

# Who What When Warez Why – Piracy from the Source

By Isaac Basque-Rice

**MASSIVE DISCLAIMER**

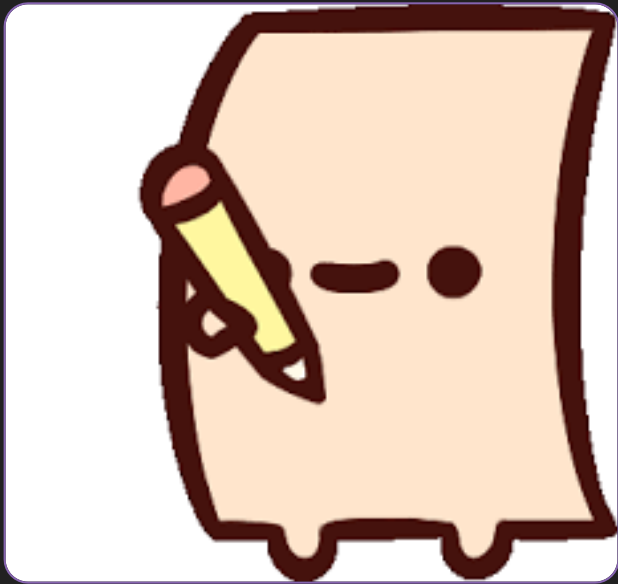
# Where does pirated stuff come from?

- Video games, movies, software
- How???? Who???? Why??



# The Warez Scene

# A quick note



- I'll be using present tense
- Conflicting reports
  - E.g Codex shutting down super recently

# What is the Warez Scene?

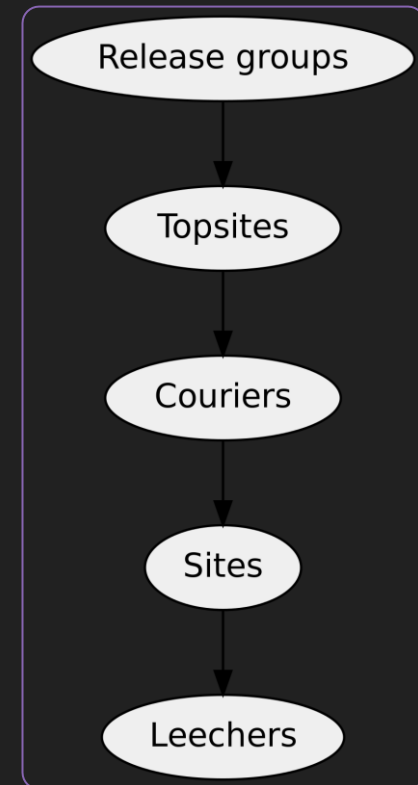
- Underground, highly secretive, highly organised, worldwide group of pirate groups
- Been around for as long as the internet has
- These guys are REALLY good
- Scene Rules guarantee quality releases and excellent internal security



# The Hierarchy

# Overview

- Fairly strict hierarchy of groups and users

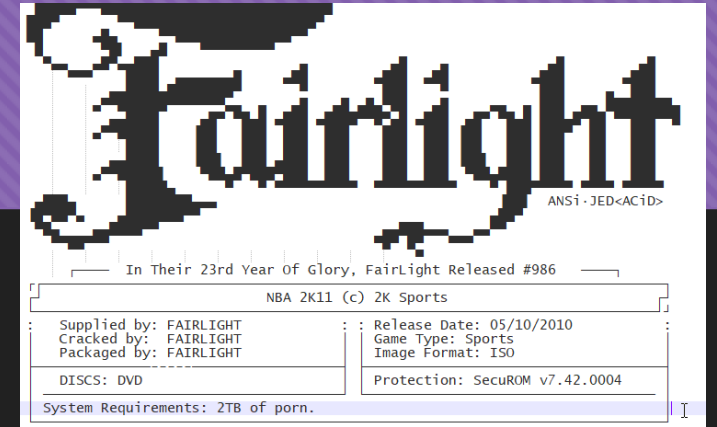




# Release Groups

- People who do all the technical wizardry
- Have to follow rules, else, nuked
- Communicate through beautiful text files





# Notable Release groups

- 3DM
- CODEX (RIP)
- CONSPIRACY
- Fairlight
- PARADOX
- SKIDROW
- STEAMPUNKS

# Topsites

- Secret FTP servers with high storage and transfer capacity
- Not uncommon for them to be physically in legitimate organisations



# Topsite Roles

- SiteOps
- Gadmins
- Affiliates
- Couriers



# Topsite Security

## Non-Technical

- Sites aren't advertised or mentioned by name
- "Blackbox" > "BBX" > "B\*\*"
- Obviously no names etc.

