

# Why demos suck

*You cannot talk about Finnish computer culture without mentioning the demoscene and its productions. However, the essence of demos is not often understood. Skrolli will now attempt to explain how you should approach demos in order to get something out of them.*

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**F**inland has the most demosceners per capita in the whole world. Most of Finland's best IT experts have a background in demos, the Finnish game industry is more or less dominated by demosceners, and the most significant computer hobbyist events were originally demoscene gatherings. Very few can appreciate demos as an art form, however. How could blobs that bounce to the beat of a monotonous tune be interesting? Why is no one interested in a deeper message and plotline? Are demos actually worthwhile to anyone who is not a member of a secret society?

## Talent contest

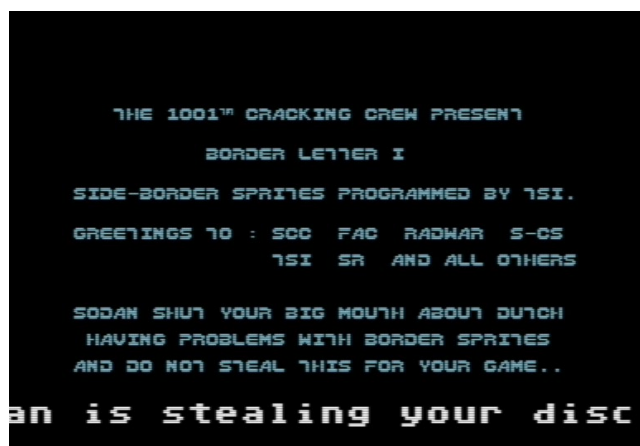
Demos were born when young computer hobbyists wanted to showcase their skills. Games already had copy protection in the early 1980s, which

made the ability to crack them a valuable asset within the community. And, naturally, you had to sign your own work. The crackers started by editing their initials into the texts in the games, but before long, creating stylish signatures also became a dedicated sport. This gave rise to crack intros and separate demonstrations of skill – demos.

In earlier demos, in particular, most elements can be purely classified as bragging: "Look at me, I made this!" Those who set new records could also say "Look at me, this is possible!" The viewing experience is affected by your understanding of the technological framework involved, as well as the knowledge of what has been done earlier within the same limitations. The uninitiated might be in awe of an average four-kilobyte demo, since they have no prior experience of what has been achieved in this file size.

Pitting one's skill and achievements against others still remains an important motivator for making demos. Even though the age of testosterone-filled gang wars is behind us, most demos are still released at demo competitions, or 'compos' for short, where the winners are selected by public vote. Of course, there are many ways to appeal to a crowd, but breaking technological barriers with style continues to work well.

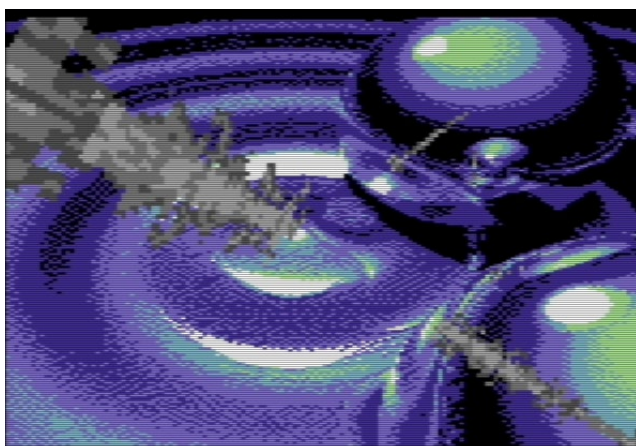
However, the limits of modern computers are difficult to reach, and the game industry with its million-dollar budgets also raises the bar for its part. Over the years, the technical innovation within the demoscene has shifted from the multiple-megabyte demos towards stricter categories that typically limit the size of the executable, the platform, or both. An executable of a few kilobytes in size cannot store an enormous 3D landscape by traditional



