

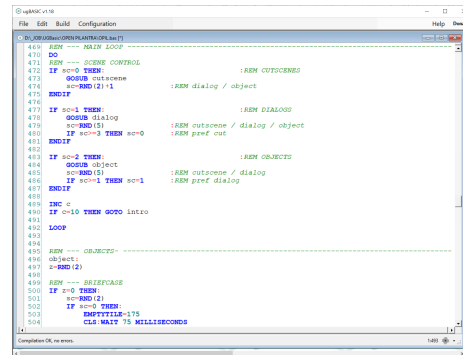
Open Pilantra

INTRODUCTION

The TRS-80 Color Computer (COCO) includes the fast and capable Color Basic interpreter, backed by an excellent manual, making it suitable for creating many games. It also supports ASM routines when extra performance is needed. Among alternative Basics for the COCO, Marco Spedaletti has spent years developing ugBasic, a modern compiled Basic with its own IDE. UgBasic is multiplatform, allowing games for several 8-bit systems from the same code while delivering far better hardware performance than interpreted Basics.



TRS-80 Color Computer

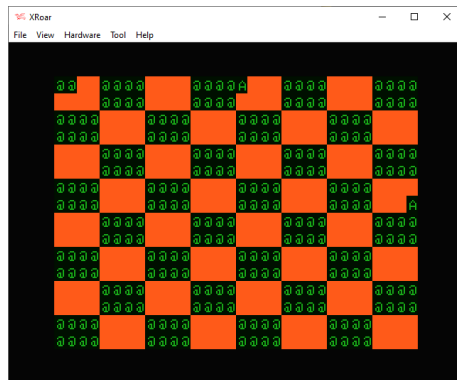


ugBasic IDE

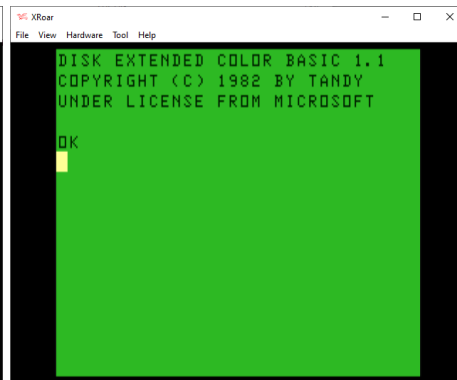
The easiest way to use it is by running on Windows machines together with the Xroar (COCO) emulator. To have it up and running, you will need:

- **Xroar Emulator.** Download the ZIP ARCHIVE file from <https://www.6809.org.uk/xroar/> and extract its content to your desired location, preferably outside the usual Windows program files or system locations, like C:/RETRODEV/xroar-1.10-w64
- **COCO Roms.** Download the roms from the Color Computer Archive at <https://colorcomputerarchive.com/repo/ROMs/XRoar/CoCo/>, for COCO 1 and 2 you will need: BAS13.ROM , EXTBAS11.ROM , DISK11.ROM _ keep those files on the Xroar folder
- **ugBasic.** Download it from <https://ugbasic.iwashere.eu/ide> and like Xroar, keep it outside of Windows standard folders, like C:/RETRODEV/ugBasic

Run Xroar just to check if it is working fine with the roms, in case a glitched image appears, change the HARDWARE / MACHINE drop down menu to Tandy Coco (NTSC). If all is fine you should be seeing the COCO boot screen with Disk Extended Color Basic.

