ReGame 64

IT IS NEVER TOO LATE FOR A COMMODORE 64

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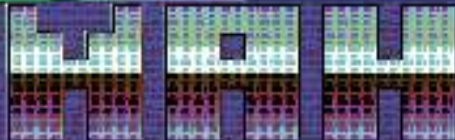
Steel Ranger

CBA

Pains 'n Aches

Sam's Journey

Sydney Hunter

Chester Kollschen ✓
Cadaver ✓
Saul Cross ✓
Mikael Tillander ✓
Simone Bevilacqua ✓

Volume #3

3,27€

CONTENTS

PREFACE

This third volume of *ReGame 64* has a new improved coloured layout! It is a step over the second volume as game screenshot is used as background.

Do you want to play to the definitive platform for the C64? Let's play *Sam's Journey*! Sam's world is coloured, big, with many enemies and secrets in it.

In the year 2218 space travel is a common action, and soldiers use special steel armature to protect themselves: *Steel Ranger* is a new action game of exploration of a planet inhabited by hostile intelligence.

Pains 'n Aches is an adventure game focused onto a pendant and coloured gem with magic power: this game has so many bosses that will surprise you.

Sydney Hunter is a porting to the C64 of a franchise appears in many console: let's Sydney explore some caverns!

Mah is an adrenalinic game where "time" matters and going "fast" is the way to win.

Don't miss a review of the *The C64 Mini*, the new C64 compatible device in mass production, and our 2017 game classific voted by users.

For the graphics art we put some entries from *Silesia Party 9*, *International Karate GFX Competition*, *Nordlicht 2018*, *Edison 2018*, *Gubbdata 2018* and some gems released elsewhere.

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Sam's Journey

What was a nice present for the past 2017 Christmas? For sure it was *Sam's Journey* C64 game produced by *Knights of Bytes* and released in a dreaming package by *Protovision*.

Sam is released as floppy disk or cartridge and a flash memory chip inside which allows you to save the progress as it was in the disk version, so instant load and saving makes cartridge the perfect choice for this game.

Once started a very lovely music is performed while the screen cycles from a wonderful Sam poster image, a scrolling ambient landscape with credits onto it and a page with greetings. Very, very good. A true presentation.

At this point you can choose from 3 slots to use, so you and two other friends can play the game independent from one another.

As the title say, this is a journey of a little boy called Sam into three big over-worlds: all starts when Sam is waked up from bed by a terrible sound and he is taken by a big claw into the wardrobe...

We are into a full scrolling landscape ambient to explore with lots of different enemies and objects to use to help the exploration: there are stones to throw

Genre	Platform
Produced	Knights of Bytes
Released	Protovision
Code	Chester Kollschen
Graphics	Stefan Gutsch
Music	Alex Ney
Year	2017

over enemies, springs to jump up, keys to open closed doors, trunks with costumes to use to change your abilities, switches (temporized or not) that modify the ambient.

You can carry most of those objects to different points of the maps, even very far from where you pick them: in this case when you leave them on the ground and goes to some screens, they will disappears and you will find them in their original position. We can not complain about this with the programmer because it is however a behaviour that does not affect the gameplay and it is far better other normal games.
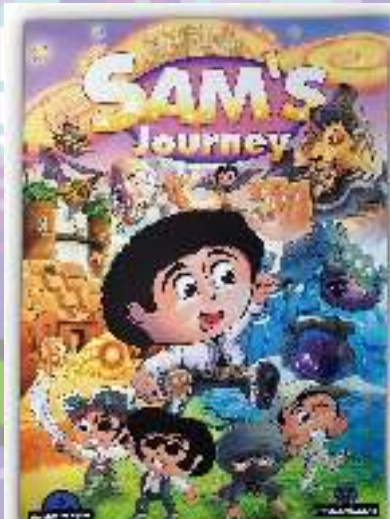
Sam's Journey

What will leave you surprised is that enemies and their thrown objects will follow their trajectory even if you go in an adjacent screen, so you will feel like being really in a large environment! You can even play out of the visible screen (for example when you swim into the back-

Presentation screen

•**Ninja Sam**: cling to walls and jump his way up narrow vertical passages.

•**Pirate Sam**: can attack his enemies with mighty cutlasses.

•**Pitcher Sam**: can throw rocks and chests with a powerful, targeted pitch (and his baseball cleats also prevent him from sliding on ice).

•**Disco Sam**: signature twist allows him to remain on air for longer periods. He also

drop or fly/jump in the upper part of the screen) and this implies that the simulated physics is very strong implemented in this game!

You had to look very carefully around the screen as there are many secret rooms or passages: they are not visible until you are very near them. Charming!!

The scoring system is very interesting: you had 40 diamonds, 10 coins and 3 trophies to collect to reach 100% of one exploration phase. Usually coins need to use some abilities or find a secret passages to collect them and for a trophy needs to kill an enemy that has it (but you did not know which is).

The abilities of Sam given by a costume are:

Can't be better!

inflicts twice damage to enemies.

•**Space Sam**: a jet-pack enables him to perform a double up jumps.

•**Vampire Sam**: can transform into a bat and fly short distances.

If you have a costume, you will lose it when an enemy touches you and you die when you are touched without it. There are no limitations in number of lives you

The menu screen

Wake up!

Ready for jumping on clouds?

Creator's corner: code with Chester

When I play "Sam's Journey" I finally find a worthy substitute in "The Great Giana Sister" that was my definitive platform! Until now.. What was the genesis of this big project?

My team and I, we've always been great fans of classic platform games. That genre, however, was not the C64's strongest field. Instead, our favourite titles were released for video game consoles like the NES, the SNES, the Sega

have, as you simple restart from the beginning of the level or from the last checkpoint you had reached.

During the journey Sam can use moving platforms or cannons that catapult him over long distances and your ability is needed into those phases to avoid enemies that are into your path.

Very amazing are the three boss levels at the end of the each major phases. For sure you will try to find a path that the boss and all the other enemies are using, and when you find it..the surprise arrives: the path changes!

If you are wondering how long will the journey be: I played it for more than 8 hours with an overall score of 80%, so maybe you need 10 hours to complete it with full 100% score.

In the end this game is a true hit for a platform genre: big coloured landscape to explore, lots of different actions that you can perform and a good variety of enemies.

You can buy it as digital download (23,99$) or floppy disk (45,00€) or cartridge (55,00€) at https://www.knightsofbytes.games/samsjourney

A water fall!

This enemy is very big!

Master System, or the Sega Genesis.

When we got back into C64 game development in 2014, we found that this gap hasn't been filled yet, and so we decided to create our own platformer which eventually became Sam's Journey.

Sam's landscape is coloured. Full of colours! Lots of colours! How was this possible? What's the trick behind?

There is no voodoo or any other black magic involved! :)

In the levels, the game uses the low-resolution multi-color charset mode of the VIC-II graphics chip. It's the most used graphics mode in C64 games as it provides a very good balance between color diversity and VRAM usage.

The sea in background is animated!

Drake is very hard to crush..

Ninja Sam is magic!

In order to make the game look more colorful than similar titles, we applied a special technique. In the landscape of Sam's Journey, there is very little empty background. In order to get the screen filled, we used only a fraction of the charset for the foreground elements, such as plat-

forms and walls, which left us plenty of chars available for the background elements. And as we didn't have to waste one color as a common background color, we could use quite uncommon color combinations.

