
UgYXR0YWNrZXIgaXMbWFraW5nIGEgY29uY3VydGVkIGVmZm9ydCB0byBwbGF4gdGhlIGdhbWUgb3IgaXMganV
zdCBhYW1pbmcgdG8gd2luIG9uIHRpbWUgaW4gYSBkZWFkIGRyYXUgcG9zaXRpb24uL0NCuKAoglMb3Npbmcgc
G9zaXRpb24g4oCTIHBsYXllciBpIGxvc3QgcG9zaXRpb24g4oCTIGVcsZSBkZXZlbG9w
ZWQgZm9yIGNoZXNzYm94aW5nIHRvIHByZXZlbnQgc3RhbGxpbmcgZm9yIHRpbWUuDQrigKIJWYgYSBwbGF5ZX
IgdGFrZXMgdG9vIG11Y2ggdGltZSBpbiBhIGxvc3QgcG9zaXRpb24gd2hlcmUgaGUgd291bGQgYmUgbWF4YW
WQgdG8gcGxheSBtdWNoIHF1aWNreSBpbiBhIG5vcm1hbCBjaGVzc2ZhdSwgdGhlIGFyYml0ZXIgY2FuIGdpdm
mUgaGltIGEgY291bnQgb2YgMTAuICBUaGUgYXJiaXRlciB3aWxsIHZpc3VhbGx5IGNvdW50IHdpdGggGlzIGhhbm
RzLiBJZiBIB2byB0aGUgaXMgZ3Zlbgb24gdGhlIGNvdW50IG9mIDEwIHRoZSBwbGF5ZXIgZvcmZlaXRzIHRoZSBnY
W1lLg0KRHJhdyBieSB0aHJlZWZvbGQgcmVwZXRpdGlvbg0K4oCiCUlmIHRoZSBzYW1lIHBvc2l0aW9uIG9jY3V
ycyAzIHRpbWVzIChhbmQgd2l0aCB0aGUgc2FtZSBwbGF5ZXIgdG8gbW92ZSksIHRoZSBwbGF5ZXIgY2FuIGNsYWlt

GEgZHJhdyBPTkxZIFdIRU4gSVQgSVMgSElTIE1PVkUuICBIZSBzaG91bGQgc3RvcCB0aGUgY2xvY2sgYWZ0ZXIgdGhl
G9wcG9uZW504oCZcyBsYXN0IG1vdmUsIHlbW92ZSBoaXMgaGVhZHBob25lcyBhbmQgVEVMTCB0aGUgYXJiaXR
lciB3aGF0IG1vdWga GUgV09VTEQgcGxheSBoeW5nZWQgaW50byB0aGUgM2JkIHJlcGV0aXRpb24uICBTEByBOT1Q
gUExBWSBUSEUgTU9WRSwgRE8gTk9UIFBBRVNTIFRIRSBDTE9DSy4gIElmIHRoZSBwbGF5ZXIgaXMgdW5zdXJlIGh
vdyB0byBwYXVzZSB0aGUgY2xvY2sgIHRoZXhgIHRoZCanIHRha2Ugbm9mIGhpcyBoZWFkcGhvbmVzIGFuZCBjbGF
pbSB0aGUgZHJhd4gIFRoZSBhcmJpdGVyIHdpbGgc3RvcCB0aGUgY2xvY2sgYXMgdGhlIGhlYWRwaG9uZXMgY2
9tZSBvZmYuICBZiB0aGUgZHJhdyBjbGFpbSBpcyBjb3JyZWN0IGFuZCB0aGUgY2xhaW1hbnQgcnVucyBvdXQgb2Y
gdGltZSBhZnRlciBjbGFpbWluZyBoaXMgaGVhZHBob25lcywgdGhlIHRyYXcgd2lsbCBob2xkLg0K4oCiUEgZHJhdyB
ieSByZXBldGl0aW9uIG5vcm1hbGx5IG9jY3VycyBieSBwZXJwZXR1YWwgY2hlY2sgc28gaXMgZWFzZSB0byBpZGVu
dGlmeS4NCiANCjUwIG1vdWgcnVsZQ0KQSBrcmF3IGNhbiBiZSBjbGFpbWVkIGlmIG5laXRoZXIgYSBwaWVjZSBpc
yB0YWtlbiBub3IgYSBwYXduIG1vdmVkIGluIDUwIG1vdmVzIChpLmUuIDUwIFdoaXRlIGFuZCA1MCBgCgFjayB0b3Zl
cykuICBBcyBwbGF5ZXJzIGFyZSBub3Qgd3JpdGluZyBhdGhaWgc2NvcmUsIHRlaGBhcmJpdGVyIHdpbGwgbW9u
aXRvciBvbiB0aGVpciBiZWhhbGg4oCTIHRoaXMgaXMgbW9zdCBsaWtlbHkgdG8gb2NjdXIgaW4gYW4gZW5kaW5
nIElrTitLIHZzLiBLLg0KIA0KRHJhdyBPZmZlcg0K4oCiICUNbnRyYXJ5IHRvIEZJREUgcnVsZXMsIHBsYXllcnMgd2lsbCB
ub3QgYmUgYWJsZSB0byBvZmZlciBhIGRyYXcgaW55ZXNzIHRoZSBwb3NpdGlvbiBpcyBhIOKAmGRlYWQgZHJhd+K
AmSwgYXMganVkZ2VkIGJ5IHRoZSBhcmJpdGVyLg0K4oCiVRoZSBvZmZlciB2aBhIGRyYXcgbXVzdCBiZSBtYWRlIH
Rocm91Z2ggdGhlIGFyYml0ZXIuICBNYWtlIHlvdXIgbW92ZSwgZG8gbm90IHByZXNzIHlvdXIgY2xvY2sgYW5CID0aG
VuIHJlbW92ZSB0aGUgaGVhZHBob25lcyB0byBzcGVheB0byB0aGUgYXJiaXRlci4gIFRoZSBhcmJpdGVyIHdpbGgc
3RvcCB0aGUgY2xvY2sgYW5kIGp1ZGdlIHdoZXRoZXIgYSBrcmF3IG9mZmVyIGlzIGFjY2VwdGFibGUuICBJZiBzbywg
aGUgd2lsbCBjb252ZXkgdG8gdGhlIG9wcG9uZW50IGZvciBjb25zaWRlcmF0aW9uIGFuZCByZXN0YXJ0IHRoZSBjbG
9jayAoYXNgdGhlIG9wcG9uZW50IGNhbiBjb25zaWRlciB0aGUgZHJhdyBvZmZlciB1bnRpbCB0aGUgbWtlcyBoaXMg
bmV4dCBtb3ZlKS4NCiANClZlcmJhbCBDb21tdW5pY2F0aW9uIHdpdGggdGhlIGFyYml0ZXINCuKAoglZiBhIHBsYXll
ciB3YW50cyB0byBzcGVheB0byB0aGUgYXJiaXRlciBkdXJpbmcgdGhlIGdhbWUgaGUgc2hvdWxkIHJlbW92ZSBoaX
MgaGVhZHBob25lcy4gIFRoZSBhcmJpdGVyIHdpbGgc3RvcCB0aGUgY2xvY2sgdG8gdGFsay4gIFRoZSBvdGhlciBw
bGF5ZXIgY2FuIHJlbW92ZSBoaXMgaGVhZHBob25lcyB0byBsaXN0ZW4gdG8gdGhlIGNvbnZlcnNhdGlvbi4NCiANCk
FyYml0ZXIgLigyslcgRlY2lzaW9uDQrigKIJVGhlIGFyYml0ZXIgLigyslcgRlY2lzaW9uIGlzIGZpbmFsLiAgVGhlIGZpbmVyIHJ1b
GVzIG9mIGNoZXNzYm94aW5nIHdpbGgbm8gZG9iYQZvbHZlIHdpdGggdGhlIHNwb3J0LiAgQW55IHVuYW5
0aWNpcGF0ZWQgY2lyY3Vtc3RhbmNlcyB3aWxsIGJlIGp1ZGdlCBjb25zaWRlcmluZyB0aGUgb2ZmaWNpYWwgRk
lERSBjaGVzcyBhbXdzLCB0aGUgbmVlZCBmb3Igc3BvcnRpbmcgZmFpcibwbGF5IGluIHJlbGF0aW9uIHRvIHRoZSB0b
3VybmFtZW50IGNoZXNzYm94aW5nIGNoZXNzYm94ZXJzLCBhbmQgdGhlIG5lZWQgdG8gZW50ZXJ0YWluIGEgcGF5aW5nIGF1ZGllbmNlLg0K

Decoded

5. WCBA CHESS RULES FOR CHESSBOXING

Chess tournament rules have legal points that casual players may be unfamiliar with. The official laws of chess are on the website of FIDE, the chess governing body http://www.fide.com/component/handbook/?id=32andview=category.

Highlighted below are legal points that cause most disputes in tournament chess situations.

In addition, some chessboxing laws differ from FIDE rules in order to (i.) ensure the paying public is entertained, (ii.) keep the game flowing with minimal disruption, and (iii.) minimise verbal communication with the competitors. These differences are highlighted where they occur.

Touch move

•   Once a piece is touched it MUST be moved, unless "J'adoube" is indicated before touching the piece. If no legal move is admissible, then any other piece can be moved without punishment.

•   Once an opponent's piece is touched it must be captured if there is such a legal move. If it cannot be captured the offender receives no penalty and is free to move without restriction.

Castling touch move

When castling you MUST touch the king first. If you touch the rook first, then you cannot castle, but you must move the rook because of the touch-move rule.

Hand is taken off a piece

When a piece is moved and the hand taken off the piece, the move cannot be retracted – the piece cannot be moved to a different square.

Illegal move

The arbiter will point out the illegal move if it goes unnoticed. Since the punishment for an illegal move is not as severe in chessboxing as in FIDE blitz chess laws, the arbiter will not allow the possibility of an illegal move going uncorrected.

"J'Adoube" rule.

Normal Chess Rules

•   If a piece is off centre and is annoying you, state "j'adoube" or "I adjust" BEFORE adjusting its position on the square. One of these phrases should be used regardless of the player's home language.

•   If you state "j'adoube" after or during the piece adjustment, then it counts as a touch move.

•   You should only adjust pieces whilst your clock is running. Adjusting during your opponent's time is forbidden as it is a distraction.

Chessboxing Rules (adapted because both players have headphones)

•   With headphones on it is simplest if players don't try to J'adoube. Pieces will be nicely centred by the arbiter between each chess round. However, if the urge to J'adoube becomes irresistible, follow the below procedure…

• Clearly turn to the arbiter and mouth "J'adoube" AND give the J'adoube hand signal specially developed for chessboxing. Then adjust the piece as in a normal chess game.

• The j'adoube hand signal is the 'OK' hand gesture, creating a circle with the thumb and first finger.

Pawn promotion

A key difference between casual chess and tournament rules. When promoting a pawn to a second queen, do NOT use an upside-down rook (as the electronic chessboard will not recognise it). Even if you shout "queen" as you do so, it is still a rook! The chessboxing arbiter will ensure a spare queen is on the table for you to use.

Clock

• The clock MUST be pressed with the same hand that makes the move

• Running out of time. If a player has no time remaining, then he is lost if his opponent can checkmate him assuming the most unskilled play, otherwise the game is a draw. For example, if Player A has three queens and a king, and Player B has one pawn and a king, then Player B wins if Player A runs out of time.

• A player should not start to make his move until the opponent has physically pressed his clock.

• Time scramble – disputes can arise when 1 or both players are short of time and moving extremely quickly:

o A player should not start to make his move until the opponent has physically pressed his clock. i.e. you should not rush to move a piece in the brief time between your opponent moving his piece and pressing his clock.

o If a player knocks down pieces during a move, he should reset them in his own time before pressing his clock. If he presses his clock without resetting the pieces on their squares, then the opponent can immediately bounce the clock back without making a move, whilst pointing to the offending piece(s) that have been knocked down. The first player should then properly reset the pieces in his own time. [This completely differs from FIDE laws, where the innocent party should stop the clocks and inform the arbiter]. The same action can be performed if a piece is not clearly on a square but significantly overlaps another square such that its position is ambiguous. The arbiter can stop the clocks if there is a flurry of poorly placed pieces, and intervene to reset the board. The arbiter can penalise the offender.

o Drawn position – playing to win on time

• If the arbiter judges the position is a dead draw (e.g. opposite colour bishop ending, or R+K vs R+K), then the arbiter can intervene and declare a draw if a player is simply trying

to win on time and not making a concerted effort to win the game. The defender does not need to request the arbiter to make such a judgement; the arbiter will assume the request exists as soon as a player has less than 2 minutes remaining. [This differs from the FIDE laws, which requires the defender to stop the clocks BEFORE he gets into critical time trouble, and ask the arbiter to observe whether the attacker is making a concerted effort to win the game or is just aiming to win on time in a dead drawn position.]

• Losing position – playing to win on time

• Note that if a player is in a winning position but is close to losing on time, the arbiter will not intervene in his favour. If he loses on time before he checkmates the opponent, this is more a consequence of time mismanagement than having to make countless moves shuffling pieces in a dead drawn position.

• Slow playing a lost position – a rule developed for chessboxing to prevent stalling for time.

