FORM 8-K

Current report filing

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FILER

OPTIMARK HOLDINGS INC

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SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): May 7, 2002

OPTIMARK HOLDINGS, INC.
(Exact name of registrant as specified in its charter)

Delaware	000-30527	22-3730995
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

10 Exchange Place, 24th Floor, Jersey City, New Jersey 07302
(Address of principal executive offices and zip code)

Registrant's telephone number, including area code: (201) 536-7000

N/A
(Former name or former address, if changed since last report)

Item 5. Other Events and Regulation FD Disclosure

On May 7, 2002, OptiMark Innovations Inc. ("*Innovations*") and The Ashton Technology Group, Inc. ("Ashton") closed the transactions contemplated by the Securities Purchase Agreement by and between Ashton and Innovations, dated as of February 4, 2002 (as amended on March 6, 2002 and May 3, 2002, the "*Securities Purchase*

Agreement"). Innovations is a subsidiary of OptiMark, Inc. ("*OptiMark*") which, in turn, is a wholly-owned subsidiary of OptiMark Holdings, Inc. ("*Holdings*").

Pursuant to the terms of the Securities Purchase Agreement, Innovations purchased 608,707,567 shares of Ashton Common Stock, par value $.01 per share (the "*Ashton Common Stock*"), in exchange for approximately $7.3 million in cash and intellectual property and other non-cash assets of Innovations valued for the purposes of the transaction at $20 million.

In addition, pursuant to the terms of the Securities Purchase Agreement, Innovations loaned approximately $2.3 million in cash to Ashton in exchange for a senior secured convertible note (the "*Note*"). The Note will mature over five years, will be convertible into shares of Ashton Common Stock at a rate of $.0515838 per share (subject to customary anti-dilution adjustments after the closing) and will accrue interest at a rate of 7.5% per annum. Currently, the Note is convertible into 52,870,757 shares of Ashton Common Stock. The Note is secured by a pledge and security agreement pursuant to which Innovations has received a blanket lien on Ashton' s assets, including, without limitation, the pledge of the equity interests of Ashton and Universal Trading Technologies Corporation, a Delaware corporation and majority-owned subsidiary of Ashton ("*UTTC*"), in each of ATG Trading LLC, wholly-owned subsidiary of Ashton ("*ATG Trading*"), Electronic Market Center, Inc., a majority-owned subsidiary of Ashton ("*eMC*"), Ashton Technology Canada, Inc., a majority-owned subsidiary of Ashton ("*Ashton Canada*"), Croix Securities, Inc., a wholly-owned subsidiary of UTTC ("*Croix*"), REB Securities Inc., a wholly-owned subsidiary of UTTC ("*REB*"); and NextExchange, Inc., a wholly-owned subsidiary of UTTC ("NextExchange").

Currently, Innovations owns approximately 80% of the fully-diluted outstanding shares of Ashton Common Stock calculated as of May 3, 2002 (the "*Closing Date*"). Fully-diluted shares include the outstanding shares of common stock and (i) shares of any series of capital stock of Ashton or its subsidiaries that vote together with Ashton' s common stock, (ii) any outstanding options issued to employees and third parties, and (iii) shares of common stock, or any securities described in clause (i) above, issuable pursuant to or upon conversion or exercise of all rights granted to any party (other than conversion of the Note). Assuming conversion of the Note, Innovations will own approximately an additional 7% of Ashton' s fully-diluted shares of Ashton Common Stock, calculated as of the Closing Date.

Financing

Innovations obtained the cash financing necessary to purchase the Ashton Common Stock through a subscription for its common stock, par value $.01 per share

(the "*Innovations Common Stock*"), and a new class of preferred stock, par value $.01 per share, designated as "Series B Preferred Stock" (the "*Innovations Series B Preferred Stock*") by a third party investor.

On April 30, 2002, Draper Fisher Jurvetson ePlanet Ventures, L.P., Draper Fisher Jurvetson ePlanet Partners Fund, L.L.C. and Draper Fisher Jurvetson ePlanet Ventures GmbH & Co. KG (collectively, "*Draper*") purchased 150 shares of the Innovations Common Stock for an aggregate cash purchase price of $375,000. On May 3, 2002, Draper purchased 963 shares of the Innovations Series B Preferred Stock for an aggregate cash purchase price of $9,630,000.

In connection with the Series B Preferred Stock subscription, Innovations, Draper and Innovations' other shareholders entered into an amended and restated Investors' Rights Agreement (the "*Innovations Rights* Agreement"). Pursuant to the terms of the Innovations Rights Agreement, Draper received (i) preemptive rights to subscribe for future sales by Innovations of any shares of, or securities convertible into or exercisable for any shares of, any class of Innovations capital stock, (ii) registration rights and (iii) the right to designate two (2) directors to Innovations' board of directors.

Intellectual Property

The intellectual property and non-cash assets transferred to Ashton by Innovations as partial consideration to Innovations' purchase of Ashton Common Stock consist of:

U.S. provisional patent application No. 60/323,940 entitled "Volume Weighted Average Price System and Method" filed on September 1, 2001 that relates to Volume Weighted Average Price, or VWAP, trading. The provisional patent application relates to processing orders for trading equity securities at the volume weighted average price ("*VWAP*") and guaranteeing the price and quantity of trades to users who submit orders;
Trade secrets and know how relating to VWAP trading;
An assignment to Ashton of a license for technology for use in a system for VWAP trading;
An assignment to Ashton of all rights, duties and obligations under a bilateral nondisclosure agreement between the licensor of the technology described above and Innovations; and
Software developed to implement critical components of the VWAP trading system, including certain tools for testing, de-bugging and building source code.

Investors' Rights Agreement

As of the Closing Date, Ashton and Innovations entered into an Investors' Rights Agreement (the "*Rights Agreement*"). Pursuant to the Rights Agreement, Innovations acquired certain rights, including but not limited to: (i) preemptive rights to subscribe for future sales by Ashton of Ashton Common Stock, (ii) registration rights and (iii) the right

to designate a number of directors to Ashton' s board of directors proportionate to Innovations' ownership of Ashton Common Stock. Currently, Innovations is entitled to designate four (4) of the directors that constitute Ashton' s board of directors. Ronald D. Fisher, Trevor B. Price and Robert J. Warshaw were chosen as three (3) of Innovations' designees to Ashton' s board of directors and were appointed to serve on Ashton' s board of directors on May 8, 2002.

In addition, so long as Innovations holds at least 20% of the Ashton Common Stock, Ashton has agreed that it will not take certain actions without Innovations' prior approval, including the issuance of additional Ashton Common Stock (with certain exceptions), the repurchase or redemption of its securities, a merger, consolidation or sale of substantially all of its assets or engaging in any business other than the business it currently engages in. So long as Innovations has the right to appoint at least one director, certain actions by the board of directors of Ashton cannot be taken without the approval of at least one of the directors appointed by Innovations. Such actions include, making capital expenditures in excess of certain limits, acquisitions or sales of assets with a value in excess of $50,000 and repurchasing or redeeming Ashton' s securities.

Non-Competition Agreement

Ashton, Innovations, OptiMark and Holdings executed a non-competition agreement as of the Closing Date. The parties currently do not compete. The Agreement precludes Innovations, OptiMark, Holdings or any entity that they control from competing on a worldwide basis with Ashton in offering VWAP trading systems or related services in U.S. and Canadian securities. The agreement has a five-year term from the date of its execution.

Intercreditor, Subordination and Standstill Agreement

On the Closing Date, Ashton entered into a Securities Exchange Agreement (the "*Securities Exchange Agreement*") with RGC International Investors, LDC, a Cayman Islands limited duration company ("*RGC*") pursuant to which RGC exchanged its 9% secured convertible note in the original principal amount of approximately $5.1 million for a four-year, 7.5% non-convertible zero-coupon senior secured note in the principal amount of approximately $4.75 million (the "*Exchange Note*") and a five-year warrant to purchase 9 million shares of Ashton Common Stock at an exercise price of $0.04305 per share, subject to customary antidilution adjustments. The Exchange Note is secured by a blanket, first priority lien on all assets of Ashton, including, without limitation, Ashton' s and UTTC' s equity interests in each of ATG Trading, eMC, Ashton Canada, Croix, REB and NextExchange.

On the Closing Date and in connection with the closing of the transactions contemplated by the Securities Purchase Agreement and the Securities Exchange Agreement, Ashton, UTTC, RGC and Innovations entered into an Intercreditor, Subordination and Standstill Agreement memorializing the agreements of the parties as to the priority of payment and security with respect to the obligations arising under the

Note and the Exchange Note, respectively, and the rights and remedies of Innovations and RGC with respect to such obligations.

Indemnification Agreement

OptiMark US Equities, Inc. (f/k/a OptiMark Technologies, Inc.), a wholly-owned subsidiary of Holdings *("Equities*"), is a defendant in a litigation captioned Finova Capital Corporation v. OptiMark Technologies, Inc., OptiMark, Inc. and OptiMark Holdings, Inc., Docket No.: HUD-L-3884-01, Superior Court of New Jersey - Hudson County. Finova alleges, among other things, that Equities has effected fraudulent conveyances of certain assets of Holdings (the "*Fraudulent Conveyance Claim*"). On the Closing Date, Ashton and Equities entered into an Indemnification Agreement (the "*Indemnification Agreement*"). Pursuant to the Indemnification Agreement, in the event that Finova adds Ashton as a defendant in the litigation, Equities will indemnify Ashton from and against the entirety of any actions resulting from, arising out of, relating to, in the nature of, or caused by the Fraudulent Conveyance Claim.

Item 7. Financial Statements and Exhibits

(a) Not applicable.

(b) Not applicable.

(c) Exhibits.

Exhibit No.	Description
2.1	Securities Purchase Agreement, dated as of February 4, 2002, by and between The Ashton Technology Group, Inc. and OptiMark Innovations Inc.(1)
2.2	Amendment No. 1 to Securities Purchase Agreement, dated as of March 6, 2002, by and between The Ashton Technology Group, Inc. and OptiMark Innovations Inc.
2.3	Amendment No. 2 to Securities Purchase Agreement, dated as of May 3, 2002, by and between The Ashton Technology Group, Inc. and OptiMark Innovations Inc.
4.1	Investors' Rights Agreement, dated as of May 3, 2002, by and between the Ashton Technology Group, Inc. and OptiMark Innovations Inc.
4.2	Investors' Rights Agreement, dated as of May 3, 2002, by and among OptiMark Innovations Inc., Draper Fisher Jurvetson ePlanet Ventures, L.P., Draper Fisher Jurvetson ePlanet Partners Fund, L.L.C. and Draper Fisher Jurvetson ePlanet Ventures GmbH & Co. KG, SOFTBANK Capital Partners LP, SOFTBANK Capital LP, and SOFTBANK Capital Advisors Fund LP.
4.3	Senior Secured Convertible Note of The Ashton Technology Group, Inc. in favor of OptiMark Innovations Inc., dated as of May 3, 2002.
4.4	Intercreditor, Subordination and Standstill Agreement, dated as of May 3, 2002, by and among RGC International Investors, LDC, OptiMark Innovations Inc., The Ashton Technology Group, Inc. and Universal Trading Technologies Corporation.
4.5	Non-Competition Agreement, dated as of May 3, 2002, by and among The Ashton Technology Group, Inc., OptiMark Innovations Inc., OptiMark, Inc. and OptiMark Holdings, Inc.
4.6	Indemnification Agreement, dated as of May 3, 2002, by and between The Ashton Technology Group, Inc. and OptiMark US Equities, Inc. (f/k/a OptiMark Technologies, Inc.).

(1) Incorporated by reference to Exhibit 2.1 to Registrant's Current Report on Form 8-K dated February 4, 2002 (Commission File No. 000-30527).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

OPTIMARK HOLDINGS, INC.

By: /s/ Neil G. Cohen
Name: Neil G. Cohen
Title: Secretary

Date: May 23, 2002

Exhibit Index

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4.5	Non-Competition Agreement, dated as of May 3, 2002, by and among The Ashton Technology Group, Inc., OptiMark Innovations Inc., OptiMark, Inc. and OptiMark Holdings, Inc.
4.6	Indemnification Agreement, dated as of May 3, 2002, by and between The Ashton Technology Group, Inc. and OptiMark US Equities, Inc. (f/k/a OptiMark Technologies, Inc.).

(1) Incorporated by reference to Exhibit 2.1 to Registrant's Current Report on Form 8-K dated February 4, 2002 (Commission File No. 000-30527).

Exhibit 2.2

AMENDMENT NO. 1 TO THE SECURITIES PURCHASE AGREEMENT

This Amendment No.1 (the "Amendment") to the Securities Purchase Agreement, dated as of February 4, 2002 (the "Agreement"), by and between The Ashton Technology Group, Inc. ("Ashton") and OptiMark Innovations Inc. ("OptiMark") is made as of this 6th day of March, 2002 by and between Ashton and OptiMark. Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Agreement.

WHEREAS the Agreement provides that any term of the Agreement may be amended with the written consent of Ashton and OptiMark;

WHEREAS in accordance with the foregoing, Ashton and OptiMark desire to amend the Agreement;

NOW THEREFORE, in consideration of the premises and the covenants hereinafter set forth, Ashton and OptiMark agree as follows:

1. Section 6.12 of the Agreement. Section 6.12(a)(iii) of the Agreement is hereby amended and restated as follows:

(iii) by either the Company or the Investor, so long as such party has not materially breached its obligations hereunder, if the Closing has not occurred on or before April 30, 2002;

2. Except as modified by this Amendment, the Agreement shall remain in full force and effect.

3. Each of Ashton and OptiMark hereby represent and warrant to the other that (i) all corporate action on its part and the part of its directors necessary for the due authorization, execution and delivery of this Amendment has been taken, and (ii) this Amendment will be a valid and binding obligation of it enforceable against it in accordance with its terms.

4. Miscellaneous.

a) Governing Law. This Agreement shall be governed in all respects by the laws of the State of New York without regard to principles of conflict of laws.

b) Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

[The Remainder Of This Page Is Intentionally Left Blank]

IN WITNESS WHEREOF, each of the undersigned has caused this Amendment to be executed as of the date first written above.

THE ASHTON TECHNOLOGY GROUP, INC.

By: /s/ William W. Uchimoto

Name: William W. Uchimoto
Title: General Counsel

OPTIMARK INNOVATIONS INC.

By: /s/ Neil G. Cohen

Name: Neil G. Cohen
Title: Secretary

Exhibit 2.3

AMENDMENT NO. 2
TO
THE SECURITIES PURCHASE AGREEMENT

This AMENDMENT NO. 2 (the "Amendment") to the Securities Purchase Agreement, dated as of February 4, 2002 (as amended by that Amendment No. 1 dated March 6, 2002, the "Agreement"), by and between The Ashton Technology Group, Inc. ("Ashton") and OptiMark Innovations Inc. ("Innovations") is made as of this 3rd day of May, 2002 by and between Ashton and Innovations. Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Agreement.

WHEREAS the Agreement provides that any term of the Agreement may be amended with the written consent of Ashton and Innovations;

WHEREAS in accordance with the foregoing, Ashton and Innovations desire to amend the Agreement;

NOW THEREFORE, in consideration of the premises and the covenants hereinafter set forth, Ashton and Innovations agree as follows:

1. Section 1.1(b) of the Agreement. Section 1.1(b) of the Agreement is hereby amended and restated as follows:

   (b) Subject to the terms and conditions of this Agreement, the Investor agrees to purchase at the Closing (as hereinafter defined) and the Company agrees to sell and issue to the Investor at the Closing, six hundred eight million seven hundred seven thousand five hundred and sixty-seven (608,707,567) shares of the Company's Common Stock (as hereinafter defined) (the "Purchased Securities"), for the purchase price of TWENTY-SEVEN MILLION TWO HUNDRED SEVENTY TWO THOUSAND SEVEN HUNDRED TWENTY SEVEN DOLLARS ($27,272,727) (the "Purchase Price").

2. Section 2.2(c)(z) of the Agreement. Section 2.2(c)(z) of the Agreement is hereby amended and restated as follows:

   (z) an additional 52,870,757 shares of its Common Stock for receipt upon conversion of the Senior Secured Convertible Note (as hereinafter defined) in favor of the Investor.

3. Except as modified by this Amendment, the Agreement shall remain in full force and effect.

4. Each of Ashton and Innovations hereby represent and warrant to the other that (i) all corporate action on its part and the part of its directors necessary for the due authorization, execution and delivery of this

Amendment has been taken, and (ii) this Amendment will be a valid and binding obligation of it enforceable against it in accordance with its terms.

5. Miscellaneous.

a) Governing Law. This Agreement shall be governed in all respects by the laws of the State of New York without regard to principles of conflict of laws.

b) Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

[The Remainder Of This Page Is Intentionally Left Blank]

IN WITNESS WHEREOF, each of the undersigned has caused this Amendment to be executed as of the date first written above.

THE ASHTON TECHNOLOGY GROUP, INC.

By: /s/ William W. Uchimoto

Name: William W. Uchimoto
Title: General Counsel

OPTIMARK INNOVATIONS INC.

By: /s/ Neil G. Cohen

Name: Neil G. Cohen
Title: Secretary

INVESTORS' RIGHTS AGREEMENT

This INVESTORS' RIGHTS AGREEMENT is made as of the 3rd day of May, 2002, by and among THE ASHTON TECHNOLOGY GROUP, INC., a Delaware corporation (the "*Company*"), OPTIMARK INNOVATIONS INC.., a Delaware corporation (the "*Investor*") and those individuals listed on Schedule A hereto each of which is herein referred to as a "*Identified Shareholder*". The Company, the Investor and each Identified Shareholder are sometimes hereinafter referred to individually as a "*Party*" and collectively as the "*Parties*".

RECITALS

WHEREAS, the Company and the Investor are parties to the Securities Purchase Agreement dated as of February 4, 2002 (as amended on March 6, 2002 and May 3, 2002, the "*Stock Purchase Agreement*");

WHEREAS, in order to induce the Company to enter into the Stock Purchase Agreement and to induce the Investor to invest funds in the Company pursuant to the Stock Purchase Agreement, the Investor, the Identified Shareholders and the Company hereby agree that this Agreement shall govern the rights of the Investor to cause the Company to register certain shares of Common Stock and certain other matters as set forth herein.

NOW, THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. Definitions. For purposes of this Agreement:

1.1. "*Act*" means the Securities Act of 1933, as amended.

1.2. "*Additional Stock*" has the meaning set forth in Section 3.2 of this Agreement.

1.3. "*Affiliate*" has the meaning specified in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.4. "*Agreement*" means this Investors' Rights Agreement, dated as of the date set forth above, among the Company, the Investor and the Identified Shareholders, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules hereto.

1.5. "*Board of Directors*" means the board of directors of the Company.

1.6. "*Common Stock*" has the meaning set forth in the Stock Purchase Agreement.

1.7. "*Company*" has the meaning set forth in the preamble to this Agreement.

1.8. "*Debt*" of any Person means, without duplication, all liabilities, obligations and indebtedness of such Person, of any kind or nature, now or hereafter owing, arising, due or payable, howsoever evidenced, created, incurred, acquired or owing, whether primary, secondary, direct, contingent, fixed or otherwise, consisting of indebtedness for borrowed money or the deferred purchase price of real or personal property.

1.9. "*Excluded Entity*" means any exchange, ECN and ATS, including, without limitation: Reuters plc, Dow Jones & Company, Thomson Financial Services, Inc., Instinet Corporation, The Interactive Brokers Group/The Timber Hill Group, NYFIX Inc. and NYFIX Millenium, ITG Inc., Bloomberg L.P., Liquidnet Inc., Hull Trading/ Goldman Sachs/Spear Leeds & Kellog, The New York Stock Exchange, The Nasdaq Stock Market, Inc., Pacific Stock Exchange, The Island ECN, Inc., Knight Trading Group and BNP Cooper Neff, and any Affiliates of the same.

1.10. "*Form S-3*" means such form under the Act as in effect on the date hereof or any registration form under the Act subsequently adopted by the SEC which permits inclusion or incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.11. "*GAAP*" has the meaning set forth in Section 3.1(a) of this Agreement.

1.12. "*Guaranty*" means, with respect to any Person, all obligations of such Person which in any manner directly or indirectly guarantee or assure, or in effect guarantee or assure, the payment or performance of any indebtedness, dividend or other obligations of any other Person (the "guaranteed obligations"), or assure or in effect assure the holder of the guaranteed obligations against loss in respect thereof, including any such obligations incurred through an agreement, contingent or otherwise: (i) to purchase the guaranteed obligations or any property constituting security therefor; (ii) to advance or supply funds for the purchase or payment of the guaranteed obligations or to maintain a working capital or other balance sheet condition; or (iii) to lease property or to purchase any debt or equity securities or other property or services.

1.13. "*Holder*" means any Person owning or having the right to acquire Registrable Securities or any assignee thereof in accordance with Section 2.12 hereof.

1.14. "*Identified Shareholder*" has the meaning set forth in the preamble to this Agreement.

1.15. "*Investor*" has the meaning set forth in the preamble to this Agreement.

1.16. "*Investor Directors*" has the meaning set forth in Section 3.5(a) of this Agreement.

1.17. "*IRS*" means the United States Internal Revenue Service.

1.18. "*1934 Act*" shall mean the Securities Exchange Act of 1934, as amended.

1.19. "*NASD*" means the National Association of Securities Dealers.

1.20. "*Notice*" has the meaning set forth in Section 3.2(a) of this Agreement.

1.21. "*Option Plan*" means the Company' s 1998, 1999 and 2000 Plan(s) as in effect on the date of this Agreement.

1.22. "*Party*" or "*Parties*" have the meanings set forth in the preamble to this Agreement.

1.23. "*Person*" means any natural person, sole proprietorship, partnership, limited liability company, joint venture, trust, unincorporated organization, association, corporation, governmental authority, or any other entity.

1.24. The term "*register*", "*registered*" and "*registration*" refer to a registration effected by preparing and filing a registration statement or similar document in compliance with the Act, and the declaration or ordering of effectiveness of such registration statement or document.

1.25. "*Registrable Securities*" means (i) the Common Stock purchased under the Stock Purchase Agreement, (ii) the Common Stock issuable or issued to the Investor through any other means from and after the date hereof, and (iii) any Common Stock of the Company issued as (or issuable upon the conversion or exercise of any warrant, right or other security which is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of the shares referenced in (i) - (ii) above.

1.26. The number of shares of "*Registrable Securities then outstanding*" shall be determined by the number of shares of Common Stock outstanding which are, and the number of shares of Common Stock issuable pursuant to then exercisable or convertible securities which are, Registrable Securities.

1.27. "*SEC*" means the Securities and Exchange Commission.

1.28. "*Stock Purchase Agreement*" shall have the meaning set forth in the recitals to this Agreement.

1.29. "*Subsidiary*" or "*Subsidiaries*" means any corporation, limited liability company, association or other business entity at least fifty percent (50%) of the outstanding voting stock or voting interests of which is at the time owned or controlled directly or indirectly by the Company or by one or more of such Subsidiaries or both, where "voting stock" or "voting interests" means any shares of stock or interests having general voting power in electing the board of directors or other governing body (irrespective of whether or not at the time stock or interests of any other class or classes

has or might have voting power by reason of any contingency). As of the date of execution of this Agreement, the Subsidiaries of the Company are: (i) Universal Trading Technologies Corporation, a Delaware corporation "*UTTC*"); (ii) NextExchange, Inc., a Delaware corporation and wholly-owned Subsidiary of UTTC; (iii) Croix Securities, Inc., a Delaware corporation and wholly-owned Subsidiary of UTTC; (iv) REB Securities, Inc., a Delaware corporation and wholly-owned Subsidiary of UTTC; (v) ATG Trading, LLC, a Delaware limited liability company; (vi) Ashton Technology Canada, Inc., a corporation subsisting under the laws of Canada; and (vii) Electronic Market Center, Inc., a Delaware corporation.

1.30. "*Violation*" has the meaning set forth in Section 2.9(a) of this Agreement.

2. Registration Rights. The Company covenants and agrees as follows:

2.1. Request for Registration By Investor.

(a) If the Company shall receive at any time after the date hereof a written request from the Investor that the Company file a registration statement under the Act covering the registration of Registrable Securities then outstanding, then the Company shall:

(i) within ten (10) days of the receipt thereof, give written notice of such request to all Holders; and

(ii) use its best efforts to effect as soon as practicable the registration under the Act of all Registrable Securities which the Holders request to be registered, subject to the limitations of subsection 2.1(b).

(b) If the Investor initiating the registration request hereunder intends to distribute the Registrable Securities covered by its request by means of an underwriting, it shall so advise the Company as a part of its request made pursuant to subsection 2.1(a) and the Company shall include such information in the written notice referred to in subsection 2.1(a). The underwriter will be selected by the Company, subject to the approval of the Investor, not to be unreasonably withheld. In such event, the right of any Holder to include his Registrable Securities in such registration shall be conditioned upon such Holder' s participation in such underwriting and the inclusion of such Holder' s Registrable Securities in the underwriting (unless otherwise mutually agreed by the Investor and such Holder) to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in subsection 2.3(e)) enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting. Notwithstanding any other provision of this Section 2.1, if the underwriter advises the Investor in writing that marketing factors require a limitation of the number of shares to be underwritten, then the Investor shall so advise all Holders of Registrable Securities which would otherwise be underwritten pursuant hereto, and shares shall be included in such underwriting according to the following priorities: (i) first, pro rata among any other holders of Registrable Securities according to the total number of

Registrable Securities entitled to be included therein by each Holder of Registrable Securities, and (ii) lastly, pro rata among any other holders of the Company' s securities seeking registration.

(c) Notwithstanding the foregoing, if the Company shall furnish to Investor requesting a registration statement pursuant to this Section 2.1, a certificate signed by the Chief Executive Officer of the Company stating that in the good faith judgment of the Board of Directors, it would be seriously detrimental to the Company and its stockholders for such registration statement to be filed and it is therefore essential to defer the filing of such registration statement, the Company shall have the right to defer taking action with respect to such filing for a period of not more than 90 days after receipt of the request of the Investor; provided, however, that the Company may not utilize this right more than once in any twelve-month period.

(d) In addition, the Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to this Section 2.1:

(i) for one hundred eighty (180) days from the closing of the Stock Purchase Agreement;

(ii) for 180 days from declaration of the effectiveness of a registration statement filed by the Company pursuant to this Section 2.1;

(iii) After the Company has effected two (2) registrations pursuant to this Section 2.1 and such registrations have been declared or ordered effective;

(iv) During the period starting with the date thirty (30) days prior to the Company' s good faith estimate of the date of filing of, and ending on a date ninety (90) days after the effective date of, a registration subject to Section 2.2 hereof; *provided* that (I) the Company is actively employing in good faith all reasonable efforts to cause such registration statement to become effective and the Holders of Registrable Securities shall have been entitled to join such registration pursuant to this Agreement and all Registrable Securities requested by the Holders to be registered shall have been so registered and (II) the delay of any registration requested pursuant to Section 2.1, as a result of this clause (iv) shall not exceed an aggregate of 180 days; or

(v) If the Investor proposes to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made in accordance with Section 2.11 below.

