

## The Euphoria of Multimedia

### Responses to the Emergence of the Internet in the Hungarian Art of the 1990s

A defining artistic phenomenon of the 1990s was the creative practices associated with media art, or as it was often referred to in the decade, new media art. The historical roots of media art reach back to the first attempts at technological imaging, including the invention of the daguerreotype process in the 1830s, which was a precursor to photography. As Walter Benjamin showed,<sup>1</sup> technological reproducibility – and especially the appearance of photography – had a significant impact on the public reception of art, while also preparing the ground for radical changes in visual art as a whole. Indeed, the emergence of avant-garde art was in part a response to the novel artistic possibilities that arose from technological imaging.

The new media paradigm was based on the creative use of the novel digital media that became available during the 1980s and 1990s. The process involved the integration of computer technology into artistic practice. The integration of the Internet, wireless networks, mobile phones and other devices then ensued. The fact that photography, film, video and other analogue tools came to be included among the tools of fine art in the nineteenth and twentieth centuries laid the foundations for artistic practices that reflected on the technological, aesthetic, cultural, social, and political aspects of the emergence of digital media. A new wave of medium experimentation, as emphasised by the early avant-garde, was signalled by the novel attitudes towards art of the 1960s and 1970s. At the same time, there was also a need for a radical reconsideration of the previous institutional framework. The practical use of the mass media, telecommunications media and electronic network possibilities served to further this aim.

In the 1980s, access to personal computers opened up a new field of creativity and experimentation. Hungarian and Hungarian-born artists played a leading role in the evolution of computer-based art, as revealed in the essay by the curator Márton Orosz,<sup>2</sup> which was published in the catalogue for the 2016 exhibition at the Hungarian National Gallery entitled *Hungarian Artists and the Computer: The Reconstruction of an Exhibition*. A pioneer of computer-based art was Vera Molnar, who has been living in France since 1947 and who, in the 1960s, developed a specific visual language for art based on computer algorithms.

The geopolitical confines of the Cold War impacted upon the use of the computer for artistic purposes. Whereas artists in the West had access to computers from the end of the 1960s onwards, in the Eastern Bloc

1 Cf. Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction* (1936). Benjamin (1936) 1963.

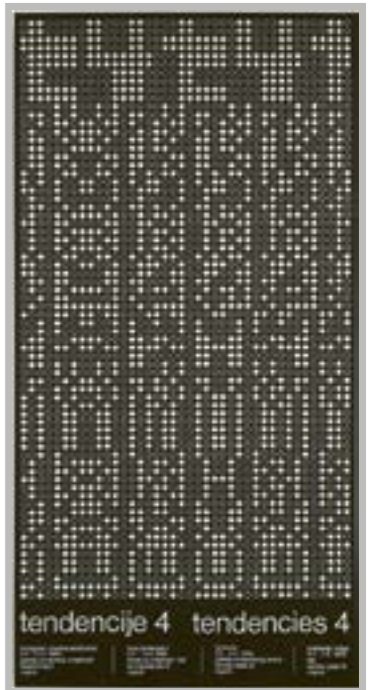
2 Orosz 2016.

countries such opportunities were limited by the Cocom list, which restricted the export of Western technology to the East. Fine art exhibitions relating to the early use of computers were held from the late 1960s onwards, with one of the first in the region being the exhibition *Computers and Visual Research (Kompiutori i vizuelna istraživanja)*. This event constituted the fourth part of the *New Trends (Nove tendencije)* exhibition series, held in Zagreb (in the former Yugoslavia) in 1969. Although Hungary enjoyed many advantages within the region (e.g., by the early 1980s, the Institute for Computer Science and Control and the Central Research Institute for Physics had already acquired Western computers), it was only in the latter half of the 1980s that fine and graphic artists began to gain access to computer technology.

Computer art was first shown to the Hungarian public at the *Digitart I* exhibition, held at the Museum of Fine Arts in 1986. The selection comprised works submitted following a joint call from the magazine *Új Impulzus* (New impulse) and the Institute for Computer Science and Control. The artists participating in the exhibition<sup>3</sup> produced graphic artworks on modern computers provided by the Institute for Computer Science and Control. The art was then presented in analogue form (prints) at the exhibition.<sup>4</sup> Tibor Szentgyörgyi organised the exhibition and was instrumental in popularising the use of computers in art in Hungary. For instance, in the late 1980s, the cover of the biweekly magazine *Új Impulzus*, which Szentgyörgyi edited, regularly featured computer graphics by contemporary artists such as Dániel Erdély and Tamás Waliczky.

