INCREDIBLE
OPEN - WORLD ACTION!!

VBLANK
ENTERTAINMENT INC.

RETRO CITY RAMPAGE

THE VIDEO GAME

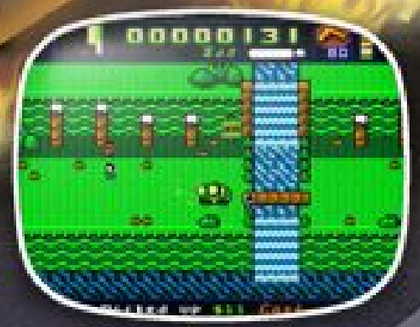
BEHIND
THE SCENES

OPEN WORLD.
ACTION PARODY.
LICENSE TO STEAL.

STARRING:
BRIAN PROVINCIANO

Five finger discounts
on over 30 vehicles!

A non-stop
action explosion!



Collect loose change
from jaywalkers!

Jack all the contraband gear
from the commando base!

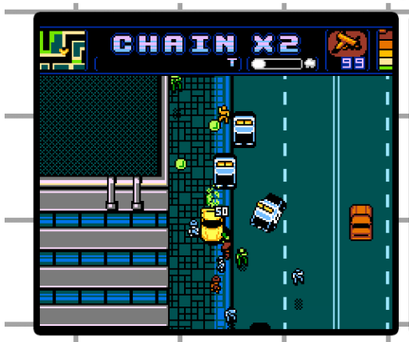
HELLO
my name is
Brian

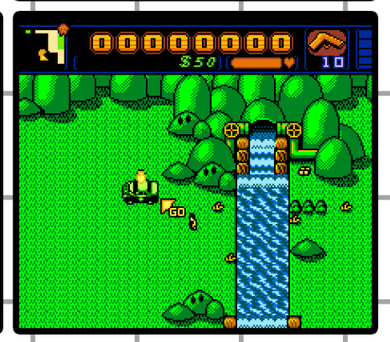
Retro City Rampage™

WITH BLURST PROCESSING!

The entire open-world is in danger.
THE PLAYER is out for a friendly frolic of CRIME CAPERS when suddenly ambushed by EVIL GOOD GUYS.
They will stop at nothing to end his RAMPAGE OF DOOM threatening the citizens of Theftropolis City.
Are YOU bad enough to defeat the EVIL GOOD GUYS?

RETRO CITY RAMPAGE lets you play as THE PLAYER. Take the wheel with five finger discounts on over 30 vehicles and wield over 20 weapons that will make you say "WHOA"! Run down innocent pedestrians to hear the magnificent monophonic modulated sounds. Order a pint of "SOUR MILK" from the barkeep to make yourself sick and avoid taking responsibility for your actions. At some point, defeat the EVIL GOOD GUYS then relax and go do it, when you want an ICED TEA.





www.retrocityrampage.com

THIS BOX IS FOR USE ONLY WITH YOUR RETRO CITY RAMPAGE VIDEO GAME.

VBLK-RCR DL GAME (VBLK - RCR)

0 S X I O P O 0

VBLANK
VBLANK ENTERTAINMENT INC.

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Retro City Rampage™ VBLANK 6502

For One Player

ACTION PARODY

Retro City Rampage™

The Giga Cartridge

VBLANK
VBLANK ENTERTAINMENT INC.

WATCH IN AMAZING ASTONISHMENT
IN REAL MOVING PICTURES!

NEW FOR 20XX!

MAY CONTAIN CONTENT
INAPPROPRIATE FOR CHILDREN

Visit www.esrb.org
for rating information

But it didn't begin as Retro City Rampage...

GREAT ideas are often the **EVOLUTION** of good ideas.
(Paralleled in prototyping, playtesting, and tuning your game)

Nintendo
ENTERTAINMENT SYSTEM™

GRAND THEFTENDO

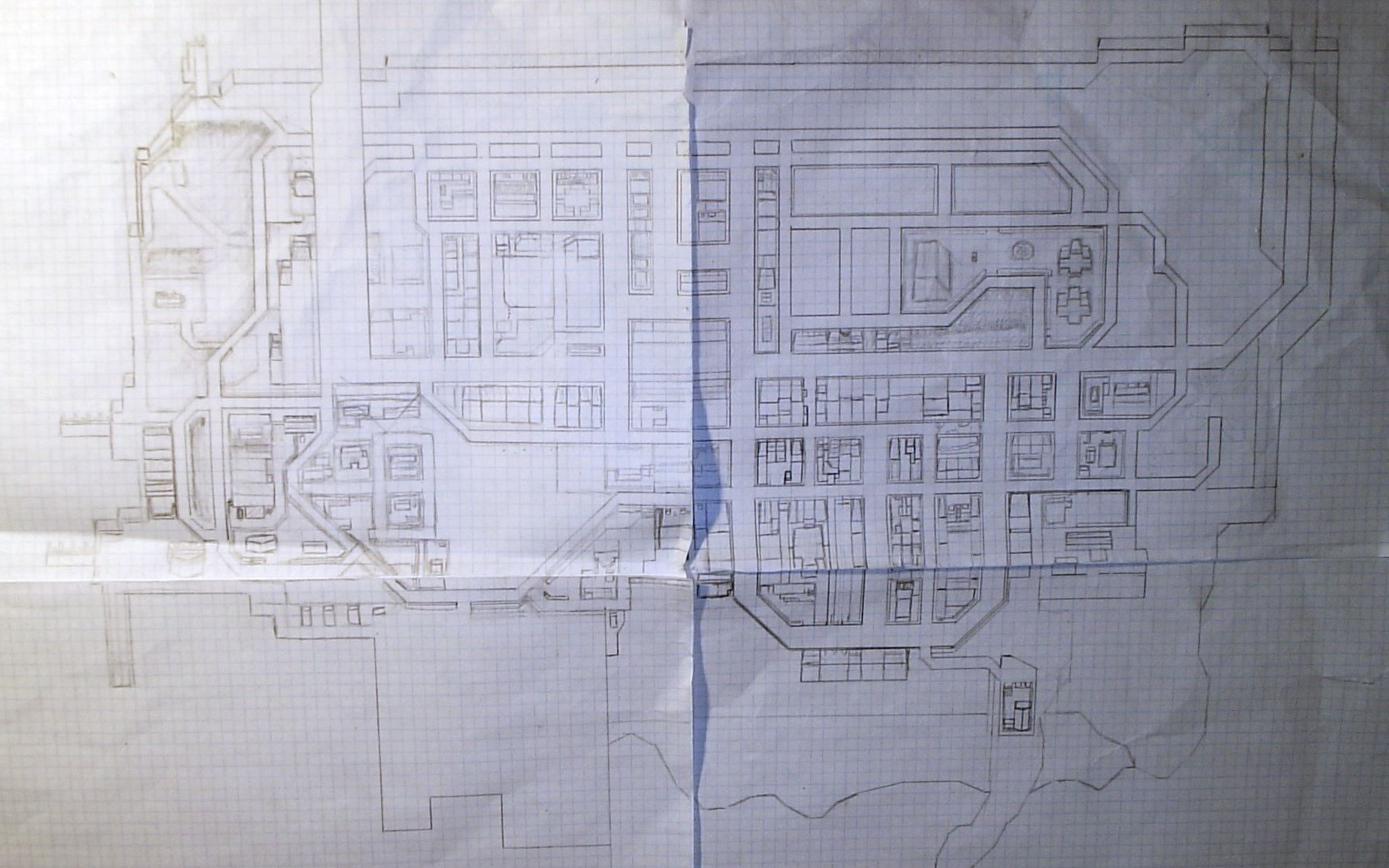
In The Beginning...