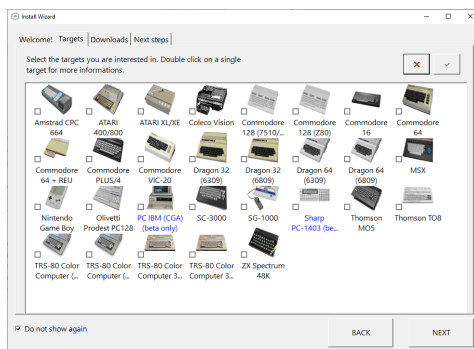


Xroar without the needed roms

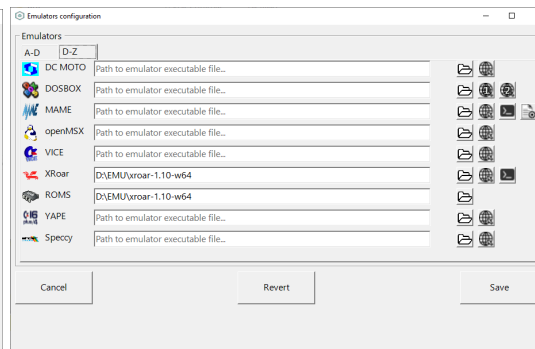


Xroar working fine

Run ugBasic, since it is the very first time, it will boot into a wizard, follow along selecting the TRS-80 Color Computer (6809) and hit download on the next page so the necessary files are installed. With that complete, select CONFIGURATIONS / EMULATORS... from the drop down menu and point Xroar and ROMS to your Xroar folder. Save it and the development environment is complete.



Wizard



Emulation configuration



Test

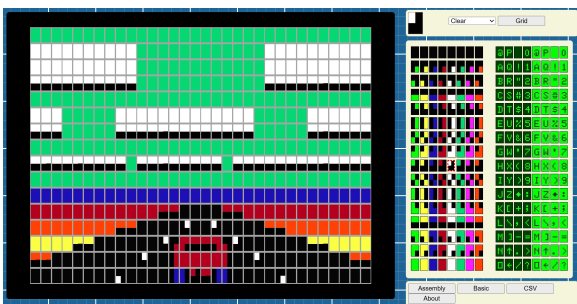
To test it, make a new project and type CLS:PRINT "ALL FINE" and save it. From the drop down BUILD menu select RUN / TANDY CORPORATION / TRS-80 COLOR COMPUTER and choose XROAR...SINGLE BIN. After compiling, the Xroar emulator should pop up and display a green screen with the printed word.

BLITTING CHARACTERS

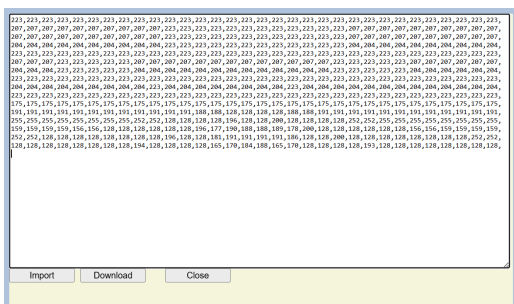
The COCO text resolution semigraphics 4 has 32 columns by 16 lines sporting a single font with dark green over green (and invert) and 8 sets of graphic characters. Each of them is divided by 4 and can contain one of the 8 colors and black. This generates a false graphic resolution of 64 x 32 pixels.

The fastest way to blit those characters in ugBasic is by using the command POKE where you state the screen location and the character ID. The screen locations start at 1024 top left and go on one by one until the last position at 1535 bottom right (512 screen positions), IDs go from 0 to 255.

A comfortable way to design graphics in this mode is by using Simon Jonassen's SGEEditor <https://daftspaniel.neocities.org/tools/sgeditremix/>, the text screen can be understood as a tile system where you pick tiles on the right (or use WASD) and mouse plot on the left. The web (online / offline) application can save and load data (CSV) as well as generate working Assembly or Basic code.



SGEditor with Outrun design



SGEditor CSV export

The POKE command in ugBasic, while blazing fast, is memory expensive, it is best to avoid poking every single character when it is not needed, therefore, the data (CSV) may be stored into a variable where it can be drawn by looping a single POKE command.

```
DIM til(98) =#{20,202,128,128,128,128,128,128,128,128,128,128,128,128,  
               202,202,195,194,194,128,195,128,128,128,128,128,128,128,  
               203,202,206,200,207,194,202,202,128,128,128,128,128,128,  
               195,194,194,194,193,195,193,194,193,195,193,194,194,193,195,  
               202,202,202,203,197,205,197,197,192,202,197,201,197,205,  
               206,200,128,128,128,128,193,193,128,193,194,128,128,193,  
               200,128,128,128,128,128,196,199,128,196,199,193,193,207}
```