2.2. Company Registration. If (but without any obligation to do so) the Company proposes to register (including for this purpose a registration effected by the Company for stockholders other than the Holders) any of its stock under the Act in connection with the public offering of such stock solely for cash (other than a registration on Form S-4 or Form S-8 or any other form relating solely to the sale of securities to participants in a Company stock plan, a registration on any form which does not include

substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities or a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities which are also being registered), the Company shall, at such time, promptly give each Holder written notice of such registration. Upon the written request of each Holder given within twenty (20) days after mailing of such notice by the Company, the Company shall, subject to the provisions of Section 2.7, cause to be registered under the Act all of the Registrable Securities that each such Holder has requested to be registered.

2.3. Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) Prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable best efforts to cause such registration statement to become effective, and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred eighty (180) days or until the distribution contemplated in the Registration Statement has been completed; *provided*, *however*, that (i) such 180-day period shall be extended for a period of time equal to the period the Holder refrains from selling any securities included in such registration at the request of an underwriter of Common Stock (or other securities) of the Company; and (ii) in the case of any registration of Registrable Securities on Form S-3 which are intended to be offered on a continuous or delayed basis, such 180-day period shall be extended, if necessary, to keep the reg9istration statement effective until all such Registrable Securities are sold.

(b) Prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Act with respect to the disposition of all securities covered by such registration statement.

(c) Furnish to the Holders such numbers of copies of a prospectus, including a preliminary prospectus, in conformity with the requirements of the Act, and such other documents as they may reasonably request in order to facilitate the disposition of Registrable Securities owned by them.

(d) Use its best efforts to register and qualify the securities covered by such registration statement under such other securities or blue sky laws of such jurisdictions as shall be reasonably requested by the Holders; provided that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business, subject itself to general taxation or file a general consent to service of process in any such states or jurisdictions.

(e) In the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form,

with the managing underwriter of such offering. Each Holder participating in such underwriting shall also enter into and perform its obligations under such an agreement.

(f) Notify each Holder of Registrable Securities covered by such registration statement at any time when a prospectus relating thereto is required to be delivered under the Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing.

(g) Cause all such Registrable Securities registered pursuant hereunder to be listed on each securities exchange on which similar securities issued by the Company are then listed.

(h) Provide a transfer agent and registrar for all Registrable Securities registered pursuant hereunder and a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration.

(i) Furnish, at the request of any Holder requesting registration of Registrable Securities pursuant to this Section 2, on the date that such Registrable Securities are delivered to the underwriters for sale in connection with a registration pursuant to this Section 2, if such securities are being sold through underwriters, or, if such securities are not being sold through underwriters, on the date that the registration statement with respect to such securities becomes effective, (i) an opinion, dated such date, of the counsel representing the Company for the purposes of such registration, in form and substance as is customarily given to underwriters in an underwritten public offering, addressed to the underwriters, if any, and to the Holders requesting registration of Registrable Securities and (ii) a letter dated such date, from the independent certified public accountants of the Company, in form and substance as is customarily given by independent certified public accountants to underwriters in an underwritten public offering, addressed to the underwriters, if any, and to the Holders requesting registration of Registrable Securities.

2.4. Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as shall be required to effect the registration of such Holder' s Registrable Securities.

2.5. Expenses of Demand Registration. All expenses (other than underwriting discounts and commissions incurred in connection with registration), filings or qualifications pursuant to Section 2.1 including, without limitation, all registration, filing and qualification fees, printers' and accounting fees, fees and disbursements of counsel for the Company and reasonable fees and disbursements of one counsel for the selling Holders shall be borne by the Company not in excess of $50,000; *provided*, *however*, that the

Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all participating Holders of Registrable Securities shall bear such expenses), unless the Holders of a majority of the Registrable Securities agree to forfeit one demand registration pursuant to Section 2.1; *provided further*, *however*, that if at the time of such withdrawal, the Holders of Registrable Securities have learned of a material adverse change in the condition, business or prospects of the Company from that known to the Holders of Registrable Securities at the time of their request and have withdrawn the request with reasonable promptness following disclosure by the Company of such material adverse change, then the Holders of Registrable Securities shall not be required to pay any of such expenses and shall retain their rights pursuant to Section 2.1.

2.6. Expenses of Company Registration. The Company shall bear and pay all expenses incurred in connection with any registration, filing or qualification of Registrable Securities with respect to the registrations pursuant to Section 2.2 for each Holder, including, without limitation, all registration, filing, and qualification fees, printers and accounting fees relating or apportionable thereto and the fees and disbursements of one counsel for the selling Holders selected by them not in excess of $50,000, but excluding underwriting discounts and commissions relating to Registrable Securities.

2.7. Underwriting Requirements. In connection with any offering involving an underwriting of shares of the Company' s capital stock, the Company shall not be required under Section 2.2 to include any of the Holders' securities in such underwriting unless they accept the terms of the underwriting as agreed upon between the Company and the underwriters selected by it (or by other Persons entitled to select the underwriters), and then only in such quantity as the underwriters determine in their sole discretion will not jeopardize the success of the offering by the Company. If the total amount of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the amount of securities sold other than by the Company that the underwriters determine in their sole discretion is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters determine in their sole discretion will not jeopardize the success of the offering (the securities so included to be apportioned (i) first, pro rata among the holders of Registrable Securities according to the total amount of Registrable Securities entitled to be included therein by each Holder of Registrable Securities, and (ii) lastly, pro rata among the other selling stockholders according to the total amount of securities entitled to be included therein owned by each other selling stockholder or in such other proportions as shall mutually be agreed to by such other selling stockholders).

2.8. Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any such registration as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.9. Indemnification. In the event any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each Holder, any underwriter (as defined in the Act) for such Holder and each Person, if any, who controls such Holder or underwriter within the meaning of the Act, or the 1934 Act, against any losses, claims, damages, or liabilities (joint or several) to which they may become subject under the Act, or the 1934 Act or other federal or state law, insofar as such losses, claims, damages, or liabilities (or actions in respect thereof) arise out of or are based upon any the following statements, omissions or violations (collectively a "*Violation*"): (i) any untrue statement or alleged untrue statement of a material fact contained in such registration statement, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) the omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the Company of the Act, the 1934 Act, any state securities law or any rule or regulation promulgated under the Act, or the 1934 Act or any state securities law; and the Company will pay to each such Holder, underwriter or controlling Person, as incurred, any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability, or action; *provided*, *however*, that the indemnity agreement contained in this subsection 2.9(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability, or action if such settlement is effected without the consent of the Company, nor shall the Company be liable in any such case for any such loss, claim, damage, liability, or action to the extent that it arises out of or is based upon a Violation which occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by any such Holder, underwriter or controlling Person.

(b) To the extent permitted by law, each selling Holder will indemnify and hold harmless the Company, each of its directors, each of its officers who has signed the registration statement, each Person, if any, who controls the Company within the meaning of the Act, any underwriter, any other Holder selling securities in such registration statement and any controlling Person of any such underwriter or other Holder, against any losses, claims, damages, or liabilities (joint or several) to which any of the foregoing Persons may become subject, under the Act, or the 1934 Act or other federal or state law, insofar as such losses, claims, damages, or liabilities (or actions in respect thereto) arise out of or are based upon any Violation, in each case to the extent (and only to the extent) that such Violation occurs in reliance upon and in conformity with written information furnished by such Holder expressly for use in connection with such registration; and each such Holder will pay, as incurred, any legal or other expenses reasonably incurred by any Person intended to be indemnified pursuant to this subsection 2.9(b), in connection with investigating or defending any such loss, claim, damage, liability, or action; *provided*, *however*, that the indemnity agreement contained in this subsection 2.9(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Holder;

provided, that, in no event shall any indemnity under this subsection 2.9(b) exceed the gross proceeds from the offering received by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.9 of notice of the commencement of any action (including any governmental action), such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party under this Section 2.9, deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; *provided*, *however*, that an indemnified party (together with all other indemnified parties which may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding.

(d) If the indemnification provided for in this Section 2.9 is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any loss, liability, claim, damage, or expense referred to therein, then the indemnifying party, in lieu of indemnifying such indemnified party hereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such loss, liability, claim, damage, or expense in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other in connection with the statements or omissions that resulted in such loss, liability, claim, damage, or expense as well as any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) The obligations of the Company and Holders under this Section 2.9 shall survive the completion of any offering of Registrable Securities in a registration statement under this Section 2, and otherwise.

2.10. Reports Under the 1934 Act. With a view to making available to the Holders the benefits of Rule 144 promulgated under the Act and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the

Company to the public without registration or pursuant to a registration on Form S-3, the Company agrees to:

(a) make and keep public information available, as those terms are understood and defined in SEC Rule 144, at all times after ninety (90) days after the effective date of the first registration statement filed by the Company for the offering of its securities to the general public;

(b) take such action, including the voluntary registration of its Common Stock under Section 12 of the 1934 Act, as is necessary to enable the Holders to utilize Form S-3 for the sale of their Registrable Securities, such action to be taken as soon as practicable after the end of the fiscal year in which the first registration statement filed by the Company for the offering of its securities to the general public is declared effective;

(c) file with the SEC in a timely manner all reports and other documents required of the Company under the Act and the 1934 Act; and

(d) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company, and (ii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC which permits the selling of any such securities without registration or pursuant to such form.

2.11. Form S-3 Registration. In case the Company shall receive from any Holder or Holders a written request or requests that the Company effect a registration on Form S-3 and any related qualification or compliance with respect to all or a part of the Registrable Securities owned by such Holder or Holders, the Company will:

(a) promptly give written notice of the proposed registration, and any related qualification or compliance, to all other Holders; and

(b) as soon as practicable, effect such registration and all such qualifications and compliances as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such Holder' s Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any other Holder or Holders joining in such request as are specified in a written request given within 15 days after receipt of such written notice from the Company; *provided*, *however*, that the Company shall not be obligated to effect any such registration, qualification or compliance, pursuant to this Section 2.11: (i) if Form S-3 is not available for such offering by the Holders; (ii) if the Company shall furnish to the Holders a certificate signed by the President of the Company stating that in the good faith judgment of the Board of Directors, it would be seriously detrimental to the Company and its stockholders for such Form S-3 Registration to be effected at such time, in which event the Company shall have the right to defer the filing of the Form S-3 registration statement for a period of not more than 90 days after receipt of the request of the Holder or Holders

under this Section 2.11; *provided*, *however*, that the Company shall not utilize this right more than once in any twelve-month period; (iii) if the participating Holders include the Investor and the aggregate price to the public of the shares to be registered on Form S-3 is less than $1,000,000 (unless all Holders of Registrable Securities are participating and selling all Registrable Securities that they hold); (iv) after the Company has effected three (3) registrations pursuant to this Section 2.11 and such registrations have been declared or ordered effective; and (v) in any particular jurisdiction in which the Company would be required to qualify to do business or to execute a general consent to service of process in effecting such registration, qualification or compliance.

Subject to the foregoing, the Company shall file a registration statement covering the Registrable Securities and other securities so requested to be registered as soon as practicable after receipt of the request or requests of the Holders. All expenses incurred in connection with a registration requested pursuant to Section 2.11, including, without limitation, all registration, filing, qualification, printer' s and accounting fees and the reasonable fees and disbursements of one counsel for the selling Holder or Holders and counsel for the Company not in excess of $50,000, but excluding any underwriters' discounts or commissions associated with Registrable Securities, shall be borne by the Company. Registrations effected pursuant to this Section 2.11 shall not be counted as demands for registration or registrations effected pursuant to Section 2.1.

2.12. Assignment of Registration Rights. The rights to cause the Company to register Registrable Securities pursuant to this Section 2 may be assigned (but only with all related obligations) by the Investor or subsequent Holder of Registrable Securities to a transferee or assignee of such securities, *provided* such transferee or assignee agrees in writing to be bound by and subject to the terms and conditions of this Agreement relating to registration of Registrable Securities including without limitation the provisions of Section 2.14 below.

2.13. Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of two-thirds (2/3rds) of the outstanding Registrable Securities, enter into any agreement with any holder or prospective holder of any securities of the Company which would allow such holder or prospective holder to include such securities in any registration filed pursuant to this Agreement unless under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of his securities will not reduce the amount of the Registrable Securities of the Holders which may be included.

2.14. Expiration of Registration Rights. The registration rights granted to the Investor under this Section 2 shall expire when the Investor or its permitted assigns is eligible to sell of its Registrable Securities within any ninety (90) day period in reliance on Rule 144 under the Act.

3. Covenants of the Company.

3.1. Delivery of Financial Statements. For so long as the Investor or its assignees holds at least fifty percent (50%) of the shares of Common Stock purchased pursuant to the Stock Purchase Agreement, the Company shall deliver to the Investor and each Holder who owns any security of the Company:

(a) as soon as practicable, but in any event within ninety (90) days after the end of each fiscal year of the Company, an income statement for such fiscal year, a balance sheet of the Company and statement of stockholder' s equity as of the end of such year, and a schedule as to the sources and applications of funds for such year, such year-end financial reports to be in reasonable detail, prepared in accordance with generally accepted accounting principles consistently applied ("*GAAP*"), and audited and certified by independent public accountants of nationally recognized standing selected by the Company;

(b) as soon as practicable, but in any event within thirty (30) days following the end of each fiscal month, an unaudited profit or loss statement, schedule as to the sources and application of funds for such fiscal month and an unaudited balance sheet, a statement of stockholder' s equity as of the end of such fiscal month and comparisons to budget and prior year, in reasonable detail;

(c) as soon as practicable, but in any event within forty-five (45) days after the end of each of the first three (3) quarters of each fiscal year of the Company, an unaudited profit or loss statement, schedule as to the sources and application of funds for such fiscal quarter and an unaudited balance sheet, a statement of stockholder' s equity as of the end of such fiscal quarter and comparisons to budget and prior year, in reasonable detail;

(d) as soon as practicable, but in any event forty-five (45) days prior to the end of each fiscal year, projected financial statements for the next fiscal year and a business plan as approved by the Board of Directors for the next fiscal year, prepared on a monthly basis, including balance sheets and sources and applications of funds statements for such months and, as soon as prepared, any other budgets or revised budgets prepared by the Company;

(e) with respect to the financial statements called for in subsections (b) and (c) of this Section 3.1, an instrument executed by the Chief Financial Officer or President of the Company and certifying that such financials were prepared in accordance with GAAP consistently applied with prior practice for earlier periods (with the exception of footnotes that may be required by GAAP) and fairly present the financial condition of the Company and its results of operation for the period specified, subject to year-end audit adjustment;

(f) as soon as practicable, copies of all reports filed with the SEC;

(g) as soon as practicable, copies of all correspondence to and from the NASD, Philadelphia Stock Exchange, Toronto Stock Exchange and the Nasdaq Stock Market;

(h) prompt notice of any defaults; and

(i) such other information relating to the financial condition, business, prospects or corporate affairs of the Company as the Investor or any assignee of the Investor may from time to time reasonably request.

In addition, upon reasonable advance written notice, the Company shall permit the Investor or its authorized agents to inspect the Company' s books and records and visit and inspect any of the properties of the Company during normal business hours.

3.2. Preemptive Rights. Subject to the terms and conditions specified in this Section 3.2 and for so long as the Investor or its assignees hold shares representing at least twenty percent (20%) of all issued and outstanding shares of Common Stock (i.e., excluding options, warrants or other securities convertible into or exchanged for shares of Common Stock), the Company hereby grants to the Investor a preemptive right to subscribe for future sales by the Company of its Additional Stock (as hereinafter defined).

Each time the Company proposes to offer any shares of, or securities convertible into or exercisable for any shares of, any class of its capital stock ("*Additional Stock*"), other than (i) any of the options remaining ungranted pursuant to the Option Plan, (ii) the exercise of any options granted under the Option Plan, or (iii) any offering of securities pursuant to an effective registration under the Act, the Company shall first make an offering of such Additional Stock to the Investor in accordance with the following provisions:

(a) The Company shall deliver a notice by certified mail ("*Notice*") to the Investor stating (i) its bona fide intention to offer such Additional Stock, (ii) the number of such shares of Additional Stock to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such Additional Stock.

(b) Within 20 calendar days after receipt of the Notice, the Investor may elect to purchase or obtain, at the price and on the terms specified in the Notice, up to that portion of such Additional Stock which equals the proportion that the number of shares of Common Stock issued and held, or issuable upon conversion or exercise of any other security then held by the Investor bears to the total number of shares of Common Stock of the Company then outstanding (assuming full conversion and exercise of all convertible or exercisable securities).

(c) If all Additional Stock which the Investor is entitled to obtain pursuant to subsection 3.2(b) is not elected to be obtained as provided in subsection 3.2(b) hereof, the Company may, during the 30-day period following the expiration of the period provided in subsection 3.2(b) hereof, offer the remaining unsubscribed portion of such

Additional Stock to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than those specified in the Notice. If the Company does not enter into an agreement for the sale of the Additional Stock within such period, or if such agreement is not consummated within 30 days of the execution thereof, the right provided hereunder shall be deemed to be revived and such Additional Stock shall not be offered unless first reoffered to the Investor in accordance herewith.

(d) The right set forth in this Section 3.2 may be assigned or transferred by the Investor to a transferee or assignee of any of its shares of capital stock of the Company, *provided*; such transferee or assignee agrees in writing to be bound by and subject to the terms and conditions of this Agreement relating to this Section 3.2.

3.3. Affirmative Covenants. For so long as the Investor or its assignees holds shares representing at least twenty percent (20%) of all issued and outstanding shares of Common Stock (i.e., excluding options, warrants or other securities convertible into or exchanged for shares of Common Stock), the Company agrees as follows:

(a) The Company will promptly pay and discharge, or cause to be paid and discharged, when due and payable, all lawful taxes, assessments, and governmental charges or levies imposed upon the income, profits, property, or business of the Company or any subsidiary; *provided*, *however*, that any such tax, assessment, charge, or levy need not be paid if the validity thereof shall currently be contested in good faith by appropriate proceedings and if the Company shall have set aside on its books adequate reserves with respect thereof, and *provided further*, that the Company will pay all such taxes, assessments, charges, or levies forthwith upon the commencement of proceedings to foreclose any lien that may have attached as security therefor. The Company will promptly pay or cause to be paid when due, or in conformance with customary trade terms, all other indebtedness incident to the operations of the Company;

(b) The Company will keep its properties and those of its subsidiaries in good repair, working order, and condition, reasonable wear and tear excepted, and from time to time make all needful and proper repairs, renewals, replacements, additions, and improvements thereto; and the Company and its subsidiaries will at all times comply with the provisions of all material leases to which any of them is a party or under which any of them occupies property so as to prevent any loss or forfeiture thereof or thereunder;

(c) The Company will keep its assets and those of its subsidiaries that are of an insurable character insured by financially sound and reputable insurers against loss or damage by fire, extended coverage, and explosion insurance in amounts customary for companies in similar businesses similarly situated; and the Company will maintain, with financially sound and reputable insurers, insurance against other hazards, risks, and liabilities to Persons and property to the extent and in the manner customary for companies in similar businesses similarly situated. The Company will maintain in full force and effect directors and officers insurance, in the amount of not less than five million dollars ($5,000,000);

(d) The Company will keep true records and books of account in which full, true, and correct entries will be made of all dealings or transactions in relation to its business and affairs in accordance with GAAP applied on a consistent basis;

(e) The Company and all its subsidiaries shall duly observe and conform to all valid requirements of governmental authorities relating to the conduct of their businesses or to their property or assets;

(f) The Company shall maintain in full force and effect its corporate existence, rights, and franchises and all licenses and other rights to use patents, processes, licenses, trademarks, trade names, or copyrights owned or possessed by it or any subsidiary and deemed by the Company to be necessary to the conduct of its business;

(g) The Company will retain independent public accountants of recognized national standing who shall certify the Company' s financial statements at the end of each fiscal year. In the event the services of the independent public accountants so selected, or any firm of independent public accountants hereafter employed by the Company are terminated, the Company will promptly thereafter notify the Investor and will request the firm of independent public accountants whose services are terminated to deliver to the Investor a letter from such firm setting forth the reasons for the termination of their services. In the event of such termination, the Company will promptly thereafter engage another firm of independent public accountants of recognized national standing. In its notice to the Investor the Company shall state whether the change of accountants was recommended or approved by the Board of Directors or any committee thereof;

(h) The Company and all its subsidiaries shall duly observe and conform to all valid requirements of governmental authorities relating to the conduct of their businesses or to their properties or assets; and

(i) The Company will cause each Person now or hereafter employed by it or any subsidiary with access to confidential information to enter into a proprietary information and inventions agreement substantially in the form approved by the Board of Directors;

(j) The Company will cause each senior manager and key employee now or hereafter employed by it or any subsidiary to (I) dedicate substantially their full working schedule to the Company and refrain from pursuing outside business activities during the Company' s business hours, consistent with the Company' s current personnel policies, and (II) enter into a noncompetition and nonsolicitation agreement substantially in the form approved by the Board of Directors;

(k) The Company will, and will cause each of its subsidiaries to, comply with all applicable requirements of law of any governmental authority in respect of conduct of its businesses and the ownership of its

properties, except such as are being contested in good faith and except for such noncompliances as will not in the aggregate have a material adverse effect on its business or properties;

(l) The Company certifies that it will use the proceeds from the Stock Purchase Agreement only for the purposes set forth in the Stock Purchase Agreement. The Company will deliver to the Investor from time to time promptly following Investor' s request, a written report, certified as correct by the Company' s chief financial officer, verifying the purposes and amounts for which proceeds from the Stock Purchase Agreement have been disbursed. The Company will supply to the Investor such additional information and documents as the Investor reasonably requests with respect to its use of proceeds and will permit the Investor to have access to any and all Company records and information and personnel as the Investor deems necessary to verify how such proceeds have been or are being used, and to assure that the proceeds have been used for the purposes specified above; and

(m) Prior to public disclosure and filing with the SEC, the Company shall provide the Investor with the opportunity to review and comment on any press release and filing pursuant to Section 13 or 15(d) of the 1934 Act.

3.4. Negative Covenants. For so long as the Investor holds shares representing at least twenty percent (20%) of all issued and outstanding shares of Common Stock (i.e., excluding options, warrants or other securities convertible into or exchanged for shares of Common Stock), the Company shall not, without the prior approval of the Investor:

(a) authorize or issue any equity security (including, without limitation, the granting of any options), other than shares of Common Stock underlying options granted and outstanding as of the date hereof;

(b) increase the aggregate authorized number of shares of Common Stock or any other class or series of common stock or preferred stock;

(c) enter into any agreement with any holder of any securities of the Company giving such holder the right to require the Company to initiate any registration of the Company' s securities under the Securities Act of 1933, as amended;

(d) repurchase or redeem any of its securities except as contemplated by the Stock Purchase Agreement;

(e) (i) merge, combine or consolidate with, or agree to merge, combine or consolidate with, or purchase, or agree to purchase, all or substantially all of the securities of, any Person or (ii) purchase, or agree to purchase, all or substantially all of the assets and properties of, or otherwise acquire, or agree to acquire, all or any portion of, any Person;

(f) sell all or substantially all of the Company' s assets;

(g) alter or change materially or adversely, the rights of the Common Stock or any other class or series of common stock or preferred stock;

(h) incur Debt or Guarantees (other than trade payables incurred by the Company in the ordinary course of business) in excess of $100,000;

(i) amend or propose to amend the Company' s certificate of incorporation or by-laws;

(j) liquidate or dissolve, effect any recapitalization or reorganization, or any stock split, reverse stock split, or, in each case, obligate the Company to do so;

(k) engage in any other business other than that business currently engaged in by the Company; or

(l) declare any dividends or distributions.

3.5. Board of Directors.

(a) For so long as the Investor holds shares representing at least twelve and a half percent (12.5%) of all issued and outstanding shares of Common Stock (i.e., excluding options, warrants or other securities convertible into or exchanged for shares of Common Stock), the Company, the Identified Shareholders and the Investor agree that (i) the number of directorships for the Board of Directors shall be fixed at five (5), (ii) the Investor shall be entitled to nominate that proportion of directors for the Board of Directors which equals the proportion that the number of shares of Common Stock issued and held, or issuable upon conversion or exercise of any other security then held by the Investor bears to the total number of shares of Common Stock of the Company then outstanding (assuming full conversion and exercise of all convertible or exercisable securities) (each, an "*Investor Director*" and collectively, the "*Investor Directors*"), (iii) the Investor shall be entitled to nominate the Chairman of the Board of Directors and (iv) subject to the requirements of applicable law or any SEC, NASD or IRS rule or regulation, the Investor Directors shall constitute the majority of the members of any committee of the Board of Directors. The Identified Shareholders and the Investor agree to vote their shares of capital stock of the Company, and any shares of capital stock of the Company for which any of the Identified Shareholders have voting rights, in order to comply with the obligations of this Section 3.5(a). As a condition of any transfer, each Identified Shareholder agrees to cause any transferee of all or a portion of such Identified Shareholder' s shares of capital stock of the Company to join and be subject to the terms and conditions of this Agreement, including the provisions of this Section 3.5(a). The Company shall reimburse all reasonable expenses incurred by such member(s) of the Board of Directors in fulfillment of their duties.

(b) The consent of the majority of the members of the Board of Directors, including the consent of at least one Investor Director, shall be required for the Company to:

(i) Make any capital expenditures in excess of (I) $50,000 in any single transaction or (II) 103% of the amount approved for capital expenditures in the operating budget of the Company for any fiscal year;

(ii) Make any loan or advance, other than travel advances to employees in the ordinary course of business;

(iii) Adopt any new or amend any existing employee benefit, bonus or stock plan, or amend any outstanding grant or other agreement entered into with employees pursuant to any existing employee benefit, bonus or stock plan;

(iv) Engage in any transaction with any Affiliate or officer, director or stockholder (or their relatives), other than in the ordinary course of business and at arms length;

(v) Sell or dispose of businesses or assets in excess of $50,000 in any fiscal year;

(vi) Acquire businesses or assets in excess of $50,000 in any fiscal year;

(vii) Acquire capital stock in any third party in excess of $50,000 in any fiscal year;

(viii) Enter into any material contracts or commitments;

(ix) Approve the annual operating and capital budget, or any amendments thereto or deviations therefrom;

(x) Establish board committees;

(xi) Waive any material rights or consent to settle any litigation;

(xii) Institute litigation and similar proceedings outside the ordinary course; or

(xiii) Make decisions to employ or terminate the Company' s senior executives, and fix their compensation.

3.6. Minority Covenants. The consent of the majority of the members of the Board of Directors, including the consent of at least one director who is not an Investor Director, shall be required for the Company to:

(a) repurchase or redeem any of its securities;

(b) (i) merge, combine or consolidate with, or agree to merge, combine or consolidate with, or purchase, or agree to purchase, all or substantially all of the securities of, any Person or (ii) purchase, or agree to purchase, all or substantially all of the assets and properties of, or otherwise acquire, or agree to acquire, all or any portion of, any Person;

(c) sell all or substantially all of the Company' s assets;

(d) alter or change materially or adversely, the rights of the Common Stock;

(e) relocate the headquarters of the Company; or

(f) engage in any other business other than that business currently engaged in by the Company.

4. Miscellaneous.

4.1. Successors and Assigns. Except as otherwise provided herein, the terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective successors and assigns of the Parties (including transferees of any shares of Registrable Securities); provided, however, that without the written consent of the Company, the Investor shall be prohibited from assigning shares of the Company' s capital stock, or the rights attendant to such shares pursuant to the terms of this Agreement, to any Excluded Entity. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the Parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

4.2. Governing Law. This Agreement shall be governed by and construed under the laws of the State of New York as applied to agreements among New York residents entered into and to be performed entirely within New York.