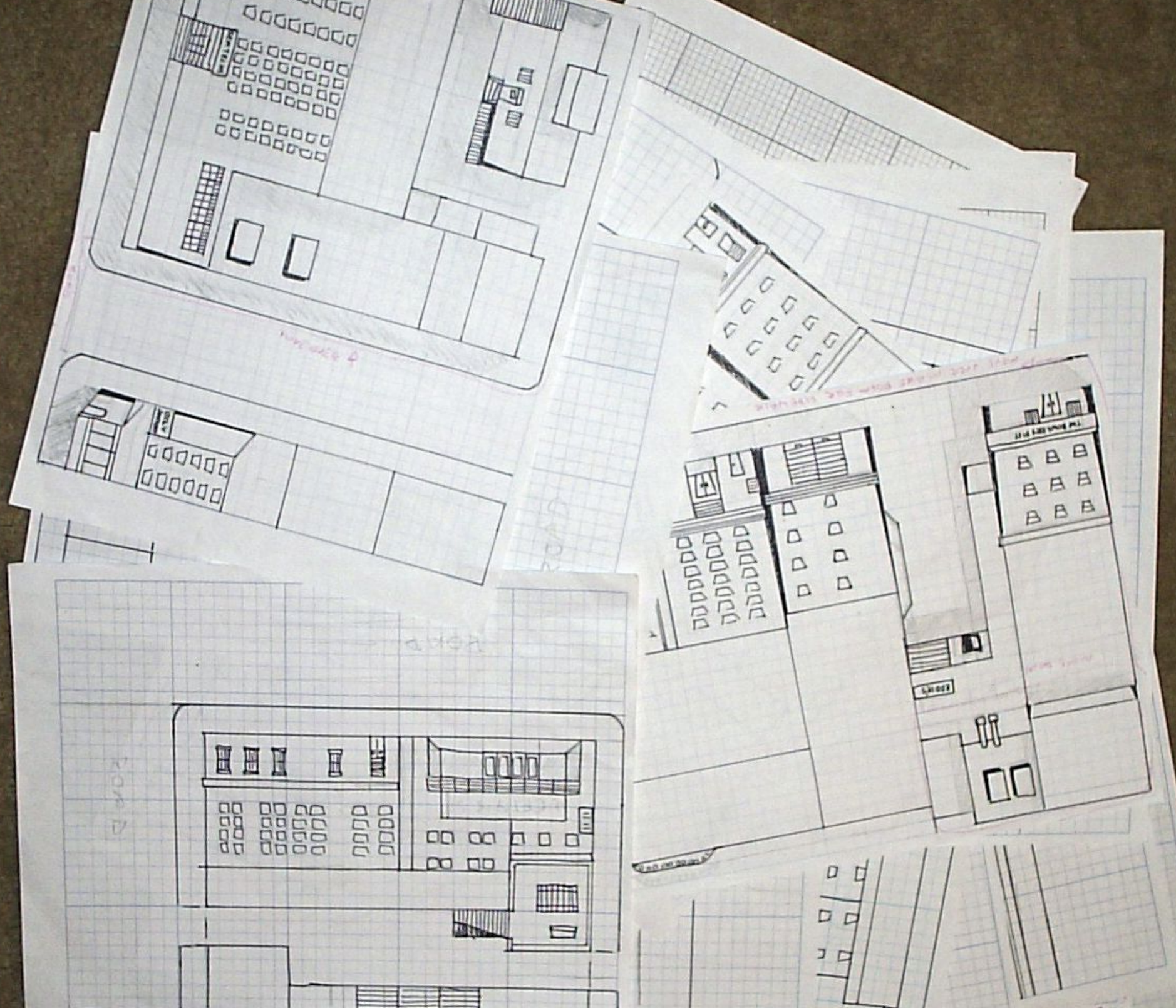
Before ***Retro City Rampage****, there was* ***Grand Theftendo***

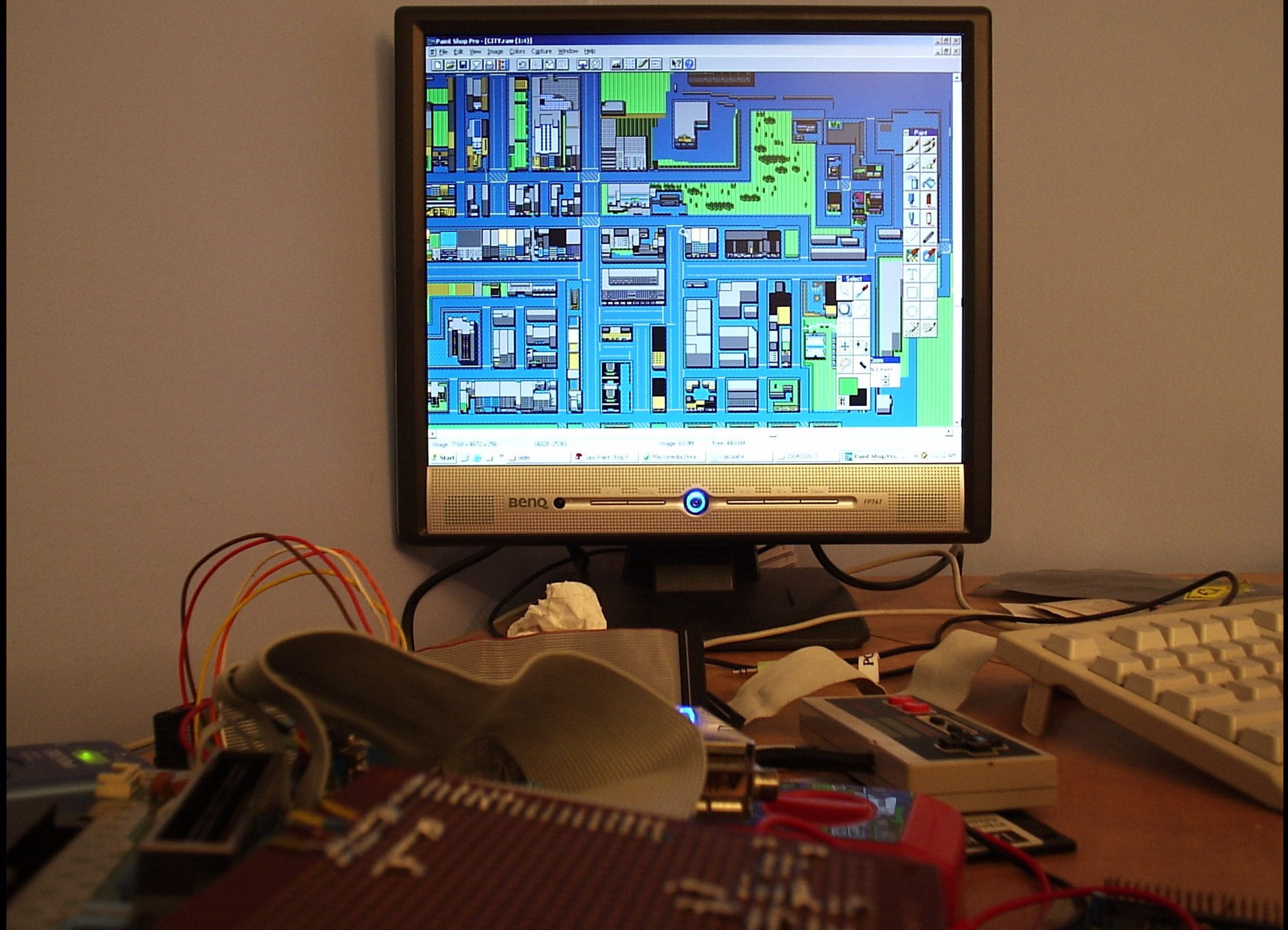
Nintendo Entertainment System
Development
NES Development Cartridge

Nintendo NES

MMC5
EW-ROM
RAM CART



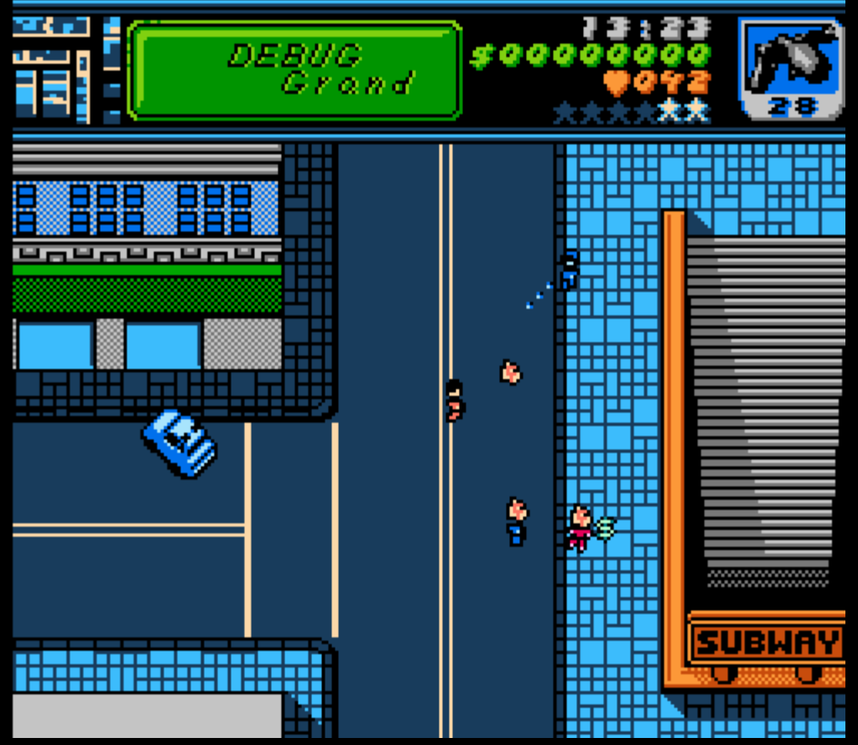



Paint Shop Pro - [CITY.raw (1:1)]
File Edit View Image Colors Capture Window Help
Start
BenQ