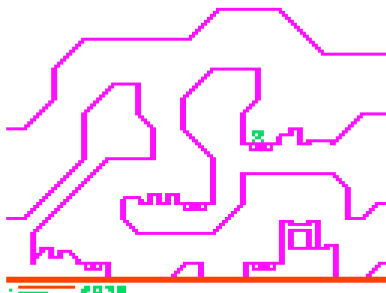
Characters stored inside the til variable

SPARK

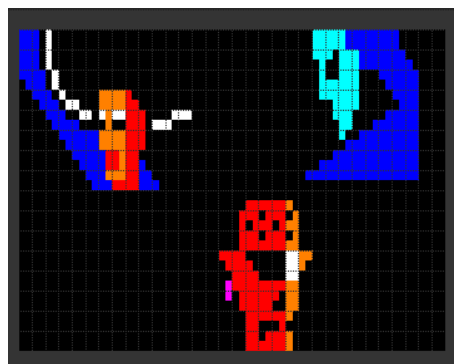
In 2024, while working on the game BELOW:MESA CRYPT OF AQUILON, a lander type game with a bit of adventure and strategy elements, I recalled when in the 80s I used to make keyboard controllable animations in Basic and then record it together with audio from a K7 into a VCR so that I could have an animated person presenting whatever I had to do for those school days (press space to move mouth in sync with the K7 talking kind of thing) :D

To spice up the adventure section, NPCs could be around the world for encounters and interaction, and they shall be similar to how I did them back in the days. Instead of keyboard controlled, they could simply animate while talking through comic balloons.

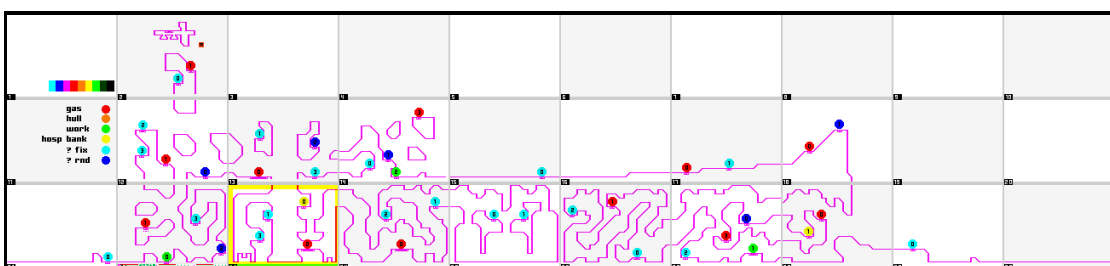
At this point I thought “why not do an animation/demo with them randomly talking together as a spin off?”



Flying around the crypt



Possible NPCs



Aquilon's map

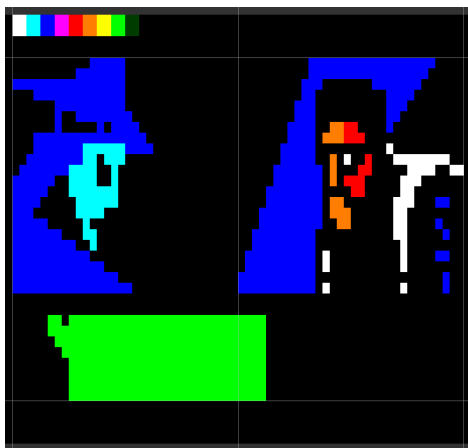
LAYOUT

The demo consists of alternating between 3 scenes: NPCs, backgrounds and objects. NPCs are scenes where either 2 characters are in a dialog or 1 character is thinking of something, backgrounds show static or panning locations, and objects either present or animate one.

