RetroMagazine *World*

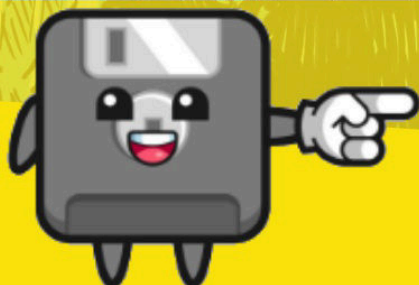*future days are back*

ZETA WING II

COMMODORE 64

INTERVIEW WITH
TOMOHIRO NISHIKADO

HARDWARE
VECTREX

**PROGRAMMING: Another SUSI? Well yes! (C64 for beginners) -
MSX Optimization: Optimizing a game in Basic Part 3
RETROHISTORY: I'm Boomer and retrogamer!
Talk to the Biker - We talk about Ball and Chain for Commodore 64
Nintendo WII: the (UN)protections -
... columns, interviews, reviews and much more!**

There is still so much to do in Italy!

Unfortunately the title of this editorial is not about retrocomputing. In fact, at the time I am writing, television and major Italian newspapers are reporting the news of the flooding in Emilia Romagna and Marche. My thoughts and those of the RMW staff can only be with the people who have lost everything, even their lives, because of this tragedy... Natural disasters cannot be predicted by definition, but surely careful prevention work and land preparation would help to limit their consequences. In Italy there is a lot of talk, especially when things have already happened, but most of the times actions never follow words... Let us hope that what happened in these regions will serve as a lesson and a warning for the future and that, at least this time, proclamations will be followed by concrete solutions!

To return to topics more in line with our magazine, you may have noticed that this issue has come a bit later than usual. In fact, as anticipated in the editorial of the previous issue, we wanted to devote some time and energy to enriching our website:
http://www.retromagazine.net

You will find a fair number of articles, especially video game reviews, directly accessible from the site. This was something we had been planning to do for quite some time, and we finally found a way to do it in a relatively simple way.

To stay on topic, we also decided to increase our collaboration with DumpClub 64. The listings posted on RetroLiPS regarding the recovery of the Best of Personal Computer World - Software for the Commodore 64 are a prime example.
Given the great work that the DumpClub guys are doing, it was the least we could do! I personally found a couple of programs extremely interesting: Solar and Balloon Fun. I had great fun deriving code from them and, as far as Solar is concerned, updating its data to 2023 (see Solar 2023).

As you can see, there is no shortage of things to do and contextually no shortage of fun. It may seem strange, but there are those who, like us, enjoy retrieving news, games, programs, listings and making them available to all. After all, what could be more satisfying than putting one's abilities at the service of others?

Now it's time for me to wish you a good read. And to our flooded friends a big hug and a wish that everything will be resolved as soon as possible and in the best way. We all are with you!

Francesco Fiorentini

People involved in the preparation of this issue of RetroMagazine World (in no particular order):

- Dr. Andrea Q.
- Carlo N. Del Mar Pirazzini
- Daniele Brahimi
- Francesco Fiorentini
- Leonardo Miliani
- Roberto Del Mar Pirazzini
- Ingrid Poggiali
- Giampaolo Moraschi
- Giuseppe Rinella
- Eugenio Rapella
- Germán Gómez Herrera
- Takahiro Yoshioka
- Barbara "Morgana" Murgida
- Giorgio Balestrieri
- GianPaolo Mara
- Michele Ugolini
- Mic the Biker Novarina
- Gianluca Girelli
- Marco Pistorio
- Cover image:
  Giuseppe Mangini
- Cover layout:
  Carlo N. Del Mar Pirazzini

Nintendo WII - the (un)protections - part 1

by Dr. Andrea Q. - www.retrofixer.it
Youtube: https://www.youtube.com/channel/UCEw0CQ8LKyA9jVvWXkEwp4Q

Today we go back a little bit and talk about the "living room" successor to the GameCube, the Nintendo Wii console.

This gem was released in 2006 and was the best non-portable product in terms of absolute sales performance (+101 million units scattered around the world) for our beloved Japanese company that begins with N . Compared to its competitors at the time, XBOX 360 and PS3, it also consistently comes out on top in terms of millions of units sold.

In the planning stage, its initial name was "N5" which stands for "fifth home console produced by N" and then changed to that of "Revolution" (product code RVL-001); in fact, the console brings with it a very big video game revolution: the Wiimote controller with all its "milluple" accessories (various examples in the image):

item that has seriously REVOLUTIONALIZED the way people play games at home and takes advantage of both infrared pointing and Bluetooth connectivity.

In addition, the console features an SD slot and... of USB ports while maintaining backward compatibility with GameCube discs (at least until the release of the hardware revision chaiamta RVL-101 where some components were removed that made the console no longer backward compatible).

It is also the first Nintendo console to make use of WiFi for Internet connectivity and free access to the Wi-Fi Connection (WFC) service, a connection that could also connect to the DS and DSi handheld siblings that could even be used as controllers.

Get ready because, after a beginning that you will probably already be largely familiar with regarding proprietary records, there will be MUCH to enjoy.

PROTECTION SYSTEMS:
PROPRIETARY STANDARD FORMAT

Wii discs are 12-cm DVDs with capacities of 4.7 GBs (single layer) and 8.5 GBs (dual layer); they are called "WODs" which stands for "Wii Optical Discs" and were manufactured by Panasonic. In late 2006 there was an agreement between Nintendo and SNIC (Sonic Solutions) for a version of the console capable of reading even regular DVDs to be released in the following year but this project never saw the light of day. There are, as with the GameCube, some PC drives that can read these discs properly equipped with a specific Hitachi microcontroller (see list below):
LG GH20NS15
Optiarc DVD RW AD-7203A
PHILIPS DVD+RW SDVD8441 PA48 IDE (GC only)
GDR-3120L (inside some old xbox360)
HL-DT-STDVD-ROM GDR8082N0L03
HL-DT-STDVD-ROM GDR8082N0007
HL-DT-STDVD-ROM GDR8082N0010
HL-DT-STDVD-ROM GDR8082N0C07
HL-DT-STDVD-ROM GDR8082N0120

HL-DT-STDVD-ROM GDR8082N0106
HL-DT-STDVD-ROM GDR8161B0042
HL-DT-STDVD-ROM GDR8161B0043
HL-DT-STDVD-ROM GDR8161B0100
HL-DT-STDVD-ROM GDR8161B0102
HL-DT-STDVD-ROM GDR8162B0015
HL-DT-STDVD-ROM GDR8162B0018
HL-DT-STDVD-ROM GDR8163B0D20
HL-DT-STDVD-ROM GDR8163B0B26
HL-DT-STDVD-ROM GDR8163B0L23
HL-DT-STDVD-ROM GDR8164B0B07
HL-DT-STDVD-ROM GDR8164B0L06
HL-DT-STDVD-ROM GDR8164B0B10
HL-DT-STDVD-ROM GDRH10NB0B10
HL-DT-STDVD-ROM GDRH10NB0F03

STANDARD QUASI-DVD

As with the GameCube, the data on these discs are stored according to a standard very similar to that of DVDs but with some proprietary differences:

1 - the data section of these disks uses a scrambling method different from the standard described in the ECMA DVD Specifications document thus producing an "obfuscation" of the stored data;

2 - the Data Frame Layout is different from the standard one;

These 2 stratagems protect against "brutal" copying by ordinary users but with professional hardware it would still be possible to reproduce a 1:1 copy. Here is where the real "physical" protection of these extraordinary media comes in.

COPY PROTECTION BCA... OWNERSHIP

As with the GameCube, the Wii discs also have the Burst Cutting Area (BCA):
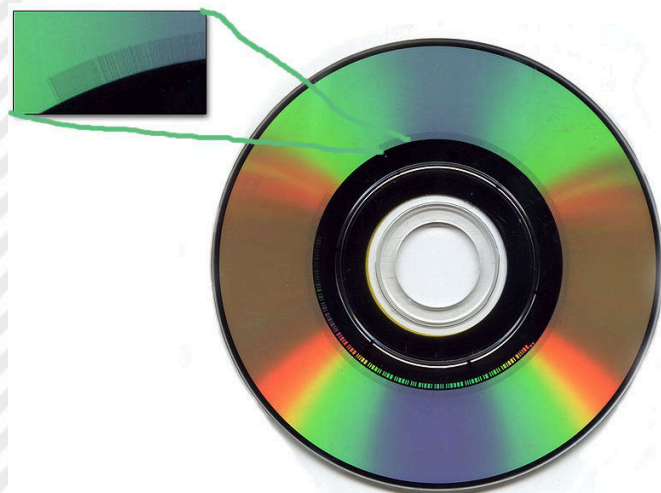
The BCA is that area of any disc, visible to the naked eye, between radius 22.3±0.4 mm and radius 23.5±0.5 mm that can optionally contain information engraved by dedicated hardware (a YAG laser) and readable by normal player lasers which, however, not all DVD players can access because they require dedicated circuitry. This area of 188 bytes in Wii discs contains 2 parts:

- an encrypted table of 124 bytes used in the protection (read a little more below)
- 64 bytes unencrypted

The data in the encrypted table is decrypted directly from the firmware of the optical drive and once in the clear we get something in my opinion mind-blowing: 6 precise values that, if analyzed in the right way, we discover represent the physical location in the disk of something... and if we go to poke around in those very locations what do we find? Just as many "cuts" written presumably by the same method as BCA but this time within the data area.

These small "cuts" are clearly visible if the disk is held in front of a strong source of light as you can see in the image below (taken from a Wii disk : it works the same way) with relative detail enlargement on one of these 6 "notches" (another one is visible in the upper left portion of the image not zoomed in):
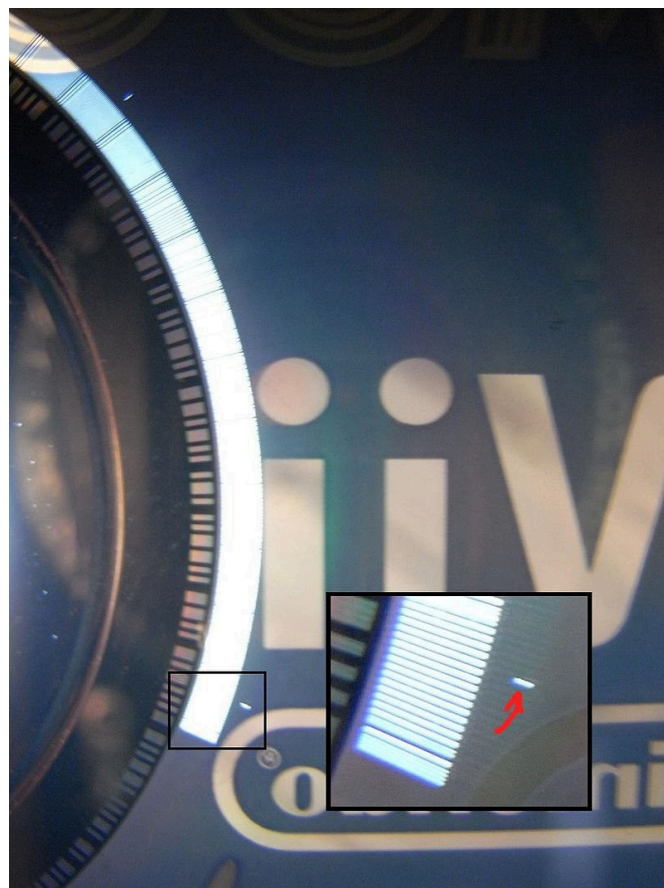
The system has been reversed by tmbinc, a very talented reverser who is able to produce this marvelous article where the minute details of protection are explained; I recall that this monster of prowess will be found in the ranks of the Twiizers team that was very impactful in the "scene" as far as Wii hacking is concerned.

REGION CHECK

Within the .ISO images of Wii games, the region is encoded in 2 offsets:

```
000000000 | 52 53 50 45 30 31 00 01   00 00 00 00 00 00 00 00 | RSPE01..........
000000010 | 00 00 00 00 00 00 00 00   5D 1C 9E A3 00 00 00 00 | ........].ﬁ....
000000020 | 53 50 4F 52 54 53 20 50   41 43 4B 20 66 6F 72 20 | SPORTS PACK for
000000030 | 52 45 56 4F 4C 55 54 49   4F 4E 00 00 00 00 00 00 | REVOLUTION......
000000040 | 00 00 00 00 00 00 00 00   00 00 00 00 00 00 00 00 | ...............
00004DFF0 | 00 00 00 00 00 00 00 00   00 00 00 00 00 00 00 00 | ...............
00004E000 | 00 00 00 01 00 00 00 00   00 00 00 00 00 00 00 00 | ...▮...........
00004E010 | 80 06 80 80 80 80 80 80   80 80 80 80 80 80 80 80 | ▮.▮▮▮▮▮▮▮▮▮▮▮▮▮
00004E020 | 00 00 00 00 00 00 00 00   00 00 00 00 00 00 00 00 | ...............
```

At offset 0x003 we have the game ID containing the region letter:

44 - D (GER)
45 - E (USA)
46 - F (FRA)
49 - I (ITA)
50 - P (PAL)
4A - J (JAP)
4B - K (KOR)
52 - R (RUS)
53 - S (SPA)
54 - T (TWN)
55 - U (AUS)

At offset 0x4E003 of the disk, on the other hand, the country code/region code is stored:

00 - JAP
01 - USA
02 - PAL
04 - KOR

ANTIMOD READER

The Wii player has undergone various modifications over the years. Depending on controller features and hardware revisions, it was or was not possible to install specific modchips to bypass certain protections (see below).

Here is the list of controller chips identified within the Wii optical drives:
Spoiler
GC2-D2A
GC2-DMS
GC2-D2B

GC2-D2C
GC2-D2C2
GC2-D2E
GC2-D3
GC2-D3-2
GC2-D4
GC2R-D2A

For more details and to understand the method of figuring out whether or not they are antimod read the dedicated section further down. To find out how likely your console has an antimod player go here (the site is based on the console serial number).

This article, due to the numerous and detailed information it contains, is very long and, for editorial needs, we decided to divide it into several installments. See you next time in issue 22 ENG of RetroMagazine World!

WARNING: Disclaimer

The information contained in this article is for informational purposes only. This documentation is not guaranteed to be error-free. If this information is used to modify your hardware, it is your responsibility to take all necessary emergency, backup, redundancy, and other measures to ensure its safe use. RetroMagazine World disclaims all liability for any damages caused by the use of the information in this article.

Vectrex

by Leonardo Miliani

The console we are about to encounter in the course of this article is a little different from all the other gaming machines that have ever appeared on the market: the Vectrex, as can be guessed from its name, is a console that operates with vector graphics, and it can also be said to be the only console of its kind that has ever appeared on the market. It also has another record: it is the first and only console put on the market to integrate a CRT screen. Unfortunately, its uniqueness was not appreciated by gamers at the time but has been reevaluated more recently, becoming a true cult object. But let's go step by step and start telling its story from its origins.

History

Everyone knows about NASA and the Apollo project that, at the turn of the 1960s and 1970s, put humans on the moon. Such a project is made up of many people working in a wide variety of fields: among them is a young engineer named Jay Smith who designs small electronic accessories. However, the Apollo project does not stay long, going to work for Mattel Toys, where he begins to work on electronic

Fig. 2 - Jay Smith

games and then, from these, on the video games that, at the end of the 1970s, are becoming popular with the general public. Because of this, he also decided to strike out on his own and founded a couple of development companies, Smith Engineering and Western Technologies. At his companies, Smith creates the Microvision, the first portable game console in history based on interchangeable cartridges, put on sale in 1979 by Milton Bradley (MB). Unlike home game consoles, the Microvision does not contain a CPU but this resides, with the program contained in its memory, directly in the cartridge itself.

During his contacts with MB to negotiate the distribution of the Microvision, Smith has several meetings with Gerry Karr, who has been entrusted with the refinement of the Microvision to produce the final version to MB's specifications. Smith appreciated Karr's talents and abilities and therefore decided to hire him at Smith Engineering, where together they began laying the groundwork for a new game console. At the time, vector graphics were all the rage in the arcades: Asteroids and Tempest were all the rage, thanks in part to the definition and visual rendering on offer, unattainable for the bitmap systems of the time. Smith and Karr then thought of a

Fig. 1: Vectrex and its controller
(author: Evan-Amos - source: Wikimedia Commons)

console capable of generating vector graphics and set as their first goal to make a device capable of reproducing the Asteroids game. Another goal is to make the console portable, trying to follow the path taken with the Microvision. While developing their idea, they send some collaborators to get a 1-inch (!!) cathode ray tube that someone saw in an electronics store and begin to develop the hardware around that tiny screen. That first prototype is named the "Mini-Arcade."

Development is progressing well, and Smith's men are able to pilot the cathode ray tube's electronic brush, although there is one problem: the screen is really too small, so it is decided to switch to a 5-inch screen (for comparison, the same screen used on the Osborne 1). In the meantime, the prototype is presented in mid-1980 to Kenner, a company that makes Star Wars products, seeking investment to pursue development of the Mini-Arcade. Kenner takes several months to make a decision on the matter but, in early 1981, responds negatively: they do not like the console, see no chance in it to establish itself in the market and thus prove profitable. Undeterred, Smith presents the Mini-Arcade to General Consumer Electronics (GCE), a company founded by Ed Krakauer, who previously oversaw the development of the Intellivision

Fig. 3 - Microvision (author: Evan-Amos - source: Wikimedia Commons)

at Mattel. Krakauer liked the console and decided to help develop it and then distribute it. Smith signs the contract in 1981 and with GCE revises the specifications: it is decided to make the console no longer a usable device in the hand but a "transportable" one, and thus to further increase its screen size.

This is also where Western Technologies comes in. At it there is already a group of engineers working on a console, but it is from a different company: it is the Atari 2600. The group is called the "Breaker Team" and, as the name suggests, is doing reverse engineering to figure out how the console talks to the cartridges so that, once the signals involved in communication are decoded, games of their own can be made and put on the market bypassing Atari's control. The group consisted of John Hall, Mark Indicator, and Paul Allen Newell.When the agreement with GCE was signed and development of the Mini Arcade began to enter the final part, i.e., hardware finalization, the Breaker group was diverted to the new console and the 3 began to develop games for it. Given the work carried out by the Breaker group, it is initially planned to use the 6502 CPU from which is derived the one used in the Atari 2600 but soon the engineers realize that this processor cannot handle the amount of computation required to handle the vector graphics of many figures on the screen so it is decided to adopt the Motorola 6809, another 8-bit CPU but one that is more performant than the one produced by MOS Technology. The characteristic vertical orientation of the screen is chosen for two reasons: to make it clear at once that the product is not a television set, since the latter have horizontally oriented screens, and to facilitate the conversion of arcade games, since yes these almost all have vertically oriented screens.

The console is unveiled at the CES in Chicago on June 7, 1982, where it receives excellent reviews from the trade press: many appreciate the high definition of its vector graphics as well as the ability to play it without using a home television set. The unit goes on sale in November 1982, at a price of $199, while game cartridges average about $30. The following year it will also arrive in parts of Europe and Japan.

Specifications
Initially conceived with a 6502 MOS inside it, a higher-performance Motorola 6809 operating at 1.6 MHz was soon adopted: compared to the former, this CPU offered

Fig. 4 - Interior view of the Vectrex: the side board contains the power management while the bottom board is the console motherboard (author: jesmar - source: Festival du Jeu Video)

features similar to those of 16-bit processors, such as multiplication in hardware, the presence of two separate stacks, the ability to perform 16-bit operations, a higher clock and more. All this comes at a cost, however: the 6809 costs 5/6 times a 6502 or a Z80, the two most popular 8-bit simultaneous processors at the time, affecting the final cost of the console. But the choice is necessary: the console was designed to handle vector graphics, and the CPU must calculate the various vertices of the vectors that make up a game element in real time as it moves across the screen, and this operation must be repeated for all moving objects, so the amount of computation increases exponentially as the number of figures on the screen increases. The system memory consists of 1 KB of RAM in which the data of the running game is saved and 8 KB of ROM containing both the "Minestorm" game built into the console (a clone of Asteroids) and the basic operating system including the on-screen drawing routines, which can also be used by the games. The latter are distributed on cartridges, each containing a ROM chip with a maximum capacity of 32 KB: the cartridges fit into a port on the side. The audio compartment is respectable: in fact, the unit mounts an AY-3-8912, used on many other arcade and console systems, which offers 3 separate channels, with the possibility of generating white noise

as well. Sound is reproduced by an internal speaker.

The screen is a 9x11-inch black-and-white monitor arranged vertically, an arrangement chosen, as mentioned, to make it easier to convert bar arcades, which also usually have vertical screens. Because the graphics are vector-based, the Vectrex's graphic detail is very high, higher than that of other consoles that use bitmap graphics instead, with resolutions generally no larger than 256 pixels on the largest side. The use of vector graphics also saves memory: on systems with bitmap graphics, the image is saved in memory with the various bits corresponding to individual pixels. This implies that 6 KB of RAM is needed to hold the information of a 256x192-pixel picture, not counting the additional memory needed to save the color information of individual dots as well as that needed for the character sprites displayed on the screen. Vector graphics, on the other hand, is based on the composition of a figure by drawing one or more lines, drawn from a starting point to a final one: to do this, it is enough to store the coordinates of these points in memory, and even a complex figure, composed perhaps of a dozen segments, needs only a couple of bytes for each vertex. The Vectrex system can also manage the thickness of the drawn line by varying the time the line is drawn: the shorter the time, the finer the line, and vice versa. To make the visual rendering of the console more impressive, the designers have made colored films to be applied to the screen that are distributed along with the game cartridges, a solution already adopted for the previous generation consoles.