Increasing access to the new technology and the euphoric atmosphere surrounding it were important factors in the initial optimism surrounding the political, social and cultural transformation of Hungary in the 1990s. The Internet, available worldwide since 1993, emerged as a new type of global real-time connectivity.

The need for artists to connect can be traced back to the network activity of the international mail art community that emerged from the Fluxus movement in the 1950s and which anticipated the artistic networking made possible by the Internet in 1990s.<sup>5</sup> With the advent of telecommunication media (e.g., telephone, television, fax, video, and other image and sound recording devices), artists had new opportunities for communication. International telecommunications projects in art were implemented in Hungary even before the change in political regime in 1989. Among the first was Artpool's project in 1983 entitled *Telephone Concert*, during which a four-hour sound performance concert took place over the phone line with telephone connections between Budapest, Vienna, and Berlin. Organised by Robert Adrian X and Helmut J. Mark, the event was coordinated by Artpool and János Vető in Budapest.<sup>6</sup> As a continuation of the project, in 1993 (the year mark-



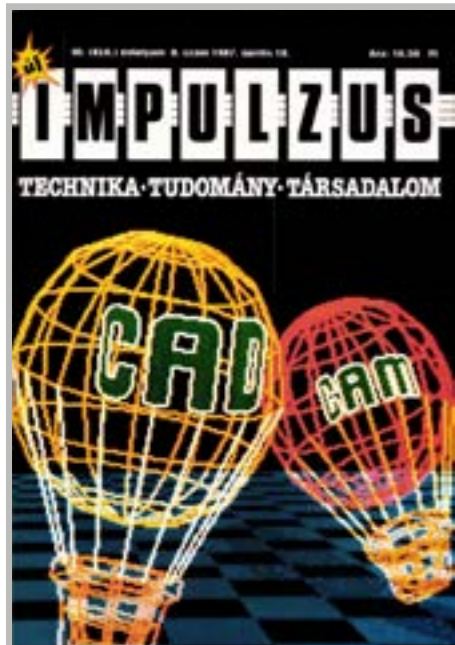
IMG\_041 *New Tendencias 4 – Computers and Visual Research*, Cultural and Information Centre, Zagreb, 2–8 August 1968, exhibition poster

3 The exhibition comprised works submitted for the competition, including hundreds of works by nearly fifty Hungarian artists (among them, András Böröcz, Dániel Erdély, Áron Gábor, György Galántai, Ágnes Holba, Zsigmond Károlyi, Frigyes König, László Révész, Gy. Péter Simon, János Sugár, János Szirtes, Tamás Trombitás, János Vető, and Tamás Waliczky). The Hungarian works were supplemented by a selection of computer graphics by foreign artists.

4 The second part of the series was *Digitart II*. It was held at the Ernst Museum in 1990, and the works presented were based to a greater extent on digital media.

5 Welch ed. 1995.





IMG\_042 Computer graphic by Tamás Waliczky on the cover of the no. 8 (1987) issue of the journal *Új Impulzus* (New impulse)

6 Hungarian participants included András Böröcz, Sándor Czakó, Zsuzsa Dobrányi, Miklós Erdély, György Galántai, Júlia Klaniczay, György Kozma, Zoltán Lábás, Tivadar Nemesi, János Sugár, János Szirtes, János Vető, etc.



IMG\_043 *Danube Connection*, electronic communication happening, Artpool-Zeronet, Budapest-Vienna, 8 September 1993, poster

ing the introduction of the Internet but without its use), an international electronic communication happening was staged between Budapest and Vienna. Entitled *Danube Connection*, the performance was organised by the Artpool Art Research Center and Robert Adrian X, using fax, telephone, videophone, computer, video and performance media.<sup>7</sup> In 1987, a visual communication project known as *Dialogue Ordinaire* was organised by the French Institute in Budapest and Art Rencontres International of Paris. In the process, via a modem-based computer connection, the computer art of the Hungarian participants could be immediately transmitted to the venue in Paris.<sup>8</sup> Noteworthy, Gábor Bódy became a highly instrumental figure in the international arena: ten numbers of the international videocassette magazine *INFERMENTAL*, which he launched in collaboration with Vera Baksa-Soós in 1980, were published by 1991. As alluded to by László Beke, all this was a foreshadowing of the networks that later emerged on the Internet video sharing platforms.<sup>9</sup>

