How did you first come in contact with a nfo file? If that was outside the context of the 'scene', when was the first time you came across one of these?

I don't actually remember my first contact with an nfo file. Though that probably has more to do with their irrelevance for me as my earliest vivid memory of 'the scene' was watching Razor's 1911 'Voyage' demo from 1991. I think I probably viewed it in 1992 or 1993 when I was 15 or so. It was shown on a large rear-projection TV at my high school by a group of senior students on the school's only multimedia machine. Most of the other machines comprised of Atari STs fitted with monochrome monitors or old DOS PCs, both of which had pretty mediocre media and gaming capabilities because of their fit outs.

The demonstration was memorable for a few reasons, the loud soundtrack, quality of the production and the 3D sequences. These were on par to anything that you could find from any game of that period. It amazed me because it was a demonstration made for free with no obvious purpose and I was watching it on this seemingly huge TV.

I know that some of those Amiga kids from my school created a couple of demos for either the PC or the Amiga. The nostalgia in me wishes I could remember their names or the aliases they'd released under.

Anyway to make a long story short, I later found out they sourced these demonstrations from bulletin board systems that dealt in pirate games. BBSes could be thought of as a single purpose, text-based web pages served by a dedicated PC. Where each visitor connected to the BBS required a dedicated phone line and modem, which meant the thing didn't scale well.

In my school only a couple of computers had modems fitted. So after school I occasionally used to wait until the Amiga guys finished their online sessions and scanned through the dialling software's log files for its recent dialled numbers. Once discovered it was a simple a matter of trying these bulletin board phone numbers at home on my personal modem. That was my introduction to the pirate scene.

Do you connect any particular events with nfo files? Do you remember specific nfo files for some reason?

In those days nfos never resonated as much for me as some of the other scene products such as scene 'e-zines' (electronic magazines). That might have partly been because I had no idea what I was doing. I spent a significant time hoarding or at least viewing any nfo that I could get my hands on. This was to self-educate myself as to the function, structure and organisation of the scene. So I could at least bluff my way through conversations with other scene personalities. See unfortunately living in remote Perth, Western Australia in the early 1990s limited your options with what you could give to a European or USA based group.

For myself the stand out encounters with nfos came about later during from my research for Defacto2. One such moment was when I was trying to trace an evolution of the nfo. I learned of the origins of the abbreviation 'nfo' and how it was first used to define an i-nfo-rmation file. From memory this was first applied to The Humble Guy's release of Bubble Bubble from 1990. Then with more research and tracing things back earlier I could see that the format and layout to what we know as the modern nfo had similarities with early scene README files. Evidence could be seen in the coloured ANSI scene text files from 1988 and 1989. Groups such as the Miami Cracking Machine, PTL Club and Bentley Sidwell Productions blindly lead the way with this medium. I had

no idea that the elite scene on the PC when this far back (and actually goes back further).

http://www.defacto2.net/file/detail/ad4195 - THG Bubble Bubble from February 1990

http://www.defacto2.net/file/detail/b0488d - MCM colour information file 1989

http://www.defacto2.net/file/detail/a42a8d - PTL Club 1988

How do you think do nfos relate to the 'readme' files? Is there a close relationship to other files or certain programs?

I believe nfos came about from README files. In the 1980s and 1990s many games sold with paper instruction manuals. Often for more complex and abstract games, the manuals were a requirement to learn how to play a title. Contemporary instructions such as in-game tutorials and help pop-ups often did not exist. For some games the manuals also served as a form of copy protection as their reproduction was often very expensive and time-consuming. So undaunted the pirate groups often included a README file in their releases with brief instructions on how to play and control the game. I believe it is through an evolution of these pirate READMEs that the modern nfos came about. Crackers started with the inclusion of their personal credits or small adverts for their bulletin boards and medium evolved from there.

http://www.defacto2.net/file/detail/ae4b07 - Vortex BBS readme for Crazy Cars 1987

http://www.defacto2.net/file/detail/ab3e5d - A tiny readme for Ultima 4 released by ESP 1987

http://www.defacto2.net/file/detail/a529ed - Crackers in Action readme for Spy vs Spy 1988 looks a little like a nfo.