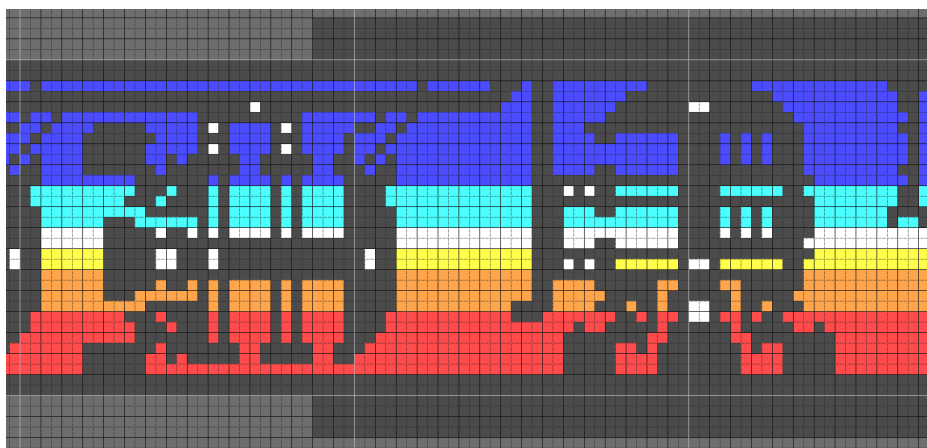
The art is created in Photoshop and later remade in SGEEditor. 20 dialogs per NPC are created, each can sport a maximum 2 lines inside the balloon. The text must be subjective and proper to mix with the others, there is a slight tendency for the right NPC to ask questions and the left one to answer them.