DEBUG
Keffendo Be
12:31
$000000000
010
100
MR.WONG'S
LAUNDRETTE

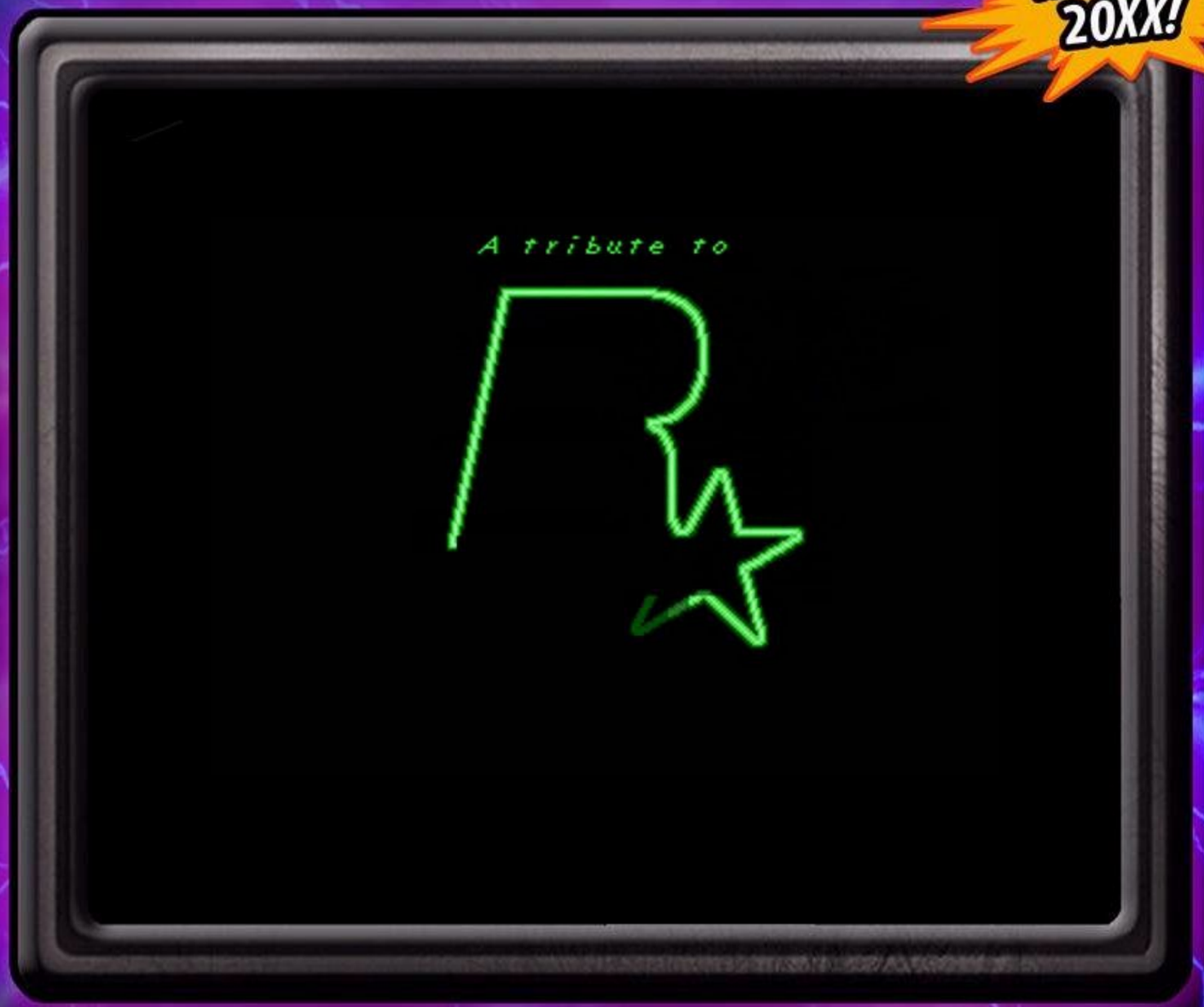
This is the place right here, let's get off the street and find a change of clothes!
BODIES

When you are 'wasted' you are returned to the nearest hospital.
GENERAL
HOSPITAL


DEBUG
Grand
13:23
$000000000
072
28
SUBWAY

WATCH IN AMAZING ASTONISHMENT
IN REAL MOVING PICTURES!

NEW FOR 20XX!



Under the hood of an NES game...

THE CODE!

ASSEMBLY LANGUAGE!

```
    .inesprg    1
    .ineschr    1
    .inesmir    1
    .inesmap    0

    .org $8000
    .bank 0

Start:
    ;       setup  the PPU
    lda #%00001000
    sta $2000
    lda #%00011110
    sta $2001

Loop:
    jmp Loop

        .bank 1
    .org    $FFFA
    .dw     0 ;(NMI_Routine)
    .dw     Start ;(Reset_Routine)
    .dw     0 ;(IRQ_Routine)

    .bank 2
    .org    $0000
    .incbin "test.chr"  ;gotta be 8192 bytes long
```

Let's AUTOMATE this!

C Style Includes, Defines, Pragmas

```
155 /*****************************************************************************/
156 // the code bank containing code only used on the reset intitialization
157 #rom.bank           BANK_CODE_RESETINIT
158 #rom.org            0xE000
159
160 #interrupt.start    reset_main
161 #interrupt.nmi      reset_nmi
162 #interrupt.irq      reset_irq
163
164     #include "std_init.as"
165     #include "sys\extraram.as"
166
167     #include "main.as"
168
169     #include "title\titlescreen.as"
170     #include "title\brandscreen.as"
171     #include "title\logoscreen.as"
172 #rom.end
173 /*****************************************************************************/
174
175
176 /*#############################################################################
177  #  ●●●●  ●●  ●● ●●●●
178  # ●●  ●● ●●  ●● ●● ●●
179  # ●●     ●●●●●● ●●●●
180  # ●●  ●● ●●  ●● ●● ●●
181  #  ●●●●  ●●  ●● ●●  ●●
182   #############################################################################*/
```

Inline/Macros for cleaner coding!

```
    } while(nonzero)
}

/*****************************************************************************
 * memset_inline( memdest, value, memsize )
 *
 *  memSize==0? memSize=256
 *
 *  memdest:    Memory location of buffer
 *  value:      Memory location of 8bit variable, 8bit immediate value
 *  memsize:    Memory location of 8bit variable, 8bit immediate value
 *
 * Registers changed:   A, Y
 */
inline memset_inline( memdest, value, memsize)
{
    lda value
    ldx #0
    do {
        sta memdest,x
        inx
        cpx memsize
    } while(nonzero)
}


/*****************************************************************************
 * size==0? size=256
```

```
/*****************************************************
// Initializes the sprite objects and the MMC5 b
function InitSprites()
{
    assign( MMC5.CHR_BANKSIZE,
    assign( MMC5.SPRCHR_BANK_SELECT_1K_0000,
    assign( MMC5.SPRCHR_BANK_SELECT_1K_0400,
    assign( MMC5.SPRCHR_BANK_SELECT_1K_0800,
    assign( MMC5.SPRCHR_BANK_SELECT_1K_0C00,
    assign(sprdraw.anibank, #CHR_ITEM_BANK_0(1K)
    assign(drawhud.sprbank, #CHR_HUDBLIPS_BANK_0

    SprObj_ClearVirtualOAM() // done all at once

    memset_inline(peds,     #0, #sizeof(peds))
    memset_inline(cops,     #0, #sizeof(cops))
    memset_inline(chaos,    #0, #sizeof(chaos))

    lda #0
    sta peds.randcount
    sta cars.randcount
    sta oamcpy.doflip

    SprCar_Init()
    SprPed_Init()
    SprItem_Init()
    HudBlips_Init()
}
```

IF/ELSE & SWITCH STATEMENTS! ZOMGBBQ!

```
/*****************************************************************************
function m000_8Ball_Proc_onAnimate()
{
    lda threads.state
    cmp #5
    if(lessthan) {
        cmp #1
        if(equal)
        {
            or_x(sprped.flags3, #O3_PED_RUNNING)

            // follow the player
            ldy m000.carspr
            SprPed_WalkTo_Car_XY()
        }
    } else {
        switch(reg.a) {
            case #6 {
                assign_16i(collide.destx, 5486)
                assign_16i(collide.desty, 3040)
                SprPed_WalkTo_X()
                if(false) {
                    Print_Message($8024) // this is the place right here

                    inc threads.state
                }
            }
            case #7 {
```

```
    tya
    and #O_ICON_TYPEMASK
    tay

    switch(reg.y) {
        case #(ICONTYPE.CHECKPOINT << 4) {
            assign(icons.checkhit, #FALSE)
            lda spritem.id, x
            switch(reg.a) {
                case #BUILDING_CHECKPOINT {
                    lda #SPRCOL.GREEN
                }
                default {
                    lda #SPRCOL.BLUE
                }
            }
        }
        default {
            lda itemTypes.flags2, y
            and #I2_COLOURMASK
        }
    }
    sta addspr.colour

    lda addspr.status
    sta spritem.status,x

    lda itemTypes.chrindex, y
```

Structs for data declarations! ZOMGBBQx2!

```
46      WEAPON_PISTOL,
47      WEAPON_UZI,
48      WEAPON_AK47,
49      WEAPON_M16,
50      WEAPON_ROCKET,
51      WEAPON_SNIPER,
52      WEAPON_MOLOTOV,
53      WEAPON_GRENADE,
54      WEAPON_SHOTGUN,
55      WEAPON_FLAMETHROW,
56      WEAPON_WHEEL
57  }
58
59  typedef struct WEAPONTYPE {
60      byte ptr     // pointer to the status tile
61      byte flags
62      byte clipsize
63      byte chrindex
64      byte maxdist
65      byte flags2
66      byte damage
67      byte radius
68      char name[8]
69  }
70
71  /*************************************************
72  #endif
73  /*************************************************
```

```
70  /*************************************************************
71  WEAPONTYPE weaponTypes[] = {
72      {status_weapons_tiles_fist-status_weapons_tiles,
73          W_NOAMMO|WDIR_NONE,
74          10,     0,      1,  W2_PUNCH,
75          1,  8,
76          "Fist"},
77      {status_weapons_tiles_bat-status_weapons_tiles,
78          W_NOAMMO|WDIR_4|W_LOCK,
79          10,     0xC1,   1,  SPRCOL.GREEN|W2_PUNCH,
80          4,  8,
81          "Bat"},
82      {status_weapons_tiles_pistol-status_weapons_tiles,
83          WDIR_1,
84          15,     0xC3,   12, SPRCOL.BLUE,
85          6,  8,
86          "Pistol"},
87      {status_weapons_tiles_uzi-status_weapons_tiles,
88          WDIR_16|W_EXPLODE|W_HOLD,
89          10,     0xC4,   14, SPRCOL.BLUE,
90          8,  8,
91          "Uzi"},
92      {status_weapons_tiles_ak47-status_weapons_tiles,
93          WDIR_16|W_EXPLODE|W_HOLD,
94          10,     0xC4,   31, SPRCOL.ORANGE,
95          12, 8,
96          "AK-47"},
97      {status_weapons_tiles_m16-status_weapons_tiles,
```