The console consists of a single black plastic block. On the front, the console has a recess under the monitor

Fig. 5 - A game cartridge (author: Suze randall - source: wikimedia commons)
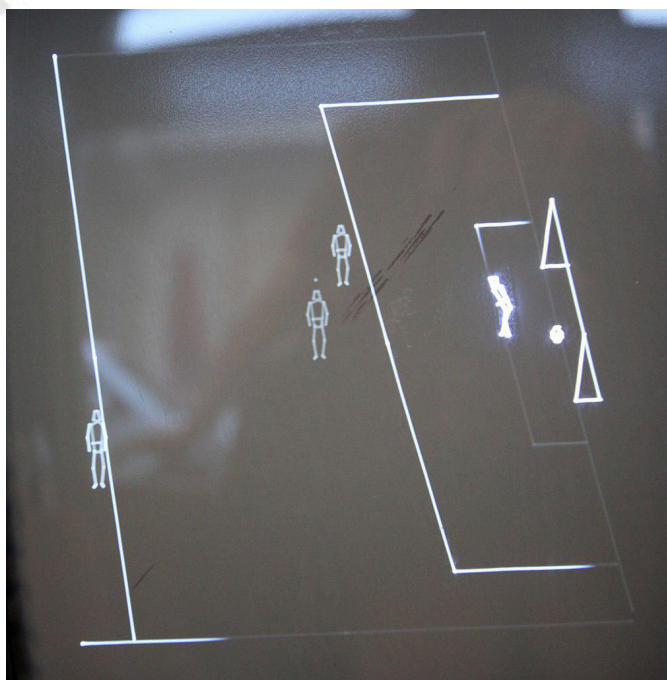
Fig. 6 - The Heads up soccer game: note the figures composed of different vectors and the different line thickness of some game elements(author: Florian Schaffer - source: Wikimedia Commons)

where the supplied controller is housed. This offers an analog joystick with 360° movement and 4 game buttons. In the recess, protected by the joystick, are the reset button, the power button that doubles as a volume control, and the socket for an additional joystick, for 2-player games, or for the optical pen, distributed by MB in the North American market only. At the rear is the screen brightness adjustment as well as, at the top, a recess like

a handle for carrying the console. The entire console electronics are housed inside the case and are divided over 2 boards: the one near the cathode ray tube contains the current transformers to supply low voltage power to the main board as well as high voltage to the cathode ray tube drive electronics. The main board contains the CPU, audio chip, RAM, ROM as well as a 6522 PIA used to handle communication with the Vectrex's input peripherals.

Games and accessories

A total of 28 official game cartridges were made during its marketing period, distributed under the GCE brand in the United States, MB in Canade and Europe, and Bandai in Japan. Some of these required the optical pen, as mentioned above distributed only in North America, or another accessory limited only to the latter market, namely special 3-D glasses called "3-D Imager." These are a viewer, to be clipped to the player's head, connected to the console and driven by the game itself. In the viewer there are 2 rotating discs that for 180° obscure the vision for the other 180° are composed of 3 segments of 60° each: each segment is transparent but red, green and blue in color. The eyes are occluded alternately: when the left eye is facing the opaque area of the disc, on the right eye is passing the area with the transparent part, and vice versa. By synchronizing the image on the screen with the discs, the speed of which is controlled by the software, the player has the illusion of seeing images at different

Fig. 7 - Game controller (author: Evan-Amos - source: Wikimedia Commons)

Fig. 8 - The 3D Imager Visor (author: jesmar - source: Wikimedia Commons)

distances, as if they were slightly raised from the surface of the screen or slightly into it. Only 3 games have used this device and as many the optical pen.

After MB's acquisition in early 1983, development began on a peripheral that, in initial plans, could turn the console into a full-fledged computer: the unit consisted of a keyboard with 65 keys, 16 KB of additional RAM and an integrated BASIC dialect. Unfortunately, the 1983 video game crisis limited the spread of the Vectrex, so development of this expansion was cancelled, as was an evolution of the Vectrex equipped with a color screen, this time due to technical problems and the high costs faced by developers.

Failure and failure
The console initially meets with moderate success: during the holidays it sells quite well, reaching 200/250,000 units, numbers to raise the attentions of MB, which decides to buy the GCE in early 1983 and push the console with magazine and TV advertisements, with a large investment of several million dollars. But despite its decent technical features, the console fails to establish itself as expected. Sales do not take off, also complicit in an event that affects the entire industry: the video game market in North America reaches collapse, in what is known as the 1983 crisis. In a fratricidal war to the death, console manufacturers introduce more and more games for their systems. Attracted by the easy profits, third-party developers also jump into the industry: because the supply is exorbitant, to try to keep sales at an acceptable level, consoles and games are rebated to the hilt, with the result that the cost of production is often no longer covered by the selling price. The larger ones manage to survive, despite losses, but the smaller ones sink. During the year only 600,000 Vectrexes are sold on American soil and about 200,000 in foreign markets, mainly Germany and Britain, because in Japan the console is literally snubbed: its importer, Bandai, takes it off sale after not even a couple of months on the market. To lift sales a bit, MB tries to tease potential buyers by first proposing a 25 percent price cut for the console and then introducing some peripherals to increase the Vectrex's appeal, a 3D viewer and an optical pen.

Even these innovations fail to budge sales, so much so that MB further lowers the price to about half of the $199 initially requested at the beginning of its marketing, in an attempt to sell in a market now saturated with video games: the Vectrex turns out to be a console with a price/

performance ratio and a totally uncompetitive game park. In early 1984, after making losses of more than $30 million, MB nearly goes bankrupt and announces the withdrawal of the console from the market and a halt to the development of new games. The losses are so great that the company goes into liquidation and, in order to survive, begins to dispose of inventories: the console, after not even a year and a half of life, is sold off for $49 while game cartridges are priced at about $10 each. After a few months, MB is purchased by Hasbro, which also permanently cancels after-market support of the Vectrex. It ends the era of a unique and original console that lasted commercially not even 18 months, a true record in the negative.

The failure can be attributed to several factors, the first of which lies in the technical choices made: using vector graphics required the use of a powerful and therefore also very expensive CPU, which was reflected in the final selling price, which is very high compared to what the machine offers. Because of this, the Vectrex could not hold a candle to the competition: for example, the Colecovision not only sold at a lower price but additionally offered color graphics and several very faithful conversions of classic arcade bar games. Although MB pushes, with its advertisements, that the Vectrex allows you to play games without "taking up" your home television set, its screen is certainly not the best: the 24-cm diagonal does not help you fully enjoy a video game break, and the black-and-white screen is now outdated stuff, from previous-generation consoles, certainly not from a modern, competitive gaming device.

If we then analyze the offering of titles with that of other devices, the comparison is merciless: the Atari 2600, despite its old age and technical limitations, still offers hundreds of games available for every taste and type of gamer. The low popularity of the Vectrex has led developers to completely snub the system, for which there are only 28 games produced exclusively by GCE, and of these "Mine Storm" is integrated into the system itself. In short, a software park with certainly some interesting conversions, thanks to vector graphics, but certainly not up to the standard of what is offered for other devices.

Conclusions
A console that was snubbed at the time and quickly fell into oblivion, the Vectrex has been reevaluated in more
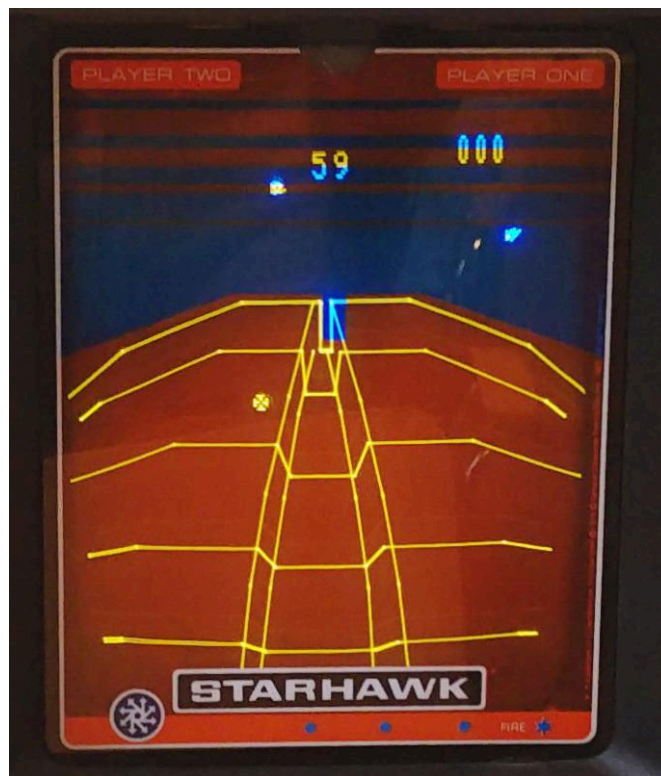
Fig. 9 - A film applied to the screen to endow the game Starhawk with color (author: Wolfgang Stief - source: Wikimedia Commons)

recent times: since the turn of the last century it has experienced renewed interest from enthusiasts and independent developers, so much so that in recent years there have been dozens and dozens of titles developed for the console. A sign that the Vectrex might have had better luck if it had been commercially supported by its parent company and if game makers had been allowed access to the machine's technical specifications. The reception by the press and industry insiders had in fact been highly positive, a sign that the interest was there: but the wave of this interest was not riding. Too bad, for a console finally different from the others that did not reap its due.

Fighting in the sky...
Interview with Tomohiro Nishikado

by Takahiro Yoshioka – translation Carlo Nithaiah Del Mar Pirazzini

As the creator of the revolutionary Space Invaders, Tomohiro Nishikado could rightly be called the father of Japanese video games. This interview tells us about Nishikado's early years at Taito as an engineer developing sophisticated (for their time) electromechanical games before getting into the details and challenges of designing Space Invaders. As a first-hand account of those early years of gaming, it is a valuable historical document.

I would like to start by asking some general questions about your early days. What kind of company was Taito Boueki then, at the time you joined them?

Nishikado: Jukeboxes were their main business, but they had a small subsidiary company that did game development. They made what we now call "electro-mechanical" games. But almost all of them were copies of American games--not literal copies in the strict sense, but in those days they were creating their own versions of whatever was popular abroad. No one was making original titles yet.

Until then you worked as a sound engineer. What made you switch gears and join Taito Boueki (Taito Trading Company)?

Nishikado: After I quit my job, I lazed around for about a month. I had this acquaintance whom I sometimes met at a nearby train station. He was my senior colleague from my old company. One day I asked him what he was up to lately, and he told me that he was now working at a company called Taito, which made games. I knew about those game machines-I had seen them installed on the top floor of department stores and malls when I was a kid. They were simple driving games that used a track for the path and you had to drive your car, trying not to go off the track.
This job sounded interesting, so I asked him for more and he ended up inviting me to work there. He told me that they really needed engineers. I had actually just accepted another offer at a communications company, so I wasn't sure what to do. But my friend insisted that they needed help, so I went for an interview and ended up accepting Taito's offer.

**What was the first game you worked on at Taito?**

Nishikado: The first work I did was on a game we imported from America, a game with firearms called "Ghost Gun." A very simple title with light guns.

What kind of electromechanical games have you made with that technology?

Nishikado: The game market in Japan then was all imported from abroad, so I felt the need to create something with more individuality. I made different styles of games. Two years after I joined Taito, I made an aerial shooter game called Sky Fighter . It was a great success. It used an acrylic dome and inside that dome flew a model airplane that you could shoot at and it would explode if you hit it. I know it doesn't seem like a big deal when I explain it now, but at the time it was a revolutionary game. The planes really seemed to float in mid-air, and I didn't even use ropes or wires! Of the electromechanical games of the time, I personally think it was the most well done.

Were the planes not connected by wires or cords? How did you make them look like they were flying then?

Nishikado: Heh, I used mirrors! Under the playing field, where the players could not see, I placed model airplanes, then used angled mirrors to reflect them on the dome. For the sliding background, I painted images of the sky on a film canister, which I then rotated on a drum. This
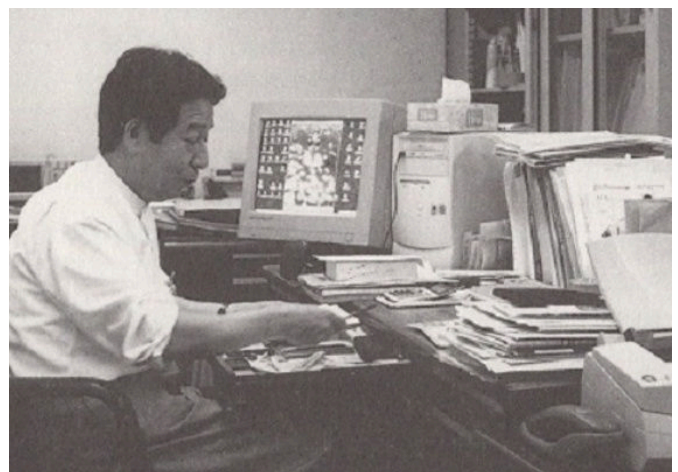
Fig. 1 - Stock photo of Mr. Nishikado in the early 2000s
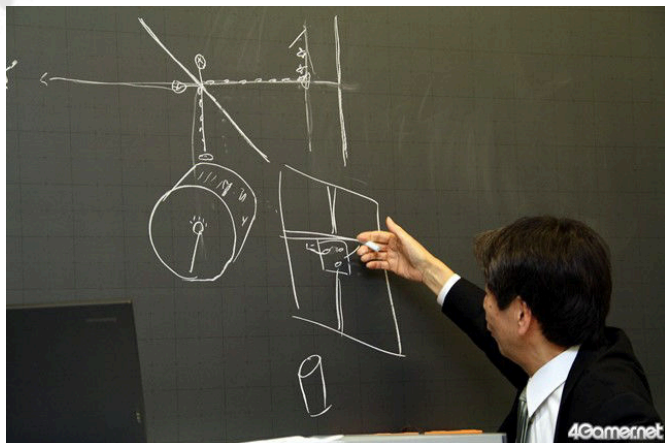
Fig. 2 - Nishikado explains how Sky Fighter works - (Thanks to 4gamer.net)

was also reflected in the mirror and the sky and clouds looked real. Finally, the trajectories of the bullets were also reflected in a mirror, so in total I used three different mirrors/drums.

When did they start making video games?
Nishikado: In 1972, Atari released Pong, which was imported into Japan by both Sega and Taito. At that time, when our staff saw this new "video game," most of us did not think it would do very well. The reason was that the price was too high. A single machine cost between 600,000 and 800,000 yen (about 6000-8000 USD). And to us it looked like just a TV inside a box, with a dial on the front--we thought it wouldn't sell! So we only bought one.
We installed the unit we bought in a store to take it for a test drive and, to our amazement, it was very popular. Everyone's opinion changed overnight: "The next era belongs to video games!" Eventually management started thinking that we could create our own games at Taito as well. To do that, they would need someone who knew electrical circuits, and I was the only person at Taito with that knowledge, naturally, so, the job was given to me.

And printed circuit boards were still quite rare at that time.
Nishikado: Yes. Pong was made using integrated circuits connected together as relays. But the thing is that integrated circuits had not yet arrived in Japan, so looking at Pong, I didn't immediately understand how it was put together. It was a great challenge to take it apart and analyze it. I had no choice but to pull out a catalog of chip parts and, pointing my flashlight at the board, try to identify which chips were connected to which. After 3 or 4 months of this work, I was able to create a blueprint of the board. But somewhere along the line I had made a mistake, which I had to spend even more time analyzing

and correcting! In the end it took more than six months. Fortunately, I enjoyed doing this kind of work and worked on it day and night nonstop.

So just to figure out how the ball moved in Pong, and how the paddle moved, it took you six months?
Nishikado: That's right. However, because I had spent all this time analyzing and understanding it, I didn't want to just make a direct copy of Pong. Call it pride, but I wanted to improve it a little bit. The game I made there was "Soccer." I added another paddle and added a soccer goal to the screen. It was simple, but it had a good sense of speed and was quite fun. At that time, I was probably the only person in Japan who had discovered Pong and made an original game based on it. Sega had imported Pong, but did not create its own game.

Has soccer been installed in game centers?
Nishikado: Yes. It was the first video game produced in Japan. Later, we also released a 4-player version of Pong called Derby Cup.

Were these games exported from Japan?
Nishikado: They were! The first to be exported was Speed Race , in 1974. Midway, an American company, bought it. It is what I personally think is the most well done. It is the origin of driving video games. The screen is still monochrome, but we were able to use more realistic sprites for the car instead of just abstract squares and circles. At that time, Atari was the leading game maker in America and had released its own driving game called Gran Trak 10 , but it was much more complicated. Speed Race had a better sense of speed and I think its simplicity made it more fun.

In the course of Taito's export business, have you ever visited America yourself?
Nishikado: Yes, and I think that was the first time I visited America. We exhibited our games at the AMOA Show, which at the time was the largest game show in the world. After seeing what the show had to offer, I remember thinking that our Taito games were made better!

America was the birthplace of video games, wasn't it? Have you visited Atari or other companies?
Nishikado: Ah, yes, I met with the president of Atari. He asked me, "Why don't you come work for us at Atari?" And when I jokingly asked the vice president, who was

sitting there, "How much is the salary?" I found out that it was extremely good! It was five or six times what Taito was paying me. If I hadn't been married, I honestly might have agreed. (laughs)

Right around that time, Atari released Breakout . It had very simple graphics but it was fun. While I was trying to do something with sprites and more impressive graphics, the designers of Breakout had approached things from a completely different perspective. It made me realize that graphics were not the only important thing in a computer game. One of Taito's managers said almost jokingly, "What the hell happened! America beat us! But it turned out to be true.

This was about the time when video games started using microprocessors, if I remember correctly.

Nishikado: Yes. At Atari, they pioneered the use of computers to make video games. Taito's game, Western Gun, was our big hit in the American market, but Midway paid the license fee and revised the game to use a microprocessor. As a game, I think the Taito version was more fun, but because the Midway version used a computer, the movement was much smoother and the game looked better. As an engineer, that was the moment I realized that Taito needed to start using microprocessors from here on out. And the first game I made using a microprocessor was Space Invaders.

You mentioned Breakout as an inspiration, but what aspects of Breakout did you find interesting?

Nishikado: I liked how you couldn't go to the next stage until you had destroyed every block. Previous games didn't have that "all clear" concept, you see. I also liked the way the game got harder as it went on-the last block was really hard to hit. And I liked how the speed of the ball increased. That gameplay was really good. I wanted to try to create a game with those elements, but with better graphics.

There was also a science fiction boom at the time: the Star Wars movie had just been released in America, and the space warship Yamato was being shown in Japanese theaters. Is that where you got the inspiration for the enemy alien invaders?

Nishikado: People often say there is a Star Wars influence in Space Invaders, but to be honest, they are not really related. Of course it was famous in Japan, and there was also a novel. I also loved movies set in space. However,

Fig. 3 - A typical "Invaders Cafe" during the Invaders Boom of 1978

initially I wanted to use tanks for the enemies. But the thing about tanks is that if their guns are not facing forward, I don't think they look good. In the game I wanted to make, the enemies were moving horizontally (side to side), which meant the cannons would have to be tilted 45 degrees to the side. So tanks were to be ruled out.

Well, I thought, if I can't make tanks, I'll make planes! But the current technology was not capable of smooth rendering of sprite animation. With this limitation, I thought the aliens would be a good alternative, since they would not look strange if their movements were all jerky and rough, nor would they look strange when they would suddenly advance in a line toward you. And at that time there were many depictions of Martians looking like octopi.

Yes, that kind of octopus/calamari-like alien design comes more from HG Wells' War of the Worlds than from Star Wars.

Nishikado: Even the name "Space Invaders" was not created by me, actually. The title I originally had was "Space Monster." However, after the game was completed, the management told me that they wanted to change it to "Invader." I don't really understand why, but there was nothing I could do about it. "MONSTER" and "INVADER" have the same number of letters, so it was not difficult to change in programming, but then from abroad we were asked to make it plural, "INVADERS." Adding that extra letter meant changing the programming, and it was a real pain.

I imagine that the development of Space Invaders must have taken a long time, since it was your first time creating a computer game in this way.

Nishikado: The actual programming of the game was surprisingly quick, taking only 3-4 months to be finished.

But the previous work, of setting up the programming/development environment, took about 6 months. It was the first game developed in Japan with a microprocessor. There were no "personal computers" or anything else at that time, so I had to create the entire development environment from scratch. There were workstations and equipment in America, but they cost tens of thousands of dollars, so we couldn't buy them.... I bought the LSI chips myself, then soldered them onto a board and programmed them directly in assembly. Looking at the conversion charts for hexadecimal, I programmed everything slowly, memorizing the hex conversions as I went along.

Did you do the programming, graphics and sound of Space Invaders yourself?

Nishikado: Yes. The ability to handle numbers in a more sophisticated way-increasing the speed of invaders or being able to shoot down individual invaders-was all due to the microprocessor. You can't do things like that in games without a computer.

I heard that when Space Invaders was first completed, the response to Taito was initially rather lukewarm.

Nishikado: Yes. Those who were involved in the development (including the management) thought it was good. Some staff members would say, "Excuse me, I have to go to the bathroom," and they would sneak off and play Space Invaders, becoming so absorbed in it that they never came back-that made me really happy. However, others at Taito didn't like it, complaining that they couldn't make
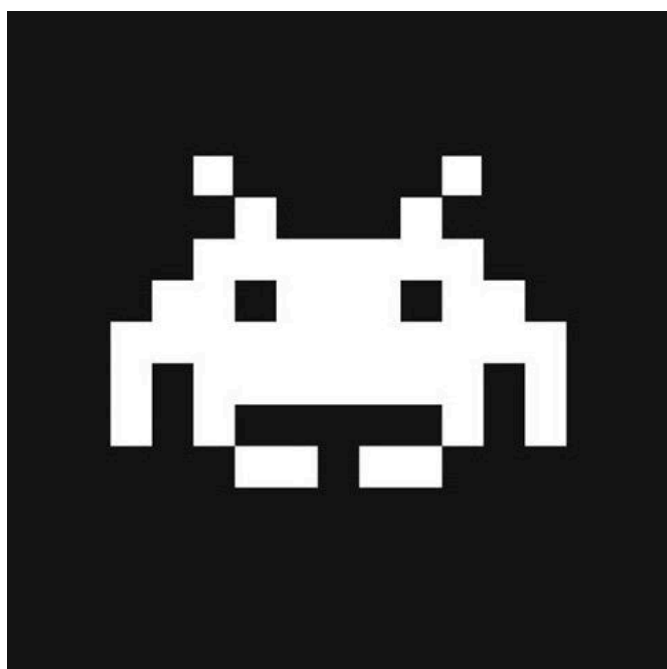
Fig. 4 - A classic alien by Space Invaders

it to the end. Later we had a private screening of the game for the play center workers and their reception was also unfavorable. They said it was too difficult.

In fact, for the time, it was a very difficult game; the invaders would aim and shoot directly at the player, and if one of them crossed the line into your territory, the game would automatically end. With the older games, even if you were bad, you would still be able to play for about 3 minutes. But in Space Invaders, if you let enemies shoot at you, you might not even last 5 seconds. So it was not well received, no. We showed it to the general public at an arcade show later that year, but we had another game called Blue Shark (a Midway import), and they showed it as our main game, with Space Invaders reduced to a supporting role.

How long did it take for the "invader boom" to begin?