• If a player takes too much time in a lost position where he would be expected to play much quicker in a normal chess game, the arbiter can give him a count of 10. The arbiter will visually count with his hands. If no move is made on the count of 10, the player forfeits the game.

Draw by threefold repetition

• If the same position occurs 3 times (and with the same player to move), the player can claim a draw ONLY WHEN IT IS HIS MOVE. He should stop the clock after the opponent's last move, remove his headphones and TELL the arbiter what move he WOULD play to get into the 3rd repetition. DO NOT PLAY THE MOVE, DO NOT PRESS THE CLOCK. If the player is unsure how to pause the clock, then he can take off his headphones and claim the draw. The arbiter will stop the clock as the headphones come off. If the draw claim is correct and the claimant runs out of time after removing his headphones, the draw will hold.

• A draw by repetition normally occurs by perpetual check so is easy to identify.

50 move rule

A draw can be claimed if neither a piece is taken nor a pawn moved in 50 moves (i.e. 50 White and 50 Black moves). As players are not writing a game score, the arbiter will monitor on their behalf – this is most likely to occur in an ending B+N+K vs. K.

Draw Offer

• Contrary to FIDE rules, players will not be able to offer a draw unless the position is a 'dead draw', as judged by the arbiter.

- The offer of a draw must be made through the arbiter. Make your move, do not press your clock, and then remove the headphones to speak to the arbiter. The arbiter will stop the clock and judge whether a draw offer is acceptable. If so, he will convey to the opponent for consideration and restart the clock (as the opponent can consider the draw offer until he makes his next move).

Verbal Communication with the arbiter

- If a player wants to speak to the arbiter during the game he should remove his headphones. The arbiter will stop the clock to talk. The other player can remove his headphones to listen to the conversation.

Arbiter's decision

- The arbiter's decision is final. The finer rules of chessboxing will no doubt evolve with the sport. Any unanticipated circumstances will be judged considering the official FIDE chess laws, the need for sporting fair play in relation to the tournament chess experience of the chessboxers, and the need to entertain a paying audience.

Rules 6.docx

Ni4gICBDSEVTUyBEUkFXIElOIFJFTEFUSU9OIFRPIFRIRSBDSEVTU0JPWElORyBCT1VUDQogDQogSWYgYSBjaGVzcyBkcmF3IGlzIGRlY2xhcmVkIGluIGFueSByb3VuZCwgdGhlcmUgd2lsbCBiZSBhdCBtb3N0IG9ubHkgb25lIGJveGluZyByb3VuZCB0aGVyZWFmdGVyLiAgSWYgdGhlIGNoZXNzIGRyYXcgb2NjdXJzIGluIHRoZSBmaW5hbCByb3VuZCwgdGhlbiB0aGVyZSB3aWxsIGJlIG5vIGZ1cnRoZXIgYm94aW5nIHJvdW5kLCBpbiBsaW5lIHdpdGggdGhlIG9yaWdpbmFsIHNjaGVkdWxlLg0KSW4gdGhlIHVubGlrZWx5IGV2ZW50IHRoYXQgdGhlIGNoZXNzIGdhbWUgaXMgZHJhd24gQU5EIHRoZSBib3hpbmcgaXMgYSB0aWUgb24gcG9pbnRzLCB0aGVuIHRoZSBwbGF5ZXIgd2l0aCB0aGUgZmV3ZXN0IGNoZXNzIHBlbmFsdGllcyBpcyB0aGUgd2lubmVyLiBJZiB0aGVzZSBhcmUgZXF1YWwgdGhlIGJvdXQgd2lsbCBiZSBkZWNsYXJlZCBhIGRyYXcuDQogDQoNCg==

Decoded

6. CHESS DRAW IN RELATION TO THE CHESSBOXING BOUT

If a chess draw is declared in any round, there will be at most only one boxing round thereafter. If the chess draw occurs in the final round, then there will be no further boxing round, in line with the original schedule.

In the unlikely event that the chess game is drawn AND the boxing is a tie on points, then the player with the fewest chess penalties is the winner. If these are equal the bout will be declared a draw.

Rules 7.docx

Ny4gIEhPVyBDSEVTUyBQSUVDRVMgTU9WRSDigJMgRklORVIgUE9JTlRTIFRIQVQgQ09ORlVTRSBCRUdJTk5FUlM
NClRoZSBjb21wbGV0ZSBvZmZpY2lhbCBsYXdzIG9mIGNoZXNzIGFyZSBvbiB0aGUgd2Vic2l0ZSBvZiBGSURFLCB0aG
UgY2hlc3MgZ292ZXJuaW5nIGJvZHkuDQpUaGUgQXBwZW5kaXggb24gdGhlIGFib3ZlIGxpbmsgZXhwbGFpbnMgY
2hlc3Mgbm90YXRpb24sIGFuZCBpbnN0YW5jZXMgd2hlcmUg4oCYYmxpdHrigJkgb3Ig4oCYcmFwaWTigJkgY2hlc3
MgcnVsZXMgZGlmZmVyIGZyb20gbm9ybWFsIOKAmGxvbmcgcGxheeKAmSB0aW1lIGNvbnRyb2xzLg0KQ2FzdGxp
bmcNCuKAoglDYXN0bGluZyBpcyBvbmUgbW92ZQ0K4oCiCVRoZSBraW5nIGFsd2F5cyBtb3ZlcyAyIHNxdWFyZXMs
IGFuZCB0aGUgcm9vayB0aGVuIGdvZXMgbmV4dCB0byB0aGUga2luZyBvbiB0aGUgb3RoZXIgc2lkZS4NCuKAoglBb
Gwgc3F1YXJlcyBiZXR3ZWVuIGtpbmcgYW5kIHJvb2sgbXVzdCBiZSBjbGVhci4gIENhc3RsaW5nIGNhbm5vdCBjYXB0
dXJlIGEgcGllY2UuDQrigKIgCUV2aGl0ZSBLaW5nc2lkZSBjYXN0bGluZyBtb3ZlcyB0aGUgS2luZyBmcm9tIGUxIHRvB
nMSwgYW5kIHRoZSBSb29rIGZyb20gaDEgdG8gZjEuDQrigKIgCUV2aGl0ZSBRdWVlbnNpZGUgY2FzdGxpbmcgbW92ZXMgdGhlIEtpbmcgZnJvbSBlMSB0byB
nMSwgYW5kIHRoZSBSb29rIGZyb20gZTEgdG8gYzEsIGFuZCB0aGUgUm9vayBmcm9tIGExIHRvIGQxLg0KQ2FzdGxpbmcgaXM
gbm90IGEgbGVnYWwgbW92ZSB3aGVuLi4uCmDQrigKIgCmDQrigKIgCmdGhlIGtpbmcgaW4gY2hlY2sNCuKAogniKZ0a
GUga2luZyBib3RoIGRlcGFydHVyZSBhbmQgZGVzdGluYXRpb24gc3F1YXJlIHRoYXQgaXMgYXR0YWNrZWQgKG1hbnkgcGxheWVycyBhcmUgdW5hd2FyZSB0aGlzIHN1YnRsZSBwb2ludCkNCuKAogni
gKZhIHBpZWNlIGlzIG9uIGEgc3F1YXJlIGJldHdlZW4ga2luZyBhbmQgcm9vaw0K4oCiCeKApnRoZSBraW5nIGhhcyB
wcmV2aW91c2x5IG1vdmVkLCBldmVuIGlmIGl0IGhhcyBzaW5jZSByZXR1cm5lZCB0byBpdHMgb3JpZ2luYWwgc3F
1YXJlDQrigKIgCeKApnRob29sgdG8gYmUgY2FzdGxlZCBoYXMgcHJldmlvdXNseSBtb3ZlZCANCkEgcm9tb3Rpb24NCkEgcGF3biB
yZWFjaGluZyB0aGUgZWlnaHRoIHJhbmsgaXMgOTklIG9mIHRpbWVzIHByb21vdGVkIHRvIGEgXVlZW4sIGJ1dCBp
dCBjYW4gYWxzbyBiZSDigJh1bmRlci1wcm9tb3RlZOKAmSB0byBhIGtuaWdodCwgYmlzaG9wIG9yIHJvb2suDQpFb
iBQYXNzYW50DQpIHNwZWNpYWwgdHlwZSBvZiBwYXduIGNhcHR1cmUuIEEgcGF3biBoYXRoY2tpbmcgYSBzcX
VhcmUgY3Jvc3NlZCBieSBhbiBvcHBvbmVudCBwYXduIGhhd24gd2hpY2ggaGFzIGp1c3QgbW92ZWQgdHdvIHNxdWFyZXMgaGFzIG
G9uZSB0dGlIGZvyYWdpbmFsIHNxdWFyZXMgaXRzIGZvcm9yaWdpbmFsIHNxdWFyZSBtYXkgY2FwdHVyZSB0aGlzIHdpcG9uZW50YHMgcGF3biB
BhcyB0aG91Z2ggdGhlIGxhdHRlciBoYWQgbWVibiB0b3ZlZCBvbmx5IG9uZSBzcXVhcmUuIFRoaXMgY2FwdHVyZSB0aGlzIHdpcGF3biB
pcyBvbmx5IGxlZ2FsIG9uIHRoZSB0aGUgZvbGxvd2luZyB0aGlzIGFkdmFuY2UgYW5kIGlzIGNhbGxlZCBhbiBlbiBwYXNzYXDigJdku
IFNlZSBodHRwOi8vZW4ud2lraXBlZGlhLm9yZy93aWtpL0VuX3Bhc3NhbnQgZm9yIHZpc3VhbCBleGFtcGxlcy4NCg
==

Decoded

7. HOW CHESS PIECES MOVE – FINER POINTS THAT CONFUSE BEGINNERS

The complete official laws of chess are on the website of FIDE, the chess governing body.

The Appendix on the above link explains chess notation, and instances where 'blitz' or 'rapid' chess rules differ from normal 'long play' time controls.

Castling

• Castling is one move

• The king always moves 2 squares, and the rook then goes next to the king on the other side.

• All squares between king and rook must be clear. Castling cannot capture a piece.

• White Kingside castling moves the King from e1 to g1, and the Rook from h1 to f1.

• White Queenside castling moves the King from e1 to c1, and the Rook from a1 to d1.

Castling is not a legal move when…

- …the king is in check

- …the king moves into check

- …the king crosses over a square that is attacked (many players are unaware of this subtle point)

- …a piece is on a square between king and rook

- …the king has previously moved, even if it has since returned to its original square

- …the rook to be castled has previously moved, even if it has since returned to its original square

Pawn Promotion

A pawn reaching the eighth rank is 99% of times promoted to a queen, but it can also be 'under-promoted' to a knight, bishop or rook.

En Passant

A special type of pawn capture. A pawn attacking a square crossed by an opponent`s pawn which has advanced two squares in one move from its original square may capture this opponent`s pawn as though the latter had been moved only one square. This capture is only legal on the move following this advance and is called an `en passant` capture. 'En passant' is French for 'as it passes'. See http://en.wikipedia.org/wiki/En_passant for visual examples.

track6.docx

VGhlIE15c3Rlcnkgb2YgQ2hlc3MgQm94aW5nOg0KKHVzZXJuYW1lcykNCg0KTXIuIE1ldGhvZA0KDQpLaW0gSWxsLVNvbmcNCg0KTXIuIFJhem9yDQoNCk1yLiBHZW5pdXMNCg0KTXIuIEcuIEtpbGxhaA0KDQpNYXR0IENhc3NlbA0KDQpNci4gSS4gRGVjayBLaWxsYQ0KDQpNci4gTy5ELkIuIDQoNCk1yLiBYYWVkd29uDQoNCk1yLiBVLUdvZA0KDQpNci4gQ2FwcGFkb25uYSAocG9zc2libHkpDQoNCkpvaG4gV29vPw0KDQpNci4gTmFzDQo=

Decoded

The Mystery of Chess Boxing:

(usernames)

Mr. Method

Kim Ill-Song

Mr. Razor

Mr. Genius

Mr. G. Killah

Matt Cassel

Mr. I. Deck

Mr. M Killa

Mr. O.D.B.

Mr. Raekwon

Mr. U-God

Mr. Cappadonna (possibly)

John Woo?

