

Z-code Text Adventure Collection #3 for Commander X16

Many of us played and loved the text adventures (AKA interactive fiction) produced by Infocom in the 1980's. They were rich in story and puzzles, and contained some excellent writing. In the years since Infocom's demise in 1989, there have been a lot of good games produced using Z-code - the game format that Infocom was using. Many of these games run fine on the Commander X16, using a Z-code interpreter. There is currently only one Z-code interpreter available for the Commander X16 - Ozmo.

I decided to create a collection of some great Z-code games for the Commander X16. All in all, this collection holds eight games, which were initially released in 1997-2018.

If you want more of a background on Infocom and the game format they used, you should read the chapter about The Zork Machine at the end of this document. There is also a chapter about building other Z-code games for play on Commander X16 and, finally, a chapter about writing your own games.

If you are new to text adventures, you may want to start by reading a short guide on how to play at <https://www.microheaven.com/ifguide/step3.html> or you could start by playing The Dreamhold, which was written to guide new players. The Dreamhold is part of Z-code Text Adventure Collection #1 for Commander X16, which can be found at <https://microheaven.com/ztac/>

I created this documentation as a PDF, so that you could easily print it out and keep it nearby as you're playing the games on your Commander X16.

You will always find the latest version of this collection at <https://microheaven.com/ztac/>

Enjoy!

Fredrik Ramsberg, June 2024
Email: fredrik.ramsberg AT gmail.com

The Games	3
Augmented Fourth	3
Calypso	3
Endless, Nameless	4
Lost Pig	4
Metamorphoses	5
She's Got a Thing For a Spring	5
Spider and Web	5
Tethered	6
Technical Information	7
The Zork Machine - past and present	7
Building Z-code games for play on Commander X16	8
Writing your own text adventures	9

The Games

Augmented Fourth

Folder name: AUG4

Genre: Fantasy / Humor

Year: 2000

Release / Serial No: 4 / 200401

Author: Brian Uri!

Link: <https://ifdb.org/viewgame?id=cpwktis6qwh9ydn8>

“WANTED: Amateur musicians to serve the Royal Court. Must provide own instrument and be inured to copious constructive criticism. Impress your friends! Meet the King! Apply in person at the Castle, located on the south side of the volcano in sunny Central Papoosen.”
[--blurb from IFDB]

Calypso

Folder name: CALYPSO

Genre: Mystery

Year: 2014

Release / Serial No: 6 / 220703

Author: Dave Footitt

Link: <https://ifdb.org/viewgame?id=apo771qxl1ba4lsy>

“Coming around in a lighthouse with no memory of who you are or how you got there, can you solve the mystery and win the game?”
[--blurb from IFDB]

Endless, Nameless

Folder name: NAMELESS

Genre: Surreal

Year: 2012

Release / Serial No: v1.07 / 131206

Author: Adam Cadre

Link: <https://ifdb.org/viewgame?id=7vtm1rq16hh3xch>

"The first time I ever saw someone play a text adventure was in fifth grade. One of the sixth-graders didn't go to outdoor ed, and therefore spent the week in my fifth-grade classroom, playing Scott Adams's Impossible Mission on a TRS-80 while the rest of us did our schoolwork. At recess we crowded around him and shouted out commands to try. I really wanted a turn at the keyboard, but this guy wouldn't let anyone else near it. It would be another couple of years before I played a text adventure myself.

My big chance came when my father signed up for the Dow Jones online service, which offered not just stock listings but sports scores, movie reviews, Grolier's Encyclopedia, and a small selection of games, among which was Adventure. A bargain at a mere \$144/hour! (In 1984 dollars!) Fortunately for my father's bank account, I eventually learned about Orange County's free BBSes, most of which were WWIV boards written in Pascal. Borland's Turbo Pascal let you swap in external modules called "door games," some of which were text adventures, and I've had the code to a few of these kicking around for (ulp!) a quarter of a century now. For a long time I've thought that it might be kind of fun to port one over to Inform, and I finally found the time to do so. Warning! These things were not exactly up to Infocom standards, let alone those of the modern day. This is a nostalgia project. Swords, trolls, magic spells, hit points. But no acoustic coupler necessary!"

[--blurb from IFDB]

Adam Cadre has written several acclaimed IF games.