Nishikado: Taito's management did not think the game was very good, so they did not expect much from it. However, a month or two after it was installed in game centers, Taito's own president remarked, "That 'Space Invaders' game is becoming really popular! Everyone is talking about it." After that, the real madness began.

And with the boom came all those unique strategies for players, such as the Nagoya-Uchi technique ("Nagoya Shot or "Nagoya Attack").

Nishikado: Until the Nagoya Attack was discovered by a player, no one at Taito had ever thought of such a technique. The fact that the invaders' shots didn't hurt you at the bottom of the screen like that-that was a programming bug. One day, I saw a really good player put together high scores around 150k. When I looked closely at what he was doing, I saw that the last row of shots from the invaders seemed to go right through his ship. It's because I programmed it so that their shots came out just a little bit in front of the invaders.

I also wanted to randomize when the UFOs appeared. But it seemed that using random numbers would be a hassle, so I abandoned the idea and made the UFOs appear based on the number of times the player shot. Unfortunately, the players discovered this rule very quickly. I was surprised how quickly they figured it out!

There was also the Rainbow technique, in which players leave only the last row of invaders alive.

Nishikado: Despite all the testing we did, I never imagined that players would leave only the first row of invaders

Fig. 5 - Tomohiro Nishikado side by side with his game: Space Invaders

alive, so I didn't check. If you play normally, you start by shooting the nearby and larger invaders first, then proceed down the line. It's interesting: the rainbow technique is one of those game phenomena born out of what you didn't plan or anticipate.

Yes, those oversights generated an interesting phenomenon of rumors and secret techniques exchanged among players. Were all those strategies ever collected somewhere in a book or anything?
Nishikado: Hmm... good question. I'm not sure.

Well, there was that "Game Center Arashi" comic strip about Space Invaders that introduced the audience to the Nagoya Shot. By the way, how popular was Space Invaders in the United States?
Nishikado: Very popular, I think it may have been even more popular in America than in Japan. It was also carried by Atari.

I know there was a big copyright problem with both clones and imitations.
Nishikado: Nintendo also made one, now that you mention it. Although theirs was not an exact copy.

Sega also created an imitation of Space Invaders.
Nishikado: I think I saw it somewhere. There were three varieties I think?

Eventually there was a lawsuit against them, and that lawsuit set a precedent in the courts regarding copyright recognition for games. What did you do after Space Invaders?
Nishikado: I made Space Invaders II in 1979. However, I don't have many good memories of the later period. Namco released Galaxian later in 1979, and that game featured color sprites, but Taito had accumulated all these Space Invaders boards (which they could only do in black and white), and they wanted me to make another game with them. I made Balloon Bomber in 1980, and some other games, with that title. They had good gameplay, but graphically they looked very primitive. It was a sad sight compared to the colorful screens of Galaxian.

I guess that's the downside of having a game that sells too well.
Nishikado: During that time they also hired a lot of new people at Taito, and I was promoted to an official managerial position, which made it harder for me to create something really new. I worked in games for about 2 more years, but

Fig. 6 - Kyuukyoku Harikiri Stadium 2 on Super Famicom

after that I got tired of it. I moved to another division and developed other projects.

I made a gaming robot that played guitar and worked on a card system that allowed gaming centers to use prepaid cards. This was before phone cards, of course. The idea was a little ahead of its time, so it was never completed. I also worked on the karaoke arrangements. I bought an Electone sound package and made electronic versions of songs for karaoke.

Wow, you even did karaoke! Since you have that audio background, it makes sense that many of your projects were about music.
Nishikado: Nowadays karaoke is all done through the Internet, but back then it was the era of the acoustic coupler . We still tried to find a way to transmit data for karaoke. We conducted many different tests.
Also, before the release of the Famicom, I was working on designing a home video game console. I was using an American microchip, the same chip as the Sega SC-3000, actually. Unfortunately, the project was abandoned.

Didn't you play any other games after that at Taito?
Nishikado: In 1989 I made some games for the Super Famicom. At that time I was section chief, so I didn't do any actual programming or other work. I made games for the Jinsei Gekijou and Kyuukyoku Harikiri Stadium series. I worked as far as the Playstation. Because I was a producer, though, I didn't do any of the actual work, but as time went on I started to feel more and more like I wanted to make games on my own again. So I left Taito.

When did you start your new development company, Dreams?
Nishikado: 1997. I planned everything by myself and introduced my new company to Taito. Pop'n Pop is a game

I made in which I programmed and planned everything by myself. It took about two years. I'm at the limit of what I can do now, so we hired some programmers and have a staff of 15 people in total. Unfortunately, as a result, I've gone back to doing more managerial work and I haven't been able to implement the projects as well as I would have liked. And I also have to manage the financial part of the company, which is even more difficult! But the advantage of having my own company is having complete control over the final product, and I feel a renewed vigor for this work.

By the way, how do you feel about video games today?
Nishikado: There are a lot of avid gamers and game enthusiasts today, and it seems that games should be made for that audience. Personally, I love STGs, but I can't get into recent STGs. I can't handle them, so I just watch. (laughs) Lately I've been asked about retro games. I think in many new games you find the basic idea in an older game. Many games have their roots in Breakout, for example.

Yes, and even a relatively old point-eating game like Pac-Man has its roots in Sega's 1979 game Head On.
Nishikado: We're slowly losing those origins as time goes on, so I think researching the history of those old games is really fun. I think there are still new ideas and new directions waiting to be found there!

Interview with Giovanni Galli, the creator of Streben

by Giorgio Balestrieri

Role-playing games have now entered the public imagination, thanks in part to a series of films and television products that have allowed the general public not only to discover them, but also to understand, or at least intuit, how they work and what kind of entertainment they can offer. There are many video games dedicated to this genre, but here we will deal with the traditional ones, to be played with paper, pen and character miniatures.

We will do this with the help of Giovanni Galli, a member of the editorial staff from the first hour, creator of Streben, an all-Italian role-playing game born from Giovanni's passion for this ludic genre. With him, therefore, we will talk not only about his project but also discuss role-playing games in general, from their birth to today's developments.

I confess that the writer has never played these kinds of games. As a boy (about 40 years ago), the only known representative of the genre was Dungeons & Dragons but I never managed to start a game, intimidated by the complexity of the instructions and the length of the preparatory phase. The first question for John therefore comes naturally.

Streben what kind of game is it? As complex as the ones I remember?

First, it should be specified that Streben represents two distinct products: a board game and a role-playing game. The RPG definitely resembles Dungeons & Dragons as mechanics, however, you create the character sheet in 5 minutes and immediately start playing. I wanted it exactly like that, easy to learn and "set up," so that even those who are not experts in GdR or do not have the time to study voluminous manuals can start playing as quickly as possible. In Streben role-playing game you have everything in a page and a half; learning the instructions, preparing the adventure and getting into the game is very fast.

I know you have been into RPGs for a very long time, and I imagine many gamers have their own game in the drawer. When did the decision to take it out and make it real come to you?

As is often the case, it was a combination of events. I wanted to make my game in collaboration with a friend of mine, Nicolò Rossi, a medievalist historian, and so together we worked out a scenario considering the year 1220 A.D., a Middle Ages that were already advanced but where firearms did not yet exist, in which history as we know it changes course and develops according to a script we devised. We hypothesized that an unexpected event resulted in the appearance of monsters throughout Europe, borrowed from the folk traditions of the time, and the birth of magic. We then wondered how the populations of the 1220s would have reacted to this: in Italy for example, given the fragmentation of kingdoms and populations, they would hardly have been able to fend off threats effectively while in Germany, where the empire was somewhat more solid, they would have been able to "hold their own." At this point all that was left was to divide our tasks and develop the idea: I was in charge of drafting the rulebook and Nicolò of creating the game world compatible with the imagined situation: the fall of the pre-existing realms, the fortification of cities, the birth of a new empire, and the extreme difficulty for human life to exist outside the city walls due to the amount of monsters

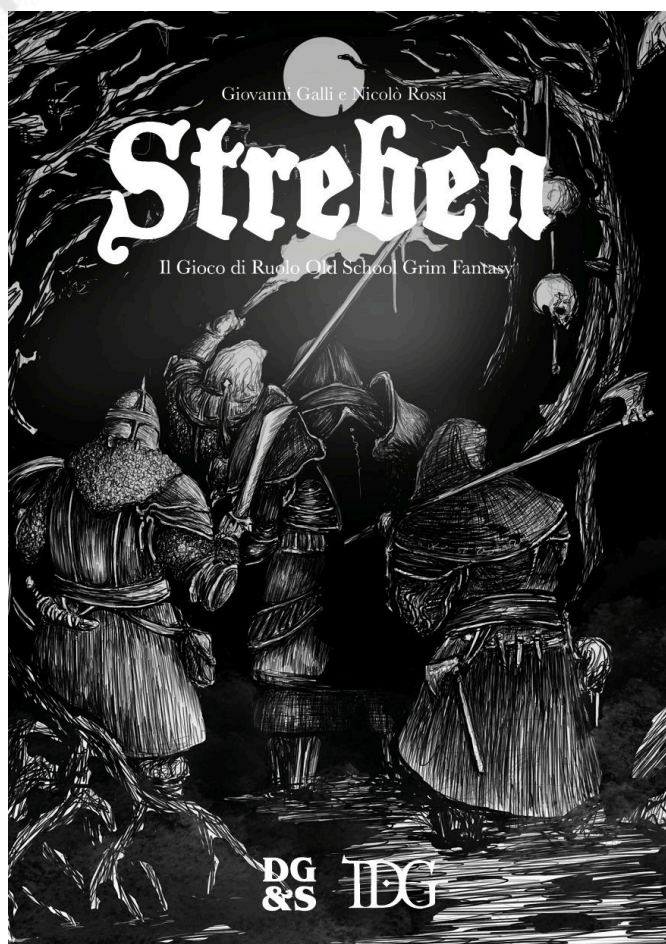**Fig. 1 - Giovanni Galli**

Fig. 2 - Streben - Gioco di ruolo (RPG)

infesting the planet. I have found that, at least for me, writing the rulebook for a role-playing game is quick but making it work and make it appealing and accessible to the greatest number of players is quite another matter; one has to proceed by continuous cycles of trial and error. Streben's was prepared before the COVID-19 pandemic began, then during the lockdown it was tested by playing and adjusting the rules based on what turned out to be poorly functioning or fluid. The testing phase lasted about a couple of years, and I basically rewrote the rulebook from scratch a lot of times, because I would always get to a point where I wasn't convinced by the game mechanics and start from scratch. Eventually, by dint of skimming and simplifying, I ended up with a four-sided manual, which also serves as a screen. On the side facing the master is a description of the setting and the rules of the game, and on the other is a wonderful picture illustrated by Simone Tammetta that players can admire throughout the game. That's it, you start playing right away. The next step was to create the adventures, also described in a page or so.

Adventures are what exactly? Secondary quests to a main storyline?
No, to explain this let's take a step back on the nature of RPGs. The basic components of an RPG are the master,

the players, and the game world, with its rules. The master can invent an initial situation according to his imagination and from there keep the game going based on what happens during the game and the players' actions in response to the events he proposes, literally reproducing life within the game. This can take time, especially for the master, to become familiar with the rules and the world in which the RPG is set. To make the task easier, we came up with the idea of creating pre-packaged adventures, that is, situations into which the master can drop the characters and quickly start playing. To explain further, I will describe the first Streben adventure, the one included in the RPG: the sister of one of the characters is accused of witchcraft and the players have to prove that she is innocent. As the adventure continues, it turns out that there is in fact a witch and so to prevent the wrong person from being burned at the stake, the sorceress must be brought back and thus exonerate the player's innocent sister. Depending on how you end the adventure (you bring back the witch alive or dead, the innocent girl is saved or not, etc.), there are then consequences that can become staples in the game world and you can take them into account in subsequent games.

So, if I understand correctly, the adventures you have prepared describe what the general context is, who the actors are, who the culprit is (if there is one), etc., and the master handles the rest.
Yes, it is, plus the dangers the characters may run into are described. For example, at one point they face a dungeon, represented by a tower. If the players go through from underneath, they encounter spiders standing there plotting in the shadows, if they go through from above they will face a trap. In the description of the adventures I give the master some prompts so that it is easier for him to keep the game going depending on the choices the characters make. He can add something of his own if he wants but otherwise, based on the prepackaged plot, you can still get to the end of the game. In this sense, tutorials can be considered, allowing you to experience a little bit at a time how an RPG works and then getting you to the point where, as master, you will be able to create your own adventures and run the game world on your own.

So even in your game the master must have a fair amount of ability to invent and tell stories, although the task is simplified if he chooses to follow adventures.
Exactly, that for role-playing games is the basis, you have to be able to tell interactive stories. For tabletop gaming, on the other hand, things change completely, there is no

interpretation, just pure dungeon crawling a la Eye of Beholder, which you also know.

I know Rogue better.
Yes, it is perfectly fine, in fact it is perfect because in Rogue the mazes are procedural as well as in my game.

So the dungeons are not already predefined, identical with each game.
No, you create them on the spot. I give you a system to generate them, based on using a 6-sided die to decide whether in the next room there is a corridor, another room, a trap, a monster and so on. The only fixed point is that there are 13 rooms in a dungeon, and when you reach the 13th, you have completed it. At that point you go back to town, sell back what you have recovered, level up and face a new, more difficult dungeon. When players reach the ninth level, you face a dragon in the next dungeon, and if you defeat it, the game ends with the players winning.

It is basically a roguelike in board game format.
Yes and like in roguelike, a player's death is permanent and of course you cannot save the game. Unlike these kinds of games though, where sometimes if you die it's not your fault but just damn bad luck, here there's a strong strategy so if you learn how to play the game correctly and even though it's pretty easy to get annoyed at first, after a while you don't die anymore because you've figured out the way to beat the game.

You can therefore put the experience gained in previous matches to good use in subsequent matches.
That's right, even here the player's talent is worth more than the character's, precisely because the experience gained from playing counts. To make a comparison, it's like in Ghosts'n Goblins; once you understand that a specific monster can be killed in a certain way, you stop attacking it haphazardly and always try it the right way.

The idea of trying to make it a marketable product instead when did it come about? Was it already planned from the beginning or maybe it came to you at the end, as in, while we have the game, let's see if it sells.
So the RPG, initially, I was not interested in selling it. I was interested in selling the board game; the RPG, as you saw, is really minimal, a facade of foldable. To make it a finished product, we invested a hundred euros, paid an artist, created an image, the end. The board game, on the other hand, requires much more material and therefore a much greater investment so with Nicolo we said either

we take out money for free, because there is no guarantee of recovering it anyway, or we try to create a following that can help us, a community. To finance the project we did not choose the crowdfunding route, which is so fashionable lately, but the pre-order route. The goal, however, was the same, to get money to invest and turn the idea into reality.

And how did it go?
In December 2021 we released the RPG for free and I started attempts to create the community by advertising it on the various Facebook groups dedicated to role-playing games. People started to get interested and every week we released a free adventure. This is because if you give a new GdR for free, people show very little interest, because they already have a lot of good quality games to play. If you give them adventures, on the other hand, things change, because at that point they think, "I'm no longer the one who has to struggle to create an adventure from scratch, I already have it ready, I can play it right away," and that entices them to try the RPG. At that point, however, they have to use your game system, so interest in the project grows.

Did it work? Were you able to catalyze the attention of enthusiasts to Streben?
Yes, slowly interest has grown and adventures and extra content produced by community participants have appeared. Now if you go on Telegram, on the Streben group, you find 98 people (at the time of writing this article, ed.). Then I launched the idea of pre-orders, while trying to figure out who was also interested in the board game, set in the same world, with the same dynamics, but where there is no creative part of the master, pure dungeon crawling. Again, the idea of keeping it minimal won out; there are no tiles (the tiles to build the maps ed) or miniatures in the box because the game is designed to reuse the ones you already have. And if you don't have them, you can buy the ones you like best and use them with Streben. This has made it possible to keep production costs low and make the game accessible to a larger audience. The RPG in this way did well, but my goal was to get to produce the board game as well. In 2022 I showed up at Modena Play, the biggest trade show dedicated to board games, which was held in May or so if I remember correctly. There I went from editor to editor presenting the role-playing game, I turned them all right around. I had made copies, I was giving them away and saying, look, I did this thing, if you're interested let's talk about it, until I met the people from Dungeoneer Games & Simulations and found out that they were already
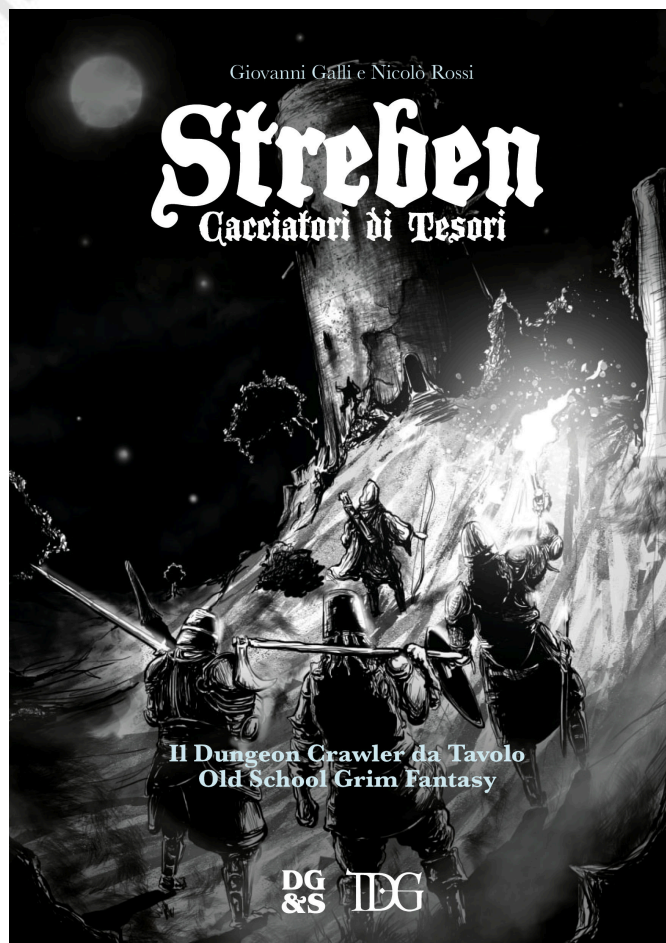
Fig. 3 - Streben - Cacciatori di Tesori

familiar with the game, just because of the activity I had done on social months earlier. This surprised me but obviously made me very happy, also because they proposed to come to an agreement to distribute the RPG. I told them that I had to talk to my partner but that he would certainly agree as long as we also came to the distribution of the board game, which had always been my desire. For me Streben is one project declined into two different games, one without the other would not do it justice. At first they were a bit reluctant but I managed to convince them, so in June the RPG officially saw the light of day and in September the board game as well. Now we are releasing expansions bit by bit.

Awareness of what a role-playing game is today is no longer limited to a small group of enthusiasts but, despite this, playing it is still reserved for a niche, precisely because of the peculiarities of this type of entertainment. It is not for everyone to possess the determination to learn manuals of dozens (or worse hundreds) of pages and handle the creative part that RPGs require. I instinctively believe that tabletop gaming is easier for a neophyte to tackle.
Yes, but there are other aspects to consider as well. For example, if you want to play D&D, you have to spend about 150€. Each manual costs an average of 50€, there are

the miniatures and tiles, the map pieces that you interlock to form the playing field, etc. that you have to buy and that brings up the price a lot. I cared about making products for the masses, that's always been a goal of mine, Streben costs 13€, with the first adventure included, the board game costs 20€. That puts everyone in a position to buy it, and that's why we kept it minimal, as I said before. If we had also included gadgets such as miniatures, maps, a richer manual, the price would have risen to the 150-200€ range, as is the case with the various Descent, Gloomhaven and all the similar products of this period. My idea was, do with what you have at home; do you have Legos? Play with Legos. Do you have square sheets of paper? Draw your own maps and use pebbles as characters. Do you want to spend more on it? Do it, go to the Internet and buy modular characters and maps. Or recycle what you have instead of buying new stuff every time. This decision for me was a risk, because people who buy themed role-playing and board games often do so only because they like the puppets, the real game they don't care about, some even never play it. There are games and publishers who exploit this and basically sell (even expensive) miniatures more than games. By removing these kinds of accessories I have therefore taken a risk by focusing on playability and the quality of satisfaction in playing, but in my opinion it is a contained risk. In the future however, nothing prohibits adding these kinds of gadgets as well, perhaps finding a formula to keep costs low and thus keep the desirability of the product high on this front.

Well, it seems to me it was a very good idea, since it is working. Future developments? Are there any others besides the expansions you've already told us about?
There are ideas, such as translating it into English and launching it abroad, getting to distribute it in bookstores, and creating a bundle that, by containing the price, includes both the RPG and the board game.

This goes somewhat against the grain of marketing trends, today the launch of such a product is preferred to be done with pomp and circumstance, aiming for the largest possible market with the most platinum product possible. You have chosen an old path, that of seeing step by step how it goes.
Yes, we started from the bottom so to speak, to lower the risks and costs of doing business. Otherwise, Nicolo and I would have had to pull out a truckload of money that we didn't have, and risk losing everything. So instead we still managed to produce something, and we are reinvesting what we earn to make the next step. Whether it will work

Fig. 4 - Streben - Cacciatori di Tesori, miniatures

I will tell you in the long run.

One part that I find particularly interesting about this operation is the practical demonstration of the power of the Internet, which, when used in the right way, can really help spread and translate an idea, such as that of a game designed to fit on a simple sheet of paper, into reality.

It is true, I am convinced that the Internet has been the key to success, but it is also the reason why now the role-playing game industry is yes famous, but also saturated. For us to intercept a need, that is, the public's desire for something not yet present within this world despite the amount of products, has been extremely complex, much more so than it could have been 10 years ago. When I first approached the world of role-playing games, you would go to trade shows where you would see new games and eventually buy on trust, because beyond that there were no other channels and sources of information to understand what product you had in front of you. Now it really takes very little to create your role-playing game and publish it online. Being able to stand out, to show that your game is more interesting than others, is much harder.

I think that was roughly always the case. It's true that at the time you had little or no way to evaluate a new game, so you agreed to buy it sight unseen, but if the game was worth little, it didn't go very far, in the sense that yes, if it had good marketing and an attractive booth, it would garner some success at the trade show, but then word of mouth among fans of the genre wouldn't

click, and sales wouldn't take off. In such a niche industry, I think it is not easy to fool buyers more**.

Sure, but without the Internet where you could find information and get a better idea of the product, it used to happen that even a bad game would manage to sell a good number of copies by accident or because, as you said, it had good marketing support. With the Internet it's all more difficult both because it's faster to spread them, and so you end up with more competitors, but also because it's easier to get information. There are reviews, communities of fans, eventually if a game is not worth it, you quickly learn about it.

