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SCHEDULE 14A

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**Proxy Statement Pursuant to Section 14(a) of the Securities
Exchange Act of 1934 (Amendment No.)**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
 Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
 Definitive Proxy Statement
 Definitive Additional Materials
 Soliciting Material Pursuant to Rule §240.14a-12

AMTECH SYSTEMS, INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
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2. Aggregate number of securities to which transaction applies:

3. Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

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SEC 1913 (04-05)

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2. Form, Schedule or Registration Statement No.:

3. Filing Party:

4. Date Filed:

AMTECH SYSTEMS, INC.
131 SOUTH CLARK DRIVE
TEMPE, ARIZONA 85281

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS
TO BE HELD ON MARCH 2, 2006

To Our Shareholders:

The 2006 Annual Meeting of Shareholders of AMTECH SYSTEMS, INC., an Arizona corporation (the "Company"), will be held at the Hilton Phoenix Airport Hotel, 2435 South 47th Street, Phoenix, Arizona, on Thursday, March 2, 2006, at 10:00 a.m., Arizona time, for the following purposes:

1. To elect three (3) directors to serve for one-year terms or until their successors are elected and qualified; and
2. To transact such other business as may properly come before the meeting or its adjournment.

The foregoing items of business are more fully described in the Proxy Statement accompanying this notice. The Company is presently aware of no other business to come before the Annual Meeting.

The Board of Directors has fixed the close of business on February 6, 2006, as the record date (the "Record Date") for the determination of shareholders who hold the Company's common stock or preferred stock who are entitled to notice of, and to vote at, the annual meeting or any postponement or adjournment thereof. Shareholders are reminded that their shares of the Company's common stock or preferred stock can be voted at the Annual Meeting only if they are present at the Annual Meeting in person or by valid proxy. A copy of the Company's 2005 Annual Report, which includes our audited financial statements, was mailed with this Notice and Proxy Statement to all shareholders of record on the Record Date.

Management of the Company cordially invites you to attend the Annual Meeting. Your attention is directed to the attached Proxy Statement for a discussion of the foregoing proposals and the reasons why the Board of Directors encourages you to vote **FOR** approval of such proposals.

By Order of the Board of Directors:



Robert T. Hass, Secretary

Tempe, Arizona
February 9, 2006

IMPORTANT: IT IS IMPORTANT THAT YOUR SHARES BE REPRESENTED AT THIS MEETING. PLEASE COMPLETE, DATE, SIGN AND PROMPTLY MAIL THE ENCLOSED PROXY CARD IN THE ACCOMPANYING ENVELOPE, WHICH REQUIRES NO POSTAGE IF MAILED IN THE UNITED STATES.

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AMTECH SYSTEMS, INC.
131 SOUTH CLARK DRIVE

PROXY STATEMENT

The Board of Directors of Amtech Systems, Inc., an Arizona corporation (the "Company"), is soliciting proxies to be used at the 2006 Annual Meeting of Shareholders of the Company to be held on Friday, March 2, 2006, at 10:00 a.m., Arizona time, and any adjournment or postponement thereof (the "Annual Meeting"). A copy of the Notice of the Meeting accompanies this Proxy Statement. This Proxy Statement and the accompanying form of proxy will be mailed to all shareholders entitled to vote at the Annual Meeting beginning February 9, 2006.

Who Can Vote

Shareholders of record as of the close of business on February 6, 2006 (the "Record Date") may vote at the Annual Meeting and at any and all adjournments or postponements of the meeting. On the Record Date, 2,705,121 shares of the Company's common stock, \$.01 par value ("Common Stock"), and 540,000 shares of the Company's Series A Convertible Preferred Stock, \$.01 par value ("Preferred Stock"), were issued and outstanding.

What Constitutes a Quorum

Except with respect to the election of directors, the presence, in person or by proxy, of the holders of a majority of the voting power of the outstanding shares of Common Stock and Preferred Stock entitled to vote is necessary to constitute a quorum at the Annual Meeting. With respect to the election of the three directors, who are to be elected by the holders of Common Stock (the "Common Stock Director"), the presence in person or by proxy of the holders of a majority of the voting power of the outstanding shares of Common Stock entitled to vote is necessary to constitute a quorum.

Abstentions and broker non-votes are included in the number of shares present at the meeting for purposes of determining a quorum. A broker "non-vote" occurs when a nominee holding shares for a beneficial owner does not vote on a particular proposal because the nominee does not have discretionary voting power for that particular item and has not received instructions from the beneficial owner.

How to Attend the Meeting

If you are a shareholder of record, which means you hold your shares in your name, you may attend the meeting. If you own shares in the name of a bank, broker or other holder of record ("street name"), you will need to ask your broker or bank for a copy of the proxy they received from us. You will need to bring the proxy with you to the Annual Meeting.

How to Vote

If you are a shareholder of record, you may vote by mail or in person. To vote by mail, sign, date and return your proxy card in the enclosed postage-paid envelope. All valid proxies received before the Annual Meeting, and not properly revoked, will be exercised. If you sign and return your proxy card, but do not give voting instructions and authority to vote is not specifically withheld, the shares represented by that proxy will be voted as recommended by our Board of Directors. If you have specified a choice with respect to any matter to be acted upon, the shares will be voted in accordance with the specifications so made.

All shareholders may vote in person at the Annual Meeting (unless they are street name holders without a legal proxy). If your shares are held in street name, you will receive instructions from the holder of record that you must follow in order for your shares to be validly voted.

We are not aware of any other matters to be presented at the Annual Meeting, except those described in this Proxy Statement. However, if any other matters not described in this Proxy Statement are properly presented at the Annual Meeting, the proxies will use their own judgment to determine how to vote your shares. If the Annual Meeting is adjourned, your Common Stock and Preferred Stock may be voted by the proxies on the new meeting date as well, unless you have revoked your proxy prior to that time.

What are the Voting Rights of Holders of Common Stock and Preferred Stock

The holders of Common Stock will be entitled to one vote per share of Common Stock. The holders of Preferred Stock will be entitled to one vote per share of Preferred Stock. The holders of Common Stock and Preferred Stock vote together as a single class on all matters, except: (i) with respect to the election of directors; (ii) as required by the Certificate of Designations, Preferences and Privileges of the Series A Convertible Preferred Stock of Amtech Systems, Inc. (the "Certificate of Designations"); and (iii) as required by law.

What Vote is Required to Approve Each Item

With respect to the election of directors, only holders of the Common Stock will be entitled to vote on the nominees for Common Stock Director. The affirmative vote of a plurality of votes cast by holders of Common Stock represented and entitled to vote at the Annual Meeting is required for the election of the Common Stock Directors. With respect to the approval of any other matters to be voted upon at the Annual Meeting by the holders of Common Stock and Preferred Stock as a single class, the affirmative vote of a majority of votes cast by holders of Common Stock and Preferred Stock represented and entitled to vote at the Annual Meeting is required for approval.