4.3. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

4.4. Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

4.5. Notices. Unless otherwise provided, any notice required or permitted under this Agreement shall be given in writing and shall be deemed effectively given upon personal delivery to the Party to be notified or upon delivery by reputable overnight courier to the Party to be notified or upon deposit with the United States Post Office, by registered or certified mail, postage prepaid and addressed to the Party to be notified at the

address indicated for such Party on the signature page hereof, or at such other address as such Party may designate by ten (10) days' advance written notice to the other Parties.

4.6. Amendments and Waivers. Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance), only with the written consent of the Party or Parties against whom such waiver or amendment is sought to be enforced. Any amendment or waiver effected in accordance with this paragraph shall be binding upon all Parties.

4.7. Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, such provision shall be excluded from this Agreement and the balance of the Agreement shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

4.8. Entire Agreement. This Agreement (including the Schedules hereto, if any) constitutes the full and entire understanding and agreement among the Parties with regard to the subjects hereof and thereof and the Parties acknowledge and agree that any other prior contracts related to the subject matter hereof, are hereby terminated.

4.9. No Restrictions on Post-Closing Competitive Activities: Corporate Opportunities.

(a) It is the explicit intent of each of the Parties that the provisions of this Agreement shall not include any non-competition or other similar restrictive arrangements with respect to the range of business activities which may be conducted by the Parties. Accordingly, each of the Parties acknowledges and agrees that nothing set forth in this Agreement shall be construed to create any explicit or implied restriction or other limitation on (i) the ability of any Party to engage in any business or other activity which competes with the business of any other Party hereto, or (ii) the ability of any Party to engage in any specific line of business or engage in any business activity in any specific geographic area.

(b) The Investor and its Affiliates (excluding the Company) shall have the right to, and shall have no duty not to, (i) engage in the same or similar business activities or lines of business as the Company and its Subsidiaries, (ii) do business with any client or customer of the Company and its Subsidiaries and (iii) employ or otherwise engage any officer or employee of the Company and its Subsidiaries, and neither the Investor nor any of its Affiliates (excluding the Company) nor any officer or director thereof shall be liable to the Company and its Subsidiaries or its stockholders for breach of any fiduciary duty by reason of any such activities of the Investor and its Affiliates (excluding the Company) or of such Persons' participation therein. Except as would otherwise result in a violation of law by the Investor, its Affiliates (other than the Company), the Company or any of its Subsidiaries, the Company and any of its Subsidiaries shall have the right to, and shall have no duty not to, (i) engage in the same of similar business activities or lines of business as the Investor and its Affiliates, (ii) do business with any client or customer of the Investor and its Affiliates and (iii) employ or

otherwise engage any officer or employee of the Investor and its Affiliates and neither the Company nor any of its Subsidiaries nor officer or director thereof shall be liable to the Investor and its Affiliates (excluding the Company) or their shareholders for breach of any fiduciary duty by reason of any such activities of the Company or its Subsidiaries or of such Persons' participation therein. In the event that the Investor or any of its Affiliates (other than the Company) acquires knowledge of a potential transaction or matter which may be a corporate opportunity for both the Investor or any of its Affiliates (other than the Company) and the Company and any of its Subsidiaries, neither the Investor nor its Affiliates shall have any duty to communicate or present such corporate opportunity to the Company or its Subsidiaries and shall not be liable to the Company and its Subsidiaries or to the Company' s stockholders for breach of any fiduciary duty as a stockholder of the Company by reason of the fact that the Investor or its Affiliates (other than the Company) pursues or acquires such corporate opportunity for itself, directs such corporate opportunity to another Person, or does not present such corporate opportunity to the Company and its Subsidiaries. In the event that the Company or any of its Subsidiaries acquires knowledge of a potential transaction or matter which may be a corporate opportunity for both the Investor or any of its Affiliates (other than the Company) and the Company or any of its Subsidiaries, neither the Company nor any of its Subsidiaries shall have any duty to communicate or present such corporate opportunity to the Investor or any of its Affiliates and shall not be liable to the Investor or any of its Affiliates (other than the Company) or to the Investor' s stockholders for breach of any fiduciary duty by reason of the fact that the Company or any of its Subsidiaries pursues or acquires such corporate opportunity for itself, directs such

corporate opportunity to another person or entity, or does not present such corporate opportunity to the Investor or any of its Affiliates (other than the Company). For the purposes of this Section 4.9, "*corporate opportunities*" of the Company and its Subsidiaries shall include, but not be limited to, business opportunities which the Company or its Subsidiaries are financially able to undertake, which are, by their nature, in a line of business of the Company or its Subsidiaries, are of practical advantage to them and are ones in which the Company or its Subsidiaries have an interest or a reasonable expectancy, and in which, by embracing the opportunities, the self-interest of the Investor or its Affiliates (other than the Company) or any of their respective officers or directors will be brought into conflict with that of the Company and its Subsidiaries, and *"corporate opportunities*" of the Investor and its Affiliates (other than the Company) shall include, but not be limited to, business opportunities which the Investor and its Affiliates (other than the Company) are financially able to undertake, which are, by their nature, in a line of business of the Investor and its Affiliates (other than the Company), are of practical advantage to them and are ones in which the Investor and its Affiliates (other than the Company) have an interest or a reasonable expectancy, and in which, by embracing the opportunities, the self-interest of the Company or its Subsidiaries or any of their respective officers or directors will be brought into conflict with that of the Investor and its Affiliates (other than the Company).

[*Signature pages follow*]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first above written.

THE COMPANY:

THE ASHTON TECHNOLOGY GROUP, INC.

By: /s/ William W. Uchimoto
Name: William W. Uchimoto
Title: EVP & General Counsel

Address for Notices:

1835 Market Street, Suite 420
Philadelphia, PA 19103

With a copy to:

Christopher S. Auguste, Esq.
Jenkens & Gilchrist Park Chapin LLP
The Chrysler Building
405 Lexington avenue
New York, NY 10174

INVESTOR:

OPTIMARK INNOVATIONS INC.

By: /s/ Robert J. Warshaw
Name: Robert J. Warshaw

Address:

c/o OptiMark Holdings, Inc.
10 Exchange Place
24th Floor
Jersey City, NJ 07302

SCHEDULE A

IDENTIFIED SHAREHOLDERS

None.

Exhibit 4.2

AMENDED AND RESTATED
INVESTORS' RIGHTS AGREEMENT

This AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT is made as of the 3 day of May, 2002, by and among OPTIMARK INNOVATIONS INC., f/k/a OTSH, Inc., a Delaware corporation (the "Company"), OPTIMARK HOLDINGS, INC., a Delaware corporation ("Holdings"), OPTIMARK, INC., a Delaware corporation ("OptiMark"), DRAPER FISHER JURVETSON EPLANET VENTURES, L.P., a Cayman Islands limited partnership ("ePlanet Ventures"), DRAPER FISHER JURVETSON EPLANET PARTNERS FUND, LLC, a California limited liability company ("ePlanet Partners") and DRAPER FISHER JURVETSON EPLANET VENTURES GmBH & CO. KG., a German partnership ("ePlanet KG"), SOFTBANK CAPITAL PARTNERS LP, a Delaware limited partnership ("Capital Partners"), SOFTBANK CAPITAL LP, a Delaware limited partnership ("SOFTBANK Capital"), and SOFTBANK CAPITAL ADVISORS FUND LP, a Delaware limited partnership ("Capital Advisors"). For purposes of this Agreement: (i) each of Capital Partners, SOFTBANK Capital, and Capital Advisors may be referred to as a "SOFTBANK Entity" and, collectively, as the "SOFTBANK Entities"; (ii) each of ePlanet Ventures ePlanet Partners and ePlanet KG may be referred to as an "ePlanet Entity" and, collectively, as the "ePlanet Entities"; and (iii) the Company, Holdings, OptiMark, each ePlanet Entity and each SOFTBANK Entity are sometimes hereinafter referred to individually as a "Party" and collectively as the "Parties".

RECITALS

WHEREAS, the Company and the ePlanet Entities are parties to a Subscription Agreement, dated as of April 30, 2002, for the purchase and issuance of shares of the Company's Common Stock (the "ePlanet Common Stock Subscription Agreement"); and

WHEREAS, the Company and the ePlanet Entities are parties to a Subscription Agreement, dated as of the date hereof, for the purchase and issuance of shares of the Company's Series B Preferred Stock (the "ePlanet Preferred Stock Subscription Agreement" and collectively, the "ePlanet Subscription Agreements"); and

WHEREAS, the Company, Holdings, OptiMark and the SOFTBANK Entities are parties to a Subscription Agreement, dated as of December 31, 2001, for the purchase and issuance of shares of the Company's Common Stock (the "SOFTBANK Subscription Agreement"); and

WHEREAS, the Company and OptiMark are parties to a Subscription Agreement, dated as of December 31, 2001, for the purchase and issuance of shares of the Company's Common Stock and Non-Qualified Preferred Stock (the "OptiMark Subscription Agreement"); and

WHEREAS, in connection with the transactions contemplated by the SOFTBANK Subscription Agreement and the OptiMark Subscription Agreement, the Company, Holdings, OptiMark and the SOFTBANK Entities are parties to an Investors' Rights Agreement, dated as of December 31, 2001 (the "Original Rights Agreement"); and

WHEREAS, in order to induce the Company to enter into the ePlanet Preferred Stock Subscription Agreement and to induce the ePlanet Entities to invest funds in the Company pursuant to the ePlanet Preferred Stock Subscription Agreement, the parties hereby agree that this Agreement shall govern certain rights and obligations associated with ownership of shares of the Company's capital stock and certain other matters as set forth herein.

NOW, THEREFORE, THE PARTIES HEREBY AGREE THAT THE ORIGINAL RIGHTS AGREEMENT IS HEREBY AMENDED AND RESTATED IN ITS ENTIRETY AS FOLLOWS:

1. Definitions. For purposes of this Agreement, capitalized terms shall have the meanings set forth in the Definitions Addendum attached hereto as Exhibit A and incorporated herein.

2. Restrictions on Transfer; Compliance with Act; Registration Rights.

2.1. Restrictions on Transfer. The (i) Common Stock, (ii) Non-Qualified Preferred Stock, (iii) Series B Preferred Stock, or (iv) any other securities issued in respect of those referred to in clauses (i) - (iii) upon any stock split, stock dividend, recapitalization, merger, consolidation or similar event (collectively, "Restricted Securities"), shall not be Transferred except upon the conditions specified in this Section 2, which conditions are intended to ensure compliance with the provisions of the Act. Each Party will cause any proposed purchaser, assignee, transferee, or pledgee of Restricted Securities held by such Party to agree to take and hold such securities subject to the provisions and upon the conditions specified in Sections 2.1-2.4 of this Agreement.

2.2. Restrictive Legends. Each certificate representing Restricted Securities shall be stamped or otherwise imprinted with the following legends (in addition to any legend required under applicable state securities laws):

> THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF A REGISTRATION STATEMENT IN EFFECT WITH RESPECT TO THE SECURITIES UNDER SUCH ACT OR AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY AND ITS COUNSEL THAT SUCH REGISTRATION IS NOT REQUIRED, PROVIDED THAT NO SUCH REGISTRATION OR OPINION OF COUNSEL SHALL BE REQUIRED IF THE SECURITIES ARE SOLD

PURSUANT TO RULE 144 OF SUCH ACT. COPIES OF THE AGREEMENT COVERING THESE SECURITIES AND RESTRICTING THEIR TRANSFER MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDER OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF THE COMPANY AT THE PRINCIPAL EXECUTIVE OFFICES OF THE COMPANY.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF A CERTAIN AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT DATED AS OF MAY 3, 2002 AMONG OPTIMARK INNOVATIONS INC. AND CERTAIN HOLDERS OF THE OUTSTANDING CAPITAL STOCK OF SUCH CORPORATION, AS SUCH AGREEMENT MAY BE AMENDED, RESTATED OR MODIFIED FROM TIME TO TIME.

The Parties consent to the Company making a notation on its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on Transfer established in this Section 2.

2.3. Notice of Proposed Transfers. The holder of Restricted Securities by acceptance thereof agrees to comply in all material respects with the provisions of this Section 2.3. Prior to any proposed Transfer of any Restricted Securities by a Holder (other than (i) a Transfer not involving a change in beneficial ownership, (ii) in transactions involving the distribution without consideration of Restricted Securities by any Holder to any of its member or partners, (iii) a Transfer to the Company, subject to compliance with applicable securities laws, (iv) solely in the case of the ePlanet Entities, a Transfer to an Affiliate of any transferring ePlanet Entity, subject to compliance with applicable securities laws, (v) solely in the case of the SOFTBANK Entities, a Transfer to an Affiliate of the transferring SOFTBANK Entity, subject to compliance with applicable securities laws, (vi) solely in the case of OptiMark, a Transfer to an Affiliate of OptiMark, subject to compliance with applicable securities laws, or (vii) Transfers in compliance with Rule 144, unless there is in effect a registration statement under the Act covering the proposed Transfer, the Holder shall give written notice to the Company of such Holder's intention to effect such Transfer. Each such notice shall describe the manner and circumstances of the proposed Transfer in sufficient detail, and, if requested by the Company, shall be accompanied, at such Holder's expense, by either (i) a written opinion of legal counsel who shall be, and whose legal opinion shall be, addressed to the Company and satisfactory to the Company and its legal counsel in their reasonable discretion, to the effect that the proposed Transfer of the Restricted Securities may be effected without registration under the Act, or (ii) a "no action" letter from the SEC to the effect that the Transfer of such Restricted Securities without registration under the Act will not result in a recommendation by the staff of the SEC that action be taken with respect thereto, whereupon the Holder of such Restricted Securities shall be entitled to Transfer such Restricted Securities in accordance with the terms of the notice

delivered by the Holder to the Company.

2.4. Removal of Restrictions on Transfer of Securities. Any legend referenced in Section 2.2 appearing on a certificate evidencing Restricted Securities, and the stock transfer instructions and stock transfer record notations with respect to such Restricted Securities, shall be removed and the Company shall issue a certificate without such legend to the Holder of such Restricted Securities if (i) such securities are registered under the Act, or (ii) such Holder provides the Company with an opinion of counsel (which may be counsel for the Company) reasonably acceptable to the Company and its counsel to the effect that a public sale or Transfer of such securities may be made without registration under the Act, other than in connection with

a Transfer of such securities pursuant to Rule 144 under the Act, or (iii) such securities are Transferred by Holder under Rule 144.

2.5. Request for Registration By Holders of Non-Qualified Preferred and Series B Preferred. The Company covenants and agrees as follows:

(a) If the Company shall receive at any time after 180 days after the effective date of the first registration statement for a public offering of securities of the Company a written request that the Company file a registration statement under the Act covering the registration of Registrable Securities then outstanding from Parties that are (x) the holders of not less than fifty percent (50%) of the shares of Non-Qualified Preferred Stock, (y) the holders of not less than fifty percent (50%) of the shares of Series B Preferred Stock, or (z) the holders of not less than ten percent (10%) of the shares of Common Stock (together, the "Initiating Holders"), then the Company shall:

(i) within ten (10) days of the receipt thereof, give written notice of such request to all Holders; and

(ii) use its best efforts to effect as soon as practicable the registration under the Act (including, without limitation, appropriate qualification under applicable blue sky or other state securities laws) of all Registrable Securities which the Holders request to be registered in a written request received by the Company within twenty (20) days after receipt of notice from the Company of a request for registration under this Section 2.5(a), subject to the limitations of Section 2.5(b) below.

(b) If the Initiating Holders intend to distribute the Registrable Securities covered by its request by means of an underwriting, they shall so advise the Company as a part of the request made pursuant to Section 2.5(a) and the Company shall include such information in the written notice referred to in Section 2.5(a). The underwriter will be selected by the Company and shall be reasonably acceptable to the Initiating Holders. In such event, the right of any

Holder to include Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting (unless otherwise mutually agreed by the Initiating Holders and such Holder) to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in subsection 2.8(e)) enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting. Notwithstanding any other provision of this Section 2.5, if the underwriter advises the Company and the Initiating Holders in writing that marketing factors require a limitation of the number of shares to be underwritten, then the Company shall so advise all other Holders of Registrable Securities which would otherwise be underwritten pursuant hereto, and shares shall be included in such underwriting according to the following priorities: (i) first, to the Initiating Holders up to the total number of Registrable Securities requested to be registered; (ii) secondly, pro rata among any other Holders according to the total number of Registrable Securities entitled to be included therein by each Holder, and (iii) lastly, pro rata among any other holders of the Company's securities seeking registration (including, for the avoidance of doubt, the Company)

(c) Notwithstanding the foregoing, if the Company shall furnish to the Initiating Holders requesting a registration statement pursuant to this Section 2.5, a certificate signed by the Chief Executive Officer of the Company stating that in the good faith judgment of the Board of Directors, it would be seriously detrimental to the Company and its stockholders for such registration statement to be filed and it is therefore essential to defer the filing of such registration statement, the Company shall have the right to defer taking action with respect to such filing for a period of not more than 90 days after receipt of the request of the Initiating Holders; provided, however, that the Company may not utilize this right more than once in any twelve-month period.

(d) In addition, the Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to this Section 2.5:

(i) After the Company has effected one (1) registration pursuant to this Section 2.5 initiated by Parties who are Holders of not less than fifty percent (50%) of the shares of Non-Qualified Preferred Stock and such registration has been declared or ordered effective;

(ii) After the Company has effected one (1) registration pursuant to this Section 2.5 initiated by Parties who are Holders of not less than fifty percent (50%) of the shares of Series B Preferred Stock and such registration has been declared effective or ordered effective;

(iii) After the Company has effected one (1) registration pursuant to this Section 2.5 initiated by Parties who are Holders of not less

than ten percent (10%) of the shares of Common Stock and such registration has been declared or ordered effective;

(iv) During the period starting with the date forty-five (45) days prior to the Company's good faith estimate of the date of filing of, and ending on a date one hundred eighty (180) days after the effective date of, a registration subject to this Section 2.5; provided that the Company is actively employing in good faith all reasonable efforts to cause (A) such registration statement to become effective, (B) Holders of Registrable Securities to join such registration pursuant to this Agreement and (C) all Registrable Securities requested by the Holders to be registered to be so registered; provided, further, that the Company shall not be permitted to exercise the rights set forth in this Section 2.5(d)(iv) more than once in any twelve (12) month period;

(v) If the Initiating Holders propose to dispose of shares of Registrable Securities at a time when the Company is permitted to register the Registrable Securities immediately on Form S-3 pursuant to a request made in accordance with Section 2.11 below; or

(vi) In a particular jurisdiction if, in order for the Company to effect such registration pursuant to this Section 2.5, the Company would be required to qualify as a foreign corporation, subject itself to taxation in that jurisdiction and consent to service of process

in such jurisdiction (unless the Company is already subject to the same in such jurisdiction and except as may be required by the Act).

2.6. Expenses of Demand Registration. All expenses, filings or qualifications pursuant to Section 2.5 including, without limitation, all registration, filing and qualification fees, printers' and accounting fees, fees and disbursements of counsel for the Company and reasonable fees and disbursements (not to exceed $50,000) of one counsel for the selling Holders selected by them (but excluding underwriting discounts and commissions) shall be borne by the Company.

2.7. Company Registration. If (but without any obligation to do so) the Company proposes to register (including for this purpose a registration effected by the Company for stockholders other than the Holders) any of its stock under the Act in connection with the public offering of such stock solely for cash (other than a registration on Form S-4 (including registrations relating solely to a Rule 145 transaction) or Form S-8 or any other relating solely to the sale of securities to participants in a Company stock plan or a registration in which only Common Stock is being registered and such Common Stock is issuable upon conversion of debt securities which are also being registered), the Company shall, at such time, promptly give each Holder advance written notice of such registration. Upon the written request of each Holder given within twenty (20)

days after mailing of such notice by the Holder, the Company shall, subject to the provisions of Section 2.9, cause to be registered under the Act all of the Registrable Securities that each such Holder has requested to be registered.

2.8. Expenses of Company Registration. All expenses incurred in connection with any registration, filing or qualification of Registrable Securities with respect to the registrations pursuant to Section 2.7 for each Holder, including, without limitation, all registration, filing, and qualification fees, printers and accounting fees relating or apportionable thereto and the fees and disbursements of one counsel (not to exceed $50,000) for the selling Holders selected by them (but excluding underwriting discounts and commissions) shall be borne by the Company.

2.9. Underwriting Requirements. In connection with any offering involving an underwriting of shares of the Company's capital stock, the Company shall not be required under Section 2.7 to include any of the Holders' securities in such underwriting unless they accept in writing the terms of the underwriting as agreed upon between the Company and the underwriters selected by it (or by other Persons entitled to select the underwriters), and then only in such quantity as the underwriters determine in their sole discretion will not jeopardize the success of the offering by the Company. If the total amount of Registrable Securities, requested by Holders to be included in such offering exceeds the amount of securities that the underwriters determine in their sole discretion is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters determine in their sole discretion will not jeopardize the success of the offering (the securities so included to be apportioned (i) first, to shares proposed to be registered by the Company in connection with the private offering of such stock solely for cash, (ii) second, pro rata among the holders of Registrable Securities according to the total amount of Registrable Securities entitled to be included therein by each Holder of Registrable Securities, and (iii) lastly, pro rata among the other selling stockholders according to the total

amount of securities entitled to be included therein owned by each other selling stockholder or in such other proportions as shall mutually be agreed to by such other selling stockholders).

2.10. Company Right to Terminate. The Company shall have the right to terminate or withdraw any registration initiated by it under Section 2.7 prior to the effectiveness of such registration whether or not any Holder has elected to include Registrable Securities in such registration. The registration expenses of such withdrawn registration shall be borne by the Company in accordance with Section 2.8 hereof.

2.11. Form S-3 Registration. In case the Company shall receive from any Holder or Holders a written request or requests that the Company effect a registration on Form S-3, the Company will:

(a) promptly give written notice of the proposed registration, and any related qualification or compliance, to all other Holders; and

(b) as soon as practicable, use its best efforts to effect such registration and all such qualifications and compliances as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such Holder's Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any other Holder or Holders joining in such request as are specified in a written request given within 15 days after receipt of such written notice from the Company; provided, however, that the Company shall not be obligated to effect any such registration, qualification or compliance, pursuant to this Section 2.11: (i) if Form S-3 is not available for such offering by the Holders; (ii) if the Company shall furnish to the Holders a certificate signed by the President of the Company stating that in the good faith judgment of the Board of Directors, it would be seriously detrimental to the Company and its stockholders for such Form S-3 Registration to be effected at such time, in which event the Company shall have the right to defer the filing of the Form S-3 registration statement for a period of not more than 90 days after receipt of the request of the Holder or Holders under this Section 2.11; provided, however, that the Company shall not utilize this right more than once in any twelve-month period; (iii) if the participating Holders, together with the holders of any other securities of the Company entitled to inclusion in such registration, propose to sell Registrable Securities and such other securities of the Company (if any), and the aggregate price to the public of the shares to be registered on Form S-3 is less than $500,000 (unless all Holders of Registrable Securities are participating and selling all Registrable Securities that they hold); (iv) if the Company, within ten (10) days of the receipt of the request for registration on Form S-3 from a Holder, gives notice of its bona fide intention to effect the filing of a registration statement with the SEC within ninety (90) days of receipt of such request (other than with respect to a registration statement on Form S-4 (including registrations relating solely to a Rule 145 transaction) or Form S-8 or any other relating solely to the sale of securities to participants in a Company stock plan) in which event the Company shall have the right to defer the filing of the Form S-3 registration statement for a period of not more than 90 days after receipt of the request of the Holder or Holders under this Section 2.11 and such Holder or Holders shall be entitled to participate in such Company Registration pursuant to Section 2.7 hereof; (v) during the period starting with the date forty-five (45) days prior to the Company's good faith estimate of the date of filing of, and ending on the date one hundred eighty (180) days

after the effective date of, any registration statement pertaining to a public filing of securities for the Company's account, provided the Company is actively employing in good faith its best efforts to cause (A) such registration statement to become effective, (B) Holders of Registrable Securities to join such registration pursuant to this Agreement and (C) all Registrable Securities requested by the Holders to be registered pursuant to Section 2.11 to be so registered; provided, further, that the Company shall not be permitted to exercise the rights set forth in this Section 2.11(b)(v) more than once in any twelve month period; and (vi) in a particular jurisdiction if, in order for the Company to effect such registration pursuant to this Section 2.11, the Company would be required to qualify as a foreign corporation, subject itself to taxation in that jurisdiction and consent to service of process in such jurisdiction (unless the Company is already subject to the same in such jurisdiction and except as may be required by the Act).

Subject to the foregoing, the Company shall file a registration statement covering the Registrable Securities and other securities so requested to be registered as soon as practicable after receipt of the request or requests of the Holders. All expenses incurred in connection with a registration requested pursuant to this Section 2.11, including, without limitation, all registration, filing, qualification, printer's and accounting fees and the reasonable fees and disbursements of one counsel for the selling Holder or Holders selected by them (not to exceed $50,000) and counsel for the Company, but excluding any underwriters' discounts or commissions associated with Registrable Securities, shall be borne by the Company. Registrations effected pursuant to this Section 2.11 shall not be counted as demands for registration or registrations effected pursuant to Section 2.5. The Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to this Section 2.11 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all participating Holders of Registrable Securities shall bear such expenses); provided, however, that if at the time of such withdrawal, the Holders of Registrable Securities have learned of a material adverse change in the condition, business or prospects of the Company from that known to the Holders of Registrable Securities at the time of their request and have withdrawn the request with reasonable promptness following disclosure by the Company of such material adverse change, then the Holders of Registrable Securities shall not be required to pay any of such expenses and shall retain their rights pursuant to this Section 2.11.

2.12. Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) Prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its best efforts to cause such registration statement to become effective, and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or until the distribution contemplated in the Registration Statement has

been completed; provided, however, that (i) such 120-day period shall be extended for a period of time equal to the period the Holder refrains from selling any securities included in such registration at the request of an underwriter of Common Stock (or other securities) of the Company; and (ii) in the case of any registration of Registrable Securities on Form S-3 which are intended to be offered on a continuous or delayed basis, such 120-day period shall be extended,

if necessary, to keep the registration statement effective until all such Registrable Securities are sold.

(b) Prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Act with respect to the disposition of all securities covered by such registration statement.

(c) Furnish to the Holders participating in such registration such numbers of copies of a prospectus, including a preliminary prospectus, in conformity with the requirements of the Act, and such other documents as they may reasonably request in order to facilitate the disposition of Registrable Securities owned by them.

(d) Use its best efforts to register and qualify the securities covered by such registration statement under such other securities or Blue Sky laws of such jurisdictions as shall be reasonably requested by the Holders; provided that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business, subject itself to general taxation or file a general consent to service of process in any such states or jurisdictions.

(e) In the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter of such offering. Each Holder participating in such underwriting shall also enter into and perform its obligations under such an agreement.

(f) Notify each Holder of Registrable Securities covered by such registration statement at any time when a prospectus relating thereto is required to be delivered under the Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing.

(g) Cause all such Registrable Securities registered pursuant hereunder to be listed on each securities exchange on which similar securities issued by the Company are then listed.

(h) Provide a transfer agent and registrar for all Registrable Securities registered pursuant hereunder and a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration.