## Technical

- IP/Host range allowlisting
- Bounced Network Connections
  - Often no users even know the genuine IP (other than SiteOps)

# Topsite Credit System

- Topsites have a credit system
- Typically in a ratio of 1 up to 3 down
- Ensures a community of those who actively contribute (no leechers on topsites)

# Couriers and Racers

- Individuals and groups who share releases
- There are a LOT of Couriers
- Often put to a trial



# P2P Sites and Leechers

- Couriers also release to Peer to Peer sites
  - PirateBay, KickassTorrents, RARBG, etc.
- Not centralised sites, more like an index of magnet links
- Allow people to access files through a peer to peer protocol





# Peer to Peer Tech

- Magnet link > Torrent Client
- Connects to network which already have the files themselves
- Torrents \*do not contain the file\*
- There \*IS\* a legitimate use, too!!!
  - Linux Distro ISOs, other large files



```
magnet:?
```

```
xt=urn:btih:dc2e7bf4a273dc4b25ae96e833fd50be2b00e953&dn=The+Humble+Indie+Bundle+6+for+Windows+%2B+Soundtracks&tr=udp%3A%2F%2Ftracker.openbittorrent.com%3A80
```

# Magnet Links

# The Methodology

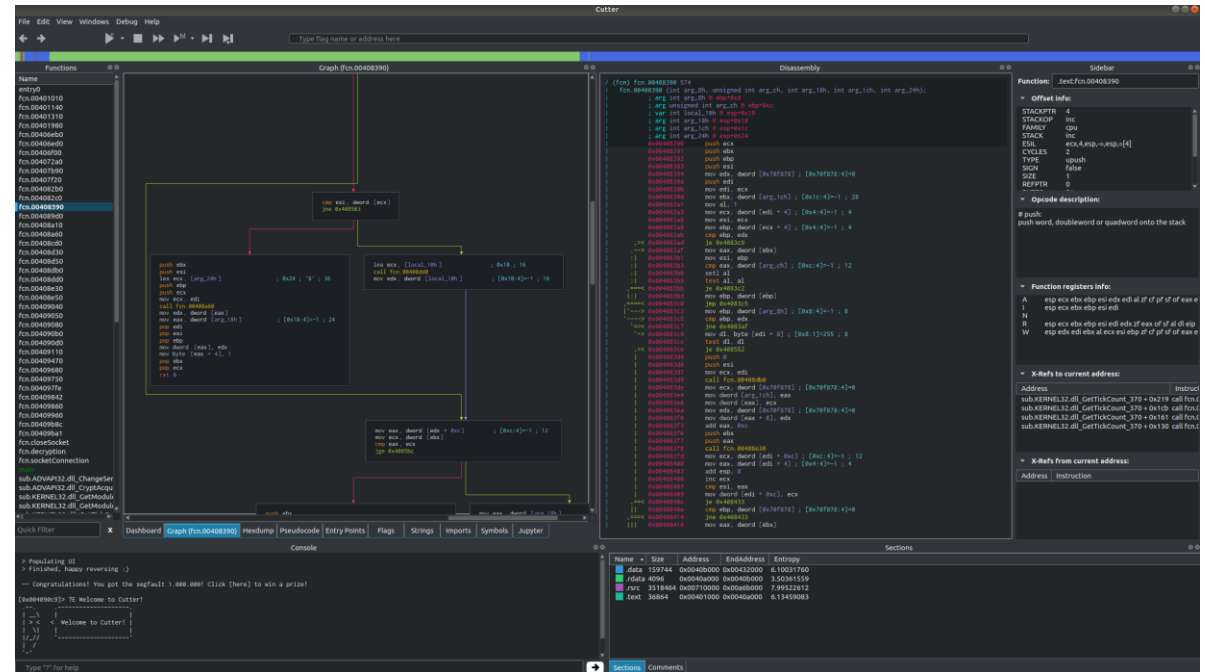
This is where we get  
✦ TECHNICAL ✦

# How does DRM work?

- Just encryption, really
- Encryption key > License server > Decrypt software > Run
- Step 2-3 is where the magic happens