Voting Choices

For each proposal presented for which you are entitled to vote, you may vote one of the following ways:

1. For the proposal
2. Against the proposal
3. Abstain from voting

Proxies signed and returned without instructions will be voted **FOR** each proposal presented.

Changing Your Vote

You may revoke your proxy at any time before it is exercised in one of three ways:

- By delivering to our offices, to the attention of our Corporate Secretary prior to the vote at the Annual Meeting, a written instrument of revocation bearing a date later than that of the proxy.
- By duly executing and delivering to our offices, to the attention of our Corporate Secretary prior to the vote at the Annual Meeting, a proxy for the same shares bearing a later date.
- By voting by ballot at the Annual Meeting, provided that the shareholder notifies our Corporate Secretary at the Annual Meeting of his or her intention to vote in person at any time prior to the voting of the proxy.

How Votes are Counted

Inspectors of election will be appointed for the Annual Meeting. The inspectors of election will determine whether or not a quorum is present and will tabulate votes cast by proxy or in person at the Annual Meeting. If you have returned valid proxy instructions or attend the Annual Meeting in person, your Common Stock and Preferred Stock will be counted for the purpose of determining whether there is a quorum. If a broker indicates on the proxy that it does not have discretionary authority as to certain shares to vote on a particular matter, those shares will not be considered as present and entitled to vote with respect to that matter. Abstentions and broker non-votes will be included in the determination of the number of shares represented for a quorum.

Costs of this Proxy Solicitation

We will pay the costs of preparing and mailing the Notice and Proxy Statement, including the charges and expenses of brokerage firms, banks and others who forward solicitation material to beneficial owners of the Common Stock and Preferred Stock. We will solicit proxies by mail. Officers and directors of the Company may also solicit

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proxies personally, or by telephone or facsimile, without additional compensation. Computershare will serve as our proxy solicitation agent. In such capacity, Computershare will coordinate the distribution of proxy materials to beneficial owners of Common Stock and oversee the return of proxy cards. The fee for all of these services is estimated to be \$15,000.

Annual Report

The Company's Annual Report to Shareholders for the fiscal year ended September 30, 2005 (the "Annual Report") has been mailed concurrently with the mailing of the Notice of Annual Meeting and Proxy Statement to all shareholders entitled to notice of, and to vote at, the Annual Meeting. The Annual Report is not incorporated into this Proxy Statement, and is not considered proxy-soliciting material.

The information contained in the "Report of Compensation and Option Committee," "Audit Committee Report" and "Comparison of Stock Performance" shall not be deemed "filed" with the Securities and Exchange Commission or subject to Regulations 14A or 14C or to the liabilities of Section 18 of the Securities Exchange Act of 1934, and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

PROPOSAL NO. 1 — ELECTION OF DIRECTORS

Number of Directors to be Elected

Our Board of Directors currently consists of five members. However, on February 3, 2006, the Board approved a reduction in the number of Board members to four effective immediately following the Annual Meeting. Each director elected at the Annual Meeting will hold office for one year or until his successor is elected and qualified. If any director resigns, or otherwise is unable to complete his term in office, our Board may elect another director for the remainder of the resigning director's term. The holders of Common Stock are entitled to elect three Common Stock Directors out of the four directors to serve on the Board. Pursuant to the Certificate of Designations, the holders of Preferred Stock are entitled to elect one director (the "Preferred Stock Director") out of the four directors. Immediately following the Annual Meeting, there will be one vacancy on the Board, which will be the directorship for the Preferred Stock Director. The Board is currently in the process of searching for and recruiting a qualified candidate to fill this vacancy following the Annual Meeting.

Vote Required

The affirmative vote of a plurality of votes cast by holders of Common Stock represented and entitled to vote at the Annual Meeting is required for the election of the Common Stock Directors. There is cumulative voting in the election of directors. This means that each holder of Common Stock present at the Annual Meeting, either in person or by proxy, will have an aggregate number of votes in the election of directors equal to three (the number of persons nominated for election as Common Stock Directors) multiplied by the number of shares of Common Stock held by such shareholder on the Record Date. The resulting aggregate number of votes may be cast by the holder of Common Stock for the election of any single nominee for Common Stock Director, or the shareholder may distribute such votes among any number or all of the nominees for Common Stock Director. The three nominees for Common Stock Director receiving the highest number of votes will be elected to our Board of Directors. The Holders of Preferred Stock may not vote for any of the nominees for Common Stock Director.

Nominees of the Board

Our Board of Directors is responsible for supervision of the overall affairs of the Company. Our Board has nominated the following individuals to serve as Common Stock Directors for the following year:

Jong S. Whang
Lawrence D. Firestone
Robert F. King

Each of these nominees currently serves on our Board of Directors, and has agreed to be named in this Proxy Statement and to serve if elected. See below for information regarding each of the nominees. The Board has not nominated an individual to serve as the Preferred Stock Director, and such directorship will become vacant following the Annual Meeting.

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Our Board of Directors recommends a vote **FOR** the election of the three nominees for Common Stock Director. Our Board of Directors intends to vote its proxies for the election of the nominees, for a term to expire at the next Annual Meeting. In that regard, our Board of Directors solicits authority to cumulate such votes.

If any nominee should become unavailable for any reason, which our Board of Directors does not anticipate, the proxy will be voted "for" any substitute nominee, or nominees, who may be selected by our Board of Directors prior to, or at, the Annual Meeting, or, if no substitute is selected by the Board prior to or at the Annual Meeting, for a motion to reduce the present membership of the Board to the number of nominees available. The information concerning the nominees and their share holdings in the Company has been furnished by them to the Company.

Information Concerning Directors and Executive Officers

The following table sets forth information regarding the executive officers and directors of the Company. The subsequent paragraphs contain biographical data for each executive officer and director.

Name	Age	Position with the Company
Jong S. Whang	60	President, Chief Executive Officer and Director
Robert T. Hass	55	Vice President — Finance, Chief Financial Officer, Treasurer, Secretary and Director
Lawrence D. Firestone	47	Director
Robert F. King	72	Director
Robert Averick	39	Director

Jong S. Whang has been President, Chief Executive Officer and a Director of the Company since its inception in 1981, and was one of its founders. Mr. Whang's responsibilities as President include the sales effort for the Company's semiconductor equipment business and the development of new products and business opportunities in that industry. He has 32 years of experience in the semiconductor industry, including time spent in both processing and manufacturing of equipment components and systems. From 1973 until 1979, he was employed by Siltronics, Inc., initially as a technician working with chemical vapor deposition, and later as manager of the quartz fabrication plant with responsibility of providing technical marketing support. From 1979 until 1981, he was employed by U.S. Quartz, Inc. as manufacturing manager. In 1981, he left U.S. Quartz to form the Company.