Mr. Nas

track10.docx

IlByb3RlY3QgWWEgTmVjayINCiJTbyB3aGF0J3MgdXAgbWFuPw0KQ29vbGluZyBtYW4iDQoiQ2hpbGxp
bmcgY2hpbGxpbmc/Ig0KIllvIHlvdSBrbm93IEkgaGFkIHRvIGNhbGwgeW91IHdooeSByaWdodD8i
DQoiV2h5PyINCiJCZWNhdXNlLCB5bywgSSBuZXZlciBldmVyIGNhbGwgYW5kIGFzaywgeW91IHRvIHBsYY
Xkgc29tZXRoaW5nIHJpZ2h0PyINCiJZZWFoIg0KIllvdSBrbm93IHdoYXQgSSB3YW5uYSBoZWFyIHJpZ2h0
PyINCiJXaGF0IHlvdSB3YW5uYSBoZWFyPw0KSSB3YW5uYSBoZWFyIHRoYXQgV3UtVGFuZyBqb2ludCINCi
CiJXdS1UYW5nIGFnYWluPyINCiJBaCB5ZWFoLCBhZ2FpbiBhbmQgYWdhaW4iDQpbc291bmRzIG9m
IGZpZ2h0aW5nXQ0KDQpbUlpBXSBXdS1UYW5nIENsYW4gY29taW5nIGF0IHlvdSwgcHJvdGVjdCB5b3
VyIG5lY2sga2lkLCBzbyBzZXQgaXQgb2ZmIHRoZSBJbmNwZWN0b3IgRGVjaw0KW01ldGhvZCBHYNoIHl
vdXIgc3RlcCBraWQgWzhYQQ0KDQpbSW5zcGVjdG9yIERlY2tdDQpJIHNtb2tlIG9uIHRoZSBtaWMgbGlrZ
SBzbW9raW5nIEpvZSBGcmF6aWVyDQpUaGUgaGVsbCByYWlzZXIsIHJhaXNpbmcgaGVsbCB3aXRoIHRo

ZSBmbGF2b3INClRlcnJvcml6ZSB0aHUgamFtIGxpa2UgdHJvb3BzIGluIFBha2lzdGFuDQpTd2luZ2luZyB0a
HJvdWdoIHlvdXIgdG93biBsaWtlIHlvdXIgbmVpZ2hib3Job29kIFNwaWRlcm1hbg0KU28gdWhoLCB0aW
MgdG9jIGFuCBrZWVwIHRpY2tpbmcNCldoaXIlIEkgZ2V0IHlvIBmbGlwcGluZyBvZmYgdGhlIHNoaXQ
gSSdtIGtpcbY2tpbmcNClRoZSBMb25lIFJhbmdlciB0b3JlIENCiDRlZXAgaW4gdGhlIG
Rhcmsgd2l0aCB0aGUgYXJ0IHRvIHJpcCBjaGFydHMgYXBhcnQNCiThIB2YW5kYWwsIHRvbyBob3QgdG
8gaGFuZGxlDQp5b3UgYmF0dGxlLCB5b3UncmUgc2F5aW5nIGdvb3RieWUgbGlrZSBUZXJpbiBDYW1wY
mVsbA0KUm91Z2huZWNrLCBjbnNwZWN0b3IgRGVjaywgdGVuIGRh
WtlIG1vcmUgbm9pc2UgdGhhbiBoZWF2eSBtZXRhdA0KDQpbUmefa3dvbl0NCiRoZSBzZXQNCiRoZSBzYWJlcwgSSBtY
WtlIG1vcmUgbm9pc2UgdGhhbiBoZWF2eSBtZXRhbA0KDQpbUmla2dvdCBpdCBnb
2luZyBvbiBwYWpzIGNhbWwgbWUgdGhlIHJhcCBhc3Nhc3NpbmF0b3INCldoeW1lcydyBWdnZWQgYW5
kIGJ1bHQgIxpa2UgU2Nod2FyemVuZXINCilaZCBJJ20gZ29ubmEgZ2V0IG1hZGRlZWVpIGxpa2
UgYSB0aHJlYXQsIGlsb3cgdXAgeW91ciBwcm9qZWN0DQpUaGVuIHRha2UgYXlsIHlvdXIgYXNzZXRzDQ
pDYXVzZSBJIGNhbWUgdG8gc2hha2UgdGhlIGZyYWllIGhhbGNldpdGdgdGhlIHRob3VnaHRzIHR
oYXQgym9tYiwgc2hpdCBsaWtlIG1hdGhDQpTbyBpZiB5b3Ugd2FubmEgdHJ5IHRvIGZsaXAgZ28gZmxp
cCBvbiB0aGUgbmV4dCBtYW4NCkhhdXNlIEgZ3JhYiB0aGUgY2xpcCBhbmQNCkhpcCB5b3Ugd2l0aBz
aXh0ZWVuIHNob3RzIGFuZCBtb3JlIEkgZ290DQpHb2luZyB0byB3YXIgd2l0aCB0aGUgbWVsdGluZyBwb3
QgaG90DQoNCltNZXRob2RdDQpJdCdzIHRoZSBNZXRob2QgTWFuIGZvciBzaG9ydCBNci4gTWV0aA0KT
W92aW5nIG9uIHlvdXIgbGVmdCBhbmQgYWghDQpBbmQgc2V0IGl0IG9mZiwgZ2V0IGl0IG9mZiwgZ2V0IGl0I
G9mZiBsaWtlIEgZ2F0DQpJIGdhbm5hIGJyZWFrIGZ1bGwsIGNvcsbgbWUgYmFjaw0KU21hbGwgY2hh
bmdlICB0aGV5IHB1dHRpbmcgc2hhbWUgaW4gdGhlIGdhbWUNCkkgdGFrZSBhaW0gYW5kIGJsb3cgd
GhhdCBuaWdnYSdvdXQgdGhlIGZyYW1lDQpBbmQgdGhlIGZyYW1lDQpBbmQgaXRlIGdyYWUNCkkgZ2l0IGhlCJzdWUiDQo6OWfmIHJlc3BlY3QgdHVlIHRvIHRoZVbbmUtc2l4L
W9oDQpJIG1lYXgb2xlIHRodSBjaGVjayBvdXQgdGhlIGZsb3NCmxpa2UgdGhlIEh1ZHNvbibvciBQQ1Ag
d2hlbiBJJ20gZHVzdGluZw0KTmlnZ2F6IG9mIGBiZWNhdXNlIEknbSBob3QgdGhlIHNhYmVQ0KVGhlIHN
t
b2tlIGZyb20gdGhlIGx5cmljYWwgYmx1bnQgbWFrZXMgbWUgY2NvdWdoQ0KDQpbVS1Hb2RdDQpPa
Cwd2hhdCwgd3JhYiBteSBUdCBnZXQgc2NyZW3ZWQNCk93LoZXJlIGNvbWVzIG15IFNoYW9saW4
gc3R5bGUNClNsb29wLCBCLiBBLBLiBCdWgtQi4gWS4gVQ0KdG8gbXkgY3JldyB3aXRoIHRoZS8ic3Vllg0KD
QpbSW50ZXJsdWRlXQ0Kd2F0Y2ggeW91ciBzdGVwIGtpZCBbOFhdDQpbT2wgRGlydHkgQmFzdGFyZF
gYydtb24gYmF5IEliYWJ5IGMybW9uIEs0WF0NCltSWkFdIFlvICB5b3UgYmVzdCBwcm90ZWN0IHlvdXIg
bmVjaw0KDQpbT2wgRGlydHkgQmFzdGFyZF0NCkpcnN0IHRoaW5ncyBmaXJzdCBtYW4geW91J3JlIGZ
1Y2tpbmcgd2l0aCB0aGUgd29yc3QNCkknbGwgYmUgc3RpY2tpbmcgcGluyBpbiB5b3VyIGhlYWQgbGlr
ZSBhIGZ1Y2tpbmcgbnVyc2UNCkknbGwgYXR0YWNrIGFueSBuaWdnYSB3aG8gc2xhcByaW4gaoXM
gbWFjay0KQ29tZSBmdWxseSBwYWNrZWQgd2l0aBhIGZhdCBydWdnZWQgc3Rhc2gNClNoYXVlIG9
uIHlvdSB3aGVuIHlvdSBsZWFwIEhocm91Z2ggdG8NClRoZSBPcEEgaXJ0eSBCYXN0YXJkIHN0cmFpZ
2h0IGZyb20gdGhlIEJyb29rbHluIFpvby0KQW5kIEknbGwgYmUgZGFtbmVkIGlmIGdldCBhIFaTBtYW4
NClNvbWUgdG8gXCB0aGUgY2VudGVyLCB5b3UgZW50ZXIgdGhlIHdpbnRlci0KU3RyYWlnaHQgdXAgYW5kI
GRvdz4gdGhhdCBhaW50IHBhY3RlZCBqYW0NCllvdSBhbmd3IGZzbGFtLCBkb24ndCBsZXQgbWUgZ2V0IG
Zvb2wgb24gaXQgbWhhd0VGhlIE9sIERpcnR5IEJhc3RhcQgaXMgZGlydHkgYW5kIGRhbmdlciBmIEgdGU
gYW4NCkNvbWUgdG8gXCB5b3UgdmVudGVyIGhlIHdpbnRlcg0KU3RyYWlnaHQgdXAgYW5kIGRvd24gd
GhhdCBhaW50IHBhY3RlZCBqYW0NCllvdSBhbmd3IEHYcm9sbGluZyB3aXRoIEgdGUgY3JlZXBzDQpPYWgg
YmUgcm9sbGluZyB3aXRoIGEgc3Rhc2ggYCFpbi0gSHNheWluZyBjYXNoLCBiaXRyIG15IHN0eWxlIEknbGVNRW9
Yml0ZSB5b3VyIG1vdGhlcmZ1Y2tpbmcgYXNzICB0aG3vc3NmYWNlIEtpbmhhdANCnZvciBicnIpbm
cgb3UgIkxudUQgbXkgc3R5bGUgaXMgbnN0eWxlIGhhcyBiZGZib21yIG1lDQpPb3QgbG9uZ2lyaCBvIB0aGVyZSB0b
yBPcmVvdm9uDQpheWVucmnyBNb3JkaWdhbi
wgY2F0Y2ggaXQgaWyZSBhaXBzZWNob3BmbGFzGhaY3MNCkkgbG92ZSBnYXRzLCBpZiByYXNg
d2FzIGEgz3VuIHlvdSd3QgYmVjIGJhY2sNCiGNvbWUgd2l0aCBzaGl0IHRoYXQncyBhbGwgdHJvbXBsZ
WQgdHVwIGFuZCBzb3VuZHMNCkFuZCB3aGVyZSBJIGxvdW5nZSBpcyB0ZSBzdG9tcGluZ2dyb3VuZA
==

cm91bmRzDQpJIGdpdmUgYSBvcmRlciB0byBteSBwZWVwcyBhY3Jvc3MgdGhlIHdhdGVyDQpUbyBnby
BhbmQgc25hdGNoIHVwIHByb3BzIGFsbCBhcm91bmQgdGhlIGJvcmRlcg0KQW5lIGdldCBmYIgbIrZS
BhIHNob290aW5nIHN0YXINCidjYXVzZSB3aG8gSSBhbSBpcyBkaW0gaW4gdGhlIGxpZ2h0IG9mIFBhYmx
vIEVzY29iYXINClBvaW50IGJsYW5rIGFzIEga2ljayB0aGUgc3F1YXJlIGJleg0KVGhlcmUgaXQgaXMgeW9
J3JlIGZjY2tpbmcgd2l0aCwgcm9zIGFuZCB0aGVyZSBpdCBnb2VzDQoNCitSWkFkDQpzb3UgY2hpbGwg
d2l0aCB0aGUgZmVlZGJhY3sgYmxhY2sgd2UgZG9uJ3QgbmVlZCB0aGF0DQpJdCdzIHRlbiBvJ2Nsb2NrIG
hvZSwgd2hlcmUgdGhlIGZrY2ncyB5b3VyIHNlZWQgYXQ/DQpGZWVsaW5nIG1hZChob3N0aXlLCByY
W4gdGhlIGFwb3N0bCBDCkZsb3dpbmcgdIRSBDaHJpc3Qgd2hlbiBJIHNwZWFrcyB0aGUgZ29zcGVsD
QpTdHJvbGwgd2l0aCB0aGUgaG9seSByb2xsIHRoZW4gYXR0YWNrIHRoZSBnb29iIHdpdGggdGhlIid
WNrdXMgc3R5bGUNCnRoZSBydWNrdXMsIHRlbiB0aW1lcyB0ZXggbWVuIGNvbW1pdHRpbmcgbWFk
IHNpbg0KVHVybiB0aGUgb3RoZXIgY2hlZWsgYW5kIEknbGwgYnJlYWsgeW91ciBmDWNraW5nIGNoaW
4NClNsYXBpbmcgbW9ok2lhbmcybaWtlIEFmcmljYW4gZHJ1bXMgKHdlJ2xsIGJlKQ0KQ29taW5nIGFy
b3VuQCB0aGUgbW91bnRhaW4gd2hlbiBJIGNvbWUNCkNyYXp5IGGsYWlib3lhbnQgZm9yIHRoZSByYX
AgZW5qb3ltZW50DQpNeSBjbGFuIGluY3JlYXNlIGxpa2UgYmxhY3sgdW5lbXBsb3ltZW50DQpZZWFoLCBh
bm90aGVyIG9uZSBkYXJlL0VHVoLXRvbsgYSBnZWVpXMgKHRvKSB0YWtlIHVzIHRoZSBmdWNrIG9
1dHRhIGhlcmUNCg0KW0dlbm1lc10NCithZSBXdSBpcyB0b28gc2xhbWpbmcgZm9yIHRoZXNlIENvbG
QgS2lsbGluZyBsYWJlbHMNClNvbWUgYWluJ3QgaGFkIGhpdHMgc2luY2UgSSBzZWVuIEF1bnQgTWFiZ
WwNCkJlllIGRvaW5nIGFydGlzdHMgaW4gbGlrZSBDYWluIGRpZCBBYmVsDQpOb3cgdGhleSBtb25leSdz
IGdldHRpbmdzdHVjayB0byB0aGUgZ3VtIHVuZGVyIHRoZSB0YWJsZQ0KVGhhdCdzIHdoYXQgeW91IGdldC
B3aGVuIHlvdSBtaXN1c2Ugd2hhdCBJIGludmVudA0KWW91ciBlbXBpcmUgZmFsbHMgYW5kIHlvdSBsb3
NlIGV2ZXJ5IGNlbnQNCkZvciB0cnlpbmcgdG8gbWxvdyB1cCBhIHNjcnViDQpOb3cgdGhhdCB0aG91Z2ho
IHdhcyBqdXN0IGFzIGJyaWdodCBhcyBhIDIwLXdhdHQgbGlnaHQgYnVsYg0KU2hvdWxkJ2VlIHB1eBlZC
BpdCB3aGVuIEkgcm9ja2VkIGl0DQpOaWdnYXogc28gc3Rpbmd5IHRoZXkgZ290IHNob3J0IGFybXMgYW
5kIGRlZXAgcG9ja2V0cw0KVGhpcyBnb2VzIG9uIGluIHNvbWUgY29tcGFuaWVzDQpXaXRoIG1haW9ycyB
0aGV5J3JlIHNjYXJlZCB0byBkZWF0aCB0byBwdW1wIHRoZXNlDQphcjdzIHZiIGhhbGwgdHJ5IHVvdX
IgQSZSDQpJIG1vdW50YWluIGNsaW1iZXIgd2hvIHBsYXlzIGFuIGVsZWN0cmljIGd1aXRhcg0KQnV0IGhlI
GRvbid0IGtub3cgdGhlIG1lYW5pbmcgb2YgZG9wZQ0KV2hlbiBoZSdzIGxvb2tpbmcgZm9yIGEgc3VpdCB
hbmQgdGllIHJhcA0KdGhhdCdzIGNsZWFuZXIgdGhhbiBhIGJhciBvZiBzb2FwDQpBbmQgSSdtIHRoZSBka
XJ0aWVzdCB0aGluZyBpbiBzaWdodA0KTWF0dGVyIG9mIGZhY3QgYnJpbmcgb3V0IHRoZSBnaXRycyBhb
mQgbGV0J3MgaGFzIGEgI1ZCBmaWdodA0KDQpbc291bnRzIG9mIGZpZ2h0aW5nXQ0KDQpbUllBXSBId3UgYm
VzdCBwcm90ZWN0IHlvdXIgbmVjayBbNFhdDQoNCg==