This in my opinion is kind of what happened with video games in general as well. I saw them being born, literally given my age, here in Italy. After the age of thirty I practically stopped playing because all in all there were no real innovations anymore; within thirty years the industry became saturated, revolutionary ideas did not come up. Reworkings of already known mechanics, introduction of scenic contrivances, refinements to the extreme those yes, but to me they were a bit of reheated soup. What I have noticed is the shift in the focus of designers toward the story told by a video game more than the story played. Many games have shifted from pure interactive entertainment to storytelling, with even notable examples in truth and products in which the two features are skillfully blended, as is the case in Nintendo games. Of course, it is reductive to define video games by these two aspects alone, and I do not at all judge storytelling to be a bad thing, but the topic is complex and more volumes would be needed to dissect it. In fact, a real innovation in mechanics I have not seen after a certain point onward, except in the Wii, where the concept of the interface between player and game was reversed. So I can understand what you are saying about RPGs.

Yes, the evolution has been somewhat similar. The first role-playing game recognized as such was D&D in the mid-1970s. They basically originated at the same time as video games, and if you think about it, they are both children of the same culture. And like video games, role-playing games have become much more story-oriented, where you get more into the plot than the game, the emotions come from that. The mainstream of role-playing games today is pointing much more toward the storytelling aspect so much so that the RPGs that have been awarded as the best games of the last few years all follow this strand. With Streben I chose to break with this dynamic; there is already an "old school" mainstream with many games but mostly they are variations of the first D&D.

There is some original rulebook, and our game goes in that direction there; however, we wanted something that did not reject storytelling but also included a lot of randomness: you have to be able to die, even quite often, the game should not come from an agreement between the master and the players, something like we have to create a fairy tale all together. Here we are telling an experience, and in the experience it can go right or it can go wrong, even in a way that nobody had thought of, because the dice are unpredictable. This is a breaking point with today's trend; right now the market is going another way and the same thing in my opinion is happening in video games; we end up with Last of us, Uncharted and a slew of games that are basically just plot while indie products are popping up that instead follow the opposite philosophy, focusing everything on gameplay in the right way and emerge in a slew of indie games that are all the same in the end because they just replicate mechanics from the past without trying to innovate them.

That's interesting, and speaking of what you just said, would you like to try to trace the history of this genre, from its inception to the present day by following its evolution, for the benefit of those like me, who only know about RPGs in broad strokes, maybe without ever having played them?
I hope I am the right person also because I too had a phase where I played them very little. Certainly role-playing games were born with D&D, no doubt about that, and immediately imitations popped up, similarly to video games where Pong gave rise to countless clones and variations on the theme, in this field products such as
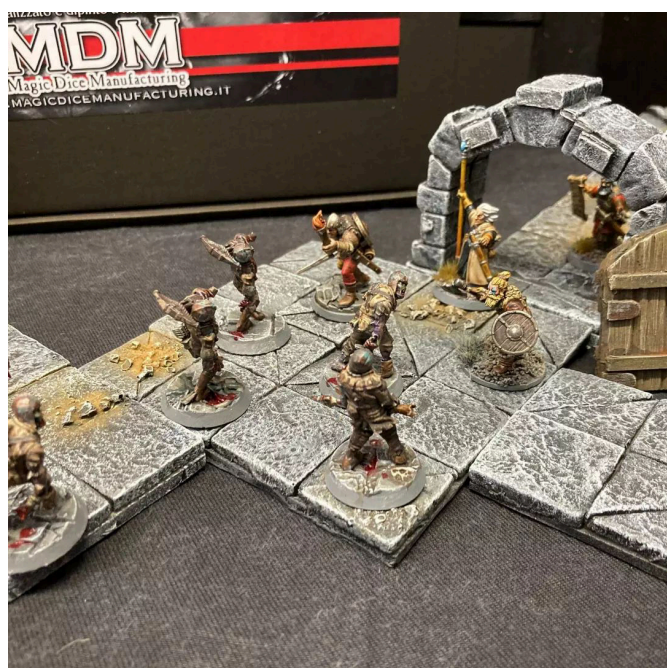
Fig. 5 - Streben - Cacciatori di Tesori, miniatures

Tunnels and trolls or games that were basically variations modeled on the first D&D were born. The original idea of a role-playing game is: you enter a dungeon, slay monsters, take treasure, go back to town, sell everything and level up. All the products of the time were based on this mechanic. Then came what I think was the second wave of RPGs, between the 1980s and 1990s. Games that were more investigative, social, such as The Call of Cthulhu inspired by Lovecraft's tales that put players not as warriors or wizards but as investigators, people who if they get a bullet will die, where combat is definitely secondary and the primary goal is instead investigation, research. Similarly happens with the world of Tenebra, which introduced vampires and werewolves. All that White Wolf's production has been and is has shifted the focus to a more social, more political role-playing game. Wanting to make a comparison, more than video games I think of TV series, Game of Thrones to be precise. It is a fantasy series but it develops political aspects a lot; fights and combat are not lacking, but the plot goes on mostly by political strategies, just as in the White Wolf games. In the late 1990s there was a period of crisis because after the third edition of D&D, 3.5 to be precise, the spirit and goodness of D&D was lost. Nobody liked the fourth edition, everything that constituted the pillars of the genre began to fail. This gave a strong impetus to the indie scene, always present but with really modest successes, which in the period 2000-2010 grew so much to the point of having seen nominated for the best role-playing game of the year products born in this environment, made up of small publishing houses, independent authors and people who financed themselves, without having the empire that D&D has behind it. The D&D brand also produces movies and cartoons and has crazy merchandising; it's not on the level of Warner Bros. but it has a big economic force unlike the small publishing houses, but they can still enter the market as indies and come up with products that are translated into multiple languages to spread to multiple markets and sometimes success comes. For example, a relatively recent title that originated in the indie branch and became very famous is Mork Borg, a Norwegian, at least I think or at least Scandinavian (it is Swedish ed.) game written directly in English. The authors (Pelle Nilsson and Johan Nohr, ed.) immediately believed in international dissemination and wrote it directly in English, which they probably know better than I do.

What are the strengths of Mork Borg?
Definitely the graphic aspect is the most striking, it harkens back a bit to the punk magazines of the 1970s, with yellow, purple and black shot through the roof, very acidic that

gives a good beat as you look at them. The setting is another plus point, very very very dark, worse than Dark Soul and Darkest Dungeon, stuff that makes you know immediately how bad the situation is. All this has struck a very favorable chord with international audiences, including Italy where it is quite popular but nevertheless there has never been an Italian language translation, the English version is used. Definitely the most successful indie in recent years but it is damn difficult. The monsters are exaggeratedly strong and you don't even have a sword at the beginning, you start fights with a bone in your hand. It's a hellish situation, which makes you start off with the certainty that you'll die soon, but the game works and it's fine anyway. It is a pure roguelike, and it is the most talked about title in recent years.

What deserves to be mentioned next?

In my opinion, the fifth edition of D&D. The fourth had been a complete failure across the board; the fifth, on the other hand, turned out beautifully, better than all the previous ones. I think its success was due to two key actions; the first was revising the rulebook. It had become too complex and with a really excessive number of rules, so they simplified it by making it accessible to non-experts but not so much as to disappoint long-time fans.

What about the second one?

Making it really cool through very clever marketing. They slipped it into trendy TV shows like Big Bang Theory and Stranger Things making it popular, now it's part of the collective imagination. I saw it with my own eyes at Lucca Comics, even at my distributor's booth. Half of the people there wanted D&D, for them role-playing games were mainly D&D. Apart from this comeback with a bang of the old classic, after the wave of rogue-like, RPGs have gone the way of narrative. From dice-driven gameplay, which tell you whether or not the action you want to perform succeeds, thus governed by extreme randomness of events, they have moved to interactive stories, where the plot goes on predetermined, whether or not you succeed in the tasks. Sure, there can be branches and multiple endings, but in my opinion they are not really RPGs. A RPG has a dynamic plot, to the point that you could say it has none. Everything is left to the dice and the imagination of the game master, who keeps inventing what comes next, based on the outcomes of the players' actions. Lovecraftesque, winner of the best role-playing game of the year award in 2018, is a narrative GdR so driven that it eliminates the figure of the master. In the game we take turns at each turn in impersonating the expected roles and proceed following an established plot. Personally, I

Fig. 6 - Streben - Cacciatori di Tesori, miniatures

had a hard time accepting such a mechanic, where there is no randomness or free evolution of the plot. To give you an example, in a traditional RPG, you may arrive at a point where you encounter a dragon. Players may decide to face it directly, or gain an elevated position to catch it by surprise. Again, they might decide to attack it starting from the tail or jump on its head or do anything else compatible with the setting the master has created and the constraints he has decided to impose. Then they roll the dice, see if the decided actions are successful, and based on these results the master can continue to invent the evolution of the story. In narratives, on the other hand, things are left not to chance but to the players' decisions; you can still go on to the end. Of course, an engaging story still makes it interesting to play and no special narrative skills are required of the master, but in my opinion a lot is lost. In any case, apart from D&D going its own way, the trend at the moment is to produce narrative RPGs.

Going back to Streben GdR instead, what strand does it fit into? You said it is a classic role-playing game, but there are also adventures, which are in fact predetermined plots. How would you classify it?

When I came up with Streben I didn't actually set out to create it as old school. I wrote it as I liked it to be, then it was put in the old school category because that's what it most resembles. It's not in a strict sense though precisely because there are adventures, which are basically exactly the opposite of a traditional RPG. I wanted a product that harkened back to the classics but could also appeal to new players, as mentioned before, which is why I call it

a hybrid product, not just because there are two versions.

Don't you fear criticism from purists?

Criticism, as long as it is intelligent and constructive, is always fine however I expect it even from fanatics who criticize anything outside the canon regardless, it is inevitable. If you want to bring some kind of innovation in an area, something has to change or break patterns. I hope this will be understood and appreciated by the majority, and if I have guessed the right idea, we will see. A role-playing game is defined as such because I who play the game am not Giovanni Galli playing the warrior Tal Dei Tali but I become that warrior and drop into the game world, I live it. Streben allows this, if players then decide to follow the adventures, that's fine, it's not fundamental to the game and anyway even those follow the basic style.

How do you evaluate a successful game?

By the feelings it leaves you with when you take your hands off the table. Whether the game lasted an hour or three months, it doesn't matter, what matters is what it makes you feel as you play and the sense of satisfaction it leaves when it's over. Regardless of how it ended. Then there is the matter of learning; a traditional game really requires a lot of commitment, especially of time, in the beginning stages, and starting a game can be exhausting. Streben is designed to get you started as quickly as possible but is still articulate enough to be engaging throughout the entire game, even if you are an experienced player.

I agree, in general a good game is one that leaves you with a sense of satisfaction, however it goes. At this point, I would say we can close our interview, I thank you for your time and good luck with Streben.

Thank you, it was a pleasure to be able to talk about Streben with you and have 4 chats together after a long time. If any of the readers are interested, I leave here the official distributor's site where to purchase both the role-playing game and the board game:

https://www.terradeigiochi.it/streben/7460-streben-9781804319123.html

https://www.terradeigiochi.it/giochi-da-tavolo/7673-streben-cacciatori-di-tesori-dungeon-crawler-da-tavolo-9781804319147.html

Free adventures by Streben can be found here:

https://drive.google.com/drive/folders/1MD5CfdpWLBswpPLSZvcehOpQ37PL8UlO?usp=share_link

We thus close our interview, with one last, no less important, note. Giovanni had already tried his hand at creating a board game, Cloudy Mountain, which he then released for free to the public through Retro Magazine World.

It is really minimal but nevertheless, fun to play.

If you are curious, you can find it in issue 23 of Retro Magazine World, downloadable as usual from our official website https://www.retromagazine.net

Please note

The miniatures and map tiles shown in the Streben images are **NOT** included with the purchase of the game, either the RPG or the board game, they are there for illustrative purposes only.

Another riddle by Susi? Well, yeah!
(for C64 – for beginners)

by Eugenio Rapella

When my C64 saw the text of the latest "Query with Susi," it whispered, "Hey, this is just for me!" I couldn't disappoint him. Here it is:

Susi is chatting with Luca.
Susi: "Hi Luca, I know you have turned nine years old and I know you have three younger little brothers, all different ages."
Luke: "Yes, that's right. If you multiply our four ages you get a three-digit number, and these three digits correspond to the ages of my brothers."
How old are the three young boys?

Here is my C64's first attempt:

```
100 for x=1 to 6
110 for y=2 to 7
120 for z=3 to 8
130 if x=y or x=z or y=z then 220
140 a=9*x*y*z
150 if a<100 or a>999 then 220
160 m=int(a/10):u=a-10*m:c=int(m/10):d=m-10*c
170 if x<>u and x<>d and x<>c then 220
180 if y<>u and y<>d and y<>c then 220
190 if z<>u and z<>d and z<>c then 220
200 print "***** a > ";a
210 print "** x,y,z > ";x,y,z
220 next z:next y:next x
```

The three brothers are younger than Luke so their ages range from one to eight years. The ages are all different (no twins) so the age of the youngest (variable x) cannot be more than six years old, the one in between (variable y) will be between two and seven years old, and the eldest of the little brothers (variable z) cannot be less than three years old.
The three nested "for-next" loops, opening at instructions 100, 110, 120 and closing at 220, go through all the possible triads--without going overboard.

At 130 we check whether two of the variables are equal to each other, in which case the triad cannot be the solution and we move on to the next one (...then 220). At 140 the variable a contains the product of the ages of the four siblings. If a is not a three-digit number (instr. 150), no dice, we go further (...then 220).

Instruction 160 is in charge of separating the three digits that make up the number a: m=int(a/10) provides the number formed by the first two digits of a (e.g., if a=317, a/10=31.7 and m=int(a/10)=31 since int(...) provides the integer part of the argument) so u=a-10*m isolates the last digit, the "units" digit (continuing the previous example, u=317-10*31=7).

Similarly c=int(m/10) isolates the first of the three digits, that of the "hundreds" (in the example it is m=31 so c=int(31/10)=int(3,1)=3) while d isolates the second digit, that of the tens (in the example d=31-10*30=1).

Moral: At the end of instruction 160, the three variables u,d,c contain the digits that form a (if a=317, we will have u=7, d=1, c=3).

We are at the end: x,y,z, the three candidates to be the solution, really are if they are the three digits that form the number a. If (instr. 170) the youngest age does not coincide with any digit of a, no dice, we go to 220 to continue with another triplet.

The same is done at 180 for the age of the second baby brother and at 190 for the third.

To 200 is reached only if everything, but everything is right (the three ages are different from each other: 130; the product a of the four ages is a three-digit number: 150; the digits of a are the ages of the three siblings: 170, 180, 190): the value of a is printed and, as confirmation, the ages of the three little brothers are printed.

Even after finding a solution, the program continues the work so that when READY appears, we will also know that the solution found is unique.

With the three nested for-nexts, we examined 6*6*6=216

triads, leaving it up to the program to exclude even those triads that, based on the text, had, from the outset, no chance of being the solution.

Actually, reading the question, one can see that the solution will have to be drawn from "combinations of 8 objects in groups of 3." In this type of grouping, the objects that make up the grouping are different from each other (in "Combinatorial Calculus" they are called "Simple Combinations") and the order of the three elements does not matter ("258" and "582" are the same "combination"). The number of combinations of 8 objects in groups of 3 is $C(8,3) = (8*7*6)/(3*2*1) = 56$.

The following little program allows the C64 to list them all:

```
100 x=1:y=2:z=3:k=0
110 k=k+1:print" k > ";k
120 print" x,y,z > ";x;y;z:print
125 get r$:if r$="" then 125
130 if z<8 then z=z+1: goto 110
140 if y<7 then y=y+1:z=y+1:goto 110
150 if x<6 then x=x+1:y=x+1:z=y+1:goto 110
```

At 100 we start with the "first" of 56 combinations (k acts as a counter), consisting of 1, 2, 3; this is printed.

With instr. 125 you wait for the user to press a key before printing the next one (if you delete it, the C64 quickly prints all combinations, but, eventually, you will only be able to see the last ones...).

At 130, until the third element reaches the value 8, it is he who is incremented: 123/124/125/ ... /128/. When this happens, we move on to consider the 2nd: y (instr. 140). If it has not yet reached its maximum value (7), it is he who is incremented, as is the 3rd: /134/135/ etc. Finally, even when y reaches the value 7, the first one (x) is incremented and the others accordingly. In this way, the three values are always in ascending order; by running the program (come on! It is only seven instructions) the mechanism becomes even clearer.

At this point, we can modify the query program by having the Commodore test only the 56 triads obtained as combinations, instead of the 216 in the previous program. In addition, it will no longer be necessary to check whether there are repeated digits in the triads, since the elements of the combination are, automatically, different from each other.

Here it is:

```
100 x=1:y=2:z=3
110 a=9*x*y*z
120 m=int(a/10):u=a-10*m:c=int(m/10):d=m-10*c
130 if x<>u and x<>d and x<>c then 180
140 if y<>u and y<>d and y<>c then 180
150 if z<>u and z<>d and z<>c then 180
160 print "***** a > ";a
170 print "** x,y,z > ";x,y,z
180 if z<8 then z=z+1: goto 110
190 if y<7 then y=y+1:z=y+1:goto 110
200 if x<6 then x=x+1:y=x+1:z=y+1:goto 110
```

This program is, of course, faster (and somewhat shorter) than the previous one even though there is very little waiting time for either "prg."

How will the unfortunate readers of "La Settimana Enigmistica" who do not own a C64 and who, even worse, perhaps do not read RMW, do it? Will they have to go through the 56 combinations of the three digits, multiply them with each other, then multiply by nine and see if the number obtained is precisely formed by the digits considered? Actually there is a nice shortcut: the number $9*x*y*z$ is a multiple of nine so the sum of its digits will also be a multiple of nine (where does this property come from? It is quickly said: if u, d, c are the digits of the units, tens and hundreds of a three-digit number, the value of the number is given by $1000*m+100*c+u=(999*m+99*c)+(c+d+u)$. The number in the first pair of parentheses is undoubtedly a multiple of 9; so will be the starting number if, and only if, so is $c+d+u$).

Taking this into account and the fact that the age of the youngest cannot be more than 3 (if the three ages were the smallest possible starting with 4, you would have $9*4*5*6=1080$ which exceeds three digits) you manage to reduce the number of candidates to only ... four triads.

My Commodore 64 made me promise not to say anything else, much less the solution (it says no one types the listings otherwise) so I'll stop here.

MSX, optimizing a game in BASIC - part 3
Game: LIGHT CYCLES

by Germán Gómez Herrera - Systems Engineer - Spain

Having seen in recent articles how it is possible to improve the execution performance of BASIC programs, with or without assembler support, in this article we will put this knowledge into practice in a game for the MSX system (1), as is now common practice.

By the way, it is the most fun way to practice what we have learned.

The game chosen is Light Cycle (2), which can be seen in the movie Tron (3). Do you remember it?

In this game, two players ride a kind of motorcycle that draws a deadly trail across the playing field, trying to crash the rival motorcycle into it.

Fig. 1 - The Light Cycles game

There are many games like this, but they are usually made in machine language because of their execution speed requirements. Therefore, it is quite difficult to implement this game in another way.

However, in this article we will try. Read on and you will have an extraordinary experience.

First test. The BASIC interpreter.

As I just said, it is very difficult to code the game in a language other than assembly, and so if you code it in basic, it will be quite complex to get a playable game.

However, we will try.

The program has been adjusted to achieve the highest possible execution performance, and indeed, although it could be faster, it is by no means unplayable.
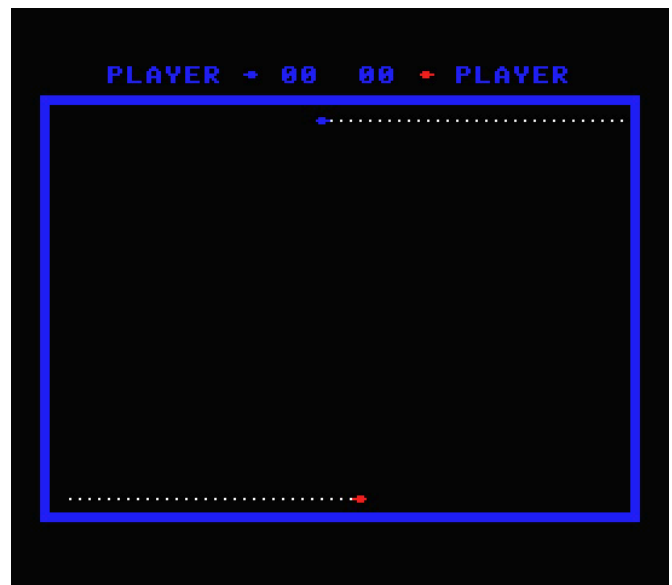
Fig. 2 - The game running in BASIC

Second stage. BASIC with support in Assembly.

Better and better. The critical parts have been coded in assembly, and you can immediately see an improvement. Now the game runs quite fast, but it is still possible to increase its execution performance. Let's see how.
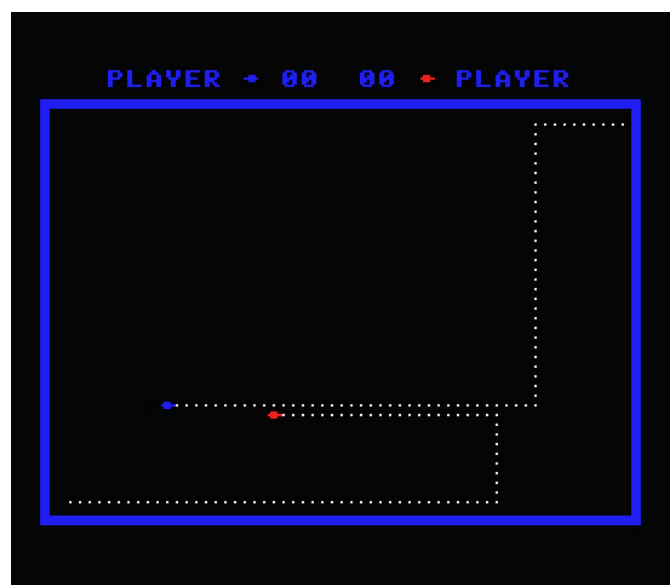
Fig. 3 - Light Cycles in BASIC and Assembly

Final stage. Fully compiled program.

As I mentioned in my last article, writing the program in assembly can be quite difficult, so it is more convenient to use a compiler.

