PLATO: Programmed Logic for Automatic Teaching Operations

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PLATO?!
What’s PLATO?

- Very early revolutionary computer-based education system
- Development began in 1960 at the University of Illinois Control Systems Laboratory (CSL)
- CSL renamed to the Computer-based Education Research Lab (CERL) around 1966
Who used it?

- Over 10,000 hours of lesson material
- Lessons span many subjects, including electrical engineering, occult sciences, acid-base titration, English language grammar, neonatal assessment, and Esperanto
- Between 1978 and 1985, the CERL PLATO system recorded 10 million hours of use
- Inspiration for many other projects, including Castle Wolfenstein, Macromedia Authorware, Lotus Notes, and Microsoft Flight Simulator.
How does it work?

PLATO II (circa 1962)
Innovations

- Hardware
  - Gas-plasma display
  - High-resolution (512x512) flicker-free graphics
  - Touch screen
  - Audio
  - Client-side programming (PLATO V, 1977)

Image from https://en.wikipedia.org/wiki/Plasma_display
Innovations

- Software
  - Timesharing
  - Real-time data processing
  - Notes (e-mail)
  - Message forums
  - Chat
  - Instant messaging
  - Emoticons
- Lesson authoring tools
- Gradebook and course management
- Context sensitive help and learner feedback
- Online multiplayer games

Character Design

- move point node
- add point node
- remove point node
- inspect character
- blank character
- full character

This is your character:

Press DATA to restore original character
LTD for octal design

Enter to format when you are done
SHIFT-DATA to format and go to main page
SHIFT-HELP to exit without formatting
What happened to PLATO?

- Last commercial PLATO system, called NovaNET and run by Pearson Education, shutdown in 2015.
- NovaNET focused on the remedial and special-needs education market.

IRATA.ONLINE
An online retro computing community built using even older technology. 700+ registered users.
Demo Time

(well, not quite yet)
Getting Connected

PLATO Terminal Emulator

Internet (cyber1 or irata.online)
Getting Connected: Mac and Windows

• Get PTerm. See https://www.cyber1.org/ and https://irata.online/.
• Or try the work-in-progress http://js.irata.online.
Getting Connected:
Apple II (8 bit)
Hardware

- Apple II or newer with at least 48 KB RAM, a Super Serial Card (SSC) in Slot 2, and a modem emulator (e.g. WiModem232 or tcpser)
- Other slots for the SSC do not work. Ethernet cards do not work.
- On the SSC, enable interrupts (close SW2-6) and enable RS-232-C signaling (open SW2-7 and close SW1-7).
- On the modem emulator, enable hardware flow control with "AT&K3".
- Get the PLATOTerm disk image from https://irata.online/.
- Use a monochrome monitor.

tcpser: https://github.com/FozzTexx/tcpser
Getting Connected:
Apple II (8 bit)

Hardware

- Got an enhanced IIE or newer? Try the unreleased DHGR version.
- Got a IIGS? Install an SSC. Or use the IIGS version.
- Got a IIc/IIcx? Hardware flow control doesn't work, but PLATOTerm mostly works for me at 1200 baud on the IIC.
Getting Connected:
Apple II (8 bit) Emulation

- Get microM8. The PLATOTerm disk image is in the internal library and just works.
- AppleWin and probably others with SSC emulation work, too, but require setting up a modem emulator with topser and, on Windows, com0com.
  - AppleWin (SSC emulation) -> com0com -> topser
  - Be sure to set "emulate baud rate" in com0com.
  - Example: topser -d /dev/ttyS3 -s 1200 -i "&K3"
- Get the PLATOTerm disk image from https://irata.online/

microM8: diskpaks/comms
topser: https://github.com/FozzTexx/tcpser
com0com: http://com0com.sourceforge.net
Getting Connected

Instruct the modem emulator (e.g. WiModem232) to connect:

ATDTIRATA.ONLINE:8005
Getting Connected: Apple II (16 bit)

- Apple IIGS with at least 512 KB RAM, Marinetti TCP stack, and a supported network card (i.e., an Uthernet or Uthernet II).
- Get the "alpha" release disk image from https://irata.online.
Keymap

See the release notes [here](https://github.com/tschak909/platoterm64/releases/tag/PLATOTerm-1.0)

Picture from [here](https://www.computerhistory.org/collections/catalog/102730839)
Demo Time

(really)

Demo: PLATOTerm on IIc, PLATOTerm on Sweet16, PLATOTerm of microM8

visit online guest/guest

Things to try:
Subject index: Engineering, electrical: “Kirchhoff’s voltage and current laws for ideal sources” (0kfpb1)
Notice: Instant learner feedback, diagnosis of common challenges, context sensitive help

Title index: Seabattle (Obattleshi)
What now?

Try it. Contribute content. Improve the PLATOTerm software. Create an online community.

Learn more: Juiced.GS (latest issue), “Friendly Orange Glow”, irata.online