Robert T. Hass has been Vice President — Finance, Chief Financial Officer, Treasurer and Secretary of the Company since June, 1992, and a Director of the Company since February, 1996. From 1991 until May, 1992, he operated a financial consulting practice. From 1985 to 1991, Mr. Hass was Director of Accounting Services and then Controller for Lifeshares Group, Inc., and from 1988 to 1991 was Controller and Chief Accounting Officer of some of Lifeshares' subsidiaries. From 1984 to 1985, he was Vice President — Finance and Treasurer of The Victorio Company. From 1977 to 1984, he served in various capacities including Vice President, Chief Financial Officer and Treasurer of Altamil Corporation, then a public diversified manufacturing company. From 1972 to 1977, he was an auditor with Ernst & Ernst, now known as Ernst & Young. He is a Certified Public Accountant.

Lawrence D. Firestone has been a director of the Company since October 27, 2005. Mr. Firestone is, and has been since 1999, the Chief Financial Officer, Secretary and Treasurer of Applied Films Corporation (Nasdaq: AFCO), a supplier of thin film deposition equipment to several industries, including the solar cell industry, with global operations, and the Senior Vice President of Applied Films since July 2003. From 1996 until 1999, Mr. Firestone served as Vice President and Chief Operating Officer of Avalanche Industries, Inc., a contract manufacturer of custom cables and harnesses. From 1993 to 1996, Mr. Firestone served as Director of Finance and Operations for the Woolson Spice and Coffee Company, a gourmet coffee roasting and distribution company, and from 1988 to 1993, as Vice President and Chief Financial Officer for TechniStar Corporation, a manufacturer of robotic automation equipment. From 1981 to 1988, Mr. Firestone served in various capacities and finally as Vice President and Chief Financial Officer at Colorado Manufacturing Technology, a contract manufacturer that specialized in printed circuit board and cable assembly. Additionally, until July 2005, Mr. Firestone served on the board of directors of HyperSpace Communications, Inc. (AMEX: HCO), and he served as chairman of their audit and governance committees. Mr. Firestone has a Bachelor of Science degree in business administration with a concentration in accounting from Slippery Rock State College.

Robert F. King has been a Director of the Company since May 2003. Since 1989, Mr. King has been President of King Associates, which provides consulting services to equipment companies serving the semiconductor and flat panel display industries. He currently serves on the advisory board of a privately-held company, which provides

equipment to the flat panel display industry. From 1968 to 1988, Mr. King was employed at Varian Associates, where he served in various marketing positions, including Vice President of Marketing for the Semiconductor Equipment Division. Mr. King also served on the Board of Directors of Varian's joint venture semiconductor equipment companies located in Korea and Japan.

Robert M. Averick has been the Preferred Stock Director since July 8, 2005. Mr. Averick is currently a Vice President, Portfolio Manager at Richard L. Scott Investments, LLC ("RLSI"), a family investment office located in Stamford, Connecticut. Mr. Averick co-manages a public equity portfolio on behalf of RLSI where he is responsible for all aspects of the investment decision-making process. Prior to joining RLSI in 2000, Mr. Averick was a Senior Associate with Prudential Investments Structured Finance Group where he focused on highly structured, private and 144A asset-backed transactions. Mr. Averick has additional work experience in Strategic Planning and Consulting. Mr. Averick received an undergraduate degree in Economics from The University of Virginia and a Masters in Business Administration in Finance and Entrepreneurial Management from The University of Pennsylvania, The Wharton School of Business.

Information About Board and Committee Meetings and Director Compensation

Information concerning our Board of Directors and the three committees maintained by our Board is set forth below. A majority of the Board of Directors, as well as the Company's Board Committees, consist of Directors who are not employees of the Company and who are "independent" within the meaning of the listing standards of the Nasdaq Stock Market. Currently, the Company's independent directors include Robert M. Averick, Lawrence D. Firestone and Robert F. King.

Our Board of Directors held six (6) meetings during the 2005 fiscal year. No director attended less than 75% of all Board meetings while he served as such director, or less than 75% of all committee meetings on which he served as a committee member. Our Board has the authority under the Company's Bylaws to increase or decrease the size of our Board and fill vacancies, and the directors chosen to fill such vacancies will hold office until the Company's next annual meeting, or until their successors are elected and qualified.

The Audit Committee, the Compensation and Option Committee and the Nominating Committee are the standing committees of our Board of Directors. The members of

each of these committees are Robert M. Averick, Lawrence D. Firestone and Robert F. King. Mr. Firestone was appointed by the Board to the Compensation and Option Committee and the Nominating Committee in February 2006.

The Audit Committee held eight (8) meetings during the 2005 fiscal year. The Audit Committee is responsible for maintaining communication between the Board of Directors, the independent auditors and members of financial management with respect to the Company's financial affairs in general, including financial statements and audits, the adequacy and effectiveness of the internal accounting controls and systems and the retention and termination of the independent auditors. The Audit Committee also develops and recommends corporate governance guidelines to the Board and provides oversight with respect to corporate governance and ethical conduct. A copy of the charter of the Audit Committee is attached as Exhibit A to the Company's Proxy Statement filed with the Securities and Exchange Commission ("SEC") on June 15, 2005.

The Audit Committee is composed of outside directors who are not officers or employees of the Company or its subsidiaries. In the opinion of our Board, and as "independent" is defined under the listing rules of the Nasdaq Stock Market, these directors are independent of management and free of any relationship that would interfere with their exercise of independent judgment as members of this committee.

The Compensation and Option Committee held one (1) meeting during the 2005 fiscal year. The Compensation and Option Committee makes recommendations concerning officer compensation, employee benefit programs and retirement plans.

The Nominating Committee held one (1) meeting during the 2005 fiscal year. The Nominating Committee identifies and approves individuals qualified to serve as members of our Board and also evaluates the Board's performance. A copy of the charter of the Nominating Committee is attached as Exhibit B to the Company's Proxy Statement filed with the SEC on June 15, 2005. The Nominating Committee approved the nomination of the candidates reflected in Proposal I. The Nominating Committee will consider, but is not required to approve, director nominations made by shareholders for any annual meeting of the Company, provided, with respect to nominees for Common Stock Director, a written recommendation is received by the Company from a holder of Common

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Stock no later than the date shareholder proposals must be submitted for consideration prior to such annual meeting, and with respect to nominees for Preferred Stock Director, a recommendation is received by the Company within a reasonable amount of time before the Company begins to print and mail its proxy materials.