Are nfos among the reasons for defacto2 as an archive?

The site was set-up as an electronic publication and later switched to the goal of collecting PC scene intros, cracktros and magazines, it has since evolved to embrace the nfo file. Though our goal in this respect is not to collect every nfo in existence as there are other websites that already serve that purpose. Rather we wish to collect and curate select nfos, to give some context of their purpose and historical significance.

Why weren't nfos ever replaced by a newer format?

On other platforms the README or nfo text file was never as prevalent as it was on the PC. Many groups operating on these other machines used loaders to tag the games they cracked. Loaders were graphics or animations created by the pirates that included the cracking and distribution credits. They were usually inserted into the start of the game and because of this it was often very easy to spot a cracked or pirated game. I imagine text files were rarely used for this purpose as they were too easy to change and ironically, potentially allowed stolen credit for the crack.

On the PC though loaders were rarer due to the modular, unsupported nature of the hardware. So groups often conveyed their information using the lowest common denominator format and that basically meant embedding a text file or two into a release. But it kept the information accessible to the greatest number of varying machines and hardware types.

This want for accessibility seems to have lingered on to this day.

http://artscene.textfiles.com/intros/APPLEII/.thumbs.html - Image based loader screens for cracked

Apple II games from the early and mid 1980s.

http://www.defacto2.net/file/detail/a42a8d - The same information conveyed through a text-file based loader screen for the PC in this 1988 PTL release of Street Fighter.

http://www.defacto2.net/file/detail/aa4273 - A rare image loader screen for the PC by The Firm in 1989.

Has the usage of nfos become a tradition? Would it be right for a proper release to lack a nfo file?

Absolutely yes on both questions. An inclusion of a text nfo file in a release has become one of the oldest surviving traditions within the scene. Yet in my eyes it is a rather redundant means of information distribution. As if you look at a modern PC ISO release there is not very much useful information contained within the nfo.

The paragraph or two of game information is pretty pointless as anyone with access to a scene release probably also has access to Google. While the release meta-data such as the title, group, release date, protection type etc. could be stored in a standardised text XML or JSON file for embedded distribution. Other than the install notes and the occasional serial key, the rest of the included fluff is generally unnecessary.

Today it seems the main purpose of a nfo is group branding.

Do you see a change in nfos from the time of their first appearance in the scene to today? What propelled these changes?

Oh yes there has definitely been evolving nfo and the README text files, both in the information they conveyed and aesthetic layout. Generally the evolution came about through competition or from a needs basis.

One early change was groups or crackers that listed their BBS phone numbers so they could increase their membership of long distance callers. They believed this could increase users and would improve the catchment and variety of uploads to the bulletin boards. As in the early BBS days there were no true cross-continental groups, let alone an international scene on the PC.

Later groups added membership lists and official bulletin board affiliations into their nfos to stop people from claiming false association with a group.

By the late 1990s after the act of bypassing copy protection became a criminal offence, the more revealing pieces of information had gone from the nfos. But even with this self-imposed security censorship, nfo files still were great tools of propaganda for rival groups.

http://www.defacto2.net/file/detail/ab392f - 2000AD release by BSP in late 1988 has a structured format.

http://www.defacto2.net/file/detail/ab3dc1 - This header for $print is a crude but early example of ASCII art used within the scene.

http://www.defacto2.net/file/detail/b0488d - A coloured ANSI text file by MCM. This format was probably dropped because it must have been time consuming to create.

http://www.defacto2.net/file/detail/a22aaf - 1990 nfo from The Humble Guys. This is probably one of the earliest modern nfos as it lists affiliated boards, members, release information, contact details.