News of the coming of the Internet, which became available to the public in 1993, spread rapidly around the globe, yet private user access only became available some years later. Hungary's various cultural actors were quick to show an interest in the opportunities afforded by the Internet. Even so, in the first half of the 1990s, they directed more attention to multimedia technologies such as CD-ROM. András Nyíró, the founder of *Internetto*, the first internet magazine in Hungary, was perceived by many as the face of the Internet in the 1990s. From 1993 to 1995, he and István Szakadát edited the experimental cultural CD-ROM magazine *ABCD*. Some issues of the magazine included fine art such as

7 The participants at the Budapest venue were, among others, Júlia Klaniczay, György Galántai, Paul Dutton, János Szirtes, and Endre Szkárosi.

8 Participants in the project included eleven Hungarian artists, namely Gábor Bachman, Áron Gábor, György Galántai, György Kemény, Attila Kovács, Sándor Pinczehelyi, László Rajk, György Soós, Róbert Swierkiewicz, János Szirtes, and András Wahorn.

9 Beke 2017, 18.

an adaptation of György Jovánovics's sculptures, Gábor Bódy's video art, or Béla Kondor's graphics in a multimedia environment. The first series of the *MetaForum* international media theory conferences initiated by the Media Research Foundation and held between 1994 and 1996 at the Hungarian Academy of Fine Arts were organised around the issue of multimedia, concerned primarily with the possibilities provided by CD-ROMs. In their summary of events, the organisers wrote the following: "... here we also presented the World Wide Web ..."<sup>10</sup> Internet access for artists became a real possibility from the mid-1990s onwards – primarily through the mediation and support of domestic institutions such as the Institute for Computer Science and Control, the Department of Intermedia of the Hungarian Academy of Fine Arts, Eötvös Loránd University, the Budapest University of Technology and Economics, and then C<sup>3</sup>, established in 1996, or the Artpool Art Research Center. The latter two institutions remain important sources for the early history of Internet culture, via their websites of media archaeological significance.<sup>11</sup>

In the former communist countries, access to the Internet was symbolic of the new public milieu in the post-transitional period, reflecting both the transformation of access to culture and the new opportunities for international connectivity among artists. In the early techno-optimistic period, the potential dangers of networking were largely ignored by everyone except for a narrow circle of activists. Indeed, the World Wide Web was generally celebrated both as a democratic interface enhancing freedom of speech and action and as a tool for securing free access to information. The Internet provided the technological infrastructure for the integration of the former Soviet bloc and its transition to Western liberal democracy. Established by the Soros Foundation in 1993, the Open Society Institute (OSI) was one of the main proponents of this vision in the region, viewing the Internet as a tool for democratisation and liberalisation and as a means to fulfil the idea of an "open society". The Soros Centres for Contemporary Arts (SCCA) provided the framework for OSI's regional cultural programme, seeking from the outset to enhance the global visibility of local artists. A principal objective of

10 <http://www.mrf.hu/mediaresearchhun.html>

11 Since 1995, György Galántai has been the designer and developer of [www.artpool.hu](http://www.artpool.hu). Balázs Beöthy designed the main page for [www.c3.hu](http://www.c3.hu) in 1997.

12 <https://tech.c3.hu/webterminal/index.htm>

13 <http://wwwold.sztaki.hu/providers/pos/index2.html>

14 <http://www.c3.hu/collection/artworld.anonymous/>

the C<sup>3</sup> Center for Culture & Communication, which was established as the Budapest branch of the SCCA, was to promote the use of the Internet and the international exposure of Hungarian visual artists. C<sup>3</sup> soon became an indispensable actor in the development of Hungarian media art in the 1990s, organising exhibitions, issuing grants and scholarships, overseeing international residency programmes, providing web hosting and domains for cultural organisations, and constructing a seminal media art collection. The first web terminals<sup>12</sup> in Budapest and the founding of Freemail, an e-mail service, were also in part the accomplishments of C<sup>3</sup>.