Since the game is already made in the BASIC language, a basic compiler was chosen for this purpose, so as not to complicate our lives too much.

Among the compilers available, there is one from an msx magazine, called MCBC (4), which can create stand-alone programs.

Unfortunately, however, the compiler does not support all the instructions in Basic... But this is not a problem, we will code in assembly the instructions used by the program that the compiler does not support.

As for the speed of execution, there is no comparison with the other examples; now the game goes at full speed.

Bonus phase. We're not done yet: let's correct the multicolor problem.
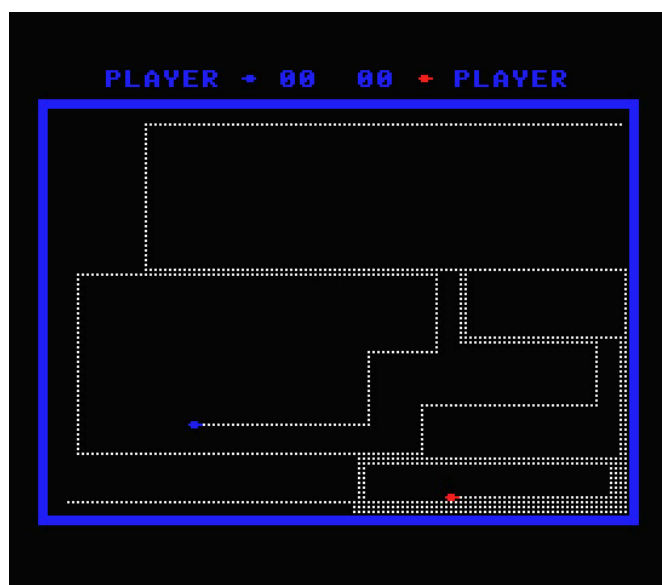
Fig. 4 - The compiled version running

If you notice, the bikes paint the tracks the same color in all the games. Why?

Well, the reason is nothing but to avoid the so-called color clash (5) problem present in computers such as the msx1 and others. For fortiuna the msx2 and later systems solved this problem.

The question is, how can we solve this problem? The answer is to draw the clash-free pixels in an interspersed way. This method has already been used in other similar games, such as lazer bikes (6), where each bike paints the track a different color.

Success with this technique requires the use of a compiler, an assembler, and a good knowledge of programming,

because the program must continuously check several points to maintain speed of execution.

As can be seen, the use of the compiler is suitable for this purpose and the speed of execution of the program is not only acceptable, but also surprising comparing it with the different tests shown in this article.

In the next article, we will improve the performance of a well-known and fun program (but I won't anticipate anything...).

As they say: if a job is worth doing, it is worth doing well.
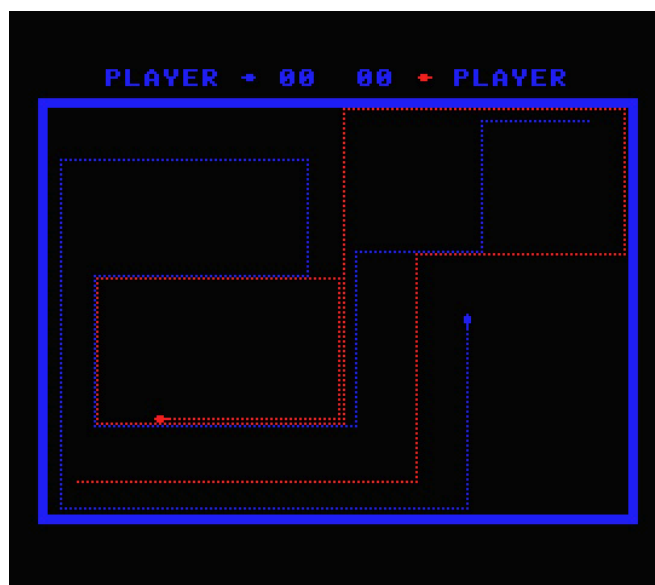
Fig. 5 - Light Cycles with the multicolor trace

For obvious reasons of space, you will find all versions of the game and listings in Basic of the same, on the disk linked at the address listed in the references box.

Have fun!

References

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2. https://en.m.wikipedia.org/wiki/Light_Cycle
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4. https://www.generation-msx.nl/software/fgi/mcbc/2360/
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I am a super-boomer and a retrogamer!

Article appeared on the FB group **Retrogames Sardegna** *and published with the author's permission.*

by Gianpaolo Mara

As a result of the merger of ICAS (Istituto di Credito Agrario per la Sardegna) with Banco di Sardegna in Cagliari, Banco di Sardegna, a public-law credit institution, was born in 1955, with its registered office in Cagliari and administrative headquarters and general management in Sassari at 36 Viale Umberto. My mother was hired here as an accountant in the Personnel offices in 1958 as soon as she graduated from high school. These offices were located on the first sub-floor with respect to the street level of viale Umberto but resulted to be on the second floor passing through the secondary entrance located at Fosso della Noce. At the end of the large vaulted atrium of the entrance was a huge and luxurious wooden elevator with serial number "Sassari plant 0001" (the first one installed in the city) that still operates in the historic banking building (now called Piazzetta Banco di Sardegna) and connected the various floors of the stately executive building.

In 1970 I was attending second grade in Enzo Street (Cappuccini district), I had already learned to read and write three years earlier at the kindergarten of the Sisters of Santi Angeli (also located on Umberto Avenue, a little higher than the Bank); during the afternoons I usually stayed in custody at grandmother's house in Mameli Avenue, studying and playing. For me, the best game of all remained making ravioli with grandma: she would prepare the dough with flour and I with the "Nuova Altea" hand crank machine would roll out the pastry sheet and roll it out on the table; then with a spoon I would make the ricotta and parsley balls to be arranged in strict, geometric order on the layer of dough and then cover everything with a second layer and cut each ravioli with the round, serrated form. Huge quantities were made for the weekend, because on Saturday and Sunday all the family members would gather at the table and the appetite was considerable. I still keep as a relic that iron mold with the wooden handle with which I have certainly produced

more ravioli over the years than Giovanni Rana. Almost every afternoon after studying and playing came the 5:30 p.m. ritual: rushing to pick up my mother at her work exit on Umberto Avenue. She was not the one who would come to accompany me to school (I would go alone, around the corner) but instead I would go to pick her up from her office. At the same time the first TV broadcasts began (in black and white; there was only RAI) with children's TV; Zorro, Rin Tin Tin or Lassie, however, did not interest me all that much, I preferred to run at breakneck speed down Viale Trento to Mama's office. In those years there were still no ironclad controls at bank entrances, no revolving doors that force you to empty your pockets of change, keys and various hardware; in the Viale Umberto office there was only a switchboard operator who also acted as a doorman at the entrance and controlled access. The telephone number of the switchboard of the Banco di Sardegna was 31501, I remember it very well to this day because I dialed it thousands of times and it was the only one I had to keep in mind. Nuova SIP - Società Italiana per l'Esercizio Telefonico p.A. was called the only Italian telephone company at that time, calls were still local, you didn't have to dial the area code because teleselection didn't exist yet (at least in Sardinia); back then you could talk in town for days at the cost of a single click. The switchboard operator would answer:
"Good morning, Operator Banco di Sardegna, who do you wish to speak to?"
And I was asking, "I would like to talk to Anna xxxxxxx from the personnel office, please!"
A huge wooden panel with lots of audio jack-type plugs and red wires in industrial quantities was the famous call switching switchboard with which it was possible to connect calls coming in from outside with the various telephone sets in the many offices of the branch. After a number of days and as many phone calls (I was most likely the only child calling the bank's switchboard) the switchboard operator proved to be increasingly polite

Fig. 1 - Advertisement of the Olivetti P6066

and attentive, so much so that it was enough for him to hear a hint of "Good evening... " that he was already anticipating me with the connection by announcing that he would immediately connect me with my mother's office. One fine day there were also the official introductions; as I waited outside the big front door of the office for my mother to leave in the afternoon, the switchboard operator/usher wanted to meet me and let me into his small office to the right of the entrance. He showed me how the switchboard panel worked and how he connected calls with the various devices by swapping cables and numbered connectors. Only a few months earlier astronauts had landed on the moon, and that pile of colored telephone wires was pure science fiction to me. My mother found me fiddling with plugs (with the operator's permission and instructions) as I connected directly with headset and microphone to her desk phone. Immense technological enjoyment!

The usher took a liking to me and told me that if I wanted one day I could also see the office where my mother worked by going downstairs. I arrived that famous afternoon and the usher accompanied me downstairs to the bottom right where the famous Personnel office (which

was in charge of accounting for all employees' salaries based on individual working hours, overtime, leave, vacation, sickness, etc.) stood. My mother's desk and those of her colleagues had at their disposal a huge Olivetti hand-crank calculator (Divisumma 26) with paper roll that emitted a machine gun-like metallic discharge with each roll. But what struck my curiosity the most were the thousands of punched card index cards that invaded every available space on the desks, in the cupboards and in the wooden drawers.

What do you need these hole-punched cards that you check so carefully for?
A colleague of my mother's explained to me in a simple way that those pitted cards contained all the coded information of the work performed each month by each individual employee of the bank. How many days and hours he had worked and how much his salary was supposed to amount to according to his job grade and cadre. I noticed that especially the overtime hours had a large impact on the final result.
I learned that one right away! All the ballots were then read by an Electronic Calculator located at the Mechanography Center, which processed all the data from all the ballots and printed them out on a continuous form paper printout full of figures and symbols.

How does the Mechanography center work?
From the switchboard operator's panel to the large IBM System 360 Electronic Computing room, the step was short. One fine afternoon, as a gift for my recent school promotion, the head of the Personnel Department accompanied me and my mother after office closing time to the magical facility of the Mechanography Center, two floors below. Here huge metal cabinets with many rotating disks were slowly turning and producing very long sheets of continuous paper. Much the same way I used to make puff pastry for ravioli, but thinner. The Center could also look to me like NASA's power plant, the futuristic Metropolis factory or Archimedes Pythagorean's laboratory; it was still the best possible playground for my imagination. It was all mine, left on and running just for me. Technically all those metal cabinets from IBM in 1970 processed a total of 128 KB (the equivalent of 2 Commodore 64s marketed since 1982 at a cost of $595). As an additional

gift they had me produce a sample punch card with the Typewriter 1450 (it should be that model according to my recollection), a very heavy maxi-keyboard that wrote and read punch cards at about 80 copies per second. The beating heart of the processor, however, was in an armored cold room because it got too hot and had to be at refrigerated temperature; we could not see it because access was forbidden. As tangible souvenirs of the memorable afternoon, I was given old punch cards that were now disused and out of storage, invaluable technological gadgets that initiated me into the world of computing.

The operation of punch cards became my primordial "video game" at home.

By 1970, 80-column punch cards (corresponding to 80 characters) were being used at that Center, with the 1961 FORTRAN IV program (the 1966 Model 66 would arrive later than 1970); program rules were very stringent on the format of the single instruction. Specifically: a line of code could not exceed 72 characters, which were punched in columns 1 to 72, if column 1 contained a C the subsequent characters constituted a comment, columns 2 to 5 were reserved for a numeric label identifying the instruction and which could be used to jump to the instruction itself from another point in the program, columns 7 through 72 contained the actual instruction, column 6 (normally blank) if it contained any character (often a *) indicated that the instruction was a continuation of the instruction punched in the previous tab. On the other hand, columns 73 through 80 were often used to number the tabs and thus allow them to be reordered if they were clumsily shuffled (and it happened often). Fortran is an almost always compiled, imperative language with static variable typing, designed primarily for scientific and numerical computing used initially by Universities and Banks. The Fortran program still endures today after numerous substantial implementations (the last was in 2008) and is being developed toward a new Fortress system.

With the early banking technology manuals there were also the basic Fortran programming codes that were generally given to female employees so that they could translate strings into machine language and be able to work. My mother had one supplied by the office, and that

became for me like the Handbook of the Young Groundhogs: an inseparable book to take everywhere, even where it would not really be needed. At first the texts were as incomprehensible to me as Egyptian hieroglyphics however, the aura of mystery made it all the more interesting; I kept the volume (I still keep it in the library) and in the years that followed nurtured my basic knowledge of Fortran. Meanwhile around 1975/76 the spread of small laptops such as the Altair , Commodore and Sinclair increased the demand for a programming language within the reach of many. BASIC, thanks to the popularization work its authors had conducted in years past, had carved out a place for itself in several industry magazines, where readers published their own free listings and programs. In addition, many languages of the time required an editor for writing code, large amounts of memory for the interpreter, and storage systems such as floppy disks for programs especially early video games. BASIC required small amounts of memory (first Altair Basic version at 4K, written by Bill Gates and Paul Allen), had a built-in editor for writing code and simple instructions, thus being suitable for machines with limited resources such as the Altair 8800 on Intel 8080 CPUs.

My father was also an employee of Banco di Sardegna, but he worked mostly in out-of-town offices and only later in the Piazza Castello office. It therefore came very badly to go to meet him, as I usually did with my mother, in those years without a driver's license and still fresh off the pedal tricycle. When the accountant later reached the downtown destination it happened that in the early 1980s the offices of the various branches replaced the

**Fig. 2 - An operator at work
in the mechanography centre**

obsolete Olivetti P6040, P6060 and P6066 desktop computers with the more modern and high-performance Olivetti M20 and M24. The old and bulky PCs were decommissioned and sold off at a bargain price or perhaps given as gifts to employees and/or agencies who requested them. One came to me as a Christmas present. Unexpectedly and with surprising timing. A desk It arrived well before the legendary Commodore VIC 20 and 64; like these it ran in Basic (also in Assembler) but already had Floppy Discs on which to record programs and data (instead of the cassette recorder of the very early Commodores); the video monitor that could be connected with an integrated card offered a bitmap graphics mode with a maximum resolution of 512x256. Available text modes were 2000 characters (80x25) . One could copy the very first video games into strings and store them on the large-format floppy.

You could play video games on PCs in banks and offices! The user's manual supplied with the P6066 was a bundle of more than 600 pages, which I devoured faster than any book I had ever read so far; in addition there was included with the machine the Assembler Language Manual of another 300 pages and The Programmer's Guide of another 106 pages. A Basic program using Assembler modules must have its own precise structure in order to achieve rapid processing; the machine was therefore equipped with two floppy disks: one on which the Assembler modules were recorded and the other on which they were recalled and fixed in the Basic environment; together they reached 1024 K Bytes. With the optional external disks provided, the machine went up to 4,915,200 bytes, a real power of play and fire for those days!

In addition, all the following peripherals could be connected to the 6066: Tape puncher, card reader, optical reader, Philips magnetic cassette and IBM-type reel-to-reel tape recorder units, chart plotter, printers of 90 and up to 300 characters/second, IEEE 488 - 1978 and EIA RS232C interface compatible peripherals including Modems for data transmission; most importantly, the 36-cm Olivetti PC 128S color monitor with RGB could be connected (monitor that would later be used on the Olivetti PC 20 and 24 and Prodest as well - expanding their memory to 128K, however).

The real game was then to copy the various (unprotected) video games of friends that ran on early Floppy disks (such as the Commodore 1540 /41) by simply loading them Load on the 6066's second Floppy drive. Sometimes, due to a timing conflict with the Commodore's video chip, the drive could be usable with the latter although it was not fully compatible, by giving the command OPEN 15,8,15, "UI-" : CLOSE 15

Unfortunately, the free and available video games were limited to the capabilities of the Commodore, Spectrum ZX, and similar machines of the time; the 6066 could have supported more than just Pin Ball Simulator/Wizard/ Spectacular, Pac Man, Jawbreaker, Aztec, or Alien Invasion! A few programs I copied from Videogame magazines that published games on the free-use list or traded with programmer/user friends.

For those who doubt the possibility of using an Olivetti P6066 as if it were a Commodore 64/128 I also enclose here an advertisement of the time that described the machine as a personal minicomputer equipped with software specialized in video/graphics applications. Equipped with 2 floppy disks and external hard disk memory up to 19,660,800 bytes with 2 HDU 2110 drives, with multiple peripherals and optional color monitor; usable in Basic and Assembler. It remains obvious that given the high purchase price of new (over 7 million old liras in the standard configuration) it was out of reach of the pockets of the young and old, especially for Gaming use.

Of course, I no longer have the 6066 that weighed almost half a ton with its desk and external disk cabinet; during a move it ended up scattered in several pieces and replaced over the years by faster and more powerful PComputers. Rereading this whole long flashback makes me think that I am now one of the very few survivors (given my very young age at the time, compared to the people who worked there) to have seen the magnetic tape reels running on the old IBM System 360s in the Bank's Mechanography Center!

Japan, episode 22 - Nintendo: the power of experience

by Michele Ugolini

Dear readers, did you go to the cinema to see the recent Super Mario movie? Did you enjoy it?

As we all know very well, Super Mario titles are very important to the house of the big "N." Super Mario Bros of course is one of the most important (and best-selling) video games in history.

Have we ever wondered where this assertive character of Super Mario and all his success comes from?

We have to go back to 1987, when Nintendo's own Famicom was experiencing happy years.

In Italy and the West, the title Doki Doki Panic does not suggest anything to us, but everything stems exactly from this title.

Yume Kōjō: Doki Doki Panic is a Japanese video game released for the Famicom Disk System about a family set out to rescue two children. It is considered the Western "Super Mario Bros. 2," with the main characters replaced with those from the Mario Series. "Doki doki" is the Japanese sound of an accelerated heartbeat, often found in Japanese video game titles to indicate anxiety and excitement.

The international version of Yume Kōjō: Doki Doki Panic, is known as "Super Mario Bros. 2" (not to be confuse with Super Mario Bros.: The Lost Levels), also released in Japan for NES (not for Famicom Disk System), Super NES (as part of Super Mario Collection) and Game Boy Advance (under the title Super Mario Advance).

Because Nintendo's Western section had sensed the pontentialities of Doki Doki Panic, it decided to Turn it into something new.

The father of Super Mario, our beloved Shigeru Miyamoto was supervisor in the repurposing of this title by transforming the elements of the video game and inserting them into a Mushroom Kingdom with four protagonists transformed into Mario, Luigi, Peach and Toad. Fortunately, the starting game was a very good platform game and full of innovative elements, with four different protagonists to select from (each with specific abilities), a multi-directional scrolling system, and a nice method of eliminating enemies based on collecting and throwing objects, including throwing the enemies themselves!

After a year, the title "Super Mario Bros. 2" was launched in the United States (1988) and then in Europe.

It was a success and Nintendo decided to release it in Japan as well, this time under the title "Super Mario Bros. USA."

You may wonder about the fate of the original "Super Mario Bros. 2" title! The title appeared on the market Western in1994, included in the Super Mario All-Stars collection for SNES "The Lost Levels."

From this moment on, Luigi's character becomes more defined than Mario's, the four characters enter the hearts of gamers all over the world, and this
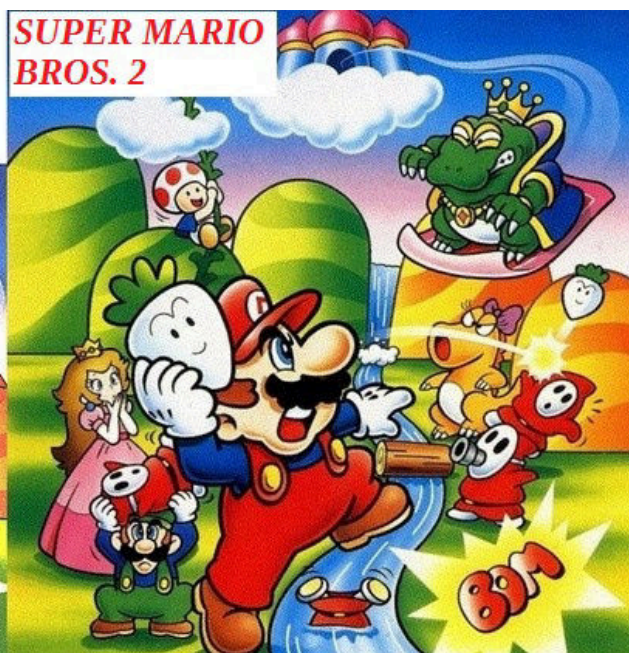
video game born from the conversion of another platform game enters sales history at Nintendo.

We should also mention that the game was developed in cooperation with Fuji Television to promote the Yume Kōjō '87 (tr. Dream Factory '87) event, dedicated to various Fuji TV products.

Doki Doki Panic has the mascots of the Yume Kōjō festival (a family consisting of siblings Imajin and Lina and parents Papa and Mama) as the main characters.

Other similarities?

Some elements of the Mario universe already existed in Doki Doki Panic before it was converted into Super Mario Bros 2, such as the Super Star, Coins, jumping sound and POW Blocks.

The rest of the characters, including the antagonist Mamū (Wart), were created by Nintendo for the game. Doki Doki Panic takes place in a book set in Arabia.

Although not developed as a Mario game Shigeru Miyamoto included in Doki Doki Panic.

major innovations that were present in the real Super Mario Bros. 2 (i.e., The Lost Levels).

Other changes?

In Super Mario Bros. 2 if a character has only one notch of energy he becomes smaller, which is not the case in Doki Doki Panic. In Doki Doki Panic, to really finish the game you have to complete it four times (each time with a different character). In Doki Doki Panic, once a character is

selected cannot be changed until Game Over. In Super Mario Bros. 2, it is possible to change

character after passing a world. In the remakes for SNES and GBA, the character can be

Changed by even losing a life. In Doki Doki Panic the mask-shaped enemy Phanto.

starts chasing the protagonist only when the protagonist leaves his room, while in Super Mario Bros. 2, Phanto starts chasing the character as soon as he picks up a key. In Doki Doki Panic, the waterfalls move faster than in Super Mario Bros. 2.

The change was made to reduce the risk of epilepsy. In Doki Doki Panic, an extra life was obtained by picking up an object with the shape of the protagonist's face, and the sound was similar to

That of recovering a Crystal Ball. In Super Mario Bros. 2, the 1-UP Mushrooms donate a life

accompanied by the standard classic sound of Mario games. In Doki Doki Panic, large tribal masks.

marked the end of a level. In Super Mario Bros. 2, they were replaced by the large masks of a

hawk. The small tribal masks of Doki Doki Panic

became mushroom-shaped blocks in Super Mario Bros. 2.

Doki Doki Panic's Overworld music is shorter than that of Super Mario Bros. 2.

Musical changes include the music of invincibility, in Doki Doki Panic full of Indian sounds. Music and sound effects have been adapted to the NES hardware. The lamps in Doki Doki Panic, used to enter Subspace, became magic potions in Super Mario Bros. 2.