I find that you implemented enemies movements and simulated physics far away from the visible screen, giving a true unlimited experience (all seems real, like enemies that follow you even if you exit from their visual, or you that swim or jump out of the screen visible limit). Can you describe how did you implement it?

All objects in Sam's Journey use world coordinates rather than screen coordinates. That is why a crawling caterpillar or a flying wasp always know where they are in the level, no matter if they currently are in the camera viewport or not. That way, they can give chase on Sam or follow a path even when offscreen.

I like the secret rooms. Your maps are so dynamics. Was it easy to implement it or not?

Opening and closing the secret rooms was quite easy to implement. We basically altered a bunch of chars in the charset. The simple idea of doing this line by line

made if look very neat though. The hardest bit, however, was to design the tiles for the secret rooms in a way that they didn't give anything away when closed and at the same time looked natural when open.

Ready for swimming?

graphics, data) are being generated from source and asset files using a toolchain based on *make* and *Python.*

The *ACME* assembler with a custom preprocessor was used for Sam's Journey. For the graphics, a couple of programs were used, including *Charpad*, *Spritepad*, *Timanthes*, *Krita* and *Gimp.* Also, we are using git for versioning and synchronizing our work across the team.

How many objects did you manage to show in a screen (I remember a phase with two big elephants in it or in boss levels with full of enemies)?

There can be 256 objects in a level, and 16 of them can be active at a time, including Sam and the camera. The elephant is one of the few objects that uses hardware y-expansion for sprites. We didn't primarily use it to make the enemy look larger, but to save valuable sprite memory.

What development environments and programs did you use to develop the game?

I use the *eclipse IDE* for virtually all my programming and so I am using it for my C64 projects as well. The game files (code,

Have you any special information or consideration to share with us about the game?

We've just reached 1250 sales of Sam's Journey which is freaking awesome! :)

How did you feel about working with Stefan (graphics artist) and Alex (sid musician)?

Stefan is a longtime colleague I have worked with for many years. Together, we created Metal Dust for the C64 and a bunch of games for feature phones. We

A secret room

A kiss to you is out of order!

both aim very high in terms of the quality of our work, and as our gaming background is quite different, we bring a nice mix of ideas and concepts to the table. This makes our collaboration quite fruitful.

As for Alex, Sam's Journey was our first joint project. If you listen to the creations of his music project Taxim, Alex may not seem the most obvious choice to compose the soundtrack for a game like Sam's Journey. But when it comes to chipmusic, Alex calls himself a multi-style musician, and so I asked him to create a set of 19 very different songs for the game. He said this would be a nice challenge which he happily accepted.

I find the cartridge package superb (but I love cartridge!), so do you know so far if people prefer the digital download or the physical disk version of the game over the cartridge one?

Yes, three months after the game's release, we do have some figures available. It seems that many people share your opinion! :) Of all customers who purchased a copy of Sam's Journey, either physical or digital, most of them went indeed for the boxed cartridge edition.

The download edition comes second, followed by the boxed disk edition. These are very interesting results that might even affect the way we approach our next projects.

Have you any other games or C64 projects planned for the future?

Yes, we are going to create new games for other classic video game systems as well. Originally, we didn't intend to make an-

Pirate Sam is a warranty!

Ice forever...

other C64 game, but given the success of Sam's Journey and all the feedback we received on it, we should really reconsider that.

The game concepts we have in mind could very well work on the C64 as well, so there is a certain probability of further C64 games by the Knights of Bytes! :)

Steel Ranger

Steel Ranger is the new action games from Lasse Öörni (Cadaver) inspired by Turrican/Metroid and that is realized in the same universe of Hessian previous games, but this time after 200 years.

If you are a fan of Cover Bitops release, from Escape From New York, the Metal Warrior series, Hessian and now Steel Ranger, we have a similar gameplay layout but with different stories that make each game really unique.

This time we are in the year 2218 and as humanity is forced to expand beyond Earth, they come into contact with a hostile machine intelligence. The ship "Scourge" is going to investigate a mystery signal from a planet that form an Omega symbol.

The soldier of the ship are equipped with "Ranger" self-recharging armour suits, so the full image that appears at the beginning of the game with the title is very evocative. A very uncommon feature that is possible to select in the configuration menu of the game is the ability to customize the armour and appearance by changing the colors of them!

Once started, a pseudo interactive action let you know that an installation is present on the surfaces of the planet, so

Genre	**Action/Adventure**
Released	**Psytronik**
Code	**Cadaver**
Music	**Cadaver**
Graphics	**Cadaver**
Year	**2018**

you are going to wear the armour, but just the time you take it, the ship crashlands so you are the unique soldier that can exit until the others can use their armours.

You start to explore the outside desolate landscape, while some flying enemies try to kill you. The avatar controls are very easy to use: you can fire in eight directions after the first shot is fired by moving the joystick and you can walk and getting down for dodge enemies fire.

You can even (by pressing fire/down) roll as a ball for an energy laps time and placing a bomb where you want: you can use this for fast advance, going in small locations or open hidden passages.

After killing enemies they left parts, weapons or energy packs that you can take up for a limited time before they disappear. During the exploration you have the possibility to upgrade your armour, energy regeneration and arms, using your

Steel Ranger

Presentation screen

You can customize the armor

collected points or by using the appropriate terminal you find.

The arms you will find and use (by simple press 1..8 to selec it, or with a special double fire sequences with joystick) are:
•Gun •Bounce •Laser
•Flamethrower •Grenades •Missiles
•Arc gun •Heavy plasma

These are no more no less the arms that enemies use over you, so as soon as you go further into the exploration and collect them you are able to kill enemies with less effort.

There are many various mechanical enemies into the game: from the ones in the open spaces, to the other into caves and the ones inside the base. You can see soon that they are placed accurately

inside the map and are not random generated, as they follows their path or try to follow you.

This game, like the previous, has some continuous scrolling part of the map, and then there are some points used to load new locations while changing charset and eventually music played. The loading from disk is very fast, so this phase is almost instantaneous. This point is also used as a restart point when you lost all your energy and died.

During the games you are in contact with your friends with messages and then you will find them inside the base in some locations (and there are a friend to save in one point... but it is better not to spoil the surprise too much..).

There is something strange below..

Awesome landscape!

You also interact with enemy computers to open some restricted area: those operations are not always easy as the alarm will catch some very big enemies that require you some effort to kill them (in other words, they are boss level..)

One important upgrade is the heart protective device that let you go into danger area and the fly pack that let you fly for a short time and go to points not normally reachable. Fantastic!

If you are wondering about the longevity of this game, then I had explored 90% of the map in more than 7 hours with the normal level of difficulty (you can select various levels when starting the game).

Last words are about the music: as usual Lasse creates many different pieces using his unmistakable style that makes your exploration very adrenaline. Note that sound effects are also played during the game actions!

Steel Ranger is available throw https://psytronik.itch.io/steelranger for digital download at 4,99$ and in 3 different disk versions (Budget, Premium and Collector's Edition) from http://www.psytronik.net.

Creator's corner: code with Cadaver

We know that you code directly most of the cross-tools you need for creating a C64 game: is this your secret for being able to produce a hit game by making code, graphic and music, in so short time?