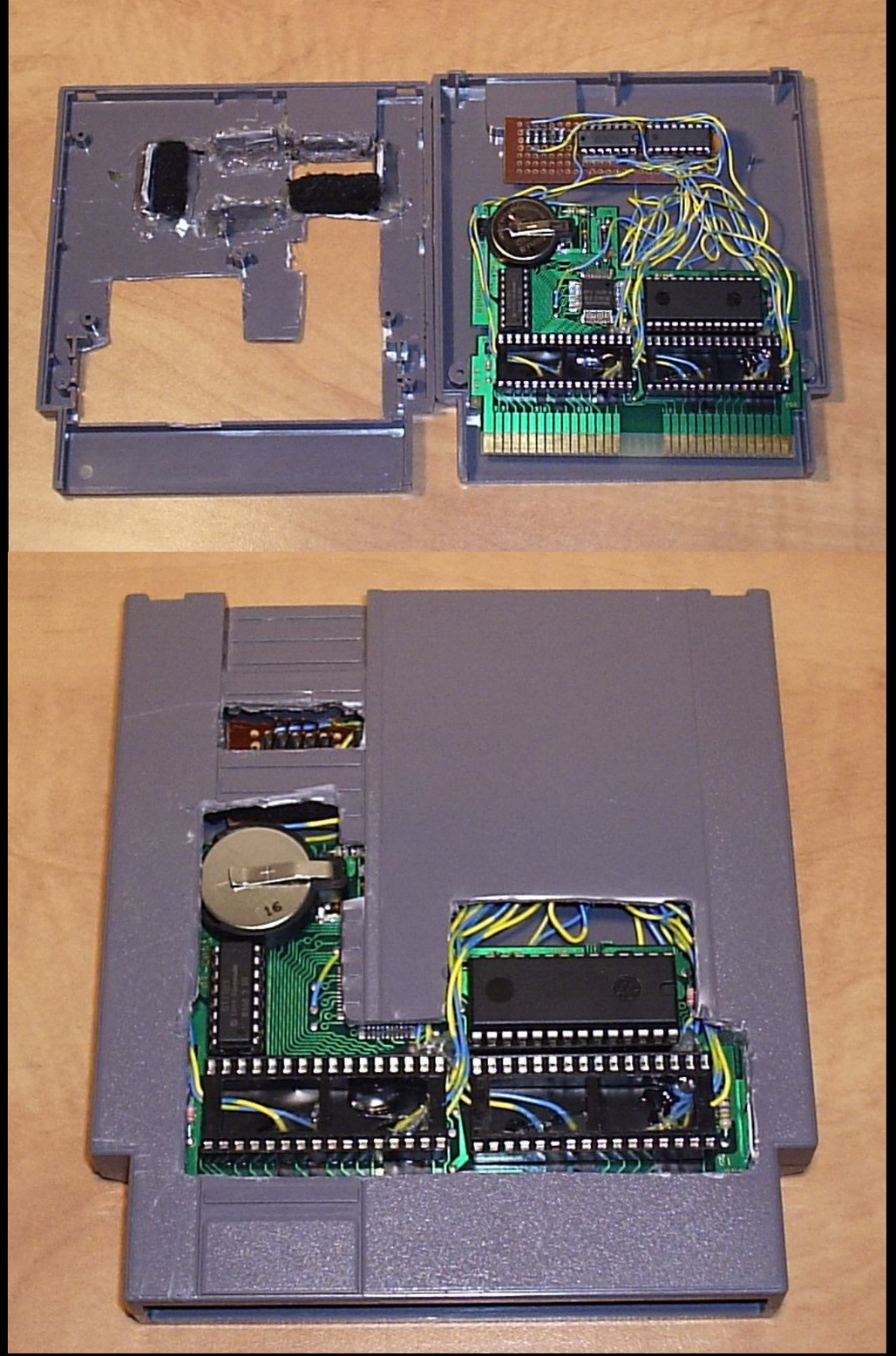
It sure would be cool to see it running on the real hardware!

WATCH IN AMAZING ASTONISHMENT IN REAL MOVING PICTURES!

NEW FOR 20XX!

DEBUG
12:20
$00000000
010 100
ble power!
Stereo earphones, batteries and exciting Tetris® game pak included.
Optional Accessories include Carrying Case, AC Adapter/ Rechargeable Battery Pack and Cleaning Kit.
The GAME BOY system features a complete library of exclusive Nintendo and third party licensed interchangeable paks.
TO PLAY:
Push Start button on GAME BOY..
GAME SELECT
Nintendo
ENTERTAINMENT SYSTEM
Press START button on LEFT controller to begin playing.
Use both controllers for two players.

HES Development Cartridge
NROM 32K/8K



But wait,
how long have you been working on this?

It's been 7+ years...

- ***Over 7 years!? What took you so long?***
  - An overly ambitious project!
  - Much of the development was part time
    (although at many times, I worked as much as a full time job!)
  - I did everything myself (engine, tools, hardware, art)
  - I had to redo things
    (rewrite code from NES to C++, draw a new city, etc.)
  - ...but the main factors:
    - Spent too long on the tech
      - Make your game already!
    - Too much time polishing minor details
    - BUSINESS. CONTRACTS. PR. PITCHES --> **MONTHS**!

Have it, Do it, Keep it in mind

- ***Passion***
  - It's all you need
  - Passion gives you the motivation, drives you to do your best and learn

- ***Automation***
  - Do **MORE** with **LESS**, automate everything you can

- ***Design***
  - It's not an afterthought
  - “Gosh! There's more to design than I gave designers credit for!”

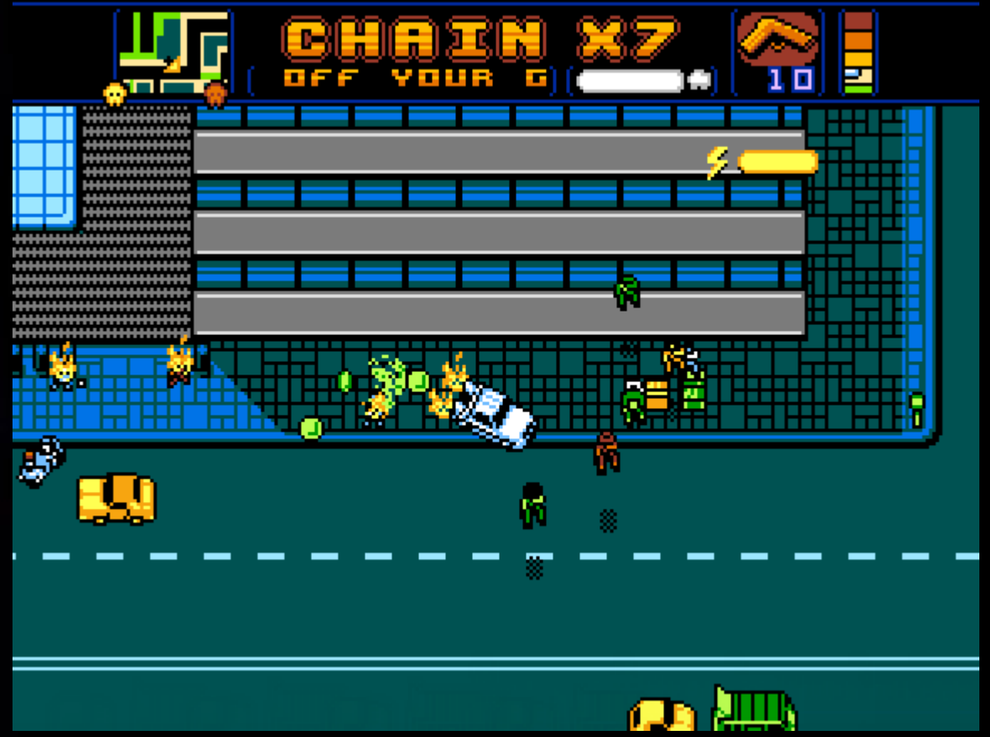
The Evolution

2004

2006

THE EVOLUTION – From NES to PC to Retro City Rampage

2010



WATCH IN AMAZING ASTONISHMENT IN REAL MOVING PICTURES!

NEW FOR 20XX!

Defining Moment #1
Shifting from NES to PC

- NES development has many downsides
  - Debugging is limited
  - Assembly codebase getting large
  - Constantly battling with memory limitations
- Idea! I'll rewrite it easily in C on the PC, finish it, then port it back!