In Doki Doki Panic, the boss in level 5-3 is a third Mouser, not the crab Chelo, as in Super Mario Bros. 2.

The Albatoss boss animation consists of seven frames in Super Mario Bros. 2 and two in Doki Doki Panic. In Doki Doki Panic it is impossible to run. In Doki Doki Panic the explosion of a bomb is.

"BOM" while in Super Mario Bros. 2 "BOMB." The slot machine has a green background in Doki Doki Panic, while in Super Mario Bros. 2 that background is a variation of the title screen. *In Doki Doki Panic the vegetables in the slot machine change as the world changes (e.g., pumpkins for world 2), while in Super Mario Bros. 2 they are always the turnips of the first world. *The Super Mario Bros. 2 manual describes Strutzi.

As a boy who thinks he is a girl. In later games, Strutzi will always be described as a girl, except in Captain Rainbow for Wii.

We could talk about other endless similarities and differences throughout the day, this quick comparison was introduced solely to quickly list the amount of work that passed under Miyamoto's hands.

How many elements steeped in history and fun were changed between the two titles!

How much programming has been undertaken by the various big "N" staffs!

How many sleepless hours and how much foresight of marketing for such an iconic and immortal character - Super Mario!

Behind great simplicity there is always immense, precise, complex work. When something

works well means that there are multiple elements behind it that contribute to its functioning so precisely. *So dear friends, let's go to the movies and thank big "N" for her immense work that has made her and continues to make her an important companion in our lives.

Till the next episode!

Ball & Chain

by Mic the Biker Novarina

NEW GAME

Release Date: June the 1st, 2022
Released by: DrMortalWombat

"It's a kind of magic," sang an immortal band in the mid-1980s, and I guess, speaking of the C64 and the like, they had it right. Always remaining alive in the hearts of fans, it now again has a worldwide scene of new games that we could only dream of in the golden years. Ball and Chain is among them, in a particularly unusual guise, edited by drmortalwombat. We find ourselves in the presence of a truly unusual game, of those that already in the golden age often peeped out on the various platforms of the period. After all, it is physiological: to make up for the limitations of the machines, ingenious and often diabolical games were developed.

The crazy plot

In this ingenious little game we impersonate an innocent bouncing ball. It is chained to an even heavier iron ball, an authentic stroke of genius. We will have to find a way to escape the gloomy dungeons of the empire of the spiked heads. Just think, there is even a dark story behind the game concept. In the deep, dark dungeons of the Spike Empire, a bouncing ball is held captive. It is chained to a heavy iron ball so that it cannot escape. But one day the bouncing ball encounters a gas canister that, by

inflating it, allows it to escape. Now don't ask me what kind of drugs or psychotropic substances are used by game designers to devise these hallucinatory plots. The fact remains that we will control the hero, that is, the gas-inflated ball, during the daring escape from the dungeon. The stroke of genius, we said earlier, is that the iron ball will restrict our movements, but it can also be used as a weapon.

The dynamics of the game

What we will have to do within the game is clear, which is to escape. Beware that the road to freedom will end when we go to hit against an enemy or are crushed by a wall. Pressing the fire button shortens the chain, having more precise control over the iron ball. Releasing the button pushes the iron ball in the opposite direction, being able to use it as a weapon. The game is one of those never-ending ones, getting harder and faster until we start wincing by losing our footing, dropping the ball. It's those hardcore "High Score" games: the score relentlessly increases the longer we stay alive. During our escape we can collect coins and stars, all to increase the score. Obviously we players are fond of these items that make us climb the leaderboard, but in the first few games I didn't understand why I always died badly. I thought it was psychological, record stress, but it wasn't. Coins give points without creating problems for us, while stars give us points, but they also increase the mass of the iron sphere. As the weight and inertia grow, it becomes increasingly difficult to untangle the levels. If we don't stop taking them, we are virtually stuck, with no way to rotate it or even lift it off the ground. Destroying an enemy causes an enhancement bubble to be released, with benefits tied to colors. Yellow allows us to attract coins as if we were magnets, gray is the cast-iron skin, meaning

it protects us for a short time. Then we can find the blue bubble, which is perhaps the most useful because it cancels all the weight and inertia of the bowl. Finally, the green, which slows gravity downward.

Graphics, Sound & Playability

Ball and Chain is visually really appealing: the graphics are beautifully colored and well-defined. The movement of the ball is pleasant and the control is realistic. This makes for fun and instinctive handling of the dynamics. The audio counterpart is clearly above average. His majesty SID is squeezed to the max, but this immortal processor the more it is put to the whip, the more it amazes us: the soundtrack is incredible! the discourse on playability and longevity is tied to your liking index to games in which there is no plot but you simply chase the high score.

Biker's Thoughts

For being a "high score" game hard and pure, the action is almost nonexistent. There is no shooting here, no peppering the screen with bullets. In Ball and Chain we more often have to plan escape than attack, and this risks things getting boring very quickly. But if you mentally set yourself up for a "never endin" puzzle game then trying to move forward more and more can become a good challenge.

It is good to speak in the present tense my fellow readers. It feels like a dream, something incredible. I never thought that as the years go by I would be able to speak in the present tense referring to games for my favorite platforms.

But that's the reality and even us obsolete players with a passion for writing have to bring ourselves up to date and see the fantastic new releases monthly!

OUR FINAL SCORE

GAMEPLAY: 90%

A high score game is always a double-edged sword, but there is no stress in starting the game and proceeding with it. The particular dynamic is not a hindrance.

LONGEVITY: 80%

There is really no end, and this can be a problem. To keep the game compact we won't see changes in the backdrop, the whole thing visually becomes a sort of loop. But the level of challenge remains good if you try to outdo each other!

NEW GAME

BOXX 4

But what an amazing character BOXX is? Really impeccably animated.

In fact to be honest the game as a whole is a really good title. It has a fast pace, lots of platforms to overcome, coins to collect to access the next paths, and colorful graphics. What about the soundtrack? Beautiful, in sync with the sound effects, and engaging.

I could hardly have hoped to see something so well done in recent times on the Amiga.

Let's face it, over the years the homebrew scene has given us many little gems even on the 16-bit Commodore, but decidedly fewer than on other platforms. Often we were faced with titles made with little care or technically "terrifying."

It happened even in the glorious Amiga years, remember?

Fortunately, the BOXX series is a playable, colorful and fun series.

This fourth episode improves the visual appearance and animations. As I said, the main character is a cute little robot animated really with great care.

The aim of the game is to finish the levels and move on to the next levels by collecting the most coins.

There are some well-done and rather "tenacious" Boss fights to deal with. Also nice is the ability to drive a small spaceship or the use of a gun (to be retrieved along the levels) decisive against end-of-world bosses.

BOXX 4 was built with Erik Hogan's increasingly efficient Scorpion Engine. Fast and quick loading on real hardware, compatible on any Amiga chipset (OCS, ECS and AGA). Also works properly in emulation, the file is in ADF format.

The few sore points are the over-similarity of some levels and the length of the game, but it is a well-crafted and highly enjoyable title.

by **Carlo Nithaiah Del Mar Pirazzini**
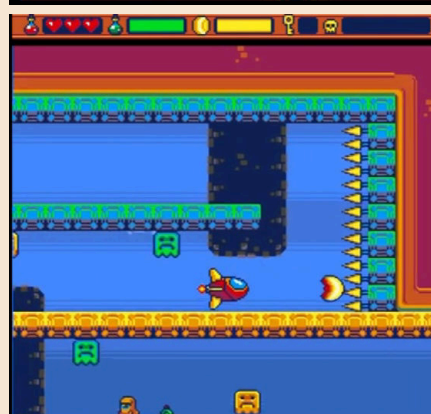
OUR FINAL SCORE

» Gameplay 90%
Excellent game controls, nice level structure, and great technical performance.

» Longevity 85%
Not super long but fun! To be tested on real hardware.

NEW GAME

GALAXIAN

Year: 2023
Editor/Developer: Plus 4 World/ Gaia
Genre: Shoot em up
Platform: Plus 4
Website: https:// plus4world.powweb.com/ software/Galaxian_Plus4

Galaxian is one of the early video games. Produced by Namco in 1979, it was the first in a long series of space-themed fixed-screen shooters. It is the first video game to use the Namco Galaxian motherboard and the first to have graphics based on the RGB color scheme.

Over the years it has been a little golden goose, virtually converted for every platform possible and imaginable. From 8-bit platforms to modern systems.
The game takes up the ideas of Space Invaders. One drives a spaceship that moves only left and right and faces fleets of insectoid-shaped alien ships. Unlike its illustrious father, the trajectories of opposing ships are more complex and unpredictable.

It is a title that was born out of and helps grow the Golden Age of arcade video games and introduces some small innovations to the gaming landscape. Namco itself, inspired, will create based on color and the deadliest trajectories of opponents the saga of Galaga and its derivatives.

The title found a worthy transposition in 1983/84 on C64 thanks to Designer Software, released on cartridge.

Only one platform was missing from the roll call. The only one that did not see a faithful transposition of the game namely the Plus/4.

Practically perfect. It's the 1979 game reproduced at its best.

Everything that needs to be there is there. Fleets of aliens, the spaceship, the right colors, and that typical early 80s style of gaming.

Nothing new, nothing more and nothing less.

It has to be so in the traditional way. Of course if you are looking for a game full of twists and turns this is not the one for you, but it is still a title to download and keep in one's play library.

by Giampaolo Moraschi

OUR FINAL SCORE

» Gameplay 80%
A classic shooter that is played in the most classic of modes.

» Longevity 70%
Eternal but repetitive. Suitable for enthusiasts.

ONESCAPE

Year: 2022
Editor/Developer: Vortador Games
Genre: Avventura punta e clicca
Platform: Atari XE/XL
Website: https://forums.atariage.com/topic/344872-onescape-game/

In 2045 a giant asteroid strikes and obliterates half of the eastern hemisphere of planet earth.

Destruction, death and a completely uninhabitable part of the planet.

Through it all, survivors migrate westward trying to rebuild their existence.

Initially, the people of the west respond positively, welcoming them with the utmost care and relief.

However, the influx was such that after a while the designated "Locations" could not accommodate the growing wave of newcomers. Governments decided to stop providing the necessary aid.

Armies were deployed and unprecedented massacres occurred. The situation on the borders became unmanageable.

Refugees infiltrated the general population. State borders fell. Anarchy, looting and food shortages ensued. The last remaining group, the CaC, decided to use chemical weapons.

Insane choice. The use of weapons manifested on the population a symptom of severe DNA degeneration and subsequent mutation into a barely humanoid form. The incubation period was different for everyone. There was no way to determine who was infected and who was not.

After it was discovered that the virus had been transported to Earth by the meteorite, an underground laboratory was built to develop an antidote. The vaccine was not tested until 2058.

Shortly thereafter, however, the laboratory exploded and all the material disappeared.

To protect the unaffected areas, a shield and numerous checkpoints were raised to detect the passage of mutant DNA and destroy the subject. However, powering the shield is very challenging and it is not known how long the resupply will last. However, a quick and successful completion of the mission could avert disaster.

Thus begins onEscape, a point-and-click subjective adventure for Atari XL/XE. It starts after a catastrophic intro that makes it clear how humankind is disinclined to cooperate even after the most terrifying of

Dead body of a scientist.

View of a destroyed city from a mountain ledge.
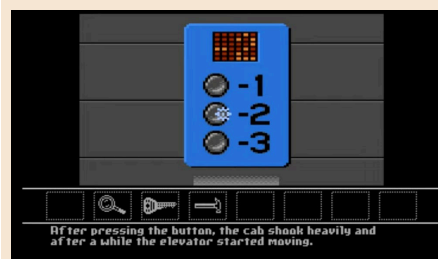
disasters.

It drops us into a mystery. The death of a scientist, restoring a shield and ... much more.

The game is a point-and-click adventure with a subjective view. Our character moves around exploring the game paintings. At the top is the picture of the level, below that is the menu where we will store found objects and where we can click to use them on certain occasions.

The on-screen cursor will show us and indicate everything that takes place during our exploration.

It is a well-developed title technically and with well-conceived and logical puzzles.

There is enjoyment in solving the adventure and one does so gladly, thanks in part to a good graphics compartment and a nice soundtrack. A title that amazed me and allowed me to appreciate a well-developed narrative and a good plot.

Perhaps a bit apocalyptic, but undoubtedly engaging.

You can download it for free from the link I put in the description and load it in emulation or on real machines.

There is also a really well-curated, limited-run "Box" version.

One of the best titles on Atari 8bit.

by **Giampaolo Moraschi**

Space between the legs. Of a table!

Light lathing hammer.

OUR FINAL SCORE

» Gameplay 92%
Simple but effective point-and-click game system and a well-developed storyline.

» Longevity 90%
Engaging and with well-calibrated difficulty.

Dead end of the corridor. There is a power box on the wall.

NEW GAME

REVENGE OF TRASMOZ

Year: 2023
Editor/Developer: Volcano Bytes
Genre: Platform/puzzle
Platform: Amstrad CPC
Website: https://volcanobytes.itch.io/revenge-of-trasmoz

Revenge of Trasmoz is a new title on Amstrad CPC by Volcano Bytes. In 2023 this is a brilliant title that frankly got me addicted. Yes, horribly addicted! I played it, played it and played it again for hours until I got almost to the end stopping at the second to last level.

A title available in digital and boxed versions. The latter features a beautiful box with well-kept graphics. There is a nice little manual and a number of interesting gagdets and I must admit that it is worth the purchase expense. Once loaded onto our CPC you get pleasantly impressed by the graphical style of the introduction. Effective and colorful super-deformed graphics. The story puts you in the cemetery of the cursed city of Trasmoz guarded by the evil wizard Mutamin, the immortal servant of the devil, who is plotting his revenge on all of you.

Our task will be to catapult ourselves into the catacombs and light candles through the sacred fire we will retrieve by killing our opponents. This fire will purify and clear the environment and allow us to reach the cursed wizard. Simply put, we will use our sword to kill the creatures and release purifying flames from their bodies. Once collected they are to be used to light the room by passing over the candelabra.

It sounds simple, but in all this there

is the hand of time. If during the level this expires, the wizard will appear to kill us. Kind of like what happened

in Bubble Bobble with Baron Von Bubbla. Levels go from simple ones to complex and crazy structures full of danger. It takes practice and a keen eye, but the feat keeps you glued to the joystick.

This title is a nice homage to some games of the past and takes cues from them particularly Bubble Bobble, but also Donkey Kong and other titles from the first wave of 80s platformers.

The levels are not so many (13 in total) but they are challenging and require a lot of practice.

Revenge of Trasmoz is a sequel to the Curse of Trasmoz for ZX Spectrum, but it differs in some game mechanics.

Turning to the technical section, we can say that there is a lot of good work behind it.

It moves well, there are colorful graphics and nice animations. Good use of colors and generally good graphics.

Sympathetic sound, minimalist but very atmospheric.

The game presents its strength in its two-player version, which is fun and brings into play dynamics absent in the single-player version.

A nice title to try that has the only flaw of not being very long.

You won't get to the evil wizard anytime soon, but 13 levels is actually a few.

by **Carlo Nithaiah Del Mar Pirazzini**

NEW GAME

SPACE STATION 23

What about all those aliens? How many years have they been trying to invade our Commodore 64? Exactly 40 years they have been trying to attack every point of our beloved game system and every time they are left with nothing.

But how come they are not tired yet? Simple, the C64 is still fertile territory and full of crazy developers who give us titles like this Space Station 23.

With a story typical of 1980s science fiction movies, we will be driving veteran Joe Pheonix to space station 23, which was hit by an asteroid and partially destroyed.

Here we will be tasked with recovering valuable energy resources present, repairing damage, and evicting some tentacled and eyed aliens that have arrived just from the asteroid.

Each level (and there are 10 of them) will have to be cleaned up thoroughly. All the material will have to be recovered (the sidebar tells us how much will have to be collected), and only after all this can you move on to a next level.

In all, there are 240 rooms to explore, full of traps, hidden objects and a barrage of aliens.

These can be blasted through our laser rifle though sparingly. And yes, kids! Our ammunition is limited and the ideal is just to destroy the eggs of the alien polypoids. Along the rooms, along with supplies and energy to recover, we will also find additional bullets.

Space Station 23 is a fun title that you happily load on the C64. It belongs to the kind of games that are complex in some stages but make you say
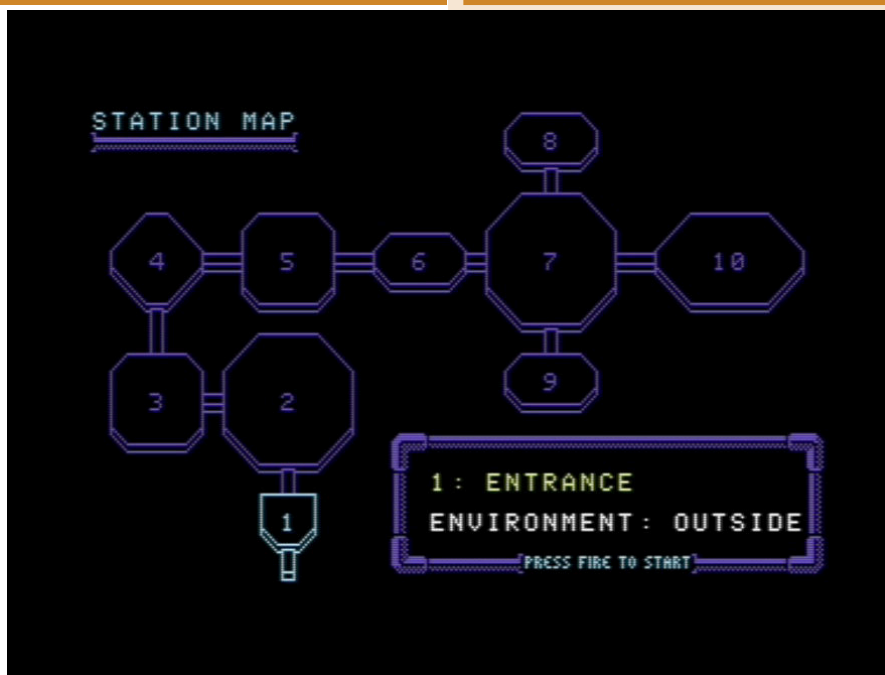
"come on, let's play one more game." Nice exploratory stages and very entertaining monster battles.

The graphics are simple but nice. Colorful and effective, easily recognizable on the screen with that Super Deformed style that I really like.
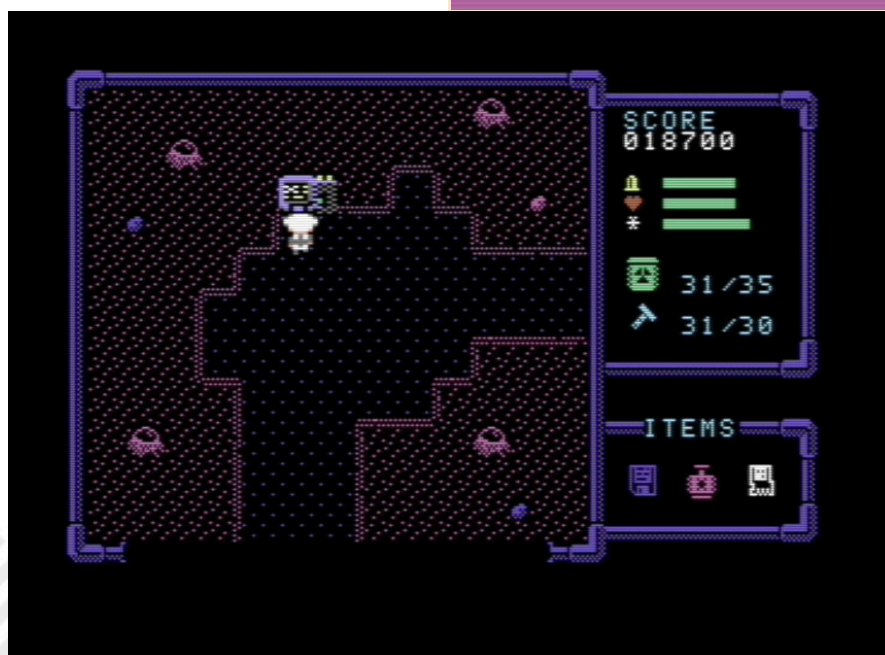
OUR FINAL SCORE

» Gameplay 90%
A fun title, easy to play and very addictive. Well-crafted levels and a well-structured increasing degree of challenge.

» Longevity 90%
10 levels, 240 rooms, lots to do and lots to see.

The game runs on real hardware, on TheC64 (maxi or mini it may be) and in emulation on VICE. It runs in both PAL and NTSC modes, but without the optimization for the latter.

Sympathetic and minimalist sound that will immerse us perfectly in the adventure.
Each level allows for a reasoned approach to dealing with aliens and collecting items. It is well calibrated in terms of difficulty and puzzles.
It lasts and makes the fun last, and I can safely place it among the best titles of this 2023 for C64.

by **Carlo Nithaiah Del Mar Pirazzini**

NEW GAME

LUNARK

Year: 2022
Editor/Developer: Canari Games
Genre: Platform
Platform: Nintendo Switch, Xbox Serie X/S, MacOS, Playstation 5, Playstation 4, Windows.
Testato su: Nintendo Switch

Lunark sends players into the retro-future we all thought would be the 1980s.

It brings to life a world of flying machines and corrupt mega-corporations with vivid pixel graphics and rotoscope animations. In its best moments, Lunark is an effective love letter to cinematic platforming, a game genre that doesn't get much attention in recent years.

From time to time, however, it serves as a reminder of how far the game design has come.

Loading Lunark is like stepping into a time machine. Everything in the game, from the music to the plot to the overall aesthetic, is inspired by the cine-platform genre.

Unlike Mario, who can turn in mid-air to make jumps seem easy and physically impossible, our hero Leo's movements are rooted in some aspects of reality. He has momentum and weight to him as he traverses the caves, factories, and prisons he finds himself exploring.

This design philosophy will seem familiar to fans of the original Prince of Persia game or even the Oddworld series, but it will certainly take some getting used to for all those who do not chew the genre.

There is a slowness in Leo's movements that will surprise modern players, particularly in the way he turns or in his inability to deal with multiple jumps in quick succession. The only time it becomes frustrating is the slight delay between pressing the jump button and the moment Leo actually gets off the ground, resulting in jumps that seem sticky. There will be a lot of deaths that are the result of Leo simply

running off a cliff rather than jumping at the last moment as planned.

In most games, we would attribute this to poor design, but in Lunark this is all part of the cinematic platforming experience. Everything is meant to remind you of the 1980s, which is when games like this were more common. The imprecise controls are, in this case, a feature rather than a bug and should not deter you. It takes some getting used to, but once you do the game is a fair but challenging platformer.