# Cracking Software

1. Install genuine version of program
  2. Run (allow to decrypt)
  3. Attach a debugger and save the unencrypted data
  4. Make file executable and remove tendrils
- This is not how it is always done (far from it) but provides a useful baseline



# Cracking Software contd.

- Search for specific DLLs
  - GETDLGITEMTEXT.dll
- Place breakpoint on call
- Step through until TEST EAX,EAX
- Change EAX to 1
- NOT ALL PROGRAMS DO THIS

The screenshot shows a debugger window titled "Found intermodular calls" with a table of calls and a disassembly view below it.

Address	Disassembly	Destination
00401000	MOV EAX, DWORD PTR DS:[54E11F]	(Initial CPU selection)
00401035	CALL <JMP.&KERNEL32.GetModuleHandleA>	kerne132.GetModuleHandleA
00401070	CALL <JMP.&KERNEL32.LocalAlloc>	kerne132.LocalAlloc
00401097	CALL <JMP.&KERNEL32.TlsSetValue>	kerne132.TlsSetValue
004010A6	CALL <JMP.&KERNEL32.TlsAlloc>	kerne132.TlsAlloc
004010CF	CALL <JMP.&KERNEL32.TlsGetValue>	kerne132.TlsGetValue
004010D9	CALL <JMP.&KERNEL32.LocalFree>	kerne132.LocalFree
004010F3	CALL <JMP.&KERNEL32.TlsFree>	kerne132.TlsFree
00401167	CALL <JMP.&OLEAUT32.VariantInit>	OLEAUT32.VariantInit
00401197	CALL <JMP.&OLEAUT32.VariantClear>	OLEAUT32.VariantClear

```
00401026 . 6A 00          PUSH 0
00401029 . EB C2E01300   CALL nirc.0053F0EF
0040102D . 59           POP ECX
0040102E . 68 E9E05400   PUSH nirc.0054E0E8
00401033 . 6A 00          PUSH 0
00401035 . EB CEBF1400   CALL <JMP.&KERNEL32.GetModuleHandleA>
0040103A . A3 27E15400   MOV DWORD PTR DS:[54E127],EAX
0040103F . 6A 00          PUSH 0
00401041 . <vE9 56A81400 JMP nirc.0054B89C
00401046 . <vE9 3FE11300 JMP nirc.0053F18A
00401048 . 33C9         XOR EAX,EAX
0040104D . A0 14E15400   MOV AL,BYTE PTR DS:[54E114]
00401052 . C3          RETN
00401053 . A1 27E15400   MOV EAX, DWORD PTR DS:[54E127]
00401059 . C3          RETN
00401059 . CC          INT3
0040105A . B9 00000000   MOV ECX,000
0040105F . 8BC9         OR ECX,ECX
00401061 . <v74 39      JE SHORT nirc.0040109C
00401063 . 83D0 1FE15400 CMP DWORD PTR DS:[54E11F],0
0040106A . <v73 0A      JNB SHORT nirc.00401076
0040106C . B8 E2000000   MOV EAX,0E2
00401071 . EB E3FFFFFF   CALL nirc.00401059
00401076 . 68 00000000   PUSH 000
0040107B . 6A 40        PUSH 40
0040107D . EB 1CC01400   CALL <JMP.&KERNEL32.LocalAlloc>
00401082 . 8BC8         OR EAX,EAX
00401084 . <v75 0A      JNC SHORT nirc.00401098
00401086 . B8 E2000000   MOV EAX,0E2
0040108B . EB C9FFFFFF   CALL nirc.00401059
00401090 . 50          PUSH EAX
00401091 . FF35 1FE15400 PUSH DWORD PTR DS:[54E11F]
00401097 . EB B6C01400   CALL <JMP.&KERNEL32.TlsSetValue>
00401099 . C3          RETN
```





# Denuvo

- Denuvo is “DRM for DRM”
- Can take many months to crack
- Denuvo is in constant dedicated development
- Made to be hard to understand



by **ir.deta**

# The Releases

# What is a Release?

- Piece of cracked software released onto a topsite
- Specific procedure involved
- Release now known as “pre”
- Dupes are nuked
- PROPERs or REPACKS if release is faulty

