

*Ray Cucco*

## **Exploring the ARPANET**

By Brian Riley

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Anyone who's ever wanted something really badly, but couldn't have it, will understand how I felt when, as a [sixteen-year-old high school sophomore](#), I stood in front of a computer terminal at Fresno State, all hot and sweaty from having dropped in through the false ceiling above a locked computer lab. My heart sank when I read the message on the screen: "The PDP 11/45 is closed for the Memorial Day Holiday."

Trespassing is wrong, of course, but that's what I did that day, having been influenced by a brilliant seventeen-year-old runaway from L.A. named Ray Cucco (koo SOH, [as he pronounced it](#)) who, unbeknownst to me, had a sleeping bag stashed on campus and was sleeping overnight in a different classroom every night to avoid getting caught.

Ray had sometimes messed up in high school, where he was bored and feeling oppressed by bullies — a situation made worse by having adoptive parents who criticized him harshly and took away his chess tournament privileges.

One weekend evening, while we walked the deserted halls of [the Business building at Fresno State](#), Ray made a powerfully insightful comment about computer science that would stick with me my entire life: "Artificial intelligence is the goal, right?"

It was a hot Friday evening that year, when Ray was in a partying mood. He couldn't openly celebrate his eighteenth birthday, because, out of fear of betraying his runaway status, he had

told us all he was eighteen when he first arrived. Only his new girlfriend and her mother knew the truth. Ray, apparently, had a different kind of celebration in mind.

The next afternoon, Saturday, June 10, 1978, might have been the day when Ray and I, along with a resourceful electronics engineer named [Bob Harwell](#), became, most likely, the first three people to ever log on to the Internet in the history of Fresno.

All of the computer-terminal phone lines in the computer labs at Fresno State were set up to dial on-campus extensions only. But Bob, crouching under a table, showed us how we could dial an outside line by re-wiring one pair of lines, connecting them to another special pair he had rigged up.

We used the [Telera terminal](#) under the [center window](#) on [the south wall](#). Ray picked up the handset of the acoustic modem and dialed the special Los Angeles number he knew, using the rotary dial. He then placed the handset in the coupler, and voilà — up came a logon screen that was entirely new to us.

What we were seeing was called the “ARPANET,” a project funded by the Defense Department that began at UCLA in 1969. It was a single network that evolved into what we now call the “Internet,” a network of networks. At this very early stage, there were only about 177 computers connected worldwide, compared with the millions connected today. I remember Ray typing the very short “@L 33” to access one of them. We logged on to various computers as far away as Boston, Massachusetts (where we sent our first e-mail) and also one overseas in Great Britain.

Today in Science Building, [Room 268](#), chemistry students still come and go, but all that remains of the computer lab is the long desk on the south wall where we sat and saw the ARPANET, helping ourselves to a cutting-edge education in our own misguided way. In an age when home computers were rare and home computers with modems virtually nonexistent, we felt the exhilaration that came with being pioneers.

Barnstorming pilots of old might have labored over engines, turning wrenches in the night, but we sat with our eyes glued to cathode ray tubes, dreaming of new codes to better control these powerful, impersonal brains.

I never knew why Ray suddenly disappeared that summer. I continued on with my life and am still working with artificial intelligence today. Now so many years later, it was a reference librarian who found out for me that Ray had passed away. [I visited Ray's grave](#) and reminisced and cried. He was only nineteen when he left us, officially listed as having suffered a swelling of the lungs, cause unknown.

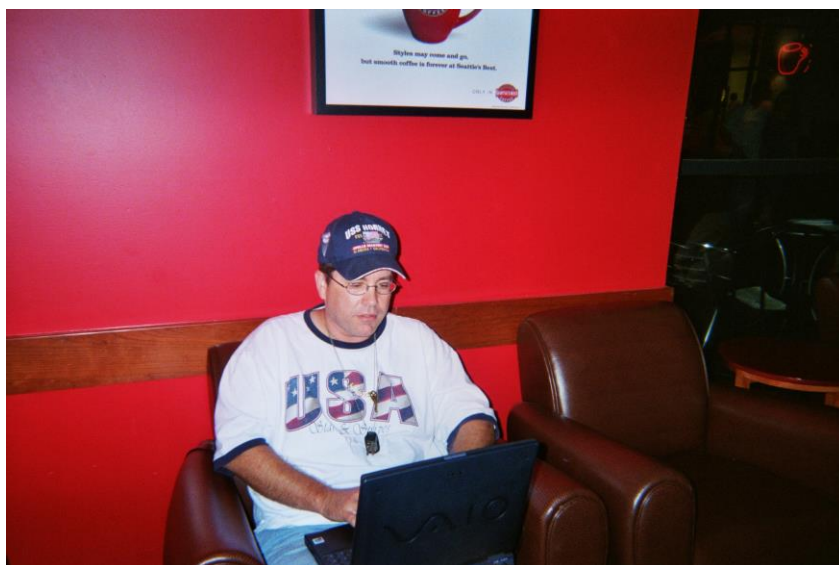
It was as if Ray passed his torch to me that summer, when we had our day in the sun. I picture Ray in my mind after [he visited my home in Clovis](#), walking [the two miles back to Fresno State](#), his body forming a lonely silhouette against a blazing setting sun.