Despite the euphoric atmosphere, artists who worked with the Internet in the 1990s were considered progressive. The World Wide Web represented technical freedom and an aesthetic toolbox. It also diverged from the traditional system of institutions, thus forming a connection with avant-garde traditions. Visual artists were encouraged to use the Internet within the framework of such experimental institutional models as the Department of Intermedia of the Hungarian Academy of Fine Arts, C<sup>3</sup>, or Artpool, which indicated the need to transform the media and institutional frameworks. In effect, multimediality entailed the expansion of the artists' toolbox, by way of technical possibilities such as dynamic hypertext and hypermedia content. These opportunities were not, however, the exclusive domain of the Internet: as a presager of Internet networking, the floppy disk and CD-ROM formats facilitated the compilation and subsequent distribution of copious quantities of audiovisual content in multidimensional structures. As members of the artist group Artworld Anonymous, Balázs Beöthy, Zolt Mesterházy, and Rolland Pereszlényi developed a project entitled *A Baedeker to Telephonia* in 1995, which was distributed on floppy disks and then published online,<sup>13</sup> in the initial period of internet access. According to the description, the compilation was a "Guide to local and international telephone systems and their manual operation". The project highlighted the social justice aspects of free

access to network communication infrastructure and information. It became a manual for free connections to the telephone network and thus free Internet access. By assuming illegality, Artworld Anonymous also had ties to hacker culture. The group's website<sup>14</sup> – still in existence today – clearly illustrates the peculiarities of web aesthetics at the time.

In the early years, there were many obstacles to Internet access: even with a subscription fee, which was extremely expensive for the private user, a subscriber only had access to a slow "dial-up" Internet connection. When a subscriber was surfing the Internet using the local telephone line, the telephone line was unavailable for other purposes. The telephone service providers thus



IMG\_044 Website of the C<sup>3</sup> Center for Culture and Communication, 2023. The home page was designed by Balázs Beöthy in 1997.



IMG\_045 Artworld Anonymous (Balázs Beöthy, Zolt Mesterházy, and Rolland Pereszlényi), *A Baedeker to Telephonia*, 1995





IMG\_046 The Night Watch, 1996–1999, home page

15 <http://old.sztaki.hu/providers/nightwatch/>

16 <http://old.sztaki.hu/providers/nightwatch/kiserleti/xy/>

17 [http://b2.hu/beta\\_tours/greencat.html](http://b2.hu/beta_tours/greencat.html)

encouraged nighttime use of the Internet by offering more favourable off-peak subscription fees, thereby affecting people's habits regarding Internet use. These issues were reflected in the online experimental art journal *Éjjeli Órjárt* (Night watch), a network project developed from 1995 with the technical assistance of the Institute for Computer Science and Control. As well as evoking Rembrandt's work from 1642, the journal's name referred to the nighttime period, which was more suitable for Internet use.<sup>15</sup> Amid the changes in the institutional system of the 1990s, the journal *Éjjeli Órjárt* was not only a medium for experimenting with digital fine art but also represented a possible form of alternative operation against the traditional institutional structures. With its seven editors (Ágnes Eperjesi, Attila Horányi, Attila Nemes, Ferenc Szijj, Katalin Timár, László Tölgyes, and Imre Weber), the journal, in addition to its text-based content, also featured experimental art projects founded on the interactive nature of the web environment. This entailed, for instance, a community poetry writing project, virtual art auctions, and attempts to reconstruct works that had disappeared. Under the auspices of the gallery project of the Institute for Computer Science and Control, *Éjjeli Órjárt* also created opportunities for the presentation of web-based art by invited artists, such as János Sugár's work entitled *Document Model*, which was based on a virtual word database that could be expanded by visitors,<sup>16</sup> Beöthy Balázs's hypermedia interface *BetaTours*, whose point of departure was the visual system of a contemporary virus,<sup>17</sup> or Ágnes Eperjesi's work published under the title *VRML Statistics*,<sup>18</sup> which reflected upon the slowness of network connections. Gábor Bakos, Gábor Gerhes, Endre Koronczai, Gyula Várnai, and Imre Weber also created internet-based art as part of the project.<sup>19</sup>