Decoded

"Protect Ya Neck"

"So what's up man?

Cooling man"

"Chilling chilling?"

"Yo you know I had to call, you know why right?"

"Why?"

"Because, yo, I never ever call and ask, you to play something right?"

"Yeah"

"You know what I wanna hear right?"

"What you wanna hear?

I wanna hear that Wu-Tang joint"

"Wu-Tang again?"

"Ah yeah, again and again!"

[sounds of fighting]

[RZA] Wu-Tang Clan coming at you, protect your neck kid, so set it off the Inspector Deck

[Meth] watch your step kid [8X]

[Inspector Deck]

I smoke on the mic like smoking Joe Frazier

The hell raiser, raising hell with the flavor

Terrorize the jam like troops in Pakistan

Swinging through your town like your neighborhood Spiderman

So uhh, tic toc and keep ticking

While I get you flipping off the shit I'm kicking

The Lone Ranger, code red, danger!

Deep in the dark with the art to rip charts apart

The vandal, too hot to handle

you battle, you're saying Goodbye like Tevin Campbell

Roughneck, Inspector Deck's on the set

The rebel, I make more noise than heavy metal

[Raekwon]

The way I make the crowd go wild, sit back relax won't smile

Rae got it going on pal, call me the rap assassinator

Rhymes rugged and built like Schwarzenegger

And I'm gonna get mad deep like a threat, blow up your project

Then take all your assets

Cause I came to shake the frame in half

With the thoughts that bomb, shit like math!

So if you wanna try to flip go flip on the next man

Cause I grab the clip and

Hit you with sixteen shots and more I got

Going to war with the melting pot hot

[Method]

It's the Method Man for short Mr. Meth

Moving on your left, ah!

And set it off, get it off, let it off like a gat

I wanna break full, cock me back

Small change, they putting shame in the game

I take aim and blow that nigga out the frame

And like Fame, my style'll live forever

Niggaz crossing over, but they don't know no better

But I do, true, can I get a "sue"

Nuff respect due to the one-six-oh

I mean oh, you check out the flow

like the Hudson or PCP when I'm dusting

Niggaz off because I'm hot like sauce

The smoke from the lyrical blunt makes me [cough]

[U-God]

Oh, what, grab my nut get screwed

Ow, here comes my Shaolin style

Sloop, B. A. Buh-B. Y. U

to my crew with the "sue"

[Interlude]

watch your step kid [8X]

[Ol Dirty Bastard] c'mon baby baby c'mon [4X]

[RZA] Yo, you best protect your neck

[Ol Dirty Bastard]

First things first man you're fucking with the worst

I'll be sticking pins in your head like a fucking nurse

I'll attack any nigga who's slack in his mack

Come fully packed with a fat rugged stack

Shame on you when you stepped through to

The Ol Dirty Bastard straight from the Brooklyn Zoo

And I'll be damned if I let any man

Come to my center, you enter the winter

Straight up and down that shit packed jam

You can't slam, don't let me get fool on him man

The Ol Dirty Bastard is dirty and stinking

Ason, unique rolling with the night of the creeps

Niggaz be rolling with a stash

ain't saying cash, bite my style I'll bite your motherfucking ass!

[Ghostface Killah]

For crying out loud my style is wild so book me

Not long is how long that this rhyme took me

Ejecting, styles from my lethal weapon

My pen that rocks from here to Oregon

Here's Mordigan, catch it like a psycho flashback

I love gats, if rap was a gun, you wouldn't bust back

I come with shit that's all types of shapes and sounds

And where I lounge is my stomping grounds

I give a order to my peeps across the water

To go and snatch up props all around the border

And get far like a shooting star

'cause who I am is dim in the light of Pablo Escobar

Point blank as I kick the square biz

There it is you're fucking with pros and there it goes

[RZA]

You chill with the feedback black we don't need that

It's ten o'clock hoe, where the fuck's your seed at?

Feeling mad hostile, ran the apostle

Flowing like Christ when I speaks the gospel

Stroll with the holy roll then attack the globe with the buckus style

the ruckus, ten times ten men committing mad sin

Turn the other cheek and I'll break your fucking chin

Slaying boom-bangs like African drums (we'll be)

Coming around the mountain when I come

Crazy flamboyant for the rap enjoyment

My clan increase like black unemployment

Yeah, another one dare,

Tuh-took a genius (to) take us the fuck outta here

[Genius]

The Wu is too slamming for these Cold Killing labels

Some ain't had hits since I seen Aunt Mabel

Be doing artists in like Cain did Abel

Now they money's gettin stuck to the gum under the table

That's what you get when you misuse what I invent

Your empire falls and you lose every cent

For trying to blow up a scrub

Now that thought was just as bright as a 20-watt light bulb

Should've pumped it when I rocked it

Niggaz so stingy they got short arms and deep pockets

This goes on in some companies

With majors they're scared to death to pump these

First of all, who's your A&R

A mountain climber who plays an electric guitar

But he don't know the meaning of dope

When he's looking for a suit and tie rap

that's cleaner than a bar of soap

And I'm the dirtiest thing in sight

Matter of fact bring out the girls and let's have a mud fight

[sounds of fighting]

[RZA] You best protect your neck [4X]

BillofRights.txt
The Bill of Rights: A Transcription

The Preamble to The Bill of Rights

Congress of the United States

begun and held at the City of New-York, on

Wednesday the fourth of March, one thousand seven hundred and eighty nine.

THE Conventions of a number of the States, having at the time of their adopting the Constitution, expressed a desire, in order to prevent misconstruction or abuse of its powers, that further declaratory and restrictive clauses should be added: And as extending the ground of public confidence in the Government, will best ensure the beneficent ends of its institution.

RESOLVED by the Senate and House of Representatives of the United States of America, in Congress assembled, two thirds of both Houses concurring, that the following Articles be proposed to the Legislatures of the several States, as amendments to the Constitution of the United States, all, or any of which Articles, when ratified by three fourths of the said Legislatures, to be valid to all intents and purposes, as part of the said Constitution; viz.

ARTICLES in addition to, and Amendment of the Constitution of the United States of America, proposed by Congress, and ratified by the Legislatures of the several States, pursuant to the fifth Article of the original Constitution.

Note: The following text is a transcription of the first ten amendments to the Constitution in their original form. These amendments were ratified December 15, 1791, and form what is known as the "Bill of Rights."

Amendment I

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

Amendment II

A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.

Amendment III

No Soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law.

Amendment IV

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but

upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

Amendment V

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offence to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

Amendment VI

In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the Assistance of Counsel for his defence.

Amendment VII

In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise re-examined in any Court of the United States, than according to the rules of the common law.

Amendment VIII

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

Amendment IX

The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

Amendment X

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

AMENDMENT XI

Passed by Congress March 4, 1794. Ratified February 7, 1795.

Note: Article III, section 2, of the Constitution was modified by amendment 11.

The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State.

AMENDMENT XII

Passed by Congress December 9, 1803. Ratified June 15, 1804.

Note: A portion of Article II, section 1 of the Constitution was superseded by the 12th amendment.

The Electors shall meet in their respective states and vote by ballot for President and Vice-President, one of whom, at least, shall not be an inhabitant of the same state with themselves; they shall name in their ballots the person voted for as President, and in distinct ballots the person voted for as Vice-President, and they shall make distinct lists of all persons voted for as President, and of all persons voted for as Vice-President, and of the number of votes for each, which lists they shall sign and certify, and transmit sealed to the seat of the government of the United States, directed to the President of the Senate; -- the President of the Senate shall, in the presence of the Senate and House of Representatives,

open all the certificates and the votes shall then be counted; -- The person having the greatest number of votes for President, shall be the President, if such number be a majority of the whole number of Electors appointed; and if no person have such majority, then from the persons having the highest numbers not exceeding three on the list of those voted for as President, the House of Representatives shall choose immediately, by ballot, the President. But in choosing the President, the votes shall be taken by states, the representation from each state having one vote; a quorum for this purpose shall consist of a member or members from two-thirds of the states, and a majority of all the states shall be necessary to a choice. [And if the House of Representatives shall not choose a President whenever the right of choice shall devolve upon them, before the fourth day of March next following, then the Vice-President shall act as President, as in case of the death or other constitutional disability of the President. --]* The person having the greatest number of votes as Vice-President, shall be the Vice-President, if such number be a majority of the whole number of Electors appointed, and if no person have a majority, then from the two highest numbers on the list, the Senate shall choose the Vice-President; a quorum for the purpose shall consist of two-thirds of the whole number of Senators, and a majority of the whole number shall be necessary to a choice. But no person constitutionally ineligible to the office of President shall be eligible to that of Vice-President of the United States.

*Superseded by section 3 of the 20th amendment.

AMENDMENT XIII

Passed by Congress January 31, 1865. Ratified December 6, 1865.

Note: A portion of Article IV, section 2, of the Constitution was superseded by the 13th amendment.

Section 1.

Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction.

Section 2.

Congress shall have power to enforce this article by appropriate legislation.

AMENDMENT XIV

Passed by Congress June 13, 1866. Ratified July 9, 1868.

Note: Article I, section 2, of the Constitution was modified by section 2 of the 14th amendment.

Section 1.

All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

Section 2.

Representatives shall be apportioned among the several States according to their respective numbers, counting the whole number of persons in each State, excluding Indians not taxed. But when the right to vote at any election for the choice of electors for President and Vice-President of the United States, Representatives in Congress, the Executive and Judicial officers of a State, or the members of the Legislature thereof, is denied to any of the male inhabitants of such State, being twenty-one years of age,* and citizens of the United States, or in any way abridged, except for participation in rebellion, or other crime, the basis of representation therein shall be reduced in the proportion which the number of such male citizens shall bear to the whole number of male citizens twenty-one years of age in such State.

Section 3.

No person shall be a Senator or Representative in Congress, or elector of President and Vice-President, or hold any office, civil or military, under the United States, or under any State, who, having previously taken an oath, as a member of Congress, or as an officer of the United States, or as a member of any State legislature, or as an executive or judicial officer of any State, to support the Constitution of the United States, shall have engaged in insurrection or rebellion against the same, or given aid or comfort to the enemies thereof. But Congress may by a vote of two-thirds of each House, remove such disability.

Section 4.

The validity of the public debt of the United States, authorized by law, including debts incurred for payment of pensions and bounties for services in suppressing insurrection or rebellion, shall not be questioned. But neither the United States nor any State shall assume or pay any debt or obligation incurred in aid of insurrection or rebellion against the United States, or any claim for the loss or emancipation of any slave; but all such debts, obligations and claims shall be held illegal and void.

Section 5.

The Congress shall have the power to enforce, by appropriate legislation, the provisions of this article.

*Changed by section 1 of the 26th amendment.

AMENDMENT XV

Passed by Congress February 26, 1869. Ratified February 3, 1870.

Section 1.

The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude--

Section 2.