Goodbye, Ray. It's all about artificial intelligence, right?

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*Historical note: Ray was perhaps the first teenager in the State of California to have a computer connected to the Internet (then ARPANET), possibly as early as 1977, accessing it with a terminal from [his bedroom](#) in his family's home in Alhambra, California. Tragically, he died from an unknown cause in [Tustin, California](#) at the age of 19, almost 20. His [girlfriend](#) ("Neural") in Fresno, whom he had met through the first chat program ("[\\$TALK](#)") on the [statewide California State University computer network](#), passed away in 2010, after working successfully for many years as a computer programmer. She was nine months older than him and was a college sophomore. I [last communicated](#) with Ray after [he left](#) Fresno, when he ("[Dragon](#)") contacted me ("Nairb") through the \$TALK program by [dialing in](#) from a terminal in New York where he was visiting. Ray was a virtuoso computer programmer, able to read and program directly in machine language. I remember him as typically carrying around a [chess book](#) (that he gave me) and computer print-outs ("Don't wrinkle the pages!"). As an intellectual, he was even-tempered and had a joyful sense of humor, in spite of the obstacles he faced in life. His favorite food was [pizza](#). [We played](#) one game of Dungeons & Dragons. His advice for young students wanting to learn how to program as well as him: Try to write a computer program that "teaches itself" how to play and win at [tic-tac-toe](#). Ray was a precocious child who, at age nine, had friends who were 16 years old. [He once played chess against Bobby Fischer](#). He was 6'1" tall (1.85 m), had hazel-colored eyes and [wiry black hair](#). He attended Mark Keppel High School in Alhambra, California. Ray was born on Sunday, June 5, 1960 in the County of Los Angeles, California and was adopted when he was four days old. He passed away at about 10:00 pm on Friday, [April 25, 1980](#). He is [greatly missed](#).*

[CLICK HERE](#) to read Brian's correspondence with Neural.



*The author, writing this commentary.*

See also:

[ARPANET Maps](#)

[History of ARPANET](#)

[ARPANET](#)

[An Atlas of Cyberspaces](#)

[Bats, bats, wonderful bats!](#)

[Discourse Analysis in Chatroom and Discussion Group Environments](#)

[Electropolois](#)

[ARPANET Completion Report \(PDF\)](#)

[Netizens: On the History and Impact of Usenet and the Internet](#)

[History of ARPANET](#)

[Early Experiences with the ARPANET and INTERNET in the UK](#)

[ARPANET Information Brochure \(March 1978\)](#)

[Computer Networks in Higher Education \(1975\)](#)

[Growth of the ARPANET \(XLS\)](#)

[ARPANET map \(1978\)](#)

[Bella Stumbo profile of Bobby Fischer \(1983\)](#)

ARPANET manual (1978)\*: [A](#), [B](#), [i](#), [ii](#), [1](#), [2](#), [3](#), [4](#), [5](#), [6](#), [7](#), [8](#), [9](#), [10](#), [11](#), [12](#), [13](#), [14](#), [15](#), [16](#), [17](#), [18](#), [19](#), [20](#), [21](#), [107](#), [165](#), [166](#), [167](#), [195](#), [196](#), [197](#), [198](#), [199](#), [200](#), [201](#), [202](#), [203](#), [204](#), [205](#), [206](#), [207](#), [208](#), [209](#), [210](#), [211](#), [212](#), [213](#), [214](#), [215](#), [216](#), [217](#), [218](#), [219](#), [220](#), [221](#), [222](#), [223](#), [224](#), [225](#), [226](#), [227](#), [228](#), [229](#), [230](#), [231](#), [232](#), [233](#), [234](#), [235](#), [236](#), [237](#), [238](#), [239](#), [240](#), [241](#), [242](#), [243](#), [244](#), [245](#), [246](#), [247](#), [248](#), [249](#), [251](#), [252](#), [253](#), [254](#), [255](#), [256](#), [257](#), [258](#), [C](#), [D](#).

\**Courtesy Landon Curt Noll, [www.isthe.com/chongo](http://www.isthe.com/chongo).*

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