Messrs. Averick and Hass have declined to stand for reelection to the Board and, therefore, will not be serving on the Board, and with respect to Mr. Averick, the Board Committees, after the date of the Annual Meeting. Until such time that the Board of Directors appoints an additional director to fill the vacancy on the Board, and the vacancy on the Audit Committee, that will exist immediately after the Annual Meeting, the Company will not be in compliance with the Nasdaq Stock Market Rules as they relate to the Audit Committee. Immediately following the Annual Meeting, the Audit Committee will have only two members, instead of three as required by the Nasdaq Stock Market Rules. The Board expects that a new independent director will be appointed to fill such vacancy on the Board, and to serve on each of the Board Committees, as soon as practicable after the Annual Meeting.

Directors' Compensation

Directors who are full-time employees of the Company receive no additional compensation for serving as directors. Non-employee directors receive an annual retainer of \$6,000 and fees of \$1,000 per Board meeting attended in person and \$500 per Board meeting attended telephonically and per committee meeting attended. In addition, under the Company's Non-Employee Directors Stock Option Plan, each outside director currently receives an annual grant of options to purchase 6,000 shares of Common Stock, or such other number of shares as maybe determined by the Board, when first elected or appointed to the Board, and 5,000 shares of Common Stock, or such other number of shares as maybe determined by the Board, upon each re-election to the Board at the Company's Annual Meeting of Shareholders. The exercise price of the options is set at the fair market value of Common Stock on the date of grant. Each option has a term of ten years and is exercisable in three equal installments commencing on the first anniversary of the date of grant and continuing for the two successive anniversaries thereafter. In the event of disability (as defined in the plan) or death of an outside director, all options remain exercisable for a period of 30 days following the date such person ceased to be a director, or such other date as may be determined by the Board, but only to the extent such options were exercisable on the date the director ceased to be a director. Furthermore, the director serving as the Chairman of the Audit Committee and the Audit Committee Financial Expert receives an annual retainer of \$14,000.

Compensation Committee Interlocks and Insider Participation

The Compensation and Option Committee is presently comprised of Messrs. Robert M. Averick, Lawrence D. Firestone and Robert F. King, who are not, and have never been, officers or employees of the Company.

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EXECUTIVE COMPENSATION

The following table sets forth information regarding annual and long-term compensation for services rendered to the Company during the fiscal years ended September 30, 2005, 2004 and 2003 by the Company's Chief Executive Officer and the other most highly compensated executive officer of the Company who received annual compensation exceeding \$100,000 during such periods (collectively, the "Named Executive Officers").

SUMMARY COMPENSATION TABLE

Name and Principal Position	Fiscal Year	Annual Compensation (1)			Long-Term Compensation			
		Salary (2)	Bonus (3)(4)	Other Annual Compensation	Awards		Payouts	
					Restricted Stock Awards	Securities Underlying Options/SARs	Long-term Incentive Plans	All Other Compensation
Jong S. Whang	2005	\$150,722	\$18,555	—	—	—	—	—
President and Chief Executive Officer	2004	150,722	—	—	—	—	—	—
	2003	150,722	—	—	—	—	—	—
Robert T. Hass	2005	\$102,000	\$ —	—	—	—	—	—
Vice President —	2004	102,000	57,461	—	—	—	—	—

- (1) Neither Mr. Whang nor Mr. Hass received personal benefit perquisites in excess of the lesser of \$50,000 or 10% of their aggregate salary and bonus.
- (2) Effective March 15, 2001, Mr. Whang entered into a five-year employment agreement with the Company. The agreement specifies an annual base salary of \$188,402, with annual increases of no less than 5%, which was based upon the compensation of executives in comparable positions in the semiconductor industry, adjusted for the size of the Company (total assets and revenues). Effective April 1, 2001, Mr. Whang voluntarily reduced his annual salary by 20% to \$150,722 and Mr. Hass voluntarily reduced his annual salary by 15% to \$102,000, which reductions remained in effect as of the end of fiscal 2005. Mr. Hass' annual salary was restored to \$120,000 effective December 2005.
- (3) See "Employment And Change In Control Arrangements" for a description of how Mr. Whang's incentive compensation is determined.
- (4) The discretionary cash bonus granted to Mr. Hass in 2004 was in consideration for work performed in connection with the acquisition of Bruce Technologies, Inc.

Option Grants in Last Fiscal Year

There were no stock option grants during the 2005 fiscal year to any of the Named Executive Officers.

Aggregated Option Exercises and Fiscal Year-End Option Values

The following table sets forth information (on an aggregated basis) concerning exercises of stock options during the 2005 fiscal year by each of the Named Executive Officers, and the year-end value of unexercised options.

Name	Shares Acquired On Exercise (#)	Value Realized (\$)	Number of Securities Underlying Unexercised Options at Fiscal Year-End (#)		Value of Unexercised "In-The-Money" Options at Fiscal Year-End (\$) (1)	
			Exercisable	Unexercisable	Exercisable	Unexercisable
Jong S. Whang	—	—	164,017	30,000	\$202,600	—
Robert T. Hass	—	—	29,250	7,000	\$ 32,650	\$ 2,500

- (1) Options are "in-the-money" at the fiscal year-end if the fair market value (\$5.75 per share, based on the closing price of the Company's Common Stock on the Nasdaq Stock Market on September 30, 2005) of the underlying securities exceeds the exercise or base price of the option on such date. The dollar values in the last two columns of the table are the amounts by which the sum of the fair market values of the in-the-money options exceeds the sum of their exercise prices.

EMPLOYMENT AND CHANGE IN CONTROL ARRANGEMENTS

On March 15, 2001, the Company entered into a five-year employment agreement with its President, Jong S. Whang. Under the terms of the agreement, Mr. Whang is entitled to an annual base salary of \$188,402, and annual base salary increases of at least 5% to be determined by our Board of Directors. Mr. Whang is also entitled to receive annual incentive cash compensation of up to the lesser of 50% of his base salary or 10% of the Company's earnings before taxes and extraordinary items (after deducting the sum of such bonuses), based on the follow criteria: (i) a bonus equal to 2% of the annual earnings of the Company before taxes and extraordinary items and (ii) a bonus equal to 2% of the amount by which the revenues of the Company for the applicable fiscal year exceeds such revenues for the previous fiscal year. In addition, Mr. Whang was granted an option to purchase 150,000 shares of Common Stock pursuant to the terms of his employment agreement. These options were granted on March 15, 2001, and vest at the rate of 20% per full year of service over a five-year period. To the extent not already exercisable, the options become immediately exercisable upon: (i) the dissolution or liquidation of the Company, or a reorganization, merger or consolidation in which all, or substantially all, prior shareholders do not continue to own more than 60% of the then outstanding shares of Common Stock and voting securities, (ii) the sale of all, or substantially all, of the assets of the Company or (iii) the occurrence of a change in control of the Company, as discussed in the agreement. The agreement also contains confidentiality and non-compete provisions with which Mr. Whang must comply. Mr. Whang is also entitled to participate in any benefit plans generally available to employees of the Company. Finally, the Company is required to purchase a \$250,000 life insurance policy on the life of Mr. Whang, with his spouse as the beneficiary of such policy. To date, Mr. Whang has waived the Company's compliance with the latter requirement.