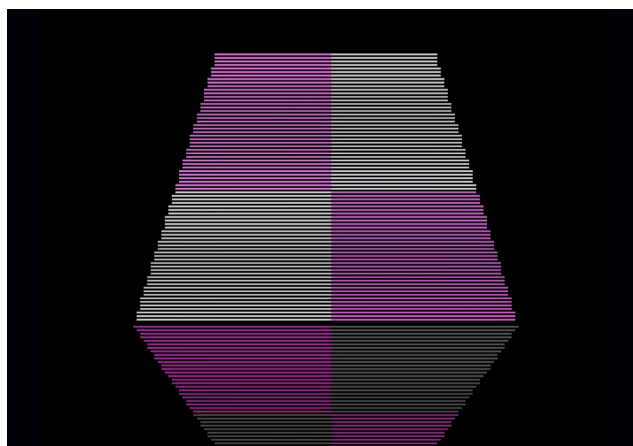
C-64 demo from 1986: A scroller that crosses into the screen border? See it to believe it! (1001 Crew: Border Letter I)



C-64 demo from 2008: A plasma effect that crosses into the screen border? Yawn, another raster timing exercise! (Booze Design: Edge of Disgrace)



What better way to ridicule the PC scene than to recreate its most over-estimated demo on the C64. (Smash Designs: Second Reality 64, 1997)



Once all the standard platforms have been conquered, it is time to up the ante. (Trilobit: Doctor, Atari 2600, 2008)

means; it needs to be generated procedurally. On 8-bit machines, on the other hand, a universal 3D engine will not get you far. In order to accomplish new things, you need to utilise the characteristics of the hardware in unconventional and creative ways. Someone once compared demosceners to ninjas: they simply must use the window even when the door is in plain sight.

The importance of limitations and challenges has created a unique relationship between the demoscene and different computing platforms. In traditional computer culture, hardware characteristics always finally boil down to computing power, and old computers are replaced by newer, more powerful ones. For demo writers, however, all platforms exist here and now, each with their own special features and limitations that give rise to specific challenges and aesthetics. In addition, the platform choice is influenced more by personal taste than the age of the author: hobbyists born in the 1990s, for example, may prefer the Commodore 64 for their demo art instead of a modern PC, and nobody will consider this odd in any way.

### Value in beauty

Technical achievements are short-lived, however. Someone will always advance the technique, making old achievements less spectacular. Demos that are enjoyable year after year and decade after decade are also aesthetically pleasing: they offer good music, beautiful graphics and smooth transitions. Most modern demos, in particular PC demos that have very loose limitations, abandon all technical flamboyancy and are built solely on aesthetics. In other words, you can enjoy demos without any in-depth knowledge of their inner workings.

Demos have had the aesthetic dimension since the beginning. Many long scroll texts from the 1980s would have been left unread if they had not been accompanied by good music and beautiful raster bars. You could keep the same part running for hours, since the user could move to the next part by pressing the spacebar, for example. The 'trackmo' style became dominant in the early 1990s; it combined music, visual displays and loading new content from disk into a music video-like

experience that lasted a few minutes. Most modern demos still adhere to the trackmo structure.

Typical demo aesthetics are usually not very easy to approach. Some people try to view them as short films, which makes them appear scattered and lacking in content. Those who approach demos like music videos or VJ sets can usually get more out of their visual style. In any case, watching demos takes some getting used to. It is like learning a new genre of music that has visual instruments in addition to the audible ones.

A genre is also a good point of reference since most demos are very focused on form. The same standard elements and stylistic touches are repeated from one demo to another: sending greetings to other groups, rotating cubes in honour of old traditions and syncing everything to the beat of the bass drum. Of course, many groups have their distinct style, but the genre features are nevertheless hard to miss.

In part, this focus on form is due to the competitions where the works are ranked. An experimental demo might



Landscapes are a mainstay in miniature-sized demos. Nowadays, the entire landscape is generated in shader language. (RGBA, Elevated, PC-4K, 2009)



Many have considered this Russian demo humorous, but the author is serious about their political message. (Cyberpunks Unity: R, ZX Spectrum, 2004).

When is this going to start? I don't get it; it should be disqualified! (Halcyon: Chimera, PC, 2002)

not succeed, and overly emphasising content may be seen as a questionable attempt to beat another entry that demonstrates higher technical skill. On the other hand, many of the scene veterans also suffer from a lack of ambition – for them, simply doing something in order to prove that they are still active is sufficient.