It's certainly a bonus to use self-made tools, as the turnaround time to add new needed features is optimally short, and you know the tools inside out. But

It's all too quiet...

making a game quickly is still most importantly a matter of determination and having a strong vision so that you don't waste work by redoing.

And not being too original so that you know which gameplay mechanics are going to work :)
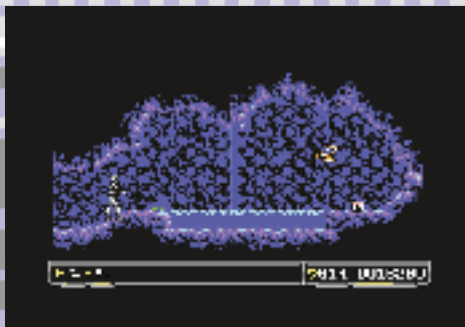
Underground water fall

This is a very dongerous place!

As we like to know something inner about this game, can you tell us how many charsets, sprites, enemies type, musics and screens have you created for Steel Ranger?

Let's see.. the game is about 730 screens spread over 19 map loads and 13 charsets. There are 575 sprite frames in total, about 40 regular enemy types, 8 boss enemy types, and 26 songs.

I'm trapped!

In this game you experiment the 2x2 blocks map size over your usual 4x4. What are the advantages and the disadvantages you find into this method?

An advantage is much better freedom in editing the world layout, and less time spent composing (or optimizing) the

Incubators?

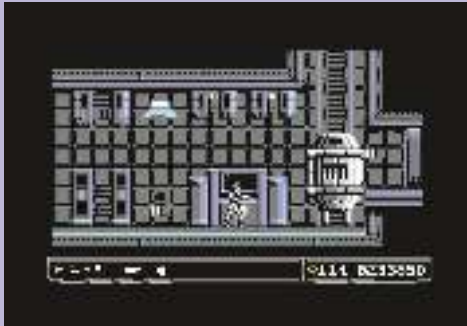blocks themselves. The disadvantages are a much larger disk space and memory use of the maps, and that the 2x2 blocks can stand out obviously, making the world seem mechanical and lifeless. Well, in this game that fits :)

Have you added other features to your engine respect the previous games?

For each game it's almost a different
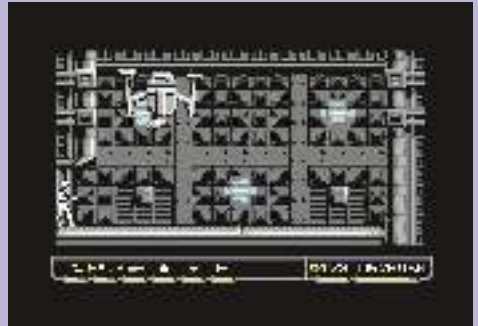
This is tough!

engine, as optimizing the game forces to drop out all features that are not used this time. For example, there are no separate weapon sprites or melee combat in this game compared to Hessian.
The most distinguishing engine feature in Steel Ranger is treating almost all different resources (sprites, level maps, code) the same under the same memory allocation system, and also relocating the loaded code's instructions at loadtime, so that it can be placed into any free memory region. The loadable code is used for enemy movement & scripted story events.

What are the improvements that you see into your engine now that the game is finished and you should think "if I had done this modification, I would have got..."?

I went rather extreme with the memory-use optimizations, so the world state (enemies, items, NPCs..) is represented in a quite awful manner compared to Hessian and Metal Warrior 4. It's fine for enemies that you shoot and they disappear for good after that (just 1 bit of storage), but anything more complicated, like a NPC moving through the world and meeting you in different places, required tedious and errorprone code.

The storytelling-related code was also shoehorned in toward the end of the project and resulted in a spaghetti mess. So these rather were anti-improvements, and I wish I hadn't gone as extreme, or had planned the code earlier and better. The good news is that now I can scrap all that code; it was fine for Steel Ranger but not more!

You have put some secrets (or less visible..) area into Steel Ranger: what's the hint for finding them all?

The typical thing is to look for walls that look slightly broken; you can bomb them open in the wheel mode. Also, look above you and return to areas once you have better movement abilities.

Can we expect a new chapter after

Hessian and Steel Ranger into this saga?

Right at the moment nothing certain is planned, but one always has some loose ideas.

Have you other C64 games idea to realize into the future?

Yes. I'm working on something that doesn't continue the Hessian / SR storyline. Cannot tell yet much, but hopefully soon :)

I'm a real fan of Cartridge: with the new format that let you save even game state into it, have you ever thought to re-release your games into cartridge format (maybe as Kickstarter projects)?

I see the convenience of the format, but personally I'm not a fan of the game being "locked" onto the cartridge; I rather like users being able to play from whatever mass storage they have, even harddisk, and play with the game file data in an open format. Cartridge format also incurs very real production costs, and I'm pretty sure I won't launch a Kickstarter myself. But teaming up with a publisher that has cartridge release capability is of course an option.

What a nice velivole!

Mission completed!

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```
                 ;;;; ---- CODE RELOCATION ROUTINE ---- ;;;;

