
TECH

MIT prof who invented early e-mail system donating records to Smithsonian Museum

Posted by Scott Kirsner

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By Scott Kirsner, Globe Columnist

V.A. Shiva Ayyadurai has nothing against the tech pioneers who started sending one another messages over the Arpanet — the Internet's predecessor — in the late 1960s and early 1970s. He just asserts that he was the first person to build an e-mail system that would evolve into the type of e-mail we use today, with fields for the sender and recipient, subject lines, and that devious BCC field. Last year, Time referred to Shiva as "the man who invented e-mail."

And today, Shiva, an MIT professor, is in Washington to donate the original code for his e-mail system to the Smithsonian's National Museum of American History. Shiva started building the e-mail system at Newark's University of Medicine and Dentistry when he was just 14, in 1978. He copyrighted the term "EMAIL" in 1982, shortly after he'd started attending MIT as an undergrad.



"There was no way to patent software then, so I submitted the first U.S. copyright on e-mail, and also the manual," Shiva says.

His e-mail system consisted of about 60,000 lines of code (see below), and it ran on an HP mainframe. Instead of using the @ symbol, e-mail addresses employed periods to separate the username from the location where they could be found. (For instance, kelly.rms would represent a user named Kelly at Rutgers Medical School.) The system had 80 or 90 users in the early days, a number that rose into the hundreds after Shiva headed off to college.

Almost as challenging as building the system, Shiva says, was persuading doctors to use it. "Doctors are still some of the biggest Luddites around," he says. "From the very beginning, they said, 'Why should we be spending all this time typing e-mail?' The docs who really used it most were the ones doing research, because they were used to writing and typing."

Shiva says he hasn't met Ray Tomlinson, who is credited with sending the first e-mail over the Arpanet using the now-omnipresent @ sign, in 1971. Though Shiva's system was built starting seven years later, he says, "Tomlinson essentially was doing messaging, the ability to append text to a file that was being FTPed from one computer to another. That is not e-mail. E-mail is having an inbox and an outbox, folders, to, from, BCC."

At MIT, Shiva is the director of the Media and Organizational Biomimetics Initiative, and he has at various times been an entrepreneur (EchoMail) and engineer (Lotus).

Time's piece provides a very detailed history of Shiva's work, as does Shiva's own website.

Shiva is writing a book, "The EMAIL Revolution." And just to be sure no one overlooks the achievement, he also happens to own the domain InventorOfEmail.com.

Try Googling "who invented e-mail," though, and you'll see that there are quite a few other contenders.

```
0140 FORMAT("What I ...")
GO TO 3028
IWHER1=0
IWHER2=0
CALL SEGLD(ISEGS(1,I-1),IERR)
WRITE(LU,5145)(ISEGS(J,I-1),J=1,3)
045 FORMAT(/"EMAIL:  SEGMENT  "3A2,"  COULD NOT BE LOADED")
GO TO 4090
00 IF(NODE.NE.INODE)GO TO 4105
WRITE(LU,5150)
50 FORMAT(/,"COMMAND
1
2 "??
3 "CM[,command][,memo#]
4 "LM
5 "CM[,file:sec:cr#]
6 "EM[,file:sec:cr#]
7 "TM[,command][,file:sec:cr#]
8 "RD[,memo#]
9 "DN[,memo#]
$ "DN[,strng1[,strng2][,group[,node]
X "DG
$ "EX
! "Note: For CM, memo# is only specified if you entered",//
+ " RM as the command.",//)
GO TO 4090
WRITE(LU,5155)
FORMAT(/,"COMMAND
1
2 "??
3 "CM[,file:sec:cr#]
4 "EM[,file:sec:cr#]
5 "TM[,command][,file:sec:cr#]
6 "RD[,memo#]
7 "DN[,strng1[,strng2][,group[,node]
8 "DG
9 "EX
MEANING",//
"DISPLAY MENU",//
"Get Mail",//
"List Mail directory",//
"Compose Memo",//
"Edit Memo file",//
"Transmit Memo",//
"ReDistribute memo",//
"Delete Memo",//
"Display Names",//
"Display Groups",//
"EXit",//)
MEANING",//
"DISPLAY MENU",//
"Compose Memo",//
"Edit Memo file",//
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"ReDistribute memo",//
"Delete Memo",//
"Display Names",//
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"EXit",//)
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