<undefined district>

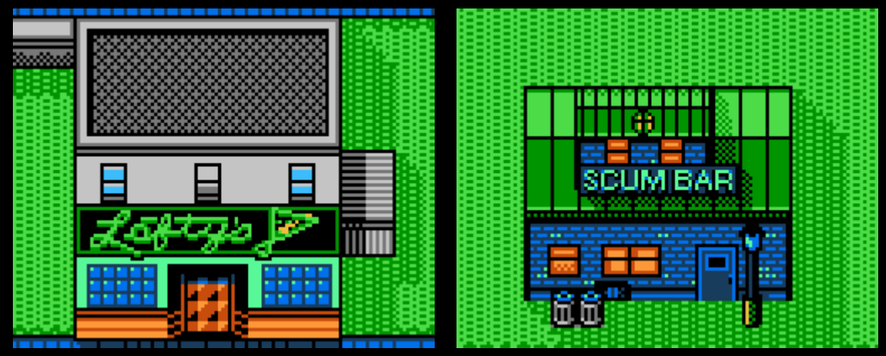
Bike

Harbour

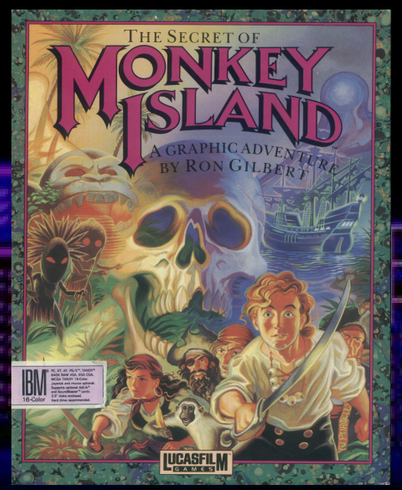
PC Version in 2006

Defining Moment #2
GTA, share the spotlight!

- “Haha! why don't I sneak in a Leisure Suit Larry or Monkey Island bar into the city?”
  - Wait a second!
    - “GTA: Monkey Island!”?
    - “GTA: Leisure Suit Larry”?
    - “GTA: Trailer Park Boys”? *(Go CANADA!)*
    - ... I like this idea!



- Started adding missions in as homage to other characters.



Defining Moment #3
The Break-Up

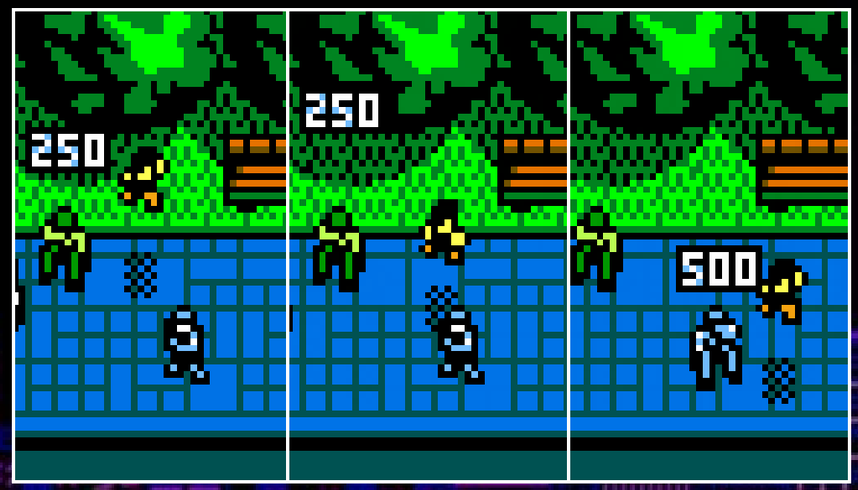
- “I sure would like to make this a full time job”
- “This is way too ambitious to finish part time”
- “...but, I can't make a job out of this if it uses the GTA IP”
- “Well, it would be fun to make an original game”

- The Grand Theft Auto 3 content is scrapped.

Defining Moment #4
ZOMGBBQ! This is GENIUS!

- Writing jumping code...
  - “I need to write code to handle when one character is on top of another.”
  - “What should they do?”
    - “Land on top?”
    - “Slide off?”
    - “Bounce off... and stomp the other one like Super Mario stomps goombas? HELL YES!”

- The direction shifts from gritty to **comedy**!



Defining Moment #5
Functional vs. Fun: A Programmer Learns Design

- After years, everything is ***FUNCTIONAL***.
  - “Yay! An 8-bit game with everything GTA has!”

- Wait a second... **“GTA with 8-bit graphics”** doesn't mean **“FUN”**.
- It needs to be **fun at its core**.
  - Time to learn that there's more to this “design” thing...

Playtesting is Key

- Stuck in a programmer's mindset?
- Want to design a good game?
- Start with playtesting –it almost does the work for you (at first)!

- Examples...

More Automation!

- Automate EVERYTHING!
- Do MORE with LESS!

256 Color Palette

Click on the color to select or double click to edit

Sort By: Palette Order

Index: 0, R:0, G:0, B:0

OK | Cancel | Help | Reset

More Automation!

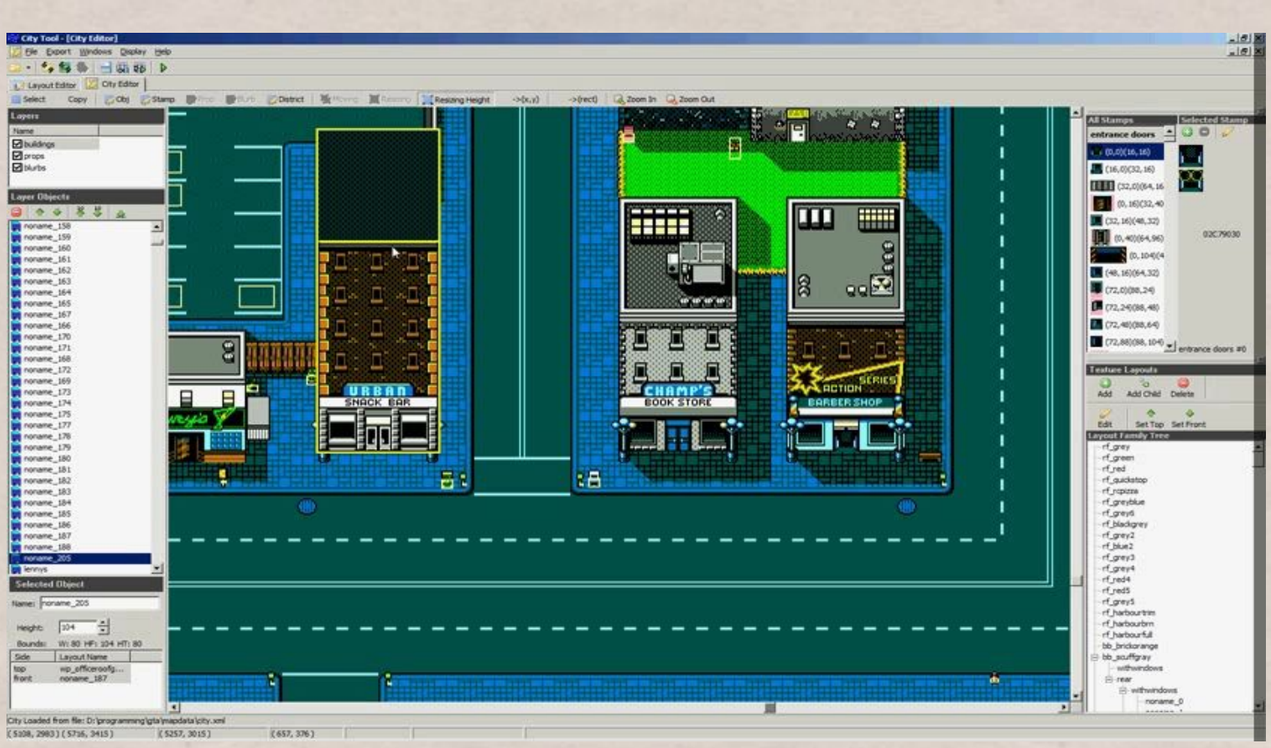
- I'm not doing that again!

INCREDIBLE
BEHIND THE SCENES ACTION!!

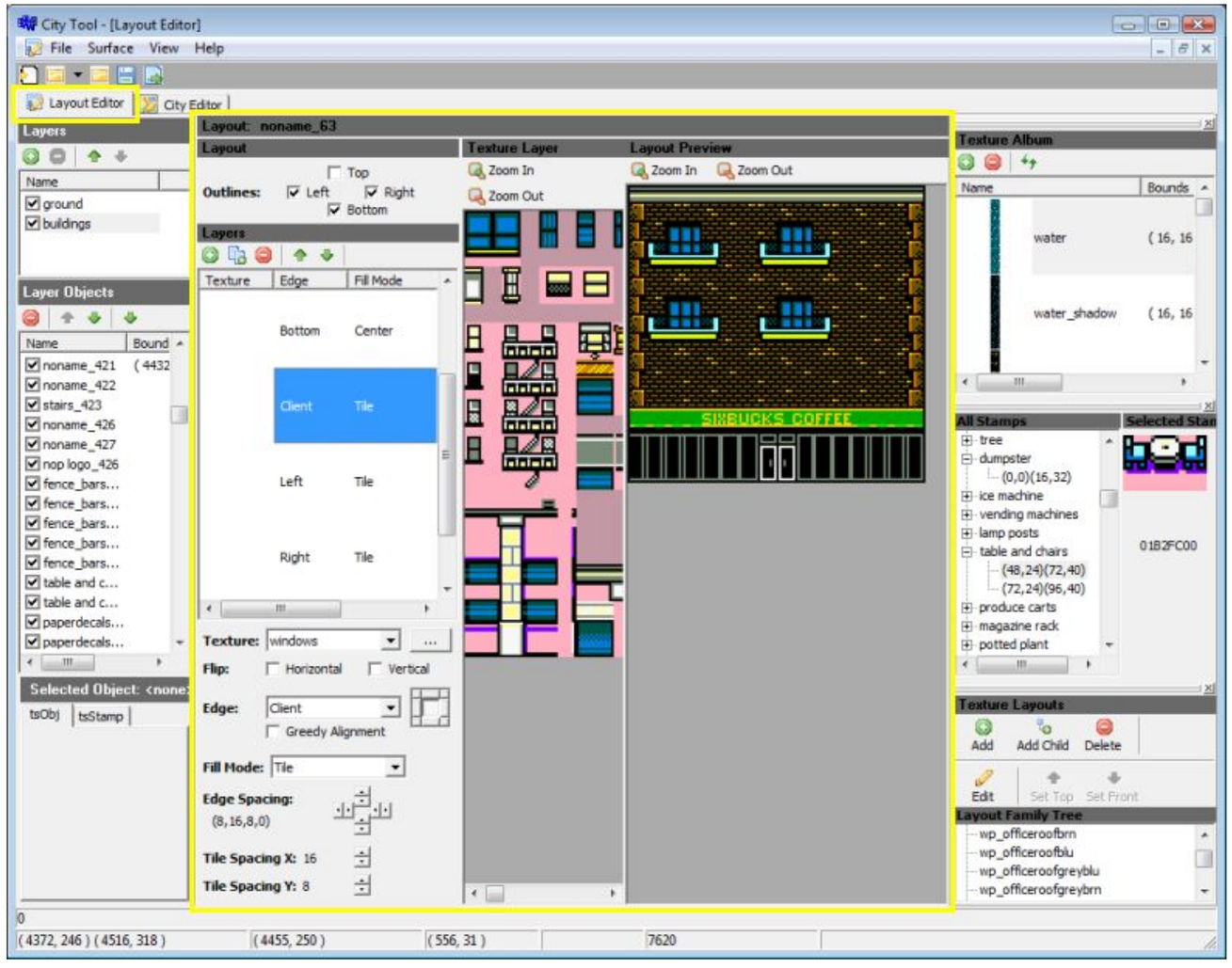
VBLANK ENTERTAINMENT INC.

