# "Thieves" and "parasites"

(From Wikipedia, 09 March 2010)

The June 1975 *Homebrew Computer Club Newsletter* carried this item written by Fred Moore, Editor.

The MITS MOBILE came to Rickey's Hyatt House in Palo Alto June 5th & 6th. The room was packed (150+) with amateurs and experimenters eager to find out about this new electronic toy.[[9]](http://en.wikipedia.org/wiki/Open_Letter_to_Hobbyists#cite_note-Homebrew_June_1975-8)

[](http://en.wikipedia.org/wiki/File:Altair_BASIC_Paper_Tape.jpg)

[http://bits.wikimedia.org/skins-1.5/common/images/magnify-clip.png](http://en.wikipedia.org/wiki/File:Altair_BASIC_Paper_Tape.jpg)

Altair 8K BASIC on paper tape. This was a popular storage medium before the low-cost floppy disk.

At the seminar, a [paper tape](http://en.wikipedia.org/wiki/Punched_tape) containing a pre-release version of Altair BASIC disappeared. The tape was given to Steve Dompier who passed it on to Dan Sokol who had access to a high speed tape punch. At the next Homebrew Computer Club meeting, 50 copies of Altair BASIC on paper tape appeared in a cardboard box.[[10]](http://en.wikipedia.org/wiki/Open_Letter_to_Hobbyists#cite_note-9)

MITS offered a complete Altair system with two MITS 4K Dynamic RAM boards, a serial interface board and Altair BASIC for $995.[[11]](http://en.wikipedia.org/wiki/Open_Letter_to_Hobbyists#cite_note-MITS_Aug_1975_Ad-10) However the $264 MITS RAM boards were unreliable due to several component and design problems. Understandably many Altair computer owners did not want to purchase this troublesome memory board. An enterprising Homebrew Computer Club member, Robert Marsh, designed a 4K static memory that was plug-in compatible with the Altair 8800 and sold for $255.[[12]](http://en.wikipedia.org/wiki/Open_Letter_to_Hobbyists#cite_note-Homebrew_July_1975-11) His company was [Processor Technology](http://en.wikipedia.org/wiki/Processor_Technology), one of the most successful Altair compatible board suppliers. Many Altair 8800 computer owners skipped the bundled package; purchased their memory boards from a third party supplier and used a "borrowed" copy of Altair BASIC.

Ed Roberts acknowledged the 4K Dynamic RAM board problems in the October 1975 *Computer Notes*. The price was reduced from $264 to $195 and existing purchasers got a $50 refund. The full price for 8K Altair BASIC was reduced to $200. Roberts declined a customer's request the MITS give BASIC to customers for free. He noted that MITS made a "$180,000 royalty commitment to Micro Soft." Roberts also wrote, "Anyone who is using a stolen copy of MITS BASIC should identify himself for what he is, a thief." Third party hardware suppliers drew this comment; "Recently a number of parasite companies have appeared."[[13]](http://en.wikipedia.org/wiki/Open_Letter_to_Hobbyists#cite_note-Computer_Notes_-_DRAM-12)

The Processor Technology static RAM board drew more current than the MITS dynamic RAM board and two or three boards would tax the Altair 8800 power supply. Howard Fullmer began selling a power supply upgrade and named his company "Parasitic Engineering".[[14]](http://en.wikipedia.org/wiki/Open_Letter_to_Hobbyists#cite_note-13)[[15]](http://en.wikipedia.org/wiki/Open_Letter_to_Hobbyists#cite_note-Ahl_1980-14) Fullmer later helped define the industry standard for Altair compatible boards, the S-100 Bus standard.[[16]](http://en.wikipedia.org/wiki/Open_Letter_to_Hobbyists#cite_note-S100_Bus-15)

The next year, 1976, would see many Altair bus computer clones such as the [IMSAI 8080](http://en.wikipedia.org/wiki/IMSAI_8080) and the Processor Technology Sol 20.

1. [**^**](http://en.wikipedia.org/wiki/Open_Letter_to_Hobbyists#cite_ref-13) Freiberger (2000), 145–146.
2. [**^**](http://en.wikipedia.org/wiki/Open_Letter_to_Hobbyists#cite_ref-Ahl_1980_14-0) [Ahl, David H.](http://en.wikipedia.org/wiki/David_H._Ahl); Burchenal Green (April 1980). ["Saga of a System (Building an Altair 8800/Cromemco TV Dazzler system)"](http://www.atariarchives.org/bcc3/showpage.php?page=97). *The Best of Creative Computing, Volume 3*. Morristown NJ: Creative Computing. pp. 90–97. [ISBN](http://en.wikipedia.org/wiki/International_Standard_Book_Number) [0-916688-12-7](http://en.wikipedia.org/wiki/Special:BookSources/0-916688-12-7). <http://www.atariarchives.org/bcc3/showpage.php?page=97>. David Ahl describes the assembly of an Altair 8800 system and the various problems that were encountered. The Processor Technology 8K Static RAM (page 94) and the Parasitic Engineering power supply (page 97) are used to replace the MITS components in his system.

Marc Kupper (from Morrow) says…

> One name... to bring up is Howard Fullmer

> (of Parasitic Engineering) who had worked with George earlier.

> [He] came to work for Morrow Designs shortly after the move to San

> Leandro. I believe he was the director of R&D.