It is not just the gameplay or graphics that brought us back to our gaming
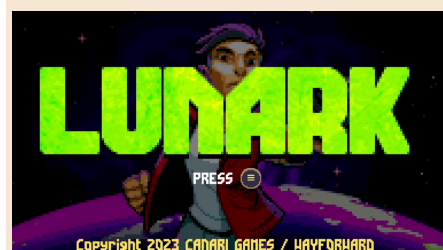
roots. The plot draws strong inspiration from classic science fiction movies such as Total Recall or Blade Runner. Humanity has moved to a distant planet by turning the entire moon into a deep space colonial ship. Leo works with a man named Gideon, traveling to places to collect artifacts and bring them back for research purposes. Of course, things are not exactly as they seem and soon Leo is on the run and must uncover the mystery behind why he is being hunted. There are roving gangs of sword-wielding robots terrorizing neighborhoods, a totalitarian regime to be overthrown, and a conspiracy on the moon to be uncovered. If it were not so well executed, it would be over-the-top and too 80s. Developer Canari Games has managed to make the game a loving homage to the era.

Lunark's pixelated graphics do a good job of bringing the different characters to life. Even with the basic aesthetics, you will immediately recognize different enemies and NPCs that populate this world.
One sticking point is how inconsistent the respawn points are.
Early levels seem to have them more frequently, while later levels will have you repeating long platforming sections over and over again as you try to figure out the pattern of one of the boss fights.

Cinematic platformers will not be for everyone, and that's okay. Those who crave an unashamedly retro challenge will find much to love in Lunark. The story pays homage to some of the best sci-fi movies of all time, while the gameplay adds a new twist with each

completed level. The retro graphics look good on Switch, particularly in handheld mode. Once you understand the sticky jumps and the weight Leo carries when he moves, you'll be ready for a solid adventure to the moon and back.

by **Roberto Pirazzini**
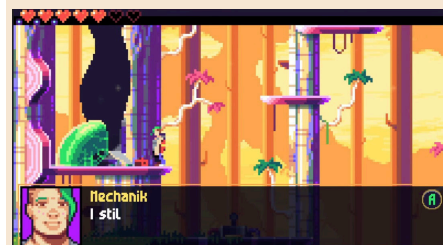
NEW GAME

ZETA WING II

The terrible insect/mutant aliens return and they are always hungry for conquest. They return on Commodore 64 and thanks to the work of Sarah Jane Avory, developer, graphic designer, writer ... eccentric and visionary woman with a strong love for video games.

Sarah Jane worked in Imagetec, a development team that was responsible in the glorious 80s/90s for the conversion of the Gemini Wing coin-op. The C64 conversion did not do justice to the technical capabilities of the machine, and after 40 years (or so), here is her new attempt.

Indeed, this is the second time of such an enterprise, because the first one was in 2020 with Zeta Wing. The progenitor of the saga that stunned critics with visual technique and tight gameplay.

It took home the RNG Gamer's Choice Award 2020 and Indie Retro News Budget Game of the year 2020. It took good marks around the magazines (we also awarded it a 90%/90%) and became one of the most popular titles of the period.

After three years of development and various work here comes the second episode. We have the aliens as already mentioned, seven different and challenging worlds, the ability to choose three types of difficulty...there is a mighty parallax scrolling that shows off technical skills, we have 12 types of power ups for weapons, supports the second button...in short there is lots and lots to see and play. The first impression is that we are looking at a PC ENGINE shooter. Not

so much for the graphics, which are beautiful and well animated, but for the speed as a whole.

The sprites hark back to past classics such as Galaga or the like, and there are indeed many of them on the screen. It never slows down. A sign of wise usage of the Commodore 64 hardware features.

Again, the reference to Gemini Wing is strong, and if, like me, you were a fan of the original title, you will appreciate it. It is not an impossible title let's be clear. It certainly needs manual dexterity and a sharp eye to tackle, but it is not a killer shoot em up. With a little practice you will complete it to your satisfaction. In all this grace, however, I would like to emphasize a detached soundtrack. Let me elaborate. I found the melodies unimpressive and unappealing. They seem "detached" from the sense of play. Apart from all this it is a title to have in every collection.

Another masterpiece of this talented programmer and game designer.

by **Carlo Nithaiah Del Mar Pirazzini**

NEW GAME

THE CURSED KNIGHT

Year 3122, you are Kalder, a genetically modified and enhanced human being who, in an attempt to bring his beloved princess back to life, embarks on a near-suicidal border journey against terrible space pirates.

The Cure Knight is a title from Broke Studio and is a nice hybrid, that is, a game that mixes different genres within it, the most present being platformer, action and shoot em up although at one point we will be driving a motorcycle. All of this is enhanced by an, albeit limited, possibility to grow one's character through enhancing power ups.

The game includes the ability to take advantage of both the traditional 3-button pad and the 6-button pad, and the controls are divided into 2 parts: those for the shooter sections and the platform/action sections.

In the shoot em up section we have a button dedicated to fire on the right and one that allows us to shoot on the left. A third button is dedicated to weapon selection, which can be upgraded and improved during the game by collecting some power ups. In the action/platform stages the weapons and selections remain the same as in the shooter version, however, there is no longer the ability to fire left or right. A jump button is present, which combined with the directional key allows you to slide.

As I mentioned, the character during his journey can be upgraded. We can increase the jumping characteristic, increase lives, acquire an extra special weapon, retrieve a sword that allows us to hit opponents up close, and retrieve the gravity enhancer, which is useful for walking in impossible places.

The game play is classic. You have to pass the level and its obstacles and destroy the boss at the end of the level (some are amazing) in order to access the next one.

A password system allows us to pick up the game where we left off.

There are three difficulty levels, and I must admit that all three are perfect. The first one allows a normal but still challenging experience (with infinite lives), the second one raises the difficulty bar with only 3 lives and 2 continues, and the last level, the insane mode, from only one life.

There are six worlds, and each world is divided into different levels.

Delving deeper into the analysis of the game, we start with the graphics. The Cursed Knight has a very high level and high value graphical compartment. It is very varied, artistically incredible and has many remarkable graphical aspects such as lighting effects, distortion effects and numerous multi-layer parallaxes. Remarkable is the inner level inside a monster's body with an impressive 3d-like effect.

The only note is the number of colors
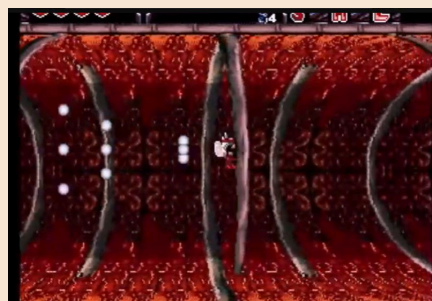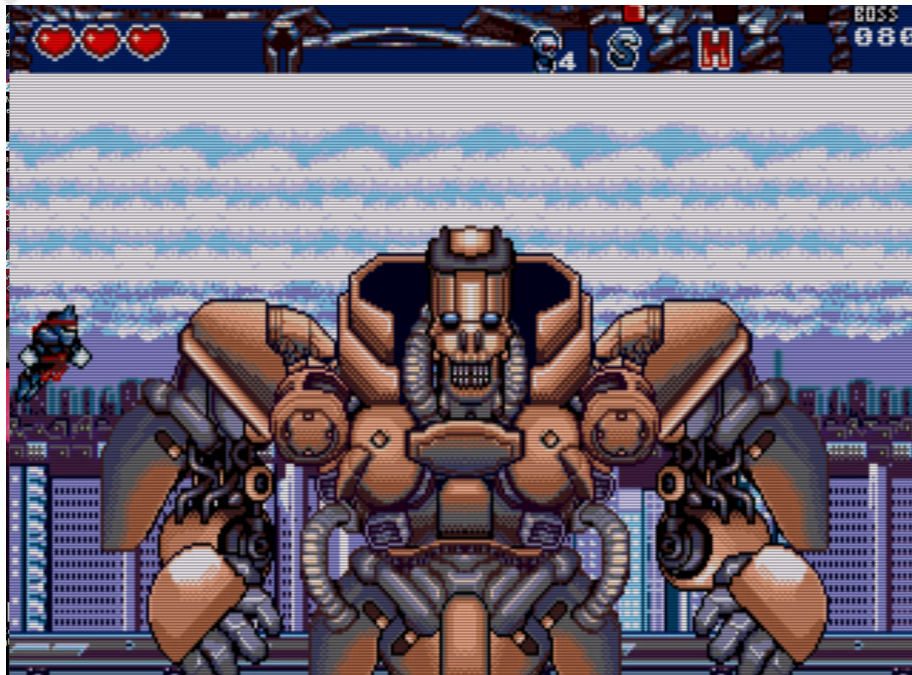
» Gameplay 95%
A well-designed platformer. Responsive and configurable controls. Different gameplay setting between shoot em up and platformer versions. Nice "motorcycle" version.

» Longevity 90%
A challenging and enduring title.

on the screen, perhaps not very high but impressive.

The sound is among the best ever heard on the 16-bit console. Intense and impactful and with excellent effects.

Playability: The Cursed Knight is a complete game with many sections or subsections to maintain variety throughout the game. The platformer and shooter sections are well structured, and I find the ability to take advantage of gravity an enhancing plus to the product.

Responsive controls, excellent handling of sprite collisions, and a perfect difficulty curve.

A game that I really enjoyed especially the platform sections where the programmers used a lot of creativity. The boss fights are incredible.

Overall it is an excellent video game, one of the best ever released on Megadrive.

It is a long-lived title that requires commitment but does not stress and makes you want to keep playing until you complete it.

Available for purchase digitally and in a physical version on cartridge complete with booklet and some interesting gadgets.

The title link is as follows: https://www.cursed-knight.fr/cursed-knight-en.php

I conclude by strongly recommending the purchase of what is undoubtedly one of the best recent games for Sega's 16bit console.

by **Carlo Nithaiah Del Mar Pirazzini**
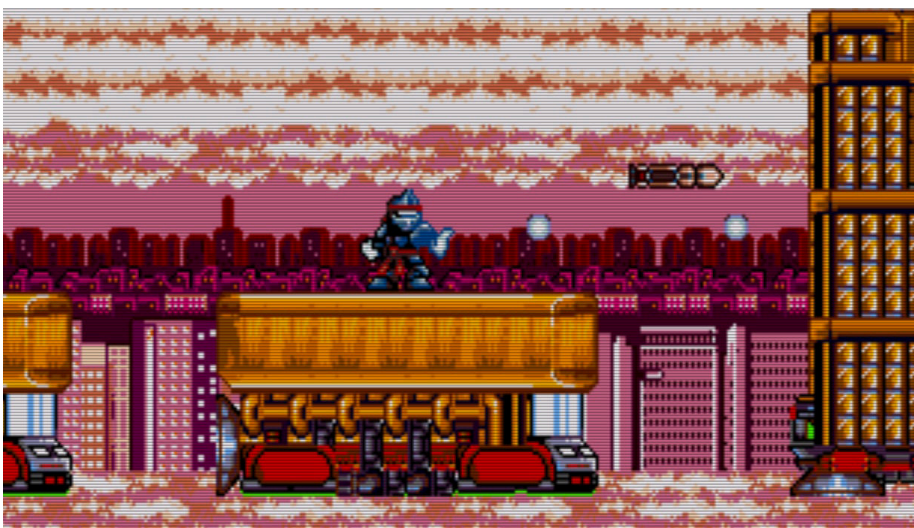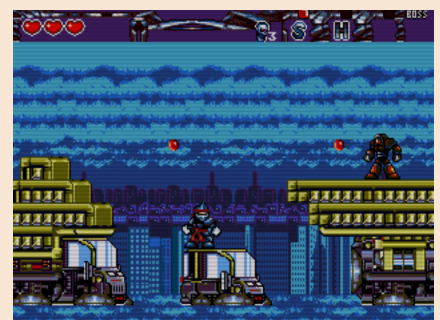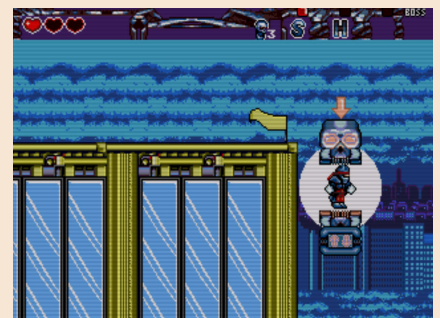
NEW GAME

TEXT QUEST

In the landscape of shooters, platformers, puzzle games and the like, every now and then something different stands out. Text adventures, now called "IF" (Interactive Fiction), are experiencing a second life, and so we gladly turned our attention to Text Quest, a text-based dungeon crawler.

In this game for Commodore64 FewBit (the author), has succeeded in recreating the atmosphere of the very first text-based RPGs that appeared on the PLATO platform, with its distinctive warm tones typical of amber phosphor monitors. Even at first glance the choice proves to be apt and compelling: monitors of this type were quite common in the 1980s, so the game will take you down the pleasant path of nostalgia from the very beginning.

For those unfamiliar with PLATO (Programmed Logic for Automatic Teaching Operations), let us recall that it was the first generalized computer-assisted instruction system.

It was first used by the University of Illinois in 1960 and, by the late 1970s, supported several thousand graphics terminals distributed around the world, running on nearly a dozen different networked mainframe computers. If you think multi-user computing is a recent invention, you are far from the truth, as many "modern concepts" were first introduced with this platform: from

touchscreens to music devices, from character editors to newsgroups or real-time text chat, PLATO was truly innovative. Video games, including dungeon crawlers, were "just" one of its many features.

Returning to TextQuest, in the game we assume the role of the hero of the hour, engaged in exploring a dungeon full of monsters. The dozens and dozens of settings are often home to
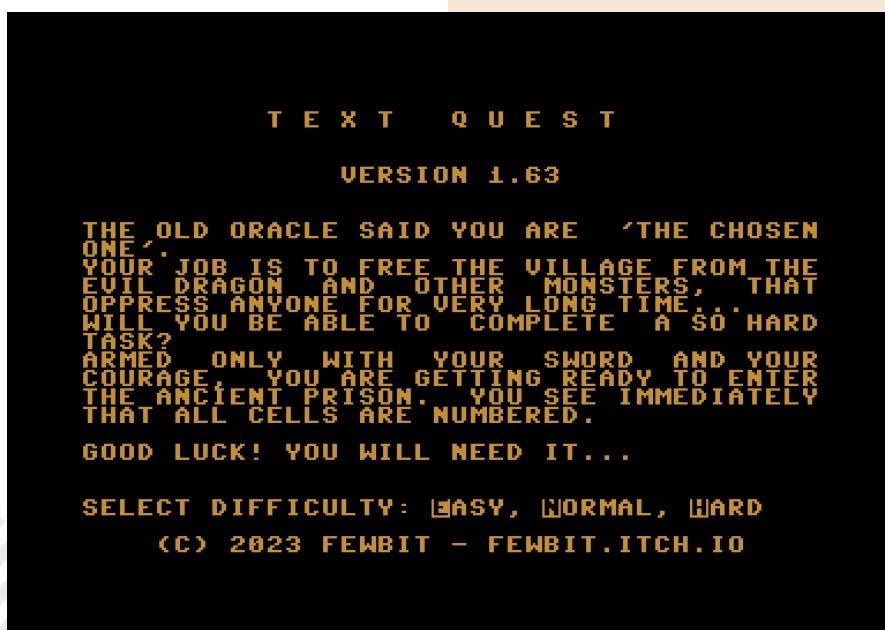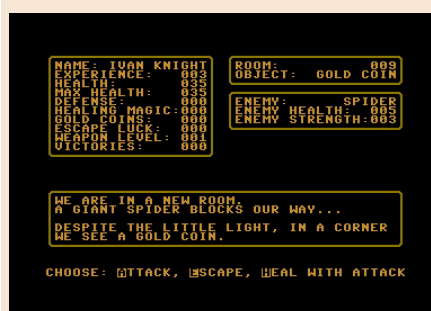
the most hideous creatures that, if eliminated, will open the way to additional treasures and rooms. Among the discoveries, one comes across armor, healing potions and, of course, money. Although at first (especially when played at an easy level), this crawler may seem like a piece of cake, it requires the player to engage in combat with proper strategy, which means you have to think and decide whether to attack, heal or flee based on your own stats versus those of the enemy. Avoiding combat is no disgrace: if the opponent is too strong, you can retrace your steps, visit other settings, find new and more powerful items, increase your stats by fighting weaker enemies, and try again, just as you would in a graphical game. Failure to do so will result in certain death. You have been warned!

As far as the layout of the GUI is concerned, the 40-column screen of the C64 is not so "spacious," but the author has managed to develop a simple and very effective system that changes dynamically depending on the situation: the upper left part of the screen always shows your hero's statistics (experience level, current health status...); the lower part is used to display room description (during exploration) or combat status; the upper right part shows the current room number and whether or not it contains useful items; finally, the middle right part of the screen shows a compass dial with available directions (during exploration) or enemy and hero statistics (health, strength, damage caused...) during combat. At the end of the combat the statistics are updated, while at the end of the game a comprehensive summary is shown. As an example, during one of my matches I dared to fight a Dragon way ahead of schedule and the result was, besides my untimely demise of course: score 160; explored 37 out of 103 rooms; won 17 out of 45; collected items 26 out of 75.

Text Quest is a game unlike any other, which I recommend you play even if you are not a fan of the genre. In case

https://en.wikipedia.org/wiki/PLATO_(computer_system)

you do, take your time, consider carefully before engaging in combat and, most importantly, draw a map! The game, available for download in both English and Italian, has three difficulty levels: easy, normal and hard. Have fun!

BONUS: We caught up with the Text Quest programmer who was immediately available to tell us a little about himself and his game.

WHO I AM
Today programming is just a hobby for me, but from a very young age I have been a home computer enthusiast. The first machine I had was a Commodore VIC 20 (already quite obsolete for the time), followed shortly after by a Commdore 128, later Amiga 500 and then several PCs.

As a young boy, the choice of a technical institution with a "programming" orientation was almost obligatory; in those days there were not many schools that offered the possibility of learning programming. There I became acquainted with Pascal, which I later never abandoned completely, because a few years later I chose to develop in Delphi (which has Pascal as its reference language).
And TextQuest is also developed in Pascal.

HOW THE IDEA WAS BORN
When I was in elementary school I loved to range in imagination and imagine worlds populated by dragons and monsters of all kinds, so much so that I kept a secret notebook where I wrote about the adventures of a knight-errant fighting fearsome monsters... Needless to say, a few years later I devoured Tolkien's trilogy almost in one go.

With the Commodore 64 (or rather C128 in C64 mode) I played so many text adventures that as such, contained no graphics. But for me, the absence of

on-screen illustrations was not a limitation, I simply did not feel the need for them: "the graphics" I imagined...

More recently I discovered Zork and even more recently I came across adventures written for PLATO systems or those for Commdore PET, dating back to the 1970s. These already contained the typical elements of tabletop role-playing games, of which unfortunately I am not a great expert; however, this did not deter me from the project of trying to make a text-based dungeon-crawler (TextQuest precisely) for the most iconic and beloved home computer of the 1980s: the Commodore 64.

THE GAME
The game is an extremely simplified transposition of what could be a board game or book-game; including turn-based combat and (virtual) dice rolls. The development was all done live, except for some small offline sessions related to hidden rooms. Users in chat during the live streams provided me with countless hints and ideas that I almost always decided to implement. Unfortunately, all of this took place in the very little free time my job allows me, mostly at night. Often, caught up in the implementation, the live broadcast went beyond 3 a.m. ... But no fatigue: all this is fun for me!

This program actually cannot be said to be finished: despite releasing continuous updates, I have a constantly growing list of things to implement; also accomplices are suggestions from friends. Development continues (almost always at night) on my Twitch channel (twitch.tv/fewbit). In addition, there are already a couple of ideas for upcoming projects.... Stay tuned!

by **Gianluca Girelli**

OUR FINAL SCORE

» Gameplay 90%
A true dungeon crawler, despite its peculiar textual aspect. The descriptions of the locations could perhaps be more thorough, not an easy task on only 40 columns. Overall, a pleasant and clean experience that will appeal to fans of the genre and beyond.

» Longevity 90%
So many rooms to explore, so many objects to find, so many enemies to kill, and three different difficulty levels. It will keep you entertained for days.

NEW GAME

BRUXOLICO

Bruxolico had an 8-month gestation, a major project and a platform made with a lot of passion.

There is everything inside this title. There is Franklin Cascaes folklore and cultural references, callbacks to some titles like Ghost n' Goblin or Maldida Castilla, there are pure platforming levels, horizontal and vertical scrolling sections, numerous boss battles, and even a small shoot em up segment.

It is a project born in the summer of 2022 and seeing the light of day these months (March for the writer) and it is beautiful to look at. It is reminiscent of pop-up picture books. You open Bruxolico on your ZX and enter this story with minimalist and colorful graphics and are enraptured.

It can be downloaded for $10. Inside the file you will find the game perfectly compatible on real or emulated hardware, a pdf with the entire story, illustrated narration, and a series of MP3 "audio stories" that will immerse you even more in the adventure.

The title is divided into several .tap files representing the Sides of the game cassette.

The story is about the little Phantom Ox, a creature who has to clean up the world from some evil forces.

The little ox will be able to scamper between five worlds, face the wackiest creatures possible and defeat 10 bosses throughout the game.

The most striking thing is the appearance. Technically, it is a dreamlike journey in a book with brightly animated colors.

I absolutely love the look Amaweks has given the game. Perhaps one of the best looking titles on ZX in the recent period.

There is also good sound, but the strong point is the gameplay and variety in general.

Lots of sessions, all different and never repetitive that are worth the $10 expense and will keep you entertained.

I have become fond of the little Phantom Ox now it is your turn.

A gem for this 2023 on ZX.
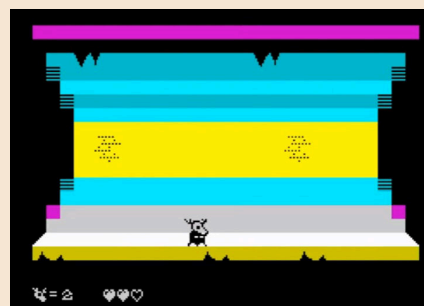
by Carlo Nithaiah Del Mar Pirazzini

OUR FINAL SCORE

» Gameplay 95%
Well structured and with lots of variety One of the best on ZX.

» Longevity 85%
Tough but not difficult game. A good book to play.