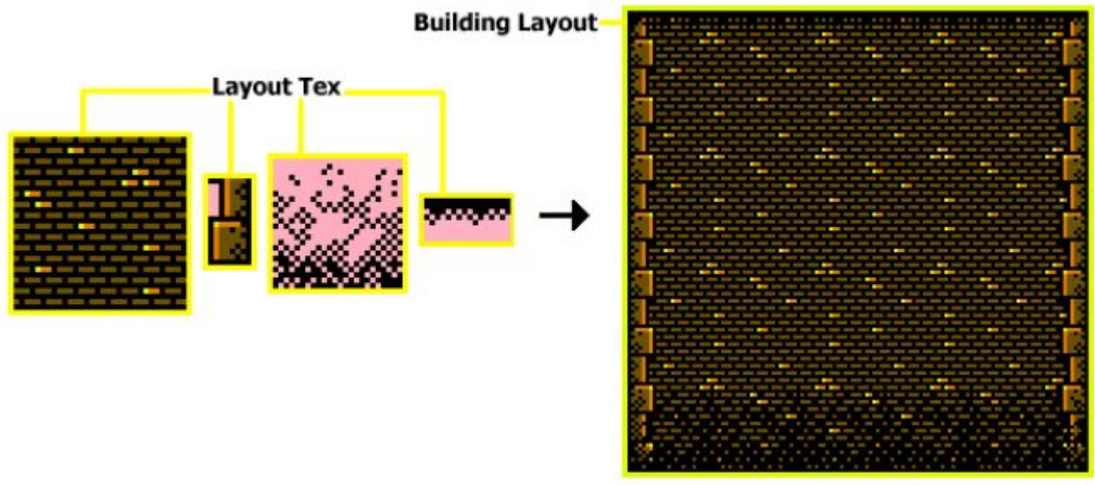
GO BEHIND THE SCENES!
GET THE GNARLY DETAILS!
READ THE THRILLING TALES!

RETRO CITY RAMPAGE



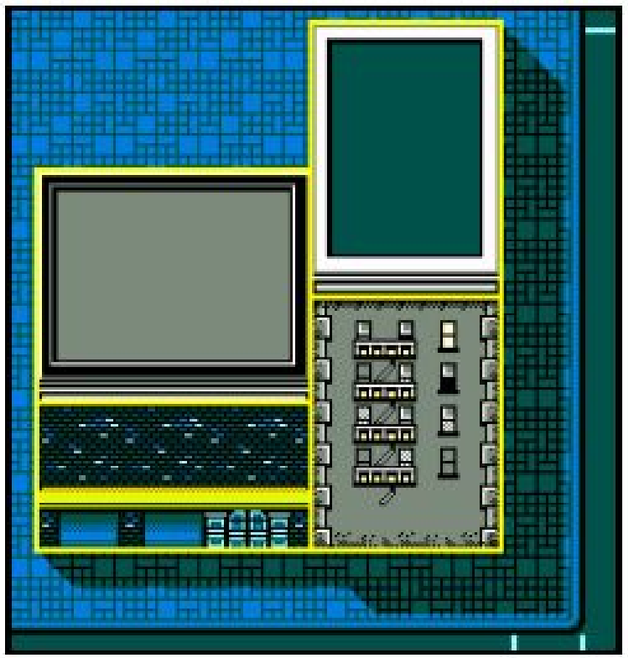
Layouts


City Tool - [Layout Editor]
File Surface View Help
Layout Editor
City Editor
Layers
Name
ground
buildings
Layer Objects
Name
noname_421
noname_422
stairs_423
noname_426
noname_427
nop logo_426
fence_bars...
table and c...
paperdecals...
Selected Object: <none>
tsObj
tsStamp
Layout: noname_63
Layout
Outlines:
Top
Left
Right
Bottom
Layers
Texture
Edge
Fill Mode
Bottom
Center
Client
Tile
Left
Tile
Right
Tile
Texture: windows
Flip:
Horizontal
Vertical
Edge: Client
Greedy Alignment
Fill Mode: Tile
Edge Spacing:
(8,16,8,0)
Tile Spacing X: 16
Tile Spacing Y: 8
Texture Layer
Zoom In
Zoom Out
Layout Preview
Zoom In
Zoom Out
SIXBUCKS COFFEE
Texture Album
Name
Bounds
water
(16, 16
water_shadow
(16, 16
All Stamps
Selected Stamp
tree
dumpster
(0,0)(16,32)
ice machine
vending machines
lamp posts
table and chairs
(48,24)(72,40)
(72,24)(96,40)
produce carts
magazine rack
potted plant
01B2FC00
Texture Layouts
Add
Add Child
Delete
Edit
Set Top
Set Front
Layout Family Tree
wp_officeroofbrn
wp_officeroofblu
wp_officeroofgreyblu
wp_officeroofgreybrn
(4372, 246) (4516, 318)
(4455, 250)
(556, 31)
7620


Building Layout
Layout Tex

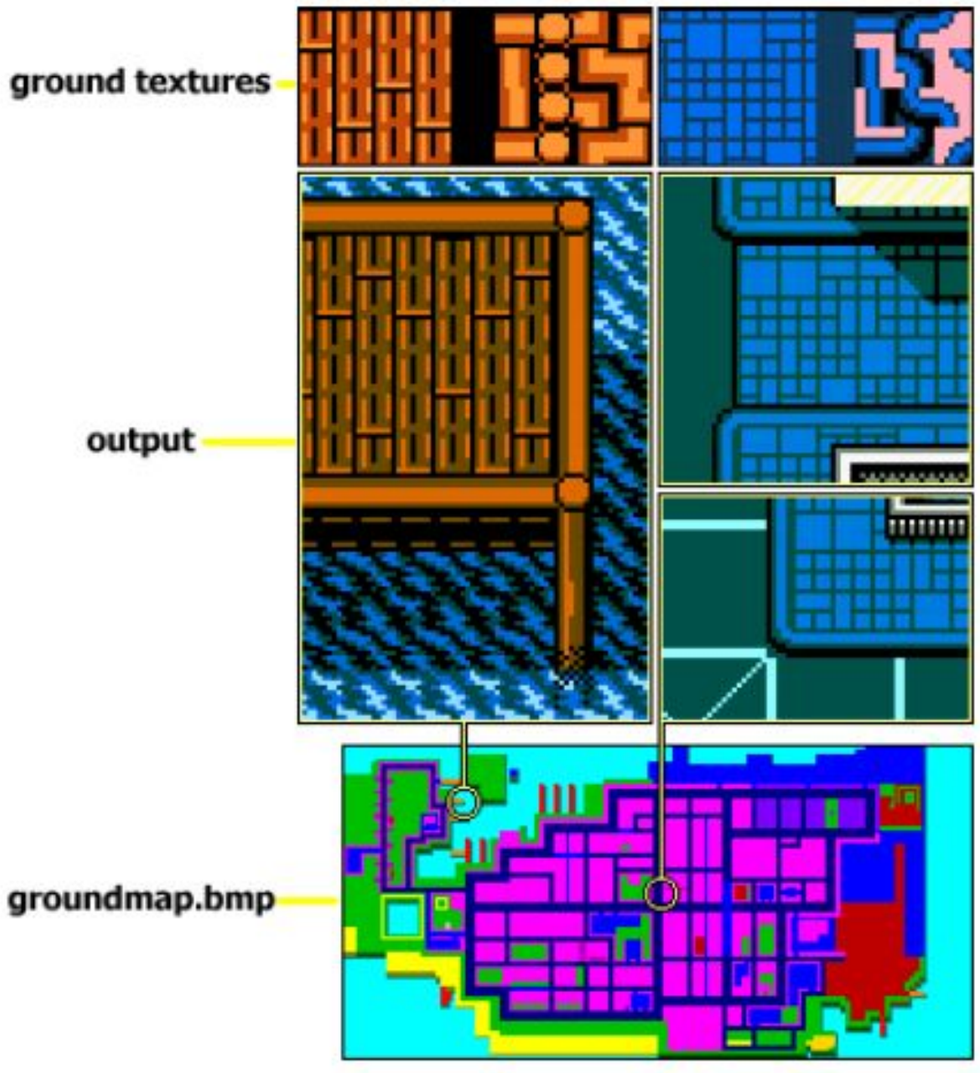
Shadows

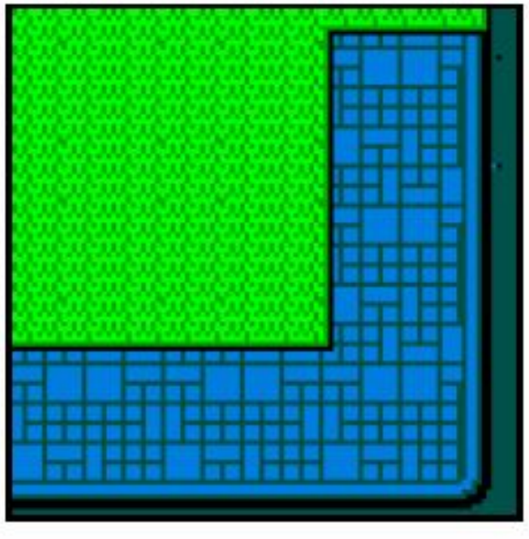
Building shadows are automatic based on its height.



