

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D
Under the Securities Exchange Act of 1934

(Amendment No.) (1)

Amtech Systems, Inc.

(Name of Issuer)

Common Stock, \$.01 par value per share

(Title of Class of Securities)

032332504

(CUSIP Number)

Catalyst Fund, L.P.
100 Mill Plain Road
Danbury, Connecticut 06811

with a copy to:

James A. Prestiano, Esq.
631 Commack Road, Suite 2A
Commack, New York 11725
(631) 499-6000

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

April 22, 2005

(Date of Event which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Sections 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box [].

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Section 240.13d-7(b) for other parties to whom copies are to be sent.

(1) The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

(Continued on following pages)

CUSIP No. 437-858-103

SCHEDULE 13D

1 NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Catalyst Fund, L.P. IRS ID No. 35-2240946

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) []

(b) []

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF 7 SOLE VOTING POWER

SHARES 196,250

BENEFICIALLY 8 SHARED VOTING POWER

OWNED BY 0

EACH 9 SOLE DISPOSITIVE POWER

REPORTING 196,250

PERSON 10 SHARED DISPOSITIVE POWER

WITH 0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

196,250

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES
(See Instructions) []

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

6.8%

14 TYPE OF REPORTING PERSON (See Instructions)

PN

CUSIP No. 437-858-103

SCHEDULE 13D

Item 1. Security and Issuer.

This statement relates to the Common Stock, \$.01 par value ("Common Stock") of Amtech Systems, Inc. (the "Issuer"). The Issuer's principal executive office is located at 131 South Clark Drive, Tempe, Arizona, 85281. The Issuer has previously reported that as of December 31, 2004, the Issuer had 2,705,121 shares of Common Stock issued and outstanding.

Item 2. Identity and Background.

(a-c) This Schedule 13D is filed on behalf of Catalyst Fund, L.P., a Delaware limited partnership. The general partner of Catalyst Fund, L.P. is Catalyst Fund GP, LLC, a Delaware limited liability company. Catalyst Fund, L.P. is an unregistered investment fund with a principal place of business located at 100 Mill Plain Road Danbury, Connecticut 06811.

(d) Catalyst Fund, L.P. has not, during the past five years, been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) Catalyst Fund, L.P. has not, during the past five years, been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction nor has Catalyst Fund, L.P. been nor is he now subject to a judgment, decree, or final order enjoining further violations of, or prohibiting or mandating activities subject to federal or state securities laws or finding any violation with respect to such laws.

(f) Catalyst Fund, L.P. is a Delaware limited partnership.

Item 3. Source and Amount of Funds or Other Consideration.

On April 22, 2005, Catalyst Fund, L.P. purchased an aggregate amount of 196,250 shares of the Issuer's Series A Convertible Preferred Stock at a price of \$4.00 per share in a private transaction for an aggregate cost of \$785,000. The Series A Convertible Preferred Stock acquired by Catalyst Fund, L.P. is convertible into 196,250 shares of Issuer's Common Stock.

Item 4. Purpose of Transaction.

Catalyst Fund, L.P. purchased the shares of Series A Convertible Preferred Stock for investment purposes. Catalyst Fund, L.P. may, for its own account,

(i) increase or decrease its beneficial ownership in the securities of the Issuer, (ii) sell all or part of its securities of the Issuer in open market or privately negotiated sales or otherwise, or (iii) make further purchases of the securities of the Issuer through open market or privately negotiated transactions or otherwise. Catalyst Fund, L.P. has not reached any decision with respect to any such possible actions. If Catalyst Fund, L.P. does reach a decision to undertake any of the above described possible actions, it will, among other things, timely file an appropriate amendment to this Schedule 13D.

Other than as described above, Catalyst Fund, L.P. does not have any plans or proposals which relate or would result in:

(a) The acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;

(b) An extraordinary corporate transaction, such as a merger, reorganization or liquidation involving the Issuer or any of its subsidiaries;

(c) A sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;

(d) Any change in the present Board of Directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any vacancies on the Board of Directors of the Issuer;

(e) Any material change in the present capitalization or dividend policy of the Issuer;

(f) Any other material change in the Issuer's business or corporate structure;

(g) Changes in the Issuer's charter, by-laws, or instruments corresponding thereto or any actions which may impede the acquisition or control of the Issuer by any person;

(h) Causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;

(i) A class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act; or

(j) Any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer.

(a) Catalyst Fund, L.P. may be deemed to beneficially own an aggregate of 196,250 shares of the Issuer's Common Stock, representing approximately 6.8% of the total shares of Common Stock issued and outstanding.

(c) Not applicable.

(d) No other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of such securities of the Issuer.

(e) Not applicable

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

None

Item 7. Material to be Filed as Exhibits.

None

After reasonable inquiry and to the best of my knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct.

Date: April 29, 2005

Catalyst Fund, L.P.

/s/ Steven N. Bronson, Member

STEVEN N. BRONSON, Member

Catalyst Fund GP, LLC,
its general partner

Attention. Intentional misstatements or omissions of fact constitute
federal criminal violations (See 18 U.S.C. Section 1001).