(i) Furnish, at the request of the Holders holding a majority of the Registrable Securities to be included in the registration pursuant to this Section 2, on the date that such Registrable Securities are delivered to the underwriters for sale in connection with a registration pursuant to this Section 2, if such securities are being sold through underwriters, or, if such securities are not being sold through underwriters, on the date that the registration statement with respect to such securities becomes effective, (x) an opinion, dated such date, of the counsel representing the Company for the purposes of such registration, in form and substance as is

customarily given to underwriters in an underwritten public offering, addressed to the underwriters, if any, and to the Holders requesting registration of Registrable Securities and (y) a letter dated such date, from the independent certified public accountants of the Company, in form and substance as is customarily given by independent certified public accountants to underwriters in an underwritten public offering, addressed to the underwriters, if any, and, to the extent permitted by applicable accounting standards, to the Holders requesting registration of Registrable Securities.

2.13. Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such written information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as shall be required to effect the registration of such Holder's Registrable Securities.

2.14. [Intentionally Omitted]

2.15. Indemnification. In the event any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each Holder, any underwriter (as defined in the Act) of such Registrable Securities and each Person, if any, who controls such Holder or underwriter within the meaning of the Act, or the 1934 Act, and each officer,

director, partner and employee of such Holder or underwriter against any expenses, losses, claims, damages, or liabilities (joint or several) to which they may become subject under the Act, or the 1934 Act or other federal or state securities laws, insofar as such expenses, losses, claims, damages, or liabilities (or actions in respect thereof), including any of the foregoing incurred in settlement of any litigation, commenced or threatened, arise out of or are based upon any the following statements, omissions or violations (collectively a "Violation"): (i) any untrue statement or alleged untrue statement of a material fact contained in such registration statement, or any preliminary prospectus, final prospectus or any prospectus that discloses information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A under the Act, contained therein or any amendments or supplements thereto or, arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (ii) any violation or alleged violation by the Company of the Act, the 1934 Act, any state securities law or any other federal or state law, rule or regulation applicable to the Company in connection with any such registration statement, qualification or compliance; and the Company will pay to each such Holder, underwriter controlling Person, officer, director, partner or employee, as incurred, any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability, or action; provided, however, that the indemnity agreement contained in this subsection 2.15(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability, or action if such settlement is effected without the consent of the Company (which shall not be unreasonably withheld), nor shall the Company be liable in any such case for any such loss, claim, damage, liability, or action to the extent that it arises out of or is based upon a Violation

which occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by any such Holder; provided, further, that the Company shall not be liable to (i) any Holder under the indemnity agreement in this subsection (a) with respect to any preliminary prospectus to the extent that any such loss, claim, damage or liability of such Holder results from the fact that such Holder sold Registrable Securities to a Person to whom there was not sent or given, at or prior to the written confirmation of such sale, a copy of the related final prospectus if the Company has previously furnished on a timely basis to such Holder sufficient copies thereof and such prospectus corrects the statement or omission, or alleged statement or arises or (ii) any Holder distributing securities otherwise than in an underwritten offering or through a broker-dealer acting as placement agent for such Holder, with respect to any preliminary or final prospectus to the extent that any such loss, claim, damage or liability of such Holder arises from the fact that such Holder delivered such preliminary or final prospectus

after receipt of any notice from the Company pursuant to Section 2.12(f) hereof and an amended or supplemented prospectus which corrects the statement or omission, or alleged statement or omission, out of which such loss, claim, damage or liability arises.

(b) To the extent permitted by law, each Holder for whom Registrable Securities are included among the securities included in the registration statement, qualification or compliance being effected, severally and not jointly, will indemnify and hold harmless the Company, each of its directors, each of its officers who has signed the registration statement, each Person, if any, who controls the Company within the meaning of the Act, against any losses, claims, damages, or liabilities (joint or several) to which any of the foregoing Persons may become subject, under the Act, or the 1934 Act or other federal or state securities laws, insofar as such losses, claims, damages, or liabilities (or actions in respect thereto) arise out of or are based upon any Violation, in each case to the extent (and only to the extent) that such Violation occurs in reliance upon and in conformity with written information furnished by such Holder expressly for use in connection with such registration; and each such Holder will pay, as incurred, any legal or other expenses reasonably incurred by any Person intended to be indemnified pursuant to this subsection 2.15(b), in connection with investigating or defending any such loss, claim, damage, liability, or action; provided, however, that the indemnity agreement contained in this subsection 2.15(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Holder; provided, that, the liability of any Holder under this Section 2.15(b) will equal the proportion that the public offering price of the shares sold by such Holder under such registration statement bears to the total public offering price of all securities sold thereunder and in no event shall exceed the gross proceeds from the offering received by such Holder unless such liability results from the willful misconduct of the Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.15 of notice of the commencement of any action (including any governmental action), such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party under this Section 2.15, deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties which may be represented

without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the

indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure of any indemnified party to give notice as provided herein shall not relieve the indemnifying party of its obligations under this Agreement unless the failure to give such notice is materially prejudicial to any indemnifying party's ability to defend such action. No indemnifying party, in the defense of any such claim or litigation, shall, except with the consent of each indemnified party (whose consent shall not be unreasonably withheld), consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such indemnified party of a release from all liability in respect to such claim or litigation.

(d) If the indemnification provided for in this Section 2.15 is held by a court of competent jurisdiction to be unavailable or insufficient to hold harmless to an indemnified party with respect to any loss, liability, claim, damage, or expense thereof referred to therein, then the indemnifying party, in lieu of indemnifying such indemnified party hereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such loss, liability, claim, damage, or expense in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other in connection with the statements or omissions that resulted in such loss, liability, claim, damage, or expense as well as any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission. The Company and each of the Holders agrees that it would not be just and equitable if contributions pursuant to this paragraph were determined by pro rata allocation (even if all of the Holders of such Registrable Securities were treated as one entity for such purpose) or by any other method of allocation which did not take account of the equitable considerations referred to above in this paragraph. The amount paid or payable by an indemnified party as a result of the losses, claims, damages, liabilities or action in respect thereof, referred to above in this paragraph, shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this paragraph, no Holder shall be required to contribute any amount in excess of the lesser of (i) the proportion that the public offering price of shares sold by such Holder under such registration statement bears to the total public offering price of all securities sold thereunder, but not to exceed the proceeds received by such Holder for the sale of Registrable Securities covered by such registration statement and (ii) the amount of any damages which they would have otherwise been required to pay by reason of such untrue or alleged untrue statement or omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act), shall be entitled to contribution from any person who is not guilty of such fraudulent misrepresentation.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in

connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) The obligations of the Company and Holders under this Section 2.15 shall survive the completion of any offering of Registrable Securities in a registration statement under this Section 2, and otherwise.

2.16. Reports Under the 1934 Act. With a view to making available to the Holders the benefits of Rule 144 promulgated under the Act and any other rule or regulation of the SEC that may at any time permit a Holder to sell Restricted Securities of the Company to the public without registration after such time as a public market exists for the Common Stock of the Company, the Company agrees to:

(a) make and keep public information available, as those terms are understood and defined in SEC Rule 144, at all times after ninety (90) days after the effective date of the first registration statement filed by the Company for the offering of its securities to the general public;

(b) file with the SEC in a timely manner all reports and other documents required of the Company under the Act and the 1934 Act (at any time after it has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company, and (ii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC which permits the selling of any such securities without registration or pursuant to such form.

2.17. Assignment of Registration Rights. The rights to cause the Company to register Registrable Securities pursuant to this Section 2 may be assigned (but only with all related obligations) by any Holder to a transferee or assignee of such securities provided that not less than 50 shares Common Stock or 500 shares of either Series B Preferred Stock or Non-Qualified Preferred Stock are so transferred, as adjusted for stock splits, stock dividends, recapitalizations, or other similar events (or a lesser number if such number represents all of the Holder's Registrable Securities), provided such transferee or assignee agrees in writing to be bound by and subject to the terms and conditions of this Agreement relating to registration of Registrable Securities including without limitation

the provisions of Section 2.19 below. A transferor agrees to furnish the Company in writing not more than ten (10) Business Days after the transfer, the name and address of the transferee and the Registrable Securities underlying the subject transfer.

2.18. Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of a majority of the then outstanding Registrable Securities, enter into any agreement with any holder or prospective holder of any securities of the Company which would allow such holder or prospective holder to include such securities in any registration filed pursuant to this Agreement

unless under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of his securities will not reduce the amount of the Registrable Securities of the Holders which may be included.

2.19. "Market Stand-Off" Agreement. Each Holder hereby agrees that, during the period of duration specified by the Company and an underwriter of Common Stock or other securities of the Company, following the effective date of registration statement of the Company filed under the Act, it shall not, to the extent requested by the Company and such underwriter, directly or indirectly sell, offer to sell, contract to sell (including, without limitation, any short sale), enter into any hedging or similar transaction with the same economic effect as a sale, grant any option to purchase or otherwise transfer or dispose of (other than to donees who agree to be similarly bound) any securities of the Company held by it at any time during such period except Common Stock included in such registration; provided, however, that:

(a) such agreement shall be applicable only to the first such registration statement of the Company which covers Common Stock (or other securities) to be sold on its behalf to the public in an underwritten offering;

(b) such agreement shall not be in effect unless all officers, directors and holders of more than 5% of any outstanding series of capital stock of the Company and all other Persons with registration rights (whether or not pursuant to this Agreement) enter into similar agreements;

(c) such market standoff time period shall not exceed one hundred eighty (180) days in the case of an initial firm commitment underwritten public offering by the Company of its Common Stock under an effective registration statement under the Act which results in the Company's Common Stock being quoted on a national securities exchange;

(d) such market standoff time period shall not exceed one hundred

twenty (120) days in any other offering by the Company under an effective registration statement under the Act.

In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to the Registrable Securities of each Holder (and the shares or securities of every other Person subject to the foregoing restriction) until the end of such period.

Notwithstanding the foregoing, the obligations described in this Section 2.19 shall not apply to a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms which may be promulgated in the future, or a registration relating solely to a transaction pursuant to Rule 145 under the Act on Form S-4 or similar forms which may be promulgated in the future.

2.20. Termination of Registration Rights. The registration rights granted under this Section 2 shall terminate on the earlier to occur of: (i) the fifth (5th) anniversary of the consummation of the initial underwritten public offering of the Company's securities pursuant to

a registration statement filed under the Act; or (ii) as to a particular Holder, when such Holder is eligible to sell all of its Registrable Securities within any ninety (90) day period in reliance on Rule 144 under the Act.

3. Covenants of the Company.

3.1. Delivery of Financial Statements. Until the closing of an initial public offering of the Company's Common Stock, the Company shall deliver to each holder of Non-Qualified Preferred Stock and Series B Preferred Stock:

(a) as soon as practicable, but in any event within ninety (90) days after the end of each fiscal year of the Company, an income statement for such fiscal year, a balance sheet of the Company and statement of stockholder's equity as of the end of such year, and a schedule as to the sources and applications of funds for such year, such year-end financial reports to be in reasonable detail, prepared in accordance with generally accepted accounting principles consistently applied ("GAAP"), and audited and certified by independent public accountants of nationally recognized standing selected by the Company;

(b) as soon as practicable, but in any event within forty-five (45) days after the end of each of the first three (3) quarters of each fiscal year of the Company, an unaudited profit or loss statement, schedule as to the sources and application of funds for such fiscal quarter and an unaudited balance sheet, a statement of stockholder's equity as of the end of such fiscal

quarter and comparisons to budget and prior year, in reasonable detail, prepared in accordance with GAAP consistently applied with prior practice for earlier periods;

(c) with respect to the financial statements called for in subsection (b) of this Section 3.1, an instrument executed by the Chief Financial Officer or President of the Company and certifying that such financials were prepared in accordance with GAAP consistently applied with prior practice for earlier periods (with the exception of footnotes that may be required by GAAP) and fairly present the financial condition of the Company and its results of operation for the period specified, subject to year-end audit adjustment;

(d) notice of any material adverse change in the financial condition, business, prospects or corporate affairs of the Company, or the commencement or threat of commencement of any material litigation, promptly upon the Company becoming aware of such changes, commencement or threat;

(e) as soon as practicable, copies of all reports filed with the SEC; and

(f) such other information relating to the financial condition, business, prospects or corporate affairs of the Company as a Party or any assignee of such Party may from time to time reasonably request.

The rights granted pursuant to this Section 3.1 may not be assigned or otherwise conveyed by any Party or by any subsequent transferee of any such rights without the prior written consent of the Company, which consent shall not be unreasonably withheld.

3.2. Preemptive Rights. Subject to the terms and conditions specified in this Section 3.2, the Company hereby grants to each Party a right of first offer with respect to future sales by the Company of its Additional Stock (as hereinafter defined).

Each time the Company proposes to offer any shares of, or securities convertible into or exercisable for any shares of, any class of its capital stock ("Additional Stock"), the Company shall first make an offering of such Additional Stock to each Party in accordance with the following provisions:

(a) The Company shall deliver a notice by certified mail ("Notice") to each Party stating (i) its bona fide intention to offer such Additional Stock, (ii) the number of such shares of Additional Stock to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such Additional Stock.

(b) Within 20 calendar days after receipt of the Notice, each Party may elect to purchase or obtain (each Party electing to purchase, a "Subscribing

Party"), at the price and on the terms specified in the Notice, up to that portion of such Additional Stock which equals the proportion that the number of shares of Common Stock issued and held by such Party bears to the total number of shares of Common Stock of the Company held by all Parties ("Pro Rata Share").

(c) If any Party elects not to purchase its respective Pro Rata Share of the Additional Stock (or fails to respond within the 20 day period specified in Section 3.2(b) above), then (i) the Company shall deliver a second notice by certified mail (the "Second Notice") to each Subscribing Party stating the number of shares of Additional Stock still available (the "Available Additional Stock") and (ii) each Subscribing Party may elect to purchase its Pro Rata Share of the Available Additional Stock within 10 calendar days after receipt of the Second Notice.

(d) If all shares of Additional Stock which a Party is entitled to obtain pursuant to Sections 3.2(b) and 3.2(c) are not elected to be obtained as provided, then the Company may, during the 60-day period following the expiration of the periods provided in Sections 3.2(b) and 3.2(c), offer the remaining unsubscribed portion of such Additional Stock to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than those specified in the Notice. If the Company does not enter into an agreement for the sale of the Additional Stock within such period, or if such agreement is not consummated within 60 days of the execution thereof, the right provided hereunder shall be deemed to be revived and such Additional Stock shall not be sold unless first reoffered to the Parties in accordance herewith.

(e) The preemptive right in this Section 3.2 shall expire on the closing of an IPO.

(f) The preemptive right set forth in this Section 3.2 may be assigned or transferred by a Party to a transferee or assignee of any of its shares of capital stock of the

Company, provided such transferee or assignee agrees in writing to be bound by and subject to the terms and conditions of this Agreement relating to this Section 3.2.

3.3. Positive Covenants. So long as any shares of the Non-Qualified Preferred Stock or Series B Preferred Stock are still outstanding, the Company agrees as follows:

(a) The Company will promptly pay and discharge, or cause to be paid and discharged, when due and payable, all lawful taxes, assessments, and governmental charges or levies imposed upon the income, profits, property, or business of the Company or any subsidiary; provided, however, that any such tax,

assessment, charge, or levy need not be paid if the validity thereof shall currently be contested in good faith by appropriate proceedings and if the Company shall have set aside on its books adequate reserves with respect thereof, and provided further, that the Company will pay all such taxes, assessments, charges, or levies forthwith upon the commencement of proceedings to foreclose any lien that may have attached as security therefor. The Company will promptly pay or cause to be paid when due, or in conformance with customary trade terms, all other material indebtedness incident to the operations of the Company;

(b) The Company will keep, and cause each of its subsidiaries to keep, its properties in good repair, working order, and condition, reasonable wear and tear excepted, and from time to time make all needful and proper repairs, renewals, replacements, additions, and improvements thereto; and the Company will, and will cause its subsidiaries to, at all times comply with the provisions of all material leases to which any of them is a party or under which any of them occupies property so as to prevent any material loss or forfeiture thereof or thereunder;

(c) The Company will keep, and cause its subsidiaries to keep, its assets that are of an insurable character insured by financially sound and reputable insurers against loss or damage, casualties and contingencies, and of such types and in such amounts as is customary for companies in similar businesses similarly situated; and the Company will maintain, with financially sound and reputable insurers, insurance against other hazards, risks, and liabilities to Persons and property to the extent and in the manner customary for companies in similar businesses similarly situated;

(d) The Company will keep true records and books of account in which full, true, and correct entries in all material respects will be made of all dealings or transactions in relation to its business and affairs in accordance with GAAP applied on a consistent basis;

(e) The Company shall, and shall cause its subsidiaries to, duly observe and conform to all material requirements of governmental authorities relating to the conduct of their businesses or to their property or assets;

(f) The Company shall, and shall cause its subsidiaries to, maintain in full force and effect its corporate existence, rights, and franchises and all licenses and other rights to use patents, processes, licenses, trademarks, trade names, or copyrights owned or possessed by it or any subsidiary and deemed by the Company to be material to the conduct of its business;

(g) The Company will retain independent public accountants of recognized national standing who shall certify the Company's financial statements at the end of each fiscal year;

(h) The Company will cause each Person now or hereafter employed by it or any subsidiary with access to confidential information to enter into a proprietary information and inventions agreement substantially in the form approved by the Board of Directors;

(i) The Company will cause each senior manager and key employee now or hereafter employed by it or any subsidiary to (I) dedicate substantially their full working schedule to the Company and refrain from pursuing outside business activities during the Company's business hours, consistent with the Company's current personnel policies, and (II) enter into a noncompetition and nonsolicitation agreement substantially in the form approved by the Board of Directors;

(j) The Company will, and will cause each of its subsidiaries to, comply with all applicable requirements of law of any governmental authority in respect of conduct of its businesses and the ownership of its properties, except such as are being contested in good faith and except for such noncompliances as will not in the aggregate have a material adverse effect on its business or properties; and

(k) Upon receipt of a request in writing from any Party, the Company will permit such Party to inspect the books and records of the Company at the principal offices of the Company and meet with management.

The covenants set forth in this Section 3.3 shall terminate and be of no further effect upon the closing of an IPO.

3.4. Board of Directors.

(a) Until the closing of an IPO, the number of directorships for the Board of Directors shall be fixed at five (5). For so long as the SOFTBANK Entities or their respective Affiliates collectively hold not less than fifty percent (50%) of the shares of Common Stock held as of the date of this Agreement, the SOFTBANK Entities shall be entitled to appoint one (1) member of the Board of Directors (the "SOFTBANK Designee"). For so long as the ePlanet Entities and their respective Affiliates collectively hold not less than fifty percent (50%) of the shares of each of the Common Stock and Series B Preferred Stock held as of the date of this Agreement, ePlanet Ventures shall be entitled to appoint two (2) members of the Board of Directors (the "ePlanet Designees"). For so long as the ePlanet Entities and their respective Affiliates collectively hold not less than twenty-five percent (25%) of the shares of Common Stock and Series B Preferred Stock held as of the date of this Agreement, ePlanet Ventures shall be entitled to appoint one (1) member of the ePlanet Designee of Directors. For so long as OptiMark and its Affiliates hold not less than fifty percent (50%) of the shares of each of the Common Stock and Non-Qualified Preferred Stock held as of the date of this Agreement, OptiMark shall be entitled to appoint two (2) members of the Board of Directors (collectively, the "OptiMark Designees"). For so long as OptiMark and its Affiliates hold not less than

twenty-five percent (25%) of the shares of Common Stock and Non-Qualified Preferred Stock held as of the date of this Agreement, OptiMark shall be entitled to appoint one OptiMark Designee. The Parties agree to vote their shares of Common Stock in order to comply with the obligations of this Section 3.5. Notwithstanding the foregoing, in the event that OptiMark and its Affiliates (for the purpose of this sentence neither a SOFTBANK Entity nor an ePlanet Entity shall be deemed an Affiliate of OptiMark) transfers shares of each of the Common Stock and Non-Qualified Preferred Stock held as of the date of this Agreement to either a SOFTBANK Entity and its Affiliates or an ePlanet Entity and its Affiliates and such transfer causes OptiMark to no longer be entitled to appoint one or both OptiMark Designees, then such transferee shall be entitled to appoint one member or both members, as the case may be, of the Board of Directors that OptiMark is no longer entitled to appoint.

(b) The affirmative vote each of the SOFTBANK Designee, the ePlanet Designee and at least one OptiMark Designee, shall be required for the Company to:

(i) make any material acquisition, investment, capital expenditure, sale of assets, incurrence of debt or contract;

(ii) approve the annual operating budget of the Company;

(iii) declare, pay or set aside any sums for the payment of any dividends, or make any distribution, on any shares of its capital stock, or redeem, repurchase or otherwise acquire any outstanding shares of its capital stock or any other of its outstanding securities;

(iv) enter into any contracts or arrangements, whether written or oral, with stockholders or any Affiliate or "associate" (as such term is defined under Rule 12b-2 under the 1934 Act) of the Company;

(v) create, authorize, or designate any stock option, "phantom" equity or stock appreciation rights plan or other employee benefits program (including, without limitation, the Option Plan), or amend any existing plan;

(vi) change the material accounting policies or methods of the Company or change the Company's independent auditors;

(vii) create, incur, assume or suffer to exist any indebtedness of the Company for borrowed money (which shall include for purposes hereof capitalized lease obligations and guarantees or other contingent obligations for indebtedness for borrowed money) or grant any pledge, lien, mortgage, charge, security interest or other encumbrance on any assets of the Company;

(viii) materially change the nature or scope of the Company's

principal line of business; or

(ix) use, commit to use, reserve, set-aside, or otherwise encumber any proceed from the sale by the Company of any shares of capital stock of The Ashton Technology Group, Inc. held as of the date hereof or hereafter acquired by the Company.

(c) In the event that OptiMark, the SOFTBANK Entities or the ePlanet Entities, or any of them, lose their respective rights to designate members of the Board of Directors pursuant to Section 3.4(a) above, then the voting requirements set forth in Section 3.4(b) shall be automatically amended to require the affirmative vote of the designees of the Parties retaining rights to designate members of the Board of Directors.

4. Rights of First Offer; Drag Along.

4.1. Right of First Offer. Each Party hereby grants to the other Parties a right of first offer (according to each Party's Pro Rata Share) with respect to future Transfers by such Party of its shares of capital stock of the Company. Each time a Party proposes to Transfer any shares of such Party's capital stock of the Company (the "Transferred Shares"), such Party (a "Transferring Party") shall first make an offering of such Transferred Shares to all of the other Parties in accordance with the following provisions:

(a) The Transferring Party shall deliver a notice by certified mail ("ROF Notice") to the other Parties stating (i) its bona fide intention to Transfer such Transferred Shares, (ii) the number of Transferred Shares to be Transferred, and (iii) the price and terms, if any, upon which it proposes to Transfer such Transferred Shares.

(b) Within 20 calendar days after receipt of the ROF Notice, each Party may elect to purchase or obtain, at the price and on the terms specified in the ROF Notice, up to such Party's Pro Rata Share of such Transferred Shares.

(c) If any Party elects not to purchase its respective Pro Rata Share of the Transferred Shares (or fails to respond within the 20 day period specified in Section 4.1(b) above), then (i) the Transferring Party shall deliver a second notice by certified mail (the "Second ROF Notice") to each Subscribing Party stating the number of Transferred Shares still available (the "Available Transferred Shares") and (ii) each Subscribing Party may elect to purchase its Pro Rata Share of the Available Transferred Shares within 10 calendar days after receipt of the Second ROF Notice.

(d) If all Transferred Shares which the Parties are entitled to obtain

pursuant to Sections 4.1(b) and 4.1(c) are not elected to be obtained as provided, the Transferring Party may, during the 30-day period following the expiration of the periods provided in Sections 4.1(b) and 4.1(c), offer the remaining unsubscribed portion of such Transferred Shares, to any Person or Persons, at a price not less than, and upon terms no more favorable to the offeree or transferee than those specified in the ROF Notice, provided that such Person agrees in writing to be bound by the terms and conditions of this Section 4.1. If the Transferring Party does not enter into an agreement for the Transfer of the Transferred Shares within such period, or if such agreement is not consummated within 30 days of the execution thereof, the right provided hereunder shall be

deemed to be revived and such Transferred Shares shall not be Transferred unless the Transferring Party first complies with the right of first offer under this Section 4.1.

(e) Prohibited Transfer.

(i) In the event any Transferring Party should Transfer any Transferred Shares in contravention of the participation rights of the other Parties under this Agreement (a "Prohibited Transfer"), the other Parties, in addition to such other remedies as may be available at law, in equity or hereunder, shall have the put option provided in Section 4.2(e)(ii) below, and such Transferring Party shall be bound by the applicable provisions of such put option.

(ii) In the event of a Prohibited Transfer, the other Parties shall have the right to Transfer to such Transferring Party, and such Transferring Party shall have the obligation to purchase, a number of shares of capital stock equal to the number of shares that the other Parties would have been entitled to Transfer to the purchaser in the Prohibited Transfer pursuant to the terms hereof. Such Transfer shall be made on the following terms and conditions:

(A) The price per share at which the shares are to be Transferred to such Transferring Party shall be equal to the price per share paid by the purchaser to such Transferring Party in the Prohibited Transfer. Such Transferring Party shall also reimburse the other Parties for reasonable fees and expenses, including legal fees and expenses, incurred pursuant to the exercise or the attempted exercise of the other Parties' rights under this Section 4.1.

(B) Within a period of thirty (30) days after the later of the dates on which the other Parties (I) receives notice from a Transferring Party of the Prohibited Transfer or (II) otherwise becomes aware of the

Prohibited Transfer, the other Parties shall, if exercising the put option created hereby, deliver to such Transferring Party the certificate or certificates representing shares to be Transferred, each certificate to be properly endorsed for Transfer.

(C) Such Transferring Party shall, upon receipt of the certificate or certificates for the shares to be Transferred by the other Parties pursuant to Section 4.1(e)(ii)(B), pay simultaneously to the order of such other Parties the aggregate purchase price therefor and the reasonable amount of any fees and expenses reimbursable under Section 4.1(e)(ii)(A) (each in immediately available funds).

(D) Notwithstanding the foregoing, any attempt to Transfer shares of the Company in violation of Section 4.1 hereof shall be voidable at the option of the other Parties, and the Company agrees it will not effect such a Transfer nor will it treat any alleged transferee as the holder of such shares without the written consent of the other Parties.

(f) Notwithstanding anything to the contrary herein: (i) in the case of a Transfer by an ePlanet Entity, the provisions of this Section 4.1 and Section 4.2 shall not apply to

(A) a Transfer to another ePlanet Entity, (B) a Transfer to an Affiliate of an ePlanet Entity or (C) a Transfer by such ePlanet Entity to any of its partners or members; (ii) in the case of a Transfer by a SOFTBANK Entity, the provisions of this Section 4.1 and Section 4.2 shall not apply to (A) a transfer to another SOFTBANK Entity, (B) a Transfer to an Affiliate of a SOFTBANK Entity or (C) a Transfer by such SOFTBANK Entity to any of its partners or members; and (iii) in the case of a Transfer by OptiMark, the provisions of this Section 4.1 and Section 4.2 shall not apply to a Transfer to an Affiliate of OptiMark.