The Congress shall have the power to enforce this article by appropriate legislation.

AMENDMENT XVI

Passed by Congress July 2, 1909. Ratified February 3, 1913.

Note: Article I, section 9, of the Constitution was modified by amendment 16.

The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration.

AMENDMENT XVII

Passed by Congress May 13, 1912. Ratified April 8, 1913.

Note: Article I, section 3, of the Constitution was modified by the 17th amendment.

The Senate of the United States shall be composed of two Senators from each State, elected by the people thereof, for six years; and each Senator shall have one vote. The electors in each State shall have the qualifications requisite for electors of the most numerous branch of the State legislatures.

When vacancies happen in the representation of any State in the Senate, the executive authority of such State shall issue writs of election to fill such vacancies: Provided, That the legislature of any State may empower the executive thereof to make temporary appointments until the people fill the vacancies by election as the legislature may direct.

This amendment shall not be so construed as to affect the election or term of any Senator chosen before it becomes valid as part of the Constitution.

AMENDMENT XVIII

Passed by Congress December 18, 1917. Ratified January 16, 1919. Repealed by amendment 21.

Section 1.

After one year from the ratification of this article the manufacture, sale, or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from the United States and all territory subject to the jurisdiction thereof for beverage purposes is hereby prohibited.

Section 2.

The Congress and the several States shall have concurrent power to enforce this article by appropriate legislation.

Section 3.

This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of the several States, as provided in the Constitution, within seven years from the date of the submission hereof to the States by the Congress.

AMENDMENT XIX

Passed by Congress June 4, 1919. Ratified August 18, 1920.

The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex.

Congress shall have power to enforce this article by appropriate legislation.

AMENDMENT XX

Passed by Congress March 2, 1932. Ratified January 23, 1933.

Note: Article I, section 4, of the Constitution was modified by section 2 of this amendment. In addition, a portion of the 12th amendment was superseded by section 3.

Section 1.

The terms of the President and the Vice President shall end at noon on the 20th day of January, and the terms of Senators and Representatives at noon on the 3rd day of January, of the years in which such terms would have ended if this article had not been ratified; and the terms of their successors shall then begin.

Section 2.

The Congress shall assemble at least once in every year, and such meeting shall begin at noon on the 3d day of January, unless they shall by law appoint a different day.

Section 3.

If, at the time fixed for the beginning of the term of the President, the President elect shall have died, the Vice President elect shall become President. If a President shall not have been chosen before the time fixed for the beginning of his term, or if the President elect shall have failed to qualify, then the Vice President elect shall act as President until a President shall have qualified; and the Congress may by law provide for the case wherein neither a President elect nor a Vice President shall have qualified, declaring who shall then act as President, or the manner in which one who is to act shall be selected, and such person shall act accordingly until a President or Vice President shall have qualified.

Section 4.

The Congress may by law provide for the case of the death of any of the persons from whom the House of Representatives may choose a President whenever the right of choice shall have devolved upon them, and for the case of the death of any of the persons from whom the Senate may choose a Vice President whenever the right of choice shall have devolved upon them.

Section 5.

Sections 1 and 2 shall take effect on the 15th day of October following the ratification of this article.

Section 6.

This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of three-fourths of the several States within seven years from the date of its submission.

AMENDMENT XXI

Passed by Congress February 20, 1933. Ratified December 5, 1933.

Section 1.

The eighteenth article of amendment to the Constitution of the United States is hereby repealed.

Section 2.

The transportation or importation into any State, Territory, or Possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited.

Section 3.

This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by conventions in the several States, as provided in the Constitution, within seven years from the date of the submission hereof to the States by the Congress.

AMENDMENT XXII

Passed by Congress March 21, 1947. Ratified February 27, 1951.

Section 1.

No person shall be elected to the office of the President more than twice, and no person who has held the office of President, or acted as President, for more than two years of a term to which some other person was elected President shall be elected to the office of President more than once. But this Article shall not apply to any person holding the office of President when this Article was proposed by Congress, and shall not prevent any person who may be holding the office of President, or acting as President, during the term within which this Article becomes operative from holding the office of President or acting as President during the remainder of such term.

Section 2.

This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of three-fourths of the several States within seven years from the date of its submission to the States by the Congress.

AMENDMENT XXIII

Passed by Congress June 16, 1960. Ratified March 29, 1961.

Section 1.

The District constituting the seat of Government of the United States shall appoint in such manner as Congress may direct:

A number of electors of President and Vice President equal to the whole number of Senators and Representatives in Congress to which the District would be entitled if it were a State, but in no event more than the least populous State; they shall be in addition to those appointed by the States, but they shall be considered, for the purposes of the election of President and Vice President, to be electors appointed by a State; and they shall meet in the District and perform such duties as provided by the twelfth article of amendment.

Section 2.

The Congress shall have power to enforce this article by appropriate legislation.

AMENDMENT XXIV

Passed by Congress August 27, 1962. Ratified January 23, 1964.

Section 1.

The right of citizens of the United States to vote in any primary or other election for President or Vice President, for electors for President or Vice President, or for Senator or Representative in Congress, shall not be denied or abridged by the United States or any State by reason of failure to pay any poll tax or other tax.

Section 2.

The Congress shall have power to enforce this article by appropriate legislation.

AMENDMENT XXV

Passed by Congress July 6, 1965. Ratified February 10, 1967.

Note: Article II, section 1, of the Constitution was affected by the 25th amendment.

Section 1.

In case of the removal of the President from office or of his death or resignation, the Vice President shall become President.

Section 2.

Whenever there is a vacancy in the office of the Vice President, the President shall nominate a Vice President who shall take office upon confirmation by a majority vote of both Houses of Congress.

Section 3.

Whenever the President transmits to the President pro tempore of the Senate and the Speaker of the House of Representatives his written declaration that he is unable to discharge the powers and duties of his office, and until he transmits to them a written declaration to the contrary, such powers and duties shall be discharged by the Vice President as Acting President.

Section 4.

Whenever the Vice President and a majority of either the principal officers of the executive departments or of such other body as Congress may by law provide, transmit to the President pro tempore of the Senate and the Speaker of the House of Representatives their written declaration that the President is unable to discharge the powers and duties of his office, the Vice President shall immediately assume the powers and duties of the office as Acting President.

Thereafter, when the President transmits to the President pro tempore of the Senate and the Speaker of the House of Representatives his written declaration that no inability exists, he shall resume the powers and duties of his office unless the Vice President and a majority of either the principal officers of the executive department or of such other body as Congress may by law provide, transmit within four days to the President pro tempore of the Senate and the Speaker of the House of Representatives their written declaration that the President is unable to discharge the powers and duties of his office. Thereupon Congress shall decide the issue, assembling within forty-eight hours for that purpose if not in session. If the Congress, within twenty-one days after receipt of the latter written declaration, or, if Congress is not in session, within twenty-one days after Congress is required to assemble,

determines by two-thirds vote of both Houses that the President is unable to discharge the powers and duties of his office, the Vice President shall continue to discharge the same as Acting President; otherwise, the President shall resume the powers and duties of his office.

AMENDMENT XXVI

Passed by Congress March 23, 1971. Ratified July 1, 1971.

Note: Amendment 14, section 2, of the Constitution was modified by section 1 of the 26th amendment.

Section 1.

The right of citizens of the United States, who are eighteen years of age or older, to vote shall not be denied or abridged by the United States or by any State on account of age.

Section 2.

The Congress shall have power to enforce this article by appropriate legislation.

AMENDMENT XXVII

Originally proposed Sept. 25, 1789. Ratified May 7, 1992.

No law, varying the compensation for the services of the Senators and Representatives, shall take effect, until an election of representatives shall have intervened.

NorthKorea.jpeg

Appendix B – Broken.py and fixed

Broken.py

```python
def fileToString(pathToFile):
    f = open(pathToFile, "r")
    strs = ""
    #adds each line of the file to the strs string
    for line in f.readlines():
        strs+=line
    return strs
def ASCII():
    #number of ASCII characters
    NumOfASCII == 0
    #returns list of all ASCII characters
    return "".join([chr(i) for i in range(NumOfASCII)])
def sumName(name):
    sums=0
    #sums the indices in ASCII of all the characters in name
    for x in name:
        sums+=ord(x
    return sums
def indexInFile(password):
    indices = []
    ASCIIArray = ASCII()
    #populates an array of indices to be used by the encoder
    for chrs in password:
        indices.append(ASCIIArray.index(chrs)+sumName(name)*2
    return indices
def indexInASCII(name):
    indices = []
    ASCIIArray = ASCII()
    #split on all non-numeric characters
    #remove first index because it is blank
    indexList = re.split("[^\d]",encoded)[1:]
    #converts encoded characters to ASCII
    for index in indexList:
        indices.append(ASCIIArray[int(index) - (sumName(name)*2)])
    #returns decoded message
    return "".join(indices)
def encode(name):
    #returns a list of indices to be used for encoding
    indices = indexInFile(password,name)
    #convert file associated with name to a string
    bill = fileToString("./%s.txt"%name)
    encoded = ""
    #add letter in file plus index of the letter in the file to the
encoded string
```

```python
        for index in indices:
                encoded+=bill[index]+str(index)

        return encoded
```

Restored.py

```python
import re
def fileToString(pathToFile):
        f = open(pathToFile, "r")
        strs = ""
        #adds each line of the file to the strs string
        for line in f.readlines():
                strs+=line
        return strs
def ASCII():
        #number of ASCII characters
        NumOfASCII = 128
        #returns list of all ASCII characters
        return "".join([chr(i) for i in range(NumOfASCII)])
def sumName(name):
        sums=0
        #sums the indices in ASCII of all the characters in name
        for x in name:
                sums+=ord(x)
        return sums
def indexInFile(password,name):
        indices = []
        ASCIIArray = ASCII()
        #populates an array of indices to be used by the encoder
        for chrs in password:
                indices.append(ASCIIArray.index(chrs)+sumName(name)*2)
        return indices
def indexInASCII(encoded,name):
        indices = []
        ASCIIArray = ASCII()
        #split on all non-numeric characters
        #remove first index because it is blank
        indexList = re.split("[^\d]",encoded)[1:]
        #converts encoded characters to ASCII
        for index in indexList:
                indices.append(ASCIIArray[int(index) -
(sumName(name)*2)])
        #returns decoded message
        return "".join(indices)
def encode(password, name):
        #returns a list of indices to be used for encoding
        indices = indexInFile(password,name)
```

```python
        #convert file associated with name to a string
        bill = fileToString("./%s.txt"%name)
        encoded = ""
        #add letter in file plus index of the letter in the file to the
encoded string
        for index in indices:
                encoded+=bill[index]+str(index)
        return encoded


def main():
        message = ""
        filename = ""
        print(indexInASCII(message,filename))


main()
```