# Technical Info on Releases

- Each release contains
  - Material
  - NFO
  - SFV

# The Rules

# The Rules

- Rules are different depending on the kind of media
- Following is a selection of rules for well known forms of media
- Go to <https://scenerules.org> for more info



# The Rules Contd.

- Often name and packaging info will be included
- “Recommended” vs “must haves” – RFC 2199
- Basic rules for almost all releases and then small section of special cases

# Media

## Current English Rules

- » [2010] ODAY<sup>7</sup> [p/t/n/d]
- » [2006] AUDIOBOOK [p/t/n/d]
- » [2010] BDR [p/t/n/d]
- » [2014] BLURAY [p/t/n/d]
- » [2008] CONSOLE [p/t/n/d]
- » [2006] COVERS [p/t/n/d]
- » [2011] DVDR [p/t/n/d]
- » [2012] eBOOK [p/t/n/d]
- » [2016] FLAC v3 [p/t/n/d]
- » [2020] FLAC (WEB)<sup>3</sup> [p/t/n/d]
- » [2021] GAMEISO [p/t/n/d]
- » [2002] MAC-OSX [p/t/n/d]
- » [2007] MDVDR<sup>4</sup> [p/t/n/d]
- » [2007] MDVDR<sup>4</sup> [p/t/n/d]
- » [2019] MP3 [p/t/n/d/e]
- » [2021] MP3 [p/t/n/d/e]
- » [VER6] MVID [p/t/n/d]
- » [2010] NDS [p/t/n/d]
- » [2010] NDS<sup>6</sup> [p/t/n/d]
- » [2010] NDS<sup>1</sup> [p/t/n/d]
- » [2019] NSW<sup>7</sup> [p/t/n/d]
- » [2002] PDA [p/t/n/d]
- » [2004] PRESSBOOKS [p/t/n/d]
- » [2018] PS4 v1.1<sup>7</sup> [p/t/n/d]
- » [2021] PS5 [p/t/n/d]
- » [2016] PSV [p/t/n/d]
- » [2011] S.I.R [p/t/n/d]
- » [2010] SCRIPTS<sup>3</sup> [p/t/n/d]
- » [2016] TV-720p [p/t/n/d]
- » [2016] TV-720p (unf) [p/t/n/d]
- » [2016] TV-SD [p/t/n/d]
- » [2016] TV-SD (unf) [p/t/n/d]
- » [2020] WEB [p/t/n/d/e]
- » [2020] WEB (unf) [p/t/n/d/e]
- » [2016] WiiU [p/t/n/d]
- » [2016] WiiU<sup>1</sup> [p/t/n/d]
- » [2016] WiiU 1.5<sup>9</sup> [p/t/n/d]
- » [VER4.1] WMV-HD [p/t/n/d]
- » [REV5] X264, X265 [p/t/n/d/e]
- » [2013] SD-X264<sup>7</sup> [p/t/n/d]
- » [2012] SD-XXX [p/t/n/d]
- » [2010] XXX-IMAGESETS [p/t/n/d]
- » [2010] XXX-IMAGESETS<sup>1</sup> [p/t/n/d]
- » [2008] XXX-PAYSITES [p/t/n/d]

- 0Days
- Audiobooks
- BluRays
- Consoles
- eBooks
- PC Games
- MP3s
- All Nintendo Consoles
- Movies and TV Shows
- The list is endless



# 0Days

- Not what you'd expect
- [Developer.name.]Program.name.vVersion[.Language][.OS][.CPU][.Release.Type][.Additional.Tags]-Groupname
- Release size
- Release type
- OSs
- Updates
- General rules

# C. 2008 Consoles

- Mostly for emulation these days
- Releases packed in RAR
  - M1 or higher
- Iso for Xbox and PS2 but full dump for Wii
- Misc rules about language and time limitations

# Console Specific – Xbox360

- Security Sectors must be patched
- If game isn't region free, include in dirname
- Region dupes are only allowed if original release wasn't region free
- If a rerelease is issued for additional foreign languages, languages must be in the NFO



# Console Specific – Nintendo Wii



- Source of game disc origin must be included in directory name
- No tools like wiiscrub allowed