            lda fileNumObjects,y      ;Assume that code starts immediately
                                      ;past the object pointers
            asl
            adc zpDestLo
            sta zpSrcLo
            lda zpDestHi
            adc #$00
            sta zpSrcHi
LF_CodeRelocLoop:
            ldy #$00
            lda (zpSrcLo),y           ;Read instruction
            beq LF_CodeRelocDone      ;BRK - done
            lsr
            lsr
            lsr
            bcc LF_LookupLength
            and #$01                  ;Instructions xc - xf are always 3 bytes
            ora #$02                  ;Instructions x4 - x7 are always 2 bytes
            bne LF_HasLength
LF_LookupLength:
            tax
            lda (zpSrcLo),y
            and #$03
            tay
            lda instrLenTbl,x         ;4 lengths packed into one byte
LF_DecodeLength:dey
            bmi LF_DecodeLengthDone
            lsr                       ;Shift until we have the one we want
            lsr
            bpl LF_DecodeLength
LF_DecodeLengthDone:
            and #$03
LF_HasLength:
            cmp #$03                  ;3 byte long instructions need relocation
            bne LF_NotAbsolute
            ldy #$02
            lda (zpSrcLo),y           ;Read absolute address highbyte
            cmp #>(fileAreaStart+$100) ;Is it a reference to self or
                                      ; to resident code/data?
            bcc LF_NoRelocation       ;(filearea start may not be page-aligned,
                                      ;but the common sprites
            cmp #>fileAreaEnd         ;will always be first)
            bcs LF_NoRelocation
            dey
            lda (zpSrcLo),y           ;Add relocation offset to the
                                      ;absolute address
            adc zpBitsLo
            sta (zpSrcLo),y
            iny
            lda (zpSrcLo),y
            adc zpBitsHi
            sta (zpSrcLo),y
LF_NoRelocation:
            lda #$03
LF_NotAbsolute:
            ldx #<zpSrcLo
            jsr Add8
            jmp LF_CodeRelocLoop
LF_CodeRelocDone:
```

Pains 'n' Aches

Pains 'n' Aches is the new adventure game released by Psytronik that continues the story of the 2009 *Knight 'n' Grail* game:

"Upon freeing the Knight's beloved from the curse, the Archmage was given the Grail as a reward. With this powerful asset in hand, the Archmage planned to rule the kingdom. The plans, however, were thwarted by the brutal Titans!

In a cruel twist of the fate the Archmage's partner was enchanted with the same spell that cursed the Knight's beloved. She was transformed into a hideous monster! The Archmage fled into exile.

Genre	Action/Adventure
Released	Psytronik
Code	Mikael Tillander
Graphics	Mikael Tillander
	Håkon Repstad
Music	Hans Axelsson
Year	2018

Years later, the Archmage heard rumours of a pendant that could reverse the spell. However, in order to embark on this quest, the Archmage would need to take on human form ... And so it begins"

The games starts with an adorable image and an intro sequences: all is around a pendant and coloured gems that you collect. Those gems give you special abilities and the color reflects even the color of your avatar. In fact you will find the first boss level after a while, so you can transform with the pendant.

The game is full of this boss levels: you enter into a room and you are trapped until you are able to kill the enemy. The power in this is that each boss level is different from the previous and as soon as you go ahead it will be more hard to achieve it.

Your avatar has three energy state, so at each enemy touch you lose one of it and when reached zero you die, but you can restart from the last saved point (there are special little structure for making this) and during a boss level you get all your energy restored.

Even if the game-play at starting seems to be the classical one (go over the map, jump over obstacles, shot enemies..) it has instead lot of new features that happen as soon as you improve your abilities by collecting gems and other elements.

For example you will be able to extend your jump with a double jump when on

Pains 'n' Aches

Presentation screen

air, or you will be able to fly in one direction at elevate speed for passing very dangerous places, or you can transform jourself into a cobra and so go in little passages and also you will be able to shot enemies even in cobra state.

Those new abilities implied that you had to go back into the map for exploration points that you was not able to reach before: the dynamic map that you can show into the game is very useful for this task. You can find some maps elements to collects during the exploration that will show part of the maps that you had not jet discovered.

Another interesting element of the game is that every enemy you kill by shooting (with one of more shots) you will be recompensate with a coin: even if you kill a

falling drop of water you will get a coin! With the collected coins you can buy some more information. In-fact you can normally read some headstones you find and have some hints about your game exploration.

Using F1/F3 keys you can switch from one gem color to another one: as we see before, your avatar color will change according from green to red, to yellow or to pink and your shot type will change too. Some doors can be opened only by shoot-

Introductive story

ing with the right color.

Shooting type varies according with your colors, so you can use the one most appropriate above all in boss levels.

The game use a mix of horizontal

The forest...

First "musical" boss

scrolling environment and vertical fixed screens, probably due to the use of more colors in horizontal bands as in very few locations you can see a little of color flickering.

The enemies that you kill will reappear if you return to previous visited rooms. Interesting was that one area of the map is under water and you can go there only after collecting the right capabilities.

Graphics are very detailed with many different locations to explore and sprites are of many kinds with very good animations. But all the boss levels with so big enemies gives a boost to the whole game!

Music varies a lot at all levels and gives the right feeling with the ambient you are exploring and you can also get sound effects on actions.

To complete the game it took about 3,5 hours with the first part (disk side A) that have more rooms to explore than the second (disk side B).

Pains 'n' Aches is available throw https://psytronik.itch.io/painsnaches for digital download at 4,99$ and in 3 different disk version (Budget, Premium and Collector's Edition) from ht-

tp://www.psytronik.net.

V

Creator's corner: code with Mikael

When did you get the idea to make a follow up of Knight 'n' Grail game and how many times did it take you to realize?

I started it about a year after the original KnG, around 2011/12. And I stopped and started about 4 times during the following 6 years it took to make it.

What development environments and program did you use for making the game?

Eclipse, *kickass*, *ant*, own made tilemap editor, *Graphics Gale* and a home made *Android* tablet gfx app, and all of Lasse Öörnis tools for loading, music etc.

An angel statue

A true ending image!

This game is full of boss levels with very big bosses and each level is almost differ-

The hardest for me is always the scrolling. My next game, Geo Six, has this

arious boss levels... you will find every kind of enemies!

ent from the previous into the attacks sequences. A big work behind those?

The attack patterns are quite simple for each of them. I always liked short, simple boss fights but I wanted more of them.

You had implemented horizontal scrolling, but vertical is instead in fixed screens. Is this a hint for having used more colors into one screen?

Yes, the color splits was one reason for it. And because the scrolling speed can be 8px per frame, having scrolling for vertical as well would have taken up away more memory.

I like that you can increase your abilities during the game (jump, double jump, fast moving, snake...) as it gives better user experience. Had you wandered to implement some other abilities but for some reason you didn't achieve them?

The "rocketing" ability had more usages than it has now. Memory issues made so they had to go.

What was the most difficult part of the game to code and the graphics to realize?

two drakes?

Geo Six in development

19

sorted out once and for all and it even have vertical scrolling. :)

I fought with the graphics for the fairies quite a lot. And no, I'm not happy with them at all.

I thought I'd saved the numbers, because I've calculated them before, but I can't find them. Think I posted them in the

PC verion of Knight 'n' Grail

lemon forums as well, but can't find it.

I'm guessing:
• ~140 animated sprites
• ~25 charsets
• ~30 songs
• ~500 screens

How did you feel to work with Håkon Repstad (graphics helper) and Hans Axelsson (music artist)?

They're great to work with. Hans makes the best music and lots of it. And Håkon are among the top gfx-designers on the C64.

Pains 'n' Aches fits into two disk sides, so

Initial game prototype...

...that is different from...

...the final game...

... as you can see

Geo Six: wonderful sky

Geo Six: first boss level

there could be a good number of bytes for putting up a Cartridge images with saving features. What did you think about such idea?

There are 512K carts with save features available now and it would be very cool to do. But if I were to make something like that I'd like to redesign a lot of the game as well.

It would mean zero loading times and I would save loads of mem on stuff not needed (like loading) so I could cram more into the game.

So, it won't most likely happen.

Have you other C64 games projects to realize into the future?

Yes, working on Geo Six. Continuing on that as soon as I finish my Megadrive game. :)

With this QR-code you can download the PDF of the book for read it in smartphone or tablet! (user **REGAME**3, password xxx).

Knight 'n' Grail 2...

Sydney Hunter and the Sacred Tribe

Sydney Hunter is a greate franchise of CollectorVision Games: a famous explorer is engaged in many adventures for finding treasures in dark caverns.