4.2. Drag Along Rights.

(a) Right to Compel Participation in Certain Transfers. If at any time one or more holders of not less than seventy five percent (75%) of the shares of Common Stock then outstanding (the "Dragging Parties") propose a Qualifying Transfer of all or a portion of their shares to a third Person, the Dragging Parties may require each of the holders of the outstanding shares of capital stock of the Company who are not Dragging Parties (collectively, the "Non-Dragging Parties") to Transfer all of their shares of capital stock, to such third Person, as follows: (i) holders of shares of Common Stock shall be entitled to the consideration to be received by the Dragging Parties; (ii) holders of shares of capital stock that are not convertible into shares of Common Stock shall be entitled to the aggregate amount of the liquidation preference plus accrued but unpaid dividends for such shares; and (iii) holders

of shares of capital stock that are convertible into shares of Common Stock, if any, shall be deemed to have converted such shares into shares of Common Stock at the then applicable conversion price immediately prior to the closing of the Qualifying Transfer. The Dragging Parties shall be obligated to ensure that, in the event of the closing of such Qualifying Transfer, the same terms and price will apply to all shareholders.

(b) Drag-Along Notice. The Dragging Parties shall provide a written and dated notice (the "Drag-Along Notice") of such proposed Qualifying Transfer to each of the Non-Dragging Parties not later than thirty (30) days prior to the consummation of the proposed Qualifying Transfer. The Drag-Along Notice shall contain (i) written notice of the exercise of the Dragging Parties' rights pursuant to this Section 4.2, (ii) the consideration per share of Common Stock, to be paid by the third Person and (iii) the other material terms and conditions of the proposed Qualifying Transfer. At the closing of the Qualifying Transfer, each of the Non-Dragging Parties shall deliver to such third Person the certificate or certificates evidencing all of the shares of capital stock to be sold, pursuant to the terms of the proposed Qualifying Transfer and to take all such actions reasonably requested by such third Person in order to consummate such Qualifying Transfer.

(c) Non Consummation. Anything hereto the contrary notwithstanding, the Dragging Parties shall have no obligation to the Non-Dragging Parties to Transfer any shares of capital stock of the Company pursuant to this Section 4.2 as a result of any decision by the Dragging Parties not to accept or consummate any Qualifying Transfer of the shares of Common Stock owned by the Dragging Parties (it being understood that any and all such decisions shall be made by the Dragging Parties in their sole discretion).

4.3. Term and Expiration of Rights of First Offer and Drag Along; Assignment.

(a) Term. The rights set forth in Sections 4.1 and 4.2 shall expire upon the closing of an IPO.

(b) Assignment. The rights set forth in Sections 4.1 and 4.2 may be assigned and Transferred by an ePlanet Entity to a transferee or assignee of not less than 100 of its shares of capital stock of the Company (or a lesser number if such number represents all of such assigning or transferring entity's Registrable Securities); provided, however, that such permitted transferee or assignee agrees in writing to be bound by and subject to the terms and conditions of this Agreement related to these Sections 4.1 and 4.2.

5. Put and Call Rights.

5.1. Independent Committee. The Independent Committee shall have the rights and obligations as set forth herein. In the event that one or more members of the Independent Committee as constituted as of the date of this Agreement, and thereafter for the term of this Section 5 of the Agreement, (i) no longer qualify as disinterested or (ii) resign or are terminated, then the Holdings Board shall use reasonable good faith efforts to find independent third persons to fill such vacancies on the Holdings Board and appoint such successor independent directors to serve on the Independent Committee. The Independent Committee shall at all times during the term of this Agreement have the rights and obligations provided under this Section 5 of the Agreement.

5.2. First Call Right of Holdings on Common Stock of the SOFTBANK Entities.

(a) First Call Right. Commencing on October 1, 2002 and continuing until September 30, 2003 (the "First Call Exercise Period"), the Independent Committee, in its sole discretion, shall have the right to require each of the SOFTBANK Entities to sell to Holdings (the "First Call Right") all, but not less than all, of the Common Stock held by the SOFTBANK Entities in exchange for an aggregate consideration of (i) US$125,000 and (ii) 16,667 shares of authorized but unissued shares of the Series E Preferred Stock. In the event of the exercise and closing of the transactions contemplated by the First Call Right, Holdings shall pay to each of the SOFTBANK Entities their pro rata share of the foregoing aggregate consideration based upon the total number of shares of Common Stock sold by such SOFTBANK Entity.

(b) Exercise. To exercise the First Call Right, Holdings shall deliver written notice of its intent to so exercise (the "First Call Exercise Notice") so that it is received by the SOFTBANK Entities during the First Call Exercise Period. Upon receipt of such exercise notice, Holdings and the SOFTBANK Entities shall arrange a mutually agreed upon time and place in which to consummate the transactions contemplated by the First Call Right, which in no event shall be more than ten (10) days from the date on which the First Call Exercise Notice is received. In the event that the closing does not occur during the foregoing ten (10) day period, the provisions of Section 5.8 shall come into effect.

(c) Closing Deliveries. At the closing, Holdings shall deliver the appropriate consideration to each of the SOFTBANK Entities and each of the SOFTBANK Entities shall tender to Holdings the certificates representing their respective shares of Common Stock, accompanied by stock power(s) duly executed in blank enabling the transfer of the shares of Common Stock to Holdings or its designee. In addition, each of the SOFTBANK Entities, the Company and Holdings agrees to execute and deliver any other documents and take such actions that any other party may reasonably request to evidence such transaction.

5.3. First Put to Holdings of Common Stock of SOFTBANK Entities.

(a) First Put Right. Commencing on October 1, 2002 and continuing until September 30, 2003 (the "First Put Exercise Period"), the SOFTBANK Entities, acting unanimously, shall have the right to require Holdings to purchase from the SOFTBANK Entities (the "First Put Right") all, but not less than all, of the shares of Common Stock held by them in exchange for an aggregate consideration of 16,667 shares of authorized but unissued shares of the Series E Preferred Stock. In the event of the exercise and closing of the transactions contemplated by the First Put Right, Holdings shall pay to each of the SOFTBANK Entities their pro rata share of the Series E Preferred Stock based upon the total number of shares of Common Stock sold by such SOFTBANK Entity.

(b) Exercise. To exercise the First Put Right, each of the SOFTBANK Entities shall deliver one collective written notice of their intent to so exercise (the "First Put Exercise Notice") so that it is received by Holdings during the First Put Exercise Period. Upon receipt of such exercise notice, Holdings and the SOFTBANK Entities shall arrange a mutually agreed upon time and place in which to consummate the transactions contemplated by the First Put Right, which in no event shall be more than ten (10) days from the date on which the First Put Exercise Notice is received.

(c) Closing Deliveries. At the closing, Holdings shall deliver the appropriate consideration to each of the SOFTBANK Entities and each of the SOFTBANK Entities shall tender to Holdings the certificates representing their respective shares of Common Stock, accompanied by stock power(s) duly executed in blank enabling the transfer of the shares of Common Stock held by them to Holdings or its designee. In addition, each of the SOFTBANK Entities, the Company and Holdings agrees to execute and deliver any other documents and take such actions that any other party to this Agreement may reasonably request to evidence such transaction.

5.4. Liquidity Event Discretionary Call of Holdings on Common Stock of SOFTBANK Entities.

(a) Discretionary Call. Subject to the rights granted to the Independent Committee in Section 5.4(d) hereof, in the event of a Company Liquidity Event on or before September 30, 2003, then Holdings shall purchase (the "Discretionary Call") all of the shares of Common Stock held by the SOFTBANK Entities in exchange for an aggregate consideration of (i) US$125,000 and (ii) 16,667 shares of authorized but unissued shares of the Series E Preferred Stock. In the event of the exercise and closing of the transactions contemplated by the

Discretionary Call, Holdings shall pay to each of the SOFTBANK Entities their pro rata share of the foregoing aggregate consideration based upon the total

number of shares of Common Stock sold by such SOFTBANK Entity.

(b) Notice of Discretionary Call. In the event of an Company Liquidity Event, Holdings shall promptly provide written notice of the same to the SOFTBANK Entities (the "Liquidity Notice"). If Holdings, pursuant to Section 5.4(d) hereof, determines not to exercise its Discretionary Call, it shall include notice of its determination not to do so in the Liquidity Notice. If the Liquidity Notice does not include notice of Holdings' decision not to exercise its Discretionary Call pursuant to Section 5.4(d) hereof, then upon receipt of the Liquidity Notice, Holdings and the SOFTBANK Entities shall arrange a mutually agreed upon time and place in which to consummate the transactions contemplated by the Discretionary Call, which in no event shall be more than ten (10) days from the date on which the SOFTBANK Entities receive the Liquidity Notice. In the event that the closing does not occur during the foregoing ten (10) day period, the provisions of Section 5.8 of this Agreement shall come into effect.

(c) Closing Deliveries. At the closing, Holdings shall deliver the appropriate consideration to each of the SOFTBANK Entities and each of the SOFTBANK Entities shall tender to Holdings the certificates representing their respective shares of Common Stock, accompanied by stock power(s) duly executed in blank enabling the transfer of the shares of Common Stock held by them to Holdings or its designee. In addition, each of the SOFTBANK Entities, the Company and Holdings agrees to execute and deliver any other documents and take such actions that any other party to this Agreement may reasonably request to evidence such transaction.

(d) Independent Committee Veto. Notwithstanding anything in this Agreement to the contrary, in the event that the Independent Committee is in existence at the time of a Liquidity Event and the Independent Committee, in its sole discretion, opposes exercising the Discretionary Call, then Holdings shall not exercise the Discretionary Call and no party shall have any obligations pursuant to the Discretionary Call.

5.5. Mandatory Call of Holdings on SOFTBANK Common Stock.

(a) Mandatory Call. In the event that: (i) none of the options set forth in Sections 5.2 through 5.4 of this Agreement have been exercised on or before September 30, 2003; (ii) the Independent Committee no longer exists; and (iii) no independent directors sit on the Holdings Board and, after reasonable good faith efforts by the remaining members of the Holdings Board, no independent persons qualified to serve on the Holdings Board have been found or, if found, are not willing to sit on the Holdings Board, then the Holdings Board shall engage an independent investment banking, accounting or third party valuation firm to evaluate whether or not it is in the best interests of Holdings that it purchase the shares of Common Stock held by the SOFTBANK Entities. In the event that such independent investment banking, accounting or third party valuation firm selected by the Holdings Board thereafter recommends to the Holdings Board that Holdings purchase the shares of Common Stock held by the SOFTBANK Entities, then Holdings shall be obligated to purchase (the "Mandatory Call") on or

before December 31, 2003 (the "Mandatory Call Period") all of the shares of Common Stock held by the SOFTBANK Entities in exchange for an aggregate consideration of (x) US$125,000 and (y) 16,667 shares of authorized but unissued shares of the Series E Preferred. In the event of the exercise and closing of the transactions contemplated by the Mandatory Call, Holdings shall pay to each of the SOFTBANK Entities their pro rata share of the foregoing aggregate consideration based upon the total number of shares of Common Stock sold by such entity.

(b) Exercise of Mandatory Call. In accordance with Section 5.4(b) hereof, Holdings shall provide the SOFTBANK Entities with the Liquidity Notice. Holdings shall include in such Liquidity Notice its intention to exercise its Mandatory Call. Upon receipt of the foregoing Liquidity Notice, Holdings and the SOFTBANK Entities shall arrange a mutually agreed upon time and place in which to consummate the transaction contemplated by the Mandatory Call, which in any event shall occur during the Mandatory Call Period. In the event that the closing does not occur during the foregoing ten (10) day period, then the provisions of Section 5.88 shall come into effect.

(c) Closing Deliveries. At the closing, Holdings shall deliver the appropriate consideration to each of the SOFTBANK Entities and each of the SOFTBANK Entities shall tender to Holdings the certificates representing their shares of Common Stock, accompanied by stock power(s) duly executed in blank enabling the transfer of such shares of Common Stock to Holdings or its designee. In addition, each of the parties to this Agreement agrees to execute and deliver any other documents and take such actions that any other party to this Agreement may reasonably request to evidence such transaction.

5.6. Second Put of SOFTBANK to Holdings of the SOFTBANK Common Stock.

(a) Second Put Right. In the event that on October 31, 2003 the SOFTBANK Entities still own all of the their shares Common Stock and no other puts or calls granted in this Agreement have been exercised, then commencing on November 1, 2003 and continuing until November 30, 2003 (the "Second Put Exercise Period"), the SOFTBANK Entities, acting unanimously, shall have the right to require Holdings to purchase from the SOFTBANK Entities (the "Second Put Right") all, but not less than all, of the shares of Common Stock held by the SOFTBANK Entities in exchange for an aggregate consideration of 16,667 shares of authorized but unissued shares of the Series E Preferred Stock. In the event of the exercise and closing of the transactions contemplated by the Second Put Right, Holdings shall pay to each of the SOFTBANK Entities their pro rata share of the Series E Preferred Stock based upon the total number of shares of Common Stock sold by such entity.

(b) Exercise. To exercise the Second Put Right, each of the SOFTBANK Entities shall delivery one collective written notice of their intent to so exercise (the "Second Put Exercise Notice") so that it is received by Holdings during the Second Put Exercise Period. Upon receipt of such exercise notice, Holdings and the SOFTBANK Entities shall arrange a mutually agreed upon time and place in which to consummate the transactions contemplated by the Second Put Right, which in no event shall be more than ten (10) days from the date on the Second Put Exercise Notice is received.

(c) Closing Deliveries. At the closing, Holdings shall deliver the appropriate consideration to each of the SOFTBANK Entities and each of the SOFTBANK Entities shall tender to Holdings the certificates representing their shares of Common Stock, accompanied by stock power(s) duly executed in blank enabling the transfer of such shares of Common Stock to Holdings or its designee. In addition, each of the parties to this Agreement agrees to execute and deliver any other documents and take such actions that any other party to this Agreement may reasonably request to evidence such transaction.

5.7. Adjustment to Preferred Stock Consideration.

(a) Adjustment for Stock Splits, Stock Dividends, Recapitalizations. To the extent any SOFTBANK Entity is to receive Series E Preferred Stock as consideration hereunder and there occurs a stock dividend, stock split, reverse stock split, recapitalization or the like after the Effective Date affecting the number of outstanding shares of Series E Preferred Stock, the number of shares of Series E Preferred Stock to be paid as consideration shall be equitably adjusted.

(b) Adjustments for Reorganization, Consolidation, Merger. To the extent any SOFTBANK Entity is to receive Series E Preferred Stock as consideration hereunder and after the date of this Agreement Holdings consolidates with or merges into another Person or conveys all or substantially all of its assets to another Person, then, in each such case, the number of shares of Series E Preferred Stock such SOFTBANK Entity would be entitled to receive shall become the stock or other securities or property to which such SOFTBANK Entity would have been entitled upon the consummation of such reorganization, consolidation, merger or conveyance if such SOFTBANK Entity had ownership of the Series E Preferred Stock immediately prior thereto.

5.8. Remedy for Failure to Tender Shares. In the event that any stockholder shall be required to sell his shares of stock pursuant to any provision hereof, and in the further event that such stockholder for any reason does not deliver the certificate or certificates evidencing such shares to the Person who is (or desires) to purchase such shares, in accordance with the applicable provisions of this Section 5, then the purchaser of such shares may deposit the purchase price or other consideration for such shares with any bank doing business within

fifty (50) miles of Holdings' principal office, or with Holdings' certified public accountants, as agent or trustee, or in escrow, for such stockholder, to be held by such bank or accountant until withdrawn by such stockholder. Upon such deposit by the purchaser of such consideration and upon notice to the stockholder who was required to sell, the shares of stock of such stockholder to be sold pursuant to the applicable provisions of this Section 5 shall at such time be deemed to have been sold, assigned, transferred and conveyed to such purchaser, such stockholder shall have no further rights thereto and the applicable corporation shall record such transfer in its stock transfer book.

5.9. Representations and Warranties of Holdings. Holdings hereby represents and warrants to the SOFTBANK Entities as follows:

(a) Organization, Good Standing and Qualification. Holdings is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. Holdings has all requisite corporate power and authority to own and operate its properties and assets, to carry on its business as currently conducted and as currently proposed to be conducted and, in the case of Holdings, to execute and deliver this Agreement, to issue and sell the shares of Series E Preferred Stock and to carry out the provisions of this Agreement. Holdings has made available to the undersigned true, correct and complete copies of Holdings' Certificate of Incorporation and Bylaws, each as amended to date and presently in effect.

(b) Authorization; Binding Obligations. All corporate action on the part of Holdings, its officers, directors and stockholders necessary for the due authorization, execution and delivery of this Agreement, the performance of all obligations of Holdings hereunder and the authorization, sale, issuance and delivery of the shares of Series E Preferred Stock pursuant hereto has been taken. This Agreement, when executed and delivered, will be the valid and binding obligation of Holdings enforceable against Holdings, in accordance with its terms, except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium or other laws of general application affecting enforcement of creditors' rights; and (ii) as limited by general principles of equity that restrict the availability of specific performance, injunctive relief or other equitable remedies. The issuance of the shares of Series E Preferred Stock is not and will not be subject to any preemptive rights or rights of first refusal.

(c) Series E Preferred Stock. The shares of Series E Preferred Stock, when issued and delivered in accordance with the terms of this Agreement, will be duly and validly issued, and when the shares of Common Stock held by the SOFTBANK Entities are delivered as consideration for the receipt of such shares of Series E Preferred Stock in accordance with this Section 5, will be fully

paid and non-assessable.

(d) Compliance with Other Instruments and Laws. Holdings is not in violation or default of any term of its certificate of incorporation or bylaws, or of any provision of any mortgage, indenture, contract, agreement, instrument or contract to which it is party or by which it or any of its property is bound or of any judgment, decree, order, writ, statute, rule or regulation applicable to Holdings or its properties which, individually or in the aggregate, would have a material adverse effect on the financial condition or results of operations, or the assets of Holdings. The execution, delivery, and performance of and compliance with the SOFTBANK Subscription Agreement by the Company and this Agreement by Holdings, and the issuance and sale of the shares of Common Stock held by the SOFTBANK Entities pursuant to the SOFTBANK Subscription Agreement, and the shares of Series E Preferred Stock issuable as consideration for the receipt of the shares of Common Stock pursuant hereto, will not, with or without the passage of time or giving of notice, result in any violation or default by Holdings of any term of its certificate of incorporation or bylaws, or of any provision of any mortgage, indenture, contract, agreement, instrument or contract to which it is party or by which it or any of its property is bound or (ii) of any judgment, decree, order, writ, statute rule or regulation applicable to Holdings, any or its properties, or result in the creation of any lien upon any of the

properties or assets of Holdings or the suspension, revocation, impairment, forfeiture or nonrenewal of any permit, license, authorization or approval applicable to Holdings, its business or operations or any of its assets or properties which, individually or in the aggregate, would have a material adverse effect on the financial condition or results of operations, or the assets of Holdings.

5.10. Term and Performance of Put and Call Rights.

(a) Term. Unless extended or earlier terminated by the parties according to the provisions of Section 7.3 below, the term of Section 5 of this Agreement shall expire and terminate on December 31, 2003.

(b) Specific Performance. Holdings and the SOFTBANK Entities agree that the shares of Common Stock held by the SOFTBANK Entities and the Series E Preferred Stock are unique, that failure to perform the obligations provided by Section 5 of this Agreement shall result in immediate and irreparable damage and that specific performance of these obligations may be obtained by a lawsuit in equity.

6. Non-Competition Covenant. Holdings hereby agrees that, for the period commencing on the date of the closing of the transactions contemplated by the

ePlanet Preferred Stock Subscription Agreement and ending five (5) years thereafter, none of Holdings, OptiMark or any Affiliate of either Holdings or OptiMark, other than the SOFTBANK Entities, any Affiliate of a SOFTBANK Entity (other than Holdings or the Company), the ePlanet Entities, any Affiliate of an ePlanet Entity (other than the Company), the Company or a direct subsidiary of the Company, shall (i) design, implement or operate a system or service for itself, (ii) operate a system for a third party that matches or fills equity orders for Securities priced at the VWAP or (iii) design, develop, create or issue any derivative instrument whose specifications or pricing is derived from the VWAP of an underlying equity security or index of securities.

7. Miscellaneous.

7.1. Assignment; No Third Party Beneficiaries. No Party shall be entitled to assign this Agreement without the prior written consent of the other Parties hereto; provided, however, that (i) OptiMark may assign its rights (solely in connection with the assumption of their obligations) to an Affiliate, and (ii) the SOFTBANK Entities and the ePlanet Entities may assign their rights (solely in connection with the assumption of their obligations) to any Affiliate of such SOFTBANK Entity or ePlanet Entity, as the case may be, including, without limitation, any other partnership or other entity of which any direct or indirect subsidiary of such SOFTBANK Entity or ePlanet Entity or any Affiliate thereof is a general partner or has investment discretion, or any employees of the foregoing subject to applicable securities laws; and provided further that any such assignee, as a condition of such assignment, must agree in writing to be bound by the provisions of this Agreement and any related agreement. The provisions hereof shall inure to the benefit of, and be binding upon, the successors and assigns of the Parties hereto. This Agreement and the rights contained herein shall not run to the benefit of or be enforceable by any third Person other than a Party and its respective successors and permitted assigns.

7.2. Negotiated Document; Gender. This Agreement is a compilation of the efforts and negotiations of the Parties hereto and their respective counsel, if any. Accordingly, this Agreement should not be interpreted in favor of one Party over another as a matter of drafting. The use of any gender herein shall be deemed to be or include the other gender and the use of the singular herein shall be deemed to be or include the plural (and vice versa), wherever appropriate.

7.3. Changes; Waiver. No change or modification of this Agreement shall be valid unless the same is in writing and signed by all the Parties hereto. No waiver of any provision of this Agreement shall be valid unless in writing and signed by the Person against whom the Agreement is sought to be enforced. The failure of any Party at any time to insist upon strict performance of any condition, promise, agreement or understanding set forth herein shall not be

construed as a waiver or relinquishment of the right to insist upon strict performance of the same or any other condition, promise, agreement or understanding at a future time.

7.4. Entire Agreement. This Agreement sets forth all of the promises, agreements, conditions, understandings, warranties and representations among the Parties hereto with respect to the matters set forth herein. This Agreement is, and is intended by the Parties to be, an integration of any and all prior agreements or understandings, oral or written, with respect to the matters set forth herein.

7.5. Governing Law. This Agreement shall be governed by and construed under the laws of the State of Delaware without regard to principles of conflicts of laws.

7.6. Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

7.7. Notices. Any and all notices, requests or other communications provided for herein shall be given in writing and shall be deemed to have been duly given: (i) on the date of delivery if personally delivered by hand, (ii) upon the third day after such notice is (a) deposited in the United States mail, if mailed by registered or certified mail, postage prepaid, return receipt requested, or (b) sent by nationally recognized express courier, or (iii) by facsimile upon written confirmation (other than automatic confirmation that is received from the recipient's facsimile machine) of receipt by the recipient of such notice:

If to Holdings, OptiMark or the Company:

OptiMark Holdings, Inc.
10 Exchange Place
Jersey City, New Jersey 07302
Attn: General Counsel
Telephone Number: (201) 536-7000
Facsimile Number: (201) 946-0742

with a copy to:

Cummings & Lockwood
Four Stamford Plaza
107 Elm Street
Stamford, Connecticut 06902

Attn: Thomas J. Freed
Telephone Number: (203) 327-1700
Facsimile Number: (203) 351-4535

If to any SOFTBANK Entity:

SOFTBANK Capital Partners LLC
1188 Centre Street
Newton Center, Massachusetts 02459
Attention: Ron Fisher
Facsimile Number: (617) 928-9301

with a copy to:

Sullivan & Cromwell
1870 Embarcadero Road
Palo Alto, California 94303
Attention: John L. Savva
Telephone Number: (650) 461-5600
Facsimile Number: (650) 461-5700

If to any ePlanet Entity:

Draper Fisher Jurvetson ePlanet Ventures, L.P.
400 Seaport Court, Suite 102
Redwood City, California 94063
Attention: Asad Jamal
Telephone Number: (650) 599-9000
Facsimile Number: (650) 599-9629

with a copy to:

Simpson Thacher & Bartlett
3330 Hillview Avenue
Palo Alto, CA 94304
Attention: Michael J. Nooney
Telephone Number: (650) 251-5070
Facsimile Number: (650) 251-5002

7.8. Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, such provision shall be excluded from this Agreement and the balance of the Agreement shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its

terms.

7.9. Expenses. Each Party shall bear its own expenses and legal fees in connection with the negotiation and execution of this Agreement; provided, however, that upon execution of this Agreement, the Company shall reimburse each of the SOFTBANK Entities, the ePlanet Entities and Holdings for their respective fees and expenses (including reasonable attorneys' fees and expenses) related to the due diligence, negotiation and execution of this Agreement and the transactions contemplated by the ePlanet Subscription Agreements and the Securities Purchase Agreement.

7.10. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[Signature pages follow]

IN WITNESS WHEREOF, the parties hereto have executed this Investors' Rights Agreement as of the date first set forth above.

OPTIMARK INNOVATIONS INC.

By: /s/ Robert J. Warshaw

Name: Robert J. Warshaw
Title: President

OPTIMARK, INC.

By: /s/ Robert J. Warshaw

Name: Robert J. Warshaw
Title: CEO

OPTIMARK HOLDINGS, INC.

By: /s/ Robert J. Warshaw

Name: Robert J. Warshaw
Title: CEO

SOFTBANK CAPITAL PARTNERS LP

By: SOFTBANK Capital Partners LLC,

its general partner

By: /s/ Ronald D. Fisher

Name:
Title:

SOFTBANK CAPITAL LP

By: SOFTBANK Capital Partners LLC,
its general partner

By: /s/ Ronald D. Fisher

Name:
Title:

SOFTBANK CAPITAL ADVISORS FUND LP

By: SOFTBANK Capital Partners LLC,
its general partner

By: /s/ Ronald D. Fisher

Name:
Title:

DRAPER-FISHER JURVETSON EPLANET VENTURES, L.P.

By: Draper Fisher Jurvetson ePlanet
Partners, Ltd., its general partner

By: /s/ Asad Jamal

Name:
Title:

DRAPER FISHER JURVETSON EPLANET PARTNERS
FUND, LLC

By: /s/ John Fisher

Name:
Title:

DRAPER FISHER JURVETSON EPLANET VENTURES

GMBH & CO. KG
By: Draper Fisher Jurvetson ePlanet SLP Germany, Ltd., its special limited partner

By: /s/ Asad Jamal

Name:
Title:

EXHIBIT A

DEFINITIONS ADDENDUM

This Definitions Addendum is an attachment to and part of that certain Amended and Restated Investors' Rights Agreement dated as of May ___, 2002 by and among the Company and the other Parties signatory thereto. Except as otherwise stated in the Agreement, the following terms shall have the following meanings:

1. "Act" means the Securities Act of 1933, as amended.

2. "Additional Stock" has the meaning set forth in Section 3.2 of this Agreement.

3. "Affiliate" or "Affiliates" has the meaning set forth in Rule 12b-2 of the 1934 Act, or any successor thereto.

4. "Agreement" means this Amendment and Restated Investors' Rights Agreement, dated as of the date set forth above, among the Parties, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules hereto.

5. "Available Additional Stock" has the meaning set forth in Section 3.2 of this Agreement.

6. "Available Transferred Shares" has meaning set forth in Section 4.1 of this Agreement.

7. "Board of Directors" means the board of directors of the Company.

8. "Capital Advisors" has the meaning set forth in the preamble to this Agreement.

9. "Capital Partners" has the meaning set forth in the preamble to this Agreement.

10. "Common Stock" means the Company's common stock, par value $.01 per share held by a Party or its permitted transferees.

11. "Company" has the meaning set forth in the preamble to this Agreement.