### Do we even need substance?

In addition to technique and aesthetics, many demos also seem to include actual substance: themes, plotlines and even messages. Mostly, however, this is all smoke and mirrors. If the audience consists mostly of people unfamiliar with demos, it is a good idea to take the aesthetics in a more cinematic direction. This makes it seem as if the demo is telling a story. However, the depth of this narrative is usually comparable to Italo-disco lyrics.

Whether demos are an art form was already under discussion in the 1990s. For many, demos are more comparable to handicrafts; they are exercises in technique that create aesthetics within the limits set by technology. On the other hand, there are also demos that emphasise artistic presentation

and only use technology as a medium. Most demos are somewhere between these extremes, but usually closer to handicrafts than art.

In principle, the technology behind demos offers an excellent platform for content-driven works. However, turning your idea into a demo does not usually make sense unless the choice of technique in itself is a part of the message. Someone wishing to make animated films, for example, will be better off learning an animation suite than coding demos. On the other hand, if your idea is so unusual that no existing technique seems to suit it, demos may be a viable platform.

### The limits of expression

The common conception is that breaking technological boundaries is the unwavering foundation for all demo art. Technology is always taken to new extremes, achievements are compared and the innovators of new tricks rise above all the others. Content, form and aesthetics are most often considered by-products and their boundaries are not broken as eagerly.

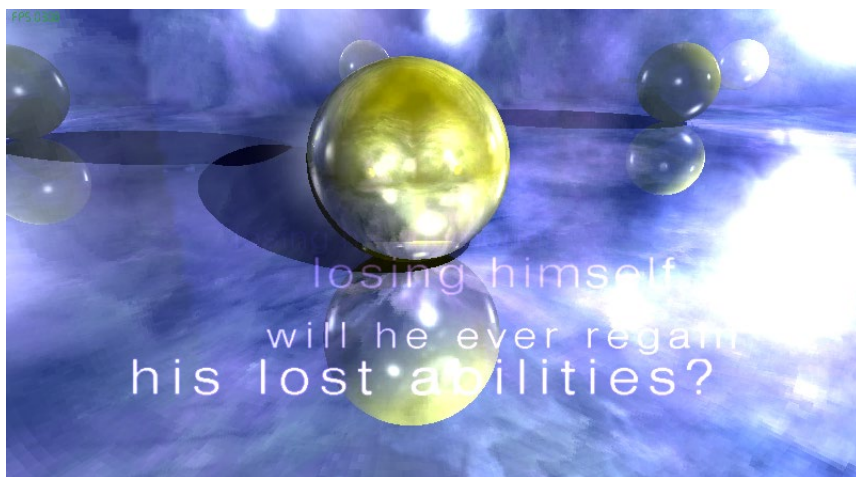
However, pushing the limits of expression has always been a part of

demo art. The current demo aesthetics would have never been born if the Amiga groups in the 1990s had not broken preconceptions concerning what demos can be. If a demo differs too much from the stabilised norms, it may be very poorly received. In order to protect their reputation, many demo authors publish their more avant-garde demos under a different alias than the one they use for the "serious" productions. Demos with extreme styles often draw upon 'noise' or 'glitch' aesthetics and use an ambient soundtrack in place of more conventional styles. Only the imagination is the limit for these experiments.

However, there is one standard that even the most avant-garde demo authors will not touch – the fact that demos are exactly the same on each run.

The main reason for their stubbornly static nature is probably that they are designed for single showings during demo competitions. Nothing must go wrong during the execution, which makes minimising the uncertainties a sensible choice. Code that operates at the technological extremes may be prone to errors. Creating a fixed run scenario can help to remove some of them. Furthermore, most demo programmers also write code for a living, which makes it understandable that they do not want to focus on bug-hunting and handling exceptions.

Demos would probably be more random and interactive if their main venue was still the home computers of individual hobbyists. Even a small amount of dynamism could also be used to explore the large grey areas that fall between demos, games and software toys. This might uncover entirely new barriers to break. However, the main motivation for demo authors are the demo events and their standardised competitions, and few people



A beautiful, technically impressive 64K PC demo with a ray-tracer routine – but did you really need to ruin it with bad poetry? Luckily, it can be switched off. (Exceed: Heaven Seven, 2000)

feel the need to publish anything outside of these events.