18 <https://www.youtube.com/watch?v=eA0UM-vkRzDM>

19 <http://old.sztaki.hu/providers/nightwatch/kiserleti/index.html>

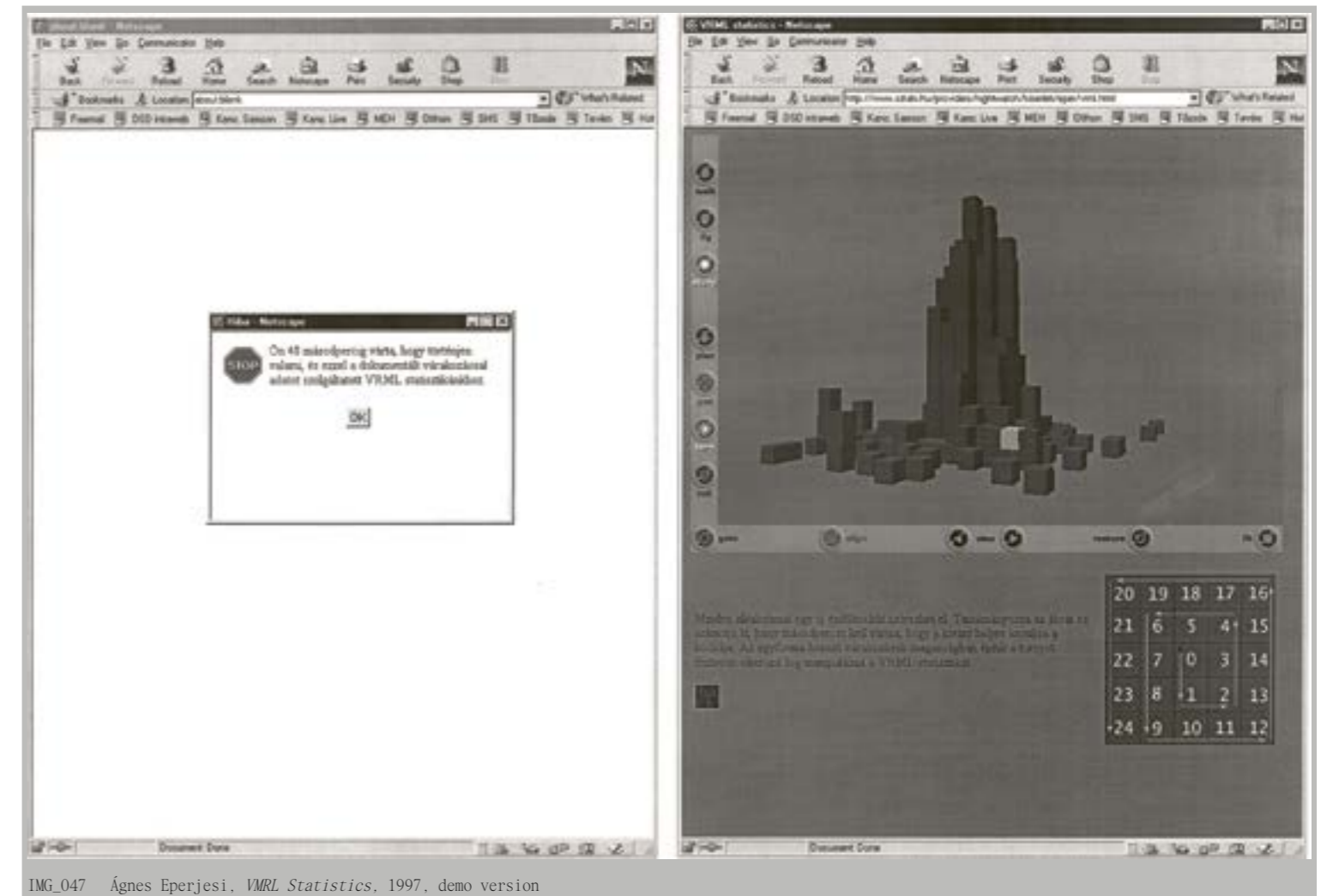
20 <http://catalog.c3.hu/index.php?page=work&id=1025&lang=HU>