12. "Company Liquidity Event" means any of the following: (A) the Company's sale, conveyance or other disposition of all or substantially all of its assets; (B) the acquisition of the Company by another entity by means of merger or consolidation resulting in the exchange of the outstanding shares of the Company for securities or other consideration issued, or caused to be issued, by the acquiring entity or its subsidiary, unless the stockholders of the Company immediately prior to the consummation of such transaction hold at least 50% of the voting power of the surviving corporation as a result of such transaction; (C) the consummation by the Company of a transaction or series of related transactions (which in no event shall

include the Formation), including the issuance or sale of voting securities, if the stockholders of the Company immediately prior to such transaction (or, in the case of a series of transactions, the first of such transactions) hold less than 50% of the voting power of the Company immediately after the consummation of such transaction (or, in the case of a series of transactions, the last of such transactions); or (D) any initial underwritten public offering of the Company's common stock.

13. "Debt" of any Person means, without duplication, all liabilities, obligations and indebtedness of such Person, of any kind or nature, now or hereafter owing, arising, due or payable, howsoever evidenced, created, incurred, acquired or owing, whether primary, secondary, direct, contingent, fixed or otherwise, consisting of indebtedness for borrowed money or the deferred purchase price of real or personal property.

14. "Discretionary Call" has the meaning set forth in Section 5.4 of this Agreement.

15. "Drag Along Notice" has the meaning set forth in Section 4.2 of this Agreement.

16. "Dragging Parties" has the meaning set forth in Section 4.2 of this Agreement.

17. "ePlanet Designee" has the meaning set forth in Section 3.4 of this

Agreement.

18. "ePlanet Entities" has the meaning set forth in the preamble to this Agreement.

19. "ePlanet Common Stock Subscription Agreement" has the meaning set forth in the recitals to this Agreement, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules thereto.

20. "ePlanet Preferred Stock Subscription Agreement" has the meaning set forth in the recitals to this Agreement, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules thereto.

21. "ePlanet Subscription Agreements" has the meaning set forth in the recitals to this Agreement, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules thereto.

22. "First Call Exercise Notice" has the meaning set forth in Section 5.2 of this Agreement.

23. "First Call Exercise Period" has the meaning set forth in Section 5.2 of this Agreement.

24. "First Call Right" has the meaning set forth in Section 5.2 of this Agreement.

25. "First Put Exercise Notice" has the meaning set forth in Section 5.3 of this Agreement.

26. "First Put Exercise Period" has the meaning set forth in Section 5.3 of this Agreement.

27. "First Put Right" has the meaning set forth in Section 5.3 of this Agreement.

28. "Form S-3" means such form under the Act as in effect on the date hereof or any registration form under the Act subsequently adopted by the SEC which permits inclusion or incorporation of substantial information by reference to other documents filed by the Company with the SEC.

29. "GAAP" has the meaning set forth in Section 3.1 of this Agreement.

30. "Holder" means any Party owning or having the right to acquire Registrable

Securities or any assignee thereof in accordance with Section 2.17 hereof.

31. "Holdings" has the meaning set forth in the preamble to this Agreement.

32. "Holdings Board" means the board of directors of Holdings.

33. "Independent Committee" means the independent committee of the Holdings Board.

34. "Initiating Holders" has the meaning set forth in Section 2.5 of this Agreement.

35. "IPO" means an initial firm commitment underwritten public offering by the Company of its Common Stock under an effective registration statement under the Act which results in the Company's Common Stock being quoted on a national securities exchange and for an offering price resulting in gross proceeds to the Company of not less than thirty million dollars ($30,000,000).

36. "Liquidity Notice" has the meaning set forth in Section 5.4 of this Agreement.

37. "Mandatory Call" has the meaning set forth in Section 5.5 of this Agreement.

38. "Mandatory Call Period" has the meaning set forth in Section 5.5 of this Agreement.

39. "1934 Act" shall mean the Securities Exchange Act of 1934, as amended.

40. "Non-Dragging Parties" has the meaning set forth in Section 4.2 of this Agreement.

41. "Non-Qualified Preferred Stock" means the Company's Non-Qualified Preferred Stock, par value $.01 per share held by a Party or its permitted transferees.

42. "Notice" has the meaning set forth in Section 3.2 of this Agreement.

43. "OptiMark" has the meaning set forth in the preamble to this Agreement.

44. "OptiMark Designee" and "OptiMark Designees" have the meanings set forth in Section 3.4 of this Agreement.

45. "OptiMark Subscription Agreement" has the meaning set forth in the recitals

to this Agreement, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules thereto.

46. "Option Plan" means the Company's Stock Option Plan as approved by the Board of Directors and in effect from time to time following the date of this Agreement.

47. "Original Rights Agreement" has the meaning set forth in the recitals to this Agreement.

48. "Party" or "Parties" have the meanings set forth in the preamble to this Agreement.

49. "Person" means any natural person, sole proprietorship, partnership, limited liability company, joint venture, trust, unincorporated organization, association, corporation, governmental authority, or any other entity.

50. "Prohibited Transfer" has the meaning set forth in Section 4.2 of this Agreement.

51. "Pro Rata Share" has the meaning set forth in Section 3.2 of this Agreement.

52. "Purchase Price" has the meaning set forth in Section 5.3 of this Agreement.

53. "Qualifying Transfer" means a Transfer of all or any portion of the capital stock of the Company for Transaction Value of not less than five million dollars ($5,000,000). For purposes of this Agreement, Transfers during any twelve (12) month period which do not individually constitute a Qualifying Transfer shall be aggregated and the individual Transfer that, when aggregated with Transfers for the preceding twelve (12) months, exceeds the Qualifying Transfer threshold shall trigger the rights set forth in Section 4.2 of the Agreement.

54. The term "register", "registered" and "registration" refer to a registration effected by preparing and filing a registration statement or similar document in compliance with the Act, and the declaration or ordering of effectiveness of such registration statement or document.

55. "Registrable Securities" means (i) the Restricted Securities, and (ii) any capital stock of the Company issued as (or issuable upon the conversion or exercise of any warrant, right or other security which is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of the shares referenced in clause (i) above. Notwithstanding the foregoing, Registrable Securities shall not include any securities of the Company sold by a Person to the public pursuant to either (i) a registration statement duly filed under the Act and declared effective by the SEC, or (ii) a transaction permitted under Rule 144 of the Act.

56. The number of shares of "Registrable Securities then outstanding" shall be determined by the number of shares of Common Stock outstanding which are, and

the number of shares of Common Stock issuable pursuant to then exercisable or convertible securities which are, Registrable Securities.

57. "Restricted Securities" has the meaning set forth in Section 2.1 of this Agreement.

58. "ROF Notice" has the meaning set forth in Section 4.1 of this Agreement.

59. "SEC" means the Securities and Exchange Commission.

60. "Second Notice" has the meaning set forth in Section 3.2 of this Agreement.

61. "Second Put Exercise Notice" has the meaning set forth in Section 5.6 of this Agreement.

62. "Second Put Exercise Period" has the meaning set forth in Section 5.6 of this Agreement.

63. "Second Put Right" has the meaning set forth in Section 5.6 of this Agreement.

64. "Second ROF Notice" has the meaning set forth in Section 4.1 of this Agreement.

65. "Securities" means all equity securities and equity derivatives listed on a securities exchange or eligible for quotation on a securities quotation system in the United Stated or Canada, other than American Depository Receipts, American Depository Shares and similar instruments.

66. "Securities Purchase Agreement" means the Securities Purchase Agreement, dated as of February 4, 2002, as amended on March 6, 2002 and May 3, 2002, by and between the Company and The Ashton Technology Group.

67. "Series B Preferred Stock" means the Company's Series B Preferred Stock, par value $.01 per share held by a Party or its permitted transferees.

68. "Series E Preferred Stock" means the Series E Preferred Stock, par value $0.01 per share, of Holdings.

69. "SOFTBANK Capital" has the meaning set forth in the preamble to this Agreement.

70. "SOFTBANK Designee" has the meaning set forth in Section 3.4 of this Agreement.

71. "SOFTBANK Entity" and "SOFTBANK Entities" have the meanings set forth in the preamble to this Agreement.

72. "SOFTBANK Subscription Agreement" has the meaning set forth in the recitals to this Agreement, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules thereto.

73. "Subscribing Party" has the meaning set forth in Section 3.2 of this Agreement.

74. "Transaction Value" means the aggregate value of the proceeds and other consideration to be received by the Dragging Parties, in exchange for or with respect to the shares of Common Stock in connection with a Transfer, including, without limitation: (i) cash; (ii) notes, securities and other property; (iii) liabilities, including all debt, pension liabilities and guarantees, assumed; (iv) payments made in installment; (v) amounts paid or payable under agreements not to compete or similar agreements; (vi) amounts paid under contractual arrangements (including lease arrangements, management fees, put or call agreements); (vii) contingent payments (whether or not related to future earnings or operations); and (viii) amounts held in escrow. For purposes of computing Transaction Value, non-cash consideration shall be valued as follows: (x) contingent and installment payments shall be valued based upon the estimated net present value thereof using an appropriate discount rate as reasonably determined in good faith by the parties, (y) publicly traded securities shall be valued at the average of their closing prices (as reported in The Wall Street Journal) for five trading days prior to the closing of the Transfer and (z) any other non-cash consideration shall be valued at the fair market value thereof as reasonably determined in good faith by the parties; provided that if such parties are unable to agree on -------- a fair market value for such non-cash consideration, the parties shall submit such issue to a panel of three arbitrators located in New York, New York (with one arbitrator being chosen by each party and the third being chosen jointly by the parties) for determination, which determination shall be binding upon each of the parties.

75. "Transfer" or "Transferred" means (i) any sale, transfer, gift, assignment, distribution, charge or lien in or other disposition of a security including, without limitation, any transfer of bankruptcy assets pursuant to the U.S. Bankruptcy Code or (ii) permitting any such action with respect to, or interest to exist in, a security, except that as used in Section 2.1 hereof Transfer shall also mean any pledge, encumbrance, hypothecation, mortgage or granting of a security interest.

76. "Transferring Party" has the meaning set forth in Section 4.1 of this Agreement.

77. "Transferred Shares" has the meaning set forth in Section 4.1 of this Agreement.

78. "Violation" has the meaning set forth in Section 2.15 of this Agreement.

79. "VWAP" means Volume Weighted Average Price.

Exhibit 4.3

THE ASHTON TECHNOLOGY GROUP, INC.

SENIOR SECURED
CONVERTIBLE PROMISSORY NOTE

$2,727,273 May 3, 2002

This Senior Secured Convertible Promissory Note and the securities issuable upon its conversion have not been registered under the Securities Act of 1933, as amended (the "Act") or other state securities laws, and have been acquired for investment and not with a view to, or in connection with, the sale or distribution thereof. No such sale or disposition may be effected (i) without an effective registration statement related thereto or an opinion of counsel that such registration is not required under the Act and (ii) unless there shall have been compliance with all applicable state securities or "blue sky" laws.

FOR VALUE RECEIVED, the undersigned, THE ASHTON TECHNOLOGY GROUP, INC., a Delaware corporation, or its successors or assigns (the "*Company*"), hereby promises to pay to OPTIMARK INNOVATIONS INC., a Delaware corporation or other holder hereof (the "*Holder*"), the principal sum of TWO MILLION SEVEN HUNDRED TWENTY SEVEN THOUSAND TWO HUNDRED SEVENTY THREE AND 00/100 DOLLARS ($2,727,273.00) in lawful money of the United States of America, together with interest thereon as, and under the conditions, set forth herein. This Note is subject to the following terms and conditions:

1. Stock Purchase Agreement. This Note is issued under and pursuant to the terms of a Stock Purchase Agreement dated as of February 4, 2002 (as amended on March 6, 2002 and May 3, 2002, the "*Stock Purchase Agreement*") by and between the Company and the Holder. Capitalized terms used herein but not defined herein shall have the meanings ascribed to such terms in the Stock Purchase Agreement.

2. Payment. Payment of both principal and interest on this Note shall be in such coin or currency of the United States of America as at the time of payment shall be legal tender for the payment of public and private debts and shall be payable at the principal office of the Holder or at such other address designated in writing by the Holder to the Company.

3. Pre-Payment. The Company may prepay, without penalty or premium, all or any portion of the unpaid principal amount of this Note, together with accrued interest on the amount prepaid.

4. Secured Obligation. The loan evidenced by this Note is secured by a first priority security interest in all of the assets of the Company, including, without limitation, the pledge by the Company of its right, title and interest in each of its subsidiaries, pursuant to that certain Pledge and Security Interest, dated as of the date hereof (the "*Security Agreement*"), by and among the Holder, the Company and Universal Trading Technologies Corporation, a Delaware corporation and majority-owned subsidiary of the Company.

5. Maturity. On May 3, 2007, the entire unpaid principal balance of this Note, together with any accrued and unpaid interest hereon and any other sums owing hereunder, under the Stock Purchase Agreement and under the Security Agreement, shall become due and payable in full, without notice or demand.

6. Interest. Subject to the provisions of Section 14 below, from the date hereof interest shall accrue on the unpaid principal balance under this Note at a rate equal to seven and a half percent (7.50%) *per annum* (the "*Interest Rate*"), and shall be due and payable semi-annually and on the Maturity Date. Interest accruing hereunder will be computed on the basis of a year of 360 days and paid for the actual number of days elapsed (including the first but excluding the last day).

7. Conversion.

(a) Optional Conversion. At any time and from time to time prior to the Maturity Date, at the option of the Holder, all or any part of the then outstanding principal amount and interest of this Note (the "*Conversion Amount*"), may be converted (the "*Conversion*") into a number of shares of Common Stock, par value $.01 of the Company, (the "*Conversion Shares*") equal to the Conversion Amount divided by the Conversion Rate. For purposes of this Note, the "*Conversion Rate*" shall be equal to $.0515838, as adjusted from time to time as set forth below. All Conversion Shares issued upon the Conversion shall be included as "Registrable Securities" under the Investors' Rights Agreement and shall be subject to the rights and obligations under that agreement. Each of the Company and the Holder shall perform such acts and execute such documents and instruments as are reasonably requested by the other to the matters set forth in this Section 7(a).

(b) Mechanics of Conversion. In order to exercise the Conversion right, the Holder shall surrender this Note at the principal office of the Company and shall give written notice of such exercise, substantially in the form of Exhibit A attached hereto (the "*Conversion Notice*"), to the Company at such office. Subject to compliance with Section 7(e) below, such Conversion shall be deemed to have been effected at the close of business on the date on which such Conversion Notice, duly completed and executed, shall have been given as aforesaid or such later date as the Holder may require as set forth in the Conversion Notice, which date, subject to Section 7(e) below, shall not be more than 15 days after the date of the Conversion Notice, and, at such time the rights of the Holder with respect to such portion of the

principal amount of the Note as is subject to such Conversion shall cease, as such, and the Holder shall be deemed for all purposes to have become the Holder of the Conversion Shares.

(c) Consolidation, Merger or Sale of Assets. The Conversion Rate shall be subject to appropriate adjustment in the event of any stock, dividend, stock split, reverse stock split, recapitalization,

reclassification, merger, combination, consolidation or other similar transaction occurring on or after the date of this Note and prior to the Conversion. Upon each occurrence of any event described in the immediately preceding sentence, the Conversion Rate in effect immediately prior to such event shall be adjusted (and any other appropriate actions shall be taken by the Company) so that the Holder, upon the Conversion, shall be entitled to receive the number and type of Conversion Shares that the Holder would have owned or would have been entitled to receive upon or by reason of any of the events described above, had this Note been converted immediately prior to the date of such event, or if such event has a record date, then the record date applicable to such event. An adjustment made pursuant to the immediately preceding sentence shall become effective retroactively to the close of business on the day upon which such event becomes effective.

(d) Certificates. As promptly as practicable, but in no event later than five (5) Business Days after any Conversion, the Company shall issue and deliver, or cause to be delivered, to the Holder the certificate or certificates representing the Conversion Shares (the "*Certificates*") and a new Note (containing terms substantially identical to this Note) in a principal amount equal to (i) the outstanding principal amount immediately prior to the Conversion, minus (ii) the Conversion Amount so converted in the Conversion. Notwithstanding any provision of this Note to the contrary, no Conversion shall be deemed to have occurred unless and until the Certificates shall have been delivered to the Holder, together with the new Note, whereupon such Conversion shall be deemed to have been effective as of the date set forth for Conversion in the Conversion Notice; provided, however, that no failure by the Company to deliver the Certificates or the new Note shall prohibit the Holder from exercising his rights as the Holder of the Conversion Shares.

(e) Compliance Matters. The Company and the Holder shall use reasonable commercial efforts to assure that all Conversion Shares issued hereunder may be so issued without violation of any applicable law or governmental regulation or any requirements of any domestic securities exchange upon which Conversion Shares may be listed (except for official notice of issuance which shall be immediately delivered by the Company upon each such issuance) and shall cooperate in making any governmental filings or obtaining any governmental approvals required in connection with any Conversion. Notwithstanding anything to the contrary contained herein but subject to the obligations of the Company and the Holder under the prior sentence, if the Company reasonably determines that, in connection with the Conversion, it is necessary to list, register or qualify the Conversion Shares underlying this Note on any securities exchange or under any law, to notify or receive consent or approval of any governmental entity or third party, or to take an action such that the issuance of the Conversion Shares does not violate any law, rule or regulation to which the Company or its business is subject, then no Conversion may be effected, in whole or in part, and no Conversion Shares may be issued, unless such conditions and requirements have been satisfied in a manner that is reasonably acceptable to the Company and the Company and the Holder

shall take such commercially reasonable actions as may be necessary to cause such conditions and requirements to be satisfied.

(f) Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon any Conversion of this Note. With respect to any fraction of a share which would otherwise be issuable upon any such Conversion, the Company shall pay such fractional amount in cash.

(g) Taxes on Conversion. The Company's issue of the Certificate(s) on a Conversion of this Note shall be made without charge to the Holder for any tax in respect of the issue (but not the ownership) thereof.

8. Compliance with Laws. It is expressly stipulated and agreed to by the Company and the Holder at all times that it is their intent to comply with applicable state law or applicable United States federal law (to the extent it permits the Holder to contract for, charge, take, reserve or receive a greater amount of interest than under state law) and that this section shall control every other covenant and agreement in this Note and the related Security Agreement. If the applicable law (state or federal) is ever judicially interpreted so as to render usurious any amount called for under this Note, or contracted for, charged, taken, reserved or received with respect to the indebtedness evidenced by this Note, then it is the Company' s and the Holder' s express intent that all excess amounts theretofore collected by the Holder be credited on the principal balance of this Note (or, if this Note has been or would thereby be paid in full, refunded to the Company), and the provisions of this Note and the Security Agreement immediately be deemed reformed and the amounts thereafter collectible hereunder and thereunder reduced, without the necessity of the execution of any new document, so as to comply with the applicable law, but so as to permit the recovery of the fullest amount otherwise called for hereunder and thereunder.

9. Waiver of Presentment, etc. The Company and all endorsers of this Note hereby waive presentment, demand, protest and notice. The Holder shall, promptly upon full payment by the Company of the principal of and interest on this Note, together with all costs and expenses, if any, due hereon, surrender this Note to the Company, for retirement and cancellation; provided, however, that to the extent the Company make a payment or payments to the Holder, which payment or payments or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, and/or required to be repaid to a trustee, receiver, or any other party under the United States Bankruptcy Code, as amended, any state or federal law, common law, or equitable causes (a "*Voidable Transfer*") and the Holder is required to repay or restore any such Voidable Transfer or the amount or any portion thereof, or upon the advice of its counsel is advised to do so, then as to any such Voidable Transfer or the amount repaid or restored (including all reasonable costs, expenses and attorneys' fees of the Holder related thereto), the joint and several liability of the Company shall automatically be revived, reinstated and restored and shall exist in full force and effect as though such Voidable Transfer had never been made.

10. Collection Costs. Should the indebtedness evidenced by this Note or any part thereof be collected in any proceeding at law, or this Note be placed in the hands of attorneys for collection after default by the Company in making due and punctual payment of

principal at maturity and interest hereunder, the Company agrees to pay all costs of collecting this Note, including reasonable attorneys' fees and expenses and court costs, if any.

11. Information Rights. For so long as any amounts remain outstanding under this Note, the Company shall be required to provide the Holder with the following:

(a) annual audited consolidated financial statements within 90 days of fiscal year end;

(b) (i) monthly consolidated unaudited statements with comparisons to budget and prior year within 30 days of month-end and (ii) quarterly unaudited consolidated statements with comparisons to budget and prior year within 45 days of the end of each fiscal year' s first three fiscal quarters;

(c) not later than 45 days prior to each fiscal year-end, a consolidated operating budget for the next fiscal period which has been approved by the Board;

(d) as soon as practicable, copies of all reports filed with the SEC;

(e) as soon as practicable, copies of all correspondence to and from the National Association of Securities Dealers, Inc. (the "*NASD*"), the Philadelphia Stock Exchange Inc., the Toronto Stock Exchange Inc. and the NASDAQ Stock Market;

(f) the right of the Holder, on reasonably prior notice to the Company, to inspect the books and records of the Company as well as visit and inspect any of the properties of the Company;

(g) prompt notice of events of default under any material agreement, including, without limitation, any Event of Default under this Note.

12. Assignment. Neither this Note nor the rights and obligations of the Company may be assigned by the Company without the prior written consent of the Holder and any attempted assignment in contravention of this Note shall be null and void and of no effect. The Holder may assign its rights or obligations hereunder to any Affiliate of the Holder; provided that, in the event that any such assignment is in violation of any federal securities laws or any rules or regulations of the NASD or would result in the delisting of the Company' s securities from the Nasdaq OTC Bulletin Board, such assignment shall be null and void and of no force or effect. This Note when surrendered for assignment or transfer by the Holder shall be accompanied by the Assignment Form, substantially in the form of Exhibit B attached hereto, duly executed by the Holder. Effective upon any such assignment, the Person to whom such rights, interests and obligations were assigned shall have and exercise all of the Holder' s rights, interest and obligations hereunder as if such Person were the original Holder of this Note.

13. No Rights as Stockholder; Note is Debt. This Note does not entitle the Holder hereof to any voting rights or other rights as a stockholder of the Company. The Company shall treat, account and report this Note as debt and not equity for accounting and tax purposes.

14. Event of Default. Upon the happening of any Event of Default (as defined below), (i) the principal of and accrued and unpaid interest on the Note shall ipso facto become and be immediately due and payable without any declaration or other act on the part of any holder, (ii) the Holder shall have and may exercise any and all rights and remedies available to him under the terms of this Note, the Stock Purchase Agreement and the Security Agreement and (iii) the Holder shall have and may exercise any and all rights and remedies available to it, at law and in equity. For purposes hereof, "*Event of Default*" means the occurrence of any of the following:

(a) the breach of any term or obligation of the Company under this Note, including, without limitation, the failure to pay when due interest and/or principal amounts under the Note;

(b) the breach of any term or obligation of the Company under the Stock Purchase Agreement, the Security Agreement or the Investors' Rights Agreement;

(c) the breach of any term or obligation of the Company under the Rose Glen Note, as amended, restated, supplemented, re-structured or otherwise modified from time to time;

(d) the entry of a decree or order for relief by a court having jurisdiction in the premises in respect of the Company in an involuntary case under the federal bankruptcy laws, as now constituted or hereafter amended, or any other applicable federal or state bankruptcy, insolvency or other similar laws, or appointing a receiver, liquidator, assignee, custodian, trustee, sequestrator (or similar official) of the Company or for any substantial part of their property, or ordering the winding-up or liquidation of any of their affairs and the continuance of any such decree or order unstayed and in effect for a period of 60 consecutive days; or

(e) the commencement by the Company of a voluntary case under the federal bankruptcy laws, as now constituted or hereafter amended, or any other applicable federal or state bankruptcy, insolvency or other similar laws, or the consent by any of them to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee, sequestrator (or similar official) of the Company or for any substantial part of its property, or the making by it of any assignment for the benefit of creditors, or the failure by the Company generally to pay its debts as such debts become due, or the taking of corporate action by the Company in furtherance of or which might reasonably be expected to result in any of the foregoing.

15. Loss, Theft or Destruction of Note. Upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft or destruction of this Note and of indemnity or security reasonably satisfactory to it, the Company will make and deliver a new Note which shall carry the same rights to interest (unpaid and to accrue) carried by this Note, stating that such Note is issued in replacement of this Note, making reference to the original date of issuance of this Note (and any successors hereto) and dated as of such cancellation, in lieu of this Note.

16. Seniority. To the fullest extent permitted by law, all principal and interest on this Note shall be senior to any and all other indebtedness of the Company covenants and agrees that it shall incur no indebtedness to rank senior to the indebtedness evidenced by this Note without the prior written approval of the Holder and a tri-party subordination agreement with terms and conditions satisfactory to the Holder.

17. Definitions. As used in this Note, the following terms shall have the following meanings:

(a) "*Act*" means the Securities Act of 1933, as amended.

(b) "*Affiliate*" has the meaning specified in Rule 12b-2 under the Exchange Act, and the rules and regulations promulgated thereunder.

(c) "*Board*" means the board of directors of the Company.

(d) "*Business Day*" means any day other than a Saturday, Sunday or other day on which banks in the City of New York are required or authorized to be closed.

(e) "*Certificates*" has the meaning set forth in Section 7(d).

(f) "*Common Stock*" means the Company's common stock, par value $.01 per share.

(g) "*Company*" has the meaning set forth in the preamble.

(h) "*Conversion*" has the meaning set forth in Section 7(a).

(i) "*Conversion Amount*" has the meaning set forth in Section 7(a).

(j) "*Conversion Notice*" has the meaning set forth in Section 7(b).

(k) "*Conversion Rate*" has the meaning set forth in Section 7(a).

(l) "*Conversion Shares*" has the meaning set forth in Section 7(a).

(m) "*Event of Default*" has the meaning set forth in Section 11.

(n) "*Exchange Act*" means the Securities Exchange Act of 1934, as amended.

(o) "*Holder*" has the meaning set forth in the preamble.

(p) "*Interest Rate*" has the meaning set forth in Section 6.

(q) "*NASD*" has the meaning set forth in Section 11.

(r) "*Note*" means this 7.50% Senior Secured Convertible Note of the Company, as may be adjusted as provided herein.

(s) "*Person*" means any natural person, firm, corporation, propriety, public or private company, partnership, limited liability company, public liability company, trust or other entity, and shall include any successor (by merger or otherwise) of such entity.

(t) "*SEC*" means the Securities and Exchange Commission.

(u) "*Security Agreement*" has the meaning set forth in Section 4, as the same may be amended, restated, supplemented or otherwise modified from time to time and including all attachments, exhibits, appendices and schedules thereto.

(v) "*Stock Purchase Agreement*" has the meaning set forth in Section 1, as the same may be amended, restated, supplemented or otherwise modified from time to time and including all attachments, exhibits, appendices and schedules thereto,

(w) "*Voidable Transfer*" has the meaning set forth in Section 9.

18. Miscellaneous.

(a) Notices. Any notice, request or other communications required or permitted hereunder shall be given upon personal delivery or upon the seventh day following mailing by registered airmail (or certified first class mail if both the addresser and addressee are located in the United States), postage prepaid and addressed to the parties as follows:

To the Company:

The Ashton Technology Group, Inc.
1835 Market Street, Suite 420
Philadelphia, PA 19103
Attn: William W. Uchimoto, General Counsel

with a copy to:

Christopher S. Auguste, Esq.
Jenkens & Gilchrist Parker Chapin LLP
The Chrysler Building

405 Lexington Avenue
New York, NY 10174

To the Holder:

OptiMark Innovations Inc.
c/o OptiMark Holdings, Inc.
10 Exchange Place
24th Floor
Jersey City, NY 07302

or to such other single place as any single addressee shall designate by written notice to the other addressees.