### Some people will never get it

Demos may suck for a number of reasons. Their aesthetics are hard to grasp, their formulaic nature is dull, there is no real content behind the facade and the inside jokes fly over your head. The technical achievements are hard to understand or appear petty. Although most demos are poor, even in the opinion of their authors, the uninitiated find it difficult to appreciate even the good ones.

The cliquy atmosphere, which is also typical of other subcultures, has been a blessing and a curse for the demoscene. On the one hand, it has allowed demo art to develop on its own terms and in its own direction and, on the other hand, it has also made demos difficult to approach and very formulaic. At their worst, the scene's internal standards prevent demos from finding new paths and their authors from seeing further.

The problem with cliques has been

acknowledged for a long time. At the turn of the millennium, when the demoscene had already ceased its rapid expansion, demo art entered the mainstream. The scene started connecting with the art and science circles, writing books and arranging demo shows and seminars. The Alternative Party, an event arranged since 1998, has questioned the standards of the demoscene and tried to find fresh views on demo art.

Although the efforts have been fruitful, the basic problem has remained: making demos is largely an inside hobby that is difficult to place inside an external framework. Demos are too shallow for art, too eccentric for entertainment and too technical to attract academic interest. Gamers cannot play them and hackers cannot read their source code. Demo authors may find it difficult to discuss the topic with people who do similar things for different reasons. In order for demo art to receive the approval and appreciation it deserves, we need research that defines its relationship with the rest of

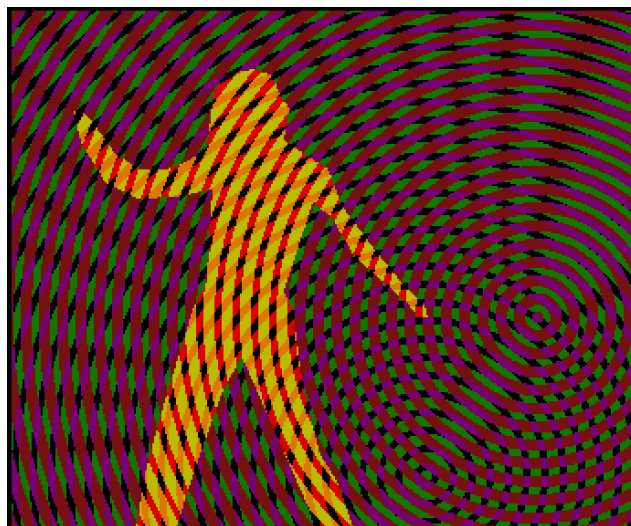
the world.

Academic research into demos has matured in recent years as researchers have found theoretical concepts that are suitable for describing them. For example, Daniel Botz, who wrote his dissertation on demo aesthetics, has found that, for demo authors, the different platforms are not so much tools as raw materials for forming their works. Digital media researchers Nick Montfort and Ian Bogost have set up a new field of research, platform studies, which may prove highly useful in demo research, as well.

Demos are a unique form of expression that offers limitless possibilities and is guided by radical technical experimentation. However, traditions and formalities are limiting their potential. It would be beneficial for the future of demos if people made, watched and understood them even outside of the traditional demoscene. This is why Skrolli will be discussing demo culture in the future, as well. 🐙



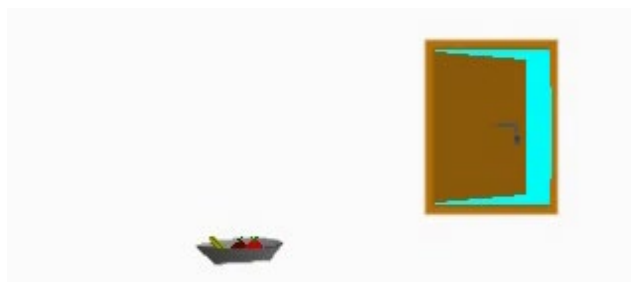
Greetings must always be sent in traditional fashion, even if your demo is built around a hardcore punk soundtrack. (Traktor: Jesus Christ Motocross, Amiga, 2009)



In its time, even this classic was frowned upon, as it favours content over technical achievement. (Spaceballs: State of the Art, Amiga, 1992)



At first glance, this seems to be saying something, but in reality, it is a fairly incoherent series of miscellaneous cool stuff. (ASD: Lifeforce, PC, 2007)



Not even the holy cow of these skill competitions is safe from criticism. (ISO: Vati, PC, 1997)