NEWSSTAND

Year: 2023
Editor/Developer: AGPX-Phobos
Genre: Action game
Platform: Commodore 64
Website: https://agpx.itch.io/news-stand

Glorious years the 80s (and the 90s)... Who remembers them? Legendary, carefree, colorful times - at least for those who, like me, were kids and went with their weekly allowance to the newsstand to buy games for the Commodore 64.

Well, yes, this used to happen in Italy, too. You could find so many titles for our beloved home computers and they were all... Pirates!

A strange thing that is too long to explain, suffice it to say that at the legislative level an actual anti-piracy rule had not yet been passed.

All that said, it was a beautiful experience. The journey from home with one's pocket money, arriving at the newsstand and buying the improbably named magazine trying to figure out what was in it.

Here, all of this is relived in NewsStand, a fun and well-crafted action game recently released on C64.

It's really about doing what we were saying: leaving the house as young Joseph with his own pocket money and trying to buy the legendary games at the newsstand. But in all this there are added dangers and absurd difficulties.

The dog chasing us, obstacles of various kinds, dubious characters who will get in our way. But we are "heroic video gamers" and nothing scares us.

NewsStand is a tribute to that period and is a simple and fun game that has given me a few moments of hilarity and amusement.

Graphically it is neat and the animations (beautiful and fun) were made by Phobos (the graphic designer) through the C64 Graphics Maker, a rather interesting program that allows us to work on pc and then convert our graphic designs into the best possible format.

There is so much attention to detail, and the makers are keen to point out the time and type of work done in the graphics department (you will find a brief story of how they made the game on the itch.io page I linked in the bi box). It is a tough as hell title. It leaves no chance for casual players and requires precision and excellent reading of the level to be tackled. It may seem limiting but I assure you that it will keep you glued to the joystick this kind of approach.

Despite the difficulty (but we are men and heroes, and on Commodore we faced so many similar challenges) NewsStand is a title that I urge you to download and support.
Nostalgic, loving, damn difficult.

by **Roberto Pirazzini**

NOX ARCHAIST

NEW GAME

The more video games chase the next phase of their supposed progress, the more we seem to pine for the past. Nothing makes this more obvious than the growing popularity for our retro systems, in which developers young and old are making absolute gems and reinventing a legacy that never really dies, but it is instead increasingly being rebuilt and in rebirth.

An extreme example of this generational trend is 6502 Workshop's Nox Archaist, a 2020 title that is receiving its first expansion these days (we will talk about her as well). Upon entering the game we were fascinated and impressed by the fidelity with which it reproduces an early 1980s gaming experience in both presentation and interface, from blocky pixels to blurry "old crt" style fonts.

Although the title is playable (in emulation) on Windows or macOS, it was written entirely on Apple II. It does not imitate a style from a bygone era, but was created with the same capabilities and constraints of the platform in the style of other similar titles of the period.

The title was created to be played on real machines, with 128k memory and a pumped-up system, but on machines from our past.

It is a role-playing game of the pure kind. That catapults us into a world of monsters, magic and intrigue. Basically it is like a sequel to the titles of the time, particularly Ultima and Bard's Tale. A sequel to these gems. It is so much a nod to the glorious days gone by that we will find some level-headed non-player characters

during exploration. We will meet Steve Wozniak (the designer of Apple II) in a quest or discuss with Sir Richard Garriot in his "Lord British" alter ego. The style of play is that of the time but with some modern, less cumbersome mechanics. A ploy to ferry the player into a more comfortable game environment.

NOX Archaist has "crude" graphics and its "biip boops" based on speakers of the original hardware. But it is an apt and, paradoxically, varied technical context.

It is an investigative game. Sent by Queen Issa to investigate a mysterious cult taking hold on islands, we will be

captured by our enemies and imprisoned on a ship. We will suffer a shipwreck and from that point on our adventure will begin.

The user interface is well structured as is the character creation. Nox is a worthy successor to the Ultima tradition and will leave you playing for hours immersing you in a great and beautiful adventure.

These days (April 2023) the "Nox Archaist Lord of Storms" DLC has been released, an expansion that adds 20 hours of gameplay, a flood of new puzzles and challenges.

There are some new features that enhance the game experience such as character customization.

In short, dispassionate advice are two titles not to be missed if you love the genre.

by **Giampaolo Moraschi**

NEW GAME

CYBERPUNKS 2
NEXT GENERATION

Year: 2023
Sviluppatore: Mutation Software
Genre: Shoot'em up
Platform: Amiga

A few years ago, as we all unfortunately know, the entire Planet and our very lives were put on hold by a terrible pandemic. Stuck at home for a long time, many of us found some relief in returning to old hobbies and passions; some played games, some coded...

Personally, I don't know if this also applies to Mutation Software, but they are certainly back with overbearance to bring joy into our lives with their fantastic games.This time it is the turn of CyberPunks2, a direct sequel to the game developed by Mutation Software and published by Core Design in 1993. As the author says, "CyberPunks 2 Next Generation was written for the Amiga A1200 and CD32 systems. The game was designed and developed in alternating stages over a period of about 1750 man-hours from 2020 to 2023. It is written 100% in 680×0 assembly language. Now it is mostly a hobby, but it was a lot of fun to create this game once again on Amiga. Many hours were spent fine-tuning it to make it as fun and engaging as possible for players."

After spending a few hours in the game, I can tell you that it delivers exactly what it promises: big (and graphically inspired) levels, plenty of enemies to take down, a particular fireteam that you'll love, and mission objectives that are fun to achieve. Not to mention the brilliantly revised look of the protagonists, as you can see by comparing the images above with those in the preview.

That said, let's take an in-depth look, beginning by getting to know our cyber-marines, all of whom bear the names of well-known figures from the Amiga scene.
Roar Muto: Primarily a science officer, he is the result of a near-fatal self-

mutation experiment in an attempt to gain superhuman strength. Possessing enhanced stamina but now forced to wear a cybernetic mask to breathe, this battle-hardened space marine brings leadership and computer terminal hacking skills to the team.

Tony Skullz: A half-human, half-droid cyborg whose extreme damage suffered in battle in the past caused many cybernetic implants to be fused to his body in order to survive. He will help inflict a lot of damage as the team's defense and reconnaissance specialist. He is nicknamed "Skullz" for his total cybernetic implant.

Moya Blaze: The squadron woman is a space marine who is very experienced in combat. Her additional skills include squad reinforcement and advanced laser weapons training. Her legendary cyberpunk mother "Bee" took down the huge robot RD98 during the droid uprisings more than 3 decades ago! She is always by the team's side in battle.

Several options for one or two players are provided. It would have been nice to have the option to choose the preferred avatar, but memory occupancy issues had to be taken into account.

Your team will land at the beginning of the mission with a spaceship, and the game will begin when it has departed. The first mission will be to rescue a "certain" AmigaBill, held captive on the rooftops of New New York.

The gameplay is simple and effective: move the characters through the various levels and collect the many pick-ups and bonus items found in each new level. From weapons to medipacks to keys, you will find everything you need to get through each level. Fight against many strange alien enemies to advance in the mission and also try to collect as much cryptocurrency and points as

possible. The team's energy bar and inventory are displayed at the bottom of the screen to provide a quick visual aid on the team's status and items collected. Items are removed from the inventory as they are used and total mission attempts (lives) can also be tracked.

Strange as it may seem, I did not actively follow the project until recently and so, although I knew the capabilities of Mutations Software, I was not prepared for what I found. The result far exceeded my expectations, thanks to engaging gameplay, well-designed levels, iconic avatars, and hypnotic music...in particular, as for the first level, I loved the look of NNY underneath and moving around looking for a way out. Where the hell did AmigaBill go?

As mentioned, to traverse each level the team will need to collect various colored keys for security doors and bypass circuits to open the many doors and force fields scattered throughout the game world. In addition, access to terminals will allow for weapon upgrades and the purchase of medikits, something that is absolutely necessary before facing the big bosses. Otherwise, the mission will be in jeopardy, as will be seen in a moment.

www.MutationSoftware.uk

Examining the terminal screen, one interesting item can be seen: decoding the key disk. As stated in the user manual, "There is only one in the entire game. If found and brought to a terminal with the right amount of credit, it will reveal a secret message once decoded. The disk is destroyed after use."

I strongly recommend that you do exactly as instructed, at least once, because it will lead to unexpected (and rather hilarious) results.

Returning to our first assignment, after exterminating a substantial number of horrible creatures, I managed to reach Bill at the top of the last rooftop. The boss fight was challenging (mostly because I suck at these games), but I still managed to pull it off. Note the amount of health remaining at the end of the fight--the team is almost dead, but Bill is safe, so he can keep streaming and cheer us up!

At the end of the mission, a numeric code is provided that allows the player to skip an already beaten level and tackle the new one. I will now post pictures of a couple of other levels, just to show you how different (and beautiful) they are.

As stated in the manual, there are currently some problems with accelerated Amiga systems, whereby you notice slowdown while playing the game. In this case, just go to the options menu and disable the CPU cache ("CPU caches off if slowdown"). Other than that, I did not experience any problems while playing the game and look forward

to playing again.

From a more technical point of view, the present test of the game was performed on Cloanto's AmigaForever emulator; subsequently, a thorough check was made on a real A1200, with an 8 MB FastRAM expansion (not required by the game specifications) using floppy disks as media.

To develop the game, Mutation Software used several tools, including:

Encoding: Sublime Text, WinUAE, Devpac 3, Hex Editor and Tiled;
Graphics: DPaint 3 and 5, Converter (custom tool), PS, Disco Diffusion AI, MidJourney AI, Blender;
Sound: Protracker (Amiga), Protracker (PC), Cooledit, Sound Snap.
Finally, the screen resolution was set to 320×240 Dual Playfield AGA and 320×256 (256 colors).

Now, if the above is still not enough to convince you to try CyberPunks2, I invite you to take a look at the box and gadgets-I am sure you will change your mind. The game will be available for the A1200 and CD32, both in digital and physical (3.5 "floppy/CD-ROM) formats.

30 years later--are you ready to lead the next generation of CyberPunks on even more dangerous missions in space and beyond? Battle relentless swarms of alien creatures with your team of cyber marines and restore order to a chaotic planetary system.

by **Gianluca Girelli**

OUR FINAL SCORE

» Gameplay 90%
A direct sequel to the original Cyberpunks and one of the best Amiga shooters of recent years. Engaging and addictive, it will keep you entertained for hours. It also features some fantastic Easter Eggs!

» Longevity 80%
Five levels is not that many, although it is sort of standard today. Difficult, but not to the point of being frustrating, as long as you spend your in-game money wisely to upgrade your team.
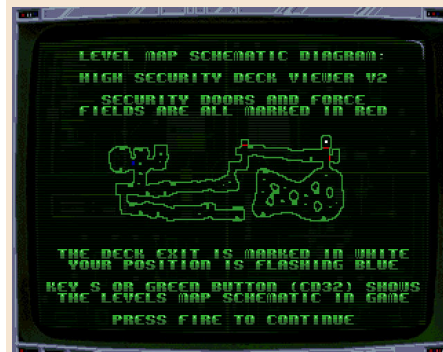
NEW GAME

MAD HOUSE

A treasure is well guarded in the large house called Mad House. This hoard is coveted by many, and so mice, cats, guard dogs and other vermin have been placed to protect it...

Of course, this assortment of animals could not frighten our protagonist who, armed with a van and a lot of patience, decided to steal it, one piece at a time.

Mad House is the latest effort by Italian developer GameCast for the MSX2 computer platform.

The game dynamics are very reminiscent of the more famous Bagitman for Commodore 64. As in the game for the Commie, we will have to steal treasure by taking a lot of money at a time and bringing it into the van (on the C64 it was actually a wheelbarrow).

In doing so we will have to avoid the animals that will try to block our way. Their touch is obviously lethal.

The gameplay is simple and intuitive; once you understand how to move around, however, it is easy to avoid the "guards", so it can happen that after a while it can be repetitive.

Since the game proves to be well programmed, smooth and without hesitation, we would like to suggest that the developer could create an updated version of the game with some additional pitfalls to increase its longevity.

The game entered the popular MSX-Dev23 competition and can be played online via the File-Hunter site at this address:
https://www.file-hunter.com/MSXdev/?id=madhouse

Let's wish GameCast good luck for the contest!

by **Francesco Fiorentini**

OUR FINAL SCORE

» Gameplay 70%
A decent platformer, fast-paced and well programmed. Intuitive and pleasantly entertaining.

» Longevity 65%
Unfortunately, the pattern of play is always the same; in the long run it may become repetitive.

SKYBLAZER

Year: 1994

Editor/Developer: Sony Imagesoft

Genre: Platform

Platform: Super Nintendo

Since having access to my father and Uncle Nith's library of Super Nintendo titles, I have asked myself: what is my favorite platform game? Many of the big "famous" ones are on the top list of all the retrogamers.

I love Super Metroid, Super Mario World, Castelvania IV, Mega Man X, the Donkey Kong Country saga, Earthworm Jim and.... this Skyblazer... Hey, wait a minute, what is Skyblazer? What can I say, I'm a newbie but I'm told from upstairs (my father and Nith) that it is one of the best titles ever made by Sony around the early 90s for Nintendo's console.

It has a story related to East Asian mythology and thus has a very intriguing spicy flavor. An engaging story and graphics that grabbed my heart.

The graphics are fantastic! It looks like a Japanese animation file, with fantastic colors, a myriad of different enemy designs, very scenic backgrounds and crazy lighting effects. Every level is different, you will fly through trees, chase enemies through leaves, take flight in the sky and so much more.

A fundamental law in good game design (whether it is a video game or a role-playing game) is to have a great atmosphere, and I must admit that Skyblazer never shows a boring point. The monsters are among the most bizarre and strange things ever seen on SNES.

I don't know much about Japanese or Asian folklore, but there really is a diverse and crazy bestiary.

Then there is the hero of the game, Sky. Drawn like Son Goku from

Dragonball with almost the same color scheme and hair. A choice probably dictated by the popularity of Akira Toriyama's popular brand in Japan at the time. Sky is as charismatic as Goku but more reckless. He has rather nice jump and fall animation and sports a lot of neat poses and can easily compete with other video game characters such as Samus or Simon Belmont.

The feature of this title that impressed me the most was the sound. Incredible is the music during fights and the emphasis during gameplay. The staff is the one who also made the soundtrack for another Super Nintendo title I recently played, Hook (so beautiful!). As a side-scrolling action platformer, it has commonalities with title such as Ninga Gaiden or Strider (I'm well-versed in this, spending my time studying at Nith's house brings me to know a bunch of beautiful titles).

Playable and of the right difficulty. The end-of-level bosses are definitely tough, but it is a title that will not allow you to be left incomplete.

I love this game! I highly recommend it! It has great music, a password system for saving, good gameplay, and beautiful, colorful graphics. Another gem in the vast Super Nintendo game library.

by **Ingrid Poggiali**

Ashura
Young sorceress, descendant of the Mystic Pantheon......

PAINTER MOMOPIE

Year: 1991

Editor/Developer: Sigma Enterprise, Inc.

Genre: Maze Game

Platform: Game Boy
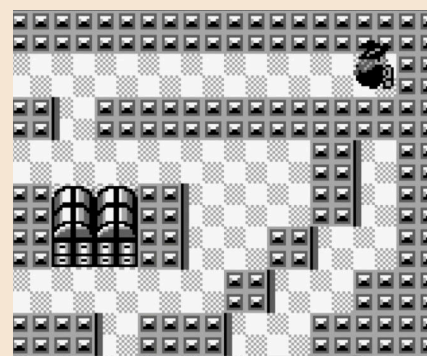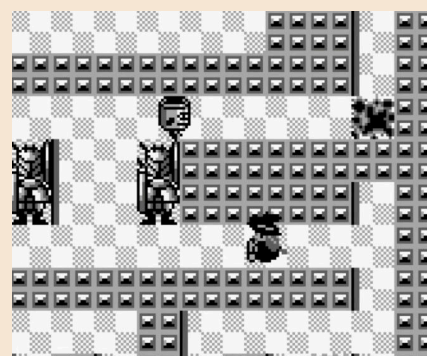
Another Japanese exclusive! It arrived to me straight from Japan along with some delicious peach candy and lemon gum! (jyuber76 Dōmo arigatōgozaimasu!) ... How beautiful and how good! But... Let's cut to the chase.

Painter Momopie was one of those games that I saw and forgot, partly because remembering all the names of cartridges, labels, and game plays is tricky... So I said to myself, "If I find

it okay."

If you're bored and don't feel like Tetris, play a maze-game with this one featuring a little witch intent on painting (or cleaning? The former is more plausible) floors while avoiding monsters (which look like mushrooms) and mice and other stuff.

I did not fully understand the mechanics the game being in Japanese, however, I like it! I need to study it thoroughly.

Puckish, fast-paced caracter design, with Gen Satou's stroke framing the label, the game is a real winner for Game Boy lovers like me, and then... I have a soft spot for jap witches! And you, do you like tiny witches?

by **Barbara "Morgana" Murgida**

OUR FINAL SCORE

» Gameplay 80%
A nice maze game that is fast and fun. Perhaps not immediately immediate.

» Longevity 80%
Nice long one!

SCOOBY-DOO

Year: 1986
Editor: Elite
Genre: Platform
Platform: Commodore 64

We are in the 70s and 80s, years that we will never forget. They are often remembered on social media thanks to pages and groups that post events, objects, movies, cartoons, etc. by people that were born in those golden years, when little was enough to be happy and be in pleasant company. Among the most famous cartoons we cannot forget those of Hanna and Barbera, aired on private and national networks a few years later. One of those that has definitely stuck with most is definitely Scooby-Doo, a cartoon starring a very cute, talking, wimpy Great Dane dog and four co-starring kids who joined him in his adventures. The scruffy Shaggy, the nerdy Velma, the likable Fred and the beautiful Daphne.

The series was a huge success, so much so that a movie was also made out of it in the early 2000s, and previously also a game for home computers, including the C64.

I first played it when I found it on a newsstand cassette and replayed and finished it in the present day on emulators.

The almost monochromatic Spectrum-style graphics may not do it justice, but then again, it was not the first title that had to make do with very few colors, but that does not preclude its substance. The sound, that of the title screen, on the other hand, is quite inviting, reproducing the soundtrack from the animated series. Unfortunately, within the game there are only sound effects such as retrieving objects and eliminating enemies.

The game consists of four levels, four like the protagonists we will have to save in each level. We find ourselves in a haunted house haunted by ghosts, structured in a multi-story scrolling fashion with numerous doors from which the ghosts escape, and holes that if not overcome with millimeter jumps, will take us back to the floor below.

We start with five lives, and along the way we can earn more lives by collecting the appropriate book marked with an S.

The gameplay is not disproportionately difficult, except that ghosts suddenly come out of doors without giving us time to paw at them, or appear after jumping holes with perfect timing, worse than a Swiss train.

The things that left me a bit puzzled are only two: Scooby-Doo more than a Great Dane dog, he looks like a banana-colored alien, plus in the animated series he was the flag bearer of the wimps, while in the game he single-handedly tackles an army of ghosts in their home by pawing at them saving all four main characters... plus, you can have seven lives too! Unbecoming for a dog, but that's another story.

Spring is here and with it the first aches and pains of the changing seasons from which yours truly is suffering as I write this article between sips of orange juice.

Whether you liked the game, are enjoying it, or were disappointed, still play the Scooby and Scrappy-Doo demo and starring the grandson of our very cute protagonist! I will be reviewing that one soon as well!

by Daniele Brahimi

OUR FINAL SCORE

» Gameplay 60%
A little inaccurate but nothing compromising.

» Longevity 55%
Four not-so-easy levels could put people off.

How about being retro-cooperative?

Here we are at the end of this blazing new issue of RetroMagazine. In spite of all the difficulties that each of us is encountering, some very serious indeed (our thoughts and warmest wishes go once again to the flooded families of Emilia Romagna and Marche), we try to stay true to our 'vintage' passions. Many of us prefer retrocomputing for example, while others prefer retrogaming instead. There are people who disdain neither. Personally, I have had the opportunity to try my hand at "Batocera"-based retrogaming systems these days, and I must say that I have been pleasantly impressed by the wide variety of systems that are emulated quite faithfully and with often very minimal hardware equipment.

It was also an opportunity to reflect on this multitude of games that can be run in so many different ways. Some may be wondering what reflections might arise from looking at these old titles? For example, I reflected on the fact that some of them were designed specifically to extort as many tokens as possible!

The mechanics of these games were designed precisely for this purpose, and the payment of the 'token' became natural, it was the tribute that each player lavished on them, almost smugly, almost as if it were the 'right price' to pay to enjoy those colors, that atmosphere, those rhythms, those thrills, those emotions. I was also reflecting that often these days, "good ideas" i.e., games of a certain success, were converted to be played on different platforms. When, as a kid at the time, I bought a cassette for my trusty C64. It contained a number of games, I certainly did not dwell on these details.

I simply thought, "How many good games, how inventive, how original, what a beautiful machine my C64 is!" It would have been difficult then to get a 360-degree view, of what was behind it, how many and what conversions existed, and how many of them were done well compared to others. Today, on the other hand, to realize all this (and more) we need only scroll the scroll wheel of our mouse!!! :D

And one more thought, last but not least in terms of importance, also from these days. I see and read so much enthusiasm (not only in the pages of RMW, enthusiasm that I and all my colleagues in the editorial staff try to convey to you) but also on FB and on the many groups and communities of passionate people.

There are those who make a business out of it, there are those who make 'ad-hoc' retrogaming devices equipped with all sorts of ROMs, systems that can even be connected to the TV at home, ready to use.

The right rule of trying not to be fooled, trying to be careful about what we buy and from whom, always applies, but I would also like to emphasize another aspect. Why criticize a priori those who choose these solutions because "you can make it yourself by spending two bucks..."? I think that if someone, in order to satisfy his or her passions, intends to spend something, he or she should be very free to be able to do so without attracting criticism, sometimes really heavy criticism.

Then, while it is true that it can be part of the "fun" to prepare the hardware, insert the SD with the various roms inside the device, do the "scraping" of the relevant title covers (to make the system more immediate in use and visually appealing) and finally configure everything appropriately, it is also true that sometimes one does not have the free time available to be able to devote oneself to all this.

Why then give it up when there are ready-made solutions on the market for such uses and, moreover, at the cost of even a few tens of euros sometimes?

Dear friends, why not trying to avoid sterile, unconstructive criticism.

Try to be supportive, instead, try to stimulate, try to help, try to advise, without ever despising those who are enthusiasts like you, and by doing so our whole community will be happier, more numerous and more united!

Greetings to all of you, dear friends and readers of RetroMagazine. Till next time!

Marco Pistorio