Up so far, there have been three adventures: *Sydney Hunter and the Shirines of Peril*, *Sydney Hunter and the Caverns of Death* and *Sydney Hunter and the Sacred Tribe* and a new one is coming (*Sydney Hunter and the Curse of the Mayan*).

Sydney Hunter appears in many old console like *SNES*, *Intellivision*, *Coleco Vision*, *MSX* and now the *Sacred Tribe* appears even to *Commodore 64* thanks to a porting by *Wanax* and *Saul Cross.*

The game starts with an option screen where you can switch on the fastoloader then a static title screen appers for few seconds with a hat that is very familiar as it remembers the one of *Indiana Jones*! follows an animated title screen, with a music that is very appropriate for the game.

Going on, the story about *Sydney Hunter* is presented with some little images and texts: *"You are Sydney Hunter, the great adventurer. You've been exploring the Yucatan penisula, seeking treasures. As you traveled, you were captured in the night by a mysterious tribe. Althrough they claim they won't hurt you, you are still their prisoner..."*

Genre	**Arcade/Platform**
Released	**CollectorVision**
Code	**Wanaz**
Graphics	**Saul Cross**
Music	**Saul Cross**
Year	**2018**

We find soon that the tribe needs our help in finding the lost access to the sacret doorway.. so let's start!

Sydney Hunter

The game is a classical platform where you have to explore the ambient, avoiding enemies, collect diamonds and keys for being able to go further away. All is done using fixed screens, maybe the same way it appears in the other systems where the game were born.

This choice is good for making you to be very reactive as when the new screen appears you can find a very aggressive enemy (like cobra snake) next to you!

It is very important to collect each single diamond you find as, even if there are baskets with lot of them, the number

needed to unlock the way for other area is very high.

Almost all the graphics are in Hires definitions with a good choices of colors for the bricks that gives the right feeling with the caverns being explored. Else, even the dangerous animals we find during the exploration are made with single-color Hires sprites: this choice gives a little old school style but the good animation of them compensate for this.

Another good right feeling is given by the ambient flickering torches fire light!

In conclusion the game has a linear flow and playability and even if you can complete it in less than an hour it is a very good hit of 2018!

Creator's corner: 360° with Saul C.

How did you get in contact with CollectorVision for making the port of Sydney Hunter on the C64?

Collectorvision really got in touch with Andrea Schincaglia who in turn got in touch with me rather than the other way around, I am not entirely sure what the start of that was.

What kind of material did you get/use from the versions of the game that run in the other architecture for starting the porting?

I had a copy of the graphics which seemed to be a mix of sprites and backgrounds form the Colecovision and MSX versions plus a full map. I also had the music from, I believe, the Colecovision version, but this did not translate well to SID so I set out to create completely a new soundtrack from scratch with original compositions.

How many freedom did you and Wanax have into the realization of the game considerate the directive that comes from CollectorVision?

There was really very little interference as far as I was concerned, I just got on with it, I think Andrea had to ensure that the map and mechanics remained the same essentially but must have had some room for changes to allow for the differences in resolution.

The game uses high resolution graphics but initially we see even a multicolor implementation. What happened then?

There was a plan to include both the

This hat is familiar to me ...

Starting screen
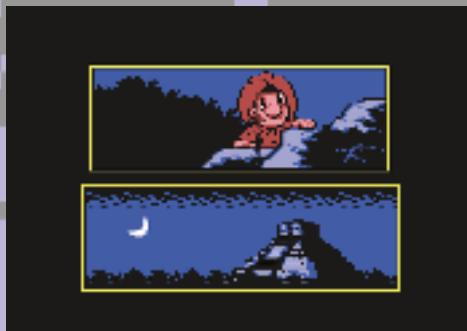
Collage of two images of presentation

multicolour and hi-res backgrounds if there had been enough memory to do this in a single load, but the game map is relatively large so memory was quite tight and the hi-res was the preferred version among all of us. Maybe one day this could be dusted off and a version with the multi-colour background could be made available as the map for this is the same and would just require swapping out the character set and turning multi-colour mode on.

I compare the C64 version with *MSX* and *ColecoVision* and what pop up is that C64 version has more colours used (look for example at Gothic style windows with 4 colors and walls/columns with 3 colors for a best 3D lighting effect). Is this your artist sign: make a conversion better than the original?

From my point of view to do a straight copy would not do the c64 justice and would also mean that I was more restricted creatively. I did want to leave a mark on the game and this was the best option that would preserve as much of the original while giving me some creative freedom and room to play, as well as showing the lovely c64 palette off.

A feature missing from other system is the moving sky onto the presentation screen where there is a pyramid in the jungle with the moon. No more free space for adding it?

I think that with a little more time this could perhaps have been done, although it would not be trivial as we had to use a bitmap for those intro scenes rather than characters.

As the SID chip can surclass for functions the others AY chips used into the system where Sydney Hunter is present, didn't you have any difficulty in making music for the game?

The music for the c64 version was all mine and I was not required to base it on the other versions, nor did I have to convert for the other versions as they have completely different music by other

Snake? I hate snake...

It's a bit hot...

people. There were challenges as I tend to try to keep in game music on two voices to allow for sfx that don't interrupt the music, but this is the same for most of the games I work on.

Can you give us some statistics about the game assets used (sprites, charset, screen, music) and the times taken to realize all them?

184 sprite frames, 2 character sets (although really 3 because of additional bits here and there), 128 tiles with the main character set, a 100 screen map, 5 bitmaps, 9 tunes taking up 7K including the player and 23 sound effects; so a bit of stuff, I would estimate about 24-28 KB of data for all the graphics.

Did you know if CollectorVision has other chapters to realize Sydney Hunter saga to port into the Commodore 64 in the future?

Sydney Hunter and the caverns of death is a possibility and one which may be developed by Andrea and myself again if we get the chance. Sydney Hunter and the Shrine of Peril could be a possibility at some point as well, although that is a much simpler game.

Did you know how many copies (physical and digital) were sold of the game? Special limited cartridge edition was already sold out before the game were finished and floppy version was sold out too after short time.

I don't know the exact figures, but I think it must have been something like 100 carts and a 100 disk editions - although I can't remember exactly. It was a pretty good number for a c64 physical release

Maybe I'm exiting...

though.

Have you other C64 games in the making that you could speak about?

The next release at the moment (or should I say current) is L'Abbaye Des Mots, but there are others some of which include just my music (Age of Heroes, Soulless II, Arcade Days), some of which feature just graphics from me (Khaos Sphere - hopefully) and some projects very much in their early stages such as Guy in a Vest. I keep myself busy and perhaps spread myself a little thinly, so I always have a fair few projects on the go at one time and this includes, possibly one or two entries for the RGCD 16KB Cartridge Competition, but still waiting to see if they pan out.

MAH

Mah is the kind of game that you like as soon as you understand its rules and so from how many times you gave to it as it uses an innovative gameplay that requires a learning approach... and that's why you study its manual!

The game from *Retream* was born in 2015 with version 1.0 followed in 2016 with version 1.1 and in 2018 it finally got commercial by *Protovision* on disk (28€), *RGCD* on cartridge (32£) and digital download (3,99$) from *itch.io*.

First of all it is very important to point out that a person that suffers of epileptic seizures could have problems playing or just looking at it, so in case you manifest some strange issues you should stop it immediately and look for medical assistance!

Turning to the game we must know how it is presented into the manual: "Your objective is to stop the Apocalypser's 90 minutes countdown. You are obstructed by the ApocalypShield, a software system made of 24 security layers and numerous virtual guards. You operate a hacking tool called Peekpoker".

When we start the game from cartridge, it appears a simple menu with a wonderful

Genre	Arcade
Released	Retream
Code	Simone Bevilacqua
Graphics	Simone Bevilacqua
Music	Simone Bevilacqua
Year	2018

logo where you can choose to see the manual, or the introduction sequence, or starting the game and (if allowed) to see the end sequence.

In the starting sequence there is a post war devastated city followed by a secret nuclear waste repository where the Apocalypser was found. This is where we learn that the Apocalypser has been activated to destroy the world. We need to hack the system to end it. So the game starts with our program injected into the shield with the opportunity to select the hack mode (normal or assisted/easy).

MAH

The game has 24 layers (i.e. levels), each of which is divided into various phases (and subphases) according to the table shown before the beginning of a layer.

At the beginning of phase B(itbricks), we need to clear a number of bitbricks by laying a trail using a tool called

Peekpoker. The same tool is used to catch the icons on the borders in order to get power-ups or prevent unpleasant effects.

It might seem easy, but you'll need fast reflexes and pay attention to the many guards (some of which can join together in a comboss that chases you, double their size, and even spawn clones) and elements that will crowd the screen more and more.