(b) Enforcement. The Company shall pay all reasonable fees and expenses, including reasonable attorney' s fees, incurred by the Holder in the enforcement of any of the Company' s obligations hereunder not performed when due.

(c) Survival of Agreement. All covenants, agreements, representations and warranties made by the Company herein shall be considered to have been relied upon by the Holder and shall survive the making of the loan and the execution and delivery to the Holder of this Note, regardless of any investigation made by the Holder or on its behalf; and shall continue in full force and effect until this Note shall terminate.

(d) Binding Effect; Several Agreement; Successors and Assigns. This Note shall become effective as to the Company when executed by the Company and delivered to the Holder, and thereafter shall be binding upon the Company and the Holder and their respective successors and permitted assigns, and shall inure to the benefit of each and their respective successors and permitted assigns.

(e) Governing Law. This Note shall be construed in accordance with and governed by the laws of the State of New York without regard to its conflicts of laws principles.

(f) Waivers. No failure or delay of the Holder in exercising any power or right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such right or power, or any abandonment or discontinuance of steps to enforce such a right or power, preclude any other or further exercise thereof or the exercise of any other right or power. The rights and remedies of the Holder hereunder are cumulative and are not exclusive of any rights or remedies that they would otherwise have. No waiver of any provisions of this Note or consent to any departure by the Company herefrom shall in any event be effective unless the same shall be permitted by the last sentence of this paragraph (f), and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on the Company in any case shall entitle the Company to any other or further notice or demand in similar or other circumstances. Neither this Note nor any provision hereof may be waived except pursuant to an agreement or agreements, in writing entered into by the Company and the Holder.

(g) Severability. In the event any one or more of the provisions contained in this Note should be held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby (it being understood that the invalidity of a particular provision in a particular jurisdiction shall not in and of itself affect the validity of such provision in any other jurisdiction). The parties shall endeavor in good-faith negotiations to replace the invalid, illegal

or unenforceable provisions with valid provisions the economic effect of which comes as close as possible to that of the invalid, illegal or unenforceable provisions.

[*signature pages follow*]

IN WITNESS WHEREOF, the Company has caused this Senior Secured Convertible Promissory Note to be executed by its officer thereunto duly authorized.

COMPANY:

THE ASHTON TECHNOLOGY GROUP, INC.

By: /s/ William W. Uchimoto
Name: William W. Uchimoto
Title: EVP & General Counsel

Exhibit A

CONVERSION NOTICE

(To Convert the foregoing Note, execute this form and supply required information.)

To: THE ASHTON TECHNOLOGY GROUP, INC.

The undersigned holder of the attached Senior Secured Convertible Promissory Note (the "*Note*"), dated as of May 3, 2002, originally executed by The Ashton Technology Group, Inc. (the "*Company*") in favor of OptiMark Innovations Inc., hereby irrevocably exercises the option to convert U.S.$_____ of the principal amount outstanding into the Conversion Shares in accordance with the terms of the Note, and directs that the Certificates representing the Conversion Shares issuable and deliverable upon such Conversion be issued and delivered by the Company to the undersigned holder hereof, unless otherwise directed by the undersigned holder below. Capitalized terms used in this Conversion Notice and not otherwise defined herein shall have the respective meanings ascribed in the Note.

Dated: _____ _____

Name of Holder

Signature of Holder

Name to appear on Certificates
(if different from above)

Exhibit B

ASSIGNMENT FORM

(To Assign the foregoing Note, execute this form and supply required information.)

FOR VALUE RECEIVED, an interest corresponding to the unpaid principal amount of the foregoing Note and all rights evidenced thereby are hereby assigned to

(Please Print)

whose address is:

Date:

Holder's Signature:

Holder's Address:

Signature Guraanteed:

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Note, without alteration or enlargement or any change whatever, and must be guaranteed by a bank or trust company. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Note.

Exhibit 4.4

INTERCREDITOR, SUBORDINATION AND STANDSTILL AGREEMENT

This INTERCREDITOR, SUBORDINATION AND STANDSTILL AGREEMENT is made as of the 3rd day of May, 2002, by and among OptiMark Innovations Inc., f/k/a OTSH, Inc., a Delaware corporation ("OII"), RGC International Investors, LDC, a Cayman Islands limited duration company ("RGC" and, together with OII, the "Creditors"), The Ashton Technology Group, Inc., a Delaware corporation (the "Borrower") and Universal Trading Technologies Corporation, a Delaware corporation and majority owned subsidiary of the Borrower ("UTTC" and, together with Borrower, the "Grantors"). OII, RGC, the Borrower and UTTC are sometimes hereinafter referred to individually as a "Party" and collectively as the "Parties".

W I T N E S S E T H:

WHEREAS, OII is contemporaneously herewith making a loan in the original principal amount of $2,727,273 to the Borrower pursuant to a certain Senior Secured Convertible Promissory Note dated as of even date herewith (the "OII Note");

WHEREAS, RGC is contemporaneously herewith making a loan in the original principal amount of $4,751,875.66 to the Borrower pursuant to the 7.50% Senior Secured Promissory Note dated as of even date herewith (the "RGC Note");

WHEREAS, the Grantors have granted to OII a security interest in the Collateral (hereinafter defined), pursuant to the terms of a certain Pledge and Security Agreement dated as of even date herewith (the "OII Security Agreement");

WHEREAS, the Grantors have granted to RGC a security interest in the Collateral (hereinafter defined), pursuant to the terms of that certain Security Agreement, those certain Collateral Pledge Agreements and those certain Collateral Assignment Agreements, all dated as of even date herewith (collectively, the "RGC Security Agreement"); and

WHEREAS, OII and RGC desire to memorialize in writing their agreements as to the priority of payment and security with respect to the obligations arising under the OII Note and the RGC Note, respectively, and the rights and remedies of OII and RGC with respect to such obligations;

NOW, THEREFORE, the Parties agree as follows:

ARTICLE I. DEFINITIONS

Section 1.1. As used herein, the following terms shall have the following meanings:

(a) "AGREEMENT" means this Intercreditor, Subordination and Standstill Agreement, dated as of the date set forth above, among the Borrower, UTTC, OII

and RGC, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules hereto.

(b) "BORROWER" has the meaning set forth in the preamble to this Agreement.

(c) "BUSINESS DAY" means any day other than a Saturday, Sunday or other day on which banks in the City of New York are required or authorized to be closed.

(d) "COLLATERAL" means all personal and fixture property of every kind and nature whether now existing or hereinafter acquired or arising, and wherever located, including without limitation all furniture, fixtures, equipment, raw materials, inventory, or other goods, accounts, contract rights, rights to the payment of money, insurance refund claims and all other insurance claims and proceeds, tort claims, chattel paper, documents, instruments, securities and other investment property, deposit accounts, rights to proceeds of letters of credit and all general intangibles including, without limitation, all tax refund claims, license fees, IP Collateral, including the IP Assets, rights to sue and recover for past infringement of Patents, Trademarks and Copyrights, service marks, customer lists, goodwill, and all licenses (including, without limitation, Licenses), permits, agreements of any kind or nature pursuant to which the Grantor possesses, uses or has authority to possess or use property (whether tangible or intangible) of others or others possess, use or have authority to possess or use property (whether tangible or intangible) of the Grantor, and all recorded data of any kind or nature, regardless of the medium of recording including, without limitation, all books and records, Software, writings, plans, specifications and schematics; and all proceeds and products of each of the foregoing.

(e) "COLLATERAL AGENT" means RGC, for purposes of Sections 2.6 and 3.7 of this Agreement.

(f) "COPYRIGHT LICENSE" means any written agreement, now or hereafter in effect, granting any right to any third party under any Copyright now or hereafter owned or held by or behalf of any Grantor or which any Grantor otherwise has the right to license, or granting any right to any Grantor under

any Copyright now or hereafter owned by any third party, and all rights of any Grantor under any such agreement, including each agreement described in Schedule 3.6 hereto or to the applicable Supplement.

(g) "COPYRIGHTS" means all of the following: (i) all copyright rights in any work subject to the copyright laws of the United States or any other country, whether as author, assignee, transferee or otherwise, and (ii) all registrations and applications for registration of any such copyright in the United States or any other country, including registrations, recordings, supplemental registrations and pending applications for registration in the United States Copyright Office or any similar offices in the United States or any other country, including those described in Schedule 3.6 hereto or to the applicable Supplement.

(h) "CREDIT DOCUMENTS" means the OII Credit Documents and the RGC Credit Documents.

(i) "CREDITORS" means, collectively, OII and RGC.

(j) "CREDIT PROCEEDING" means any dissolution, winding up, liquidation, or Insolvency Proceeding, or other event resulting in Distributions (other than Distributions in the ordinary course).

(k) "DECLARED DEFAULT NOTICE" has the meaning set forth in Section 2.4(a) of this Agreement.

(l) "DISTRIBUTION" means any payment or distribution of any kind (whether in cash, property, securities or otherwise), including, without limitation, by exercise of set-off rights by a Creditor, of all or any of the assets of the Grantors (or either Grantor) to the Creditors, other than pursuant to the last sentence of Section 2.3.

(m) "EVENT OF DEFAULT" means either a OII Event of Default or a RGC Event of Default.

(n) "GRANTORS" means, collectively, the Borrower and UTTC.

(o) "INSOLVENCY PROCEEDING" means any arrangement, reorganization, adjustment, protection, relief or composition of Grantors (or either Grantor) or its/their debts, whether in any bankruptcy, insolvency, arrangement, reorganization, receivership, relief or similar proceedings or upon an assignment for the benefit of creditors or any other marshalling of the assets and liabilities of Grantors (or either Grantor).

(p) "IP ASSETS" means all IP Collateral set forth on Exhibit A hereto, contributed to the Borrower by OII pursuant to a certain Bill of Sale and Assignment dated as of the date hereof between OII and the Borrower, and all additions, improvements and accessions to, and books and records describing or used in connection with, any of the foregoing and all proceeds and products of any of the foregoing, in whatever form received.

(q) "IP COLLATERAL" means all intellectual and similar property of any Grantor of every kind and nature, including the IP Assets, whether now owned or hereinafter acquired or arising and wherever located, including, without limitation, inventions, designs, Patents, Copyrights, Trademarks, Licenses, domain names, trade secrets, confidential or proprietary technical and business information, know-how, show-how or other data or information, Software and databases and all embodiments or fixations thereof and related documentation, registrations and franchises, and all additions, improvements and accessions to, and books and records describing or used in connection with, any of the foregoing and all proceeds and products of any of the foregoing, in whatever form received.

(r) "LICENSE" means any Copyright License, Patent License, Trademark License or other license or sublicense to which any Grantor is a party.

(s) "OBLIGATIONS" means, collectively, RGC Obligations and OII Obligations.

(t) "OII" has the meaning set forth in the preamble to this Agreement.

(u) "OII CREDIT DOCUMENTS" means the OII Note, the OII Security Agreement, and all written instruments, agreements, and assignments by which OII Obligations and any security interest or assignment for the payment thereof is evidenced or created, in each case relating to the OII Note.

(v) "OII EVENT OF DEFAULT" means an event of default under the OII Note.

(w) "OII NOTE" has the meaning set forth in the recitals to this Agreement, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules thereto.

(x) "OII OBLIGATIONS" means all indebtedness, liabilities, obligations, covenants and duties of the Borrower and/or UTTC to OII of every kind, nature and description, direct or indirect, absolute or contingent, due or not due, contractual or tortious, liquidated or unliquidated, arising by

operation of law or otherwise, now existing of hereafter arising, under the OII Credit Documents.

(y) "OII RIGHTS" means any rights or remedies OII may have to accelerate the OII Obligations or other obligations of the Borrower and/or UTTC to OII, or any other default rights or remedies with respect to the Borrower and/or UTTC or any assets of the Borrower and/or UTTC (whether or not arising in connection with the OII Note), whether under OII Credit Documents, at law, at equity or otherwise.

(z) "OII SECURITY AGREEMENT" has the meaning set forth in the recitals to this Agreement, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules thereto.

(aa) "OTHER LOANS" has the meaning set forth in Section 4.1 of this Agreement.

(bb) "PARI PASSU" means apportionment whereby each Creditor's right to Distributions shall be deemed equal in scope and priority with the other Creditor's right thereof limited to a pro-rata share equal to the relative amount of the Obligations owing to such Creditor as of the date of such Distribution. For example, if the outstanding amount of the RGC Obligations is $1,000,000, and the outstanding amount of the OII Obligations is $3,000,000, then RGC shall receive 25% and OII shall receive 75% of Distributions until the Obligations of the Creditors are satisfied.

(cc) "PARI PASSU OBLIGATIONS" means thirty percent (30%) of the original principal amount of the RGC Note calculated as of the date of this Agreement, or $1,425,562.70, plus accrued but unpaid interest on the RGC Obligations.

(dd) "PARTY" or "Parties" have the meanings set forth in the preamble to this Agreement.

(ee) "PATENT LICENSE" means any written agreement, now or hereafter in effect, granting to any third party any right to make, use or sell any invention on which a Patent, now or hereafter owned or held by or on behalf of any Grantor or which any Grantor otherwise has the right to license, is in existence, or granting to any Grantor any right to make, use or sell any invention on which a Patent, now or hereafter owned by any third party, is in existence, and all rights of any Grantor under any such agreement, including each agreement described in Schedule 3.6 hereto or to the applicable Supplement.

(ff) "PATENTS" means all of the following: (i) all letters patent of

the United States or any other country, all registrations and recordings thereof and all applications for letters patent of the United States or any other country, including registrations, recordings and pending applications in the United States Patent and Trademark Office or any similar offices in the United States or any other country, including those described in Schedule 3.6 hereto or to the applicable Supplement, and (ii) all reissues, continuations, divisions, continuations-in-part, renewals or extensions thereof, and the inventions disclosed or claimed therein, including the right to make, use and/or sell the inventions disclosed or claimed therein.

(gg) "RGC" has the meaning set forth in the preamble to this Agreement.

(hh) "RGC CREDIT DOCUMENTS" means the RGC Note, the RGC Security Agreement and all written instruments, agreements, and assignments by which RGC Obligations and any security interest or assignment for the payment thereof is evidenced or created, in each case relating to the RGC Note.

(ii) "RGC EVENT OF DEFAULT" means an event of default under the RGC Credit Documents.

(jj) "RGC NOTE" has the meaning set forth in the recitals to this Agreement, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules thereto.

(kk) "RGC OBLIGATIONS" means all indebtedness, liabilities, obligations, covenants and duties of the Borrower and/or UTTC to RGC of every kind, nature and description, direct or indirect, absolute or contingent, due or not due, contractual or tortious, liquidated or unliquidated, arising by operation of law or otherwise, now existing of hereafter arising, under the RGC Credit Documents.

(ll) "RGC RIGHTS" means any rights or remedies RGC may from time to time have to accelerate the RGC Obligations or other obligations of the Borrower and/or UTTC to RGC, or any other default rights or remedies with respect to the Borrower and/or UTTC or any assets of the Borrower and/or UTTC (whether or not arising in

connection with the RGC Note), whether under RGC Credit Documents, at law, at equity or otherwise.

(mm) "RGC SECURITY AGREEMENT" has the meaning set forth in the recitals to this Agreement, as amended, restated, supplemented or modified from time to time and including all exhibits and schedules thereto.

(nn) "SOFTWARE" means all "software" as defined inss.9-102(a)(75) of the Uniform Commercial Code.

(oo) "STANDSTILL PERIOD" has the meaning set forth in Section 2.4(b) of this Agreement.

(pp) "SUBJECT ASSETS" has the meaning set forth in Section 6.1 of this Agreement.

(qq) "TRADEMARK LICENSE" means any written agreement, now or hereafter in effect, granting to any third party any right to use any Trademark now or hereafter owned or held by or on behalf of any Grantor or which such Grantor otherwise has the right to license, or granting to any Grantor any right to use any Trademark now or hereafter owned by any third party, and all rights of any Grantor under any such agreement, including each agreement described in Schedule 3.6 hereto or to the applicable Supplement.

(rr) "TRADEMARKS" means all of the following: (i) all trademarks, service marks, trade names, corporate names, company names, business names, fictitious business names, trade styles, trade dress, logos, other source or business identifiers, designs and general intangibles of like nature, now existing or hereafter adopted or acquired, all registrations and recordings thereof, and all registration and recording applications filed in connection therewith, including registrations and registration applications in the United States Patent and Trademark Office or any similar offices in the United States or any other country, and all extensions or renewals thereof, including those described in Schedule 3.6 hereto or to the applicable Supplement, (ii) all goodwill associated therewith or symbolized by any of the foregoing and (iii) all other assets, rights and interests that uniquely reflect or embody such goodwill.

(ss) "UNIFORM COMMERCIAL CODE" means the Uniform Commercial Code from time to time in effect in the State of New York.

(tt) "UTTC" has the meaning set forth in the preamble to this Agreement.

ARTICLE II. INTERCREDITOR RELATIONSHIP; SUBORDINATION; STANDSTILL

Section 2.1. INTERCREDITOR RELATIONSHIP; SUBORDINATION. RGC, OII and the Grantors agree that the RGC Obligations and the OII Obligations are subject to the payment

and security priorities established by this Agreement, and to the extent inconsistent with such priorities, each of RGC and OII subordinates and makes junior, the payment and security priorities governing such payment and security priorities as set forth in the Credit Documents to the extent necessary to achieve the intent of this Agreement.

Section 2.2. PRIORITY. Notwithstanding anything to the contrary contained in the rules for determining priority under the Uniform Commercial Code or any other law governing the relative priority of security interests of secured creditors, the time, order or method of attachment and perfection of the security interests created by the Credit Documents or the time or order of filing or recording of financing statements or other documents filed or recorded to perfect security interests in any Collateral of the Borrower or UTTC pursuant to the Credit Documents, each of RGC and OII, for itself and for each future holder of the Obligations owing to RGC and OII, respectively, agree that (i) the security interests created by the RGC Credit Documents shall be in all respects and for all purposes first, prior, senior and continuing liens in and to the Collateral, except the IP Assets, and the liens of OII in and to the Collateral, except the IP Assets, are and shall be fully subject and subordinate to RGC's liens on the Collateral; (ii) subject to the succeeding sentence below, the security interests created by the OII Credit Documents shall be in all respects and for all purposes first, prior, senior and continuing liens in and to the IP Assets and the liens of RGC in and to the IP Assets are and shall be fully subject and subordinate to OII's liens on the IP Assets; and (iii) except as otherwise expressly provided in this Section 2.2, the security interests created by the RGC Credit Documents and the OII Credit Documents shall be in all respects and for all purposes prior, senior and continuing liens in and to the Collateral and the liens of any third party (i.e., not a party to this Agreement) in and to the Collateral are and shall be fully subject and subordinate to RGC's and OII's liens on the Collateral. Notwithstanding sub-part (ii) of the preceding sentence, for so long as the Pari Passu Obligations remain outstanding, the security interests created by the OII Credit Documents shall be in all respects and for all purposes Pari Passu and of equal priority with the security interests created by the RGC Credit Documents in and to the IP Assets.

Section 2.3. RESTRICTIONS ON PAYMENT OF OBLIGATIONS. Except in compliance with Section 2.4 and 2.5 hereof, from the date hereof until the last day of the Standstill Period (hereinafter defined), RGC and OII each agrees not to ask, demand, take or receive from Borrower and/or UTTC, directly or indirectly, in cash or other property or by setoff or in any other manner (including, without limitation, from or by way of collateral), payment of all or any portion of the Obligations. Notwithstanding the foregoing, prior to the commencement of a Standstill Period (hereinafter defined) Borrower and/or UTTC may (i) pay to RGC and RGC may receive from Borrower and/or UTTC principal and interest amounts permitted under Sections 2.2 and 2.3 of the RGC Note and (ii) pay to OII and OII may receive from Borrower and/or UTTC, principal amounts pursuant to Section 5 of the OII Note and payments of interest semi-annually and on the Maturity Date (as defined in the OII Note) pursuant to Section 6 of the OII Note. Payments to RGC or OII of principal or interest other than as provided in the preceding sentence shall be prohibited except in compliance with Section

2.4 and 2.5 hereof.

Section 2.4. DEFAULT NOTICES; STANDSTILL; SHARING OF PAYMENTS.

(a) NOTICES. RGC and OII, respectively, shall provide each other prompt written notice of any Event of Default. In the event that, on or after the occurrence of a RGC Event of Default, RGC desires to exercise any RGC Right, RGC shall provide OII written notice thereof and, in the event that, on or after the occurrence of a OII Event of Default, OII desires to exercise any OII Right, OII shall provide RGC written notice thereof (either such notice, a "Declared Default Notice").

(b) STANDSTILL PERIOD. For a period commencing on the date any Declared Default Notice is furnished by either Party to the other Party and for thirty (30) days after OII's or RGC's receipt of the subject Declared Default Notice (such period, the "Standstill Period"), RGC shall not have the right to exercise any RGC Right with respect to IP Assets and OII shall not have the right to exercise any OII Right with respect to any Collateral, including IP Assets, except as otherwise agreed in writing between OII and RGC. During a Standstill Period, (i) each of OII and RGC shall cooperate with the other Party, (ii) RGC shall permit OII to cure any RGC Event of Default within the Standstill Period and to the extent any Grantor can cure such Event of Default and (iii) OII shall permit RGC to cure any OII Event of Default within the Standstill Period and to the extent any Grantor can cure such Event of Default. In the event Borrower, RGC or OII shall cure such Event of Default during the Standstill Period and, in the case of any cure by Borrower or OII, such Event of Default is cured prior to the exercise by RGC of any RGC Right with respect to any and all Collateral, other than IP Assets, the Creditors shall be returned to the status quo ante and all rights under this Section shall be reinstated.

(c) EXERCISE OF RIGHTS DURING STANDSTILL PERIOD; CONCLUSION OF STANDSTILL. Notwithstanding anything to the contrary contained herein, before or during a Standstill Period RGC shall be entitled to exercise any RGC Right with respect to any and all Collateral, other than IP Assets. At the conclusion of a Standstill Period, RGC may exercise any RGC Rights with respect to all Collateral, including IP Assets, and OII may exercise any OII Rights with respect to all Collateral, including IP Assets, subject however, to the other terms and conditions of this Agreement.

Section 2.5. SHARING OF DISTRIBUTIONS.

(a) Except as provided in Section 2.3, until the OII or RGC Obligations are paid in full, in the event OII or RGC receives any Distribution which otherwise would be payable or deliverable upon or with respect to the RGC

Obligations or OII Obligations, respectively, such Distribution shall be received and held in trust for the benefit of OII or RGC, respectively, shall be segregated from other funds and property held by RGC or OII, respectively, and shall be forthwith paid over to OII or RGC, respectively, in the same form as so received (with any necessary endorsement) to be applied (in the case of cash) to or held as collateral (in the case of noncash property or securities) for the payment or prepayment of the Obligations in accordance with Section 2.5(b).

(b) All Distributions received by OII or RGC with respect to the OII Obligations and the RGC Obligations shall be applied as follows:

(i) In the event that the Distribution is of Collateral other than IP Assets:

(1) First, Pari Passu between OII and RGC in reimbursement of the out-of-pocket costs and expenses of each incurred in connection with the enforcement of the rights and remedies of each against the Borrower and/or UTTC and, if applicable, OII or RGC in connection with such Distribution;

(2) Second, 100% to RGC, unless and until the RGC Obligations are fully paid;

(3) Third, 100% to OII, unless and until the OII Obligations are fully paid; and

(4) Lastly, to the Borrower and/or UTTC or such other person or entity as shall be entitled thereto.

(ii) In the event that the Distribution is of IP Assets:

(1) First, Pari Passu between OII and RGC in reimbursement of the out-of-pocket costs and expenses of each incurred in connection with the enforcement of the rights and remedies of each against the Borrower and/or UTTC and, if applicable, OII or RGC in connection with such Distribution;

(2) Second, Pari Passu between RGC and OII unless and until the Pari Passu Obligations are fully paid to RGC;

(3) Third, 100% to OII, unless and until the OII Obligations are fully paid;

(4) Fourth, 100% to RGC, unless and until the RGC Obligations are fully paid; and

(5) Lastly, to the Borrower and/or UTTC or such other person or entity as shall be entitled thereto.

(c) Each Creditor shall pay over to the other Creditor the full amount due such other Creditor under this Section 2.5 within three (3) Business Days after such receipt.

Section 2.6. TURNOVER OF COLLATERAL. If any Creditor acquires custody, control or possession of any Collateral or any Distribution other than pursuant to the terms of this Agreement, such Creditor shall promptly cause such Collateral or the proceeds of such Distribution to be delivered to or put in the custody, possession or control of the Collateral

Agent for disposition and distribution in accordance with the provisions of Section 2.5 of this Agreement. Until such time as such Creditor shall have complied with the provisions of the immediately preceding sentence, such Creditor shall be deemed to hold such Collateral and the proceeds thereof in trust for the Party or Parties entitled thereto under this Agreement.

Section 2.7. RECOVERY OF PREFERENTIAL PAYMENT. Notwithstanding anything to the contrary contained in this Agreement, RGC and OII each agree that if, subsequent to the purported payment in full of the Obligations outstanding to RGC and OII, respectively, or subsequent to any purported termination of this Agreement by mutual consent of the Creditors, any payment received by OII or RGC, respectively, from or for the account of the Grantors (or either Grantor) with respect to the RGC Obligations or the OII Obligations is repaid by OII or RGC, respectively, to the Borrower or to any trustee or custodian of Grantors (or such Grantor) because of any claim of preference, fraudulent transfer or the like, this Agreement shall automatically be reinstated, effective as of the date of the purported termination or the purported payment in full of the OII Obligations or RGC Obligations, respectively, and this Agreement shall apply to any and all payments received by RGC and OII, respectively, on or after the date of the purported termination or purported payment in full of the OII Obligations and RGC Obligations, respectively.

ARTICLE III. COVENANTS AND FURTHER ASSURANCES

Section 3.1. CERTAIN COVENANTS OF RGC AND OII. Each of RGC and OII agrees that if any Credit Proceeding shall exist with respect to Borrower and/or UTTC, it shall duly and promptly take such action as OII or RGC, respectively, may request to collect the RGC Obligations or OII Obligations, respectively, for account of OII or RGC, respectively, and to file appropriate claims or proofs of claim in respect of such Obligations.

Section 3.2. NO COMMENCEMENT OF ANY PROCEEDING. RGC and OII each agrees that, prior to the expiration of the Standstill Period, it will not commence, or join with any creditor other than OII or RGC, respectively, in an Insolvency Proceeding.

Section 3.3. RIGHTS OF SUBROGATION. Each Party agrees that no Distribution to OII or RGC, respectively, pursuant to the provisions of this Agreement shall entitle RGC or OII, respectively, to exercise any rights of subrogation in respect thereof until the OII Obligations and RGC Obligations, respectively, shall have been paid in full.

Section 3.4. INSOLVENCY. This Agreement shall be applicable both before and after the commencement of any Insolvency Proceeding and all converted and succeeding cases in respect thereof. The relative rights, as provided for in this Agreement, shall continue after the commencement of any such case on the same basis as prior to the date of the commencement of any such Insolvency Proceeding, as provided in this Agreement, subject to any court order approving the financing of or use of cash collateral by Borrower and/or UTTC, as debtor-in-possession.