Lost Pig

Folder name: LOSTPIG

Genre: Fantasy / Humor

Year: 2007

Release / Serial No: 2 / 080406

Author: Admiral Jota

Link: <https://ifdb.org/viewgame?id=mohwfk47yjzii14w>

"Pig lost! Boss say that it Grunk fault. Say Grunk forget about closing gate. Maybe boss right. Grunk not remember forgetting, but maybe Grunk just forget.

[--blurb from IFCOMP 2007]

Metamorphoses

Folder name: METAMORP

Genre: Fantasy

Year: 2000

Release / Serial No: 4 / 020222

Author: Emily Short

Link: <https://ifdb.org/viewgame?id=j61yaux1cqbptxyb>

You wake to stillness. The hammering, banging, and shouting that kept you awake half the night are gone. The air is cold, and something smells burnt. Your master's experiments must be finished, but with what result?

[--blurb from IFDB]

She's Got a Thing For a Spring

Folder name: SPRING

Genre: Slice of Life / Travel

Year: 1997

Release / Serial No: 4 / 080207

Author: Brent VanFossen

Link: <https://ifdb.org/viewgame?id=km1xagfje83xzkbp>

"It's been a hectic year, and it's time to get away. He told you that, and you agreed. Now you're here, in a grove of aspen, and long for a good, long bath in the nearby hot spring."

[--blurb from The Z-Files Catalogue]

Spider and Web

Folder name:TANGLE

Genre: Science Fiction / Espionage

Year: 1998

Release / Serial No: 4 / 980226

Author: Andrew Plotkin

Link: <https://ifdb.org/viewgame?id=2xyccw3pe0uovfad>

"A vacation in our lovely country! See the ethnic charms of the countryside, the historic grandeur of the capital city. Taste our traditional cuisine; smell the flowers of the Old Tree. And all without leaving your own armchair! But all is not as it seems..."

[--blurb from The Z-Files Catalogue]

Andrew Plotkin has written a wide array of interactive fiction games, and won many awards. He has also done professional game development, including the highly polished IF game Hadean Lands which can be found on Steam.

Tethered

Folder name: TETHERED

Genre: Mystery / Survival

Year: 2018

Release / Serial No: 5 / 200424

Author: Linus Åkesson

Link: <https://ifdb.org/viewgame?id=u16mpjnk07d3l8i2>

"I do not know whether I was then a man dreaming I was a butterfly, or whether I am now a butterfly, dreaming I am a man.

-- Chuang Tzu"

[--blurb from IFDB]

Technical Information

Here you can find a bit more information about Infocom, the game format they developed, how you can find more Z-code games and make them playable on the Commander X16, and what you need to write your own text adventure.

The Zork Machine - past and present

In 1977, a few guys at Massachusetts Institute of Technology played Adventure, which is widely considered to be the first text adventure. They decided to write their own adventure game, first called Zork, then Dungeon, then Zork again. In 1979, they started a company called Infocom, to make business software. They needed a source of income as they were starting up, and they thought Zork could provide that, if they could only get it to run on the micro computers of the time. The game was about 1 MB in size, and the computers they needed to run it on typically had 32 KB of memory. Also, the game was written in Fortran, which wasn't available for micro computers. On top of all this, there were new computer models coming out all the time, and they wanted the game to run on as many different platforms as possible.

To solve this equation, they designed a virtual machine, an imaginary computer never meant to be built, but to be emulated. The machine was called the Z-Machine (Zork Machine), and it was designed only for running text adventures. They then created their own programming language called ZIL (Zork Implementation Language), heavily inspired by MDL, the language they wrote the first version of Zork in. They wrote a compiler called Zilch, which compiled ZIL programs to Z-code, programs ready to be run on the Z-machine. They then wrote a separate ZIP (Z-machine Interpreter) to emulate the Z-machine on each platform they wanted to support. The end result was that they could, after the hard work of writing all this software was done, release their text adventures for many different platforms without rewriting any of the code.

While the Z-machine was heavily optimized to make text adventures compact in size, Zork was still too big. They split up the game into three parts, added some pieces and removed others, to make three different games, each one of them playable on a micro computer with a disk drive attached. An entire game would fit on a disk, and the computer would use virtual memory, copying the parts of the game that it needed at the moment from disk to memory. In this way, games of up to 128 KB in size could be played on a computer with only 32 KB of memory. Zork I was released in 1980, and became a commercial success. Infocom kept on making text adventures for about ten years, producing some of the finest games of the eighties.