Under the terms of Mr. Whang's employment agreement, if he is terminated other than for "cause," or he terminates his employment for "good reason" (as such terms are defined in his employment agreement), he is entitled to receive, as severance pay, salary, incentive compensation and vacation accrued through the date of termination plus the following: (i) an amount equal to two years of Mr. Whang's base salary in effect on the termination date; (ii) a pro-rated portion of the amount of incentive compensation Mr. Whang would earn for the fiscal year in which the termination occurs if the results of operations of the Company for the period from the beginning of such fiscal year to the termination date were annualized; (iii) full vesting of all stock options issued under the employment agreement; and (iv) vesting of a pro-rated portion of the number of stock options that would have vested for the fiscal year in which the termination occurs.

Mr. Whang's employment agreement also provides for benefits should his employment with the Company be terminated following a change in control. If Mr. Whang's employment with the Company is terminated within one year following the occurrence of a change of control, either by the Company for any reason other than for cause, or by Mr. Whang for good reason, the Company would be required to pay him a lump sum payment equal to three years of his annual base salary in effect on the termination date and the maximum amount of incentive compensation that he could earn for the fiscal year in which the termination date occurs. In addition, all unvested stock options held by him would vest immediately.

The Company has also entered into a severance agreement with Robert T. Hass, its Vice President — Finance, which provides for severance benefits similar to those described above for Mr. Whang, with the exception that Mr. Hass is entitled to a lump sum severance payment equal to one year's base salary should his employment be terminated within one year following a change in control.

Certain Relationships and Related Transactions

Other than as set forth below, the Company has had no transactions since the beginning of its last fiscal year with any director, director nominee, executive officer, security holder known to the Company to own of record or beneficially more than 5% of the Common Stock, or any member of the immediate family of any of the foregoing persons, in which the amount involved exceeded \$60,000.

In April 2005, the Company completed a private offering of 540,000 shares of Preferred Stock. Catalyst Financial, LLC (“Catalyst Financial”), which is the Company’s investment banker, served as the placement agent in connection with the private placement and received a cash fee of \$172,800, reimbursement of expenses of \$43,200 and a warrant to purchase 60,000 shares of Common Stock as consideration for its services. In addition, Catalyst Fund, L.P. acquired 196,250 shares of Preferred Stock in the private placement in consideration for \$785,000. Steven N. Bronson, as president of Catalyst Financial and the managing member of Catalyst Fund GP LLC, which is the

general partner of Catalyst Fund, L.P., may be deemed to beneficially own 256,250 shares of Common Stock, representing approximately 8.7% of the total shares of Common Stock issued and outstanding.

REPORT OF COMPENSATION AND OPTION COMMITTEE

The Compensation and Option Committee of the Company’s Board of Directors (the “Committee”), which is composed entirely of independent, outside directors, establishes the general compensation policies of the Company, and specific compensation for each executive officer of the Company, and administers the Company’s stock option program. The Committee’s objective is to make the compensation packages of the executive officers of the Company sufficient to attract and retain persons of exceptional quality, and to provide effective incentives to motivate and reward Company executives for achieving the financial and strategic goals of the Company essential to the Company’s long-term success and growth in shareholder value. The Company’s executive compensation package consists of three main components: base salary, incentive cash bonuses and stock options.

Base Compensation — The Committee’s approach is to offer executives salaries competitive with those of other executives in the industry in which the Company operates. To that end, the Committee evaluates the competitiveness of base salaries based on information drawn from a variety of sources, including published and proprietary survey data and the Company’s own experience recruiting and retaining executives, although complete information is not easily obtainable. The Company’s base salary levels are intended to be consistent with competitive practice and level of responsibility, with salary increases reflecting competitive trends, the overall financial performance of the Company and the performance of the individual executive.

Bonuses — In addition to base salary, executives are eligible to receive a discretionary annual bonus. At the beginning of each year, the Committee and the Chief Executive Officer (the “CEO”) review each individual executive’s job responsibilities and goals for the upcoming year. The amount of the bonus and any performance criteria vary with the position and role of the executive within the Company. In addition, for all executives, the Committee reviews the Company’s actual financial performance against its internally budgeted performance in determining year-end bonuses, if any. However, the Committee does not set objective performance targets for executives other than the CEO and sales and marketing personnel.

Stock Option and Restricted Stock Grants — The Company, from time to time, grants stock options and shares of restricted stock in order to provide certain executives with a competitive total compensation package, and to reward them for their contribution to the long-term price performance of the Common Stock. Grants of stock options and restricted stock are designed to align the executive’s interest with that of the shareholders of the Company. In awarding option grants, the Committee will consider, among other things, the amount of stock and options presently held by the executive, the executive’s past performance and contributions, and the executive’s anticipated future contributions and responsibilities.

2005 CEO Compensation — Effective April 1, 2001, Mr. Whang, the Company’s CEO, voluntarily reduced his annual base salary under his March 15, 2001 employment agreement by 20% to \$150,722, and has forgone any salary increases since that date. The Committee expects to enter into a new employment agreement with Mr. Whang following the expiration of the current agreement on March 15, 2006. See “Summary Compensation Table — Note (2)”.

In connection with the execution of Mr. Whang’s employment agreement, our Board of Directors approved an incentive compensation plan for the CEO, which provides for an annual cash bonus equal to 2% of the annual earnings of the Company before taxes and extraordinary items, plus 2% of the amount by which the revenues of the Company in an applicable fiscal year exceed such revenues for the previous fiscal year. The total of such cash bonuses is limited to 50% of Mr. Whang’s base salary for the applicable fiscal year. Mr. Whang earned a bonus in 2005. Mr. Whang’s employment agreement with the Company incorporates the incentive compensation plan described above. See “Employment And Change In Control Arrangements.”