Appendix C – TCP Streams – Capture 2.pcap

```
:Method MODE Method :+i
:NickServ!NickServ@services. NOTICE Method :This nickname is registered. Please choose a different nickname, or identify via ./msg NickServ identify <password>..
ISON Ill_Song brig
:verne.freenode.net 305 Method :You are no longer marked as being away
:verne.freenode.net 303 Method :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Method
:SlZaQzRJQ05NvIjHUTMzRUZRUUVTSURCTlVRR0s2RERORjHS1pCQU1GUkc2NUxVRUIyR1FaSkFPQlpHNjQzUU1WUlhJSURQTVlRSEkyREZFQkJXUVpMVE9NUUVFMzNZTkzYR09JRFhONVpHvNvpCQU95VVh3M0RGRUJSVzYzTEpOwlRTQTVEUEVCSUhTMzNPTTU0V0MzVEhGWT09PT09PQ==
PRIVMSG Ill_Song :
NDkyMDYxNmQyMDZlNmY3NDIwNzM3NTcyNjUyMDc3Njg2ZjIwNzk2Zjc1MjA2MTcyNjUyYzIwNjI3NTc0MjA0OTIwWjg2MTc2NjUyMDYxNmUyMDY5NjQ2NTYxMmUyMDQ1Njk3N4NjU3MjIwZMTc5MmMyMDQ5MjA2MTZkMjA2ZTZmNzQyMDY5NmU3NDY1NzI2NTczZ5NjZQ2NTY0MmU=
ISON Ill_Song brig
:verne.freenode.net 303 Method :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Method
:U1hCaGJTQnFkWE4vSUdodmNHVmikV3d1SUVsMElIZHZkV3hrSUcxbFlXNGdjMjhnYlhiamFDQjB1euU3vWVhabE1IUiBKRVFHQzNKQU5KMlhHNUJBTkJYwEFaTEdPVldDNE1DSk9RUUhPMzNwT1JTQ0EzTEZNR1hDQTQzUEVCV1hLwTNJRUIyRzZJRElNRjNHS0lEVVU5CU1NBvkRKT1JXR0tJRE1NV1pHS0xSQUtCV0dLwUxUVVRR0czM09PT1VXSVpMU0VCVVh3TFE9
PRIVMSG Ill_Song :
NDQ2ZjIwNmU2Zjc0MjA3MzcwNjU2MTZiMjA3NDZmMjA2ZDY1MjA2MTY3NjE2OTZlMmU=
:Method!~malware@216.14.247.46 QUIT :Client Quit
ERROR :Closing Link: 216.14.247.46 (Client Quit)
```

```
:hobana.freenode.net 376 Genius1 :End of /MOTD command.
:Genius1 MODE Genius1 :+i
ISON Ill_Song
:hobana.freenode.net 305 Genius1 :You are no longer marked as being away
:hobana.freenode.net 303 Genius1 :Ill_Song
ISON Ill_Song
:hobana.freenode.net 303 Genius1 :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Genius1 :SUZaU0E1M0ZFQlNHUzQzRE9WWlhHwkxFRUJTV0MVE1ORlNYRUxCQUpFUUdFWkxNTkZTWE1aSkFKRVFHMjJMSE5CMkNBWWRGRUJRV0UzREZFQjJHNklESU1WV0hBSURaTjUyU0E1M0pPU1VDQTZMUE9WWkNBNDNGTUZaR0cyQk8=
ISON Ill_Song
PRIVMSG Ill_Song :
MTExIDA0MCAxNjYgMTQ1IDE0NSAwNTYgMDQwIDEyNCAxNTAgMTQ1IDE1NiAwNDAgMTY3IDE0NSAwNDAgMTU1IDE2NSAxNjMgMTY0IDA0MCAxNTUgMTQ1IDE0NSAxNjQgMDU0IDA0MCAxNDEgMTU2IDE0NCAwNDAgMTExIDA0MCNjcgMTUxIDE1NCAxNTQgMDQwIDE2MyAxNDUgMTQ1IDA0MCAxNjQgMTUwIDE0NSAwNDAgMTY2IDE0NSAxNDAgMTUxIDE0NCAxNTEgMTY0IDE3MSAwNDAgMTU3IDE0NUAwNDAgMTY0IDE0NSAwNDAgMTU1IDA1Ng==
ISON Ill_Song
:hobana.freenode.net 303 Genius1 :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Genius1 :SkvRR0dZTE9FQlJHS0lESk5ZUUdHT0xHTUUyV0VPRERNSVpXRU1Kwkc1UVdLTkxETVUyR0VZTEdIQTJEQ05MQkdNM1RLWVJBTzVVWEkyREpOwVFISTJERkVCM1ldLWkxMRlk9PT09PT0=
ISON Ill_Song
:hobana.freenode.net 303 Genius1 :Ill_Song
PRIVMSG Ill_Song :
MTE2IDE1NyAwNTYgMDQwIDExNiAxNTcgMTY0IDA0MCAxNTAgMTQ1IDE2MiAxNDUgMDU2IDA0MCAxMDMgMTQxIDE1NiAwNDAgMTExIDA0MCAxNTYgMTU3IDE0NCAwNDAgMTQ3IDE1NyAwNDAgMTY0IDE1NyAwNDAgMTcxIDE1NyAxNjUgMDc3
ISON Ill_Song
:hobana.freenode.net 303 Genius1 :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Genius1
:SkvRR0M0MzSkFNRlRIRV1MSk1RUUhJMkRCT1FRSE8zM1ZOU1NDQVlURkVCM1c0NTNKT05TUzRJQ0pFQjNXUzNETUVCWldLM1RFRUI0VzY1SkFNRVFHMlpMVE90UVdPWkpBTzVVWEkyQkFPUlVHS0lERU1GMkdLSURCT1pTQ0EzRFBNT1FYSTJMUE5ZUUhJMkRTTjUyV08yQkFNRVFHMjMzU01VUUhHWkxET1ZaR0tJREd0NvpHMklEUE1ZUUdHMzNOT1YyVzQyTERNRjJHUzMzT0ZZPT09PT09
QUIT :Leaving.
```

```
:Killah MODE Killah :+i
ISON Ill_Song
:NickServ!NickServ@services. NOTICE Killah :This nickname is registered. Please choose a different nickname, or identify via ./msg NickServ identify <password>..
:dickson.freenode.net 305 Killah :You are no longer marked as being away
:dickson.freenode.net 303 Killah :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Killah :SkJYWE93REpPTVFISTJERkVCM1dLWUxVTk3TWEVJREpOwVFGQ1lMVU1GVkNZSUN0T0lYQ0FTM0pOU1dHQzJCNw==
PRIVMSG Ill_Song :
MTEwIDE1NyAxNjQgMDU0IDA0MCAxNDEgMTYzIDA0MCAxNDEgMTU0IDE2MyAwNTYgMDQwIDEyNyAxNTAgMTU3IDA0MCAxNTEgMTU4IDA0MCAxNjQgMTUwIDE1MSAxNjMgMDc3
ISON Ill_Song
:dickson.freenode.net 303 Killah :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Killah :SkvRR0MzSkFNRVFHTV1hT0VCWFdNSUNETk3TWEc0WkFJSlhYUTJMT000WENBU0pBTzVYwEszREVFQldHNjVURkVCMkc2SURUTVZTU0E1RE1NVVFGSTJMVU5SU1NBMkRGTlJTQ0EyTE9FQkZXNjRURk1FWEE9PT09
PRIVMSG Ill_Song :
MTI3IDE0NSAwNDAgMTY3IDE1MSAxNTQgMTU0IDA0MCAxNTAgMTQxIDE2NiAxNDUgMDQwIDE2NCAxNTcgMDQwIDE2MyAxNDUgMTQ1IDA0MCAxNTAgMTU3IDE2NyAwNDAgMTY0IDE1MCAxNDUgMDQwIDE0MiAxNTEgMTQ0IDA0MCAxNjQgMTY1IDE2MiAxNTYgMTYzIDA0MCAxNTcgMTY1IDE2NCAwNTY=
ISON Ill_Song
:dickson.freenode.net 303 Killah :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Killah :SkZaU0E1RElNV1pHS0lEQk5aNFhJMkRKT1pUU0E1RElNRjJDQVNKQU1OVFhLM0RFRUJTRzZJRFVONFFHUVpMTU98UUcyUdUxHTVVRSFMzM1lZPSVFHSVpMRE5GWldTMzNPRUJTV0M0M0pNVlpENj09PQ==
PRIVMSG Ill_Song :
MTE2IDE1NyAwNDAgMDQwIDEyNCAxNTAgMTQ1IDA0MCAxNDcgMTYyIDE0NSAxNDEgMTY0IDA0MCAxNTYgMTQxIDE2NCAxNTEgMTU3IDE1NiAwNDAgMTU3IDE0NiAwNDAgMTIxIDE0MSAxNjYgMTQxIDE2MiAwNDAgMTY3IDE1NyAxNjUgMTU0IDE0NCAwNDAgMTU2IDE0NSAxNjYgMTQ1IDE2MiAwNDAgMTQyIDE0NSAw
NDAgMTYzIDE2NyAxNDEgMTcxIDE0NSAxNDQgMDQwIDE2MyAxNTcgMDQwIDE0NSAxNDAgMTYzIDE1MSAxNTQgMTQ1IDA1Ng==
ISON Ill_Song
:dickson.freenode.net 303 Killah :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Killah :
MTE2IDE1NyAxNjIgMDQwIDE2NyAxNTcgMTY1IDE1NCAxNDQgMDQwIDExMSAwNTYgMDQwIDEyNyAxNDUgMDQwIDE0NCAxNTcgMDQwIDE1NiAxNTcgMTY0IDE1NyAxNDAgMTU2IDE0NCAxNTcgMTU3IDA0MCAxNjQgMTUwIDE1MSAxNjMgMDQwIDE2MCAxNDEgMTY0IDE1NCAxNDUgMTY0IDE1MSAxNDNDgMTQwIDE1NiAxNTcgMTY0IDE1MSAxNDMgMTYyIDE1MSAxNTQgMTQ1IDE2MiAxNzEgMDU2
ISON Ill_Song
:dickson.freenode.net 303 Killah :Ill_Song
QUIT :Leaving.
:Killah!~malware@216.14.247.46 QUIT :Client Quit
ERROR :Closing Link: 216.14.247.46 (Client Quit)
```

```
ISON Ill_Song
:wilhelm.freenode.net 305 Raekwon :You are no longer marked as being away
:wilhelm.freenode.net 303 Raekwon :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Raekwon :SlZaQzRJQ1NNRlNXVzUzUE5ZV0NBMkRCT1pTU0E2TFBPVVFIRzREUE5OU1c0SURYTkYyR1FJQ05PSVhDQVVUQl8KWFhFUFk9
PRIVMSG Ill_Song :
NDkyMDY4NjE3NjY1MmMyMDYyNzU3NDIwNDkyMDc3MmY2ZTkyNzQyMDYyNjUyMDYyNmY3NTY3Njg3NDIwNzM2ZjIwNjU2MTcznjk2Yzc5MmU=
ISON Ill_Song
:wilhelm.freenode.net 303 Raekwon :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Raekwon
:SUpYWEtaM0lPUTdTQVQzR0VCU1c2MUxTT05TU0EzVFBPUVhDQVdFVUUdDNFRGRUJRVzRJRFBNWlRHU1kzSk1GV0NBMzNPUUIyR1FaSkFNVjRHS1kzVk9SVVhNWkpBTU5YVzIzTEpPUjJHS1pKQU41VENBNURJTVVRRVNRMkNJRVhDQVNKQU5KMlhHNUJBTzVRVzQ1QkFQRlhYS01EVU40UUdXM1RQTzRRSEkyREJPUV
FFU0lEQk5VUUdRdXxTTVVRSEkzWkFOQlNXVTRCQU5UVVdXVkpBUEZYWEs0UkFNUlNXRzJMVE5GWEFc05URCT01RR0tZTFRQRVFHQzRaQU9CWFhHNDNKTUpXR0tHUkE=
PRIVMSG Ill_Song :
NDkyMDc3NmY3NTZjNjQyMDZlNjU2NTY0MjA2MTc0MjA2YzY1NjE3Mzc0MjAzMjMwHjA2ZDY5NmU2YzY5NmY2ZTIwNTI3NTYyNmM2NTczMmU=
ISON Ill_Song
:wilhelm.freenode.net 303 Raekwon :Ill_Song
:Ill_Song!~Ill_Song@216.14.247.46 PRIVMSG Raekwon :SU5YVzQ0M0pNUlNYRUlESk9RUUdJMzNPTVVYQ0FTSkFPNVVXWTNCQU9U1c0wkJBUEZYwEtJRFVOQlNTQTJMT01awFhFM0xCT1JVVzYzUkFNWlhYRUlEVU5CU1NBwkRTTjVZQzIzM0dNWVFIQTMzSk5aMkNBNDNQTjVYQzQ9PT0=
QUIT :Leaving.
:Raekwon!~malware@216.14.247.46 QUIT :Client Quit
ERROR :Closing Link: 216.14.247.46 (Client Quit)
```

Appendix D - ngrep -q -I Capture4.pcap "recMessages"

T 199.87.160.87:80 -> 192.168.1.5:56183 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:39:00 GMT..Server: Apache..X-Hos
t: sj2-web32..Content-Length: 892..Keep-Alive: timeout=10, max=16..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[{"messageId":"45b537c51e5cf2f90f31779e9ec8f
c46","messageType":"normal","messageText":"Good afternoon, Ann.","recipien
tType":"phone","recipientId":"14068522589","senderType":"phone","senderId":
"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:38:55","mes
sageStatus":"unread","deliveryMethod":"onnet"}],"sentMessages":[{"messageId
":"d275712ce4c2b1b420bd1ba0728b79af","messageType":"normal","messageText":"
this is a test","recipientType":"phone","recipientId":"14069243754","sender
Type":"phone","senderId":"14068522589","senderName":"Ann Dercover","time":"
2014-07-02 22:34:13","messageStatus":"read","deliveryMethod":"onnet"}],"bra
ndedSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:38:5
7","largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTexts
Sent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:56183 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:39:00 GMT..Server: Apache..X-Hos
t: sj2-web32..Content-Length: 892..Keep-Alive: timeout=10, max=16..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[{"messageId":"45b537c51e5cf2f90f31779e9ec8f
c46","messageType":"normal","messageText":"Good afternoon, Ann.","recipien
tType":"phone","recipientId":"14068522589","senderType":"phone","senderId":
"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:38:55","mes
sageStatus":"unread","deliveryMethod":"onnet"}],"sentMessages":[{"messageId
":"d275712ce4c2b1b420bd1ba0728b79af","messageType":"normal","messageText":"
this is a test","recipientType":"phone","recipientId":"14069243754","sender

Type":"phone","senderId":"14068522589","senderName":"Ann Dercover","time":"2014-07-02 22:34:13","messageStatus":"read","deliveryMethod":"onnet"}],"brandedSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:38:57","largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:58487 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:39:05 GMT..Server: Apache..X-Host: sj2-web12..Content-Length: 585..Keep-Alive: timeout=10, max=36..Connection: Keep-Alive..Content-Type: application/json....{"success":"messages retrieved","result":{"recMessages":[{"messageId":"45b537c51e5cf2f90f31779e9ec8fc46","messageType":"normal","messageText":"Good afternoon, Ann.","recipientType":"phone","recipientId":"14068522589","senderType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:38:55","messageStatus":"read","deliveryMethod":"onnet"}],"sentMessages":[],"brandedSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:38:57","largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:58487 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:39:05 GMT..Server: Apache..X-Host: sj2-web12..Content-Length: 585..Keep-Alive: timeout=10, max=36..Connection: Keep-Alive..Content-Type: application/json....{"success":"messages retrieved","result":{"recMessages":[{"messageId":"45b537c51e5cf2f90f31779e9ec8fc46","messageType":"normal","messageText":"Good afternoon, Ann.","recipientType":"phone","recipientId":"14068522589","senderType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:38:55","messageStatus":"read","deliveryMethod":"onnet"}],"sentMessages":[],"brandedSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:38:57","largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:51189 [AP]