# Console Specific – PS2

- The PS2 is a basic bitch

# Audiobooks

## Non-DAISY

- Format type is always AUDIOBOOK
- Must be encoded using Variable Bitrate

## DAISY

- Format type is always DAISY-AUDIOBOOK
- No re-encoding on penalty of death
- Must include working SMIL



# E-Books



- Scans
- Retail
- No DRM or Watermarking
- Strict NFO formatting
- PDFs, EPUBs, Kindle, and MOBIPOCKET allowed

# Nintendo Switch

- Interesting case here
- Image Formatting
  - Cartridges must be in XCI
  - Eshop must be in NSP
    - With all NCA files + NAX layers decrypted
- Must provide actual proof of Cartridge





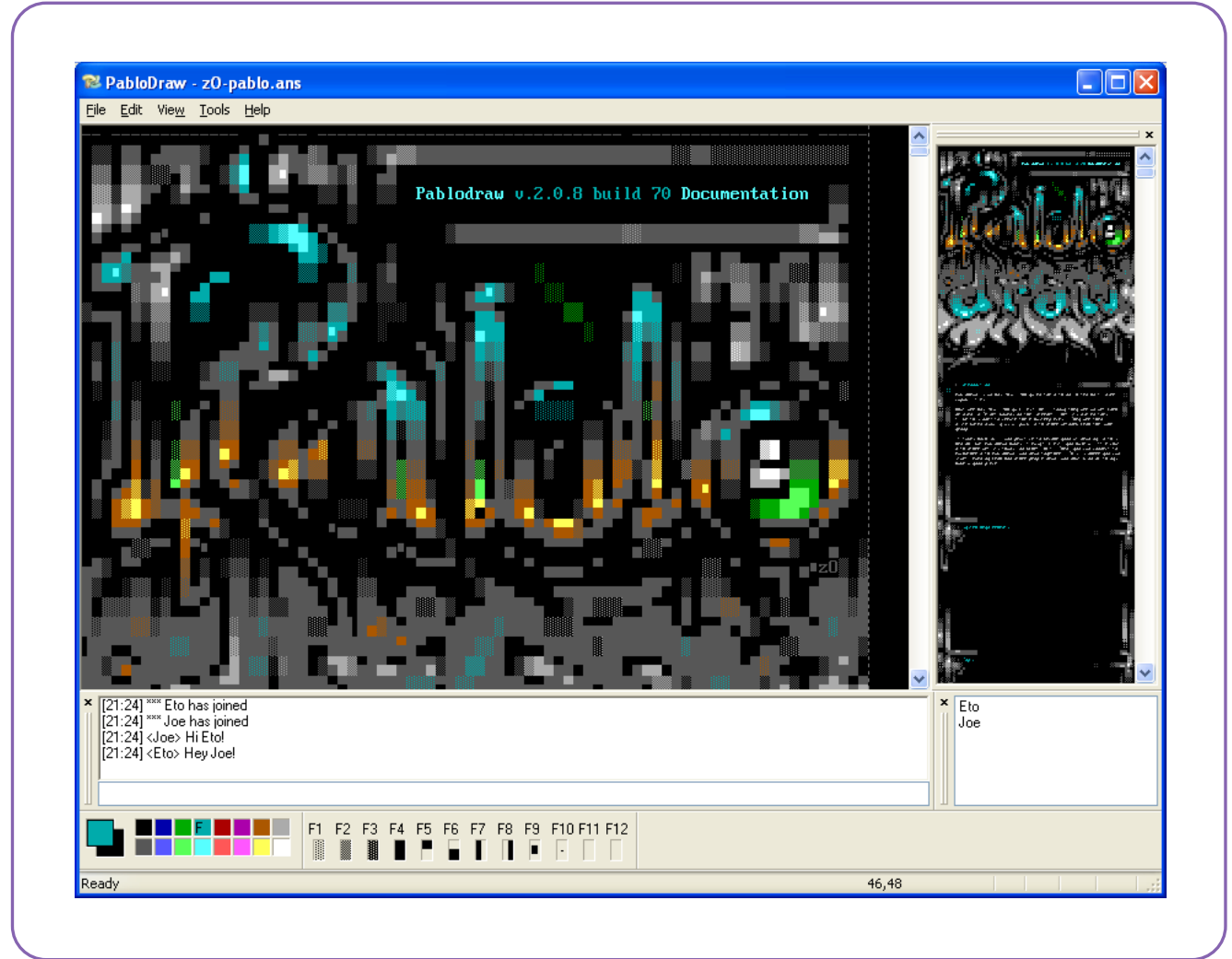
# Miscellaneous

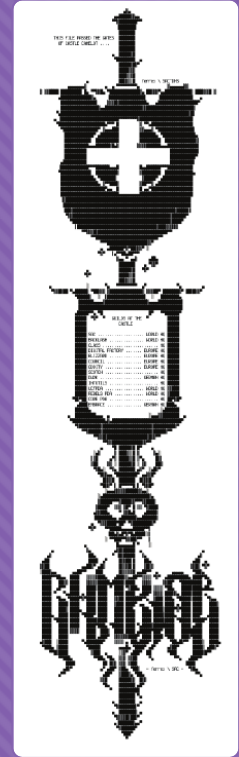
- Extensive but also simple rules
- Vast majority are info relating to file naming conventions etc

**The Art**

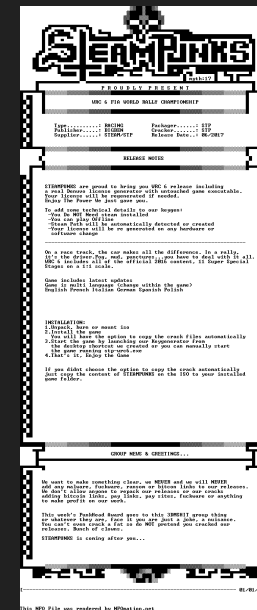
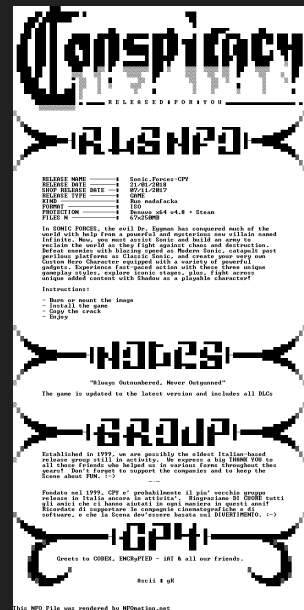
# The Art

- And breathe...
- Lends a distinct aesthetic
- Often made in software like PabloDraw

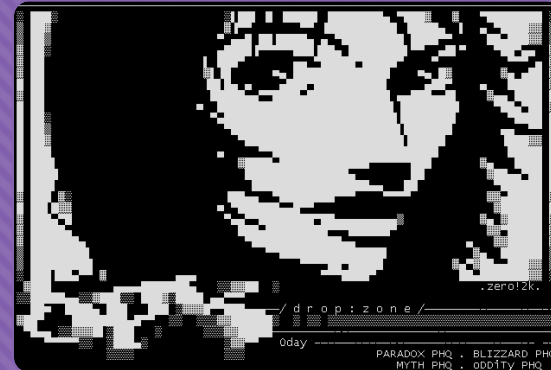
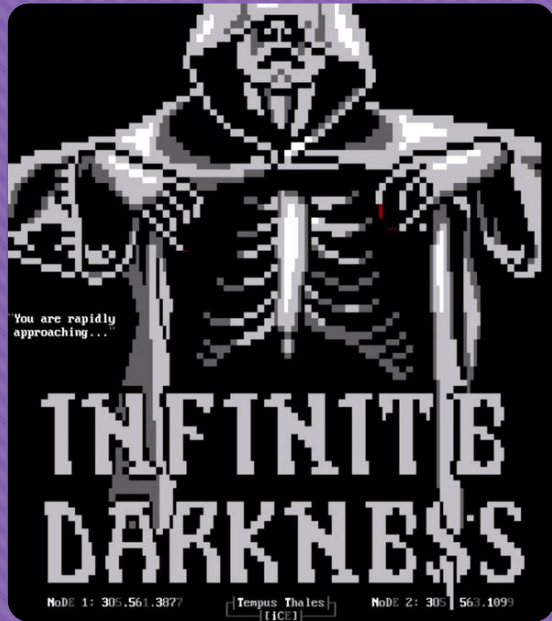




ART!!!



An example of NFOs



More Art!

**The End**

**Questions?**



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