A definitive trend of the media art of the 1990s was the emphasis on the genre of interactive installations. The works, which were usually based on multimedia tools, were also linked with the new international wave of era-specific installation art in the avant-garde tradition and with the paradigm of interactive media, which became increasingly important with the advent of digital technology. The digital environment created new opportunities for an interaction that had been present ever since the avant-garde: real-time feedback became a feasible possibility, and the limiting of interaction to a single physical location was no longer valid. One of the first installation works in Hungary to base interactive participation on Internet infrastructure was János Sugár's *Reference Generator*, which was featured at *The Butterfly Effect* comprehensive media art historical exhibition, held at the Kunsthalle Budapest in 1996.<sup>20</sup> The exhibition marked an important turning point in Hungarian media art endeavours: the success of the exhibition, which was supported by the Soros Foundation, led to the founding of C<sup>3</sup> a few months later. The *Reference Generator* consisted of a computer and a fan placed on a table in a dimly lit room, with a projection on the wall behind the table. The fan moved a Christmas tree ornament hanging in front of it, the swinging of which visitors could also influence. This movement controlled a random generator via photocell transmission. The word or concept displayed by the random generator from a collection of approximately four hundred words could be read on the computer screen, while the generator was also used to randomly project onto the wall images from a database of hundreds of items. Most of these pictures came from the archives of the Society for the Dissemination of Scientific Knowledge (TIT). The resultant constellation served to encourage visitors to create references between the visual and verbal information. The lexical database was partly formed from suggestions sent by visitors in e-mails, thus building on the interactivity of the recipients. Since the computers located in the exhibition space had a publicly available and free Internet connection – for the first time in Hungary –, it was also possible to expand the lexical database on site. Sugár's work focuses on the transformational phenomena of the process of reference creation through digital information linking. Owing to the thematic definition, the images chosen for the pro-

21 Sugár 1996.

22 [http://www.c3.hu/events/99/image\\_engine/in-dexhu.html](http://www.c3.hu/events/99/image_engine/in-dexhu.html)

jection emphasise the interdependence of the various scientific fields, thereby pointing to the need for interdisciplinarity. This idea increasingly formed a central part of the digital revolution. When describing the artwork, Sugár stated the following: "Computer technology makes it possible to recreate a lacking cross-referential matrix, since the most diverse types of information are stored in the same way. Due to the high-speed data process, a large amount of complex data is available, easy to handle and accessible for all, continuously."<sup>21</sup> Chance as an organising principle serves to incentivise creativity, while the installation form emphasises the actual experience of the associative system and the possibility of a physical connection. Sugár's work reflected upon both the opportunities for free reference making made possible by hypermediality and upon the pressing need for a relaxation of the structures of scientific discourse by means of the Internet.

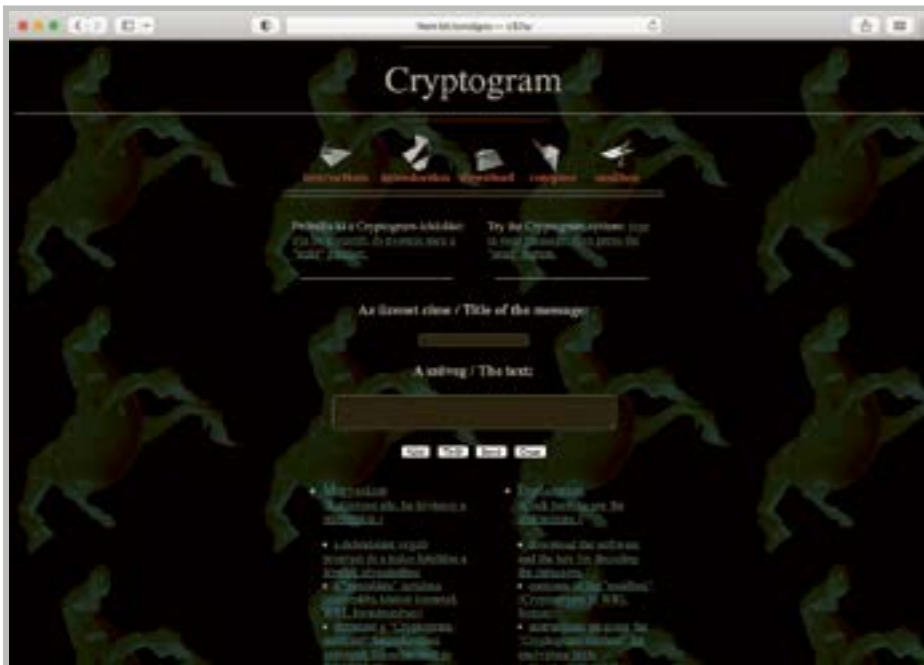


IMG\_047 Ágnes Eperjesi, VRML Statistics, 1997, demo version





IMG\_048 János Sugár, *Reference Generator*, 1996 (installation at *The Butterfly Effect* exhibition, Budapest Kunsthalle, 1996)



IMG\_049 Zoltán Szegedy-Maszák, *Cryptogram*, 1996, online version

23 <https://www.c3.hu/cryptogram/>

interface appeared only in 2001). In a pioneering way, El-Hassan's work thus reflected upon the possibilities of synaesthetic associations within a technological environment. The work *Image Engine* – similarly to János Sugár's work presented in the foregoing – is linked, through the thematisation of the creation of references between verbal and visual information, with elements in the avant-garde that are manifested, among others, by the Dadaist visual and sound poems or the Surrealists' examination of the limits of free association.