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http://www.defacto2.net/file/detail/ac4731 - NEUA nfo from 1991 with a more structured but expirimental layout and no header logo.

http://www.defacto2.net/file/detail/a52c90 - Razor 1911 nfo from late 1991 with an ASCII header and framed content.

http://www.defacto2.net/file/detail/aa38c3 - Fairlight from March 1992.

http://www.defacto2.net/file/detail/a52c90 - INC follows suit with this from April 1992.

http://www.defacto2.net/file/detail/a7281f - Fairlight nfo from July 1992

http://www.nfohump.com/index.php?switchto=nfos&menu=quicknav&item=viewnfo&id=198136 - It is not too different to this one released 20 years later.

http://www.defacto2.net/file/detail/ac469b - An experimental coloured ANSI nfo from INC in September 1992. In an era of competitive groups racing to claim ownership of a release, a coloured nfo could be a time-consuming disadvantage.

http://www.defacto2.net/file/detail/aa45a4 - Pyradical probably paid the artist for this more artistic and elaborate ASCII logo. It gave the group a greater degree of professionalism to its public image.

http://www.defacto2.net/file/detail/a428b8 - Especially compared to this one from a few weeks earlier.

http://www.defacto2.net/file/detail/a52685 - A Blade of Steal release is unusual in that an artistic figure dominates.

Paradigm is a good example of the forced shift to anonymity during the late 1990s, due to the many inside take-downs during this period.

http://www.defacto2.net/file/detail/a62c0c - Paradigm nfo from October 1996 lists boards with full names, an IRC channel for communication, membership and a couple of credits for the release.

http://www.defacto2.net/file/detail/ae3ca3 - By December they have an e-mail address listed but one of their sites ET does not list its complete name.

http://www.defacto2.net/file/detail/a938b4 - February 1997 all sites listed are now anonymous.

http://www.defacto2.net/file/detail/b44dd0 - July 1997 and all member information is gone.

http://www.defacto2.net/file/detail/af482c - The anonymous site listings remained until 1999.

In which way did these four factors shape the appearance and usage of nfo (or the other way around)?

The fact that I they would be read by friend and Feds alike.

When nfos were first popularised in the 1990s there was no issue with regards to the Feds reading the files. Not for profit software piracy was not a criminal act during this period. It was the signing of the World Intellectual Property Organization Copyright Treaty in December 1996 by 89 WTO member countries that started the change. It gave software the same protection as other copyrighted literary works and it criminalised the act of bypassing copy protection and rights management.

The USA ratified this treaty with the infamous Digital Millennium Copyright Act on 28th October 1998. Europe followed during March of 2000. By the time of the treaty's activation in March of 2002 all 89 signatories had ratified similar laws effectively killing the elite-scene's public face.

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So by this time the data shared in nfos was very different to 5 years earlier. What had once been a hobby with dubious moral issues had flat-out become an illegal, criminal activity with unwanted political and mainstream media attention.

The merging of the warez-scene and the art-scene.

The art-scene never merged into the warez-scene, rather in the very early 1990s much of the art scene spawned from the warez-scene. The split came about from artists who had mostly worked for 'elite' bulletin board systems but either outgrew the warez-scene or just wanted more creative freedom. Though it seems some artists kept their old ties for the benefit of free software or cash payments. But this was less common than one might think. As looking back there was often a huge divide in quality between the art that emerged from the art scene to that of the warez-scene.

http://ia700204.us.archive.org/13/items/notacon-artscene-2004-04-24/notacon-artscene-2004-04-24-transcript.txt - 100 YEARS OF THE COMPUTER ART SCENE

The changing distribution methods.

The plain text file is ambiguous which makes it useful and very portable. It can be read on nearly any computer device in existence from a modern Apple iPhone to a positively ancient 1970's Tandy TRS-80 home computer.

The plain text file is also tiny and uses the most minimal of space. Generally 1 character uses 1 byte or 8 bits of data. This is not so important now but in the days of terribly slow dial-up (telephone land-line) communication modems; extremely small and hugely expensive hard disks; tiny capacity floppy disks and horribly slow cassette tapes; file size was critical. Piracy was about distribution and sharing, so no one wanted unnecessary baggage in a warez release as it took longer to redistribute.