{"success":"messages retrieved","result":{"recMessages":[{"messageId":"45b5
37c51e5cf2f90f31779e9ec8fc46","messageType":"normal","messageText":"Good af
ternoon, Ann.","recipientType":"phone","recipientId":"14068522589","sender
Type":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time":"
2014-07-02 22:38:55","messageStatus":"read","deliveryMethod":"onnet"},{"mes
sageId":"c113ed366ab0fba64f6215f41d6fb127","messageType":"normal","messageT
ext":"Castling.","recipientType":"phone","recipientId":"14068522589","sende
rType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time":
"2014-07-02 22:39:31","messageStatus":"unread","deliveryMethod":"onnet"}],"
sentMessages":[{"messageId":"eb232446d54193d00876830421797030","messageType
":"normal","messageText":"who is this?","recipientType":"phone","recipientI
d":"14069243754","senderType":"phone","senderId":"14068522589","senderName"
:"Ann Dercover","time":"2014-07-02 22:39:15","messageStatus":"read","delive
ryMethod":"onnet"}],"brandedSystemMessages":[],"calls":[],"voicemails":[],"
now":"2014-07-02 22:39:32","largestCount":2,"smsCreditBalance":0,"callingCr
editBalance":0,"numTextsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:51189 [AP]

{"success":"messages retrieved","result":{"recMessages":[{"messageId":"45b5
37c51e5cf2f90f31779e9ec8fc46","messageType":"normal","messageText":"Good af
ternoon, Ann.","recipientType":"phone","recipientId":"14068522589","sender
Type":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time":"
2014-07-02 22:38:55","messageStatus":"read","deliveryMethod":"onnet"},{"mes
sageId":"c113ed366ab0fba64f6215f41d6fb127","messageType":"normal","messageT
ext":"Castling.","recipientType":"phone","recipientId":"14068522589","sende
rType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time":
"2014-07-02 22:39:31","messageStatus":"unread","deliveryMethod":"onnet"}],"
sentMessages":[{"messageId":"eb232446d54193d00876830421797030","messageType
":"normal","messageText":"who is this?","recipientType":"phone","recipientI

d":"14069243754","senderType":"phone","senderId":"14068522589","senderName"
:"Ann Dercover","time":"2014-07-02 22:39:15","messageStatus":"read","delive
ryMethod":"onnet"}],"brandedSystemMessages":[],"calls":[],"voicemails":[],"
now":"2014-07-02 22:39:32","largestCount":2,"smsCreditBalance":0,"callingCr
editBalance":0,"numTextsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:56880 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:39:41 GMT..Server: Apache..X-Hos
t: sj2-web34..Content-Length: 573..Keep-Alive: timeout=10, max=17..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[{"messageId":"c113ed366ab0fba64f6215f41d6fb
127","messageType":"normal","messageText":"Castling.","recipientType":"phon
e","recipientId":"14068522589","senderType":"phone","senderId":"14069243754
","senderName":"Kim Ill-song","time":"2014-07-02 22:39:31","messageStatus":
"read","deliveryMethod":"onnet"}],"sentMessages":[],"brandedSystemMessages"
:[],"calls":[],"voicemails":[],"now":"2014-07-02 22:39:32","largestCount":1
,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRe
c":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:56880 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:39:41 GMT..Server: Apache..X-Hos
t: sj2-web34..Content-Length: 573..Keep-Alive: timeout=10, max=17..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[{"messageId":"c113ed366ab0fba64f6215f41d6fb
127","messageType":"normal","messageText":"Castling.","recipientType":"phon
e","recipientId":"14068522589","senderType":"phone","senderId":"14069243754
","senderName":"Kim Ill-song","time":"2014-07-02 22:39:31","messageStatus":
"read","deliveryMethod":"onnet"}],"sentMessages":[],"brandedSystemMessages"
:[],"calls":[],"voicemails":[],"now":"2014-07-02 22:39:32","largestCount":1
,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRe
c":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:39427 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:40:00 GMT..Server: Apache..X-Hos

t: sj2-web04..Content-Length: 878..Keep-Alive: timeout=10, max=2..Connectio

n: Keep-Alive..Content-Type: application/json....{"success":"messages retri

eved","result":{"recMessages":[{"messageId":"c113ed366ab0fba64f6215f41d6fb1

27","messageType":"normal","messageText":"Castling.","recipientType":"phone

","recipientId":"14068522589","senderType":"phone","senderId":"14069243754"

,"senderName":"Kim Ill-song","time":"2014-07-02 22:39:31","messageStatus":"

read","deliveryMethod":"onnet"}],"sentMessages":[{"messageId":"4125737ad171

57e816310b4f2f98752a","messageType":"normal","messageText":"where are you?"

,"recipientType":"phone","recipientId":"14069243754","senderType":"phone","

senderId":"14068522589","senderName":"Ann Dercover","time":"2014-07-02 22:3

9:46","messageStatus":"read","deliveryMethod":"onnet"}],"brandedSystemMessa

ges":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:39:54","largestCoun

t":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTex

tsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:39427 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:40:00 GMT..Server: Apache..X-Hos

t: sj2-web04..Content-Length: 878..Keep-Alive: timeout=10, max=2..Connectio

n: Keep-Alive..Content-Type: application/json....{"success":"messages retri

eved","result":{"recMessages":[{"messageId":"c113ed366ab0fba64f6215f41d6fb1

27","messageType":"normal","messageText":"Castling.","recipientType":"phone

","recipientId":"14068522589","senderType":"phone","senderId":"14069243754"

,"senderName":"Kim Ill-song","time":"2014-07-02 22:39:31","messageStatus":"

read","deliveryMethod":"onnet"}],"sentMessages":[{"messageId":"4125737ad171

57e816310b4f2f98752a","messageType":"normal","messageText":"where are you?"

,"recipientType":"phone","recipientId":"14069243754","senderType":"phone","

senderId":"14068522589","senderName":"Ann Dercover","time":"2014-07-02 22:3

9:46","messageStatus":"read","deliveryMethod":"onnet"}],"brandedSystemMessa

ges":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:39:54","largestCoun

t":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTex

tsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:42044 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:40:14 GMT..Server: Apache..X-Hos

t: sj2-web07..Content-Length: 595..Keep-Alive: timeout=10, max=49..Connecti

on: Keep-Alive..Content-Type: application/json....{"success":"messages retr

ieved","result":{"recMessages":[{"messageId":"dc821c4eeacd713cfef5cea15e803

040","messageType":"normal","messageText":"I know I can't tell you that.","

recipientType":"phone","recipientId":"14068522589","senderType":"phone","se

nderId":"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:40:

05","messageStatus":"unread","deliveryMethod":"onnet"}],"sentMessages":[],"

brandedSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:4

0:06","largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTe

xtsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:42044 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:40:14 GMT..Server: Apache..X-Hos

t: sj2-web07..Content-Length: 595..Keep-Alive: timeout=10, max=49..Connecti

on: Keep-Alive..Content-Type: application/json....{"success":"messages retr

ieved","result":{"recMessages":[{"messageId":"dc821c4eeacd713cfef5cea15e803

040","messageType":"normal","messageText":"I know I can't tell you that.","

recipientType":"phone","recipientId":"14068522589","senderType":"phone","se

nderId":"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:40:

05","messageStatus":"unread","deliveryMethod":"onnet"}],"sentMessages":[],"

brandedSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:4

0:06","largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTe

xtsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:47289 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:41:37 GMT..Server: Apache..X-Host: sj2-web13..Content-Length: 945..Keep-Alive: timeout=10, max=4..Connection: Keep-Alive..Content-Type: application/json....{"success":"messages retrieved","result":{"recMessages":[{"messageId":"dc821c4eeacd713cfef5cea15e803040","messageType":"normal","messageText":"I know I can't tell you that.","recipientType":"phone","recipientId":"14068522589","senderType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:40:05","messageStatus":"read","deliveryMethod":"onnet"}],"sentMessages":[{"messageId":"bdc2b81acb8e3bff28a1e87ff44ee5d7","messageType":"normal","messageText":"Do you know that there are people investigating Kim Ill-Song?","recipientType":"phone","recipientId":"14069243754","senderType":"phone","senderId":"14068522589","senderName":"Ann Dercover","time":"2014-07-02 22:41:25","messageStatus":"read","deliveryMethod":"onnet"}],"brandedSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:41:31","largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:47289 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:41:37 GMT..Server: Apache..X-Host: sj2-web13..Content-Length: 945..Keep-Alive: timeout=10, max=4..Connection: Keep-Alive..Content-Type: application/json....{"success":"messages retrieved","result":{"recMessages":[{"messageId":"dc821c4eeacd713cfef5cea15e803040","messageType":"normal","messageText":"I know I can't tell you that.","recipientType":"phone","recipientId":"14068522589","senderType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:40:05","messageStatus":"read","deliveryMethod":"onnet"}],"sentMessages":[{"messageId":"bdc2b81acb8e3bff28a1e87ff44ee5d7","messageType":"normal","messageText":"Do you know that there are people investigating Kim Ill-Song?","recipientType":"phone","recipientId":"14069243754","senderType":"phone","senderId":"14068522589","senderName":"Ann Dercover","time":"2014-07-02 22:41:25","messageStatus":"read","deliveryMethod":"onnet"}],"brandedSystemMessages":[],

"calls":[],"voicemails":[],"now":"2014-07-02 22:41:31","largestCount":1,"sm

sCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRec":0

,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:54994 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:41:53 GMT..Server: Apache..X-Hos

t: sj2-web19..Content-Length: 636..Keep-Alive: timeout=10, max=31..Connecti

on: Keep-Alive..Content-Type: application/json....{"success":"messages retr

ieved","result":{"recMessages":[{"messageId":"8197385d4b4222e32ec474fa497b7

0d8","messageType":"normal","messageText":"Of course. However, they will

never know it is me behind the bribes.","recipientType":"phone","recipientI

d":"14068522589","senderType":"phone","senderId":"14069243754","senderName"

:"Kim Ill-song","time":"2014-07-02 22:41:47","messageStatus":"unread","deli

veryMethod":"onnet"}],"sentMessages":[],"brandedSystemMessages":[],"calls":

[],"voicemails":[],"now":"2014-07-02 22:41:48","largestCount":1,"smsCreditB

alance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRec":0,"invite

Count":0}}.

T 199.87.160.87:80 -> 192.168.1.5:33205 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:43:01 GMT..Server: Apache..X-Host: sj2-web36..Content-Length: 1003..Keep-Alive: timeout=10, max=16..Connection: Keep-Alive..Content-Type: application/json....{"success":"messages retrieved","result":{"recMessages":[{"messageId":"8197385d4b4222e32ec474fa497b70d8","messageType":"normal","messageText":"Of course. However, they will never know it is me behind the bribes.","recipientType":"phone","recipientId":"14068522589","senderType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:41:47","messageStatus":"read","deliveryMethod":"onnet"}],"sentMessages":[{"messageId":"700b4051723f212b979cf068e59067b9","messageType":"normal","messageText":"still we should be careful. Pay attention. I want to meet in September at 5PM.","recipientType":"phone","recipientId":"14069243754","senderType":"phone","senderId":"14068522589","senderName":"Ann Dercover","time":"2014-07-02 22:42:54","messageStatus":"read","deliveryMethod":"onnet"}],"brandedSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:42:58","largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:33205 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:43:01 GMT..Server: Apache..X-Host: sj2-web36..Content-Length: 1003..Keep-Alive: timeout=10, max=16..Connection: Keep-Alive..Content-Type: application/json....{"success":"messages retrieved","result":{"recMessages":[{"messageId":"8197385d4b4222e32ec474fa497b70d8","messageType":"normal","messageText":"Of course. However, they will never know it is me behind the bribes.","recipientType":"phone","recipientId":"14068522589","senderType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:41:47","messageStatus":"read","deliveryMethod":"onnet"}],"sentMessages":[{"messageId":"700b4051723f212b979cf068e59067b9","messageType":"normal","messageText":"still we should be careful.

Pay attention. I want to meet in September at 5PM.","recipientType":"phone
","recipientId":"14069243754","senderType":"phone","senderId":"14068522589"
,"senderName":"Ann Dercover","time":"2014-07-02 22:42:54","messageStatus":"
read","deliveryMethod":"onnet"}],"brandedSystemMessages":[],"calls":[],"voi
cemails":[],"now":"2014-07-02 22:42:58","largestCount":1,"smsCreditBalance"
:0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRec":0,"inviteCount":
0}}.