Zoltán Szegedy-Maszák's work *Cryptogram* was also created at this time, initially as an installation at the exhibition *The Butterfly Effect* and subsequently (in the same

24 Szegedy-Maszák 1996.

25 Eco 1989.

year) as a web version.<sup>23</sup> The work seeks to function as an encrypted communication interface through which text messages can be encoded into a virtual sculpture, with the verbal content of the messages arriving in the form of a virtual sculpture that can be deciphered with the help of *Cryptogram*. This visual decoding possibility is closely related to the actual interpretation of fine art. Szegedy-Maszák's work reverses the process of iconographic decoding, creating the possibility of encrypting a text-based message with the help of an algorithmic system generated by him. Szegedy-Maszák enables encryption using a digital toolbox and by transforming the text and the medium of the sculpture. In 1996, he stated the following about the work: "I wanted to create a real interactive work that provides more for the viewer than simply browsing over a prefabricated hypermedia piece. Instead of a traditional hypertext site, I aimed at publishing a 'communication system for virtual communities'..."<sup>24</sup> *Cryptogram* exemplifies the fact that although the interactive works of the period were based on physical or virtual interventions by – and feedback from – the recipients, in many cases this was based solely on the interactive nature of the technology and did not take into consideration the communication and social conditions for mutual interaction with the recipients. For this reason, instead of the desired interaction, the works often remained confined to one-way communication situations. At the same time, the system created by *Cryptogram* dispels the limits on interpreting the work of art and creates opportunities for the recipients to contribute, thereby evoking Umberto Eco's concept of an "open work" in several aspects.<sup>25</sup> Szegedy-Maszák also addressed the connections between the virtual space and the reality of 3D sculptures in other Internet-based works created during the period, including the works *Demedusator* (1998) and *Promenade* (1998/2002).

In addition to the aforementioned trends (with works reflecting on the accessibility of the network, the duality of the physical and virtual space, and the interactive nature of the online environment), many artists who had previously worked with traditional media (and who did so later in many cases) were primarily concerned with experimenting with the new tools of the Internet milieu. The 1996 web adaptation of Szilvia Seres's 1995 video work *Culture is a Commodity* examined the role of the market as a novel factor in the post-transitional period, with the online interface providing an opportunity to navigate between the various statements made by the interviewees. In this way, the framework of interpretation was expanded, and interviewees' opinions were

26 [http://www.c3.hu/collection/common\\_name/](http://www.c3.hu/collection/common_name/)

27 [https://web.archive.org/web/19991008144627/http://www.c3.hu/~rub/nok/Vecsei\\_Julia\\_link\\_gyujtemeny.htm](https://web.archive.org/web/19991008144627/http://www.c3.hu/~rub/nok/Vecsei_Julia_link_gyujtemeny.htm)

28 <https://web.archive.org/web/20000523165416/http://www.c3.hu/InterMedia/ig/ahajni/index.html>

29 <https://web.archive.org/web/20030809231333/http://intermedia.c3.hu/~zicsb/fibo.html>