Section 3.5. SUBORDINATION LEGEND; FURTHER ASSURANCES.

(a) RGC, the Borrower and/or UTTC will cause each instrument evidencing the RGC Obligations to be endorsed with the following legend:

"The rights of RGC International Investors, LDC hereunder are subject to certain interests of OptiMark Innovations Inc. pursuant to a certain Intercreditor, Subordination and Standstill Agreement dated May 3, 2002, by and among RGC International Investors, LDC, OptiMark Innovations Inc., The Ashton Technology Group, Inc. and Universal Trading Technologies Corporation."

(b) OII, the Borrower and/or UTTC will cause each instrument evidencing the OII Obligations to be endorsed with the following legend:

"The rights of OptiMark Innovations Inc. hereunder are subject to certain interests of RGC International Investors, LDC pursuant to a certain Intercreditor, Subordination and Standstill Agreement dated May 3, 2002, by and among RGC International Investors, LDC, OptiMark Innovations Inc., The Ashton Technology Group, Inc. and Universal Trading Technologies Corporation."

(c) RGC, OII, the Borrower and UTTC each will further mark its books of account in such a manner as shall be effective to give proper notice of the effect of this Agreement and will, in the case of any Obligation which is not

evidenced by any instrument, upon OII's or RGC's request cause such Obligation to be evidenced by an appropriate instrument or instruments endorsed with the above legend. RGC, OII, the Borrower and UTTC each will, at its expense and at any time and from time to time, promptly execute and deliver all further instruments and documents, and take all further action, that may be necessary or desirable, or that OII or RGC, respectively, may request, in order to protect any right or interest granted or purported to be granted hereby or to enable OII or RGC, respectively, to exercise and enforce its rights and remedies hereunder.

Section 3.6. NO CHANGE IN OR DISPOSITION OF RGC OBLIGATIONS. Neither RGC nor OII shall:

(a) Cancel or otherwise discharge any of the Obligations owing to such Party (except upon payment in full thereof) or subordinate any of such Obligations to any indebtedness of the Borrower and/or UTTC other than as subordinated hereby;

(b) Release or terminate any security interest covering any Collateral;

(c) Sell, assign, pledge, encumber or otherwise dispose of any of the Obligations or of any document or instrument evidencing the Obligations unless such sale, assignment, pledge, encumbrance or disposition is made expressly subject to this Agreement; or

(d) Permit any change in the terms of any of the Obligations owing to such Party or the terms of the RGC Credit Documents with respect to RGC without the prior written consent of OII or the OII Credit Documents with respect to OII without the prior written consent of RGC.

Section 3.7. AGREEMENT BY THE CREDITORS.

(a) In accordance with Sections 2.1 and 2.2 of this Agreement, OII shall not perfect any security interest in any asset of the Borrower or UTTC except to the extent that it has confirmed that RGC has a perfected prior lien. RGC shall not perfect any security interest in any asset of the Borrower or UTTC unless and until it has confirmed that contemporaneously OII is perfecting a security interest in such asset.

(b) The Collateral Agent shall take all actions necessary or desirable to perfect the security interest in any asset of the Borrower or UTTC not otherwise perfected by the filing of Uniform Commercial Code financing statements, including, without limitation, (i) the filing of Patent and

Trademark assignments with the United States Patent and Trademark Office, (ii) the filing of Copyright assignments with the United States Copyright Office and (iii) possession of instruments and certificates evidencing investment property (including possession of instruments and powers of transfer duly endorsed in blank).

Section 3.8. AGREEMENT BY THE GRANTORS. Each of the Borrower and UTTC agrees that it will not make any payment of any of the Obligations, or take any other action, in contravention of the provisions of this Agreement.

Section 3.9. SUPERVISION OF OBLIGATIONS. Except to the extent otherwise expressly provided herein, each Creditor shall be entitled to manage and supervise the obligations of the Grantors to it in accordance with applicable law and such Creditor's practices in effect from time to time without regard to the existence of any other Creditor.

Section 3.10. LIMITATION RELATIVE TO OTHER AGREEMENTS. Except to the extent otherwise expressly provided herein, nothing contained in this Agreement is intended to impair, as between any Creditor and any Grantor, the rights of such Creditor and the obligations of such Grantor under (i) the OII Credit Documents, in the case of OII and any Grantor, or (ii) the RGC Credit Documents, in the case of RGC and any Grantor.

Section 3.11. OBLIGATIONS HEREUNDER NOT AFFECTED. All rights and interests of OII and RGC, respectively, hereunder, and all agreements and obligations of RGC, OII, UTTC and the Borrower under this Agreement, shall remain in full force and effect irrespective of:

(a) any lack of validity or enforceability of the any OII Credit Document or RGC Credit Documents;

(b) any change in the time, manner or place of payment of, or in any other term of, all or any of the Obligations, or any other amendment or waiver of or any

consent to departure from the OII Credit Documents or RGC Credit Documents (provided that the inclusion of this subsection in this agreement shall not be deemed to limit, expand or otherwise affect the terms of Section 3.6(c) hereof);

(c) any exchange, release or non-perfection of a security interest covering any Collateral, or any release or amendment or waiver of or consent to departure from any guaranty, for all or any of the Obligations (provided no consent thereto in violation hereof is made by the inclusion of this subsection); or

(d) any other circumstance which might otherwise constitute a defense available to, or a discharge of, either Grantor or RGC or OII.

This Agreement shall continue to be effective or be reinstated, as the case may be, if at any time any payment of any of the Obligations is rescinded or must otherwise be returned to the Borrower and/or UTTC upon the insolvency, bankruptcy or reorganization of Borrower and/or UTTC or otherwise, all as though such payment had not been made.

ARTICLE IV. OTHER LOANS

Section 4.1. NO OTHER LOANS EXCEPT IF SUBORDINATE. Each of RGC and OII represents that it has made no other loan to the Borrower and/or UTTC, except pursuant to the RGC Credit Documents and the OII Credit Documents respectively. If, in the future, either Creditor elects to make any other loan other than the OII Obligations or the RGC Obligations to Grantors (or either Grantor or their respective affiliates) (any such loan or advance of any kind being hereinafter referred to collectively as "Other Loans"), all such Other Loans shall be subject and subordinate in payment (including without limitation regularly scheduled payment of principal and interest) and security to the Obligations pursuant to the OII Credit Documents and the RGC Credit Documents and any lien given or granted by Grantors (or either Grantor) to secure any Other Loan (other than a purchase money security interest) shall be subject and subordinate to the liens given by the Grantors to secure the Obligations. In extension of the foregoing, any and all payments received by either Creditor from the Grantors (or either Grantor) shall be applied in the order prescribed by this Agreement. The Grantors shall not accept and neither RGC nor OII shall make available to the Grantors or their respective affiliates any Other Loan, unless the documents and instruments evidencing such Other Loan are expressly so subordinate. Each Grantor covenants that it shall neither make nor agree to make any payment or other Distribution (including without limitation regularly scheduled principal and interest payments) on any Other Loan unless and until the Obligations are fully and irrevocably paid. As use in the sentence, the term "Other Loans" shall also include (i) any increase in the principal amount of the OII Obligations or the RGC Obligations to the extent of such increase and/or (ii) any change in the amortization schedule of the OII Obligations or the RGC Obligations which results in any scheduled payment being greater than those required under the OII Credit Documents or the RGC Credit Documents on the date hereof to the extent of such payment differential, provided nothing in this paragraph shall be deemed to limit, expand or otherwise affect the terms of Section 3.6(c) hereof.

ARTICLE V. REPRESENTATIONS AND WARRANTIES

Section 5.1. RGC OBLIGATIONS. RGC and each Grantor each hereby represents and warrants as follows:

(a) The RGC Obligations now outstanding are evidenced by the RGC Credit Documents and true and complete copies of documents relating thereto have been furnished to OII, have been duly authorized by the Borrower and UTTC, have not been amended or otherwise modified, and constitute the legal, valid and binding obligation of the Borrower and UTTC enforceable against the Borrower and UTTC in accordance with its terms. There exists no default in respect of any of the RGC Obligations.

(b) RGC owns the RGC Obligations now outstanding free and clear of any lien, security interest, charge or encumbrance or any rights of others.

(c) There are no conditions precedent to the effectiveness of this Agreement that have not been satisfied or waived.

Section 5.2. OII OBLIGATIONS. OII and each Grantor each hereby represents and warrants as follows:

(a) The OII Obligations now outstanding are evidenced by the OII Credit Documents and true and complete copies of documents relating thereto have been furnished to RGC, have been duly authorized by the Borrower and UTTC, have not been amended or otherwise modified, and constitute the legal, valid and binding obligation of the Borrower and UTTC enforceable against the Borrower and UTTC in accordance with its terms. There exists no default in respect of any of the OII Obligations.

(b) OII owns the OII Obligations now outstanding free and clear of any lien, security interest, charge or encumbrance or any rights of others.

(c) There are no conditions precedent to the effectiveness of this Agreement that have not been satisfied or waived.

ARTICLE VI. SECURITY

Section 6.1. ACKNOWLEDGMENT OF SECURITY INTERESTS. OII hereby acknowledges that to secure all of the RGC Obligations, RGC has been granted or will be granted, from time to time, a security interest in and a general lien upon all of the assets of the Borrower and/or UTTC (the "Subject Assets") pursuant to the terms of the RGC Credit Documents as in effect on the date hereof. OII waives the application of all provisions, if any, contained in the OII Credit Documents which would or might otherwise prohibit Borrower and/or UTTC from entering into or consummating any financing documents and the transactions contemplated thereunder. RGC hereby acknowledges that to secure all of the

OII Obligations, OII has been granted or will be granted, from time to time, a security interest in and a general lien upon the Subject Assets. RGC waives the application of all provisions, if any, contained in the RGC Credit Documents which would or might otherwise prohibit Borrower and/or UTTC from entering into or consummating any financing documents and the transactions contemplated thereunder.

Section 6.2. NO RGC OR OII LIENS EXCEPT AS DISCLOSED. Notwithstanding anything to the contrary contained herein, including without limitation, the subordination and priority provisions hereof, the RGC Obligations are and shall at all times be obligations secured only as specifically set forth in the RGC Credit Documents and the granting of any other lien in any collateral by the Borrower and/or UTTC or the receipt of any such grant by RGC shall be a violation of this Agreement. Notwithstanding anything to the contrary contained herein, including without limitation, the subordination and priority provisions hereof, the OII Obligations are and shall at all times be obligations secured only as specifically set forth in the OII Credit Documents and the granting of any other lien in any collateral by the Borrower and/or UTTC or the receipt of any such grant by OII shall be a violation of this Agreement.

ARTICLE VII. MISCELLANEOUS

Section 7.1. AMENDMENTS, ETC. No amendment or waiver of any provision of this Agreement nor consent to any departure by RGC or OII (or either Grantor) therefrom shall in any event be effective unless the same shall be in writing and signed by OII and RGC, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given. No failure on the part of RGC or OII to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof; nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided are cumulative and not exclusive of any remedies provided by law.

Section 7.2. FORMALITIES. RGC, OII and each Grantor each hereby waives promptness, diligence, notice of acceptance and any other notice with respect to any of the Obligations and this Agreement. RGC and OII each hereby waive any requirement that OII and RGC, respectively, protect, secure, perfect or insure any lien on any property subject thereto or exhaust any right or take any action against Grantors (or either Grantor) or any other person or entity or any collateral.

Section 7.3. EXPENSES. The Grantors jointly and severally agree to pay, upon demand, to OII and RGC respectively, the amount of any and all reasonable expenses, including the reasonable fees and expenses of counsel, which OII and RGC, respectively, may incur in connection with the exercise or enforcement of any of its rights or interests hereunder.

Section 7.4. NOTICES. Unless the Party to be notified otherwise notifies the other Parties in writing as provided in this Section, and except as otherwise provided in this

Agreement, notices shall be delivered in person or sent by overnight courier, facsimile, ordinary mail, cable or telex addressed to such Party at its address set forth on the signature page of this Agreement. Notices shall be effective: (a) on the day on which delivered to such Party in person, (b) on the first Banking Day after the day on which sent to such Party by overnight courier, and (c) if given by mail, 48 hours after deposit in the mails with first-class postage prepaid, addressed as aforesaid.

Section 7.5. CONTINUING AGREEMENT. This Agreement is a continuing agreement and shall (i) remain in full force and effect until the Obligations shall have been paid in full, (ii) be binding upon and inure to the benefit of RGC, the Grantors, OII and their respective successors and assigns. Without limiting the generality of the foregoing clause (ii), OII and RGC may assign or otherwise transfer all or any portion of its rights or obligations under the OII Credit Documents and RGC Credit Documents to any other person or entity; provided that such assignee, as a condition of such assignment, must agree in writing to be bound by the provisions of this Agreement.

Section 7.6. INTEGRATION. This Agreement sets forth the entire agreement among the Parties hereto relating to the matters covered herein and supersede any prior oral or written statements or agreements with respect to such transactions.

Section 7.7. GOVERNING LAW. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York as applied to agreements among New York residents entered into and to be performed entirely in New York.

Section 7.8. NO JOINT VENTURE. The execution and delivery of this Agreement is not intended, nor shall it be construed to constitute, the formation of a partnership or joint venture between the Creditors.

Section 7.9. INDEPENDENT INVESTIGATION. Each Creditor represents to the other Creditor that is has entered into this Agreement on the basis of its own independent commercial relationship with the Grantors, and that except as set forth herein, the other Creditor has not made any representations or warranties to such Creditor and that no specific act, actions or failure to act in any one or more instances by the other Creditor, including, without limitation any review of the affairs of Grantors, shall be deemed to constitute a representation or warranty by either Creditor. Each Creditor represents to the

other that it has independently and without reliance upon the other Creditor, and based on such documents and information as each has deemed appropriate, made its own appraisal of and investigation into the financial condition, credit-worthiness, affairs, status and nature of Grantors and made its own decision to enter into this Agreement and to make such investigation as it deems necessary to inform itself as to the status and affairs, financial or otherwise of Grantors. Neither Creditor shall be required to make any inquiry concerning the Grantors or any of their obligations to the other Creditor under its loan documents or any collateral or to inspect the properties or books or records of the Grantors. Additionally, if requested by either Creditor after notification that such Creditor has not received the same from such Grantor, either Creditor will provide the other Creditor with such financial and other statements as

such Creditor shall have received and which shall have been so requested. Each Creditor's agreement to provide any of the foregoing shall not in any way constitute an assumption by such Creditor of any responsibility for the accuracy, completeness, authenticity, legality, validity or enforceability thereof.

Section 7.10. COUNTERPARTS. This Agreement may be executed in counterparts and each Party hereto shall be entitled to rely on each other Party's signature as if it were an original.

[Signature pages follow]

IN WITNESS WHEREOF, the parties have duly executed this Intercreditor, Subordination and Standstill Agreement as of the day and year first written above.

THE ASHTON TECHNOLOGY GROUP, INC.

By: /s/ William W. Uchimoto

Name: William W. Uchimoto
Title: EVP & General Counsel

UNIVERSAL TRADING TECHNOLOGIES CORPORATION

By: /s/ William W. Uchimoto

Name: William W. Uchimoto
Title: EVP & General Counsel

Address for Notices:

1835 Market Street, Suite 420
Philadelphia, PA 19103
Attention: President
Facsimile: (215) 789-3397

With a copy to:

Christopher S. Auguste, Esq.
Jenkens & Gilchrist Park Chapin LLP
The Chrysler Building
405 Lexington Avenue
New York, NY 10174
Facsimile: (212) 704-6288

RGC INTERNATIONAL INVESTORS, LDC
By: Rose Glen Capital Management, L.P.
By: RGC General Partner Corp

By: /s/ Gary Kaminsky

Name: Gary Kaminsky
Title: Managing Director

Address for Notices:

c/o Rose Glen Capital Management, L.P.
3 Bala Plaza East, Suite 501
251 St. Asaphs Road
Bala Cynwyd, PA 19004

With a copy to:

Barry J. Siegel, Esq.
Klehr, Harrison, Harvey, Branzburg & Ellers LLP
260 S. Broad Street
Philadelphia, PA 19102
Facsimile: (215) 568-6603

OPTIMARK INNOVATIONS INC.

By: /s/ Robert J. Warshaw

Name: Robert J. Warshaw
Title: President

Address for Notices:

c/o OptiMark Holdings, Inc.
10 Exchange Place, 24th Floor
Jersey City, NJ 07302
Attention: Office of the General Counsel
Facsimile: (208) 293-4810

Exhibit A

IP Assets

PATENT APPLICATION
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1. U.S. Provisional Patent Application No. 60/323,940 entitled "Volume Weighted Average Price System And Method," filed on September 21,

2001.

TRADE SECRETS, KNOW HOW, AND LICENSES

2. Diagrams, presentations, project plans, research, spreadsheets, discussion documents, and other documents developed specifically for volume weighted average price "guaranteed price/fill" systems and technology (hereinafter "VWAP Trading") including, but not limited to, (a) the documents listed on Attachment 1 hereto and (b) a CD_ROM containing those documents.

3. All rights, duties, and obligations of OptiMark Innovations Inc. (f/k/a OTSH, Inc.) under that certain "License Agreement" dated as of February 21, 2002 by and between OptiMark Innovations Inc. and Marlex Communication Systems, Inc. ("Marlex") for use in the implementation, maintenance and/or operation of VWAP trading of U.S. securities utilizing the Licensed Technology (as defined in such License Agreement) and as permitted under such License Agreement.

4. All rights, duties, and obligations of OptiMark Innovations Inc. under that certain "Bilateral Nondisclosure Agreement" dated August 7, 2001 by and between Marlex and OptiMark, Inc. and/or subsidiaries thereof, including, but not limited to, all rights, duties, and obligations of OptiMark Innovations Inc. in and to the Proprietary Information and works derived therefrom pursuant to such Bilateral Nondisclosure Agreement, and all results and work product generated by OptiMark Innovations Inc. or its predecessor-in-interest in connection with evaluative efforts related thereto.

SOFTWARE

5. Software specifically for VWAP Trading including, but not limited to, (a) the software files listed on Attachment 2 hereto, entitled "Group1.log, and (b) a CD_ROM containing those files.

6. All rights, duties, and obligations of OptiMark Innovations Inc. relating to software provided by Marlex in connection with that certain License Agreement and/or Bilateral Nondisclosure Agreement referenced in paragraphs 3 and 4 above, and work product generated by OptiMark Innovations Inc. or its predecessor-in-interest associated with such software, relating to a "slicing" algorithm for VWAP Trading including, but not limited to, (a) the software files listed on Attachment 3 hereto, entitled "Group2.log," and (b) a CD_ROM containing those files.

7. Software specifically for VWAP Trading for (a) tracking bugs in the software described in paragraphs 5 and 6 above, and (b) building source code into executable code for the software described in paragraphs 5 and 6 above, including, but not limited to, (x) the software files listed on Attachment 4 hereto, entitled "Group4.log," and (y) a CD_ROM containing those files.

8. Software specifically for VWAP Trading for testing the software described in paragraphs 5 and 6 above, including, but not limited to, (a) the software files listed on Attachment 5 hereto, entitled "Group5.log," and (b) a CD_ROM containing those files.

Exhibit 4.5

NON-COMPETITION AGREEMENT

THIS NON-COMPETITION AGREEMENT (this "Agreement") entered into as of this ___ day of May, 2002 by and among The Ashton Technology Group, Inc., a Delaware corporation (the "Company"), OptiMark Innovations Inc., a Delaware corporation (the "Investor"), OptiMark, Inc., a Delaware corporation, and OptiMark Holdings Inc., a Delaware Corporation (the Investor, OptiMark, Inc. and OptiMark Holdings Inc, collectively, the "Group"). Unless otherwise stated in this Agreement, capitalized terms used herein but not otherwise defined herein shall have the meanings ascribed to them in the Securities Purchase Agreement dated as of the 4th day of February, 2002, by and between the Company and the Investor (the "Purchase Agreement").

R E C I T A L S

WHEREAS, pursuant to the terms of the Purchase Agreement, on the date of the Closing, the Investor is acquiring six hundred eight million seven hundred seven thousand five hundred sixty seven (608,707,567) shares of the Company's Common Stock; and

WHEREAS, pursuant to Section 4.29 of the Purchase Agreement, it is a condition to consummate the transactions contemplated by the Purchase Agreement, that the Group enter into a non-competition agreement with the Company in form and substance mutually satisfactory to the Company and the Investor.

NOW, THEREFORE, in consideration of the consummation of the transactions contemplated by the Purchase Agreement and the mutual agreements and covenants herein contained, the parties hereto agree as follows:

1. THE GROUP'S NON-COMPETITION COVENANTS. The Group agrees that, for the period commencing on the date of the Closing and ending five (5) years following the date of the Closing (the "Restricted Period"), the Group will not, within the Restricted Area (as hereinafter defined), (a) design, implement or operate a system or service, for itself or (b) operate a system for a third party, in the case of (a) and (b), that matches or fills equity orders for Securities (hereinafter defined) priced at the Volume Weighted Average Price ("VWAP") or (c) design, develop, create or issue any derivative instrument whose specifications or pricing is derived from the VWAP of an underlying equity security or index of securities (the "Restricted Business"). "Securities" means all equity securities and equity derivatives listed on a securities exchange or eligible for quotation on a securities quotation system in the United States or Canada, including American Depository Receipts, American Depository Shares and similar instruments.

2. RESTRICTED AREA. The Group acknowledges that the Company will engage in the Restricted Business following the date of the Closing, throughout the world. For this reason, the Group acknowledges that the reasonable area covered by the covenants set forth in Section 1 shall be the world (the "Restricted Area").

3. REMEDIES. The Group acknowledges that the remedy at law of monetary damages for any breach or threatened breach of the covenants of the Group contained in Section 1 hereof may be inadequate or impossible to ascertain, and that any breach or threatened breach by any member of the Group would cause immediate and irreparable damage to the Company and its respective affiliates. Therefore, the Group agrees that in the event of any breach or threatened breach by any member of the Group of any of its covenants herein, in addition to any and all legal and equitable remedies available to the Company, its affiliates and its respective successors and permitted assigns for such breach or threatened breach, including a recovery of damages, such party shall be entitled to seek preliminary or permanent injunctive relief.

4. SEVERABILITY. Any provision of this Agreement which is deemed invalid, illegal or unenforceable in any jurisdiction shall, as to that jurisdiction and subject to this Section 4, be ineffective to the extent of such invalidity, illegality or unenforceability, without affecting in any way the remaining provisions hereof in such jurisdiction or rendering such provision or any other provision of this Agreement invalid, illegal or unenforceable in any other jurisdiction. If any covenant should be deemed invalid, illegal or unenforceable because its scope is considered excessive, such covenant shall be modified so that the scope of the covenant is reduced only to the minimum extent necessary to render the modified covenant valid, legal and enforceable.

5. MISCELLANEOUS.

(a) NOTICE. All notices, requests, demands and other communications hereunder shall be in writing and shall be delivered to each party hereto by hand or sent by reputable overnight courier, with receipt verified, or facsimile, with receipt verified, or registered or certified mail, return receipt requested, addressed as follows:

(i) If to the Company:

11 Penn Center
1835 Market Street, Suite 420
Philadelphia, PA 19103
Attention: William Uchimoto, Esq.
Telephone: (215) 789-3305
Facsimile: (215) 789-3397

with copies to:

Christopher S. Auguste, Esq.
Jenkens & Gilchrist Parker Chapin LLP
The Chrysler Building
405 Lexington Avenue
New York, NY 10174
Telephone: (212) 704-6000
Facsimile: (212) 704-6288

(ii) If to OptiMark Innovations Inc.:

c/o OptiMark Holdings, Inc.
10 Exchange Place
24th Floor
Jersey City, NJ 07302
Attention: Secretary
Telephone: (201) 536-7088
Facsimile: (208) 293-4810

(iii) If to OptiMark, Inc.:

10 Exchange Place
24th Floor
Jersey City, NJ 07302
Attention: Neil Cohen, Esq.
Telephone: (201) 536-7088
Facsimile: (208) 293-4810

with a copy to:

Cummings & Lockwood
Four Stamford Plaza
107 Elm Street
P.O. Box 120
Stamford, CT 06904-0120
Attention: Evan S. Seideman, Esq.
Telephone: (203) 351-4277
Facsimile: (203) 708-3808

or to such other address as any party may designate by written notice in the aforesaid manner.

(b) ASSIGNABILITY; BENEFIT. This Agreement shall be binding upon, and shall inure to the benefit of, the parties hereto and their successors and permitted assigns. This Agreement shall not be assignable by any of the parties except with the prior written consent of all of the other parties hereto, and any purported assignment without such consent shall be void.

(c) GOVERNING LAW. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of New York without regard to its conflicts of law principles.

(d) WAIVER. Any failure of a party to comply with an obligation, covenant, agreement or condition herein may be waived in writing by the other party, but such waiver or failure to insist upon strict compliance with such obligation, covenant, agreement or condition shall not operate as a waiver of any other failure.

(e) AMENDMENT. This Agreement may be amended, modified or supplemented only by written agreement executed by the Company, or its successors or permitted assigns, and the Group.

(f) REMEDIES CUMULATIVE. All remedies of the parties provided herein shall, to the extent permitted by law, be deemed cumulative and not exclusive of any other remedies available to the parties, by judicial proceedings or otherwise, to enforce the performance or observance of the covenants and agreements contained herein and every remedy given herein or available by law to any party hereto may be exercised from time to time, and as often as shall be deemed expedient, by such party.

(g) HEADINGS. The section and other headings contained in this Agreement are for reference purposes only and shall not affect the interpretation or meaning of this Agreement.

(h) COUNTERPARTS. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Agreement.

(i) BANKRUPTCY, ETC. This Agreement shall become null, void, and unenforceable in the event that (1) the Company has dissolved or liquidated or taken an equivalent action, (2) an involuntary petition shall have been filed under any federal or state bankruptcy, reorganization, insolvency, moratorium or similar statute against the Company or any of its subsidiaries, (3) a custodian, receiver, trustee, assignee for the benefit of creditors or other similar official have been appointed to take possession, custody, or control of the

property of the Company or any of its subsidiaries, (4) the Company or any of its subsidiaries have admitted in writing its inability to pay any debts, individually or in the aggregate, that are equal to or greater than $250,000 as they mature,

or have filed any petition or action for relief relating to any bankruptcy, reorganization, insolvency or moratorium law, or any other similar law or laws for the relief of, or relating to, debtors, (5) the Company or any of its subsidiaries have made a general assignment for the benefit of creditors or entered into an agreement of composition with its creditors, or (6) the Company or any of its subsidiaries ceases to operate a guaranteed price and fill VWAP service or system.

[signature page follows]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date and year first above written.

THE ASHTON TECHNOLOGY GROUP, INC.

By: /s/ William W. Uchimoto

Name: William W. Uchimoto
Title: EVP & General Counsel

OPTIMARK INNOVATIONS INC.

By: /s/ Robert J. Warshaw

Name: Robert J. Warshaw
Title: President

OPTIMARK, INC.

By: /s/ Robert J. Warshaw

Name: Robert J. Warshaw
Title: CEO

OPTIMARK HOLDINGS INC.

By: /s/ Robert J. Warshaw

Name: Robert J. Warshaw
Title: CEO