T 199.87.160.87:80 -> 192.168.1.5:48325 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:43:11 GMT..Server: Apache..X-Hos
t: sj2-web04..Content-Length: 589..Keep-Alive: timeout=10, max=40..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[{"messageId":"e5d6be661c5ed90cfb27a0fb50b33
bf2","messageType":"normal","messageText":"At our old meetup spot?","recipi
entType":"phone","recipientId":"14068522589","senderType":"phone","senderId
":"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:43:06","m
essageStatus":"unread","deliveryMethod":"onnet"}],"sentMessages":[],"brande
dSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:43:07",
"largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSen
t":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:48325 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:43:11 GMT..Server: Apache..X-Hos
t: sj2-web04..Content-Length: 589..Keep-Alive: timeout=10, max=40..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[{"messageId":"e5d6be661c5ed90cfb27a0fb50b33
bf2","messageType":"normal","messageText":"At our old meetup spot?","recipi
entType":"phone","recipientId":"14068522589","senderType":"phone","senderId
":"14069243754","senderName":"Kim Ill-song","time":"2014-07-02 22:43:06","m
essageStatus":"unread","deliveryMethod":"onnet"}],"sentMessages":[],"brande
dSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:43:07",

"largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSen

t":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:34995 [AP]

{"success":"messages retrieved","result":{"recMessages":[{"messageId":"e5d6

be661c5ed90cfb27a0fb50b33bf2","messageType":"normal","messageText":"At our

old meetup spot?","recipientType":"phone","recipientId":"14068522589","send

erType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time"

:"2014-07-02 22:43:06","messageStatus":"read","deliveryMethod":"onnet"},{"m

essageId":"b5860bdea833df4231c31dfbecbedf0d","messageType":"normal","messag

eText":"What day?","recipientType":"phone","recipientId":"14068522589","sen

derType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time

":"2014-07-02 22:43:44","messageStatus":"unread","deliveryMethod":"onnet"}]

,"sentMessages":[{"messageId":"9854f7107287ad4d6a6a69b25fc3da57","messageTy

pe":"normal","messageText":"yes","recipientType":"phone","recipientId":"140

69243754","senderType":"phone","senderId":"14068522589","senderName":"Ann D

ercover","time":"2014-07-02 22:43:28","messageStatus":"read","deliveryMetho

d":"onnet"}],"brandedSystemMessages":[],"calls":[],"voicemails":[],"now":"2

014-07-02 22:43:45","largestCount":2,"smsCreditBalance":0,"callingCreditBal

ance":0,"numTextsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:34995 [AP]

{"success":"messages retrieved","result":{"recMessages":[{"messageId":"e5d6

be661c5ed90cfb27a0fb50b33bf2","messageType":"normal","messageText":"At our

old meetup spot?","recipientType":"phone","recipientId":"14068522589","send

erType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time"

:"2014-07-02 22:43:06","messageStatus":"read","deliveryMethod":"onnet"},{"m

essageId":"b5860bdea833df4231c31dfbecbedf0d","messageType":"normal","messag

eText":"What day?","recipientType":"phone","recipientId":"14068522589","sen

derType":"phone","senderId":"14069243754","senderName":"Kim Ill-song","time

":"2014-07-02 22:43:44","messageStatus":"unread","deliveryMethod":"onnet"}]

,"sentMessages":[{"messageId":"9854f7107287ad4d6a6a69b25fc3da57","messageTy
pe":"normal","messageText":"yes","recipientType":"phone","recipientId":"140
69243754","senderType":"phone","senderId":"14068522589","senderName":"Ann D
ercover","time":"2014-07-02 22:43:28","messageStatus":"read","deliveryMetho
d":"onnet"}],"brandedSystemMessages":[],"calls":[],"voicemails":[],"now":"2
014-07-02 22:43:45","largestCount":2,"smsCreditBalance":0,"callingCreditBal
ance":0,"numTextsSent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:48377 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:43:51 GMT..Server: Apache..X-Hos
t: sj2-web09..Content-Length: 573..Keep-Alive: timeout=10, max=41..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[{"messageId":"b5860bdea833df4231c31dfbecbed
f0d","messageType":"normal","messageText":"What day?","recipientType":"phon
e","recipientId":"14068522589","senderType":"phone","senderId":"14069243754
","senderName":"Kim Ill-song","time":"2014-07-02 22:43:44","messageStatus":
"read","deliveryMethod":"onnet"}],"sentMessages":[],"brandedSystemMessages"
:[],"calls":[],"voicemails":[],"now":"2014-07-02 22:43:45","largestCount":1
,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRe
c":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:48377 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:43:51 GMT..Server: Apache..X-Hos
t: sj2-web09..Content-Length: 573..Keep-Alive: timeout=10, max=41..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[{"messageId":"b5860bdea833df4231c31dfbecbed
f0d","messageType":"normal","messageText":"What day?","recipientType":"phon
e","recipientId":"14068522589","senderType":"phone","senderId":"14069243754
","senderName":"Kim Ill-song","time":"2014-07-02 22:43:44","messageStatus":
"read","deliveryMethod":"onnet"}],"sentMessages":[],"brandedSystemMessages"
:[],"calls":[],"voicemails":[],"now":"2014-07-02 22:43:45","largestCount":1

,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRe
c":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:40889 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:50:00 GMT..Server: Apache..X-Hos
t: sj2-web19..Content-Length: 273..Keep-Alive: timeout=10, max=21..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[],"sentMessages":[],"brandedSystemMessages"
:[],"calls":[],"voicemails":[],"now":"2014-07-02 22:43:45","largestCount":0
,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRe
c":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:40889 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:50:00 GMT..Server: Apache..X-Hos
t: sj2-web19..Content-Length: 273..Keep-Alive: timeout=10, max=21..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[],"sentMessages":[],"brandedSystemMessages"
:[],"calls":[],"voicemails":[],"now":"2014-07-02 22:43:45","largestCount":0
,"smsCreditBalance":0,"callingCreditBalance":0,"numTextsSent":0,"numTextsRe
c":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:39570 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:50:53 GMT..Server: Apache..X-Hos
t: sj2-web05..Content-Length: 892..Keep-Alive: timeout=10, max=50..Connecti
on: Keep-Alive..Content-Type: application/json....{"success":"messages retr
ieved","result":{"recMessages":[{"messageId":"b5860bdea833df4231c31dfbecbed
f0d","messageType":"normal","messageText":"What day?","recipientType":"phon
e","recipientId":"14068522589","senderType":"phone","senderId":"14069243754
","senderName":"Kim Ill-song","time":"2014-07-02 22:43:44","messageStatus":
"read","deliveryMethod":"onnet"}],"sentMessages":[{"messageId":"3ceeadc119a
0225656c73b3fbfd3418f","messageType":"normal","messageText":"I told you to

pay attention.","recipientType":"phone","recipientId":"14069243754","sender

Type":"phone","senderId":"14068522589","senderName":"Ann Dercover","time":"

2014-07-02 22:50:32","messageStatus":"read","deliveryMethod":"onnet"}],"bra

ndedSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:50:4

5","largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTexts

Sent":0,"numTextsRec":0,"inviteCount":0}}.

T 199.87.160.87:80 -> 192.168.1.5:39570 [AP]

HTTP/1.1 200 OK..Date: Wed, 02 Jul 2014 22:50:53 GMT..Server: Apache..X-Hos

t: sj2-web05..Content-Length: 892..Keep-Alive: timeout=10, max=50..Connecti

on: Keep-Alive..Content-Type: application/json....{"success":"messages retr

ieved","result":{"recMessages":[{"messageId":"b5860bdea833df4231c31dfbecbed

f0d","messageType":"normal","messageText":"What day?","recipientType":"phon

e","recipientId":"14068522589","senderType":"phone","senderId":"14069243754

","senderName":"Kim Ill-song","time":"2014-07-02 22:43:44","messageStatus":

"read","deliveryMethod":"onnet"}],"sentMessages":[{"messageId":"3ceeadc119a

0225656c73b3fbfd3418f","messageType":"normal","messageText":"I told you to

pay attention.","recipientType":"phone","recipientId":"14069243754","sender

Type":"phone","senderId":"14068522589","senderName":"Ann Dercover","time":"

2014-07-02 22:50:32","messageStatus":"read","deliveryMethod":"onnet"}],"bra

ndedSystemMessages":[],"calls":[],"voicemails":[],"now":"2014-07-02 22:50:4

5","largestCount":1,"smsCreditBalance":0,"callingCreditBalance":0,"numTexts

Sent":0,"numTextsRec":0,"inviteCount":0}}.

Appendix E – Co-ordinates

Latitude	Longitude
46.85661315917969	-114.01860809326172
46.85693359375	-114.01863098144531
46.85727310180664	-114.01868438720703
46.857601165771484	-114.01866912841797
46.858055114746094	-114.01866149902344

46.8582878112793	-114.01864624023438
46.858524322509766	-114.01863861083984
46.858734130859375	-114.01864624023438
46.85884475708008	-114.01864624023438
46.858943939208984	-114.01864624023438
46.859046936035156	-114.01864624023438
46.85914993286133	-114.01864624023438
46.859466552734375	-114.01864624023438
46.85957717895508	-114.01864624023438
46.85969161987305	-114.01864624023438
46.85980987548828	-114.01864624023438
46.85993194580078	-114.01864624023438
46.86029052734375	-114.01863098144531
46.86052322387695	-114.01863861083984
46.860755920410156	-114.01863098144531
46.86098861694336	-114.01863098144531
46.861228942871094	-114.01863861083984
46.86147689819336	-114.01863098144531
46.86159896850586	-114.01863098144531
46.86183547973633	-114.01862335205078
46.862064361572266	-114.01861572265625
46.862281799316406	-114.01860046386719
46.86248779296875	-114.01860046386719
46.86260223388672	-114.01859283447266
46.86282730102539	-114.0185775756836
46.86306381225586	-114.0185775756836
46.86330032348633	-114.01856231689453
46.863426208496094	-114.0185546875
46.86355209350586	-114.01854705810547
46.86367416381836	-114.01853942871094
46.8637809753418	-114.01853942871094
46.86387252807617	-114.0185317993164
46.863704681396484	-114.01164245605469
46.86370849609375	-114.01163482666016
46.864017486572266	-114.01107025146484

46.864044189453125	-114.01074981689453
46.86404800415039	-114.01071166992188
46.86408996582031	-114.01042175292969
46.86408996582031	-114.01012420654297
46.864078521728516	-114.00962829589844
46.864070892333984	-114.0094223022461
46.86406707763672	-114.00910186767578
46.86407470703125	-114.00875854492188
46.86408233642578	-114.0084228515625
46.864051818847656	-114.0074691772461
46.864044189453125	-114.00716400146484
46.864044189453125	-114.00694274902344
46.86404800415039	-114.00680541992188
46.86405563354492	-114.00670623779297
46.864051818847656	-114.00662231445312
46.864051818847656	-114.00646209716797
46.864051818847656	-114.00627899169922
46.864051818847656	-114.00605773925781
46.864051818847656	-114.00592803955078
46.86405944824219	-114.00563049316406
46.86405944824219	-114.00563049316406
46.86405944824219	-114.00534057617188
46.86405563354492	-114.00506591796875
46.864051818847656	-114.00477600097656
46.864051818847656	-114.00452423095703
46.864044189453125	-114.0042724609375
46.864044189453125	-114.00414276123047
46.86404037475586	-114.00392150878906
46.863983154296875	-114.00354766845703
46.86393356323242	-114.0035171508789
46.86381912231445	-114.00352478027344

46.863643646240234	-114.0035400390625
46.86354446411133	-114.00354766845703
46.86325454711914	-114.00360107421875
46.86309051513672	-114.00376892089844
46.86293411254883	-114.00396728515625
46.86286163330078	-114.00408172607422
46.862701416015625	-114.00432586669922
46.86253356933594	-114.00457763671875
46.862361907958984	-114.00481414794922
46.86210632324219	-114.00520324707031
46.86183547973633	-114.0055923461914
46.86166000366211	-114.00584411621094
46.86148452758789	-114.00609588623047
46.86122131347656	-114.00647735595703
46.86103057861328	-114.00672912597656
46.860843658447266	-114.00699615478516
46.86065673828125	-114.00727081298828
46.86037063598633	-114.0076675415039
46.859989166259766	-114.00820922851562
46.85979080200195	-114.00848388671875
46.85969161987305	-114.00862121582031
46.859500885009766	-114.00887298583984
46.85930252075195	-114.00914001464844
46.85910415649414	-114.00941467285156
46.8590087890625	-114.0095443725586
46.858829498291016	-114.00979614257812
46.858646392822266	-114.01005554199219
46.858375549316406	-114.01044464111328
46.858123779296875	-114.01079559326172
46.85795211791992	-114.01103973388672
46.8577880859375	-114.01127624511719
46.85765838623047	-114.0114517211914
46.857513427734375	-114.01164245605469
46.85749053955078	-114.01168823242188
46.85747146606445	-114.01171112060547

46.857418060302734	-114.01179504394531
46.85733413696289	-114.01190948486328
46.857234954833984	-114.01204681396484
46.857181549072266	-114.01212310791016
46.85708236694336	-114.01225280761719
46.85697937011719	-114.01237487792969
46.856834411621094	-114.01256561279297
46.85672378540039	-114.01271057128906
46.856597900390625	-114.01287078857422
46.85647201538086	-114.01302337646484
46.856319427490234	-114.01313018798828