	<p>DATA "COMO DITO" "TUDO FINO" "HMMM, ACHO" "QUE DESANDOU"</p> <p>DATA "NAO FALARAM" "NADA" "RESOLVIDO?" "..."</p> <p>DATA "PODE SER UMA" "ARMACAO?" "NO PRAZO?" "CINCO DIAS"</p> <p>DATA "NINGUEM SAU" "DE LA" "ISSO FOI HA" "COMPLICADA"</p> <p>DATA "PODE FALHAR" "SITUACAO" "FECHA?" "ENCOMENDADO"</p> <p>DATA "NAO VAI SER" "POSSIVEL" "ACREDITO QUE" "EXAMINAR"</p> <p>DATA "SERA MESMO?" "ESTA SENDO" "VOU" "ALTERNATIVA?"</p> <p>DATA "CERTO" "JUA" "CONSIDERE" "FEITO"</p> <p>DATA "NAO CONFOIO" "..."</p> <p>DATA "OUTRA VEZ?" "..."</p>		<p>DATA "COMO ESTA A" "CARGA?" "O QUE EU TE" "DISSE?"</p> <p>DATA "COMO FICOU O" "TRABALHO?" "NEM ME FALE!" "PASSAR?"</p> <p>DATA "E A CONTRA" "PARTIDA?" "MUITO BOM" "RECUSOS"</p> <p>DATA "FORAM AS" "FALHAS?" "CONTRATE" "O QUE TEMOS?"</p> <p>DATA "DEIXE ISTO" "PARA LA" "FALHAR" "OUTRA FORMA"</p> <p>DATA "NAO PODE" "FALHAR" "ACERTE" "NOVO!"</p> <p>DATA "IMPERDOAVEL" "ESPERAR" "DOBRAR?"</p> <p>DATA "NAO PODEMOS" "FEITO RAPIDO" "E O RETORNO?" "AMANHAI"</p> <p>DATA "MUITO BARATO" "COM O ACORDO" "NAO SOBROU"</p> <p>DATA "CONVENCA-O" "..."</p>
	<p>DATA "NAO TEM COMO" "..."</p> <p>DATA "SO GAINDO DA" "GOMA" "MANO E LISO" "..."</p> <p>DATA "MAS AINDA" "NAO VOLTOU" "DE BOA" "DE BOA"</p> <p>DATA "TO FORA" "AGITO?" "NADA FEITO" "AGITO?"</p> <p>DATA "SEM GRANA?" "500 PELO" "MENOS?" "MENOS?"</p> <p>DATA "ALI PELAS" "2AM" "PELO MENOS E" "PERTO"</p> <p>DATA "NAO VIRA" "CASCATA" "E SE NAO" "TILINTAR?"</p> <p>DATA "VAI DAR" "RUIM" "VAI SE LA" "COMIGO" "FIRMEZA"</p> <p>DATA "DO JEITO QUE" "NAO CONTE" "SO SE FOR" "FIRMEZA"</p> <p>DATA "VAI DAQUELE" "JEITO" "SO SE FOR" "FIRMEZA"</p>		<p>DATA "NAO VOLTE" "MAIS LA?" "ANDE" "ACOMPANHADO"</p> <p>DATA "CONFERIU" "AS SAIDAS?" "AS SAIDAS?" "PASSAR?"</p> <p>DATA "REFACA O" "PLANO" "ENTREGUE A" "MERCADORIA"</p> <p>DATA "VEIO ABERTO?" "ACERTE COM" "ELES" "ELES"</p> <p>DATA "LIVRE-SE" "DELES" "O QUE ESTA" "FALTANDO?"</p> <p>DATA "COMO PODE" "DESMONTAR?" "LEVE PARA" "OUTRO AGORA"</p> <p>DATA "NAO FOI" "FEITO RAPIDO" "ACERTE" "ACERTE"</p> <p>DATA "COMO" "RESPONDERAM?" "PEGUE O DAS" "22:40"</p> <p>DATA "NAO ATRASE" "COM O ACORDO" "EM PARTES" "SIM"</p> <p>DATA "ALGUNS" "ACREDITAM" "NAO SOBROU" "MUITO"</p>
	<p>DATA "VAI SER" "LISO" "FOI" "PROTOCOLADO"</p> <p>DATA "BEM" "POSSIVEL" "OK" "..."</p> <p>DATA "SERA" "CONFISCADO" "TEM TRAMITE" "TRANQUILO?"</p> <p>DATA "ARTEFATOS?" "UM TANTO" "CASCA GROSSA" "CASCA GROSSA"</p> <p>DATA "VALE A PENA?" "DE FATO" "COM MENOS" "ARTIFICIOS"</p> <p>DATA "CARREGADO" "PARA ABRIR" "VELOCIDADE E" "TUDO?"</p> <p>DATA "ESTAVAM" "VOLTAR" "FOI A ULTIMA" "TRANSPORTE"</p> <p>DATA "NAO DEVO" "SITUACAO DE" "PESO" "PESO"</p> <p>DATA "FECHADO" "..."</p>		<p>DATA "NAO VOLTE" "ATRAS?" "COMPREENDEU?" "..."