But this is nothing! In the following subphase, a guard will chase us while we try to compose a given password by catching its symbols on the borders. This is very adrenaline and even the fast music improve this state   (the music changes according to the context throughout the game).

In phase P(ort), you need to put the teeth of a guard in a given combination by hitting its ears and chin (hitting it from the top will make it change direction). In the meanwhile, the Peekpoker is dragged by the background currents. If you collide against the borders, the guard, or a ghost that moves around, the teeth elements will change randomly. As a hint, look at the color of mouth...maybe this help you...

Phase C(hannel) is full of combosses that fall down the screen (the sprite multiplexor is working heavy in this situation!) and you have to pick up some keys that pass from gold, to silver and to bronze during the movement, so the more pregiate it is and the less keys you need to pick up.

When you get all the keys, a big antiviruship appears with opening and closing sides that has a cannon that shot beans to the bottom, but you can beam it: one of the two will prevail!

Starting presentation

In phase D(ecryption), one of the best phases, a guard moves around leaving a trail of packets: the bad ones must be avoided, while the good ones have to be caught on the fly. This is visually excellent with the lots of colors effects. Finally, the game ends with the super special S(witch) phase.

At the end of a layer, if the relevant counter has reached zero due to mistakes done in the previous phases, you will have to play the phase Q(uarantine). You have so to pick up a key by shot a *Cobermann* (that will go faster when hit), but as soon as you take the key, he transforms himself into a dog that go versus your direction: you can pass it if you are able to have the key into the door lock when the other moving door lock into the border is aligned.

This is a little frustrating as dog is very fast in movement and door lock is moving very slow! You must calculate the right moment for the action...

The more you play this game and more easy and fun it appears, but as there are many phases to complete with a fast countdown, you need many hours of playing before completing it!

And the end sequences is something spectacular... not to miss at all! It's like an interactive speed scrolling demo. Very fast and with lots of surprises in it :)

Creator's corner: 360° with Simone

MAH is a truly original game. How did you come up with the idea?

At the beginning of 2014 I stopped developing software altogether.

However, I could resist the urge to code only for about seven months: on August 9, 2014, I wrote a little moving-dot-with-trail effect in C64 BASIC just to relieve some of the pressure, but that actually fired me up.

I started to think about making a game around that effect, but I couldn't come up with something that convinced me; however, the effect evolved into something else and became the trail that appears in phase B; in addition to that, those brainstorming sessions provided additional ideas, among which the combining of many hires sprites into hires multicolor sprites - that's a fixation I've had since I was a kid, and I thought I'd turn the sprites weakness into a strength and make it a central element of the game. Initially the game consisted of just (subphase B of) phase B, but over time I designed other totally different gameplay sections (sometimes retrieving ideas that had been discarded - e.g. the phase P currents), which then were added progressively.

The very last addition was phase D, which is based exactly on the moving-dot-with-trail idea that got everything started.

What a beautiful face!
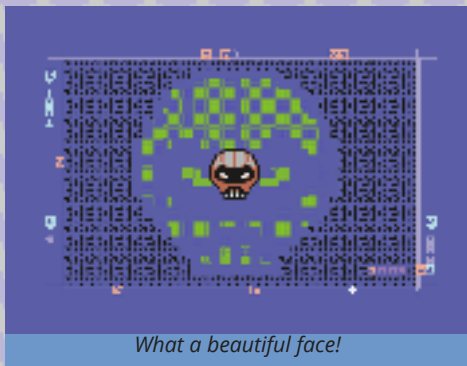
How long did you need to create it (considering v1.0, v1.1 and v2.0)?

The various versions were made in different time periods, and that was a while ago, so I can't remember exactly. Anyway, I'd say more than a couple of years of quite intensive work (including the making of the manual, quick reference cards, and package artwork).

What is your work environment and which programs did you use to make graphics and music?

My work environment basically boils down to *FrexxEd* (a classic *Amiga* text editor) and a shell. For graphics and music I used *Personal Paint* and *GoatTracker*, respectively. The toolchain also includes *gcc*, *BASIC-BOSS*, several command-line tools of my own, and make to glue everything together. All running on *AmigaOS 4.*

You use monocromatic hires sprites for several enemies, but when they join together we get a nearly perfect multicolor hires enemy with lots of details, which is not seen often in C64 games. How did you create them?

The key is mine!
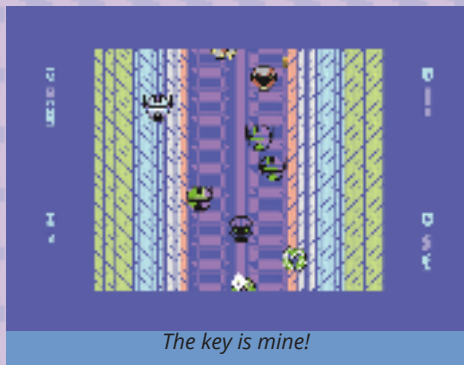
Why "nearly"? ;)

I guess you're thinking of the phase B patrols, which combines into combosses. I pixelled them (like all the rest) in Personal Paint. The extra challenge they posed was to make also the separate sprites (i.e. the patrols) look nice - in fact, if you look closely, you'll notice that three out of the four patrols belonging to a comboss don't simply reflect the pixels shown in the comboss, but have a much more elaborate design (the topmost patrol must instead coincide with the pixels in the comboss, as there is no layer on top of it that would hide the extra pixels).

That said, actually the whole game is swarming with hires multicolor sprites. I have used a variety of overlay schemes, but describing them in words wouldn't be that effective, so I've prepared a factsheet that provides plenty of information and also visual examples.

What about the power of your sprite multiplexer? In phase C we have tons of multicolor hires sprites! How many sprites in a screen did you achieve?

There is no single multiplexer: there's a specific one wherever multiplexing is needed. The curious thing all the multiplexers have in common is that they don't use interrupts.

Regarding phase C, the number of sprites on screen is 40 - that comes from 9 combosses (each of which is made of 4 sprites) plus 1 key (made of 2 sprites) plus the lost key icon (1 sprite) plus the Peekpoker (1 sprite).

What was the most difficult part to code?

It's really hard to say (especially because my memory isn't fresh). I guess the worst four or five moments were when all of sudden a hard-to-hunt bug appeared out of the blue causing deadly memory corruption.

Another thing that really made me sweat a lot has been squashing the whole game into a single load (intro, outtro, and manual aside, that is): I can't count the times I have rearranged the memory map or radically changed algorithms, data format, loader, and so on in order to exploit all the available RAM (in fact, in the end, only a few bytes scattered here and there remained unused) - but it's also been lots of fun. Overall, the whole project has been quite demanding.

Speaking of code, somewhere on these pages must be a box with a piece of code: since it must look quite obscure, let me spend a few words about the weird way it's written in. The whole code is based on a custom framework I've written in C, so the sources are in C. The sources contain C code that handles metadata, pre-processes data, and generates the actual code by means of macros and functions.

The code embedded in the macros is written in BASIC or machine language (the latter thanks to the £code statement

of *BASIC-BOSS*). Compiling works like this:

1. gcc compiles the C sources and produces an AmigaOS 4 executable;

2. the executable runs and outputs a *BASIC-BOSS* source;

3. *BASIC-BOSS* compiles the source and produces a C64 program.

I know, it sounds crazy, but there are historical reasons why I ended up working like that. The result, anyway, is excellent, also thanks to the fact that the BASIC code is written in a way that the resulting binary code is optimal anyway.

The cartridge package is a true dream for a game collector like me, but I know that you don't like physical releases: is that true?

Not entirely: I do like physical releases, but I think that the environmental emergency the Earth is in should make us stop producing what is not strictly necessary - and videogames generally don't need a physical release. Now, having published MAH and other games physically does make me feel guilty.

Three reasons convinced me to go that way: a bad one is that I've been unemployed for most of the time I've been developing games, so I needed more sales and visibility - and physical releases achieve that; another reason is that my games are quite/totally original and based on rich mechanics, so there is no way to (really) understand/enjoy them without

appropriate documentation, and appropriate documentation can only come as printed manuals (and quick reference cards, in MAH's case) - to be honest, they could be replaced by digital documents, but reading on computers/tablets/smartphones isn't that comfortable, and color e-readers are not common yet; the last reason is that my games sell in low volumes, so their impact on the enviroment is minimal.

Inside the cartridge is your QUOD INIT EXIT game as an easter egg. QUOD INIT EXIT is another uncommon game with hires and lots of colors, can you tell us something about this title?

It's the first game I made for the C64. I made it after returning to such computer in 2007. It originated from some jokes me and some of my friends had been playing for years, my will to learn about the C64 (as a kid I had learned very little), and, again, from my childhood love with colorful hires sprites, which evolved into the

objective of making an entirely hires and yet very colorful game.

As you can see, that love dictated also the direction of *QUOD INIT EXIT IIm* (with which I wanted to push things even further: not only colorful hires graphics, but also unlimited and unprecedented scrolling) and, of course, *MAH*.

Are there some other easter eggs?

No, but there are a few little secrets scattered here and there ;)

Are you developing other games for the C64 or some other machine?

Yes, I'm continuing (albeit very, very slowly) *QUOD INIT EXIT IIo* (the "fat" version of *QUOD INIT EXIT IIm*) for the C64 and finishing *SkillGrid* for *AGA Amigas*.

