# A Chance in Hell Developer's Technical Notes:

## Two versions:

* ACIH - Standard C64 version.
* ACIHX - EXtreme version for SuperCPU or fast emulation (25x)

## Areas:

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| Area | Description |
| 1 | Starting area - Church graveyard and road |
| 2 | C64 interface |
| 3 | Church interior |
| 4 | Church Staircase |
| 5 | Underground room |
| 6 | Cliff house and sea |
| 7 | Hut interior |
| 8 | Underground Passage |
| 9 | House living room |
| 10 | C64 Room |
| 11 | Underground junction room |
| 12 | Security area |
| 13 | Demon room |
| 14 | Room with shaft |
| 15 | Game complete area |
| 16 | Table room |
| 17 | Underwater |

## Personal remarks on the areas:

### 1: Church graveyard and road

The animated cars are an array of car objects along the road. The interrupt counter variable 122 is used to 'randomly' initiate the first car in the sequence, triggering the sequence to ripple the car object along the road. This permits multiple cars to be on the road at any time.

To stop the player walking 'over' the cars, FLY1 mode is used for this area alone in the game. The Player height is kept at constant height by continuously setting the play Z coordinate to a constant.

Only when the player is on the tower of the church is WALK mode used.

An invisible cube is used to detect if the player is above the grave hole.

Most of the gravestones are global objects, and are reused as shipwrecked boxes at the bottom of the underwater area 17.

### 2: C64 interface

A black area with no objects. This is the cyberworld of the C64 screen! The crosshair cursor is turned off, and text is displayed on the draw window itself, with keypresses detected using variable 121.

### 3: Church interior

Contains code to cope with the entrances to the FLY1 area 1.

### 4: Church Staircase

Allows the player to access area 1 in WALK mode, on the church steeple.

### 5: Underground room

Contains code to cope with the entrances to the FLY1 area 1.

### 8: Underground Passage

### 11: Underground junction room

Standard areas consisting of objects. Nothing noteworthy in these areas.

### 6: Cliff house and sea

Contains code to cope with the entrances to the FLY1 area 1.

This area gives the sneaky impression that it is a standard floor area with objects, but the player is actually walking on a massive cube that takes up most of the area. The cube stops short of the end of the area, acting as a cliff. An invisible rectangle triggers the animation for climbing down the cliff, and shooting the upward arrow animates the player up the cliff. The space at the bottom of the cliff is relatively small, so several sea-coloured eye-height rectangles are placed at the edges of the area give the illusion that the water continues to a distant horizon.

In this area I discovered that it is not possible to GOTO an entrance on a rectangle platform that is floating in the air. Instead, a cube with at least a thickness of 1 is needed, otherwise the player falls through the rectangle platform when GOING to its entrance.

### 7: Hut interior

If the light bulb is shot, the area is recoloured to all black using the COLOR FCL command. It is noteworthy that areas automatically revert back to the original colours when re-entered.

### 9: House living room

The couch is placed away from the wall so that the player can't walk over the couch and over the wall to escape the room! (Rectangular roofs do not prevent the player from popping their heads through them when changing modes from CRAWL to WALK.)

### 10: C64 Room

The scale of this area is 4. This allows the objects to have smaller details, such as the C64 keyboard and disk drive. Using the C64 triggers a nice animation into the C64 screen, blanking the crosshair, and then the player is moved to the cyberspace area 2.

### 12: Security area

Three sensors are used to give the laser effect when the security system has not been deactivated in this area.

### 13: Demon room

Locks the player in place until he kills the demon, or exits via the door. The demon is quite complex, made up of several triangles, pyramids, hexagon, pentagon and line objects. I actually ran out of patience creating it, and didn't finish aligning the objects properly. Thus the demon is an illusion, and if you were able to walk around the demon, you would see that the objects are actually at different distances from the demon's body.

