

## Computer Demos and the Demoscene: Artistic Subcultural Innovation in Real-Time

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### What demos are (not)

The demoscene (or short: the scene) is a vivid digital subculture of approximately up to 10.000 people which work internationally and collaboratively on different kinds of non-commercial digital artefacts (e.g. hand-pixeled images, music and magazines), essentially so called (computer) demos, which are audio-visual real-time animations. Pivotal to the demo aesthetic is the syn-aesthetic experience of the interplay of electronic images, animations and sounds in connection with its computer-generated background – the demo-sceners (or short: sceners) connect artistic practices with highly elaborated computer programming techniques in a unique way.

This attempt to somehow define computer demos shows its aesthetical, cultural and technological interdependency with other digital productions in the context of new/digital media (art). Demos are oftentimes pretty close to the aesthetic of experimental (electronic) music video clips, as both of them combine electronic music and a staccato-like torrent of images but often without a valid plotline. Additionally demos use basically the same programming techniques as computer games, although they are intentionally non-interactive, in order to preserve the synchronized visual and sound experience, which is considered an important part of the creation itself. Demos and computer games are – unlike CGI (computer based imagery) movies – rendered in real-time, which means that they are not pre-calculated in a computationally intensive way and just played back on an image per image basis, but every image is rendered just in the moment the spectator is watching it.

## Origins and evolution

The demoscene has its roots in the illegal cracker scene of the early nineteen eighties and the rise of the home computers – in particular the C64, Amiga and Atari ST. Back then, the newly introduced and soon widespread copy protection mechanisms for almost every software court the adolescent's resentment, especially concerning video games. As they could not effort to buy but wanted to play every new game, some of them started to remove the copy protection and spread these software cracks amongst their friends. The removal of the copy protection soon became secondary and people started to form cracker groups, which challenged themselves to provide the fastest and most improved cracks. In order to gain recognition, they put a little animation in front of every crack which was called intro. These digital signatures got more and more important as differentiation between the competing cracking crews and as the skills of those responsible for those intros grew, also the desire to solely show off their capabilities grew. Soon, the main goal for the producers became to demonstrate that they were able to use the hardware in a way originally not intended and to present these efforts in an aesthetically appealing way. The audio-visual gimmicks became self-contained artworks that were spread independently of the video games and over time their producers separated themselves more and more from the illegal software cracking crews to form the demoscene (Walleij 1998).

## Is it all about restrictions?

Today's self-conception of the demoscene is reminiscent of this origin: most of the hardware limits which were in existence in the early days are basically non-existent today, but the perception is still alive that restrictions level the playing field and therefore are important to sustain the competition and lead to new creative ways to squeeze out the most impressive artworks within these self-imposed limits. These limitations could be classified into two categories: (1) limit yourself by which target device you choose or (2) limit yourself by the size of your artefact.

It's important to point out that these restrictions are self-imposed to stimulate the competition just for its own sake. Sceners however never restrict themselves when it comes to the tools they use. They are not dominated by the computer and its software, but instead always try to overcome any limits that are imposed on them from the outside. Oftentimes they write their own tools or extend existing tools to achieve some special visual or audio effects they envisioned for their work. Their technical skills seem to be a very important criterion, but as well the one that is most difficult to decide on. As compared to any other artisanry, probably the only people who can really decide on whether an effect is technically advanced or not are the sceners themselves (Tasajärvi 2004). Anyhow, for quite a while now, the digital media art scene takes notice of the demoscene (e.g. demo screenings at Ars Electronica and Bitfilm Festival and at least three exhibitions worldwide) and for some other reason appreciates their works of art. Besides the fact that from the mid nineteen nineties on, computer demos changed from pure

technical show-offs to increasingly ambitious designed multimedia productions, more general traits characterize the scene and its artefacts: (a) the interdisciplinary collaboration, (b) the ideals of originality, innovation and high quality concerning the programming itself (Carlsson 2009), (c) the sub-cultural low-budget production process or (d) the emphasis of the computer as a decisive element of the demo's aesthetic instead of its prevalent usage as merely convenient tool. I would assume that it is a combination of these aspects which determine the momentous impact demos might have on today's art scene.

#### References

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