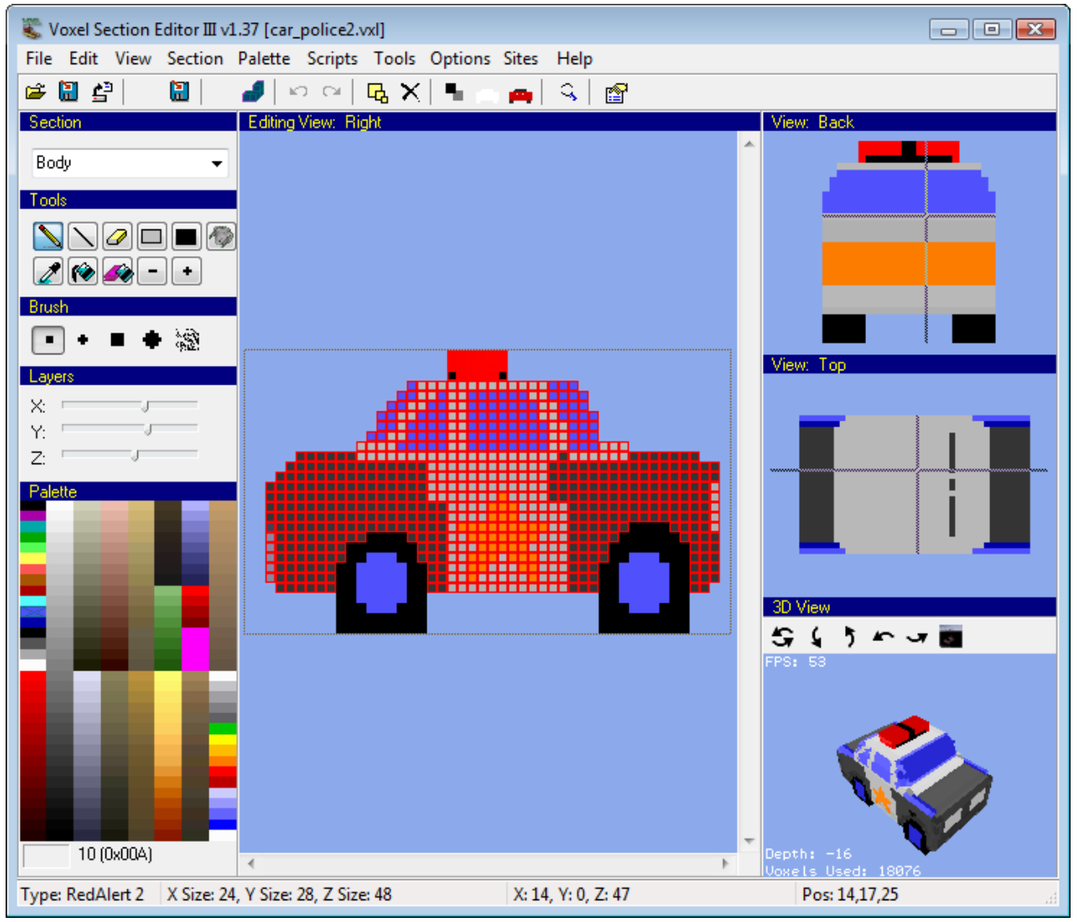
Shadows for stamps (fences, objects) can be automatic or custom. If bmp palette[253] (purple) is used in the stamp's texture, an automatic shadow will not be generated. Instead, anywhere this colour is used will become the shadow.

Ground Textures

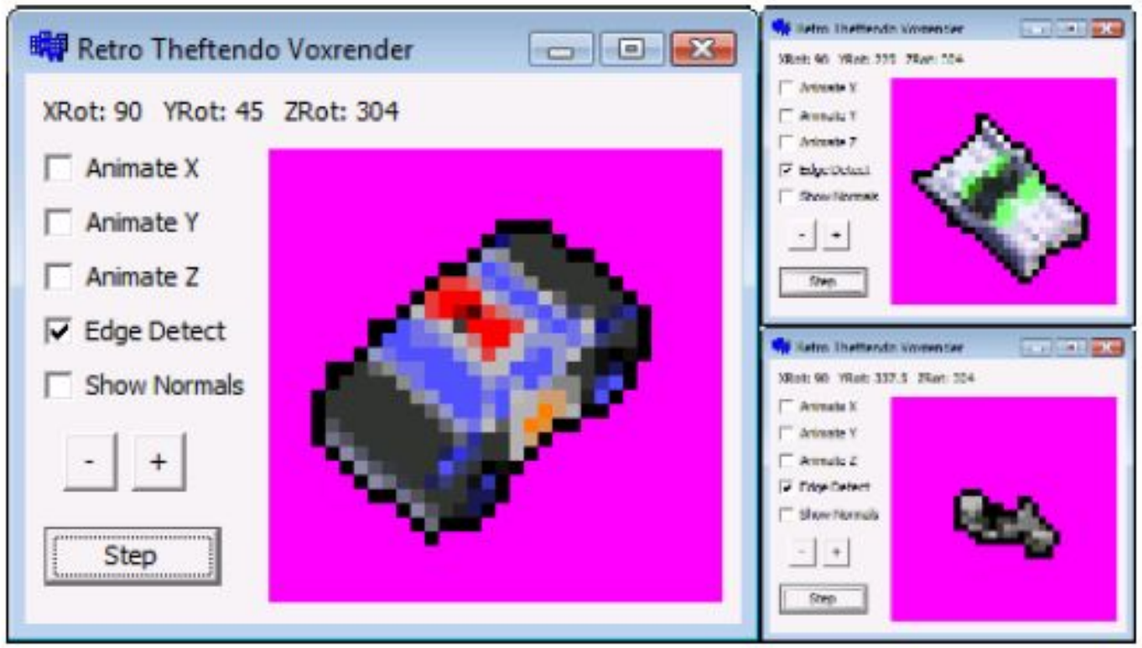




VOXELS FOR VEHICLES! ZOMGBBQ²

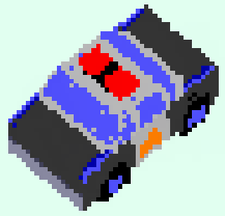
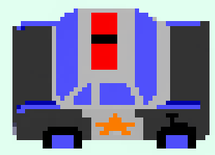
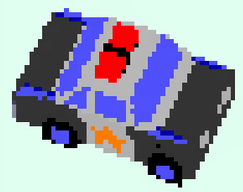
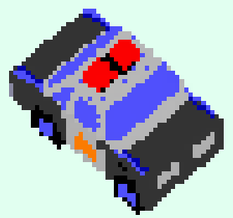
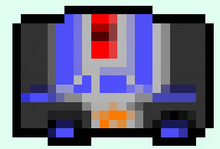
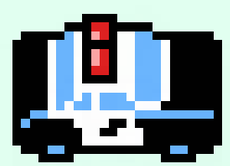


Free open source voxel editor
(A Command & Conquer editor, whoa!)



Custom exporter!

TIDY IT UP!