</p> <p>DATA "AGORA E EM" "DOBRO?" "NAO FECHOU O" "ACESSO?"</p> <p>DATA "POUCOS VAO" "ESCAPAR" "COBRE" "PARTICIPACAO"</p> <p>DATA "ENTRE POR" "ULTIMO" "NAO IMPONHA" "DEMANDAS"</p> <p>DATA "ESGUIO" "MALANDRO?" "ENCONTROU" "FRAQUEZA?"</p> <p>DATA "E CERTEZA" "DE DOMINIO?" "ATRAVES DA" "CONFLUENCIA?"</p> <p>DATA "CARREGUE AO" "MAXIMO?" "ENCONTROU O" "DISPOSITIVO?"</p> <p>DATA "PODE ENTRAR" "EM COLAPSO?" "ABANDONOU" "O PROTOCOLO?"</p> <p>DATA "FUGA" "IMEDIATA" "LOGO ESTARA" "COMPLETO?"</p> <p>DATA "ATENDEU AO" "COMISSARIO?" "NAO VEJO" "A HORAI"</p>
	<p>DATA "FLUIDO EM" "ORDEN" "O COMANDO" "FOI TROCADO"</p> <p>DATA "EM" "EXERCICIO" "ESTA" "OPERACIONAL"</p> <p>DATA "AFIRMATIVO" "DADO BAIXA" "ABASTECENDO" "A REGIAO"</p> <p>DATA "EXTRAORDINARIO" "TRES" "RECURSOS" "ALINHADO"</p> <p>DATA "COBERTURA" "PLENA" "MUNICAO" "RECURSOS"</p> <p>DATA "POUCA" "PLANO" "EM SEGUNDO" "PLANO"</p> <p>DATA "EM PRIMEIRO" "FUMACA" "INDO PARA" "O FRONT"</p> <p>DATA "CORTINA DE" "INFRACOES" "EM ACORDO" "COM A NORMA"</p> <p>DATA "PESADAS" "CALCULAR" "PENSO OUTRO" "CAMINHO"</p> <p>DATA "HA DE SE" "..."</p>		<p>DATA "CONEXAO" "RESTAURADA" "FALHAS" "HAPTICAS"</p> <p>DATA "INICIO DE" "FRAGMENTACAO" "CONECTADO EM" "REDE"</p> <p>DATA "VALORES" "ENCRIPТАDOS" "DELETAR" "CONTEUDO?"</p> <p>DATA "ACESSOS" "EXTRAVIADO" "LIQUIDAR" "UNIDADES?"</p> <p>DATA "RESTAURAR" "INTEGRACAO" "FORMATADO" "OPOSTOS"</p> <p>DATA "BATERIA" "PRACA" "CALCULADO OS" "PROCEDURAL"</p> <p>DATA "50 POR CENTO" "DE REVERSAO" "ANTIGA FORMA" "EM T-42"</p> <p>DATA "CONFERE" "FABRICA" "DESATIVADO" "INDUSTRIAL?"</p> <p>DATA "RESET DE" "FACULTATIVA" "PROCEDE" "..."</p> <p>DATA "LOGISTICA" "..."</p>
	<p>DATA "NAO SATISFEZ" "RESERVA" "SAO MAIS" "PESSOAS"</p> <p>DATA "COM POUCA" "DESTRUILU" "COM MAIS" "UM ESCRAVO"</p> <p>DATA "A HUMIDADE" "NAO PERMITEM" "ELES NAO" "COMPREENDEM"</p> <p>DATA "OS SUJITOS" "PROFUNDA" "NAO ESTA" "ALINHADO"</p> <p>DATA "FALTA VISO" "MADRUUGADA" "RETORCIDO" "TOXICO"</p> <p>DATA "SOMENTE NA" "SIMBIOSE?" "DEGETO" "VACINA"</p> <p>DATA "SEM" "INFECTADOS" "NAO EXISTE" "FORAM MUITOS" "CORTES"</p> <p>DATA "DUZENTOS" "RADIOATIVOS" "ESTAGIO DE" "LARVA"</p> <p>DATA "MUITO" "EM CHOQUE?" "..."</p> <p>DATA "E SE ENTRAR" "..."</p>		<p>DATA "QUEM E O" "MESTRE?" "INVADA O" "LOCAL?"</p> <p>DATA "APERTE OS" "MAIS FRACOS" "NAO RETORNE" "SEM EXITO?"</p> <p>DATA "NAO TENHA" "REMORSOS" "CONFERIU A" "MERCADORIA?"</p> <p>DATA "USE OS" "PUNOS" "HOLIVE RASTRO" "FACCAOI"</p> <p>DATA "NAO ACERTO" "TROCADOS?" "DESTRUA A" "MISERAVEL"</p> <p>DATA "RECOLHERAM" "A GRAINA" "COMO" "VEREMOS?"</p> <p>DATA "QUAL MELHOR" "HORARIO?" "JOGO" "ENFRENTAR?"</p> <p>DATA "QUEM?" "TESTEMUNHAS" "SUJO"</p> <p>DATA "SEM" "ESTAVA" "E AGORA?" "..."</p> <p>DATA "LA ELE NAO" "..."</p>