```
JC("liand1")
SC("w4=%u", MM_CHARSET + CI_BACKGROUND_TOFLIP_F * CHARACTERSIZE)
SLN0
OB("160,7,"    // ldy #7
   "132,%u,"   // sty B1      ; set bottom offset
   "160,0,"    // ldy #0
   "132,%u,"   // sty B0      ; set top offset
   "179,%u,"   // lax (W4),y  ; get top byte (loop here)
   "164,%u,"   // ldy B1      ; get bottom offset
   "177,%u,"   // lda (W4),y  ; get bottom byte
   "133,%u,"   // sta B2      ; preserve bottom byte
   "138,"      // txa
   "145,%u,"   // sta (W4),y  ; store  top byte at the bottom
   "165,%u,"   // lda B2
   "164,%u,"   // ldy B0
   "145,%u,"   // sta (W4),y  ; store bottom byte at the top
   "200,"      // iny
   "132,%u,"   // sty B0      ; point to next byte at the top
   "198,%u,"   // dec B1      ; point to previous byte at the bottom
   "196,%u,"   // cpy B1
   "144,230",  // bcc -26     ; if not all bytes swapped...
   B1, B0, W4, B1, W4, B2, W4, B2, B0, W4, B0, B1, B1)
SC("w4=w4+8:ifb4<>%uthen%u",
    (MM_CHARSET + (CI_BACKGROUND_TOFLIP_L + 1)*CHARACTERSIZE)& 255,ln0)
JE