30 <http://www.c3.hu/~iput/>

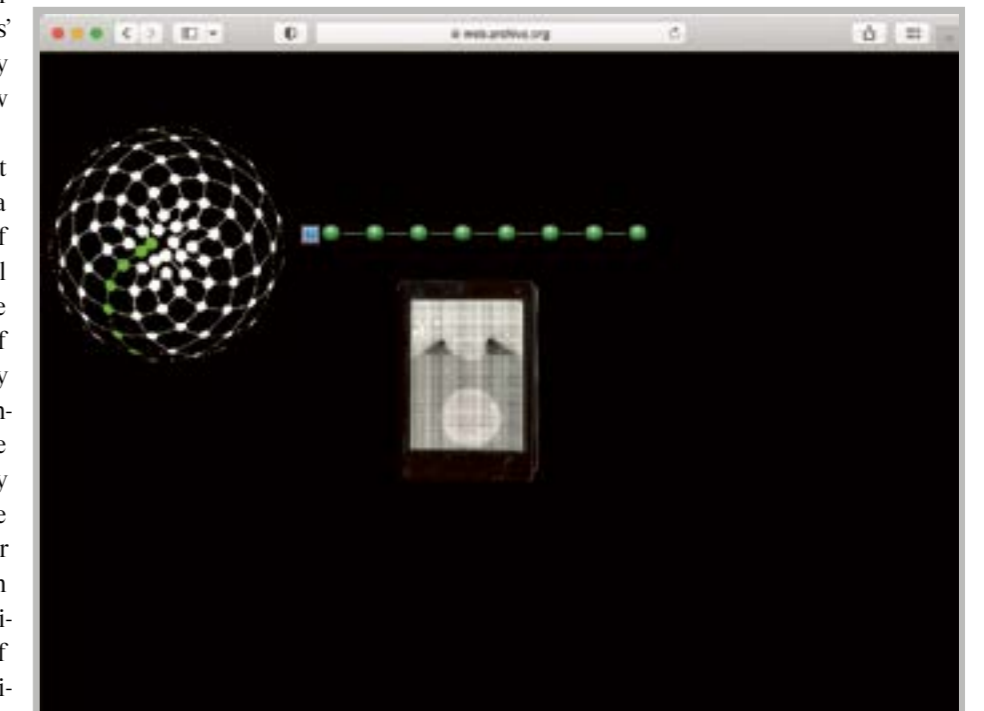
31 <http://www.c3.hu/~iput/index2.html>

placed in a new context. Zsolt Veress and Csaba Nemes further developed their renaming project on the Internet, publishing works on authorship in a hypermedia system.<sup>26</sup> Under the auspices of the 1997 exhibition *Internet Galaxy*, Júlia Vecsei built an online archive of female artists.<sup>27</sup> Meanwhile, Hajnal Németh examined the possibility of binary coding in the digital environment, applying it to the text of the Ten Commandments appearing in the Old Testament.<sup>28</sup> For her part, Brigitta Zics organised her own works into a multidimensional virtual system, making use of a Fibonacci diagram to do so.<sup>29</sup> In 1999, Tamás Szentjóbó created the *IPUT/TNPU* website,<sup>30</sup> an interface presenting his projects arranged in a hypermedia structure. The main page of the website includes the motto "The web is the generator of coincidences".<sup>31</sup> These works are examples of artists' curiosity about the innovative technology; their primary aim was to explore the Internet milieu as a possible new forum for experimentalism.

The aforementioned cases clearly demonstrate that Hungarian artists' creative reflections on multimedia and the Internet in the 1990s were mostly the results of experiments undertaken in the spirit of technological optimism. Various institutions promoting digital culture in the early years were instrumental in the creation of works requiring technical background support. They included the Institute for Computer Science and Control, C<sup>3</sup> (which was created by the Soros Foundation), the Department of Intermedia of the Hungarian Academy of Fine Arts (which had strong connections with C<sup>3</sup> due to overlapping staff), Artpool Art Research Centre, or experimental organisations such as the Media Research Foundation. One should also note that those Hungarian artists who had international success in the field of digital art already enjoyed the support of foreign institutions in the 1990s. For instance, Ágnes Hegedüs and Tamás Waliczky undertook residencies at the Zentrum

für Kunst und Medien (ZKM) in Karlsruhe as early as 1992. Waliczky's first major international breakthrough came in 1989 when he won the Golden Nica Award at the Ars Electronica festival in Linz.

The initial enthusiasm about the creative possibilities posed by the Internet was dented around 2000. The circle of supporters seemed to dissolve, in consequence of the restructuring of contemporary art institutions in Hungary and a radical reduction in central and local government funding for cultural organisations. A further blow was dealt by the withdrawal of the Soros Foundation's cultural aid programme. Concurrently, however, interest in the Internet soared, with the rise of companies seeking business opportunities in the tech sector and the new digital market infrastructure. Instead of being a creative medium for visual artists, the Internet has increasingly become a forum for online self-representation and self-marketing. The multimedia experiments have given way to artists' blogs, portfolio pages, and websites. Changes in the institutional system and in the global market economy led – in part owing to a lack of critical reflection on these changes – to a decline in the optimism that had surrounded multimedia in the 1990s. These developments heralded the end of the decade of media art.



IMG\_050 Website of Brigitta Zics