Commercial, Hobbyist, and in-between: Understanding the DAI Personal Computer associative Game Library

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INTRODUCTION

This paper aims to understand how the ecosystem of video games published in the 1980s on the Belgian machine "DAI Personal Computer" should be understood (DAI stands for the full name of the company "Data Applications International"[1]). To do so, I will expose the general history of the machine, and how it was supported mainly by amateurs' clubs. I will present their magazines' content to grasp how the computer was used creatively. Then I will illustrate the issues raised by this ecosystem through significant cases of video games. As a result, I will propose to formalize the notion of "associative video game" to be compared with the indie movement in North America or doujin games in Japan. This presentation is part of a larger, collective, long-term research project that seeks to study the history of the DAI, crossing perspectives from platform studies, media archaeology, and oral history[2].

A FORGOTTEN COMPUTER

At the beginning of the 1980s, the DAI Personal Computer was presented as "the first general-purpose computer"[3] (according to an advertising brochure) and it was relatively high-end[4]. This computer was indeed used in diverse fields (architecture, education, light industry, graphics, etc.) and marketed in several Western European countries (including Belgium, Netherlands, Germany, France, Switzerland, and England – as can be seen from various advertisements in the specialized press). The machine targeted as much the companies and the industries (via a system of modular interface cards - "Real World Cards") as the enthusiasts (by insisting on its graphic and sound performances). However, few commercial structures invested in the DAI. In addition, it could only rely upon limited support from its manufacturer and did not achieve commercial success. Moreover, although the computer appeared in specialized magazines, it remained uncommon. These elements partly explain why it is absent from history books.

THE PIVOTAL ROLE OF CLUBS IN THE CIRCULATION OF VIDEO GAMES

The DAI users, left almost alone with their own devices, had to organize themselves. Generally, they chose to do so in the form of clubs backed by non-profit organizations[5].

These local clubs (e.g. in Liège, Bordeaux, or Utrecht[6]) took a proportionally striking place in the history and historiography of the machine at the time – in a way comparable to what can be usually observed in the *afterlife* of video game consoles – (Custodio 2020). The DAI was taken over by hobbyists ready to take out the soldering iron or program their software on a computer, as in other comparable technological contexts (Swalwell 2021). The clubs had several functions like organizing meetings, exchanging programs, or publishing magazines. In these publications, preserved by the said amateurs, one could find tutorials, debates, exchange of services, electronic board diagrams to be reproduced at home, and video games.

We find classic trends like arcade or adventure games in this game library. But beyond the content of these games, their exploitation is of great interest. The clubs oversaw the distribution of games (by mail), their publication (evaluating and selecting games), and their promotion (in the pages of the magazine). They kept a small part of the financial gains. These games could be distributed and published in several ways, and I will illustrate these different possibilities with four cases.

First, *Phoenix* (Janin 1984) was made by a user and distributed individually on cassette. It circulated through clubs and their magazines. It was inspired by the shoot 'em up released in 1980 (Taito), and so it is part of the habit of the time to replicate popular games. Next, I will report the existence of twelve "game collections" distributed by the organization Dainamic Software. It belongs to what I will call "bulk games" – a series of games distributed on the same cassette, the future player only knowing the evocative titles of the games they could play. For instance, the *4th game collection* (distributed by Dainamic, authors and date unknown) promises to let you play *Football*, *The Car*, *Break-out*, *Gompy*, and *Space invaders*. In third place will come *Le pigeon agile* (F.G. 1984), an original game distributed in the form of a written listing in BASIC (as pages of computer code to be retyped on one's machine), firstly in the French specialized magazine *Tilt*, then rebroadcasted by Dainamic with some significant differences. I will then underline the difference in status between games in the form of listings and those on other media. Finally, with *Puzzly* (Bernard 1984), I will show that even in the case of a commercial game made by a professional studio (Dialog Software), the DAI's ecosystem put the clubs in a central position to advertise these products. During the presentation, I will analyze the way games circulated and how authors or editors construct and address their audience in their discourses within the games, and their paratext (Consalvo 2007, Švelch 2020).

Relying on these analyses, I will investigate which general category would be most appropriate for the DAI's abundant but underground library. The amateur/professional distinction does not seem sufficient here: games created by amateurs can reach the level of commercial productions – especially at the time. Is it, then, an "independent" scene? This qualifier had no meaning in the early 1980s: the industrial sector was indeed only emerging in Europe. The high level of formalization of the clubs, notably through legal structures, makes it difficult to frame their activity as "hobbyism" or "homebrewing". For these reasons, I will propose to discuss the potential of a new category: the associative video game. This notion refers to games made alone or in teams, distributed through clubs, intended to be played by peers, and designed as a work of a peer. It is neither the hobbyist acting in their own corner, nor the employee of a commercial structure targeting an audience, but a semi-formal in-between. This category could also help to understand the dynamics of video game production on other platforms in the early 1980s.

CONCLUSION

In conclusion, I would like to discuss two consequences linked to the establishment of this categorization. Firstly, this research calls for official structures in charge of

archiving and curating video games to consider this intermediate category. Secondly, the notion of associative video game can be seen in the broader West European cultural context, in relation with the North American indie movement (Vanderhoef 2016) and Japanese doujin games (Fiadotau 2017, Helland 2018, Picard 2013).

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ENDNOTES

[1] Data Applications International went bankrupt in 1982 and the DAI was then marketed by Indata, a subsidiary of Prodata.

[2] This research can be followed on our scientific blog "DAI-ving into the Past: Unearthing a Forgotten Computer", access on: dai.hypotheses.org

[3] "Le Premier Ordinateur de Bureau Tous Usages" in French.

[4] The DAI system was based on an 8-bit processor (intel 8080a) and offered 48k RAM of user memory. It benefited from a fast "semi-compiled" BASIC execution, eight graphic modes going up to display 16 colors in a resolution of 512 x 244 pixels, and a sound oscillator via 4 independent channels (including one of white noise). However, its video memory management system was slower than its competitors since it required 2 bytes to store 8 pixels. It was therefore relatively slow in terms of animation. The early 1980s evolved very rapidly in terms of technical capabilities, and these features were much more impressive in 1980 than in 1985.

[5] When the activity of the clubs dedicated to DAI declined, around 1987, some of the members participated in the foundation of new associations focusing on another machines (Commodore, Amiga, PC, etc.).

[6] Exchanges between French-, Dutch- and German-speaking clubs took place through correspondence in English, joint bi- or trilingual publications, and direct translations, e.g. from German to French.