CR(CONFIGURE_MEMORY_RDR)

// set up screen.

// BASE

CR(INITIALIZE_SCREEN_BASE_1, "b0", C1_BITBRICK_0, "b1", HI_PURPLE)

// HOME

SC("poke%u,%u", MM_FIELD_HOME, CI_BORDERS_H0)

// ADDITIONAL HUD MARKS

CR(ADD_PROGRESS_MARK_TO_HUD)

SC("poke%u,%u:poke%u,%u:poke%u,%u:poke%u,%u:poke%u,%u:poke%u,%u",
   MM_HUD_BRICKBOT - SCREENWIDTH * 2, CI_HUDM_BRICKBOT,
   MM_HUD_CHARGE_T - SCREENWIDTH * 2, CI_ICON_RECHARGE,
   MM_HUD_PEPO_T - SCREENWIDTH *2, CI_HUDM_PEPO,
   MM_HUD_BRICK_BOT - SCREENWIDTH, CI_HUDM_HOOK,
   MM_HUD_CHARGE_T - SCREENWIDTH, CI_HUDM_HOOK
   MM_HUD_PEPO_T - SCREENWIDTH, CI_HUDM_HOOK)

 // PEPO SIGNS
 //
 // NOTE
 // The unrolled loop is convenient only up to a certain number of signs.
 // Equivalent BASIC code:
 //
 // SC("w4=%u", MM_HUD_PEPO_T + SCREENWIDTH)
 // FS("b0", CI_HUDS_SPEPO_F)
 // SC("pokew4,b0:w4=w4+%u", SCREENWIDTH)
 // FE("b0", CI_HUDS_SPEPO_F + NO_SPEPCOINS, "+1")
 {
   int a, i;
   a = MM_HUD_PEPO_T + SCREENWIDTH;
   for (i = CI_HUDS_SPEPO_F; i < CI_HUDS_SPEPO_F + NO_SPEPCOINS; ++i)
   {
      SC("poke%u,%u", a, i);
      a = a + SCREENWIDTH;
   }
 }
```

GRAPHIC PIXEL ART

"EVA" by Rail Slave
Multicolor - 2018

"Space Monster" by Fabs
Multicolor - 2018

"I Am The Master Of My Universe" by Jailbird
Multicolor - 2018

"Banished" by Rail Slave
Multicolor - 2018

"Heaven's Gate" by Rail Slave
Multicolor - 2018

Rail Slave: [Banished]..a big part of it is the awesome audience/competition and lots of legends to look up to. It's an inspirational scene/environment. I have been becoming increasingly frustrated with having to put restrictions before the picture itself (actually, I

"The Last Girl in the Lost World " by Leon & Soci
Multicolor Interlance - 2018

never do this). But this is a good place to be, I don't think i would be doing such wildy creative stuff in other places (I tried) [EVA] This could have done with a few more hours polish I think, got a bit excited : P Best is yet to come. Feel a bit of an evolutionary jump in the raw skills.

Jailbrid: Well... The theme was inspiring, but I can't say that I care too much about the competition itself. The event's only aim was to have some fun, right? What's the point of putting these productions in an order of significance based on an utterly flawed system?

Fabs: I wasn't even sure to publish this one. Is still a bit drafty yeah, but I'm at the point that if I touch it again I wouldn't go any better.. Better to start a new one if it make sense! ;) (The astronaut at the beginning looks like a seahorse lol)

"Subliminal Intro" by Leon & Color Bar
Multicolor - 2018

"Turbo Outrun Re-imagined" by Almighty God
Multicolor - 2018

"Deep Sea" by Veto
Multicolor - 2018

"She-Pilot" by Worrior1
Muilticolor - 2018

"Pirates Gold" by Fabs
Multicolor - 2018

"Volture" by Pardon
Hires - 2018

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Pardon: Hehe I have no skill in more colors than two :D

"IK Planet Rail Slave" by Rail Slave
Multicolor - 2017

"IK Stonehenge Solstice" by Fabs
Multicolor - 2017

"Back on the Route!" by Yazoo
MultiColor - 2018

"The Old Forest " by Soya
Multicolor - 2018

"Queen " by Dr. TerrorZ
Multicolor - 2018

"I Got Stamina..." by Leon
Multicolor Interlace - 2018

"Nailed it" by Razorback
FLI - 2018

"Hunters Moon Remastered" by Robin Levy
Multicolor - 2018

"IK Waterfall" by Prowler
Multicolor - 2018

"IK The Great Wall " by STE'86
Multicolor - 2017

"IK Imperial Court of the Dragon" by Hend
Multicolor - 2018

"IK Hidden Jungle Temple" by Hend
Multicolor - 2017

"IK Feed the Gods" by Hend
Multicolor - 2017

"Simple and Clear" by Leon
Multicolor - 2017

"International Karate Sunset" by STE'86
Multicolor - 2017

"International Karate Fist Temple" by
Multicolor - 2017

"Speedball 2 Re-Imagined" by JonEgg
Multicolor - 2018

"Datagubbe" by redcrab
PETSCII - 2018

Veto: It was quite intense and satisfying creating a C64 compopic after four years doing different stuff. Actually I was surprised that it was such a long time.

Prowler: Inspiration came when looking at all those excellent IK backgrounds (JonEgg, STE, Hend, etc), really impressive work!!

Soya: Thanks guys! I tried to focus much on getting the colors "right" for this one...

THEC64 MINI RELEASED

Finally a new hardware product (designed for being produced in big quantity) that replace the old C64 is here!

The story about this project originally called *The64* is a bit longer and starts with a *Indiegogo* crowdfunding campaign by *Retro Games Ltd* over two years ago for reproducing the *Commodore 64* with modern hardware in both full size or portable LCD console.

Unfortunately at that time there were not too much technical hardware information about it and the unique certainties were the use of licensed ROM (BASIC, KERNAL, CHARGEN), the C64 form factor (old model) and licensed games, so the campaign did not reach a full foundation due to a little of scepticism from C64 owner.

This made the thing goes long, with the developer that underground makes commercial agreements with partners and did not reveal what kind of hardware will be used in the product, until it was announced the born of *TheC64 Mini*, a way to follow the success of mini reproductions of console that have popped up recently.

In fact, the *C64 Mini* is a scaled reproduction of the C64 that comes with 64 games inside and used software emulation to recreate the original Commodore, but we will return to this point further during the review.

As a backer, I get my *TheC64 Mini* some

weeks before the arrival of the product in many European store and I will receive a full size version as soon as it will be realized.

I had always loved the carton box of the original C64 with blue color that changes in white color by some different size lines (that is used in every C64 related production, like the books ans manuals) and the layout of the Mini box is a good more modern reproduction as the lines are now curved.

Unlike the original, now the internal polystyrene (that for sure with the use it will be broken where you put the power supply, isn't it true?) is replaced by plastics that separate the mini from his joystick and we can say that this package is very very good. Approved!

Inside the box we so have even an HDMI cable, an USB cable and the starting guide book. What is missing is the power supply. For sure a little 1A 5V from 220V devices to insert will cost only 2€ more as material but it will be an increased production cost as it must be with the right connector for every country. Ok this is not a big issue.

What will be very disappointing for lot of people is the fake keyboard: it is just a good plastic external reproduction of the original without functionality. For 75€ having a working keyboard is utopic, but for the backed original price of 150€

maybe it could be more affordable. You would not have written your poems with a working mini keyboard, but maybe some BASIC commands could be inserted. So even this is not a big issue as software emulation will help in inserting few commands with joystick and true USB keyboard can be used too.

Probably the big issue from a C64 old user prospective, is the use of *A20 Allwinner* chip: it is a Dual-Core Cortex-A7 ARM CPU at 1GHz with a Mali400 MP2 GPU that support HMD 1.4. It is used to run an emulator of the C64 (so no original peripherals could be used) and with only 1GHz of frequency we cannot have a true SID emulation for example. Else it supports only two USB devices that means you need to buy an USB hub for having 2 joysticks, 1 keyboard and a USB pen used together. So at least, if powerful chip with more that two USB cost to much for a mass product, it should instead integrate a cheaper USB hub inside.

The boot of the Mini is almost instantaneous and a carousel menu to select the games appears with a special made music of *Matt Gray* running in background. I think that in the provided games you will find for sure one that you like, but in the worst case the good news is that by opening a C64 window, you can load a game from USB with the BASIC commands and you can even freeze the state of it for continuing to play in another game session (this is an advantage of having the emulation underground).

This action was a little complicated in the first version of the firmware, but with a recent upgrade it is more easy as from menu you can browse your pen drive. Else, many kinds of format (like CRT, TAPE) are now supported over the initial D64. The firmware upgrade is very simple as soon as you download the images from the site an put it in the USB pen.

The very positive news on the Mini is that it is based on Vice emulator, but the worst is that it uses an old 2.4 version of 2012, so you cannot expect that all demos can run on it! Maybe that choice comes from the fact that 3.0 version is of 2016 around the same time they were realizing the product. So there could be the possibility that in future they use an updated version of Vice, even if they use snapshots for game carousel and game freeze features and snapshots are not compatible from version change of Vice!

What is instead a fact is that the USB joystick seems to be too cheap as there are many photos of broken lever due to a wrong size of used screw. However I actually used it in the Mini and in the PC to test the game we review here without problem, so let the time pass and see if it breaks or not.

In conclusion, even if TheC64 Mini has some controversial points, I definitely like it and I hope that future firmware upgrade improve compatibility for demo and there will be a Mini 2 with improved hardware too.

Best game of the 2017 year!

And the winner is.... *Sam's Journey,* followed by *Galencia* and then *Planet Golf*!

We had asked to nominate five games from a list of ten that were released during the 2017. Then we give 5 points to the first nominated, 4 to the second and so on until 1 point to the last one. We sum all the points and then calculate the relative % of each games, obtaining the final classification.

Thanks to all that voted!

1° 34,23%	2° 22,52%	3° 15,32%	4° 11,71%	5° 7,21%

6° 4,50%	7° 2,70%	8° 1,80%	9° 0,00%

Nintendo and Sega had it. Now our turn has come. A Commodore 64 platformer worthy to carry the banner has finally emerged. Behold Sam's Journey!

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