RESPECTFULLY SUBMITTED,

Robert M. Averick
Lawrence D. Firestone
Robert F. King

AUDIT COMMITTEE REPORT

In accordance with its written charter adopted by our Board of Directors on April 16, 2005, a copy of which is attached as an exhibit to the Company’s Proxy Statement filed with the Securities and Exchange Commission (the “SEC”) on June 15, 2005, the Audit Committee is responsible for reviewing and discussing the audited financial statements with management, discussing with the Company’s auditors information relating to the auditors’ judgments about the quality of the Company’s accounting principles, recommending to our Board of Directors that the Company include the audited financial statements in its Annual Report on Form 10-K and overseeing compliance with the requirements of the SEC for disclosure of auditors’ services and activities. The Audit Committee also develops and recommends corporate governance guidelines to the Board and provides oversight with respect to corporate governance and ethical conduct.

The Board of Directors annually reviews the independence of the Audit Committee members in view of the NASD’s listing standards’ and the SEC’s definitions of independence for audit committee members. The Board has determined that each of the three members of the Audit Committee meets those definitions and standards. Additionally, each member of the Audit Committee is financially literate, and one of the Audit Committee members, Lawrence D. Firestone, has financial management expertise as required by Nasdaq’s rules and meets the SEC’s definition of an “audit committee financial expert.”

Management is responsible for the preparation, presentation and integrity of the Company’s financial statements, accounting and financial reporting principles, internal controls, and procedures designed to ensure compliance with accounting standards and applicable laws and regulations. The Company’s independent auditors are responsible for performing an independent audit of the consolidated financial statements and expressing an opinion on the conformity of those financial statements with generally accepted

accounting principles.

The Audit Committee meets regularly with the independent accountants without management present and also meets in executive session without any others present. The Audit Committee has reviewed the Company's consolidated financial statements for the fiscal year ended September 30, 2005, as audited by its independent auditors, Mayer Hoffman McCann P.C. ("Mayer Hoffman McCann"), and has discussed these financial statements with management. In addition, the Audit Committee has discussed with Mayer Hoffman McCann the matters required to be discussed by Statement of Auditing Standards No. 61, "Communications with Audit Committees." Furthermore, the Audit Committee has received the written disclosures and the letter from Mayer Hoffman McCann required by the Independence Standards Board Standard No. 1, "Independence Discussions with Audit Committees," and has discussed with Mayer Hoffman McCann its independence.

Based upon the foregoing review and discussion, the Audit Committee recommended to our Board of Directors that the audited financial statements for the fiscal year ended September 30, 2005 be included in the Company's Annual Report on Form 10-K for filing with the SEC.

RESPECTFULLY SUBMITTED,

Lawrence D. Firestone, Chairman
Robert M. Averick
Robert F. King

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PRE-APPROVAL POLICY

In May, 2003, the Audit Committee adopted a Pre-Approval Policy (the "Policy") governing the approval of all audit and non-audit services performed by the Company's independent auditor in order to ensure that the performance of such services does not impair the auditor's independence.

According to the Policy, the Audit Committee will annually review and pre-approve the types of services, and will set a limit on the fees for such services, that may be provided by the independent auditor during the following year. The Policy specifically describes the annual audit services and fees, other services that are audit-related, the preparation of tax returns and tax related compliance services and all other services that have the general pre-approval of the Audit Committee. The term of any general pre-approval is twelve (12) months from the date of pre-approval, unless the Audit Committee specifically provides for a different period.

Any service to be provided by the independent auditor that has not received general pre-approval under the Policy is required to be submitted to the Audit Committee for approval prior to the commencement of a substantial portion of the engagement. Any proposed service exceeding pre-approved cost levels is also required to be submitted to the Audit Committee for specific approval.

The Audit Committee will revise the list of general pre-approved services from time to time based on subsequent determinations. The Audit Committee does not delegate its responsibilities to pre-approve services performed by the independent auditor to management.

CODE OF ETHICS

The Board of Directors has adopted a Code of Ethics for all employees of the Company, as recommended by the Audit Committee. A copy of this Code of Ethics may be viewed on our website (www.amtechsystems.com), or obtained at no charge by written request to the Company's Corporate Secretary.

DISCLOSURE OF AUDIT AND NON-AUDIT FEES

The following table sets forth the fees billed to us by our independent auditors during the years ended September 30, 2005 and 2004 for: (i) services rendered for the audit of our annual financial statements and the review of our quarterly financial statements, (ii) services by our auditor that are reasonably related to the performance of the audit or review of our financial statements and that are not reported as audit fees, (iii) services rendered in connection with tax compliance, tax advice and tax planning, and (iv) all other fees for services rendered.

	Year Ended Sept. 30, 2005	Year Ended Sept. 30, 2004
Audit Fees	\$243,649	\$275,000
Audit-Related Fees (1)	6,000	5,773
Tax Fees	—	—
All Other Fees	—	—
Total Fees	<u>\$249,649</u>	<u>\$280,773</u>

(1) Accounting and reporting advisory services related to acquisition activities and regulatory filings.

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SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information concerning the beneficial ownership of our Common Stock and Preferred Stock as of January 20, 2006 by (i) each director and executive officer of the Company, including the Named Executive Officers, (ii) all executive officers and directors of the Company as a group and (iii) each person known by the Company to be the beneficial owner of more than 5% of our Common Stock. This information was determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934, as amended, and is based upon the information furnished by the persons listed below. Except as otherwise indicated, each shareholder listed possesses sole voting and investment power with respect to the shares indicated as being beneficially owned.

Name and Address (1)(2)	No. of Shares of Common Stock Beneficially Held (3)	Percent of Common Stock Ownership (3)	No. of Shares of Preferred Stock Beneficially Held	Percent of Preferred Stock Ownership
Jong S. Whang	278,472(4)	9.6%	—	—
Robert T. Hass	34,375(5)	1.3%	—	—
Robert M. Averick	10,000(6)	*	—	—
Lawrence D. Firestone	—	*	—	—
Robert F. King	5,667(7)	*	—	—
Directors and Executive Officers of the Company as a group (5 persons)	328,514(8)	11.1%	—	—
Robert Sussman 520 Madison Avenue 41st Floor New York, NY 10022	202,500(9)	7.5%	—	—
Richard L. Scott 700 11th Street, Suite 101 Naples, FL 34102	312,500(10)	10.4%	312,500 (10)	57.9%
Steven N. Bronson 100 Mill Plain Road Danbury, CT 06811	256,250(11)(12)	8.7%	196,250 (12)	36.3%

* Less than 1%.