Original Scale					
Game Scale (50%)					
Cleaned Up					

Pedestrians

Direct Colours

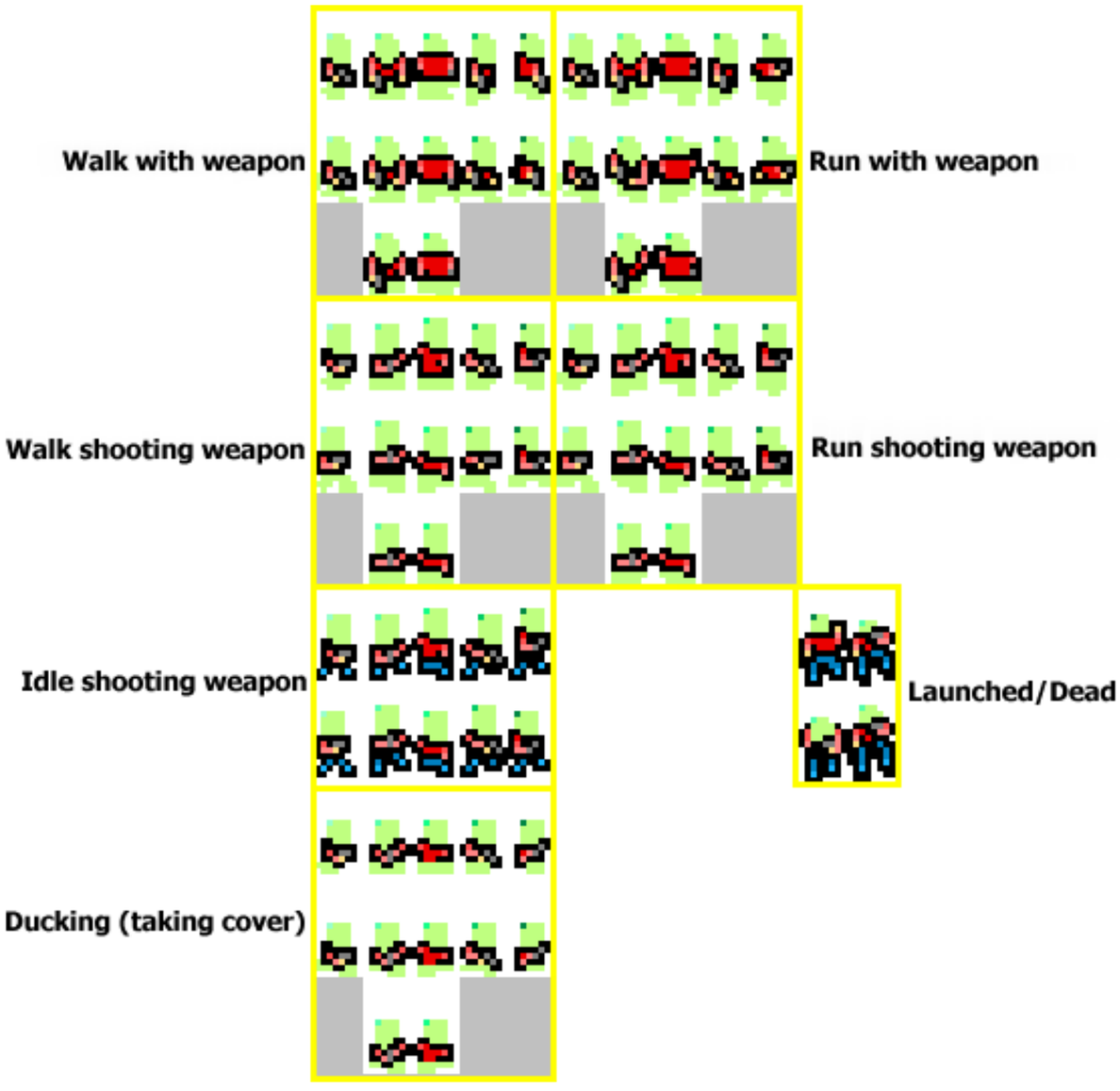
- Transparent
- sprpal[3] (light colour)
- sprpal[2] (dark colour)
- sprpal[1] (black)

Mapped Colours

- Hands
- Pants
- Shoes
- Shirt (torso)
- Shirt (upper sleeve)
- Shirt (lower sleeve)

Head Placement Markers

- East
- South
- North
- South-East
- North-East



NES Chrank

New | Load Project | Save Project | View Animation | Generate >> | About | Exit

Files

Input Bitmap: D:\programming\gta\gfx\decals\effects.bmp RL Browse...

Output CHR: D:\programming\gta\gfx\chr\decal_effects.chr Browse...

Output Map: Browse...

Output Tiledef: Browse...

Output Srchdr: Browse...

Output Scrhdr: Browse...

Select
Define
Move
None
Hotpoints
Zoom In
Zoom Out

Tile Options

8x8 / 8x16

Insert Transparent Tile as Tile #0

Crop Transparent Right/Bottom Edges

Number of Banks: 1

Transparent Colour: White Black

Colour Palette

Compression

Enable Compression

Similarity Compression

H Flip

V Flip

Max Similarity: 0 (0-64)

Map Options

Map: Source Source Struct Binary Binary Tabled

Load Options | Save Options

Byte Formatting

Byte Order: Byte #2 | Byte #1 | Byte #0

	7 6 5 4 3 2 1 0	7 6 5 4 3 2 1 0	7 6 5 4 3 2 1 0	NOT USED
Tile Index:			I I I I I I I I	
H Flip:		H		
V Flip:		V		
Priority:				
Palette:				P
Collision:				C

Index Base: 0 Max Index Bits: 8 (max tiles: 256)

Output: 2 Bytes: Together In Separate Buffers

Output Width/Height in Source

Double Indexes (for 8x16 tile mode)

Output Sprite Index Array

Show Tile Validation

Add | Del | Define | Paint

Name	Width	Height	Coords	Dirs
Effect_Magic	1	1	0,0	6
Effect_Sparkle	1	1	0,1	4
Icon_Lock	1	1	0,2	3
KickUp_Dust	1	1	0,3	4
BlastBubble	2	1	4,2	1
BoomBubble	2	1	4,3	1
BlastBubbleBig	3	2	0,4	1
WhiteBlock	1	1	4,1	2
Ghost	2	1	0,8	9
sprite #7	5	1	6,1	3
sprite #0	2	1	12,1	4
sprite #0	1	1	6,4	3

sprite #0

Width: 2 Height: 1

Sets: Horizontal Vertical

# of Frames: 4 Mirroring

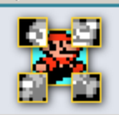
Enable Compression Output Map

Palette

Load | Save | Generate | Mirror #0

Num Palettes: 1

Speed: 8/60



Brian Provinciano's NES Chrank NES Graphic Maker

Project Loaded.

```
 !"#$%&'()*+,-./
0123456789:;<=>?
@ABCDEFGHIJKLMNO
PQRSTUVWXYZ[/]↑_
`abcdefghijklmno
pqrstuvwxyz{|}~·
€¤¡ƒ„…†‡ˆ‰Š‹ŒŽ¤¤
‘’“”•–—˜™š›œžŸ
 ¡¢£¤¥¦§¨©ª«¬·®¯
°±²³´µ¶·¸¹º»¼½¾¿
ÀÁÂÃÄÅÆÇÈÉÊËÌÍÎÏ
ÐÑÒÓÔÕÖ×ØÙÚÛÜÝÞß
àáâãäåæçèéêëìíîï
ðñòóôõö÷øùúûüýþÿ
```

```
 !"#$%&'()*+,-./
0123456789:;<=>?
@ABCDEFGHIJKLMNO
PQRSTUVWXYZ[/]↑_
`abcdefghijklmno
pqrstuvwxyz{|}~·
€¤¡ƒ„…†‡ˆ‰Š‹ŒŽ¤¤
‘’“”•–—˜™š›œžŸ
 ¡¢£¤¥¦§¨©ª«¬·®¯
°±²³´µ¶·¸¹º»¼½¾¿
ÀÁÂÃÄÅÆÇÈÉÊËÌÍÎÏ
ÐÑÒÓÔÕÖ×ØÙÚÛÜÝÞß
àáâãäåæçèéêëìíîï
ðñòóôõö÷øùúûüýþÿ
```

```
 !"#$%&'()*+,-./
0123456789:;<=>?
@ABCDEFGHIJKLMNO
PQRSTUVWXYZ[\]^_
`ABCDEFGHIJKLMNO
PQRSTUVWXYZ{¦}~⌧
€¤¡ƒ„…†‡ˆ‰Š‹ŒŽ¤¤
‘’“”•–—˜™š›œžŸ
 ¡¢£¤¥¦§¨©ª«¬·®¯
°±²³´µ¶·¸¹º»¼½¾¿
ÀÁÂÃÄÅÆÇÈÉÊËÌÍÎÏ
ÐÑÒÓÔÕÖ×ØÙÚÛÜÝÞß
àáâãäåæçèéêëìíîï
ðñòóôõö÷øùúûüýþÿ
```

```
 !"#$%&'()*+,-./
0123456789:;<=>?
@ABCDEFGHIJKLMNO
PQRSTUVWXYZ[\]^_
`ABCDEFGHIJKLMNO
PQRSTUVWXYZ{¦}~⌧
€¤¡ƒ„…†‡ˆ‰Š‹ŒŽ¤¤
‘’“”•–—˜™š›œžŸ
 ¡¢£¤¥¦§¨©ª«¬·®¯
°±²³´µ¶·¸¹º»¼½¾¿
ÀÁÂÃÄÅÆÇÈÉÊËÌÍÎÏ
ÐÑÒÓÔÕÖ×ØÙÚÛÜÝÞß
àáâãäåæçèéêëìíîï
ðñòóôõö÷øùúûüýþÿ
```

```
 !"#$%&'()*+,-./
0123456789:;<=>?
@ABCDEFGHIJKLMNO
PQRSTUVWXYZ[\]^_
```

```
 !"#$%&'()*+,-./
0123456789:;<=>?
@ABCDEFGHIJKLMNO
PQRSTUVWXYZ[\]^_
```

INCREDIBLE
BEHIND THE SCENES ACTION!!
VBLANK
ENTERTAINMENT INC.
GO BEHIND THE SCENES!
GET THE GNARLY DETAILS!
READ THE THRILLING TALES!
RETRO CITY RAMPAGE

00002040
$1,062
20
VICE
DEFECT BROOMS

Runtime Debugging

Conclusion

- Scope realistically.
- Automate everything you can.
- Business & proper marketing take up a lot of time. ***A LOT!***
- *Don't do it alone!*
- *Have local dev gatherings!*

Brian Provinciano
Vblank Entertainment

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