When the scene moved away from bulletin boards and online to the Internet as their primary means of distribution the nfo file remained relevant. The software that hosted the pirate sites were command line, text only Unix and Linux FTP file servers that relied on ASCII text. From a purely aesthetic point of view the move from dial-up bulletin boards with their colourful ANSI art to black and white ASCII art used by internet hosted FTP sites was a downgrade.

The increased audience.

This is a complicated one as I think there were conflicting interests when it came to increasing an audience. On the one side the purpose of the scene was competition and the bragging rights of being the first persons in the world to crack and distribute a particular software title. This was especially true of well-known AAA game titles and mainstream applications such as software from Microsoft.

On the flip side there was the issue that a greater audience generally attracted a large demographic of newbie-idiots or 'lamers' as they were once known as. And frankly most active people in the elite-scene had no time or patience for these people.

But these same 'lame' people were often willing to pay cash for products and services sold by scene groups. Running a group was often an expensive enterprise and generally the most successful groups were either operated by well-to-do participants or by people with direct connections within the software industry. It was difficult to be successful as a group and cash poor.

Using cheap but criminal means such as stolen credit/calling card numbers to get unreleased software or free long distance phone calls was generally the easiest way to get noticed by the police.

Many groups sold compilation discs loaded with releases, some sold memorabilia such as T-shirts or caps branded with a group logo. While others resold hard to get, grey-import hardware.

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Numerous bulletin boards and some sites sold paid 'leech' accounts for access to their warez. As generally even with a private user account on a board, most non-paying members would have a set trading ratio and download quota. 1 byte of a file upload might give you 3 or 5 bytes of credit to use for downloads. So paying for an account was an easy way for some to bypass the quota.

Either way the greater number of people who read an advert contained within a nfo, the greater was the potential market for these paid products and services.

What purpose do nfos serve from your perspective? How important are they?

From a historical perspective they are great, only emails serve a better function to the inner-workings of the scene of the day. Prior to the clamp downs, major arrests and busts in the 2000s, nfos were a great source of scene propaganda, fighting and public conversations.

But like I mentioned earlier, today the nfo seems more to do with tradition and branding. The scene is still about bragging rights, for claiming a release within a inner-clique. For if that wasn't important then why would groups associate an identifier for themselves for illegally bypassing DRM? Surely it would be safer just to release cracked software anonymously?

How important was the introduction of ascii/ansi art in nfo files? Did it change how nfos were produced and used?

I am not sure there was much change by the introduction of ASCII headers into nfos and text files. Other than to cement branding and to differentiate the newbie groups from the established ones. But this appears to follow a trend that originated from the demo-scene. Yet in both scenes it took awhile to catch on as I guess ASCII headers are superficial.

The layout and format of the text of a nfo seems to have had more importance for early nfos. In later nfos having an ASCII header just became expected but wasn't a need.

In what way do nfos connect to the emerging demo-scene?

I don't think you could call the demo-scene emerging as it has been well established for decades now. And they too followed the same trend of having README files that later evolved into nfo files. I have linked to some early demo-scene README files that are nfos. In fact on DOS (the precursor to Microsoft Windows) these kinds of files were probably more critical for the demo-scene than for the warez-scene. Simply because many early intros and demos were high maintenance, poorly tested and could require unique hardware or software tweaks to successfully run.

http://www.pouet.net/nfo.php?which=4081 May 90 UltraForce

http://www.pouet.net/nfo.php?which=4084 Dec 90 UltraForce

http://www.pouet.net/nfo.php?which=2996 June 90 Future Crew

What kind of feedback do you get on Defacto2 collection of nfo files? What do you believe has been the motivation of your contributors?

Generally we have 3 kinds of contributors to the site, the one time hoarders, the cracktro/intro fans and the nfo collectors.

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The one time hoarders are generally people who discover old floppy disks, hard drives or compact discs that contain their old collections of scene related files. And offer to send them over, for us to sort through.

While both the cracktro fans and the nfo collectors generally stay to their subjects, their motivation for collecting probably more nostalgic. It takes them back to a time in their youth when they obsessively spent time either working on the elite-scene or watching it from afar.