### 14: Room with shaft

Another area that is high up in the air. I forgot to use a cube for the starting floor, and used a rectangle instead, and so had to put in some unwieldy FCL code to stop the player falling through the floor on entering the area. The player is oblivious to this, but I could tidy this up to free up a good ten bytes or so.

The player is animated when falling down the shaft.

### 15: Game complete area

I used nice trick of text colour changes to give a strobing text effect to end the game.

The crosshair is disabled for this endgame area.

### 16: Table room

This area is used twice! Firstly for the underground room where the scuba kit cab be found, and secondly for the underwater ship room, where the key can be found. The ship version of the room uses COLOUR commands to recolour it to blue tones, makes use of an additional wall and a ceiling, and is accessed in MODE FLY2 with tilted entrance viewpoints.

### 17: Underwater

A blue coloured area accessed in mode FLY2 with tilted entrance viewpoints. Despite its appearance, this is actually a very cheap area in terms of memory requirements, as many of the objects are globals that are recycled from other area objects. For example, the container on the ship is actually the C64 Monitor in the Computer Area!

## Procedures:

proc 1: clear the message line with 4xdelay (using sub procs)

proc 2: clear the message line without delay

proc 3: movement

proc 4: movement

proc 5: movement

proc 6: fall procedure (using sub procs)

proc 7: 3xdelay

proc 8: inventory line clear and print (using sub procs)

proc 9: deals with mode changes and visibility bugs (only to be called from areas 3-6)

proc 10: need things (using sub procs)

proc 11: print "you have" print 22 1 24

proc 12: clear inventory line

## Variables:

v1:

v2: denotes whether player has the disk.

v3: strength

v4: used for mode changes between the starting area and other areas.

v5:

v6: used in the C64 'cyberspace' area. Also used in the shaft area, set to 50 when above the shaft

v7: used to denote whether the security system is active

v8: denotes possession of bible, also used as counter for shooting the demon

v9:

v10: denotes whether player has inserted the disk into the C64 disk drive.

v11: denotes whether player has scuba kit and then the key.

V12: set to 1 when falling down the shaft, but expected to be 0 when at bottom!

v13: used in final area as a counter for falling down the shaft

v14: used to correct the viewpoint in the shaft area.

## MESSAGES:

1 "CLIMBING"

2 " " (USED FOR BLANKING THE MESSAGE DISPLAY)

3 "CLIPPED BY A CAR"

4 "OUT OF ENERGY"

5 "GAME OVER"

6 "A BIBLE"

7 "YOU FALL"

8 "DOWN"

9 "UP"

10 "YOU CANT SWIM"

11 "DARKNESS"

12 "EXIT"

13 "PLEASE WAIT"

14 "SECURITY SHUTDOWN"

15 "DEMON KILLED"

16 "A DISK"

17 "DISK INSERTED"

18 "DEFEAT THE"

19 "DEVIL"

20 "GAME COMPLETE"

21 "IN HELL YOU"

22 "YOU HAVE"

23 "NEED"

24 "A KEY"

25 "SCUBA KIT"

26 "Y N"

27 "CLIFF"

28 "SHOOT IT"

## EXtreme Specific Changes:

\* Decreased the frequeny of cars (by tripling the timer in area 1 local 1)

\* Added delay to proc 1

\* setting all area 1 local delays to 255 (New proc 7 is to delay for 3x255)

\* Extended all delays

\* Added delay 150 to procs 3 and 4 for climbing up and down the cliff

\* Reduced the rate the security system decreases strength (v3)

\* decreased the walk and turn increments to suit the faster CPU speed

\* Increased timer to make the cars less frequent

\* Increase strength variable 3 threshold to 240

\* Fixed the stairs bug

\* Saved memory by not permitting the trapdoor to be closed

\* Remodelled area 8 passageway.

\* Remodelled the house.

\* Added obstacle in the security area

\* Inventory, cleared at game start

\* For areas 12 and 13, added timers to slow sown the strength sapping

\* Strength restored when entering the church