- (1) Except as otherwise noted, the address for each person listed in this table is c/o Amtech Systems, Inc., 131 South Clark Drive, Tempe, Arizona 85281.
- (2) Mr. Whang is the Company's President, Chief Executive Officer and a director. Mr. Hass is the Vice President — Finance, Chief Financial Officer, Treasurer, Secretary and a director. Messrs. Averick, Firestone and King are directors of the Company. Messrs. Sussman, Scott and Bronson are beneficial owners of at least 5% of the Company's outstanding Common Stock.
- (3) The share amounts and percentages shown include shares of Common Stock actually owned as of January 20, 2006, and shares of Common Stock with respect to which the person had the right to acquire beneficial ownership within 60 days of such date pursuant to options, warrants or Preferred Stock. All shares of Common Stock that the identified person had the right to acquire within 60 days of January 20, 2006, upon the exercise of options or warrants or the conversion of Preferred Stock, are deemed to be outstanding when computing the percentage of the securities owned by such person, but are not deemed to be outstanding when computing the percentage of the securities owned by any other person.
- (4) Includes (i) 351 shares held jointly with Mr. Whang's spouse and (ii) 194,017 shares issuable upon exercise of options exercisable within 60 days of January 20, 2006.
- (5) Includes 34,250 shares issuable upon exercise of options exercisable within 60 days of January 20, 2006.
- (6) Mr. Averick may be deemed to beneficially own 10,000 shares of Common Stock as a result of his 3.2% membership interest in Amtech Investments, LLC, which owns 312,500 shares of Preferred Stock that is

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convertible into Common Stock. Richard L. Scott may be deemed to share beneficial ownership of such 10,000 shares of Common Stock as set forth in footnote 10 below.

- (7) Includes 5,667 shares issuable upon exercise of options exercisable within 60 days of January 20, 2006.
- (8) Includes 243,934 shares issuable upon exercise of options and conversion of Preferred Stock exercisable or convertible, respectively, within 60 days of January 20, 2006.
- (9) Includes 2,500 shares jointly owned with Mr. Sussman's spouse.
- (10) Mr. Scott is a controlling member of Amtech Investments, LLC, a member-managed limited liability company which owns 312,500 shares of Preferred Stock that is convertible into Common Stock. Mr. Scott may be deemed to share beneficial ownership of 10,000 shares of such Common Stock with Robert M. Averick as set forth in footnote 6 above.
- (11) Mr. Bronson is president of Catalyst Financial LLC, a broker-dealer that owns a warrant to purchase 60,000 shares of Common Stock.
- (12) Mr. Bronson is managing member of Catalyst Fund GP, LLC, which is the general partner of Catalyst Fund, L.P. Catalyst Fund, L.P. owns 196,250 shares of Preferred Stock that is convertible into 196,250 shares of Common Stock.

Section 16(a) Beneficial Ownership Reporting Compliance

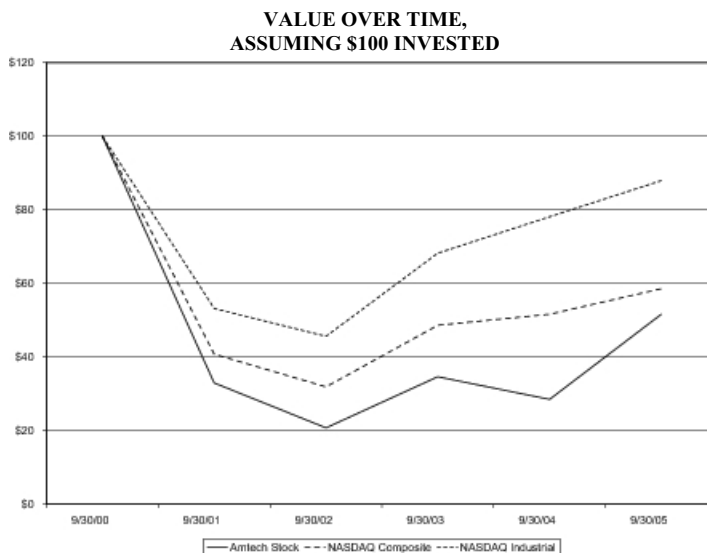
Section 16(a) of the Securities Exchange Act of 1934, as amended, requires the Company's directors and executive officers, as well as persons beneficially owning more than 10% of our outstanding Common Stock, to file certain reports of ownership with the SEC within specified time periods. Such officers, directors and shareholders are also required by SEC rules to furnish the Company with copies of all Section 16(a) forms they file.

Based solely on our review of such forms received by us during the fiscal year ended September 30, 2005, or written representations from certain reporting persons, we

believe that between October 1, 2004 and September 30, 2005, all Section 16(a) filing requirements applicable to its officers, directors and 10% shareholders were complied with, except that: (i) Mr. King failed to timely make such required filings with respect to an automatic option grant on July 8, 2005; and (ii) Mr. Averick failed to timely make such required filings with respect to his election as a director of the Company on July 8, 2005 and with respect to an automatic option grant on the same date. In addition, no filing under Section 16(a) has been made with respect to the beneficial ownership of Common Stock by Richard L. Scott.

Comparison of Stock Performance

The following line graph compares cumulative total shareholder return, assuming reinvestment of dividends, for: the Company's Common Stock, the NASDAQ Composite Index and the NASDAQ Industrial Index. Because the Company did not pay dividends on its Common Stock during the measurement period, the calculation of the cumulative total shareholder return on the Company's Common Stock did not include dividends. The following graph assumes that \$100 was invested on October 1, 2000.



OTHER MATTERS

Annual Report

The Annual Report of the Company for the fiscal year ended September 30, 2005, is enclosed herewith.

Voting By Proxy

In order to ensure that your shares will be represented at the Annual Meeting, please sign and return the enclosed proxy in the envelope provided for that purpose, whether or not you expect to attend. Any shareholder may, without affecting any vote previously taken, revoke a written proxy by delivering to our executive offices, to the attention of our corporate Secretary prior to the vote at the Annual Meeting, written notice of revocation or a duly executed proxy bearing a later date, or by attending the Annual Meeting and voting in person.

Independent Auditors

Our Board of Directors selected the accounting firm of Mayer Hoffman McCann P.C. ("Mayer Hoffman") as the Company's independent public accountants for the fiscal year ending September 30, 2005 and expects to reappoint them for the fiscal year ending September 30, 2006 immediately following the Annual Meeting of Shareholders. KPMG LLP ("KPMG") audited the Company's financial statements for the fiscal years ending September 30, 2004 and 2003. A representative of Mayer Hoffman is expected to be present at the Annual Meeting and will have the opportunity to make a statement if he or she so desires, and will also be available to respond to appropriate questions.

On May 18, 2005, the Company received notification that KPMG had declined to stand for reappointment as the Company's independent accountants and that the client-audit relationship between the Company and KPMG had ceased.