Fast forward to the nineties. Infocom had been bought by Activision and eventually shut down. Some fans gathered together over the now emerging Internet, and started figuring out just exactly how the Z-Machine worked, by reading the machine code of the interpreters used (ZIP:s). They called themselves The Infocom Taskforce. A guy in England called

Graham Nelson saw what was happening and started to write his own programming language, compiler and text adventure programming library, based on the findings of the Infocom Task Force. He called his system Inform. While he was developing it, we also wrote his own game in Inform, called Curses. When Inform hit version 5, it had matured enough for a much wider audience to use it. Graham made Inform available for free, along with Curses.

Since Curses was using the same virtual machine as Infocom had used, it could also be played with the same ZIP:s that Infocom had produced, but soon enough other people started to write new Z-machine interpreters, for modern computers. Graham also created two new versions of the Z-machine, called version 7 and 8 (Infocom created versions 1-6), which allowed for bigger games. A version 8 game can be up to 512 KB in size, which allows for truly huge text adventures. It has been estimated that Infocom's first two trilogies (Zork 1, 2, 3 + Enchanter, Sorcerer and Spellbreaker) could be combined into a single game without hitting this limit.

Inform 5 was used to produce a dozen games or so. Then came Inform 6, which has been used to write hundreds of games. After that came Inform 7, which is very different from the earlier versions. It has been used to create hundreds of games as well. To allow for even larger games, and to make it easier to incorporate graphics and sound into text adventures, a new virtual machine, Glulx, was designed by Andrew Plotkin. Inform 7, as well as the more recent versions of Inform 6, can produce both Z-code and Glulx games.

Building Z-code games for play on Commander X16

There is currently only one Z-code interpreter for the Commander X16 - Ozmoos.

Ozmoos and instructions on using it can be found at <https://ozmoos.online>

To use Ozmoos, you go to the website, upload a Z-code file, specify your build options, and press a button. This produces a zip archive which you can then download and play on your Commander X16.

All games produced by Infocom except the four titles with graphics (Zork Zero, Arthur, Shogun and Journey) should work fine on the Commander X16.

As for Z-code games produced post-Infocom, you can generally expect all games that weren't built using Inform 7 to work well. Some lightweight Inform 7 games may also work reasonably well, but most Inform 7 games are just too slow. Inform 7 typically produces code that is very demanding for the computer, and an 8 MHz 8-bit computer isn't up to the task.

A few modern games show some Unicode characters which can't be displayed on a Commander X16. These characters will just be omitted in output when playing on a Commander X16. If you want to play a game in German, French, Spanish, Italian, Danish or Swedish, Ozmoos has you covered though, as it can use a custom font which replaces some graphic characters with the accented characters you need.

Writing your own text adventures

You can of course write your own text adventures as well. Some popular tools include Inform 7, Twine, ChoiceScript, TADS 3 and Adrift.

If you want to produce Z-code games, and have them playable on retro computers, these are the obvious options today:

- ZIL: Use the Lisp-like language used by Infocom. The compiler and some pointers can be found at <https://foss.heptapod.net/zilf/zilf>
- Dialog: A language inspired by Prolog. It's quite advanced and powerful, but the games produced are a bit too heavy to run on your typical 8-bit machine. 16-bit machines and newer machines are better suited to run these games. Find out more at <https://www.linusakesson.net/dialog/>
- Inform 6 with its standard library: Similar to C in syntax. Games produced are a bit too heavy for most 8-bit machines, but most of them run fine on Commander X16 and 16-bit machines. There is a (no longer maintained) site at <https://www.inform-fiction.org/>
- Inform 6 with the PunyInform library: With a much more lightweight library, you can produce games that run fine on all sorts of 8-bit computers for which there are Z-code interpreters (~30 different platforms). Of course, the games will also run fine on newer computers. The homepage is located at <https://github.com/johanberntsson/PunyInform>

I am a co-author of PunyInform and perhaps not surprisingly, I think PunyInform is the easiest option for writing Z-code games for retro computers. While the library is designed to be much smaller and faster than the standard library, it has most of the functionality of the standard library, plus some that the standard library lacks.

No matter which system you choose, or even before you choose a system, I recommend the friendly forum at <https://intfiction.org/> as a place to get support, encouragement, feedback, playtesters, and all sorts of useful pointers.