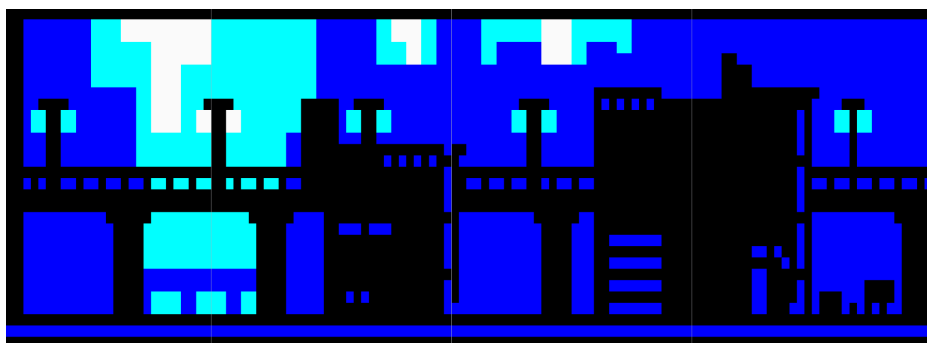
NPCs sentences in Portuguese



NPCs dialog balloon



Space port



Downtown



Ongoing conversation

CODE STRUCTURE

The code is divided into 2 parts, the first one defines variables and the graphic / text data, the second runs the loop and animate the demo.

2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									
2019-2020									

- Variable declaration
- ugBasic logo graphic
- Open Pilantra title graphic
- NPCs dialogs and graphics

- Object graphics

- Background graphics

[illegible]

- **Intro animation**
 - . Draw FUED logo
 - . Draw ugBasic logo
 - . Draw title
- **Main loop**
 - . Scene control
 - . Jump to dialogs or objects
 - . Jump to background, dialogs or objects
 - . Jump to background or dialogs
- **Objects**
 - . Briefcase animation
 - . Safe animation

- **Backgrounds**
 - . Static or left / right pan
 - . Static animation

- **Dialogs**
 - . Choose talk or think
 - . Draw NPCs
 - . Draw text box
 - . Choose and print text
 - . Animate NPC talking

- ## - Subroutines

CONCLUSION

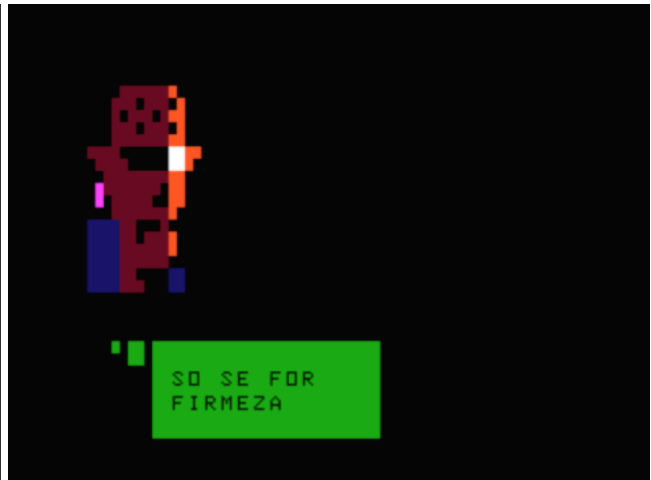
Open Pilantra works as a continuous random 2 minute movie generator, it was exposed at RetroSC 2025 by myself and COCO Fest 2026 by Henry Strickland, the author of the Centipede board as well as many other soft and hard wonders <https://github.com/strickyak/copico-centipede/tree/main>

It offers a curious experience: the audience instinctively follows the narrative, assembling the story within their own minds. It may take some time to realize that what unfolds is merely a continuous, random stitching of scenes, raising a question:

Does the author's story matter more, or the one we create for ourselves?



Mock up vinyl cover



Só se for firmeza!

Open Pilantra is made so people can play around with it, you are free to change graphics, dialogs or add anything you please.

It is available in both English and Portuguese in disk format, and the full source code is available.

If you enjoy this kind of content, consider buying one of FUED's games or donate a few quids to support future work.

Have fun!



FUED.NET