During the two years ended September 30, 2004 and the subsequent interim period ended May 18, 2005, there were no disagreements between the Company and KPMG on any matters of accounting principles or practices, financial statement disclosure or auditing scope or procedure, which, if not resolved to the satisfaction of KPMG, would have been referred to in their reports. KPMG's report on the Company's financial statements for the two years ended September 30, 2004 did not contain an adverse opinion or a disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope or accounting principles. In addition, during the two years ended September 30, 2004 and the subsequent interim period through May 18, 2005, there were no reportable events (as defined in Item 304(a)(1)(v) of SEC Regulation S-K).

On May 24, 2005, pursuant to approval of the Audit Committee, the Company engaged Mayer Hoffman to serve as its new independent accountants. Anticipating future cost savings, the Audit Committee had undertaken an evaluation of a potential change in independent accountants prior to receiving notification that KPMG would not stand for reappointment. The Audit Committee selected Mayer Hoffman based on that firm's accounting expertise, the resources the firm has committed to assign to the Company's account and the fee estimates provided to the Audit Committee for the firm's services.

During the years ended September 30, 2004 and 2003 and the subsequent interim periods, the Company did not consult with Mayer Hoffman regarding either (i) the application of accounting principles to a specified transaction or the type of audit opinion that might be rendered on the Company's financial statements or (ii) any matter that was either the subject of a disagreement (as defined in Item 304(a)(1)(iv) of Regulation S-K) or a reportable event (as defined in Item 304(a)(1)(v) of Regulation S-K).

Deadline for Shareholder Proposals for Action at the Company's Next Annual Meeting

The Company anticipates holding its 2007 Annual Meeting of Shareholders on March 16, 2007. Any shareholder who wishes to present any proposal for shareholder action at the 2007 Annual Meeting of Shareholders, must be submitted to the Company's Secretary, at the Company's offices, not later than October 12, 2006, in order to be included in the Company's proxy statement and form of proxy for that meeting. Such proposals should be addressed to the Corporate Secretary, Amtech Systems, Inc., 131 South Clark Drive, Tempe, Arizona 85281. If a shareholder proposal is introduced at the 2007 Annual Meeting of Shareholders without any discussion of the proposal in the Company's proxy statement, and the shareholder does not notify the Company on or before

December 26, 2006, as required by SEC Rule 14(a)-4(c)(1), of the intent to raise such proposal at the Annual Meeting of Shareholders, then proxies received by the Company for the 2007 Annual Meeting will be voted by the persons named in such proxies in their discretion with respect to such proposal. Notice of such proposal is to be sent to the above address

Shareholder Communications with Board of Directors

The Company does not have formal procedures for shareholder communications with the Board of Directors. However, any matter intended for the Board of Directors or any Board Committee should be directed to the Corporate Secretary of the Company at 131 South Clark Drive, Tempe, Arizona 85281, with a request to forward the same to the intended recipient. All shareholder communications delivered to the Corporate Secretary of the Company for forwarding to the Board of Directors or specified Board members will be forwarded in accordance with the shareholder's instructions.

HOUSEHOLDING OF PROXY MATERIALS

In December 2000, the SEC adopted new rules that permit companies and intermediaries (i.e., brokers) to satisfy the delivery requirements for proxy statements with respect to two or more security holders sharing the same address by delivering a single proxy statement addressed to those security holders. This process, which is commonly referred to as "householding," potentially means extra convenience for security holders and cost savings for companies.

If you are currently receiving multiple copies of the Company's Proxy Statement and Annual Report at your address and would like to request householding of your communications, please contact your broker. Once you have elected householding of your communications, householding will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in householding, and would prefer to receive a separate Proxy Statement and Annual Report, please notify your broker if you own shares in street name, or direct your written request to Amtech Systems, Inc., 131 South Clark Drive, Tempe, Arizona 85281, Attn: Secretary if you are a shareholder of record.

By Order of the Board of Directors:




Robert T. Hass, Secretary

Tempe, Arizona
February 9, 2006



Amtech Systems, Inc.

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Mark this box with an X if you have made changes to your name or address details above.

Annual Meeting Proxy Card

A Election of Directors

1. The Board of Directors recommends a vote FOR the listed nominees as Common Stock Directors

	For	Withhold
01 - Jong S. Whang	<input type="checkbox"/>	<input type="checkbox"/>
02 - Lawrence D. Firestone	<input type="checkbox"/>	<input type="checkbox"/>
03 - Robert F. King	<input type="checkbox"/>	<input type="checkbox"/>

B Authorized Signatures - Sign here – This section must be completed for your instructions to be executed.

The undersigned agrees that the proxy holder is authorized to cumulate votes in the election of directors and to vote for less than all of the nominees. Please sign exactly as your name appears on the front of this proxy card. When shares are held in common or in joint tenancy, both should sign. When signing as attorney, as executor, administrator, trustee or guardian, please give full title as such. If a corporation, sign in full corporate name by President or other authorized officer. If a partnership, please sign in partnership name by an authorized person. Please return in the enclosed, postage-paid envelope.

Signature 1 - Please keep signature within the box

Signature 2 - Please keep signature within the box

Date (mm/dd/yyyy)



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Proxy - AMTECH SYSTEMS, INC.

**THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS
OF AMTECH SYSTEMS, INC. FOR THE 2006 ANNUAL MEETING OF SHAREHOLDERS**

The undersigned shareholder of Amtech Systems, Inc., an Arizona corporation (the "Company"), hereby acknowledges receipt of the Notice of Annual Meeting of Shareholders dated February 9, 2006, and hereby appoints Jong S. Whang and Robert T. Hass, and each or either of them, proxies and attorneys-in-fact, with full power of substitution, on behalf and in the name of the undersigned, to represent the undersigned at the Annual Meeting of Shareholders of AMTECH SYSTEMS, INC. to be held at the Hilton Phoenix Airport Hotel, 2435 South 47th Street, Phoenix, Arizona on Thursday, March 2, 2006, at 10:00 a.m., Arizona time, and at any adjournment(s) or postponement(s) thereof, and to vote all shares of Common Stock and Series A Convertible Preferred Stock that the undersigned would be entitled to vote if then and there personally present, on the matters set forth on the reverse side.

THIS PROXY WHEN PROPERLY EXECUTED WILL BE VOTED IN THE MANNER DIRECTED HEREIN BY THE UNDERSIGNED SHAREHOLDER. IF NO DIRECTION IS MADE, THIS PROXY WILL BE VOTED FOR THE ELECTION OF THE NOMINEES NAMED ON THE REVERSE SIDE AND AS SAID PROXIES DEEM ADVISABLE ON SUCH MATTERS AS MAY COME BEFORE THE MEETING.